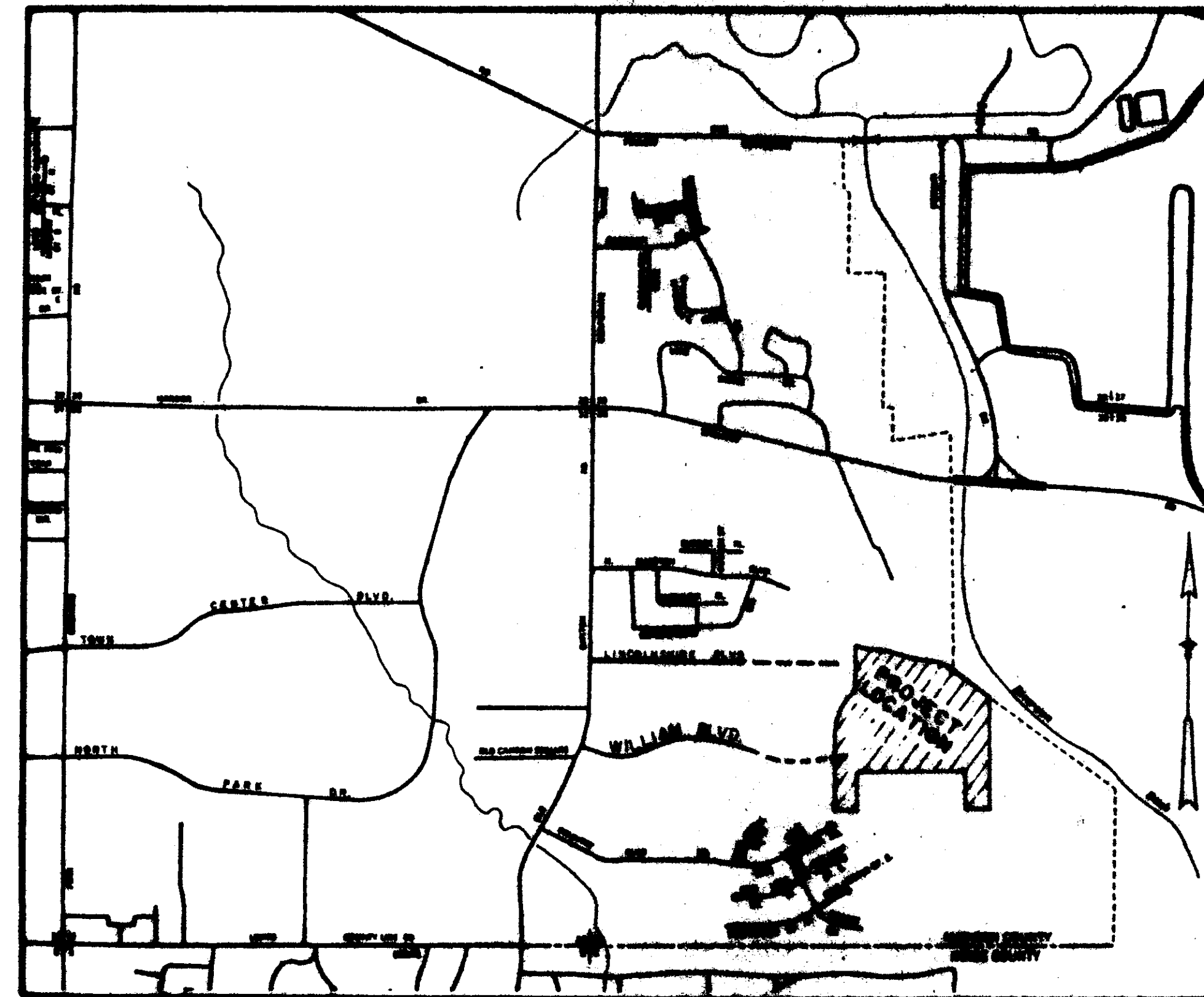


CONSTRUCTION PLANS FOR
UTILITY AND STREET CONSTRUCTION

HAWTHORN GREEN SUBDIVISION PART 2A

CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI



LOCATION MAP

A DEVELOPMENT OF GREEN AND HARKINS
5760, I-55 NORTH JACKSON, MISSISSIPPI 39211

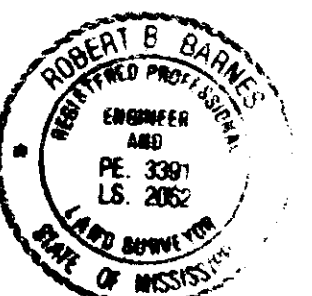
**HUBERT F. GREEN, JR., JAMES HARKINS
& MIKE HARKINS**

PREPARED
BY
ROBERT B. BARNES
CIVIL ENGINEER
&
LAND SURVEYOR
4 OLD RIVER PLACE
JACKSON, MISSISSIPPI 39202
TELEPHONE (601) 353-7078

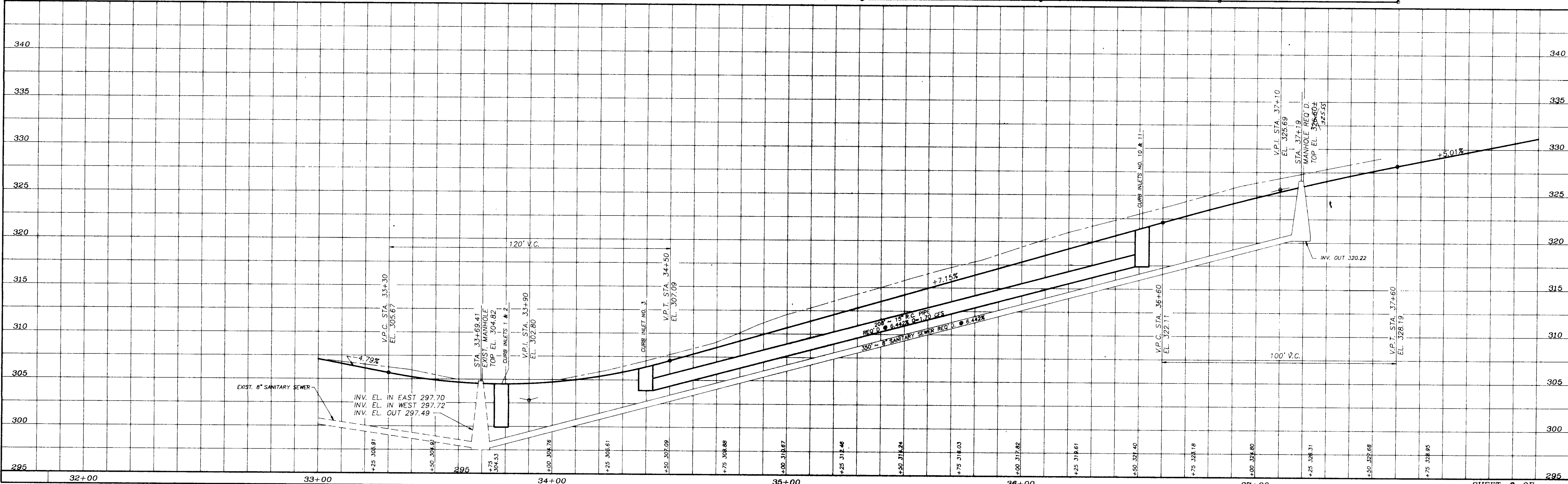
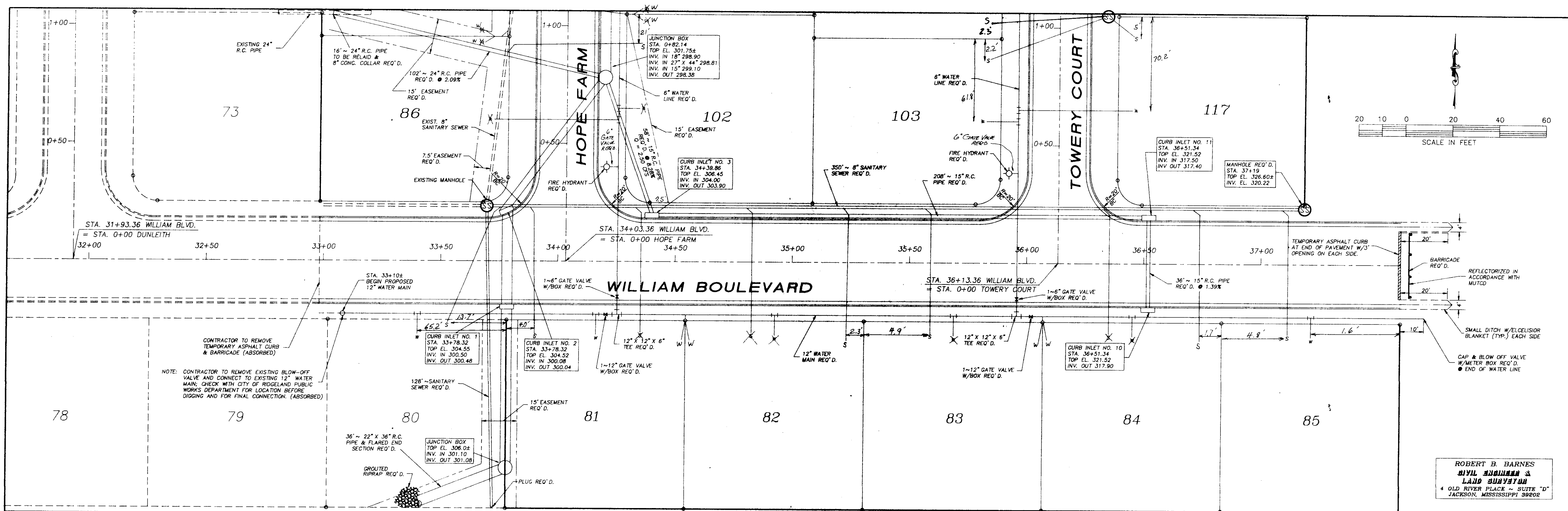
GENERAL NOTES:

- All excess excavation shall be placed evenly on adjoining lots or other designated low spots or stock piled as directed by the Engineer on the job site. All spread material shall be properly processed and spread in maximum of 6" to 8" lifts.
- Prior to placement of the base course, density test shall be performed by a licensed soil laboratory at the contractor's expense.
- All unsuitable material which will not compact readily when rolled or tamped shall be removed as directed by the engineer and replaced with suitable material and compacted. Being wet will not qualify material as being unsuitable. The sub-grade shall be thoroughly compacted with suitable equipment to achieve a density of a least 95% of standard proctor density. The moisture content of the compacted sub-grade shall be at or near optimum moisture. Toy items are set up to provide for uncuring expansive clays in the top 2 feet of the sub-grade and replacing with select material as approved by the Engineer. This shall be done only when directed by the engineer.
- Underground improvements shown in these plans are determined from surface evidence and maps obtained from various entities. No excavation was performed. Users of these plans should satisfy themselves as to whether the information shown hereon is correct and complete.
- Street extensions to match existing grades.
- Elevations are based on N.S.L. datum.
- Junction box per Mississippi State Highway Department Standard Drawing "JUNCTION BOX FOR PIPE CULVERTS" Sheet No. 227; or standard storm sewer brick manhole.
- Tops of all fire hydrants, drainage structures, and sanitary sewer manholes to be adjusted on job site as necessary to match finish grade.
- Construction and testing of all materials shall be in accordance with the standard subdivision specifications of the City of Ridgeland, Mississippi.
- The maximum infiltration and exfiltration rate for sanitary sewer lines shall be 200 gal. per inch of diameter per mile per 24 hours.
- Manholes shall be waterproofed inside with an application of KOPPERS 300 M Coal Tar Epoxy or approved equal.
- All sewers 24 inches or less will be laid with straight alignment between manholes and will be checked by laser and lamping methods.
- All backfill will be of suitable material, hand tamped to within one (1) foot of the top of the pipe, and otherwise placed in such a manner as not to disturb the alignment of the pipe.
- Inlet and outlet to manholes will be constructed in such a manner that the connection will be flexible and watertight and not damage the sewer main in the event of manhole settlement.
- Before any backfill is placed, the sewer line shall be checked by the Engineer for line, grade and workmanship. Before acceptance, each section of line between manholes or such other length as determined by the Engineer to be suitable, shall be thoroughly inspected and any defects in workmanship shall be immediately corrected.
- The completed gravity flow system shall be free of all mud, siltation and other foreign matter deposited or collected during construction. Flushing shall commence at the upstream end of the completed system and continue downstream manhole-to-manhole. Water used in flushing will not be permitted to enter into the existing system but shall be disposed of in a manner acceptable to the Engineer. Should the collected matter be sufficient in quantity to obstruct or affect the testing, flushing shall be accomplished prior to testing. Flushing will not be required in those sectors of the installed pipes and manholes where the exfiltration test has adequately cleaned the mains.
- Water services to be 3/4" minimum.
- All items of work necessary for testing utility lines not shown as bid item are to be absorbed.
- All water and sanitary sewer services to be marked at the property line with a 2" diameter creosote post or other acceptable marker. Services shall be 3' to 4' deep at the service markers.
- All (100%) of the PVC gravity sewer pipe used will be tested for excessive deflection after installation. A "go, no-go" mandrel that is sized such that it will not pass a deflection greater than 5% shall be used. The mandrel shall be drawn through the pipe by hand. Irregularities or obstructions encountered in the line shall be corrected by the Contractor. Sewer lines to be SDR 26.
- Bedding for sewer pipe shall be class "C" in accordance with ASTM C12-74 (ANSI A106.2) or WPCF MOP No. 9 (ASCE MOP NO. 37) for rigid pipe and Class III in accordance with ASTM D2321-74 (ANSI K65.171) for flexible pipe.
- Sewer and water mains will have minimum separation of ten (10) feet horizontally and 24" vertically with relation to each other.
- All intersection grades shall be set to insure positive drainage into curb inlets.
- All water lines shall be PVC, C-900 or Ductile Iron Class 50.

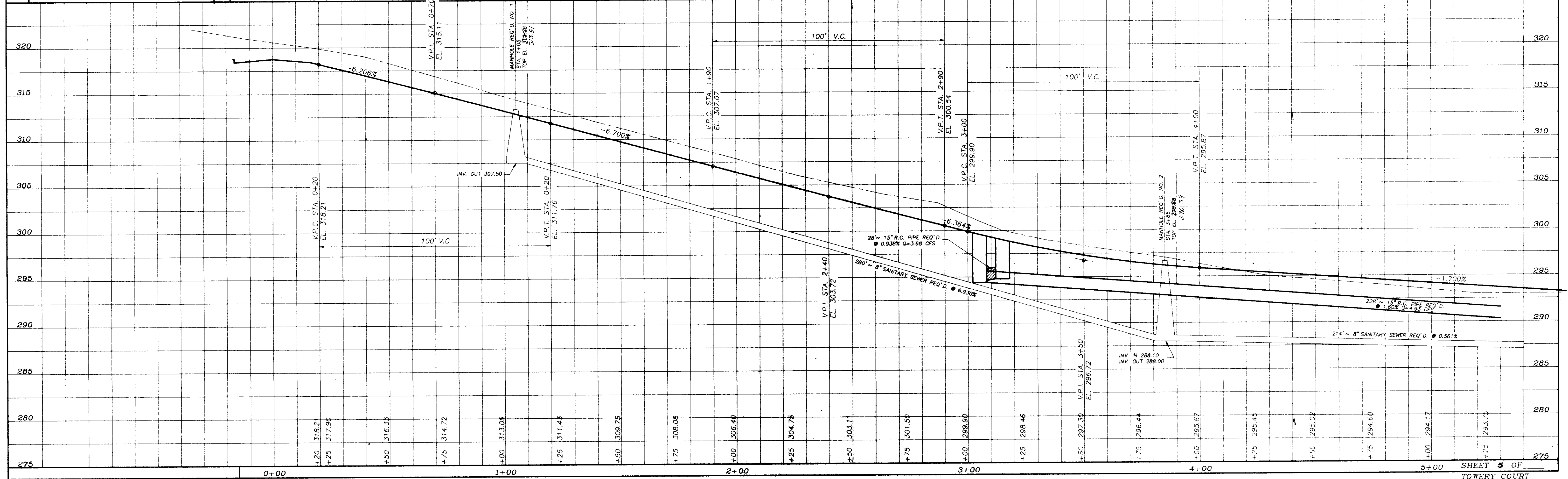
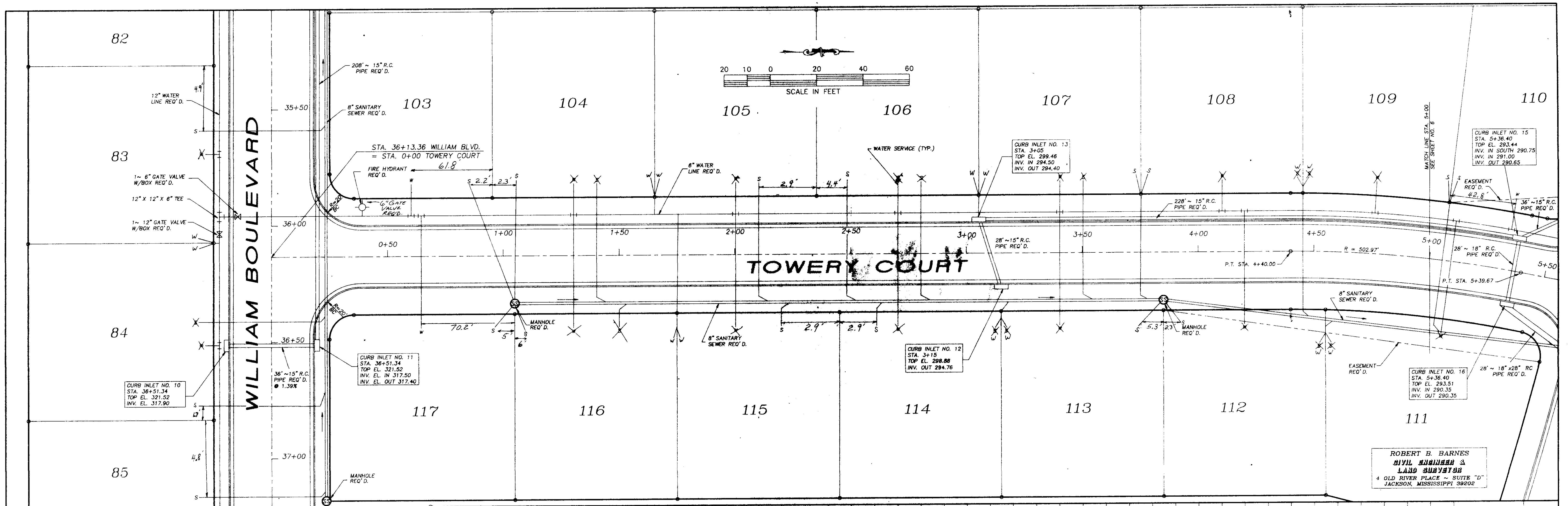
I HEREBY CERTIFY THAT A FINAL FIELD SURVEY WAS CONDUCTED AND THAT THESE "AS BUILT" PLANS RESULTED FROM SAID SURVEY AND ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I FURTHER CERTIFY THAT EACH IMPROVEMENT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH CITY SPECIFICATIONS.



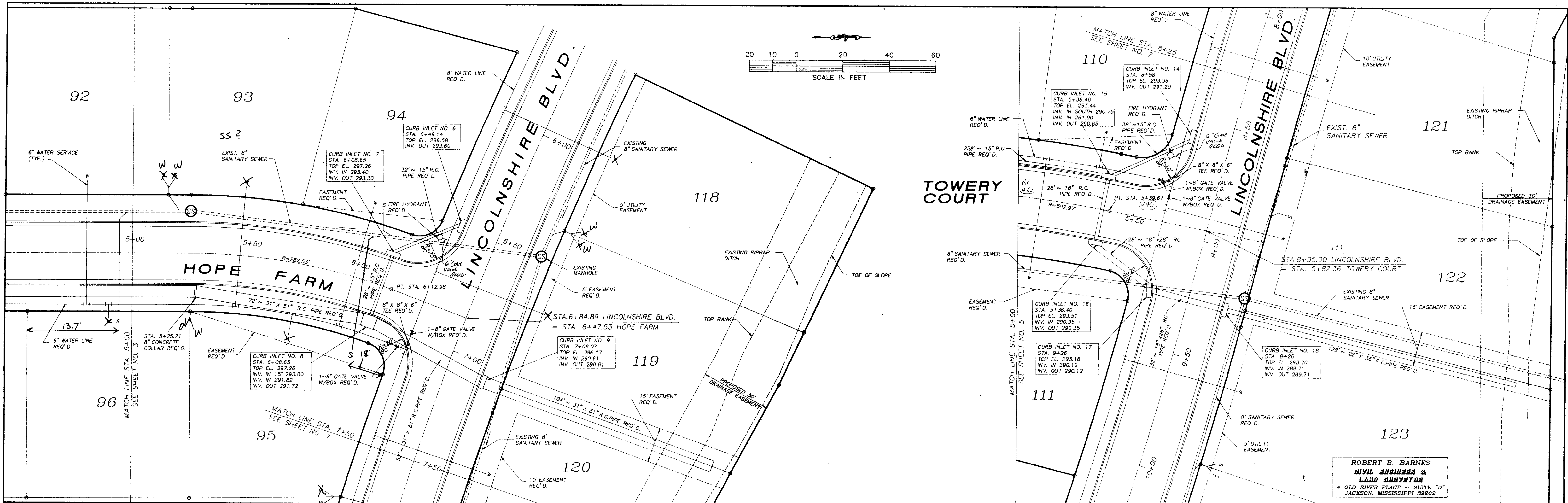
PWP-00822



ROBERT B. BARNES
CIVIL ENGINEER &
LAND SURVEYOR
4 OLD RIVER PLACE - SUITE "D"
JACKSON, MISSISSIPPI 39208

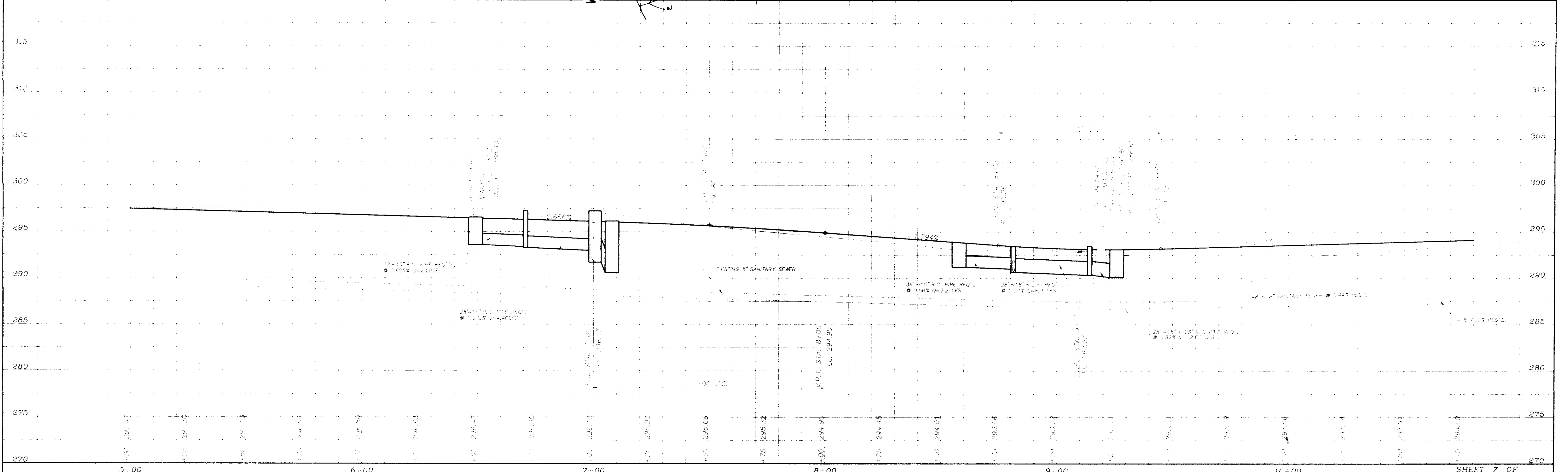
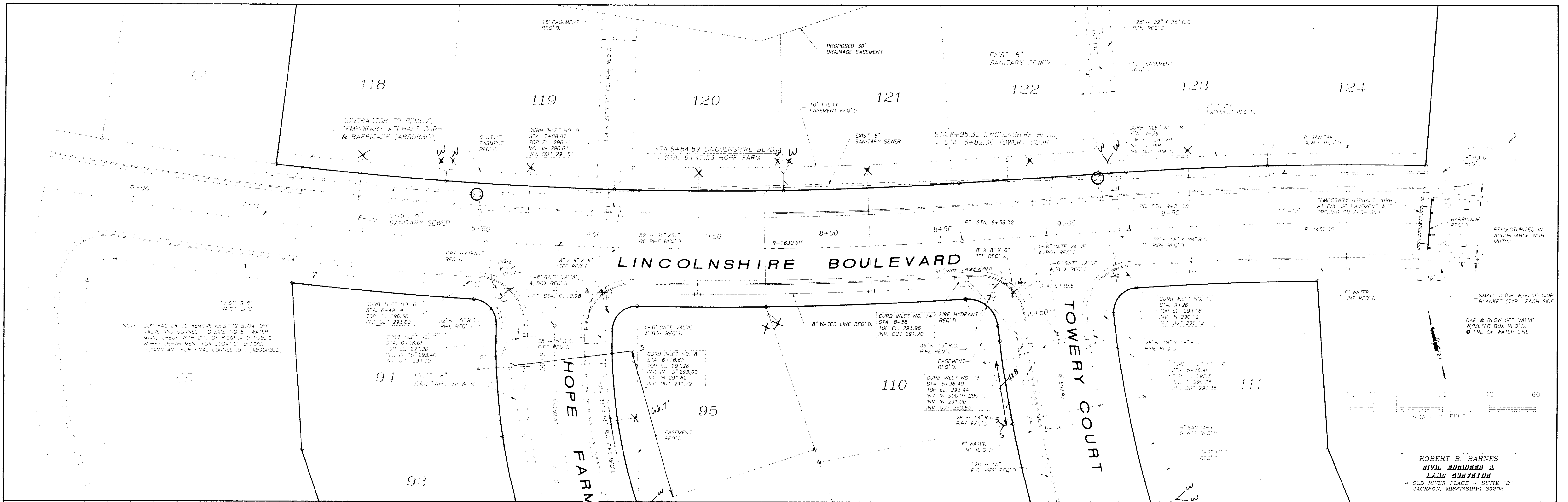


ROBERT B. BARNES
 CIVIL ENGINEER &
 LAND SURVEYOR
 4 OLD RIVER PLACE ~ SUITE "D"
 JACKSON, MISSISSIPPI 39202



SHEET 6 OF 6
LINCOLNSHIRE AT TOWERY COURT

8572-03



ROBERT B. HARNES
 CIVIL ENGINEER
 4 OLD RIVER PLACE - SUITE 701
 JACKSON, MISSISSIPPI 39202