

Drain: POND WEST DRAIN Drain #: 254
Improvement/Arm: POND WEST - SECTION 7
Operator: JDH Date: 3-16-04
Drain Classification: Urban/Rural Year Installed: 1994

GIS Drain Input Checklist

- Pull Source Documents for Scanning JDH 3-16
- Digitize & Attribute Tile Drains N/A
- Digitize & Attribute Storm Drains JDH 3-16
- Digitize & Attribute SSD JDH 3-16
- Digitize & Attribute Open Ditch JDH 3-30
- Stamp Plans JDH 3-16
- Sum drain lengths & Validate JDH 3-16
- Enter Improvements into Posse JDH 3-16
- Enter Drain Age into Posse JDH 3-30
- Sum drain length for Watershed in Posse JDH 3-30
- Check Database entries for errors JDH 3-16

Gasb 34 Footages for Historical Cost
Drain Length Log

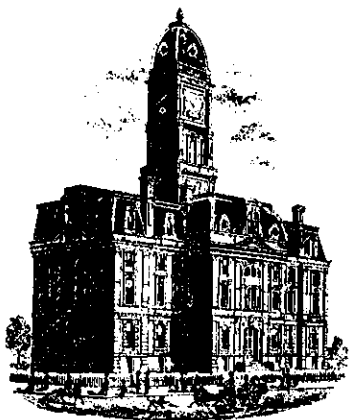
Drain-Improvement: PONDOS WEST DRAIN - PONDOS WEST - SECTION 7

					RECONCILE	
Drain Type:	Size:	Length SURVEYORS REPORT	Length (DB Query)	Length Reconcile	Price:	Cost:
SSO	6"	1840'	1840'	Ø		
	12"	161'	161'	Ø		
	15"	30'	30'	Ø		
	18"	226'	226'	Ø		
	30"	405'	405'	Ø		
	42"	88'	88'	Ø		
OPEN DITCH		460'				

Sum: 3210' Ø

Final Report: _____

Comments:



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square July 15, 1994
Noblesville, Indiana 46060-2230

TO: Hamilton County Drainage Board

RE: Ponds West Drain, Section 7 Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Ponds West Drain, Section 7 Arm. I have reviewed the submittals and petition and have found each to be in proper form.

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

The drain will consist of the following:

6" SSD	5227 ft	18" RCP	226 ft	
12" RCP	161 ft	30" RCP	405 ft	Open Ditch 460 ft
15" RCP	30 ft	42" RCP	88 ft	

The total length of the drain will be 5145 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 min SSD lines which are located within the easement 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 Lot 133 and Rear of Lot 136 The open ditch located across Lots 135, 136 and Tract 09-22-00-00-010.000 to the Osborn-Collins Drain will be considered part of the regulated drain. The portion of the Osborn-Collins running through the section should be included under the maintenance program or Ponds West until such time the open ditch is set up for maintenance separately

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 the drain/this section will be \$ 420⁰⁰

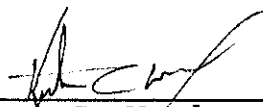
Parcels assessed for this drain may be assessed for the Osborn-Collins or Williams Creek at sometime in the future.

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 Ponds West Drain, Section 7 Arm as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for August 1994.



Kenton C. Ward
Hamilton County Surveyor
KCW/no

GASB 34 – Value Calculations
Ponds West Sec. 6 & 7

Bonds: \$31,808

Total Feet: 4100

Ponds West Sec. 6: $890/4100 = 22\%(31808) = \$6,997.76$

Ponds West Sec. 7: $3210/4100 = 78\%(31808) = \$24,810.24$

MSE Engineering

*Engineering
Surveying
Landscape Architecture
Digital Mapping*

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

HAMILTON COUNTY DRAINAGE BOARD
CERTIFICATE OF COMPLETION AND COMPLIANCE

Address of premises on which land
alteration was accomplished: 900 West 141st Street

Project Name: Ponds West Section 7

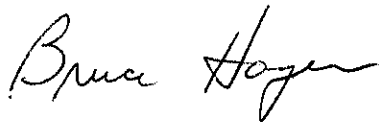
Relative to plans prepared by MSE Corporation on June 30, 1994.

I hereby certify that:

1. I am familiar with drainage requirements applicable to such land alteration (as set forth by the Hamilton County Drainage Board).
2. Land alteration accomplished pursuant to the referenced drainage permit was observed by personnel under my direction, and
3. To the best of my knowledge, information and belief, such land alteration has been performed and completed in conformity with all such drainage requirements.

Certified this 24th day of January, 1995.

MSE CORPORATION



Bruce E. Hagen
Professional Engineer #920299 - Indiana



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: Ponds West Drain-Ponds West Section 7

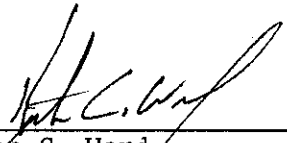
Attached are "As-Built", Certificate of Completion and Compliance and other information for Ponds West-Section 7. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain which will alter the plans submitted with my report for this drain dated July 15, 1994. The changes are as follows: The six (6") SSD inch was not installed along the rear of Lots 133, 166, and 136. Per inspectors report dated December 9, 1994. Structure 13 was constructed as a 3x6 box with Twin 4342 Castings. The six (6") inch SSD was incorrectly typed on the original report. The correct total of six (6") inch SSD is 1840 feet.

The length of the drain due to the changes described above is now 3210 feet. The non-enforcement request was approved by the Board at its meeting on August 22, 1994.

The bond or letter of credit from National Bank of Indianapolis, number 6700000-11, dated July 11, 1994 in the amount of \$31,808.00 has been released.

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



Kenton C. Ward
Hamilton County Surveyor
KCW/no

SLM

Land Description

Land being part of the Northeast Quarter of Section 22, Township 18 North, Range 3 East, Hamilton County, Indiana, more particularly described as follows:

Beginning at the Southeast corner of said Northeast Quarter Section; thence South 89°20'11" West on and along the South line of said Quarter Section, a distance of 767.80 feet; thence North 00°04'20" East 475.00 feet; thence South 89°20'11" West parallel with the South line of said Quarter Section a distance of 733.70 feet; thence South 00°04'20" West 31.00 feet; thence South 89°20'11" West on and along the North line, and the prolongation thereof, of land described in a deed to Sarah B. Hein, recorded in Deed Book 329, Page 547, in the Office of the Recorder of Hamilton County, Indiana, a distance of 721.58 feet to the Northwest corner of said Hein's land; thence South 00°05'18" West, on Hein's West line, a distance of 444.00 feet to the South line of aforesaid Northeast Quarter Section; thence South 89°20'11" West on said South line a distance of 412.50 feet to the Southwest corner of said Quarter Section; thence North 00°05'18" East on and along the West line of said Quarter Section a distance of 2132.02 feet to a point 495 feet South of the Northwest corner of said Quarter Section; thence North 89°04'58" East parallel with the North line of said Quarter Section a distance of 412.50 feet; thence North 00°05'18" East 0.74 feet to an iron pipe found at the Southwest corner of land described in a deed to James M. Buck, as recorded in Deed Book 330, Page 304, in said Recorder's Office; thence North 79°49'38" East on and along the South line of said Buck's land a distance of 478.11 feet; thence South 00°55'02" East 57.80 feet; thence South 83°45'01" East 53.37 feet; thence South 41°01'24" East 43.56 feet; thence South 90°00'00" East 60.18 feet; thence South 11°18'35" East 310.67 feet; thence North 85°43'26" East 454.02 feet; thence North 00°48'29" West 795.00 feet to the North line of said Northeast Quarter Section; thence North 89°04'58" East on and along said North line, a distance of 1102.37 feet to the Northeast corner of said Quarter Section; thence South 00°02'16" East on and along the East line of said Quarter Section a distance of 2638.59 feet to the Point of Beginning, containing 123.288 acres, more or less, subject to rights-of-way, restrictions, easements, and legal drains.

CONSTRUCTION PLANS FOR PONDS WEST SECTIONS 5-7

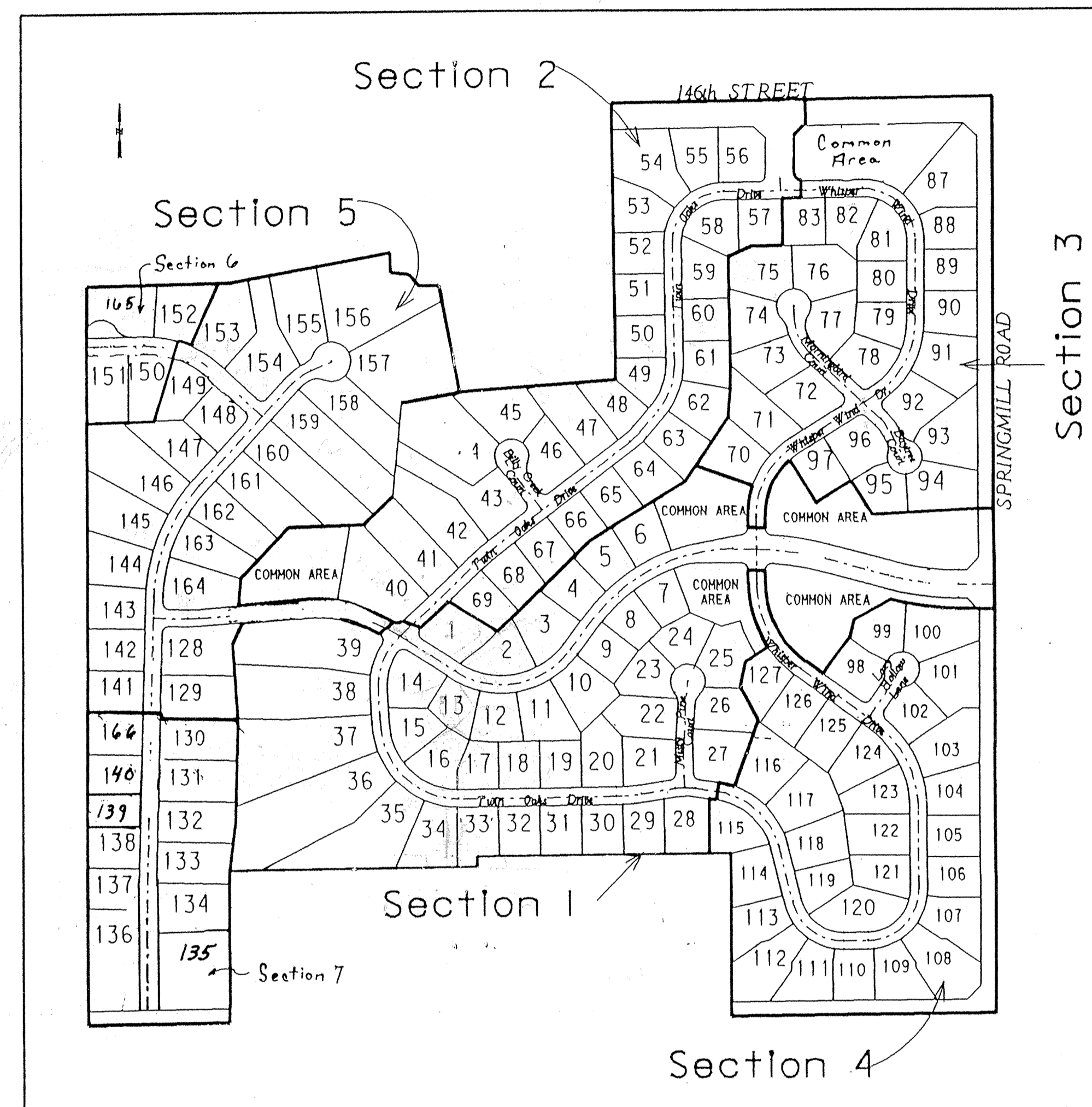
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SPECIFICATIONS
8A, 8B	SITE UTILITY PLANS & GRADING PLANS
9, 16-18	STREET PLAN & PROFILES
30-32	STORM PLAN & PROFILES
43	SANITARY PLAN & PROFILES
44	CUL-DE-SAC & INTERSECTION DETAILS
47A	ENTRANCE DETAILS
49-50	EROSION CONTROL PLANS
50-51	DETAILS
47B	BRIDGE PLAN

SHEET NO.	REVISIONS
33-43	2/22/93 Revise San. Sewer Inverts
51	2/22/93 Revise San. Sewer Bedding Details
3-9, 26-30	3/12/93 See Sheets
47-48	3/12/93 See Sheets
1, 3-9, 27, 47, 49-51	3/28/93 See Sheets
1-52	4/9/93 Change Subd. name & Street Names
3-8, 8B, 10, 14, 16, 18, 21, 23, 25, 27, 29	4/20/93 See Sheets
41, 47	4/20/93 See Sheets
49	4/30/93 See Sheet
44	6/3/93 See Sheets
4, 13, 21, 33, 38	7/30/93 See Sheets
4, 8A, 21	9-14-93 See Sheets
4, 47	1-4-94 See Sheets
2, 3, 7, 20, 48	4-23-94 See Sheets
8A, 8B	7-11-94 See Sheets

NOTES:

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

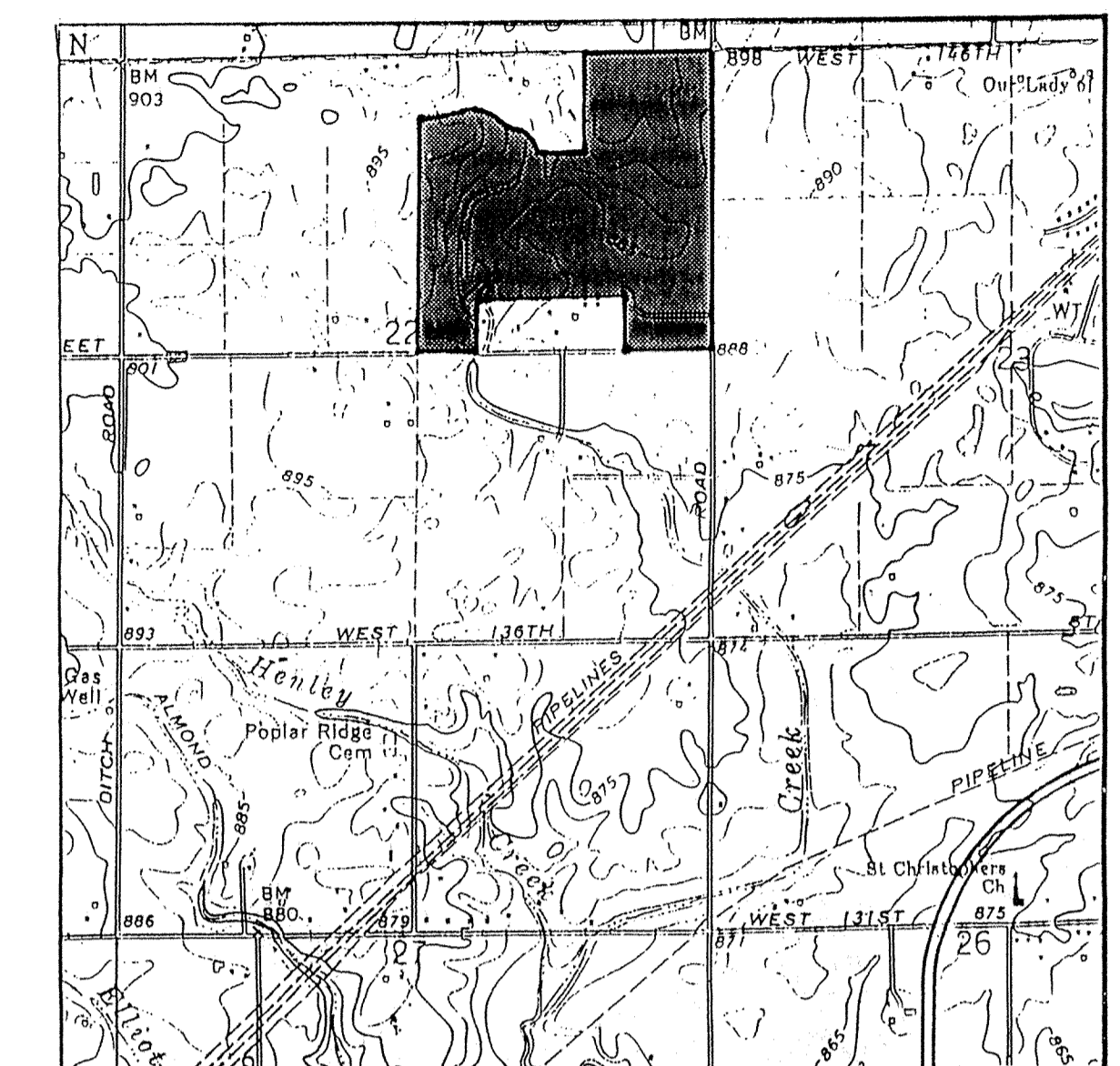
ANY ALTERATIONS TO THESE PLANS NOT AUTHORIZED BY MSE ENGINEERING AND NOT IN ACCORDANCE WITH THE PLANS AND RECORDS ON FILE AT MSE ENGINEERING OFFICES SHALL RELIEVE MSE ENGINEERING OF RESPONSIBILITY FOR OVERALL ACCURACY OF PLANS.



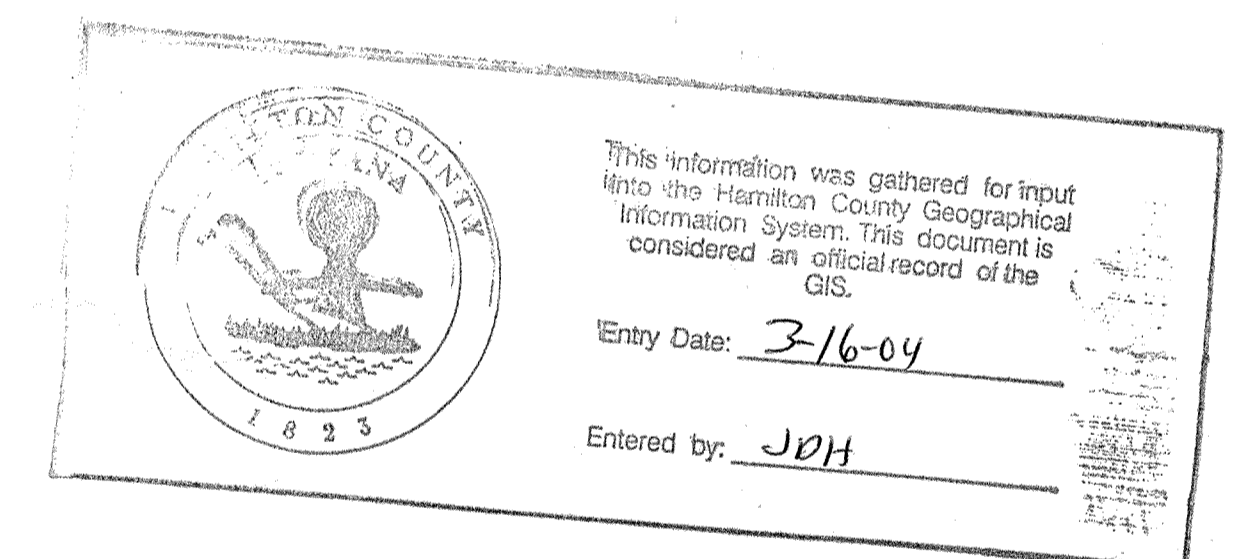
PLANS PREPARED FOR
DART DEVELOPMENT CORP II
14122 SPRINGMILL ROAD
CARMEL, IN 46032
(317) 844-4451

PREPARED BY:

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



VICINITY MAP



CERTIFIED THIS 30TH DAY OF JUNE 1994

Bruce Hagen
BRUCE HAGEN

PROJECT DATA
ACRES : 123.288
LOTS : 164
LOTS/ACRE : 1.33

FILED

JUN 17 1994
OFFICE OF HAMILTON COUNTY SURVEYOR

JOB No. 114-0522
SHEET 1 OF 52

SITE WORK GENERAL NOTES AND SPECIFICATIONS

I. GENERAL CONDITIONS

- 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.
- 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.
- The Contractor shall be responsible for notification and coordination of all construction with the respective utility companies.
- 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.
- 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.

- 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.
- 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

- 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".
- 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 scarred areas shall be removed in accordance with accepted horticultural practice and the scars coated thoroughly with an asphaltum base iron paint.
- All "unsuitable material" from clearing operations stated in Item II-A shall be removed to disposal area(s) off the project site; unless a Bury Pit is utilized. Bury Pits shall not be located below proposed building or pavement areas nor below proposed drainage structures or impoundment areas. Written permission of project owner must be obtained for bury pit construction on site.
- Materials shall not be disposed of by burning unless approved by the local Fire Marshall.

III. TREE REMOVAL AND PROTECTION

- Trees shall be removed from the project site only in areas occupied by roadway and surfaced areas in accordance with specifications of the City of Carmel.
- Trees shall be removed from the project site as directed by the Developer and so designated.
- Trees shall be removed from the project site where they interfere with the placement of storm or sanitary sewers.
- 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.
- 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.
- See note II-B.

IV. STRIPPING OF TOPSOIL

- The Contractor shall verify that all topsoil has been removed in the areas to be occupied by road, walks and designated building areas. Topsoil shall be removed to a depth of 6 inches or deeper, if necessary, to assure the removal of vegetation matter where required.
- Topsoil shall be kept separated from suitable fill materials and shall not be used as fill under pavement and/or building areas.
- 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.
- Topsoil shall be reasonably free from subsoil debris and stones.

V. GRADING

- The Contractor shall perform all grading operations to bring subgrades, after final compaction, to the grades required for site improvement.
- Subgrade shall be proofrolled with appropriate equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.
- Subgrade for streets shall be prepared in compliance with **Hamilton County**. 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.
- 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.
- 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

- 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.
- 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 specification. 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 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.
- 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 a representative of the Clay Waste District.
- 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 0.005 inches per foot. The following are considered deflection test results: 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.
- All mandrel testing shall be observed by a Professional Engineer for certification and a representative of the Clay Waste District.
- 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.
- 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.
- Water and sewer line crossings and separations shall be in accordance with Ten States' Standards.
- Trench shall be opened sufficiently ahead of pipe laying to reveal obstructions, and shall be properly 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, until such time as all tests on the sewers have been completed and the lines have passed all punch lists.
- All sewer laterals installed by the mainline Contractor shall be bedded the same as the main line sewer.
- 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.
- 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".
- The minimum slope for sewer acceptance by the Clay Township Regional Waste District are:

Size of Pipe	Minimum Constructed Slope
8-inch	0.40%
10-inch	0.28%
12-inch	0.22%
15-inch	0.15%
18-inch	0.12%
- 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.
- 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

- The Contractor shall provide adequate erosion protection measures during construction.
 - Rip-rap at locations designated on the plans.
 - Swales draining the site shall be mulch seeded or sodded and Contractor shall be responsible for establishing grass cover.
 - Construction operations conducted on private or city-owned property shall be neatly finish graded and mulch seeded.

VIII. STORM SEWER CONNECTION

- Storm sewer structures shall comply with current specifications of the City, County and all agencies with respect to design and quality of construction.
- 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.
- Where reinforced concrete pipe is shown on the construction plans, it shall be in accordance with A.S.T.M. C-76 Class III Wall "B", unless otherwise specified on the plans.
- Where corrugated metal pipe is shown on the construction plans, it shall be 16 gauge unless otherwise specified and shall have the connecting bands and seals as specified by the manufacturer. C.M.P. may be either aluminum pipe or zinc coated steel sheets in accordance with A.S.T.M. A-444.
- Manholes, catchbasins, and inlets may be precast concrete or poured in place concrete.
- Precast concrete and steel for manholes and inlets shall be in accordance with A.S.T.M. C-478.
- Castings shall be as shown on the Structure Data Table.
- Granular backfill shall be required for all crossings under pavement areas, per the Hamilton County specifications.

IX. UTILITIES

- Water Line**
 - See Sanitary Sewers Notes for vertical and horizontal separations (Note VI-1 and 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.
 - Pressure tests for the water system shall be done in accordance with manufacturer's recommendations and the Hamilton Western Utilities specifications.
 - Granular backfill shall be required for all utility crossings under pavement areas. See Section VI-W.
 - Where private water lines are shown on the contract plans the pipe materials shall meet the Hamilton Western Utilities specifications.
 - Thrust blocks shall be installed in accordance with the details contained within the plans or the Hamilton Western Utilities standard specifications as applicable.
 - Felt material not to exceed 3/8 inch thick shall be placed between pipes and concrete thrust blocks.
 - All valves and appurtenances for domestic and fire protection water mains shall be approved by the Underwriters Laboratories and Factory Mutual for critical use.
- Electric and Telephone**
 - Conduit shall be required for all crossings under pavement areas.
 - Granular backfill shall be required for all crossings under pavement areas and three feet beyond the edge of the pavement.
 - 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

- Shall be in accordance with I.N.D.O.T. Standard Specifications.

XI. PAVEMENT CONSTRUCTION

- All pavement construction shall be in accordance with the plans and specifications and conform to the minimum standards of Hamilton County.
- 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.
- Backfilling of utility trenches with granular material under pavement areas is required and shall conform to Hamilton County specifications.
- Contractor shall notify Hamilton County forty-eight hours prior to commencement of street construction within any existing or proposed right-of-way.

XII. CONCRETE CURB AND WALKS

- See Detail Sheet for type and details. Curbs and walks within existing or proposed right-of-way shall be constructed in accordance with Hamilton County specifications.
- Concrete shall be ready mixed Portland cement conforming to A.S.T.M. C-150. Aggregate shall conform to A.S.T.M. C-33. Compressive strength of concrete at 28 days shall be 4000 p.s.i. Where required, reinforcement shall be welded steel wire fabric conforming to A.S.T.M. A-185.
- Application
 - Place concrete only on a moist, compacted subgrade or base free from loose material. Place no concrete on muddy or frozen subgrade.
 - Concrete shall be deposited so as to require as little rehandling as practical. When concrete is to be placed at an atmospheric temperature of 35°F or less, Paragraph 702.10 of the I.N.D.O.T. Specifications, 1988 edition, shall apply.
 - Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the I.N.D.O.T. Specifications, 1988 edition.

XIII. FINISH GRADING AND SEEDING (Developer shall designate location if required.)

- Topsoil or approved fill shall be spread over the rough grade to a depth sufficient to insure final grades are met after rolling and settlement. The minimum thickness of the topsoil shall not be less than 4". New grades shall slope uniformly between levels established on the plans. Intersections of new grades with existing grades shall be uniform and smooth.
- Fertilizer and agricultural limestone shall be spread uniformly over the area to be seeded and mixed into the top two inches of soil with a disk harrow, rotary tiller, or other approved equipment. Fertilizer shall be spread at the rate of 800 pounds per acre and agricultural limestone at the rate of one-half ton per acre, unless otherwise specified.
- A seeding mixture in stripping, cut, or fill areas shall be applied at a rate of 90 pounds per acre with a mixture as follows: 18 lbs. Kentucky Bluegrass, 18 lbs. Park Kentucky Bluegrass, 18 lbs. Delta Kentucky Bluegrass, 10 lbs. Pennlawn Fescue and 26 lbs. Annual Ryegrass. Wood cellulose fibre, straw or mulch, as approved by the Engineer, shall be applied at a rate of 3/4 tons per acre.

XIV. LIME MODIFIED SOIL (Developer shall designate location if required.)

- The use of Lime Modification shall be used to improve the upper 12" of subgrade that does not conform to Section 207 of the 1988 I.N.D.O.T. Specifications. The lime used shall be "Polyhydrated Lime, Code 'L', as manufactured by Mississippi Lime, or equal. The following construction procedures shall be utilized.
 - The subgrade shall be placed to the proper grade.
 - Lime shall be dry placed on the subgrade at an application rate of 24 to 36 pounds per square yard as directed by the Engineer. The lime and soil shall then be mixed by tractor-drawn disc harrows, scarifiers, rotary mixers, or front end loaders equipped with bucket teeth. Several passes shall be made to a depth of 12" as directed by the Engineer.
 - Initial compaction shall be performed with a sheepfoot roller. The soil and lime shall be compacted in 6" lifts until the proper grade is obtained. Grading will be accomplished by blading the excess to one lane and compacting the mixed lime and soil in the 6" lifts. The final passes shall be made with a steel wheel or pneumatic-tired roller as approved by the Engineer.
 - The density of the soil-lime mixture will be determined by the City of Carmel near the end of the finishing operations. Any portion of the soil-lime mixture not passing the density requirements shall be determined by the City of Carmel in accordance with AASHTO T-191.
 - When compaction of the lime-soil mixture is nearing completion, the surface shall be sloped to the required lines, grades, and cross section, and compaction continued using a steel wheeled roller until the minimum specified density is obtained.
 - The surface shall be maintained in a moist condition by means of a fine spray of water during all finishing operations. The treated material shall be maintained in a moist condition by sprinkling with water for a period of seven days. Traffic of all types shall be kept off the lime modified soil for seven days, or thereafter until in the opinion of the Engineer the lime-modified soil will support traffic without being damaged. When allowed on the subgrade, traffic shall exercise further care in driving over it so as not to tear up the subgrade.
 - Caution:** Lime and lime mixtures are caustic in nature. The manufacturer of the lime shall be consulted to determine what special precautions are required to protect the skin, and particularly the eyes.

XVI. REMOVAL OF PAVEMENT, SIDEWALKS, CURBS, ETC.

- 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).
- Prior to performing the work of pavement removal at locations indicated on the plans, or where directed, cement concrete pavement to be removed shall be cut 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

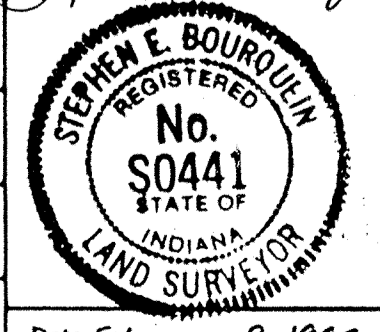
- Reflection cracks and joints, both longitudinal and transverse, as well as checked, cracked and alligatored areas shall be sealed using from 0.10 to 0.15 gallon per square yard of AE-90 or AE-150 bituminous material and covering with either No. 14-2 or No. 17 sand. The cracks, joints and alligatored 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 in the existing surface and any surplus shall be squeezed back and forth over the area to refill them. Any excess material shall be squeezed off the pavement. The sealed surface shall be covered with approximately 5 pounds of sand per square yard.

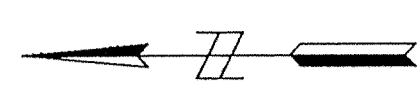
STRUCTURE DATA TABLE SANITARY SEWER

Structure Number	Structure Type	Casting
200-201	Manhole Type "C"	R-1642
202	by others	----
203	Manhole Type "C"	R-1916-F1
204-206	Manhole Type "C"	R-1642
207	by others	----
208-246	Manhole Type "C"	R-1642
247	by others	----
250	Manhole Type "C"	R-1642

STRUCTURE DATA TABLE STORM SEWER

Structure Number	Structure Type	Casting
1	Inlet Type "A"	R-3501-N
2	Inlet Type "A" (modified)	R-3516
3	Manhole Type "B"	R-3501-N
4	End Section	----
5	Manhole Type "B"	R-3516
6	Manhole Type "B"	R-1772-A
7	Inlet Type "A"	R-4342
8	Inlet Type "A" (modified)	R-3516
9	Manhole Type "B"	R-3516
10	End Section	----
11	Inlet Type "B" (modified)	R-3516
12	Inlet Type "B" (modified)	R-3516
13	Special Structure	----
14	Manhole Type "B"	R-1772-A
14A	End Section	----
15	Inlet Type "A" (modified)	R-3516
16	End Section	----
17	End Section	----
18	End Section	----
19	Inlet Type "A"	R-4342
20	Inlet Type "A" (modified)	R-3516
21	Manhole Type "B"	R-3516
22	No Structure	----
23	Manhole Type "B"	R-4342
24	Manhole Type "B"	R-4342
25	Manhole Type "B"	R-4342
26	End Section	----
27	Inlet Type "A" (modified)	R-3516
28	Inlet Type "B" (modified)	R-3516
29	Manhole Type "B"	R-4342
30	End Section	----
31	Inlet Type "A"	R-4342
32	End Section	----
33	End Section	----
34	Inlet Type "A"	R-3501-N
35	Inlet Type "A"	R-3501-N
36	Manhole Type "B"	R-3516
37	End Section	----
38	Manhole Type "B"	R-1772-A
39	Manhole Type "B"	R-1772-A
40	Manhole Type "B"	R-4342
41	No Structure	----
42	Inlet Type "B" (modified)	R-3516
43	Inlet Type "B" (modified)	R-3516
44	Manhole Type "B"	R-4342
45	Manhole Type "B"	R-1772-A
46	Manhole Type "B"	R-3501-N
47	Manhole Type "B"	R-3501-N
48	Manhole Type "B"	R-1772-A
49	End Section	----
50	Inlet Type "A" (modified)	R-3516
51	Inlet Type "A" (modified)	R-3516
52	Manhole Type "B"	R-4342
53	End Section	----
54	Inlet Type "A" (modified)	R-3516
55	Manhole Type "B"	R-3501-N
56	Inlet Type "B" (modified)	R-3516
56A	End Section	----
57	Manhole Type "B"	R-4342
57A	Manhole Type "B"	R-4342
58	Inlet Type "B" (modified)	R-3516
59	Inlet Type "A" (modified)	R-3516
60	No Structure	----
61	Inlet Type "A"	R-4342
62	Manhole Type "B"	R-1772-A
63	Inlet Type "B"	R-3501-A
64	Inlet Type "B" (modified)	R-3516
65	Manhole Type "B"	R-4342
66	Special Structure	R-4216-D
67	Manhole Type "B"	R-3501-N
68	Manhole Type "B"	R-3501-N
69	Manhole Type "B"	R-4342
70	Inlet Type "B" (modified)	R-3516
71	Inlet Type "B" (modified)	R-3516
72	End Section	----
73	Inlet Type "B" (modified)	R-3516
74	Inlet Type "B" (modified)	R-3516
75	End Section	----
76	End Section	----
77	End Section	----
78	Inlet Type "B" (modified)	R-3516
79	Inlet Type "B" (modified)	R-3516
80	End Section	----
81	End Section	----
82	Inlet Type "B"	R-3150
83	Inlet Type "B"	R-3150
84	End Section	----
85	End Section	----
86	Inlet Type "B"	R-3150
87	Inlet Type "A"	R-3150
88	End Section	----
89	Manhole Type "B"	R-4342
90	End Section	----
91	End Section	----
92	Manhole Type "B"	R-3516
93	Manhole Type "B"	R-3516
94	Manhole Type "B"	R-3516
95	Inlet Type "A" (modified)	R-3516
96	Manhole Type "B"	R-1772-A
97	Manhole Type "B"	R-4342
98	Manhole Type "B"	R-4342
99	No Structure	----
100	Manhole Type "B"	R-3516
101	Inlet Type "B" (modified)	R-3516
102	Inlet Type "B"	R-4342
103	Inlet Type "A"	R-4342
104	End Section	----
105	Inlet Type "A"	R-3501-N
106	End Section	----

Revisions and Dates: 2-25-93 Rev San Sewer Specs 1-4-94 Add Str 90A 4-23-94 Del Str 10A; Rev Str 70 to End Section	Designed by: <i>Stephen E. Bourque</i> Drawn by: <i>Stephen E. Bourque</i> Checked by: <i>Stephen E. Bourque</i> Approved by: <i>Stephen E. Bourque</i> Date February 8, 1993		Mid States Engineering, Inc. 501 Congressional Blvd., Suite 110 Carmel, IN 46032 317-843-5080	SPECIFICATIONS JUL 13 1994 Scale: Job No: 114-0522 Date: 2 of 52
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- LEGEND
- EXISTING
- PROPOSED
- STORM SEWER
- SANITARY SEWER
- MANHOLE
- INLET
- END SECTION
- STORM STR. NO.
- SANITARY STR. NO.
- FLOW ARROW
- CONTOUR
- SPOT ELEVATION
- MATCH EXISTING GRADE

NOTE: THE FLOW LINE AND BANKS OF WILLIAMS CREEK ARE TO BE CLEARED OF SNAGS AND DEAD VEGETATION.

Revisions and Dates
3-12-93 Relocate Str 8 & 9, Rev Line A Sta 11-14, Add End of Road Note on stub street
4-09-93 Changed Street Name
6-21-94 Extend QuailPointe Dr. to 141st Street.
6-21-94 Delete Loretta Drive
7-11-94 Add Note

Designed by: BEH	Drawn by: OSC	Checked by: BEH	Approved by: Beh
Date: 6/30/94			

MSE Engineering

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

Site
SITE UTILITY PLAN
FILE GRADING PLAN
SECTION 5 & 7

Scale: 1" = 50' Job No: 114-0522 Sheet No: 8A of 52

CURVE	DELTA	RADIUS	TANGENT	LENGTH	CHORD	BEARING
1	18°00'00"	50.00	85.24	102.98	85.12	N 89°51'03" V
2	60°40'32"	48.00	24.09	50.83	48.49	S 60°34'50" E
3	43°39'28"	300.00	120.17	228.59	223.10	S 60°05'18" E
4	90°00'00"	20.00	20.00	31.42	28.28	S 02°15'34" E
5	90°00'00"	20.00	20.00	31.42	28.28	N 87°44'26" E
6	25°15'43"	150.00	33.61	66.14	65.60	S 55°22'18" V
7	51°55'03"	48.00	23.37	43.50	42.02	N 87°20'08" E
8	21°08'19"	56.50	26.37	79.11	79.11	N 22°16'27" V
9	43°22'51"	48.00	19.09	36.34	35.48	N 43°50'49" E
10	41°20'39"	500.00	188.66	360.80	353.02	S 22°04'07" V
11	89°31'29"	20.00	19.83	31.25	28.17	S 43°50'28" E
12	80°00'00"	20.00	20.00	31.42	28.28	N 46°23'41" E
13	90°00'00"	20.00	20.00	31.42	28.28	N 46°23'41" E
14	90°00'00"	20.00	20.00	31.42	28.28	N 46°23'41" E
15	45°41'11"	48.00	20.22	36.28	31.27	S 24°14'26" V
16	27°12'34"	56.50	26.61	78.94	78.94	S 88°36'13" E
17	45°41'11"	48.00	20.22	36.28	31.27	N 21°26'51" E
18	06°05'50"	300.00	15.98	31.92	31.91	S 88°20'53" V
19	25°12'50"	300.00	67.10	132.02	130.96	N 82°05'31" V
20	12°15'14"	800.00	85.88	171.10	170.77	N 63°21'35" V
20-A	10°41'53"	800.00	74.91	149.37	149.16	N 64°08'15" V
20-B	01°23'51"	800.00	10.86	21.72	21.72	S 43°50'28" E
20-C	06°43'11"	775.00	45.90	90.89	90.84	N 65°07'36" V
20-D	08°18'14"	825.00	59.83	119.57	119.46	N 65°20'05" V
21	71°52'01"	20.00	14.50	25.09	23.47	N 82°52'59" E
22	104°10'53"	20.00	25.68	36.37	31.56	N 05°08'31" V
23	88°24'45"	20.00	19.45	30.86	27.89	N 18°33'39" E
24	95°42'56"	20.00	22.10	33.41	29.66	S 14°54'34" E
25	49°41'02"	200.00	92.59	173.43	168.05	N 22°06'24" E
25-A	37°05'23"	175.00	58.71	113.28	111.32	N 15°48'35" E
25-B	35°41'01"	225.00	72.42	140.13	137.88	S 15°06'24" V
26	87°55'42"	225.00	217.01	445.29	312.39	S 46°41'58" E
27	08°19'51"	500.00	36.41	72.70	72.64	N 85°10'16" E
28	17°05'44"	200.00	30.06	59.68	59.45	S 89°33'13" V
28-A	08°10'34"	200.00	14.29	28.54	28.52	S 89°50'37" V
28-B	08°55'10"	200.00	15.60	31.14	31.10	N 88°21'30" V
28-C	17°05'44"	200.00	26.30	52.22	52.02	N 89°33'13" E
29	81°49'26"	20.00	17.33	28.56	26.20	N 40°05'37" E
30	81°49'26"	20.00	17.33	28.56	26.20	S 14°54'34" E
31	04°42'55"	150.00	6.18	12.34	12.34	N 01°32'22" E
32	41°50'59"	48.00	18.35	35.06	34.29	S 24°49'19" V
33	26°41'51"	50.00	23.02	44.49	44.49	N 86°06'11" V
34	41°50'59"	48.00	18.35	35.06	34.29	N 17°01'40" E
35	68°26'00"	210.00	68.26	120.00	117.80	S 17°45'55" V
36	77°11'54"	150.00	119.74	202.10	187.16	N 52°03'52" V
37	89°22'21"	150.00	148.37	233.98	210.97	N 44°38'51" E
38	54°37'12"	300.00	154.91	285.99	275.28	N 21°20'53" V
38-A	54°37'12"	275.00	142.00	262.16	252.34	N 21°20'53" V
38-B	50°22'55"	325.00	155.87	285.78	276.66	N 21°14'41" V
39	85°45'43"	20.00	18.57	29.94	27.22	N 07°32'20" V
40	41°50'59"	48.00	18.35	35.06	34.29	S 24°49'19" V
41	26°41'51"	50.00	23.02	44.49	44.49	N 86°06'11" V
42	41°50'59"	48.00	18.35	35.06	34.29	N 17°01'40" E
43	30°00'00"	20.00	20.00	31.42	28.28	N 80°20'51" E
44	54°37'12"	300.00	154.91	285.99	275.28	N 21°20'53" V
45	58°17'19"	250.00	135.40	254.33	243.51	S 09°04'56" V
46	15°00'00"	20.00	15.35	26.18	24.35	S 84°14'58" E
47	101°25'31"	20.00	24.45	35.40	30.96	S 03°51'48" V
48	13°26'16"	20.00	14.92	25.63	23.92	N 82°28'06" V
49	105°00'00"	20.00	26.06	36.65	31.13	N 05°45'00" E
50	18°25'37"	150.00	24.33	48.24	48.03	S 37°32'09" V
51	41°50'59"	48.00	18.35	35.06	34.29	N 17°01'40" E
52	26°41'51"	50.00	23.02	44.49	44.49	N 86°06'11" V
53	41°50'59"	48.00	18.35	35.06	34.29	N 17°01'40" E
54	58°17'19"	250.00	135.40	254.33	243.51	N 29°06'23" E
54-A	59°51'03"	225.00	129.51	235.03	224.49	N 29°53'15" E
54-B	54°42'50"	275.00	142.00	262.16	252.34	N 21°14'41" V
55	45°40'56"	150.00	63.41	119.99	116.82	S 23°50'00" E
55-A	21°08'57"	125.00	23.34	46.14	45.88	S 36°10'29" E
55-B	33°56'12"	175.00	40.10	103.65	102.15	S 28°46'54" E
56	59°55'43"	48.00	21.67	50.21	47.95	S 04°21'51" V
57	26°18'09"	50.00	22.88	75.96	75.96	S 83°45'37" V
58	33°59'42"	48.00	14.67	28.48	28.06	N 29°48'36" V
59	30°52'45"	150.00	152.32	237.92	213.75	S 45°28'39" E
60	89°53'27"	150.00	149.71	235.33	211.93	N 44°04'10" E
61	40°53'55"	200.00	14.58	142.76	139.75	S 19°38'28" V
62	12°21'11"	200.00	21.84	43.12	43.04	S 46°16'01" V
63	90°00'00"	20.00	20.00	31.42	28.28	S 82°33'23" E
64	60°40'32"	48.00	24.09	50.83	48.49	S 01°13'07" E
65	24°04'02"	50.00	21.03	86.31	86.31	S 82°46'48" V
66	90°00'00"	20.00	20.00	31.42	28.28	N 07°26'31" V
67	05°29'41"	500.00	23.99	41.95	47.93	S 49°41'46" V
68	05°45'39"	250.00	63.16	374.20	340.24	N 19°53'11" V
69	53°18'05"	500.00	250.93	465.14	448.55	S 63°39'25" V
69-A	35°49'33"	475.00	153.54	291.01	292.19	S 54°55'10" V
69-B	42°25'12"	525.00	203.14	388.70	379.88	S 58°13'01" V
70	17°28'31"	150.00	23.05	45.75	45.57	N 81°34'12" E
71	73°21'52"	20.00	16.62	27.74	25.57	N 39°41'40" E
72	89°39'16"	20.00	19.88	31.30	28.20	N 44°51'54" V
73	86°40'43"	20.00	18.87	30.25	27.45	N 47°02'58" V
74	93°51'39"	20.00	21.40	32.76	23.22	S 46°53'33" V
75	14°28'35"	800.00	101.61	202.13	201.59	N 82°27'14" V
75-A	10°57'41"	760.00	72.92	145.40	145.18	N 80°41'43" V
75-B	11°30'03"	840.00	84.59	168.61	168.33	N 80°57'54" V
76	14°49'20"	800.00	104.06	206.96	206.38	N 82°37'31" V

LEGEND

EXISTING PROPOSED

STORM SEWER

SANITARY SEWER

MANHOLE

INLET

END SECTION

STORM STR. NO.

SANITARY STR. NO.

FLOW ARROW

CONTOUR

SPOT ELEVATION

MATCH EXISTING GRADE

NOTE: THE FLOW LINE AND BANKS OF WILLIAMS CREEK ARE TO BE CLEARED OF SNAGS AND DEAD VEGETATION.

Revisions and Dates	Designed by
3-12-93 Add End of Road Note on stub street	BEH
7-11-94 Add Note	BEH
	Checked by:
	BEH
	Approved by:
	SEB

Designed by: BEH

Drawn by: DSC

Checked by: BEH

Approved by: SEB

Date:

MSE Engineering

MSE Corporation
501 Congressional Boulevard
Suite 110
Carmel, IN 46032
317 843-5080
317 843-5089 FAX

Site: 501 Congressional Boulevard

SITE UTILITY PLAN & GRADING PLAN

SECTION 5.6

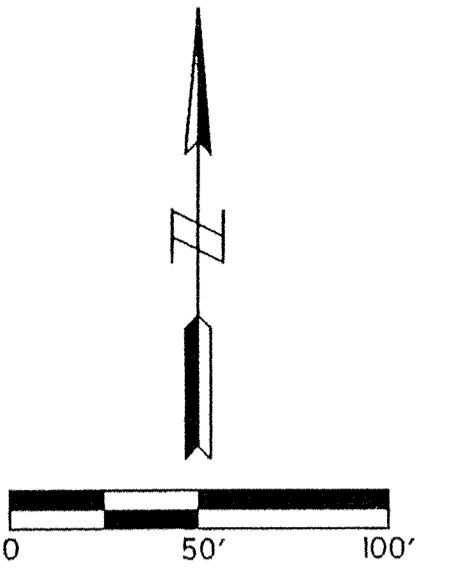
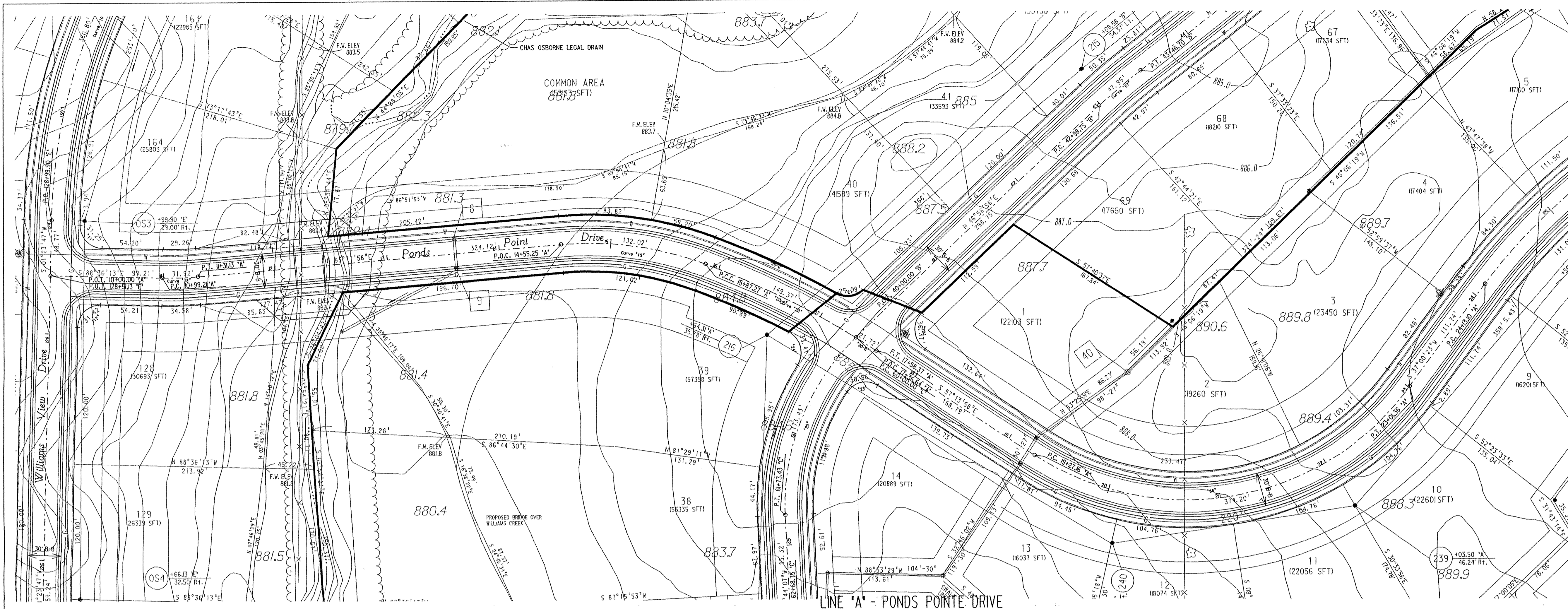
DATE: JUL 13 1994

Scale: 1"=50'

Job No: 114-0522

Sheet No: 88 of 92

DATE	BY
SURVEYED	
PLOTTER	
NOTE BOOK	
BY OF MAY CHECKED	



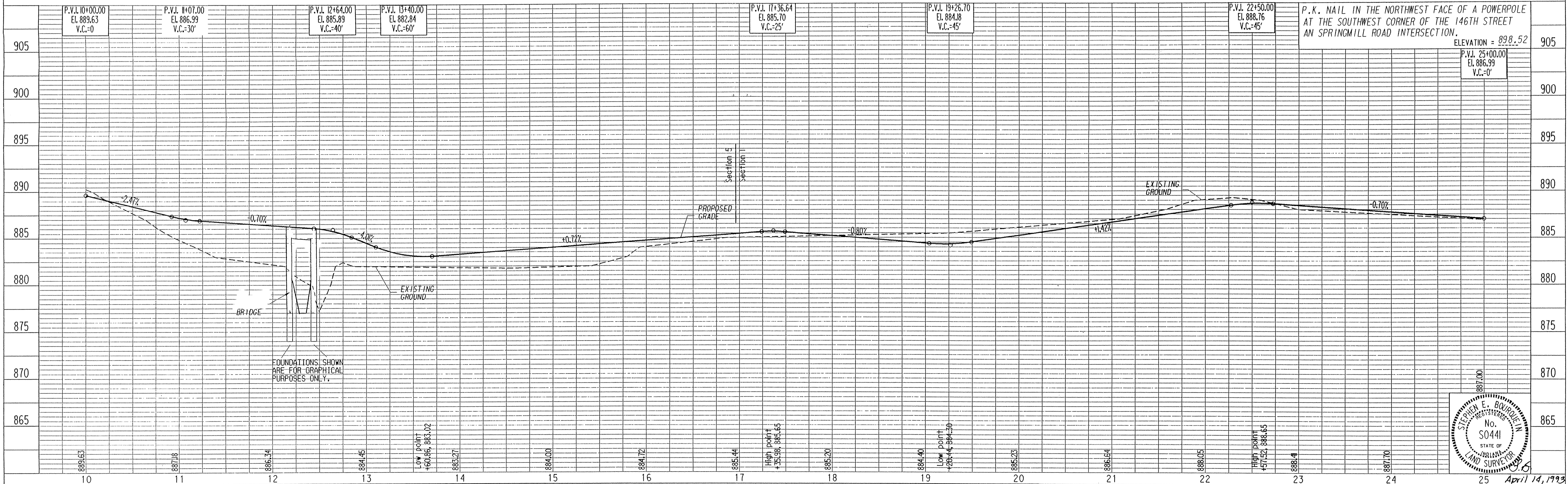
GRANULAR BACKFILL REQUIRED

25 MPH DESIGN SPEED
 SCALE: PLAN: 1" = 50'
 PROFILE: 1" = 5'
 VERTICAL: 1" = 50'
 HORIZONTAL: 1" = 50'

BENCH MARK DESCRIPTION

P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE AT THE SOUTHWEST CORNER OF THE 146TH STREET AN SPRINGMILL ROAD INTERSECTION. ELEVATION = 898.52

DATE	BY
SURVEYED	
PLOTTER	
NOTE BOOK	
BY OF MAY CHECKED	



STEPHEN E. BOVINGTON
 No. S0441
 STATE OF INDIANA
 LAND SURVEYOR

MSE Engineering

3-12-93 Revise Street Centerline Sta 11+00-14+00
 4-09-93 Changed Street Name

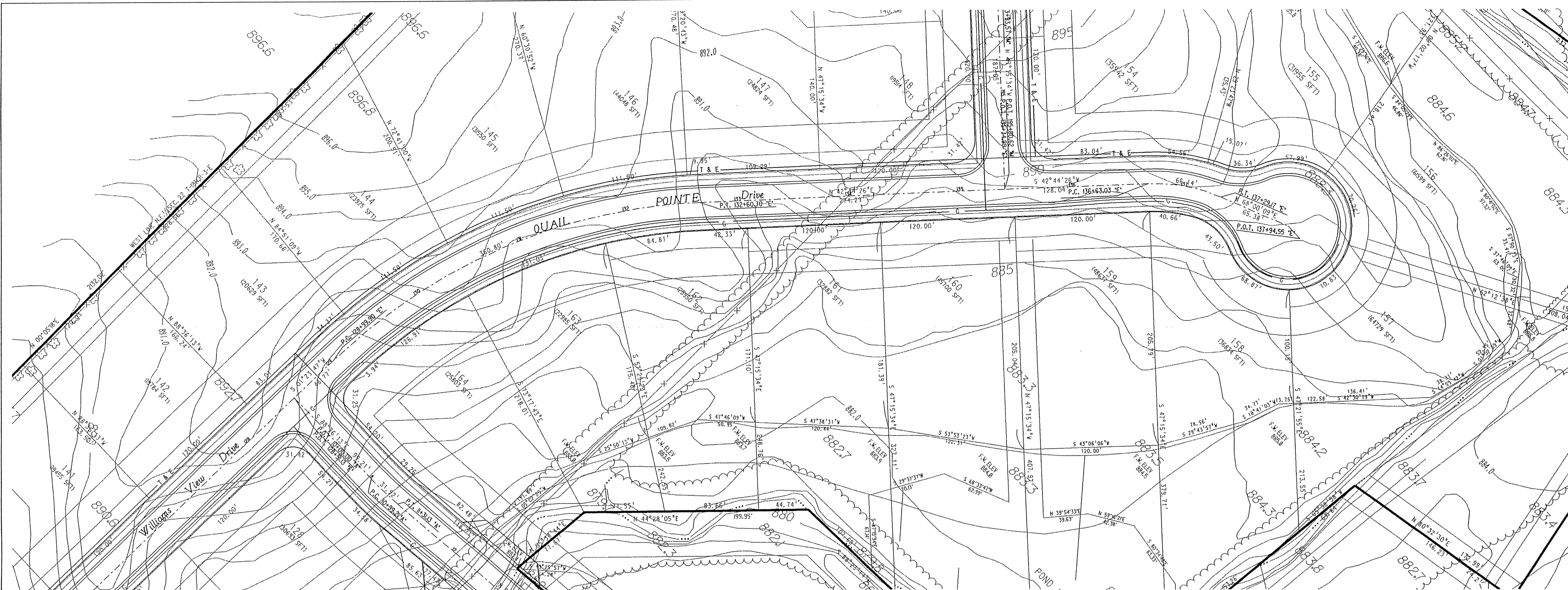
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DGN	PRF
14-0522	A	9	52	522512	522512

FILED

JUL 13 1994
 OFFICE OF HAMILTON COUNTY SURVEYOR
 STREET PLAN & PROFILE

NOTED
CHECKED
PT. OF WAY CHECKED
NO.

NOTED
CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED
NO.



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

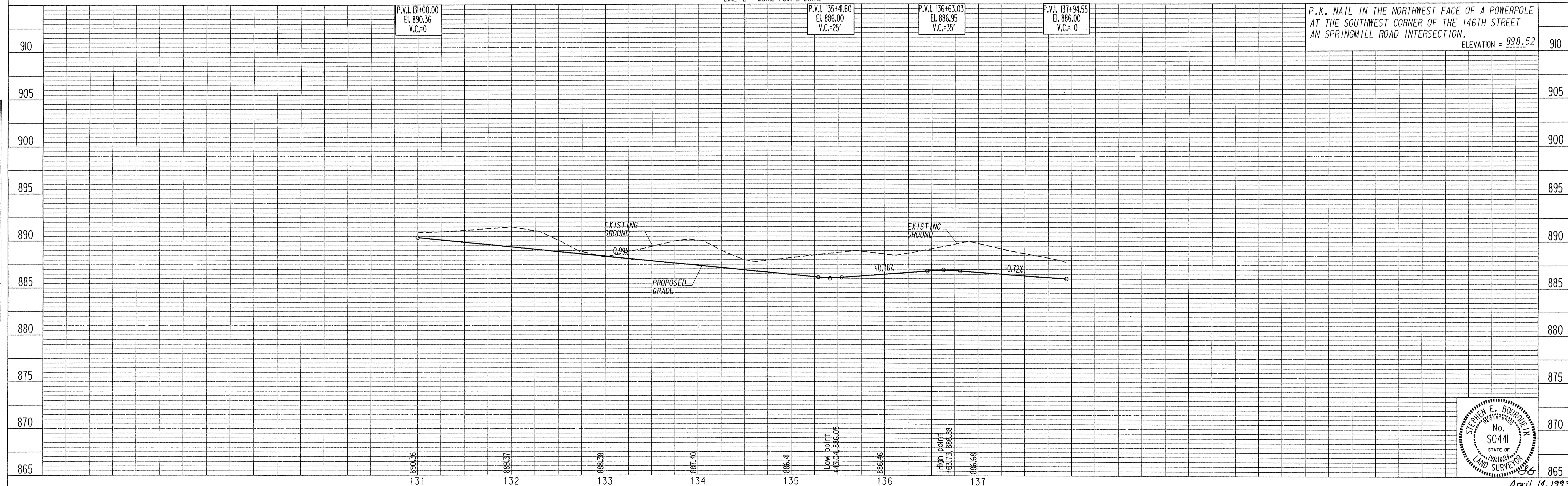
25 MPH DESIGN SPEED

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

BENCH MARK DESCRIPTION

P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE
AT THE SOUTHWEST CORNER OF THE 146TH STREET
AN SPRINGMILL ROAD INTERSECTION.
ELEVATION = 898.52

LINE 'E' - QUAIL POINTE DRIVE



MSE Engineering

PONDS WEST

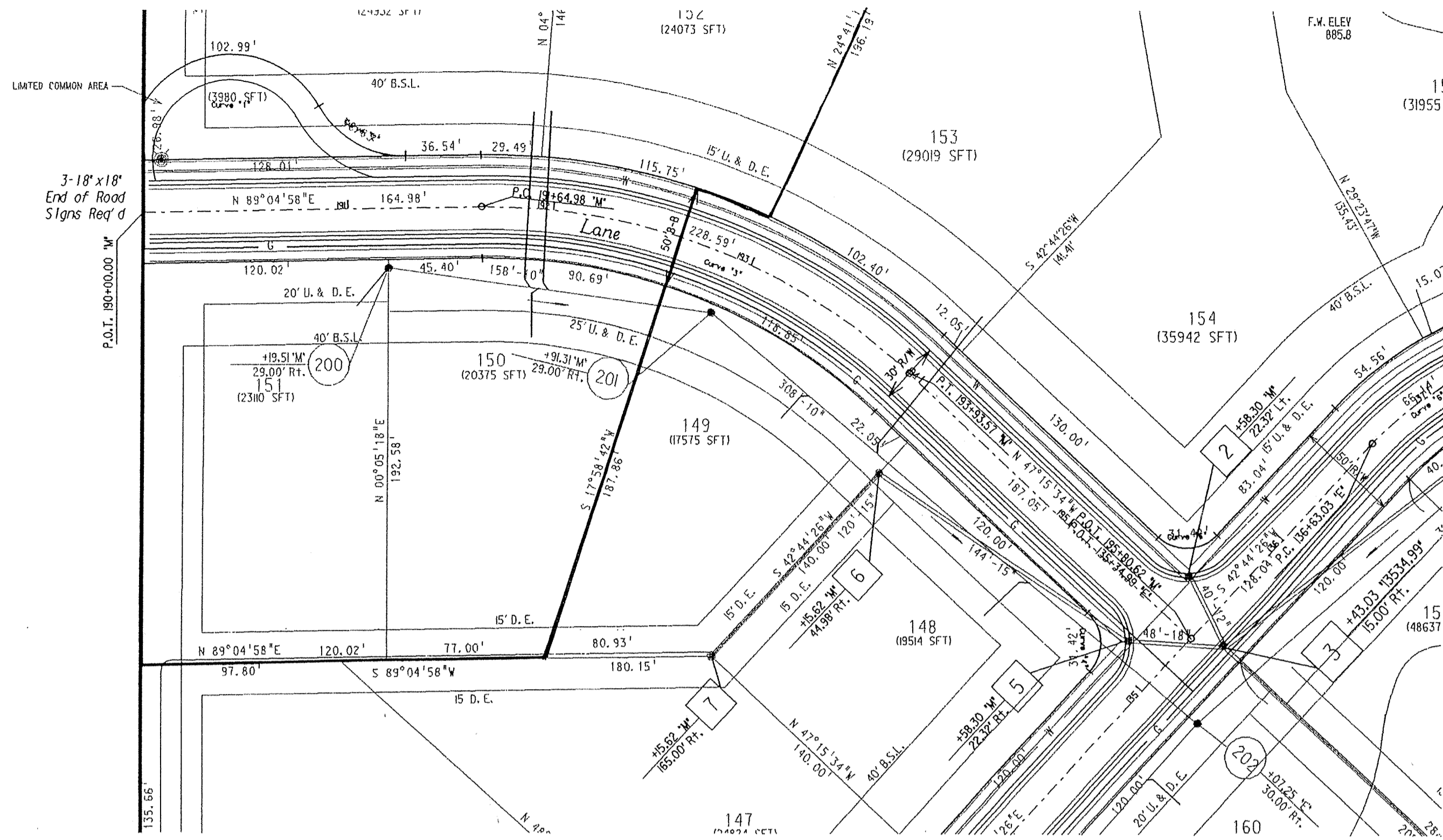
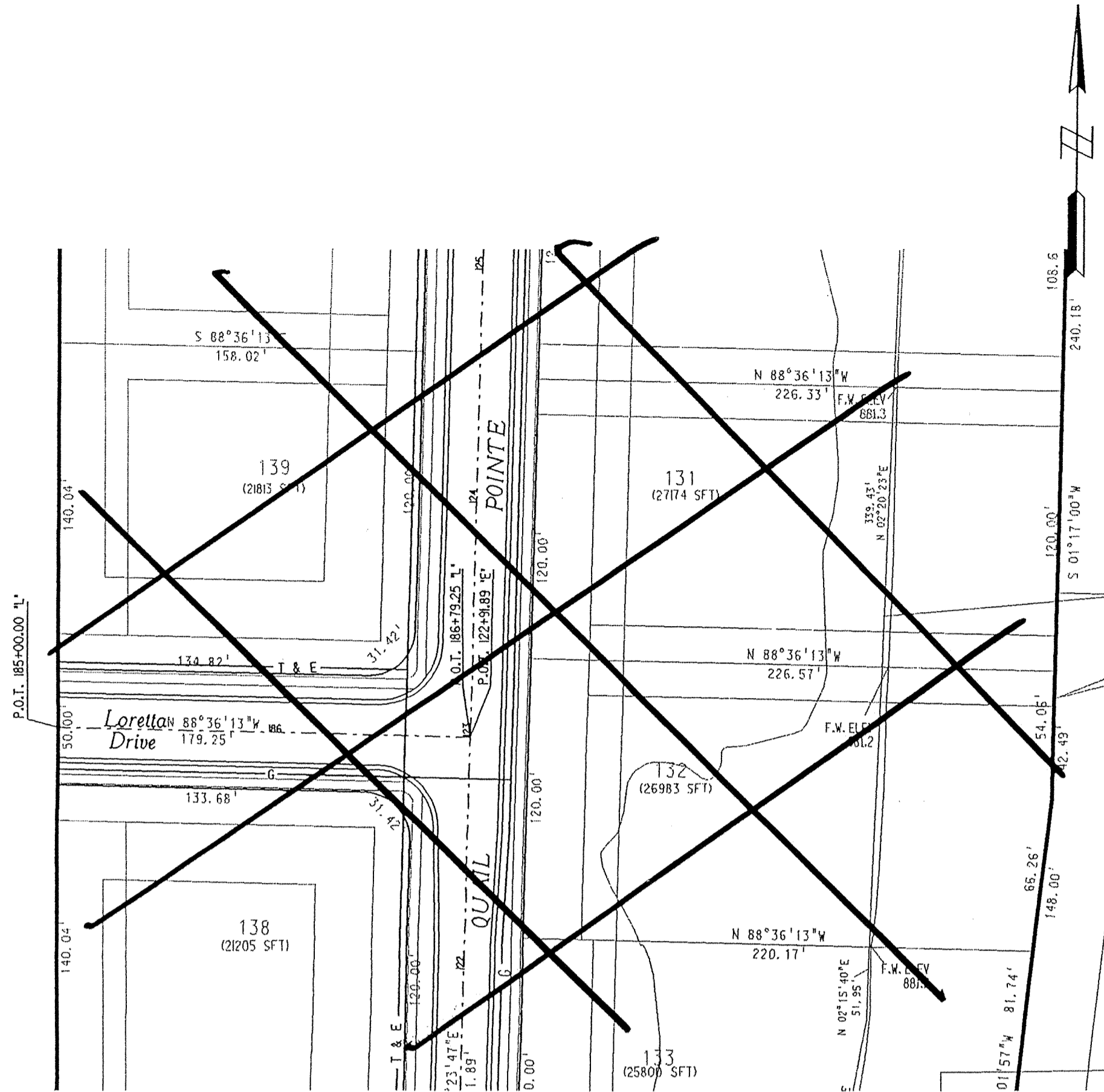
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DGN	PRF
14-0522	E	17	52	522STR7	522STR7

4-09-93 CHANGED STREET NAME

FILED
JUL 13 1994
STREET PLAN & PROFILE

OFFICE OF HAMILTON COUNTY SURVEYOR

DATE	BY	SURVEYED	NOTED	PLANNED



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



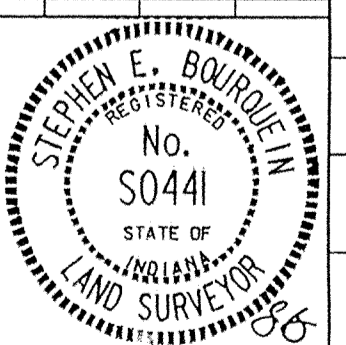
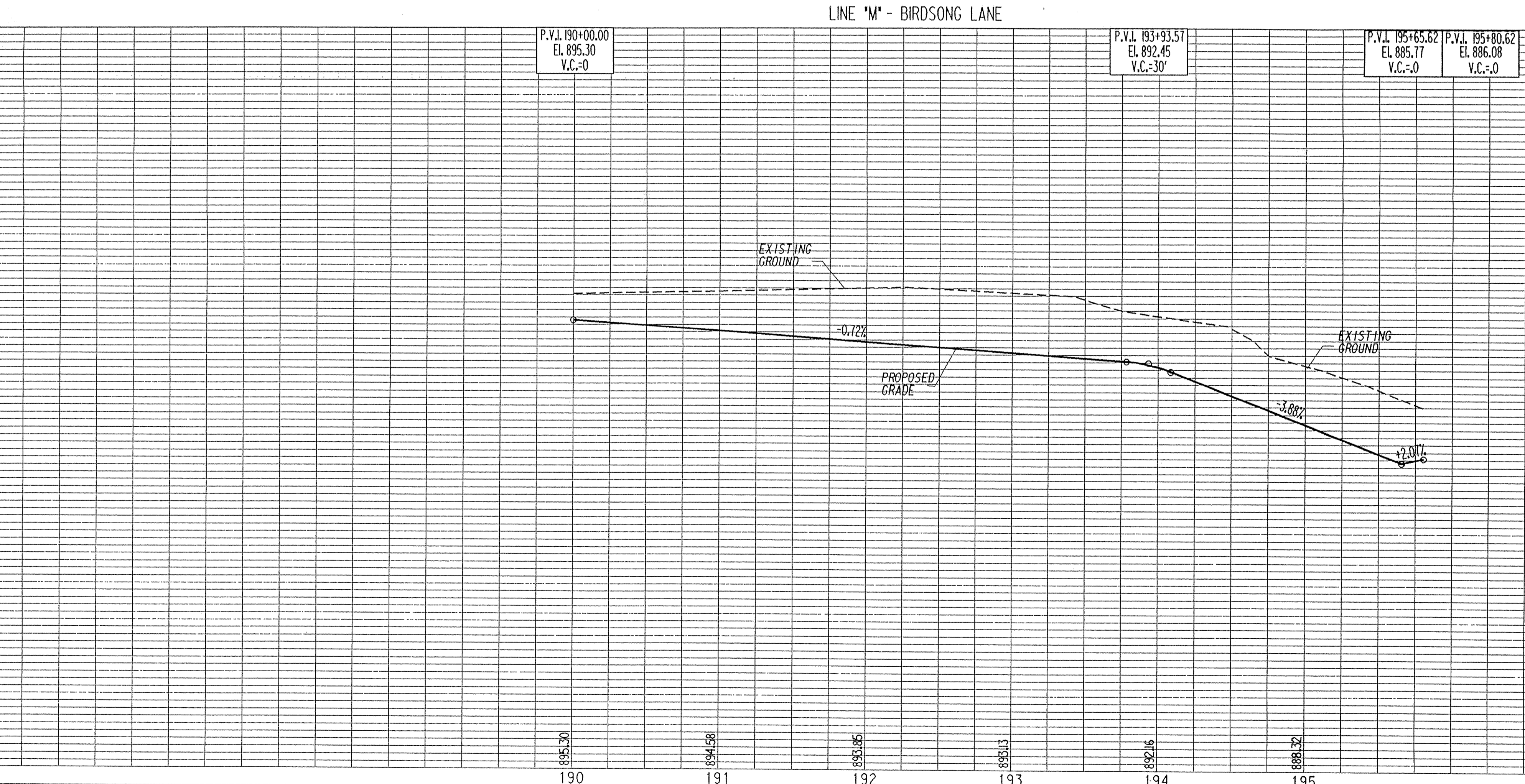
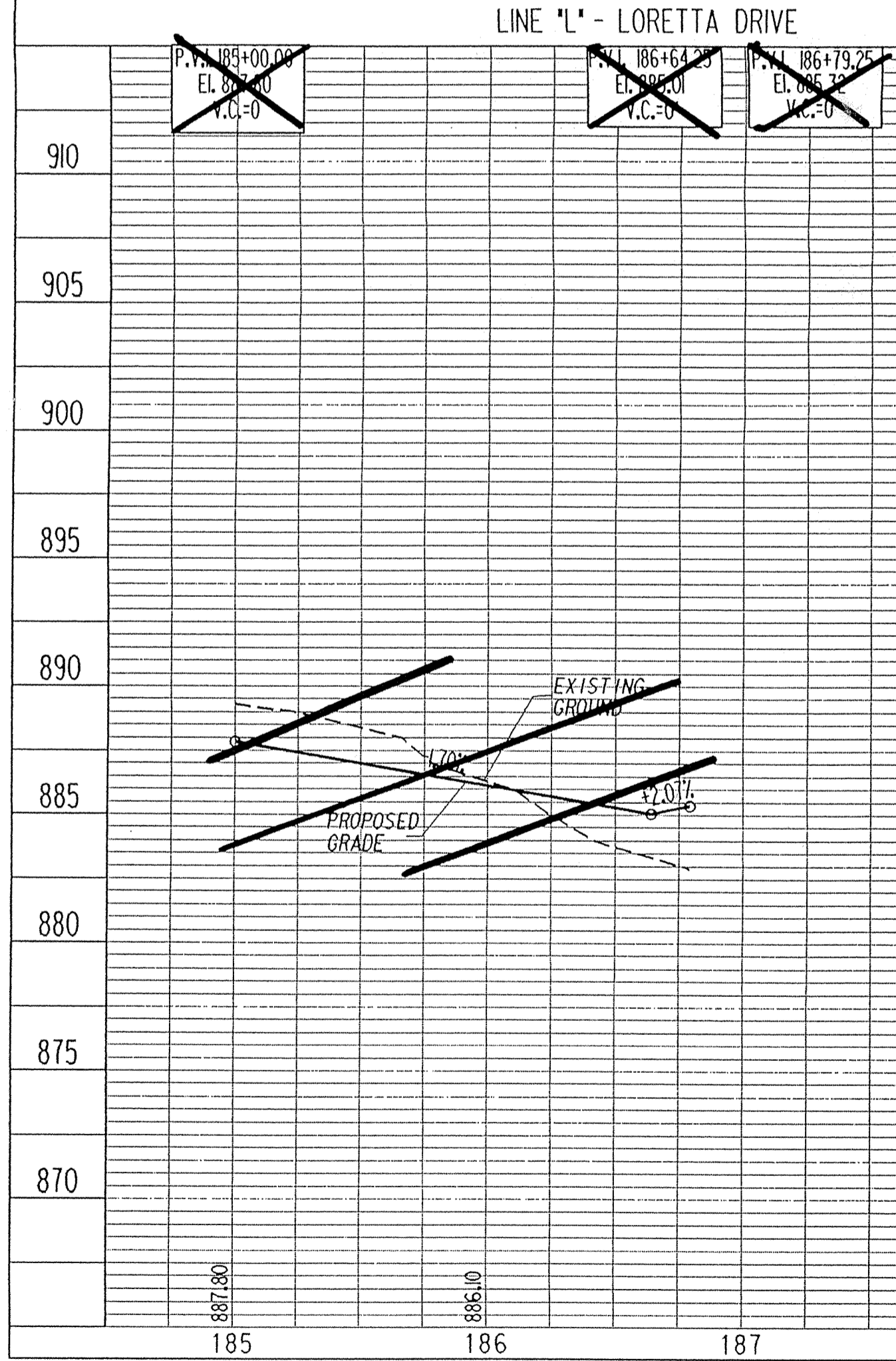
25 MPH DESIGN SPEED

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

BENCH MARK DESCRIPTION

P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE AT THE SOUTHWEST CORNER OF THE 146TH STREET AN SPRINGMILL ROAD INTERSECTION. ELEVATION = 898.52

DATE	BY	SURVEYED	NOTED	PLANNED



April 14, 1993

MSE Engineering

PONDS WEST

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DGN	PRF
04-0522	LW	18	52	5223TR9	5225TR9

4-09-93 CHANGED STREET NAME

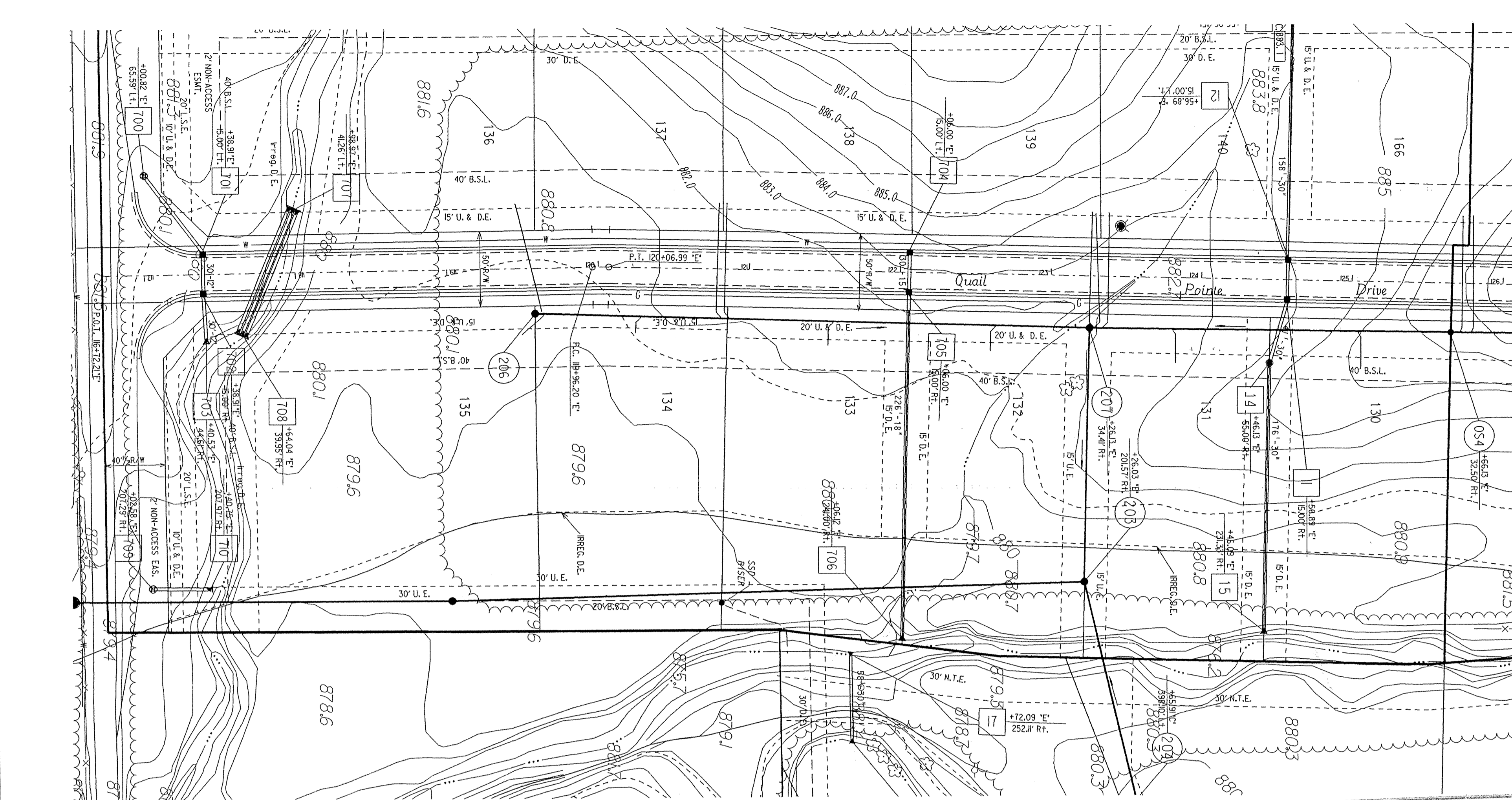
STREET PLAN & PROFILES
FILED

JUL 13 1994

OFFICE OF HAMILTON COUNTY SURVEYOR

PLAN	SURVEYED	DATE
NO.	BY	
NOTE BOOK: 111 P. 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000		

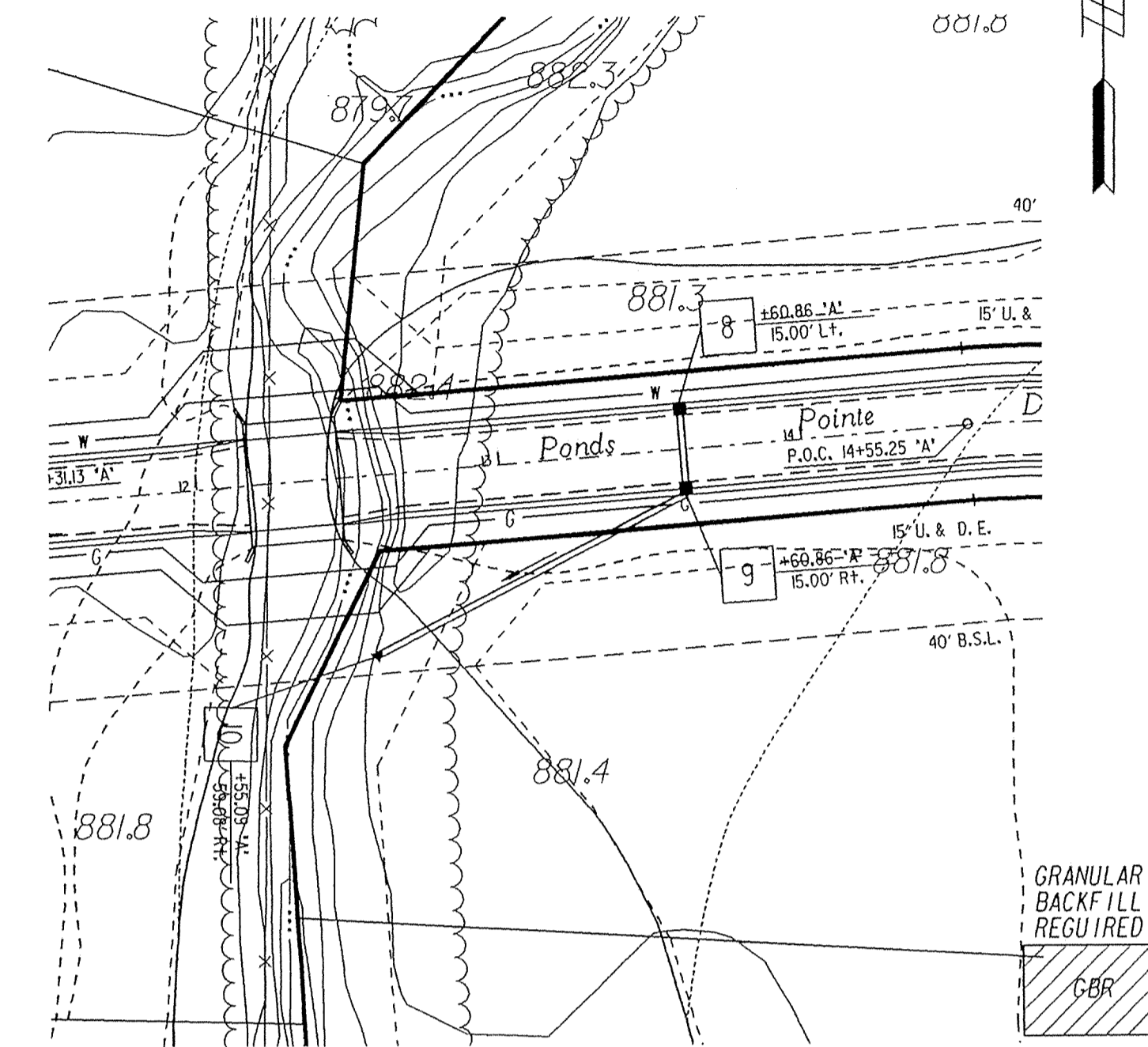
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NO.	BY	
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NOTES:

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

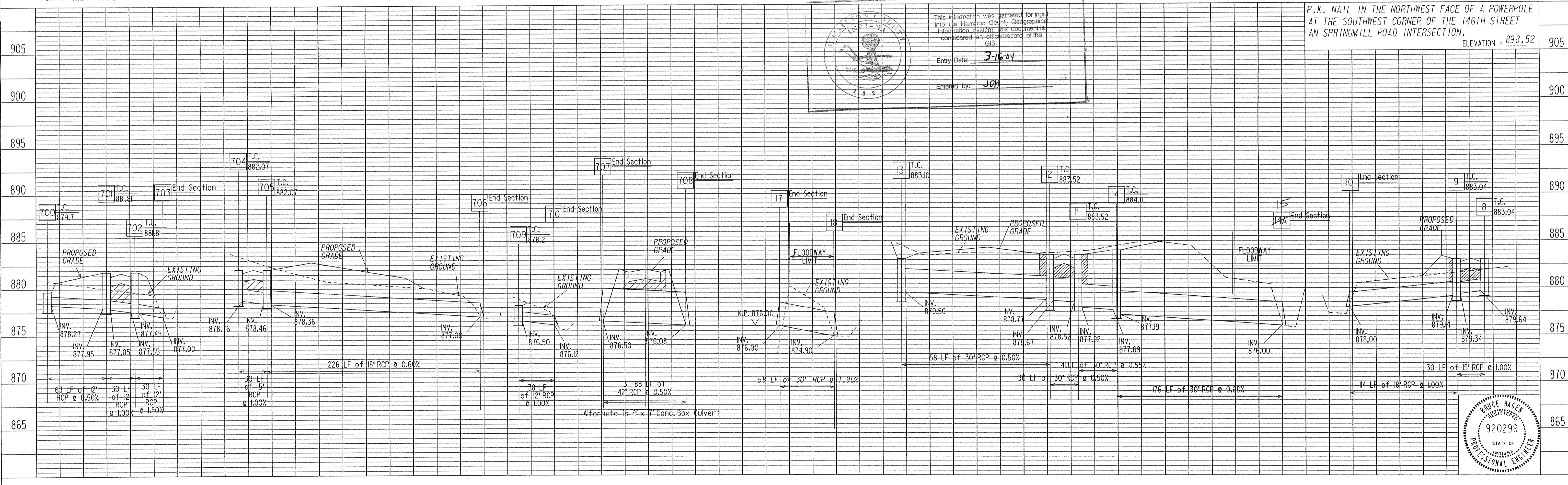
CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.



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

BENCH MARK DESCRIPTION

P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE AT THE SOUTHWEST CORNER OF THE 146TH STREET AN SPRINGMILL ROAD INTERSECTION. ELEVATION = 898.52



MSE Engineering

PONDS WEST

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DGN	PRF
14-052		30	52	5225TM6	5225TM6

3-12-93 Revise pipe run Str 8 - 10
6-21-94 Delete Str 15-16; Add Str 700-710

FILED
JUL 13 1994
STORM PLAN & PROFILE
OFFICE OF HAMILTON COUNTY SURVEYOR

PLAN	DATE	BY	DATE
SUBMITTED			
NOTE BOOK			
ALIGNED CHECKED			
NO.			

PROFILE	DATE	BY	DATE
SUBMITTED			
NOTE BOOK			
GRADES CHECKED			
NO.			



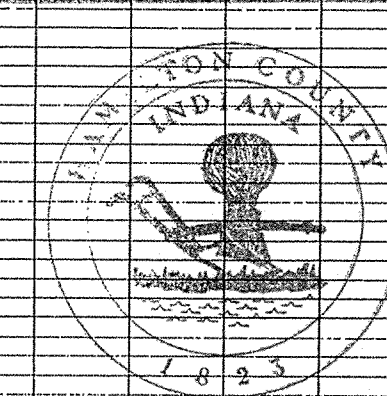
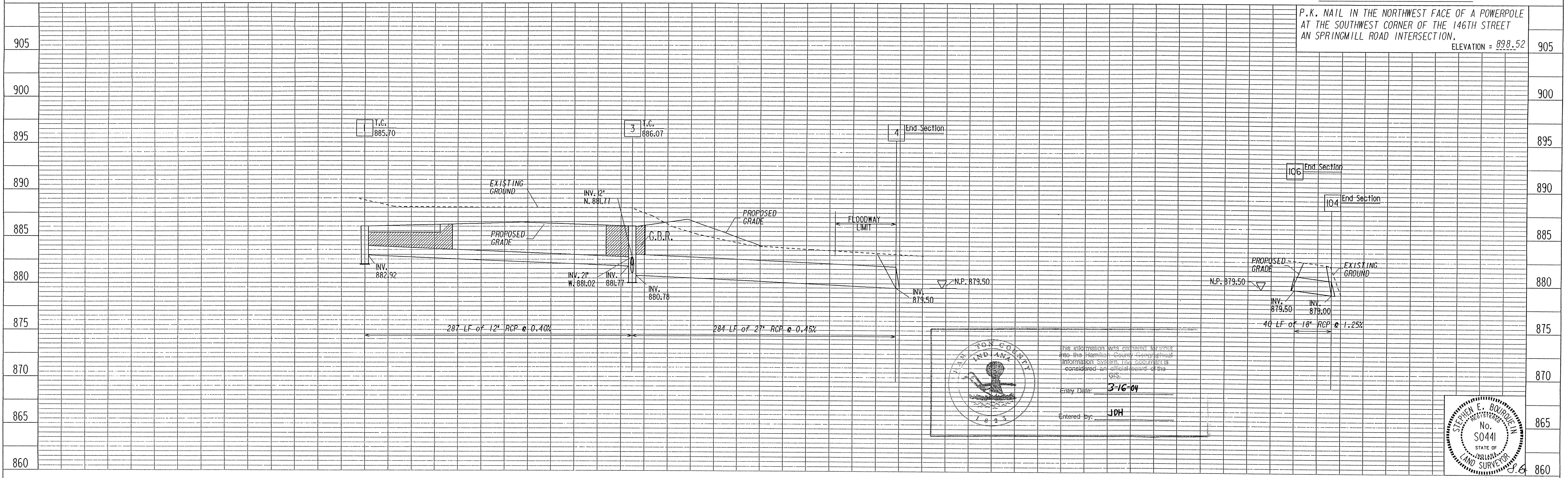
NOTES:
 LENGTHS OF PIPES INDICATED ARE FROM CENTER TO CENTER OF STRUCTURES AND ARE NOT ACTUAL PIPE LENGTHS.
 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.

GRANULAR BACKFILL REQUIRED
 GBR

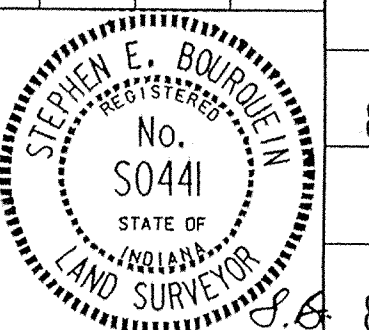
SCALE:
 PLAN: 1" = 50'
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BENCH MARK DESCRIPTION

P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE AT THE SOUTHWEST CORNER OF THE 146TH STREET AN SPRINGMILL ROAD INTERSECTION.
 ELEVATION = 898.52



This information was obtained from the Hamilton County Geographic Information System and is considered an official record of the GIS.
 Entry Date: 3-16-04
 Entered By: JDN



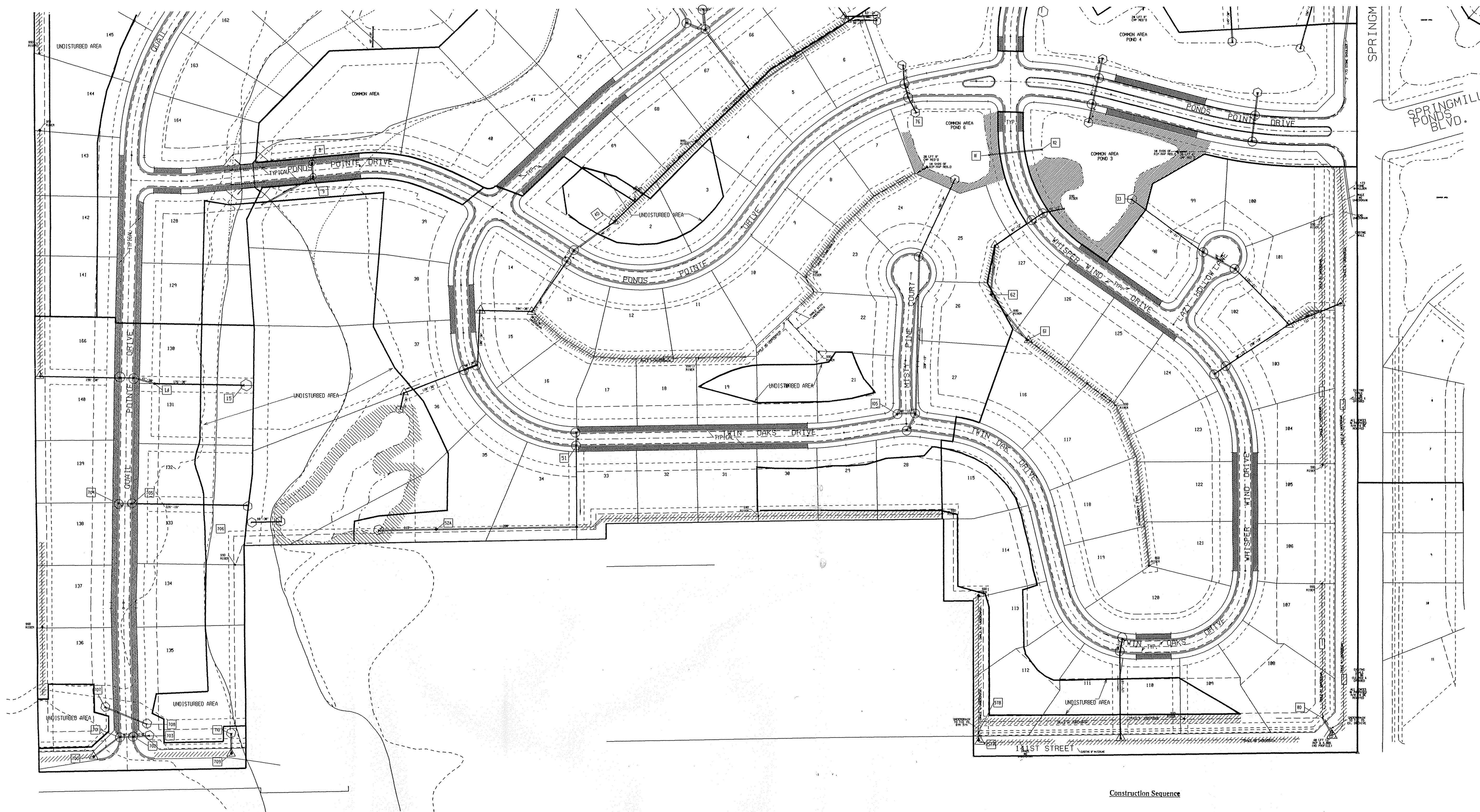
April 14, 1993

MSE Engineering

PONDS WEST

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DN	PRF
14-0522		52	52	5225TM7	5225TM7

FILED
 JUL 13 1994
 OFFICE OF HAMILTON COUNTY SURVEYOR
 STORM PLAN & PROFILE



NOTES:

EROSION CONTROL BLANKETS TO HAVE A MINIMUM VELOCITY RATING OF 3 FT/SEC.
LAKE BANK SEEDING - USE SEEDING CHART SHEET 51.
SEEDING BEHIND CURB - USE SEEDING CHART SHEET 51.
LAKE BANK SEEDING AND SWALE SEEDING TO BE PERMANENT SEEDING.
SEEDING BEHIND CURB AND MOUND SEEDING TO BE TEMPORARY SEEDING.

LEGEND

- △ TEMPORARY SILTATION SUMP
- TEMPORARY SILTING PIT
- RIP-RAP 0.50'-7"
- SILT FENCE OR STRAW BALE DAM
- ▨ SEEDING BEHIND CURB - MOUND SEEDING (REQUIRED BEHIND ALL CURBS)
- ▨ EROSION CONTROL BLANKET/ SWALE SEEDING/ LAKE BANK SEEDING

NOTE: SEE DETAILS ON SHEET 51.
NOTE: ALL INLETS DRAINING DIRECTLY TO WILLIAMS CREEK WILL REQUIRE GRAVEL CURB INLET PROTECTION

PONDS WEST

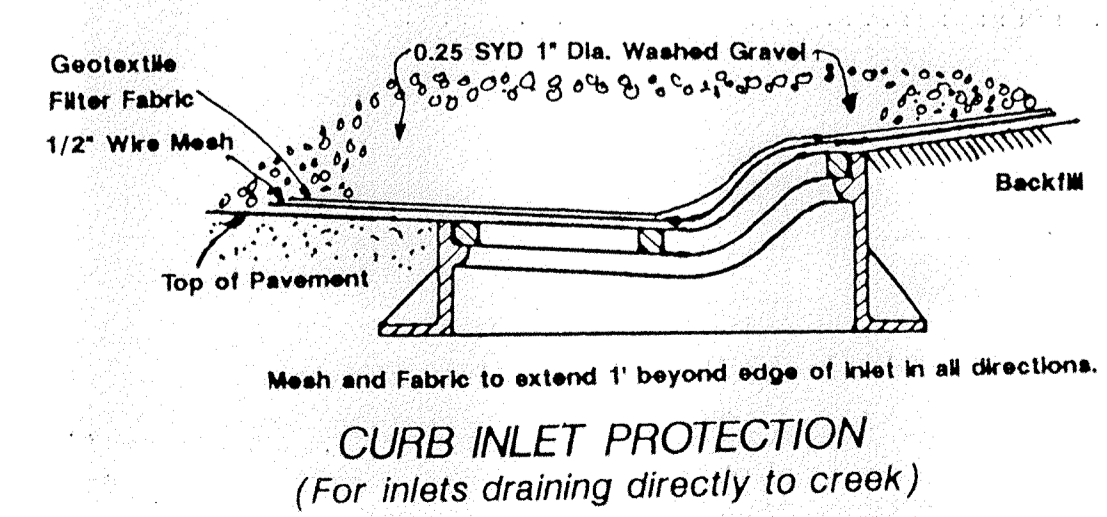
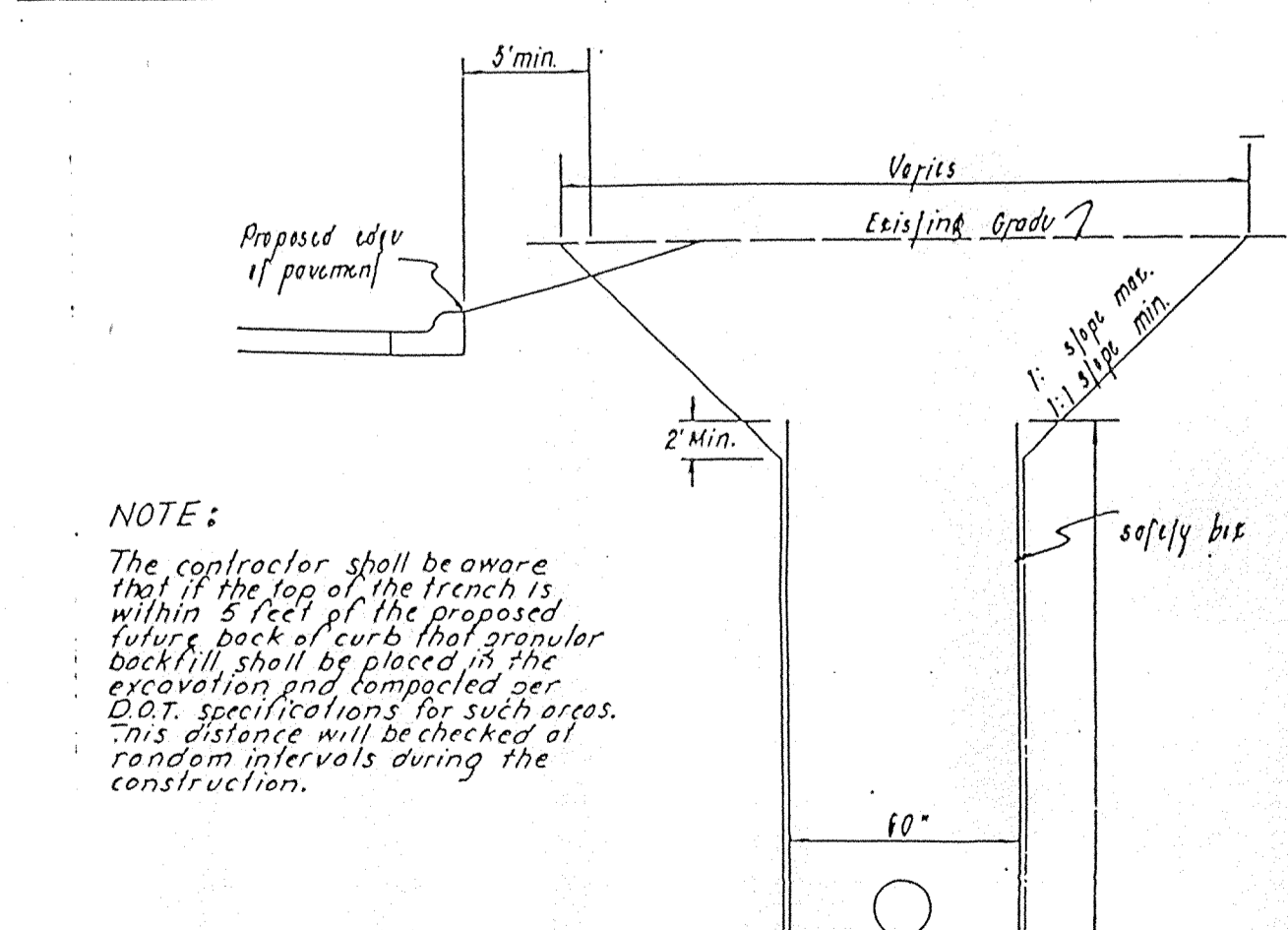
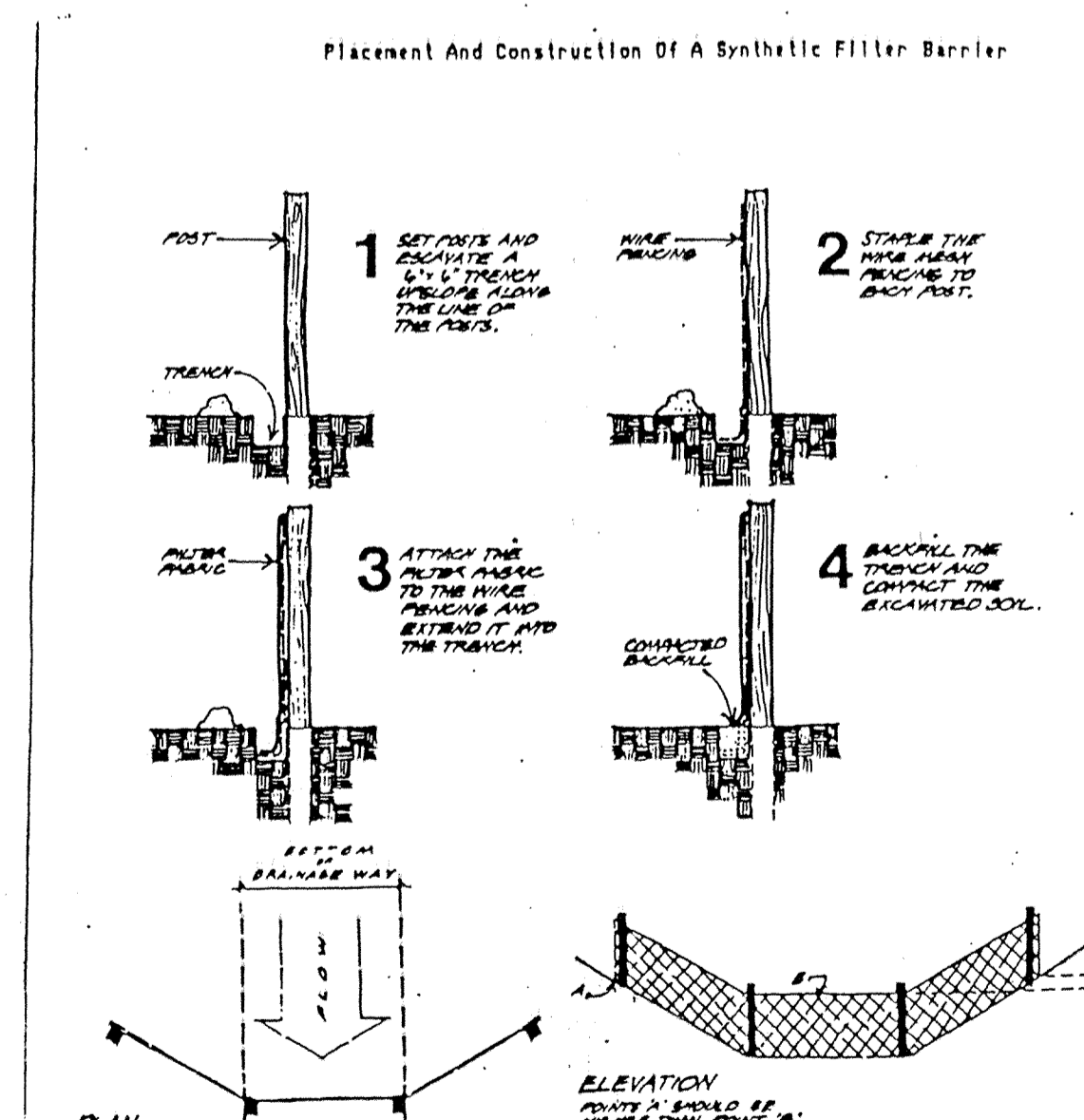
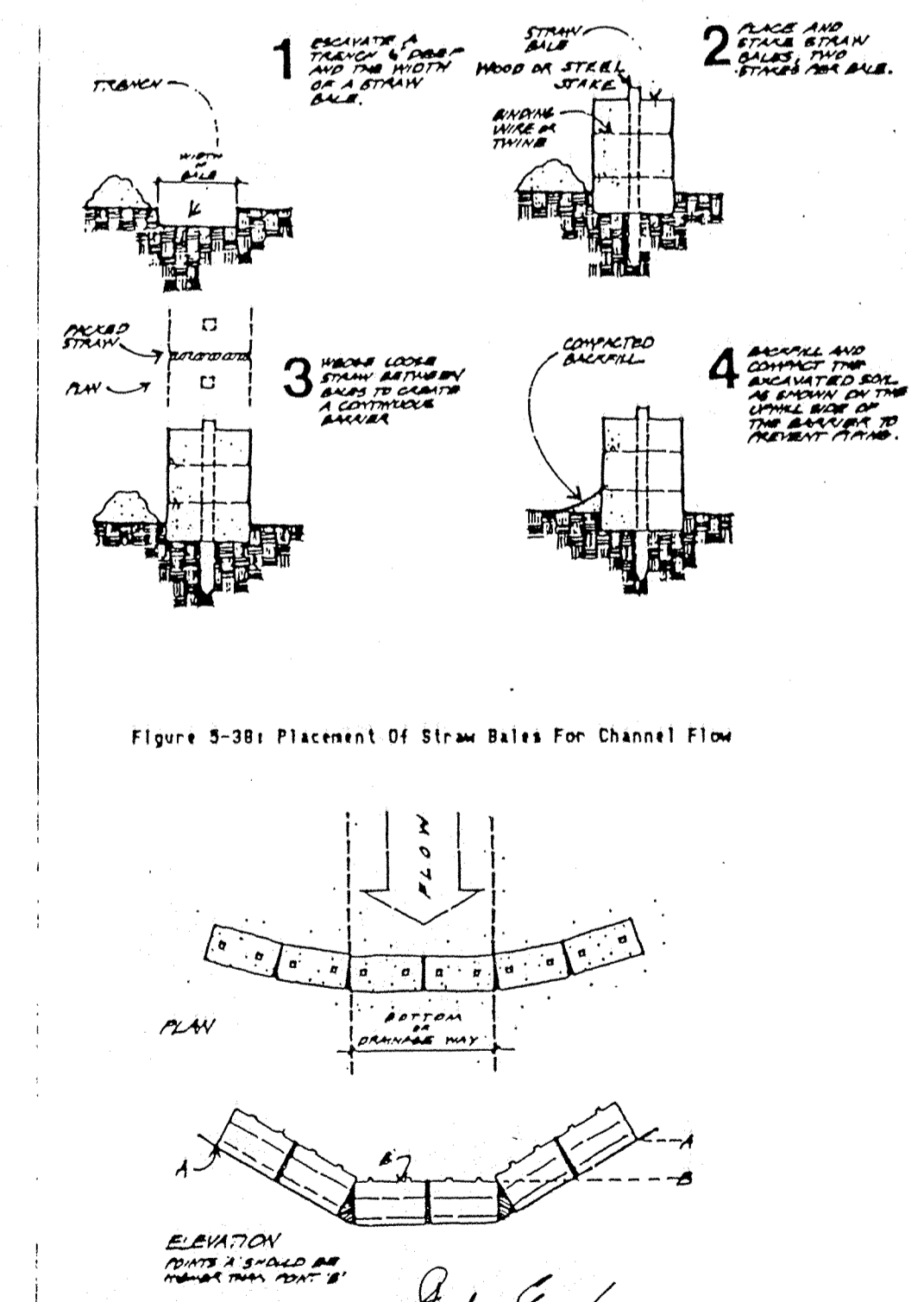
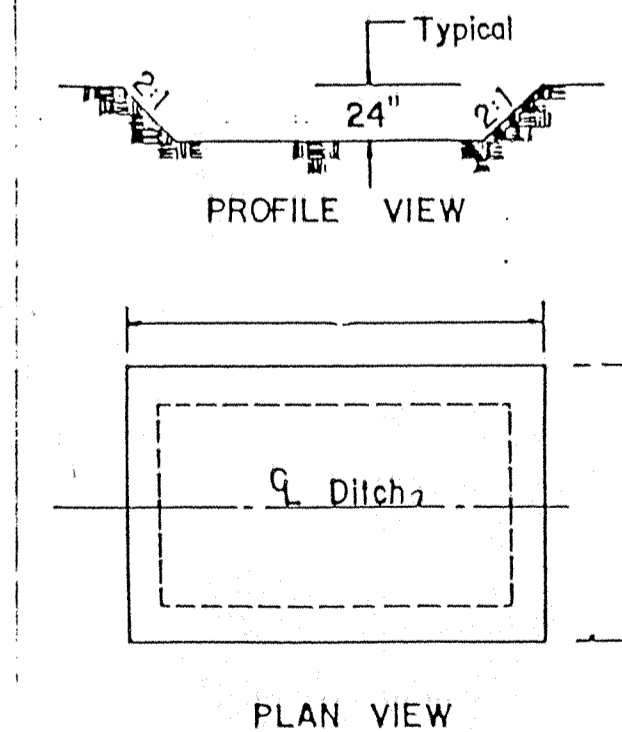
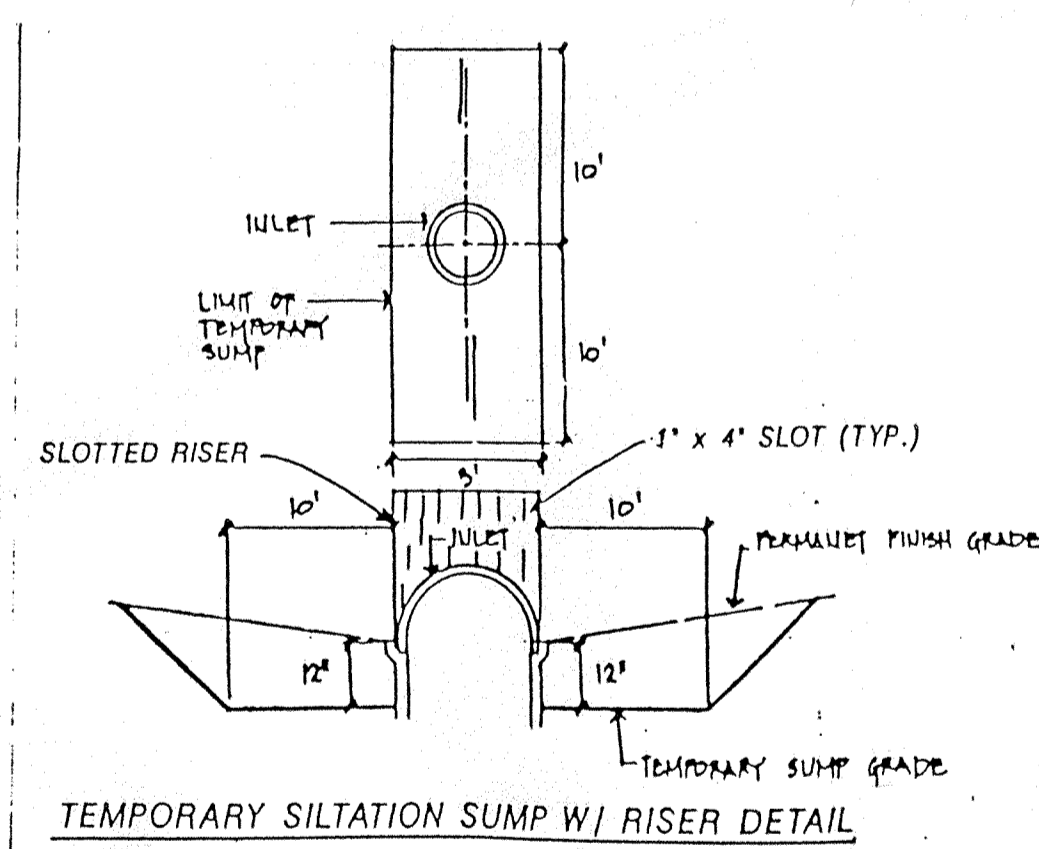
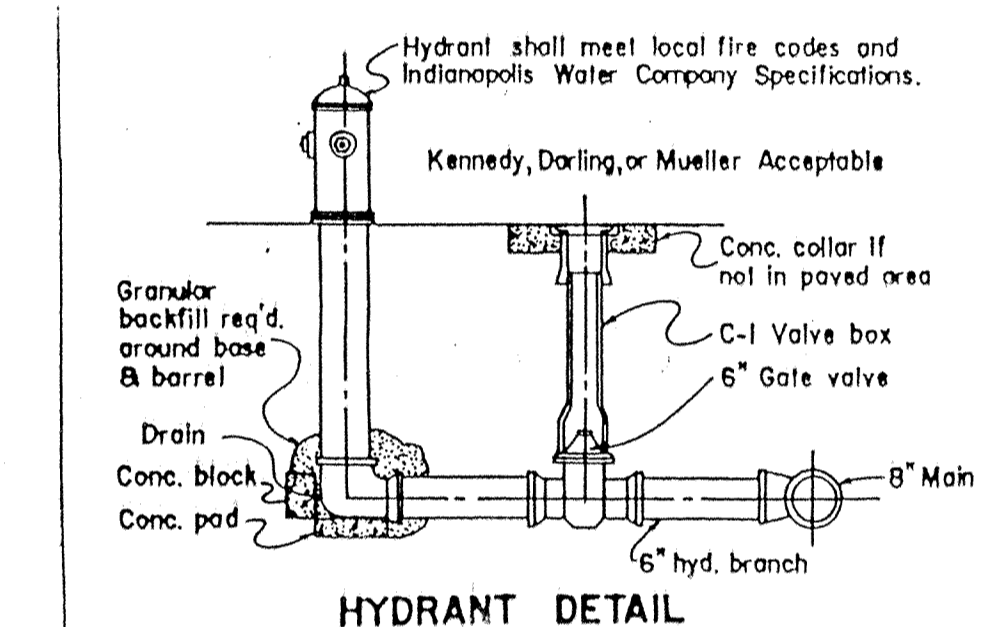
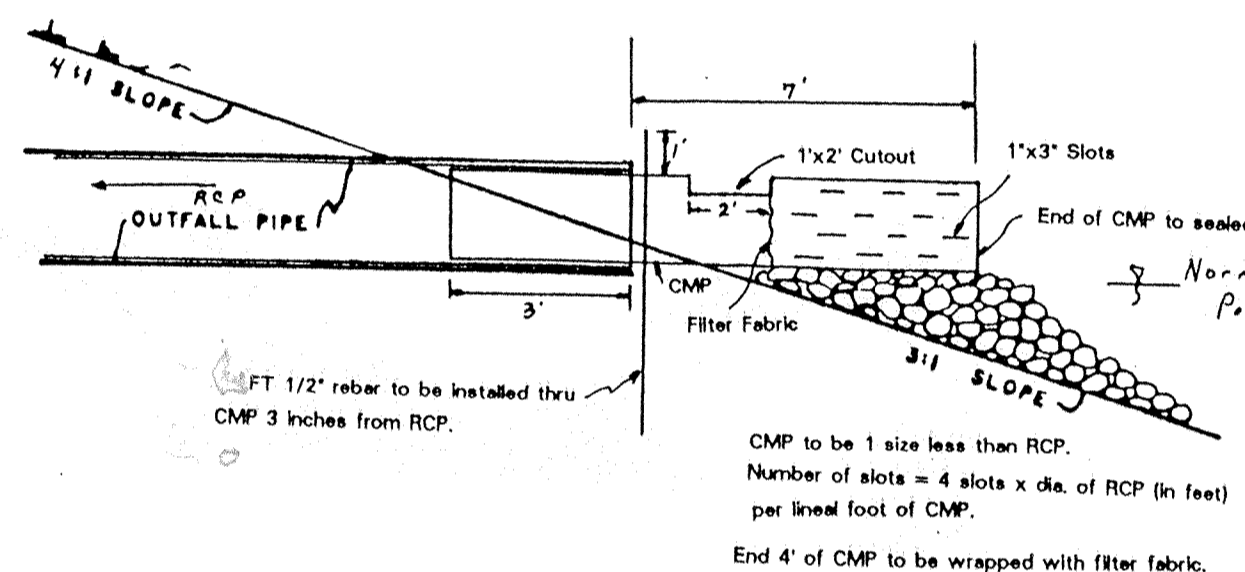
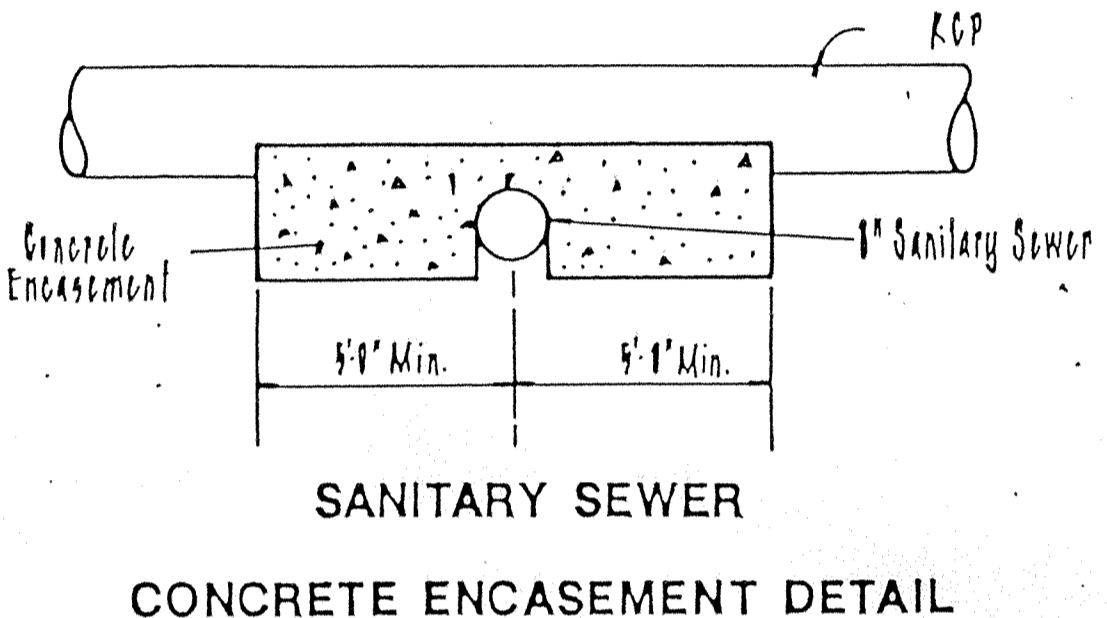
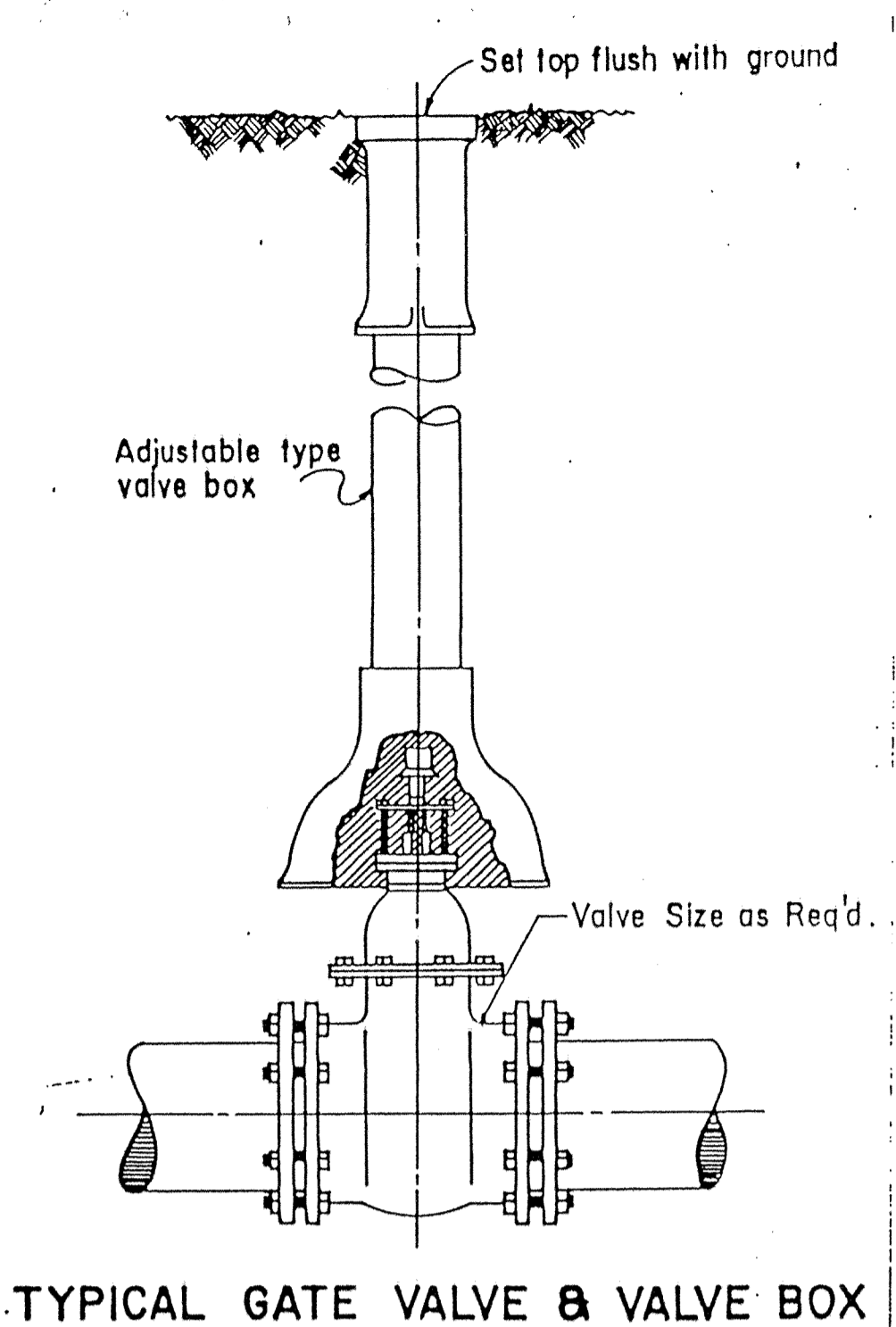
Construction Sequence

- 1.) Construct detention basins. Install outlet piping. Install temporary outlet structure in Ponds 5 & 7. Install silt barricades around outlet structures which serve as intake between Ponds 5 & 7.
- 2.) Strip Section 1 stockpile topsoil as directed on site.
- 3.) Rough grade Section 1.
- 4.) Construction rear yard swale and street inlets in conjunction with storm sewer.
- 5.) Install temporary erosion control measures and sediment traps.
- 6.) Finish grade site.
- 7.) Permanent sod areas as required.
- 8.) Pave and curb streets.
- 9.) Repeat steps 2-8 for Sections 2-5.

MAINTENANCE SCHEDULE


1. Silt pits to be cleaned out when 1/2 full.
2. Silt sumps around behives to be cleaned out when 1/2 full.
3. Silt fence to be cleaned when sediment height reaches 1/2 the fence height.
4. Seeded areas to be reseeded if erosion takes place.
5. Curb inlets with filter fabric protection are to be cleaned after each significant rainfall.


3-28-93 REVISE PER SCS LETTER 2/19/93	Designed by: BEH		Title: EROSION CONTROL PLAN JUL 13 1994 Scale: 1"=100' Job No: 14-0522 Sheet No: 49 of 52
4-30-93 ADD MAINTENANCE SCHEDULE	Drawn by: DSC		
6-21-94 REVISE DUE TO QUAIL POINTE EXTENSION	Checked by: BEH		
	Approved by: BEH		
	Date:		





Seasonal Soil Protection Chart


Stabilization
Predictive Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.


Permanent A 


Seeding 


Dormant B 

Temporary C 

Seeding E 

Seeding F 

Seeding G 

Mulching G 

A = Kentucky Bluegrass 40 lbs/acre; Creeping Red Fescue 40 lbs/acre plus 2 tons straw mulch/acre, or add Annual Ryegrass 20 lbs/acre.

B = Kentucky Bluegrass 60 lbs/acre; Creeping Red Fescue 60 lbs/acre plus 2 tons straw mulch/acre, or add Annual Ryegrass 30 lbs/acre.

C = Spring Oats 3 bushels/acre.

D = Wheat or Rye 2 bushels/acre.

E = Annual Ryegrass 40 lbs/acre. (1 lb/1000 sq. ft.)


F = Sod


G = Straw Mulch 2 tons/acre.

0-10/ Irrigation needed during June, July, and/or September.

0-3 Irrigation needed for 2 to 3 weeks after applying sod.

[illegible]

Designed by:	
Drawn by:	
Checked by:	
Approved by:	
Date February 8, 1993	



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

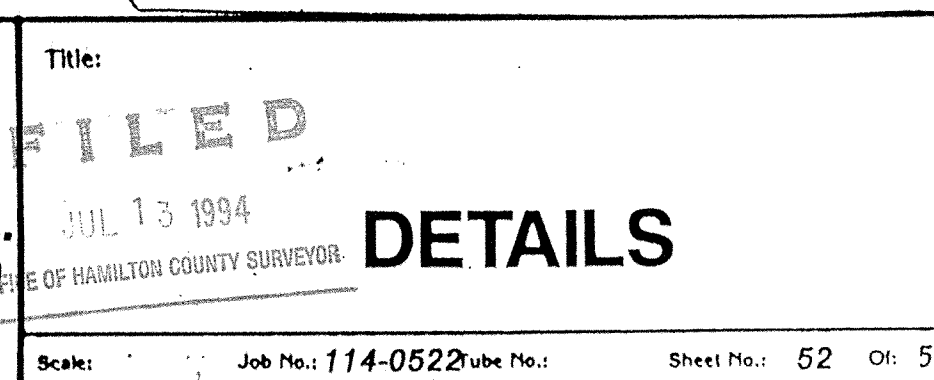
Title: _____

FILED DETAILS

JUL 13 1994

DEPT OF HEALTH & COUNTY SERVICES


Scale: _____ Job No.: 114-0522 vbc No.: _____ Sheet No.: 51 Of: 52



PROFILE	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK NO.	GRADES CHECKED _____		
	B.M.'s NOTED _____		
	STRUCTURE NOTATIONS CHECKED _____		



GRANULAR
BACKFILL
REQUIRED

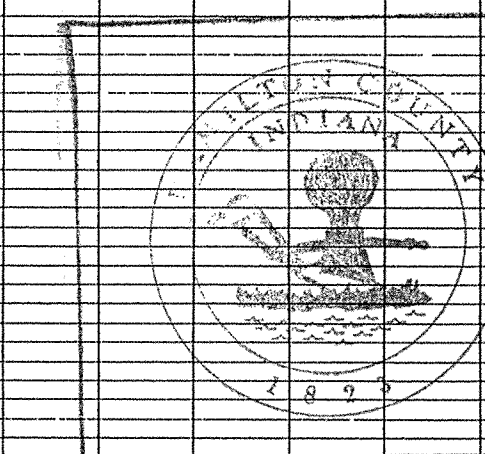
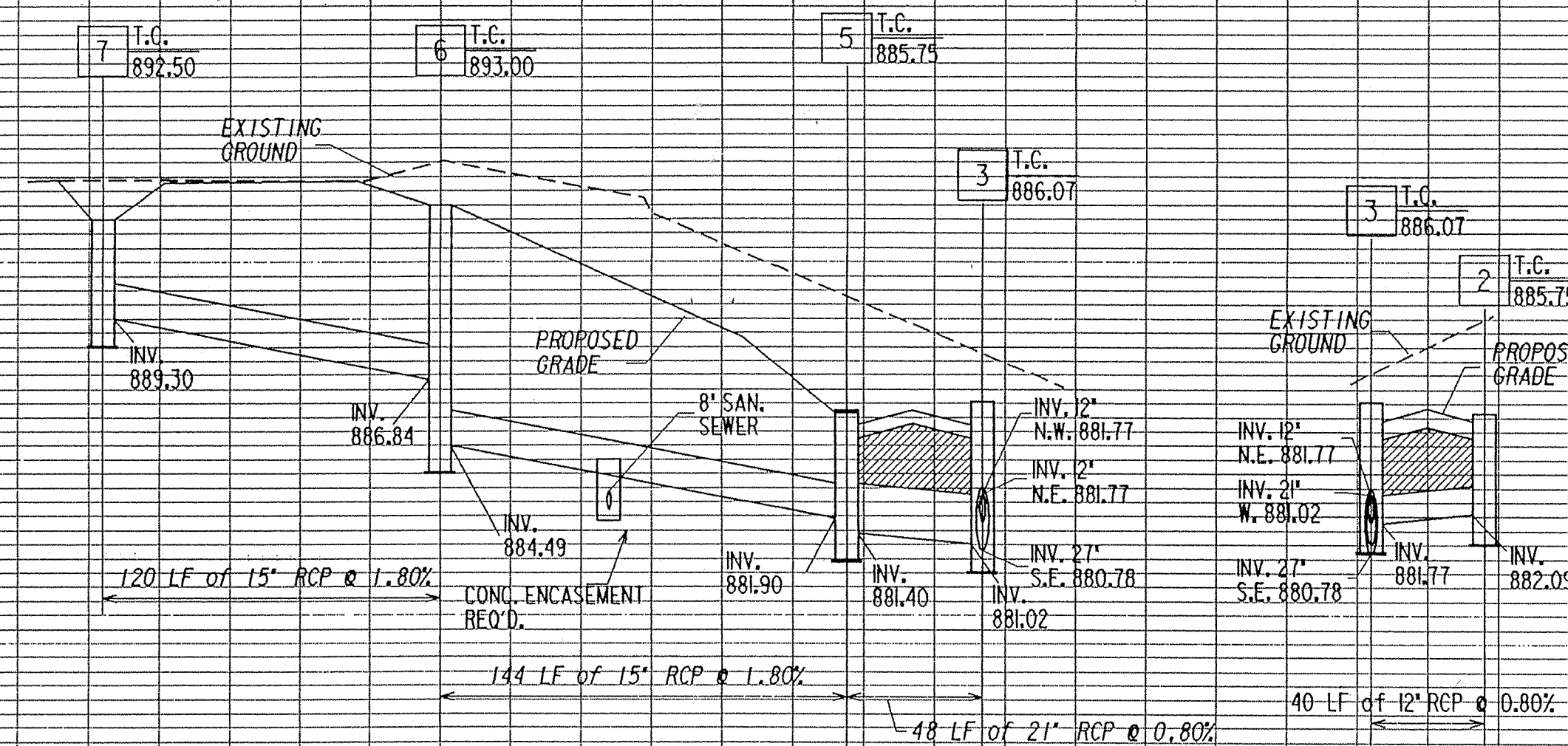


The diagram shows a cross-section of a trench. The trench is filled with granular backfill, indicated by diagonal hatching. The text "GRANULAR BACKFILL REQUIRED" is written above the hatched area. The label "GBR" is written inside the hatched area.

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

BENCH MARK DESCRIPTION

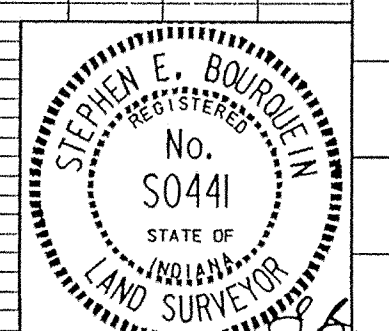
P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE
AT THE SOUTHWEST CORNER OF THE 146TH STREET
AN SPRINGMILL ROAD INTERSECTION.
ELEVATION = 898.52



This information was categorized into the Harassment Category. This information is considered Confidential under the GLB Act.

Entry Date: 3-16-04

Entered by: JDH



April 14, 1993

MSE Engineering

PONDS WEST

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DCN	PRF
114-0522		32	52	522STM9	522STM9

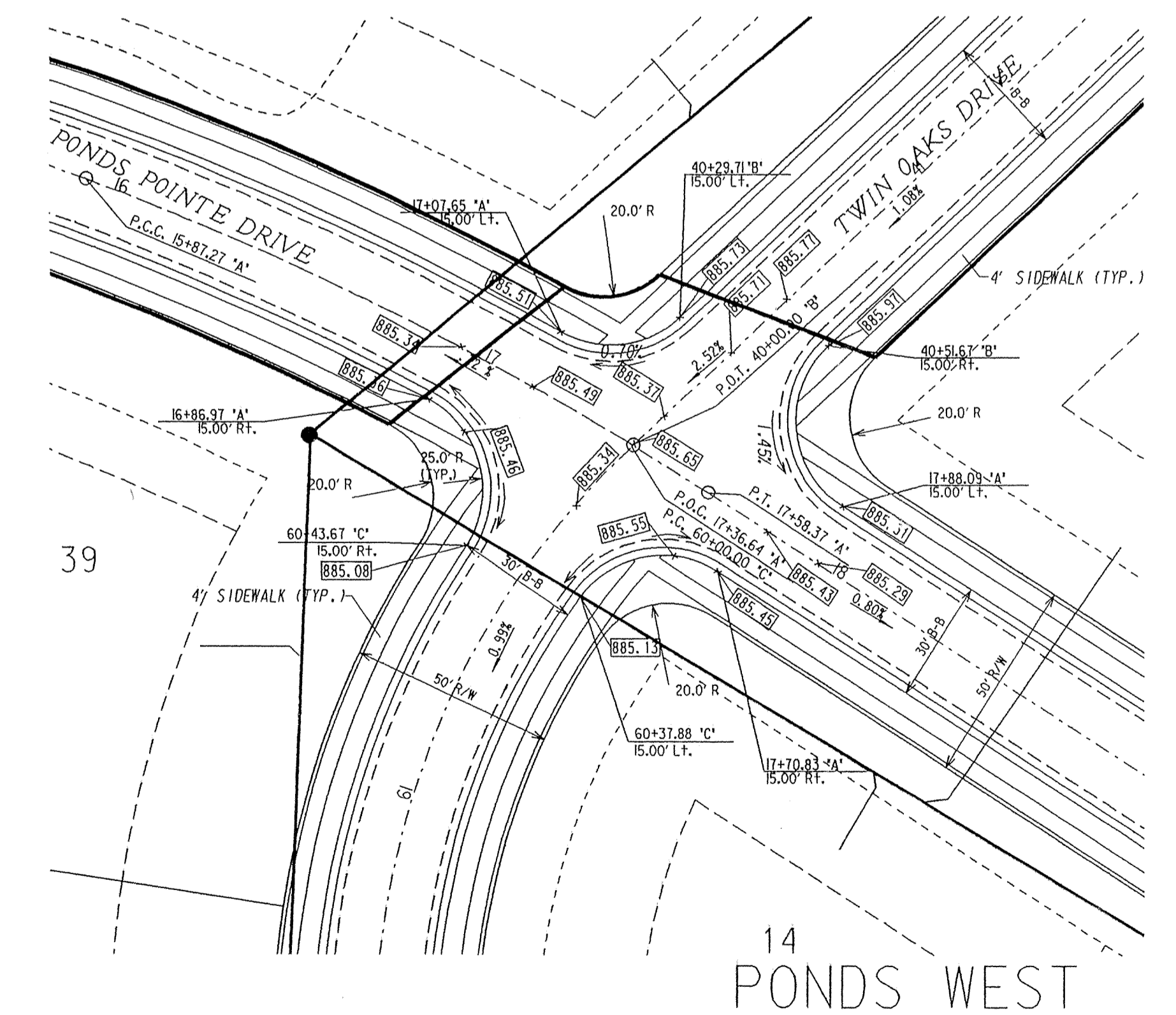
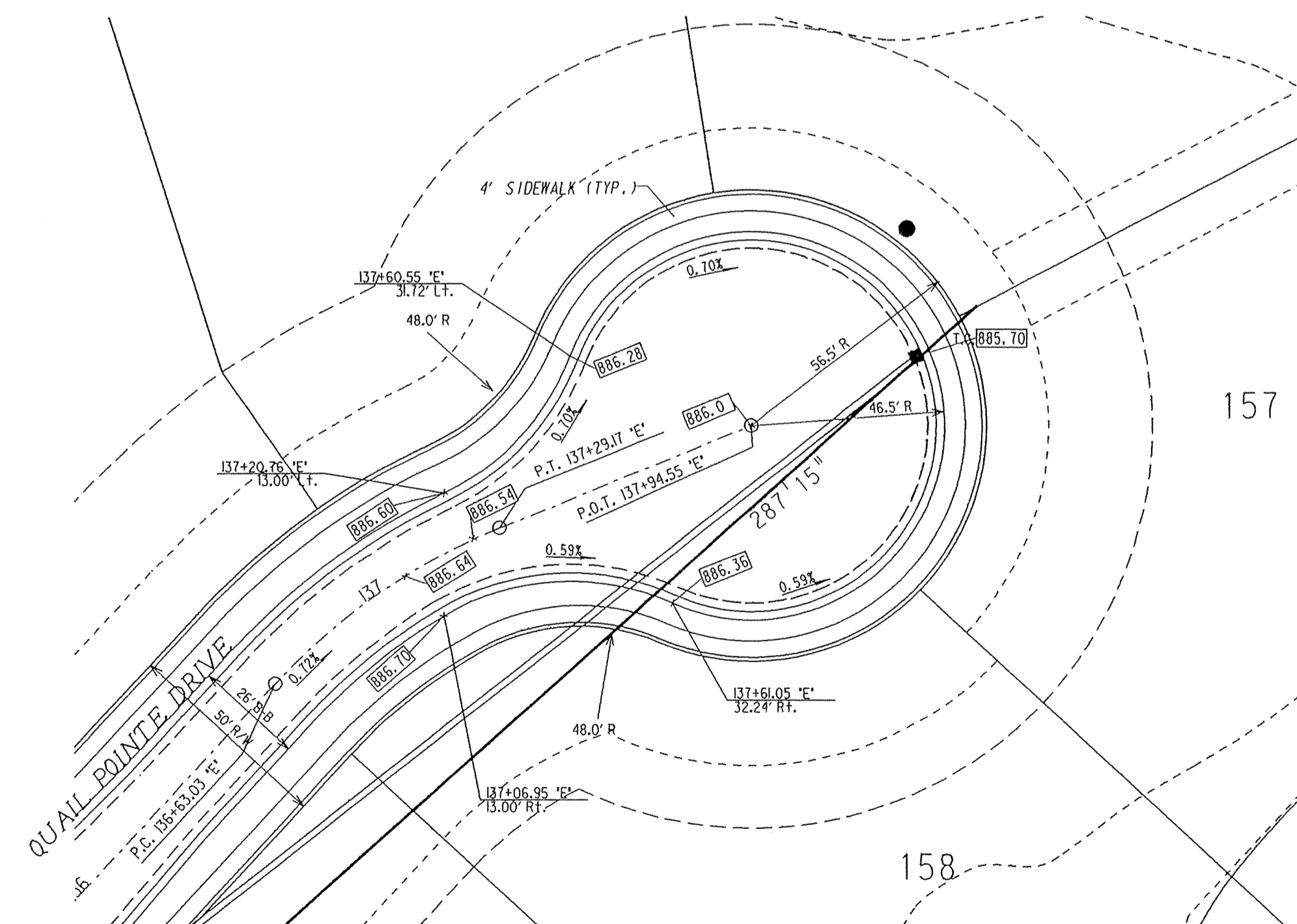
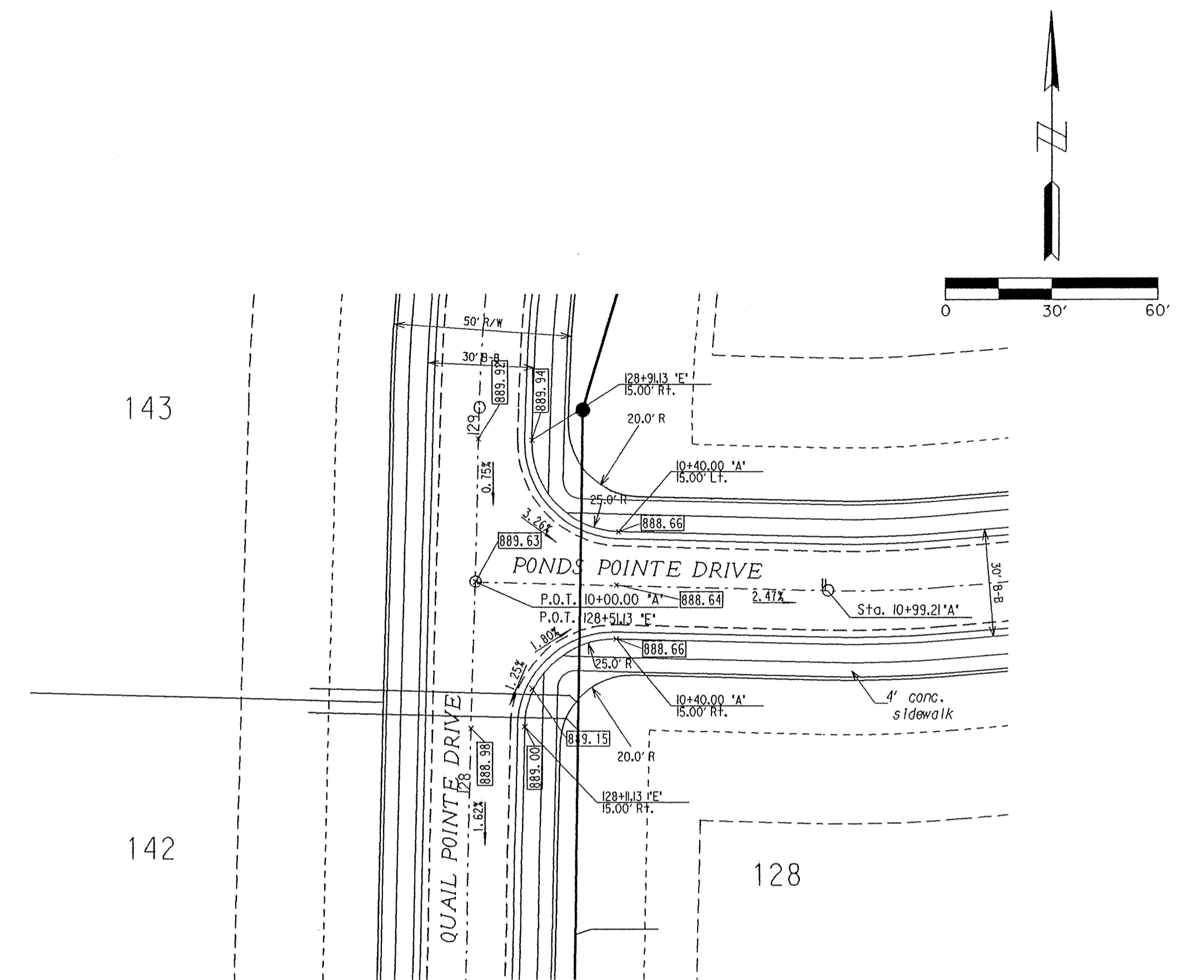
FILED

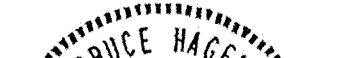
JUL 13 1994

OFFICE OF HAMILTON COUNTY SURVEYOR ST

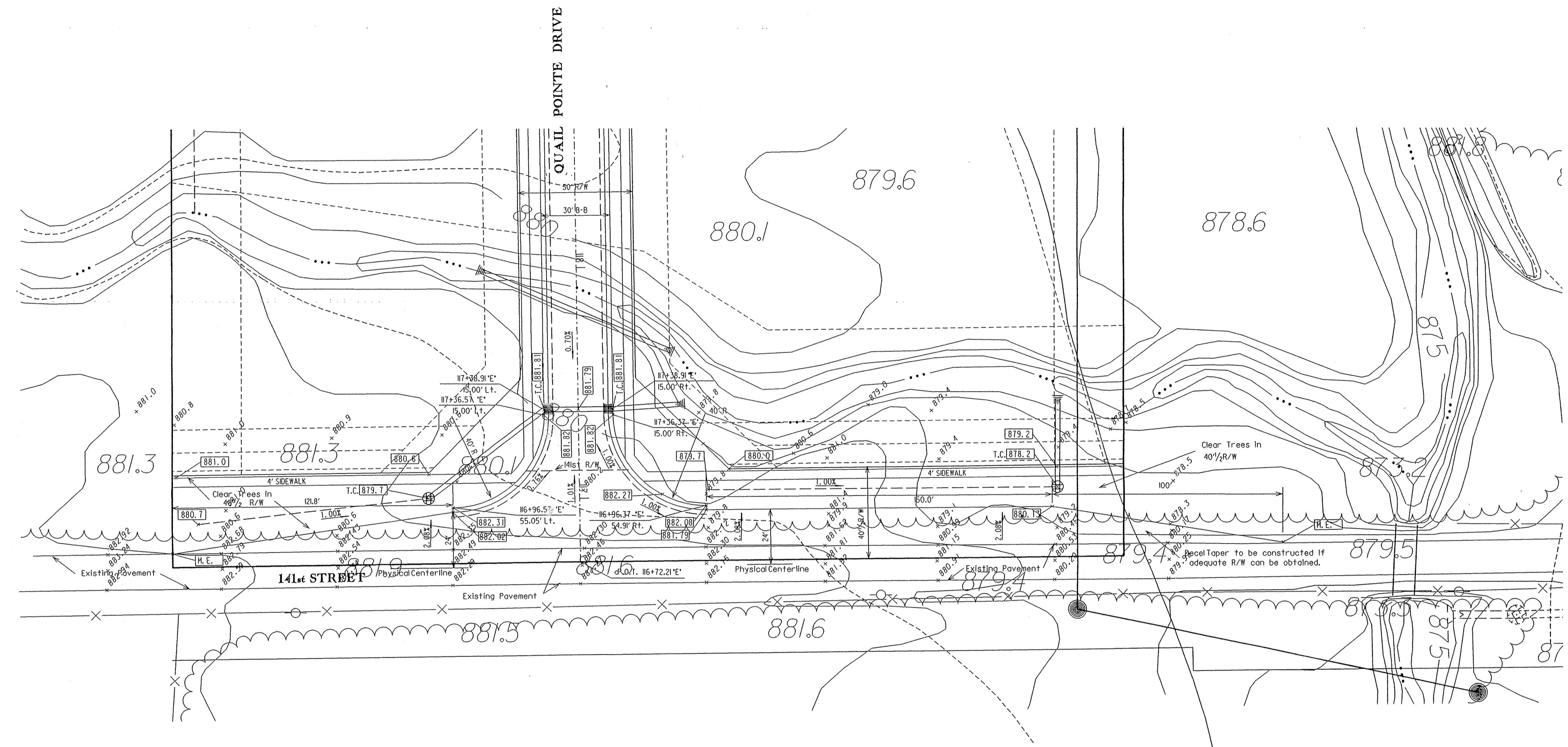
STORM PLAN & PROFILES

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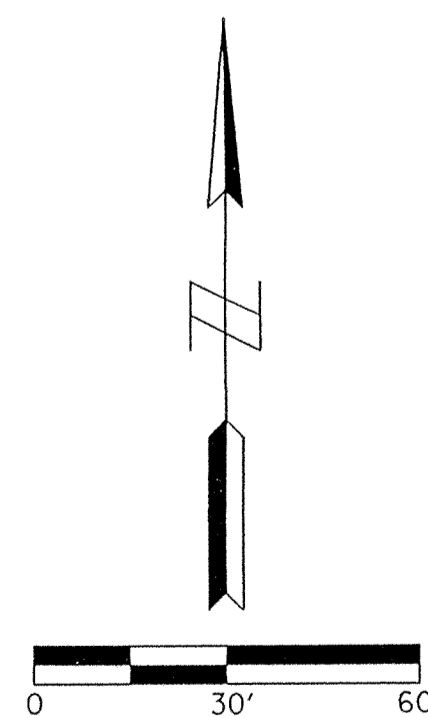
Revisions and Dates 6-21-94 Delete Loretta Dr. / QuailPointe Dr Detail 6-21-94 Delete QuailPointe Dr Cul-de-sac Detail 6-28-94 Add Temporary Turnaround Detail	Designed by: Drawn by: Checked by: Approved by: Date:		MSE Engineering MSE Corporation 941 North Meridian Street Indianapolis, IN 46204-1061 317 634-1000 317 634-3576 FAX	Title: FILED JUL 13 1994 OFFICE OF HAMILTON COUNTY SURVEYOR CUL-DE-SAC & INTERSECTION DETAILS Scale: 1" = 30' Job No. 114-0522 Sheet No. 44 of 52
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A blank graph paper with a horizontal axis labeled from 10 to 20 and a vertical axis with a label 'Q OF ENTRANCE' at the top.




PAVEMENT WITHIN 141st STREET R/W

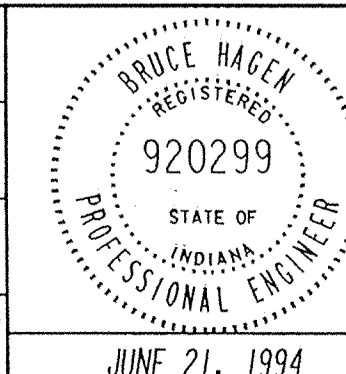
- 1" BITUM. SURFACE NAC #11 OR #12
- 4" BITUM. BINDER #9
- 12" #53 STONE OR #53 #2 STONE & 4" #53 STONE COMPACTED TO 95% STANDARD PROCTOR.



Note Northern 3' of existing 141st Street pavement to be milled for construction of accel-decel lanes.

BENCHMARK DESCRIPTION:
P.K. NAIL IN THE NORTHWEST FACE OF A POWERPOLE
AT THE SOUTHWEST CORNER OF THE 146TH STREET
AN SPRINGMILL ROAD INTERSECTION.

Revisions and Dates	Designed by: BEH	
	Drawn by: BEH	
	Checked by: BEH	
	Approved by: BEH	
		JUNE 21, 1994



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

Title:

ENTRANCE DETAIL

JUL 13 1994

OFFICE OF HAMILTON COUNTY SURVEYOR

Scale: 1" = 30' Job No.: 14-0522 Sheet No.: 47b

