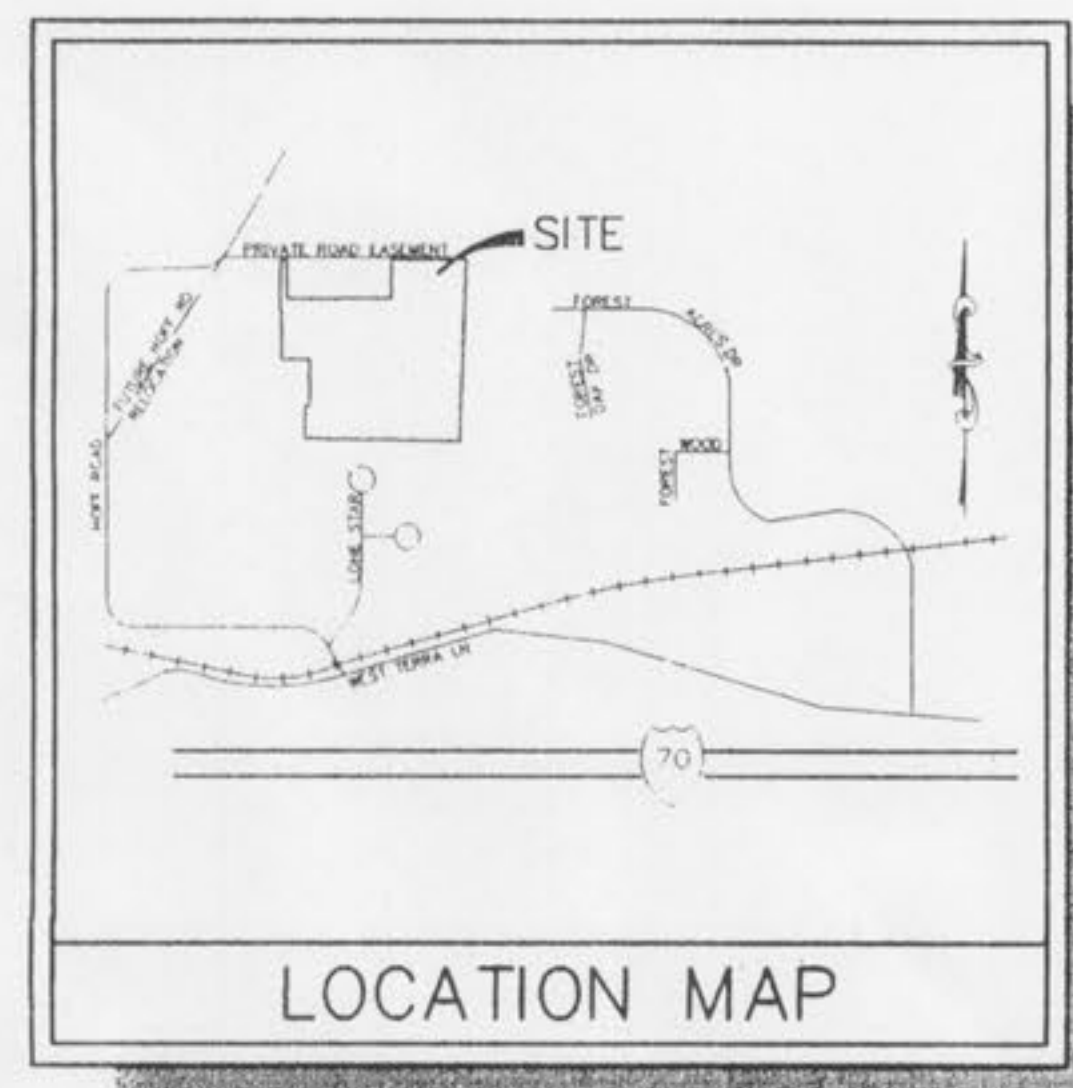
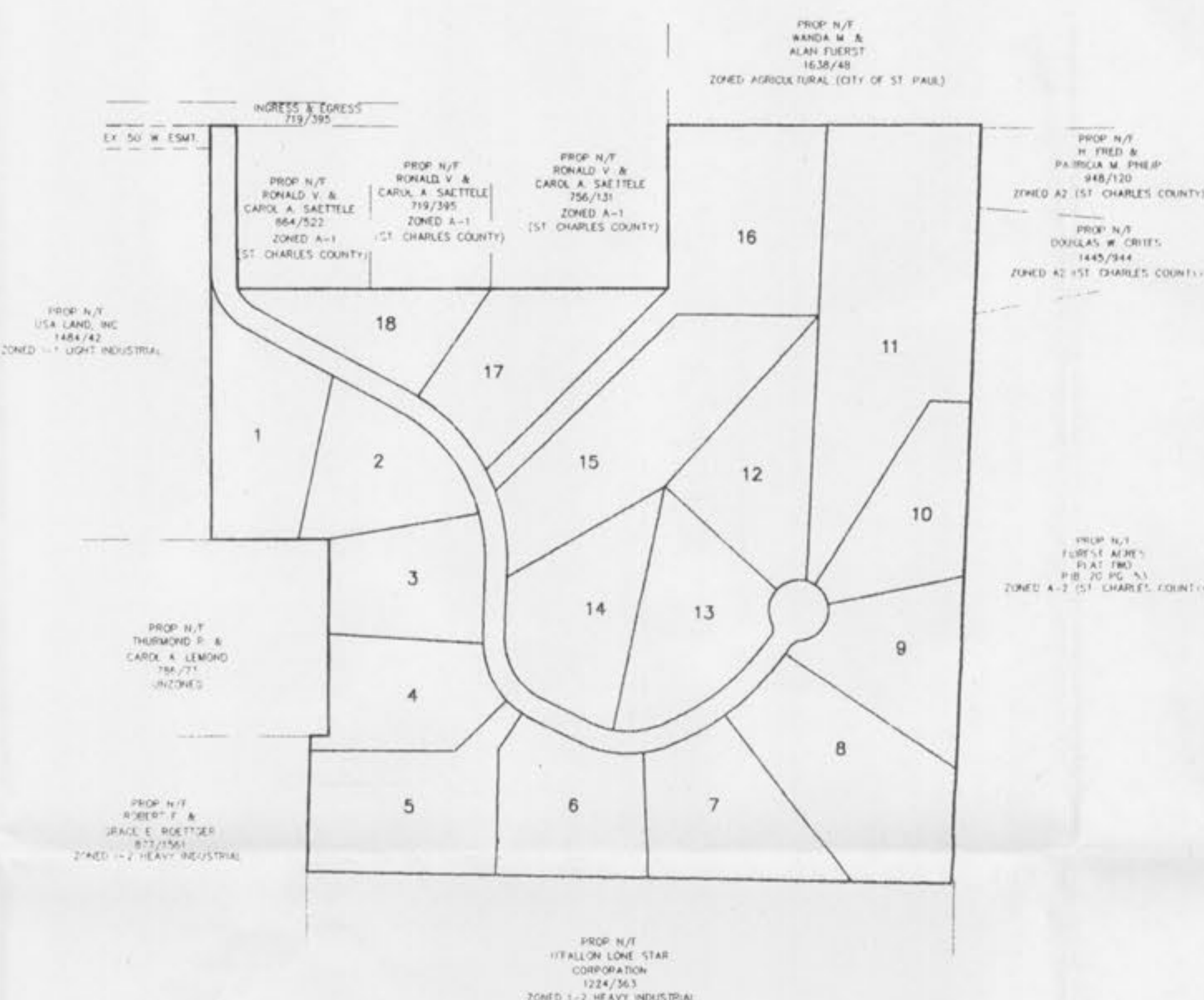


PRINCIPALS & STANDARDS

- All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33%). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the City Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
- Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run-off waters. Temporary siltation control measures shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible during the next seeding period after grading has been completed.
- When grading operations are completed or suspended for more than 30 days permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided.
- All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and locked at the rate of 100 pounds per 1,000 square feet when seeded.
- Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap or concrete or other suitable materials. Detention basins, diversions or any other appropriate structures shall be constructed to prevent velocities above 5 fps.
- The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run-off water from developed areas, parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variations will include designed streambank erosion control measures, FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- All lots shall be seeded and mulched or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.
- 8" P.V.C. sanitary sewer pipe shall meet the following standards: A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- All PVC water pipe 6" and larger in size shall be Class C-900 per St. Charles County Public Water District No. 2 Specifications. All other mains shall have a minimum pressure rating of PR-200 or SDP-21. NOTE: Ultra-Blue PVC (MO) Pressure Pipe with a minimum pressure rating of 200 p.s.i. shall also be considered acceptable.
- Water lines, valves, sleeves, meters, and fittings shall meet all specifications and installation requirements of St. Charles County Public Water District No. 2.
- All water hydrants and valves shall be ductile iron and installed in accordance with plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. Specification CC-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. Specification C-111.
- All sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)E.
- All sanitary sewer manholes to be 42 inch minimum inside diameter in accordance with Missouri Department of Natural Resources specification 10 CSR 20-8.

A SET OF AS-BUILTS FOR  
**MANDERLEY PLACE**  
 A TRACT OF LAND BEING PART OF  
 SECTION 24, TOWNSHIP 47, RANGE 2 EAST  
 ST. CHARLES COUNTY, MISSOURI



GENERAL NOTES

- Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the improvements.
- No area shall be cleared without the permission of the Project Engineer.
- All grades shall be within 0.2 feet of those shown on the grading plan.
- No slope shall be steeper than 3:1 or as called for in the soils report for the project. All slopes shall be sodded or seeded and mulched.
- All construction and materials used shall conform to current City of O'Fallon Standards.
- All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
- If any wells and/or springs are discovered on this property they shall be located and sealed in a manner acceptable to the City of O'Fallon. There are no visible wells.
- No flood plain exists on this tract per FIRM MAP 29183C0230 E & 29183C0240 E dated August 2, 1996.
- Tree preservation during development:  
 Area of existing trees 29.42 acres (100%)  
 Area of trees to be removed 3.40 acres (11.5%)  
 Total area of trees to be saved 26.02 acres (88.5%)  
 1 Tree/50FT. of Street frontage  
 4900 Ft. of street frontage/50FT./1 Tree= 98 trees required  
 No Additional Trees are required
- Site is served by:  
 City of O'Fallon Sewer District  
 Cuivre River Electric Company  
 St. Charles Gas Company  
 City of O'Fallon Water District  
 GTE Telephone Company  
 Fort Zumwalt School District  
 O'Fallon Fire Protection District
- A Variance for the cul-de-sac length was approved by the City of O'Fallon Board of Adjustments on November 14, 1996.
- All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved, areas, shall be compacted to 90% maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All filled places within public roadways shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test AASHTO T-99, Method C" (A.S.T.M.D.-698).
- All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D.-1557). All other trench backfills may be earth material (free of large clods or stones). All trench backfills shall be water jetted.

LEGEND



SHEET INDEX

- 1 OF 6 - COVER SHEET
- 2 OF 6 - FLAT PLAN
- 3 OF 6 - FLAT PLAN
- 4 OF 6 - FLAT PLAN
- 5 OF 6 - SANITARY PROFILES
- 6 OF 6 - STORM SEWER PROFILES

THIS IS TO CERTIFY THAT WE HAVE DURING THE MONTH OF OCTOBER, 1996, BY ORDER OF EISENBATH DEVELOPMENT, INC., EXECUTED AN AS-BUILT SURVEY OF THE EXISTING SANITARY SEWERS, STORM SEWERS, FIRE HYDRANTS AND WATER VALVES WITHIN "MANDERLEY PLACE" A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK \_\_\_\_\_ PAGE \_\_\_\_\_ OF THE ST. CHARLES COUNTY RECORDS. THE SANITARY LATERALS THAT ARE SHOWN WERE TAKEN FROM INFORMATION SUPPLIED TO BAX ENGINEERING BY THE CONTRACTOR, THEREFORE THEIR LOCATION IS ASSUMED APPROXIMATE. ALL SEWERS SHOWN LIE WITHIN THE EASEMENTS AS SHOWN ON SAID SUBDIVISION PLAT UNLESS OTHERWISE NOTED. THE RESULTS OF THIS AS-BUILT SURVEY ARE SHOWN ON THIS PLAT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*[Signature]*  
 BAX ENGINEERING CO., INC.  
 BARRELL R. OAKLEY  
 REGISTERED L.S. #2265

GRADING NOTES

- A Geotechnical Engineer shall be employed by the owner on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
  - The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied therefrom, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
  - The Contractor shall notify the Soils Engineer at least 7 days in advance of the start of the grading operation.
  - All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
  - A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded areas shall be allowed to remain bare without being seeded and mulched. Care should be exercised to prevent soil from disturbing adjacent property and siltling up existing drainage/storm drainage system.
  - Debris and foundation material from any existing building or structure which is scheduled to be razed for development must be disposed of off-site.
  - All trash and debris on site, either existing or from demolition must be removed and properly disposed of off-site.
  - Soft soil in the bottom and banks of any existing stream, ditches or tributaries or on any sediment basins or traps shall be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in or adjacent to right-of-way locations or on any storm sewer facilities.
  - Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds, the grubbing and removal of all other surface obstructions from the site, and the demolition and removal of any man-made structures. All material shall be properly disposed of off-site. Topsoil in the fill areas shall be thoroughly disc prior to the placement of any fill. The Soils Engineer shall approve the discing.
  - Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
  - The Soils Engineer shall observe and test the placement of fill to verify that specifications are met. A series of density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
  - The Soils Engineer shall notify the Contractor of rejected a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
  - All areas to receive fill shall be scarified to a depth of less than 6 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
  - The sequence of operation in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture contents during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture contents during the filling operation in the remaining areas are from 2 to 8 percent above the optimum moisture control.
  - The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the lower placement to freeze.
  - Fill and backfill should be compacted to the criteria specified in the following table:
- | CATEGORY                              | MINIMUM PERCENT COMPACTION |
|---------------------------------------|----------------------------|
| Fill in building areas below footings | 90%                        |
| Fill under slabs, walks, and pavement | 95%                        |
| Fill other than building areas        | 90%                        |
| Natural subgrade                      | 90%                        |
| Pavement subgrade                     | 95%                        |
| Pavement base course                  | 95%                        |
| Fill under Sanitary & Storm Sewers    | 90%                        |
- Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).
- Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

PREPARED FOR: **EISENBATH DEVELOPMENT, INC.**  
 725 LORETTA DRIVE  
 O'FALLON, MO 63366  
 PHONE (314) 975-3030

REVISIONS

NO.	DATE	DESCRIPTION
1	9-29-96	AS-BUILT COMMENTS

ENGINEERING PLANNING SURVEYING

1052 South Chestnut Drive  
 St. Peters, MO 65376-6445  
 314-928-5562  
 FAX 928-4718

10-31-96  
 DATE  
 95-R169  
 PROJECT NUMBER  
 1 OF 6  
 SHEET OF  
 B1F9CON.DWG  
 FILE NAME  
 PLS  
 DRAWN BY C. EP

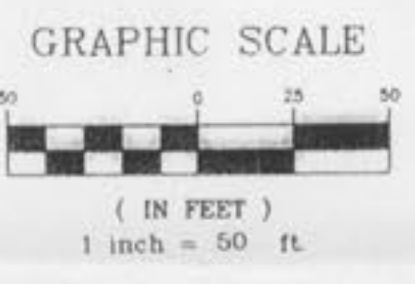


GERALDINE PATRICIA HOFF  
 1801/331

PROPERTY N/F  
 DAVID & MARILYN STOVERINK  
 1744/665

**MISTY MEADOW LANE (PRIVATE)**

HOFF ROAD

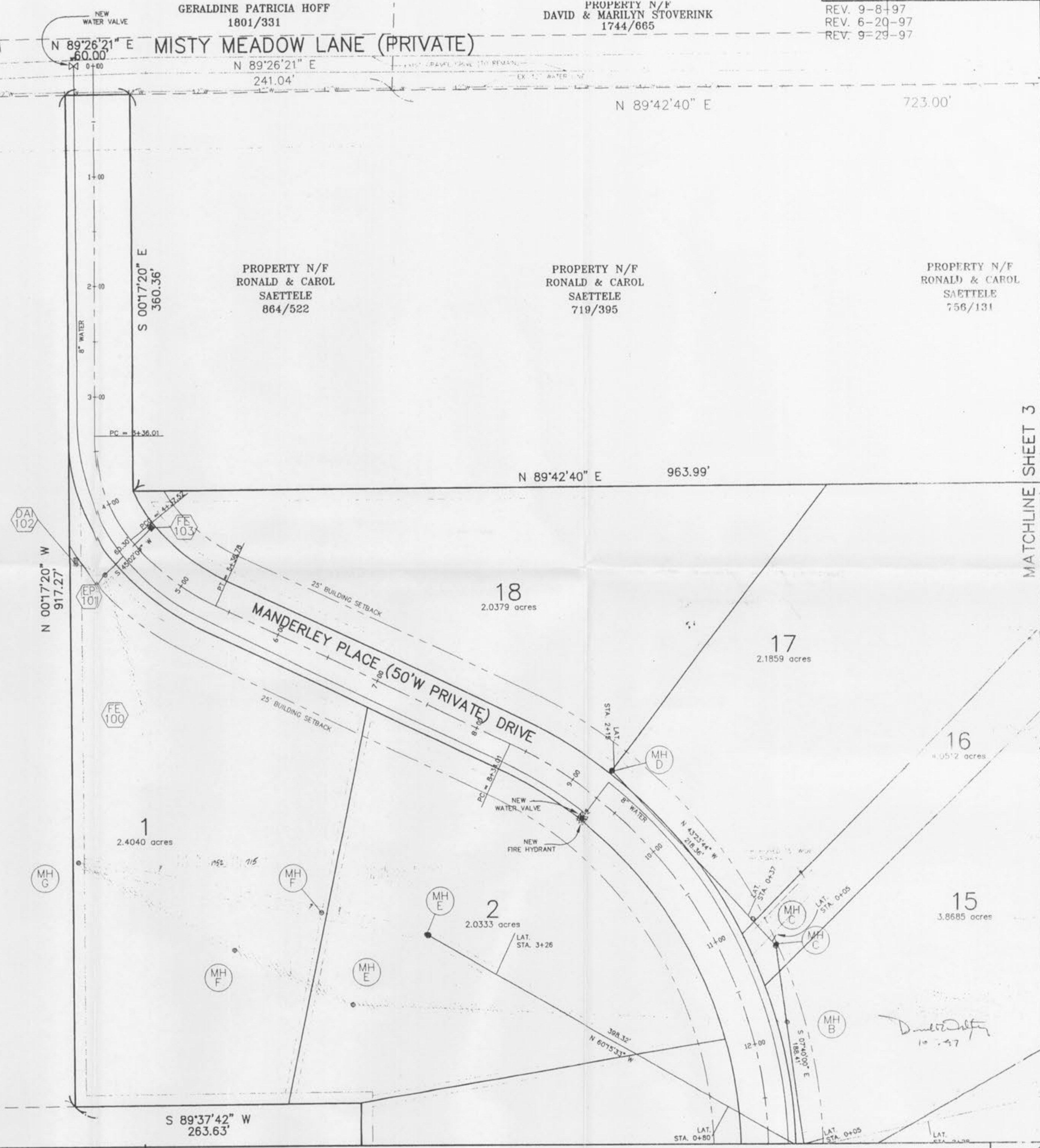


PROPERTY N/F  
 USA LAND, INC.  
 1484/42  
 PARCEL 2

PROPERTY N/F  
 RONALD & CAROL  
 SAETTELE  
 864/522

PROPERTY N/F  
 RONALD & CAROL  
 SAETTELE  
 719/395

PROPERTY N/F  
 RONALD & CAROL  
 SAETTELE  
 756/131



MATCHLINE SHEET 4

MATCHLINE SHEET 3

2



PROPERTY N/F  
 ALAN & WANDA FUERST  
 1638/498

MILAM PARTNERSHIP  
 1234/672

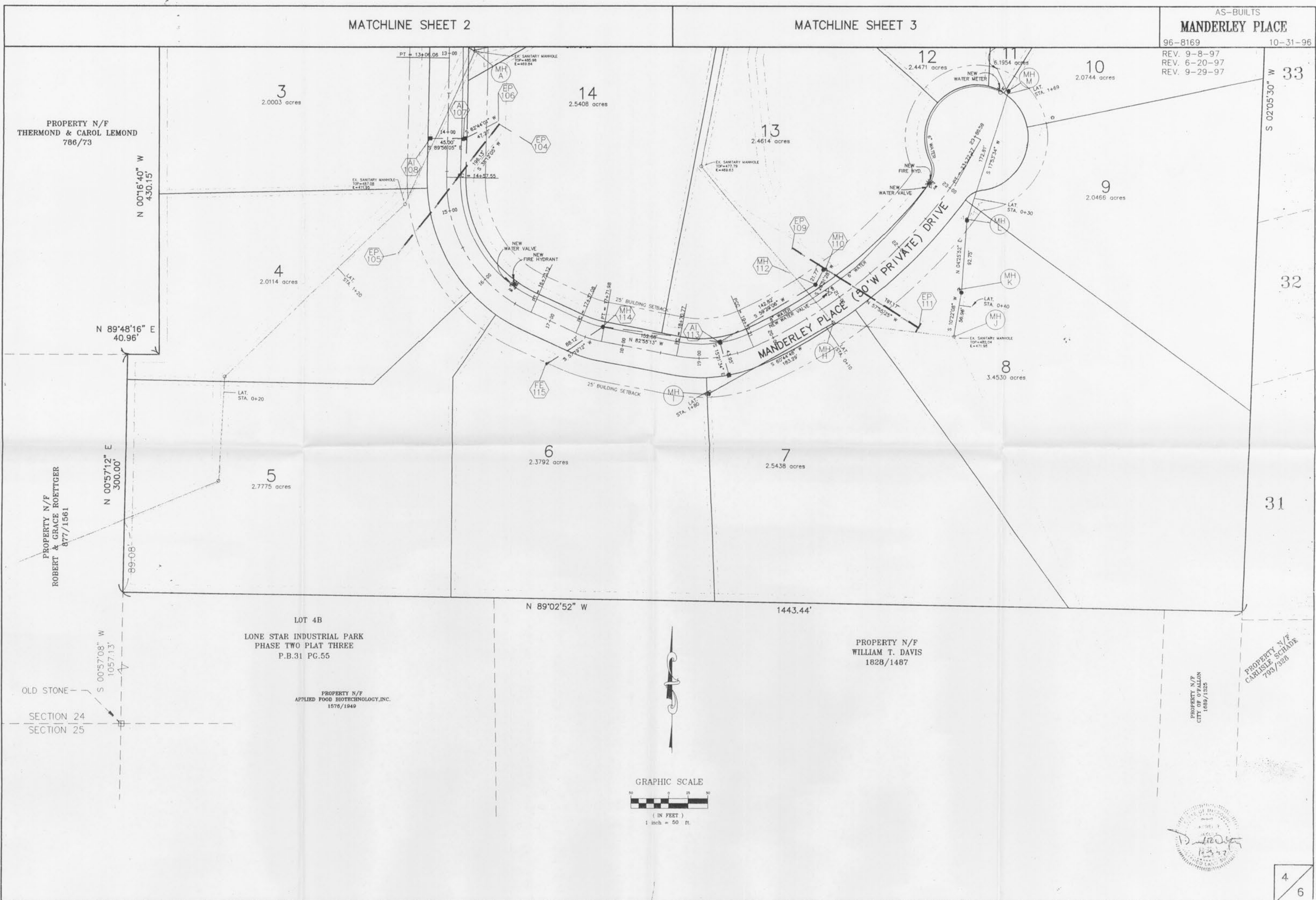
MATCHLINE SHEET 2



MATCHLINE SHEET 4

*D. Miller*  
 10-3-97





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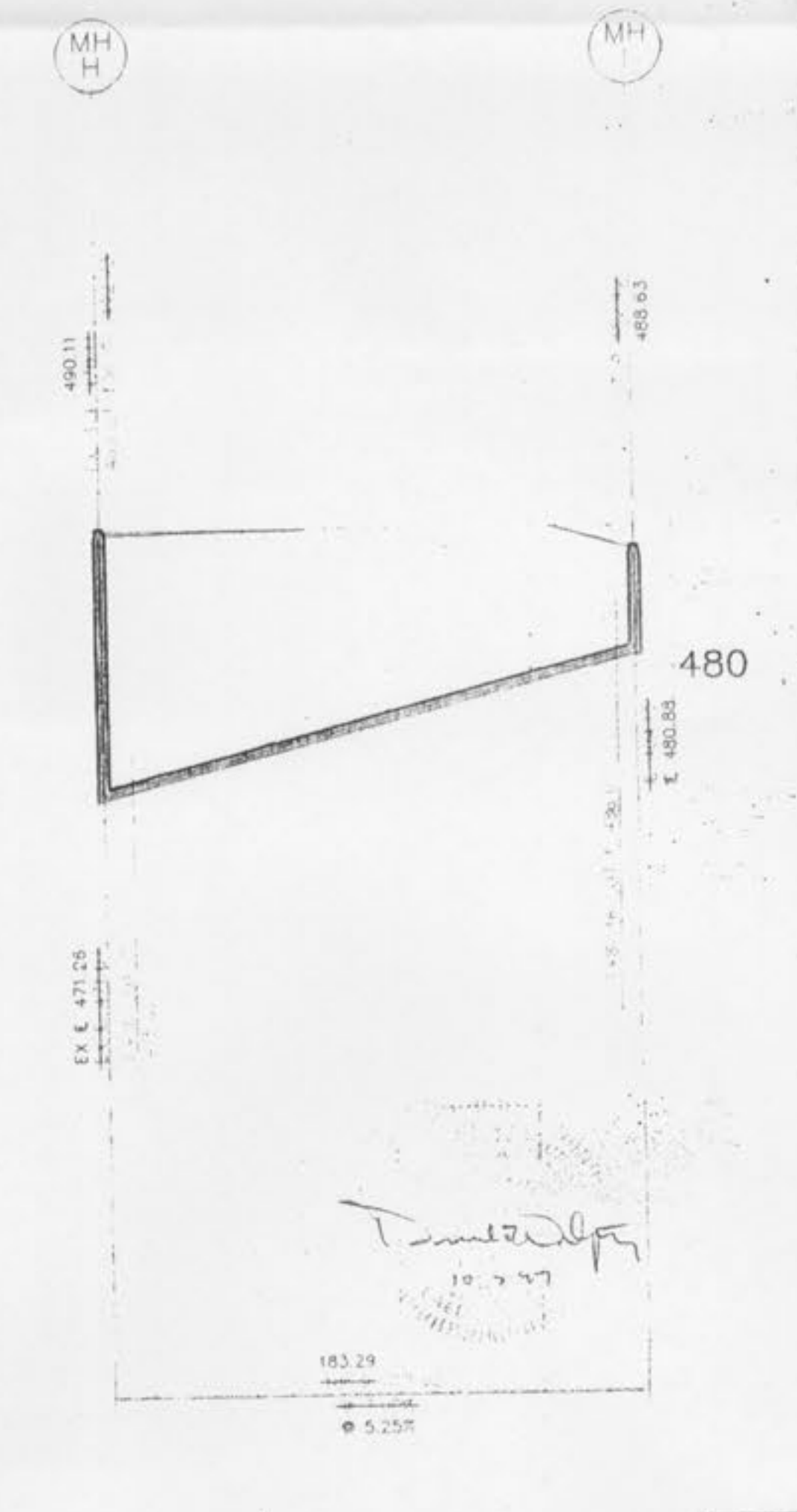
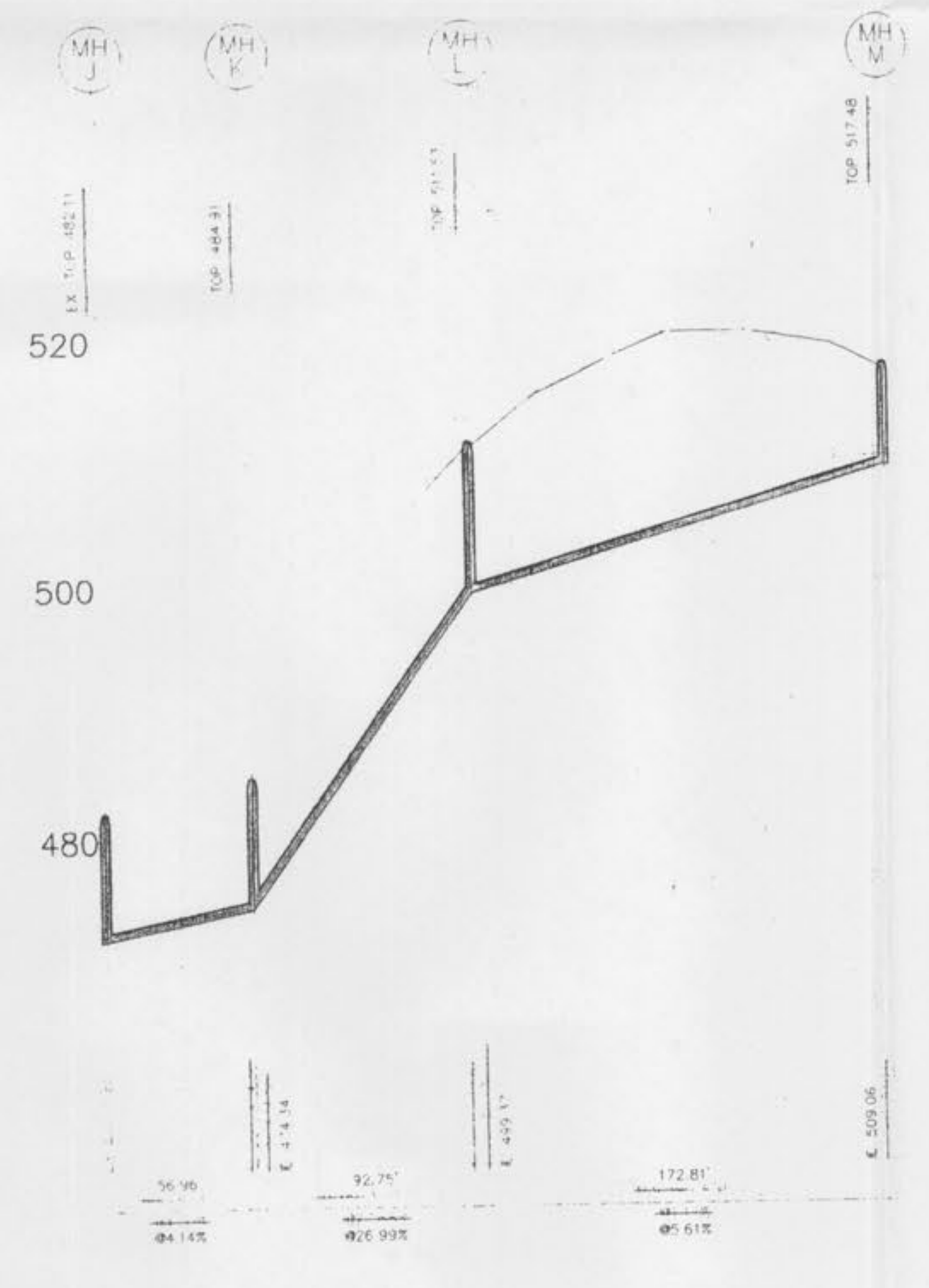
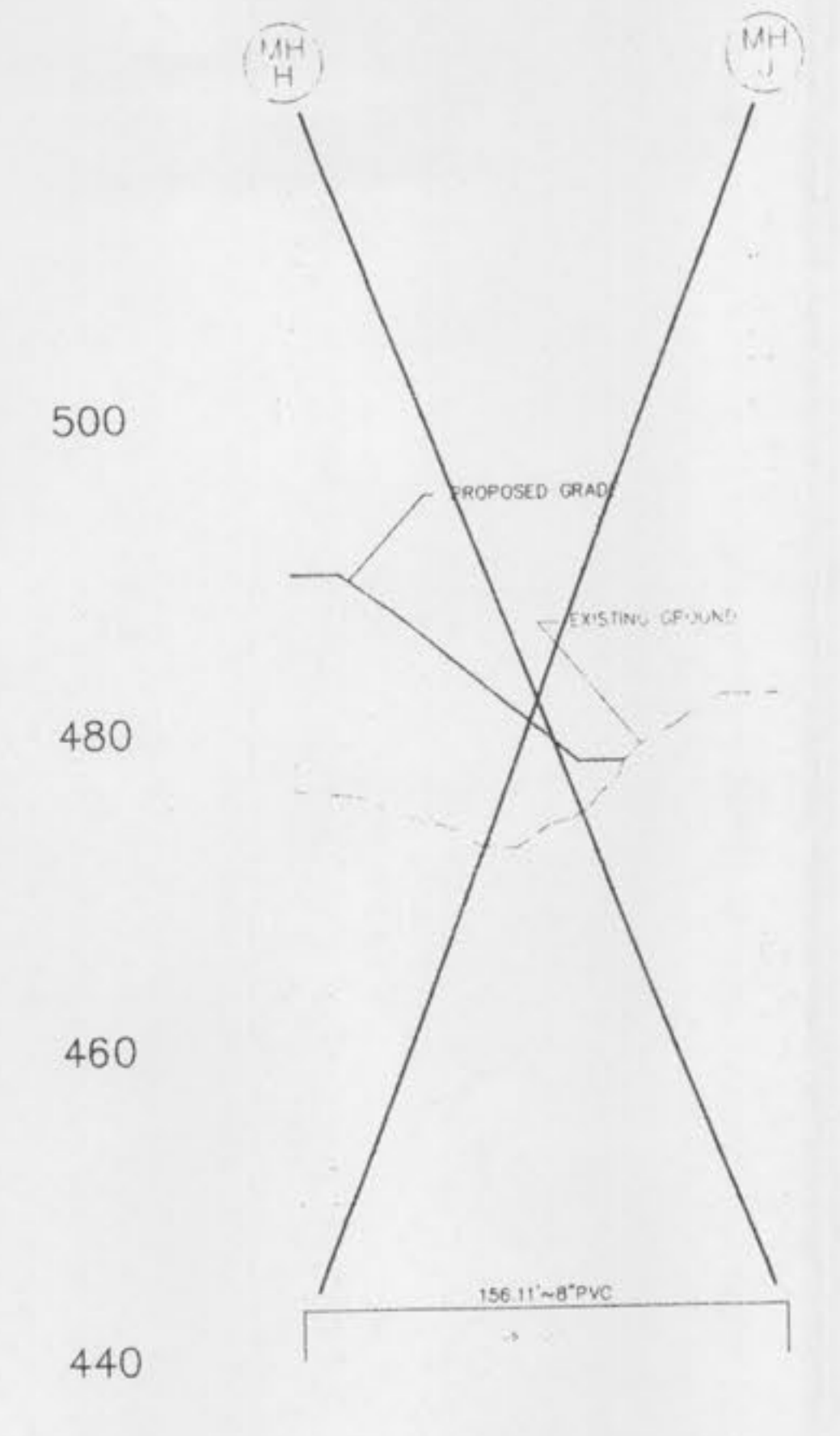
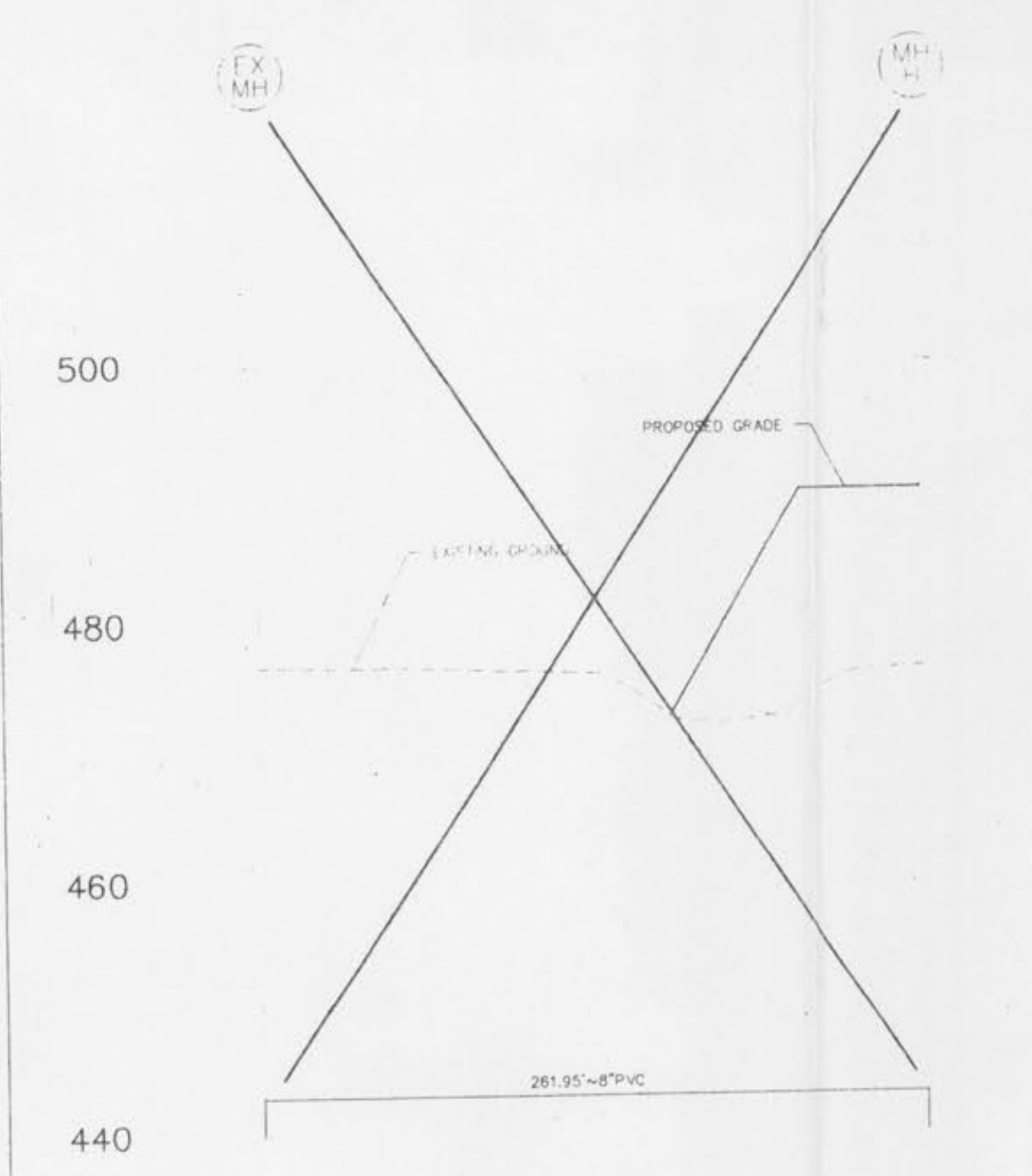
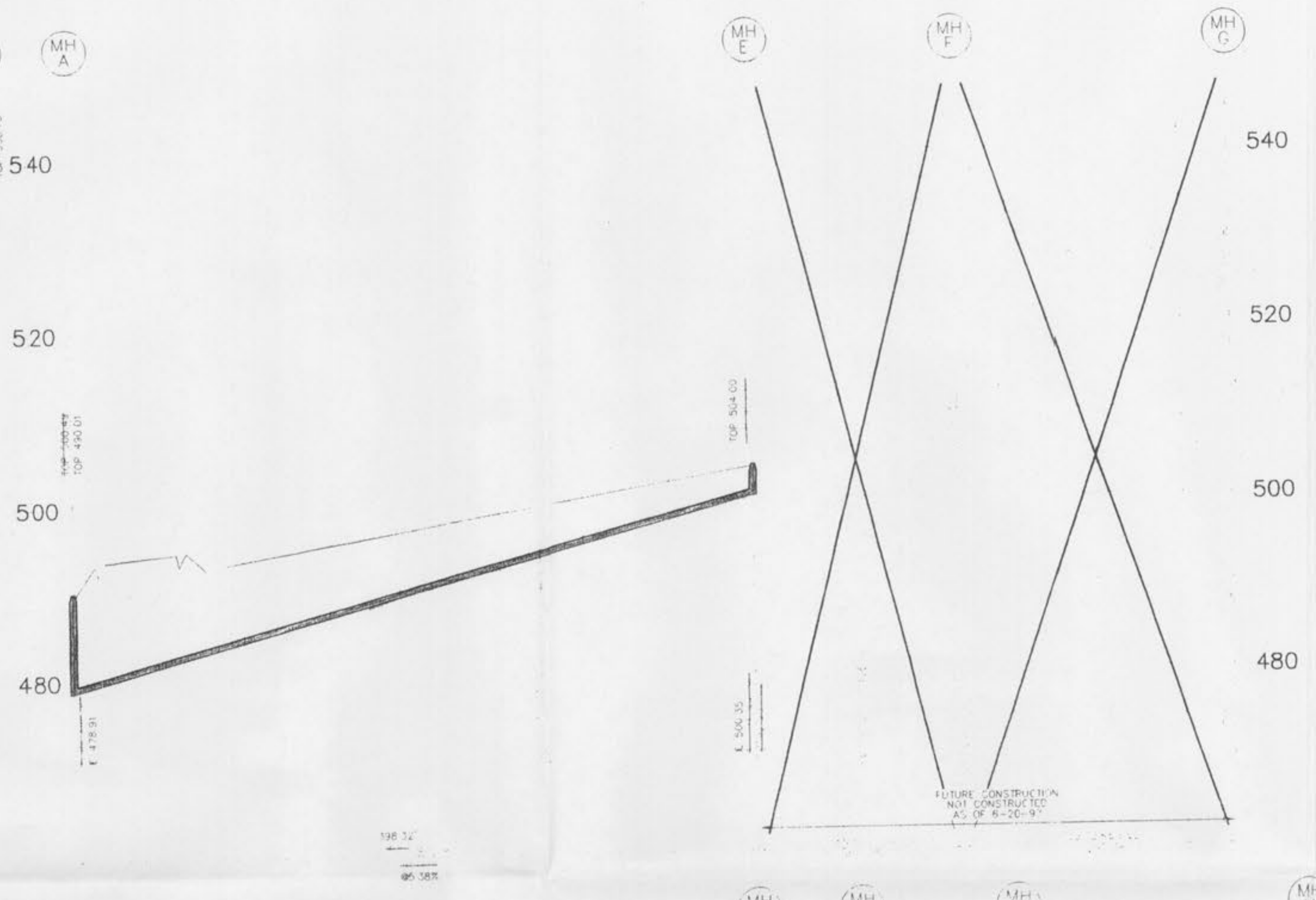
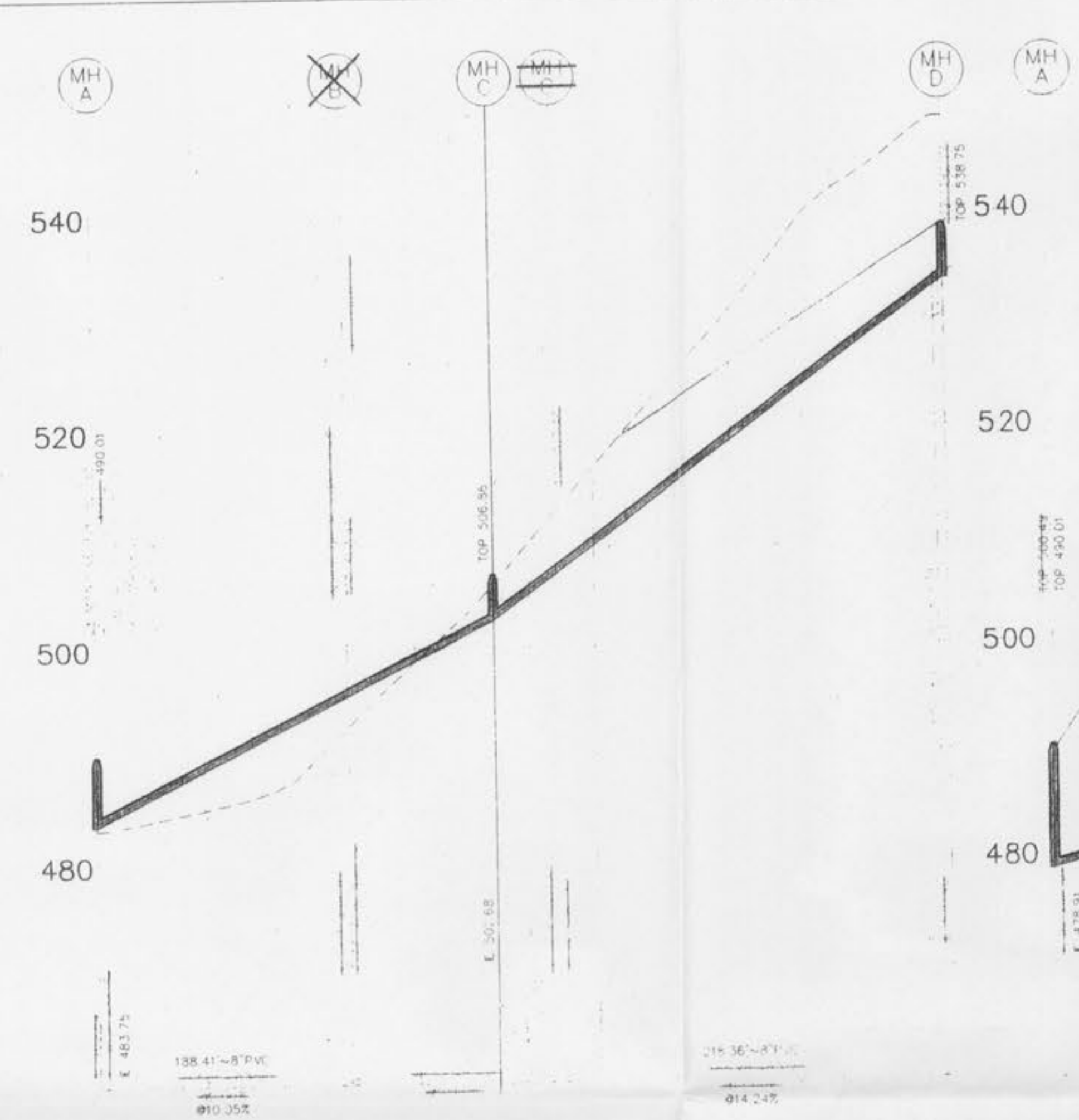
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4  
6

C:\DWG\BIB\BIB58 Thu Oct 2 15:27:41 1997 STATION 3



10-31-96 96-8169  
REV. 1-6-97  
REV. 1-29-97  
REV. 6-20-97  
REV. 9-29-97



SCALE: 1" = 50' HORIZ  
1" = 10' VERT



