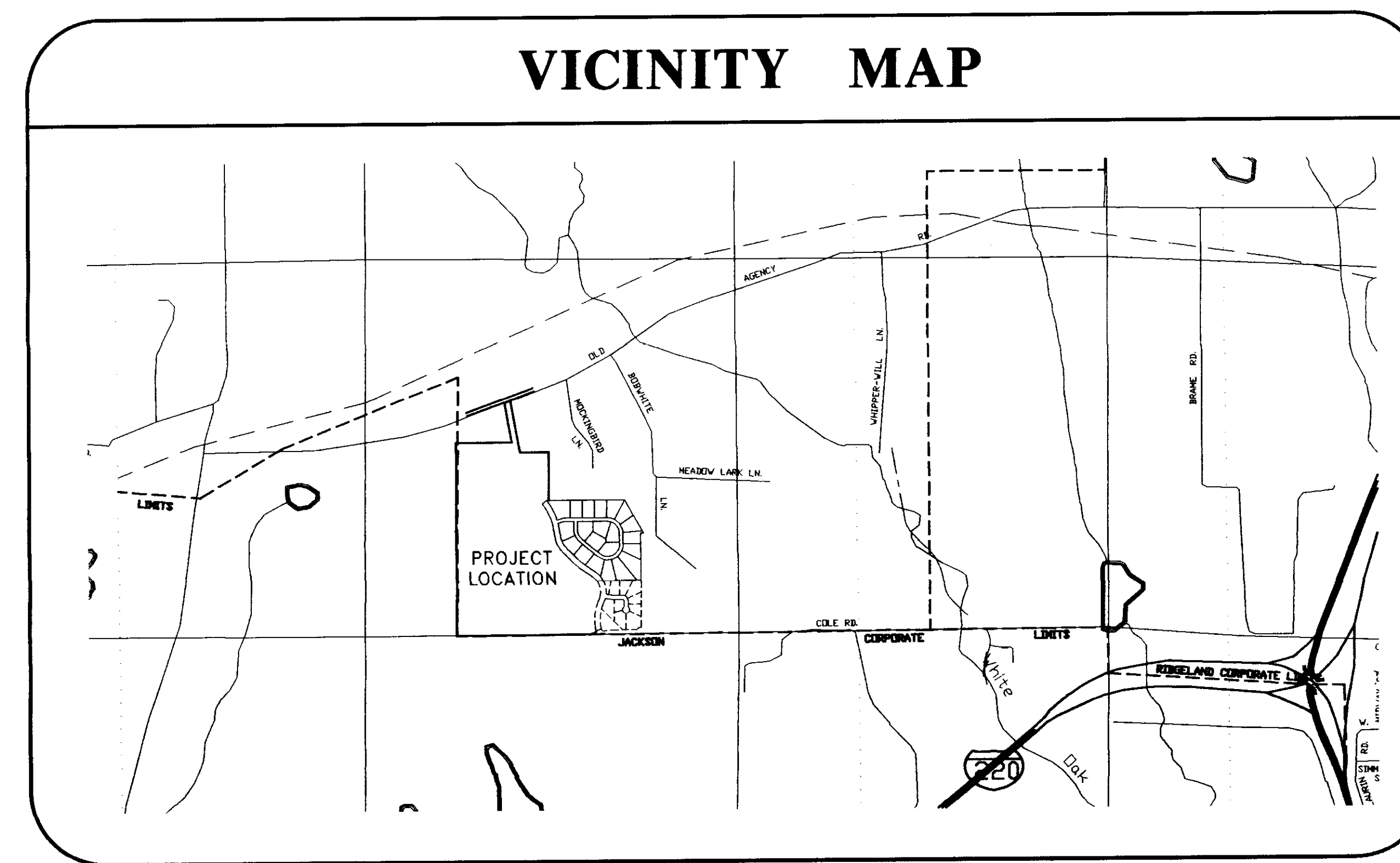
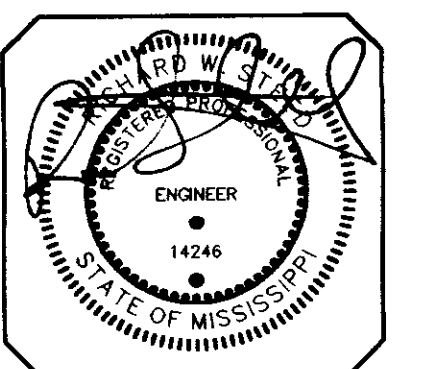


**CONSTRUCTION PLANS**  
 FOR  
**PINEHURST**  
 AT  
**HIGHLAND PARK OF RIDGELAND**  
**RIDGELAND, MISSISSIPPI**  
 FOR  
**TRAVIS PROPERTIES, LLC**  
**111 MOCKINGBIRD LANE**  
**RIDGELAND, MISSISSIPPI 39157**



**HARRIS & STEED, INC.**  
 Consulting Engineers  
 Jackson, Mississippi  
 3003 LAKE LAND COVE, SUITE F, JACKSON, MS 39208  
 PH. (601) 664-0388 • FAX. (601) 664-0389



**RECORD DRAWING**  
**THESE DRAWINGS SHOW AS BUILT**  
**LOCATIONS OF WATER AND SEWER**  
**SYSTEMS ONLY.**  
 BY: *[Signature]* DATE: *12/6/01*

MAY 3, 2001  
 S-170

I:\S-170\002.dwg Wed Jan 03 10:28:25 2002 Paul Wilie.ln

**NOTES**

1. ALL FINISH SPOT ELEVATIONS REPRESENT BASE OF CURB ELEVATIONS
2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL TIMES
3. OWNER SHALL BE RESPONSIBLE FOR GRADING OF PARCELS TO ENSURE POSITIVE DRAINAGE AS INDICATED
4. BEFORE UNDERTAKING EACH PART OF THE WORK, THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE PLANS & SPECIFICATIONS AND CHECK AND VERIFY PERTINENT FIGURES SHOWN THEREON AND ALL APPLICABLE FIELD MEASUREMENTS. IF ANY CONFLICTS, ERRORS, DISCREPANCIES, OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED EITHER ON THE CONSTRUCTION DOCUMENTS OR IN THE FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY REPORT IN WRITING TO THE ENGINEER OR HIS REPRESENTATIVE, AND SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE ENGINEER OR HIS REPRESENTATIVE BEFORE PROCEEDING WITH ANY WORK AFFECTED THEREBY.

**LOCAL UTILITY COMPANIES**

1. WATER AND SEWER - PUBLIC WORKS DEPT. (601) 856-3938
2. GAS SERVICE - ENTTEX (601) 856-9348
3. TV CABLE SERVICE - DBS WIRELESS CABLE (601) 856-8890
4. ELECTRICAL SERVICE - ENTERGY 1-800-368-3749
5. TELEPHONE SERVICE - BELLSOUTH 557-6000
6. CONTRACTOR SHALL CALL (MISSISSIPPI ONE CALL SYSTEM INC.) BEFORE CONSTRUCTION (601) 362-4374

**DEMOLITION NOTES**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY AND ALL EXISTING STRUCTURES DESIGNATED TO BE REMOVED WITHIN THE PROPERTY LIMITS, INCLUDING BUT NOT LIMITED TO STRUCTURES, FOUNDATIONS, ALL EXISTING PAVEMENTS AND DRIVEWAYS, EXISTING FENCES, UTILITIES AND DEBRIS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT OCCUR TO IMPROVEMENTS SHOWN HEREON TO REMAIN.
3. CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE THAT IS FOUND TO EXIST PRIOR TO HIS WORK OR THAT IS GENERATED AS A RESULT OF HIS WORK. DEBRIS SHALL CONSIST OF ANY MATERIAL OTHER THAN SOIL.
4. CONTRACTOR WILL NOT BE RESPONSIBLE FOR DEMOLISHING OR REMOVING ANY EXISTING ABOVE OR BELOW GROUND TELEPHONE OR POWER BUT SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ALL LOCAL UTILITY COMPANIES.

5. CONTRACTOR SHALL CALL THE MISSISSIPPI DAMAGE PREVENTION NUMBER (1-601-362-4374) BY LAW TO LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO HIS WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITIES NOT DESIGNATED TO BE REMOVED UNDER THIS CONTRACT AND BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING UTILITIES NOT DESIGNATED TO BE REMOVED THAT RESULT FROM CONTRACTOR'S WORK.

6. REMOVAL OF ALL POWER LINES, POLES, AND APPURTENANCES SHALL BE BY LOCAL UTILITY COMPANY.

7. LIMITS OF CLEARING AND GRUBBING SHALL BE PROPERTY LINES, UNLESS SPECIFICALLY DESIGNATED OTHERWISE.

8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL CONSTRUCTION PERMITS THAT ARE REQUIRED TO ACCOMPLISH THE WORK SPECIFIED HEREON.

**GRADING**

1. GENERAL: IT IS THE RESPONSIBILITY OF THE BUILDING CONTRACTOR TO ESTABLISH A FINISHED GRADE TO ELEVATIONS SHOWN. THE OWNER AT HIS OWN EXPENSE MAY TEST INPLACE MATERIAL FOR ACCEPTANCE. THE BUILDING CONTRACTOR SHALL NOTIFY THE OWNER WHEN FINISH GRADE IS ESTABLISHED AND SHALL NOT PROCEED UNTIL FINAL ACCEPTANCE BY OWNER.

2. REFERENCE POINTS: THE CONTRACTOR SHALL LOCATE BENCHMARKS, MONUMENTS AND OTHER REFERENCE POINTS FOR ELEVATION AND LOCATION OF BUILDING. NOTIFY OWNER'S SITE REPRESENTATIVE OF APPARENT DISCREPANCIES IN INDICATED LOCATIONS. PROTECT REFERENCE POINTS FROM DISLOCATION OR DAMAGE. REPLACE OR REPAIR IMMEDIATELY ANY POINTS DAMAGED, DESTROYED OR DISLOCATED. DO NOT PROCEED WITH CONSTRUCTION WORK UNTIL REFERENCE POINTS HAVE BEEN REVIEWED AND ACCEPTED BY THE OWNER'S SITE REPRESENTATIVE.

3. CLEAN-UP: UPON COMPLETION OF WORK OF THIS SECTION, REMOVE FROM PREMISES, AND DISPOSE OF ALL RELATED DEBRIS, EXCESS MATERIAL, IMPLEMENT GRASSING OPERATIONS AND TURF ESTABLISHMENT IN AREA INDICATED TO BE GRADED OR STRIPPED.

4. SITE GRADING: PROOF ROLLING WITH A LOADED TRUCK OR SCRAPER WILL BE PERFORMED TO LOCATE POTENTIAL SOFT SPOTS IN THE SUBGRADE AND/OR NATURAL GROUND BEFORE ANY FILL IS PLACED. SOFT SPOTS WILL BE REMOVED AND REPLACED WITH COMPACTED STABLE SANDY CLAY (CL). THE TOP 6 INCHES OF NATURAL GROUND WILL BE SCARIFIED AND COMPACTED TO 98% ASTM D-698 PRIOR TO FILL PLACEMENT. CUT OR FILL AND MACHINE GRADE SITE AS SHOWN ON THE DRAWINGS TO DRAIN AS INDICATED, ALLOWING FOR THE THICKNESS OF PAVING SUBBASE AND THE PAVING. WHERE FILL IS REQUIRED, USE LABORATORY APPROVED SUITABLE CLEAN MATERIAL. PLACE IN HORIZONTAL LIFTS NOT IN EXCESS OF 8 INCHES THICK AFTER COMPACTION BY ROLLING AND/OR TAMPING TO 95% OF MAXIMUM DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT. ALL EARTHWORK WILL BE IN ACCORDANCE WITH SUBSURFACE INVESTIGATION REPORT AS PROVIDED BY THE OWNER.

5. MATERIALS FOR FILLING AND BACKFILLING: FILL AND BACKFILL MATERIAL WILL HAVE PROPERTIES TO ALLOW COMPACTION BY ROLLING AND TAMPING TO A DENSITY EQUAL TO 95% OF MAXIMUM DENSITY WITHIN ±2% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY TEST METHODS DESCRIBED IN ASTM D698, LATEST EDITION, "MOISTURE DENSITY RELATIONSHIP OF SOILS". IF EXCAVATED MATERIAL IS UNSUITABLE FOR COMPACTION AS DETERMINED BY THE SOILS TESTING LABORATORY, FURNISH SUITABLE BORROW, WHICH CAN BE COMPACTED, FROM AN OFF-SITE SOURCE. ALL FILL AND BACKFILL MATERIALS SHALL BE OF LOW EXPANSIVITY, UNIFORM IN GRADE, FREE FROM ORGANIC MATERIAL AND CONSIST OF A SOIL BEING PLACED AND HAVING THE FOLLOWING CHARACTERISTICS: THE FILL MATERIAL PLACED IN THE EXCAVATION SHOULD BE SANDY CLAY MIXTURE MEETING THE SPECIFICATIONS OF CLASS 5, GROUP D AS PER THE "MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

6. BEFORE UNDERTAKING EACH PART OF THE WORK, THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE PLANS AND SPECIFICATIONS AND CHECK AND VERIFY PERTINENT FIGURES SHOWN THEREON AND ALL APPLICABLE FIELD MEASUREMENTS. IF ANY CONFLICTS, ERRORS, DISCREPANCIES, OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED EITHER ON THE CONSTRUCTION DOCUMENTS OR IN THE FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY REPORT IN WRITING TO THE ENGINEER OR HIS REPRESENTATIVE AND SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE ENGINEER OR HIS REPRESENTATIVE BEFORE PROCEEDING WITH ANY WORK AFFECTED THEREBY.

**UTILITIES**

1. CARE SHALL BE TAKEN TO PROTECT EXISTING AND NEW UTILITIES FROM DAMAGE. DAMAGE TO UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE BEFORE ACCEPTANCE.

2. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL BE SDR 26 CONFORMING TO THE LATEST EDITION OF ASTM STANDARD D-3034 AND ASTM F879. THE THERMOPLASTIC SHALL BE VIRGIN, RIGID PVC PLASTIC CONFORMING TO ASTM D1784 FOR A MINIMUM CELL CLASS OF 12454-C (PVC TYPE 1). PIPE JOINTS SHALL BE OF INTEGRAL BELL AND SPIGOT TYPE WITH FLEXIBLE ELASTOMERIC SEALS CONFORMING TO THE LATEST EDITION OF ASTM D-3212. ELASTOMERIC SEALS SHALL CONFORM TO THE LATEST EDITION OF ASTM F-477. LUBRICANT AS RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED WHEN COMPLETING JOINTS.

3. ALL NEW WATER MAIN SHALL BE PVC, C900 AWWA APPROVED. CONNECTION OF PROPOSED WATER LINES TO THE EXISTING WATER MAIN SHALL BE COORDINATED THROUGH UTILITY COMPANY REPRESENTATIVES. ALL TAPS IMPACT FEES ALONG WITH METER VAULT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

4. MANHOLES SHALL BE CONSTRUCTED TO PRECAST MANHOLE SECTIONS OR CAST-IN-PLACE CONCRETE AT THE CONTRACTOR'S ELECTION, UNLESS OTHERWISE SPECIFIED. THE CONSTRUCTION SHALL ALSO INCLUDE THE NECESSARY EXCAVATION, ECCENTRIC CONE SECTIONS, FRAMES, COVERS, CASTINGS, FITTINGS, STEPS, VENTS (IF REQUIRED) AND CONNECTIONS ALL INSTALLED OR CONSTRUCTED IN ACCORDANCE WITH THESE SPECIFICATIONS AND CONFORMING TO REQUIREMENTS, DETAILS, LINES, GRADES AND DIMENSIONS SHOWN ON THE DRAWINGS OR ESTABLISHED BY THE ENGINEER. EXCAVATION FOR MANHOLES SHALL BE SUFFICIENT TO PERMIT THE CARRYING OUT OF THE CONSTRUCTION AS REQUIRED. CARE SHALL BE TAKEN NOT TO EXCAVATE FOR THE MANHOLES BELOW THE DEPTH SPECIFIED. SPACE SO EXCAVATED THROUGH ERROR OR NEGLECT SHALL BE REFILLED WITH CONCRETE AT THE CONTRACTOR'S EXPENSE. IF EXTRA DEPTH OF EXCAVATION IS NECESSITATED BY THE NATURE OF THE SOIL AND IS ORDERED BY THE ENGINEER, THE CONTRACTOR WILL BE PAID FOR THE SELECTED FILL MATERIAL AT THE CONTRACT UNIT PRICES. DURING CONSTRUCTION OF THE JUNCTION BOXES, THE EXISTING STORM WATER FLOW SHALL BE MAINTAINED IN A MANNER ACCEPTABLE TO THE ENGINEER.

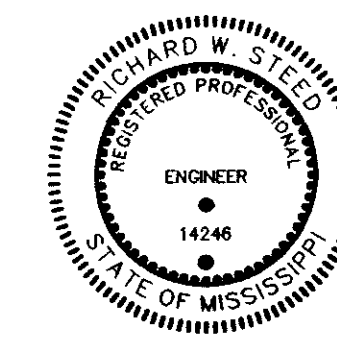
5. EACH LOT UTILITY CONNECTION WILL CONFORM TO THE CITY OF RIDGELAND'S REGULATIONS.

**INDEX OF SHEETS**

1. COVER SHEET
2. GENERAL NOTES / DRAWING INDEX
3. STREET AND LOT LAYOUT
4. WATER AND SEWER LAYOUT
5. DRAINAGE AND GRADING LAYOUT
6. PLAN AND PROFILE - SANITARY SEWER CONNECTION  
HIGHLAND PARK BOULEVARD (6+50 TO 15+50)
7. PLAN AND PROFILE - HIGHLAND PARK BOULEVARD (15+50 TO 22+23.28)
8. PLAN AND PROFILE - PINEHURST CIRCLE (0+00 TO 14+00)
9. PLAN AND PROFILE - PINEHURST CIRCLE (14+00 TO 23+22.86)
- ~~10. EROSION AND SEDIMENT CONTROL PLAN (OMITTED)~~
11. STANDARD WATER AND SEWER DETAILS
- ~~12. MDOT TYPE 1 MEDIAN INLET (29" - 51" PIPE) (OMITTED)~~
- ~~13. MDOT TYPE 1 MEDIAN INLET (OVER 51" PIPE) (OMITTED)~~

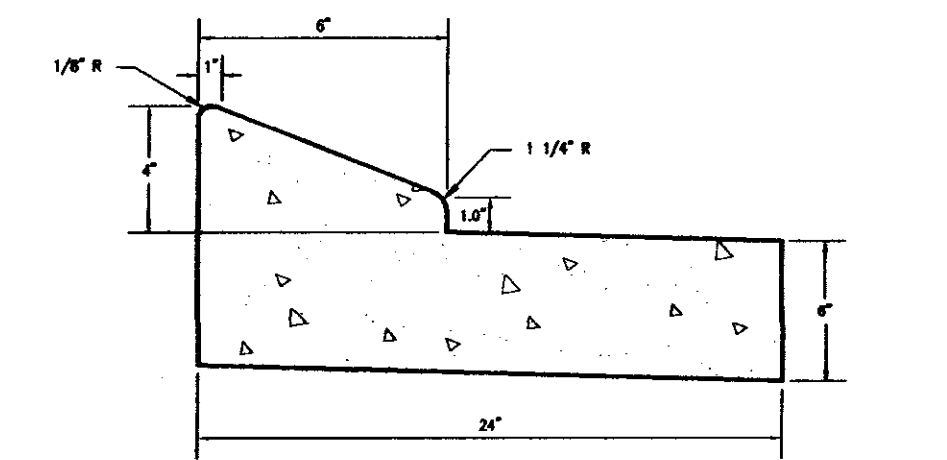
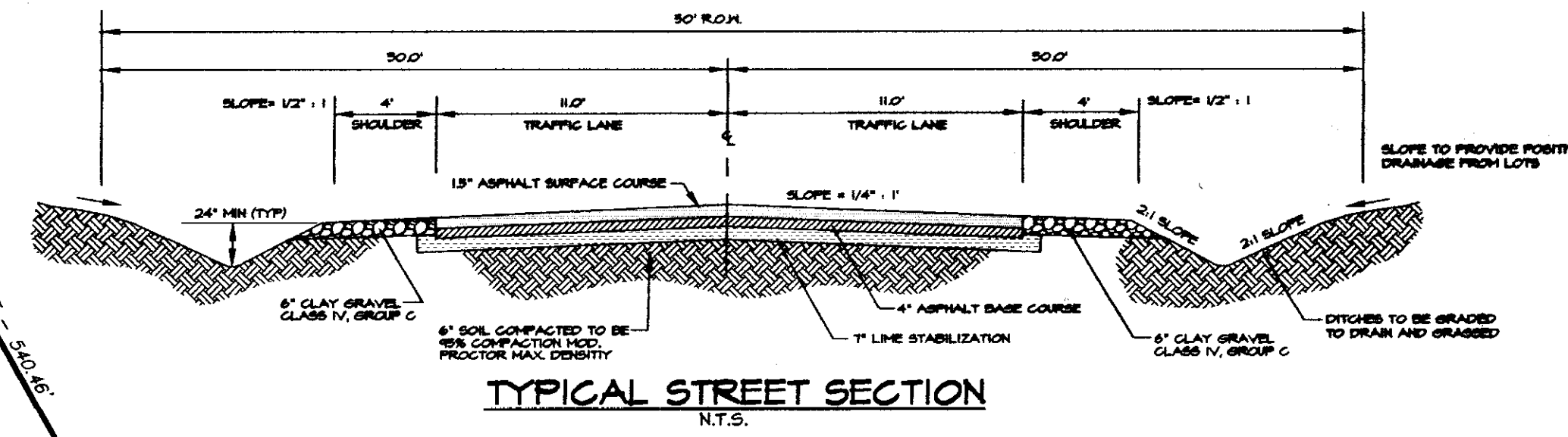
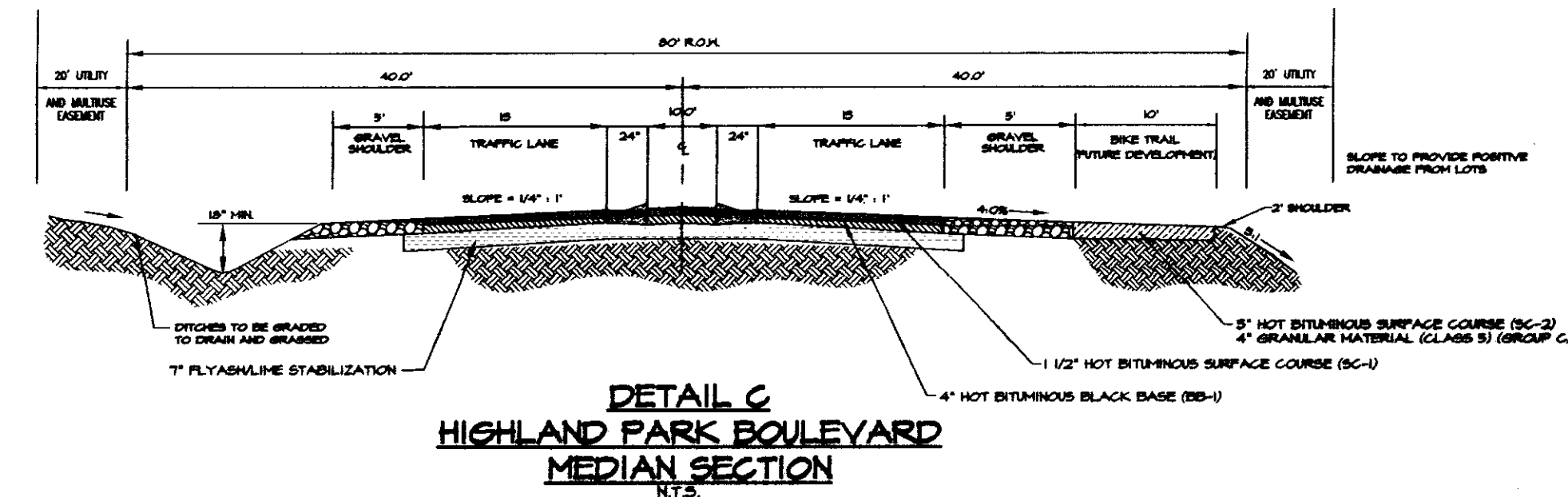
**RECORD DRAWING**  
THESE DRAWINGS SHOW AS BUILT  
LOCATIONS OF WATER AND SEWER  
SYSTEMS ONLY.

BY: *mw* DATE: *12/2/01*



Project: <b>PINEHURST AT HIGHLAND PARK OF RIDGELAND</b>		Client: <b>TRAVIS PROPERTIES, LLC RIDGELAND, MISSISSIPPI</b>	
Title: <b>GENERAL NOTES DRAWING INDEX</b>			
DSCR: P.H.W.	DATE: 05/03/01	HARRIS & STEED, INC. Consulting Engineers Jackson, Mississippi	DRAWING NO. <b>2 of 13</b>
DRWN: P.H.W.	DATE: 05/03/01		
CHKD: R.W.S.	DATE: 05/03/01		





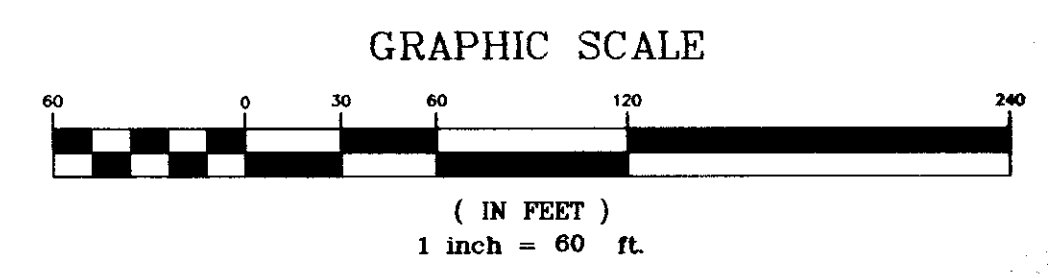
**NOTES:**

- DIMENSIONS ALONG CURVES ARE CHORD DISTANCES.
- A 15' UTILITY EASEMENT IS REQUIRED ADJACENT TO ALL STREET RIGHT-OF-WAYS.
- MINIMUM BUILDING SETBACKS: FRONT SETBACK - LOTS 1-8 - 80' FROM R.O.W.  
 LOTS 9-12 - 105' FROM R.O.W.  
 LOTS 13-21 - 60' FROM R.O.W.  
 SIDE SETBACK - 10' FROM SIDE LOT LINE  
 REAR SETBACK - 30' FROM REAR LOT LINE  
 REAR SETBACK - 35' FROM STREET R.O.W. (HIGHLAND PARK BLVD.)
- THIS PROPERTY IS SITUATED IN FLOOD ZONE "X" ACCORDING TO FLOOD INSURANCE RATE MAPS OF MADISON COUNTY, MISSISSIPPI, MAP NUMBER 28089C0315 D, DATED APRIL 15, 1994. (REVISED TO REFLECT LOMR, EFFECTIVE MAY 10, 2001.)
- SANITARY SEWER ALONG HIGHLAND PARK BOULEVARD WILL BE IN ACCORDANCE WITH THE LARUE CREEK BASIN STUDY.
- TOTAL AREA OF THIS DEVELOPMENT - ±28.74 ACRES
- DATE OF SURVEY - DECEMBER 8, 2000

**RECORD DRAWING**  
 THESE DRAWINGS SHOW AS BUILT  
 LOCATIONS OF WATER AND SEWER  
 SYSTEMS ONLY.

BY: *[Signature]* DATE: 12/1/01

CURVE	LENGTH	RADIUS	CHORD	CENTRAL ANGLE
C1	120.52	300.00	119.71	23°03'50"
C2	90.07	500.00	89.95	10°13'17"
C3	249.50	400.00	245.45	35°44'20"
C4	420.57	800.00	416.08	30°08'45"
C5	53.91	200.00	53.23	15°01'50"
C6	314.24	200.00	282.90	30°01'18"
C7	456.78	300.00	342.23	32°26'47"
C8	173.42	200.00	168.09	42°41'50"



Project: **PINEHURST**  
 AT  
**HIGHLAND PARK OF RIDGELAND**

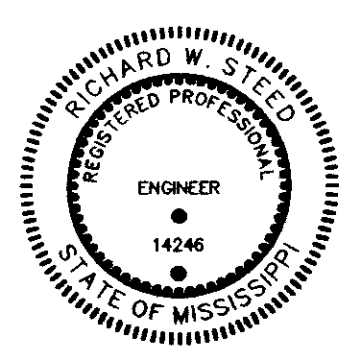
Client: **TRAVIS PROPERTIES, LLC**  
**RIDGELAND, MISSISSIPPI**

Title: **STREET AND LOT LAYOUT**

Designed By: P.E.W. Date: 05/03/01  
 Drawn By: P.E.W. Date: 05/03/01  
 Checked By: E.W.S. Date: 05/03/01

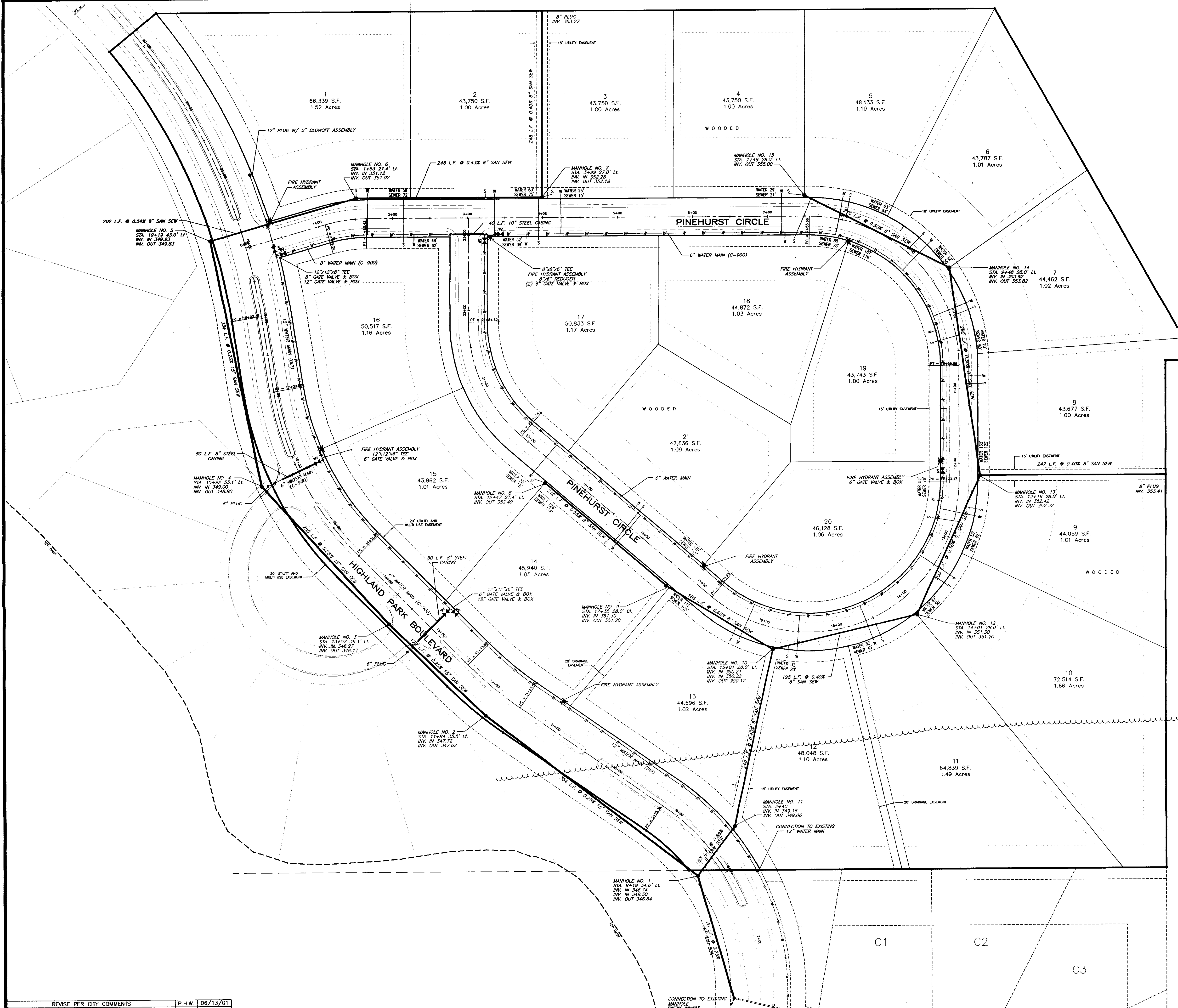
HARRIS & STEED, INC.  
 Consulting Engineers  
 Jackson, Mississippi

Drawing No. **3** OF **13**  
 Project No. S-178



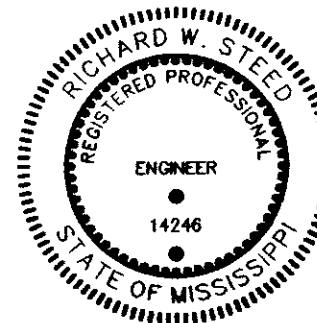
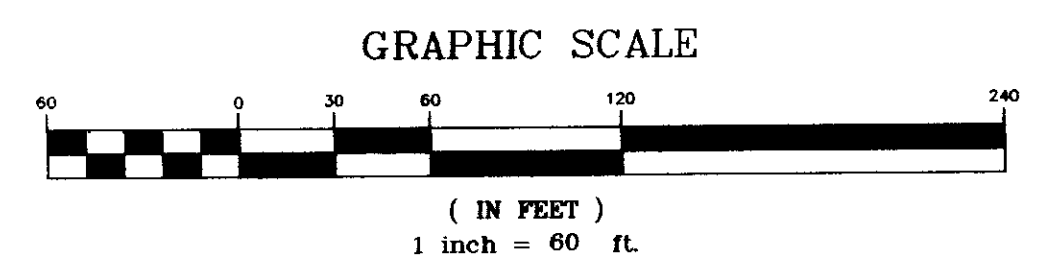
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REVISION	BY	DATE



**RECORD DRAWING**  
 THESE DRAWINGS SHOW AS BUILT  
 LOCATIONS OF WATER AND SEWER  
 SYSTEMS ONLY.

BY: *PLW* DATE: 12/03/01

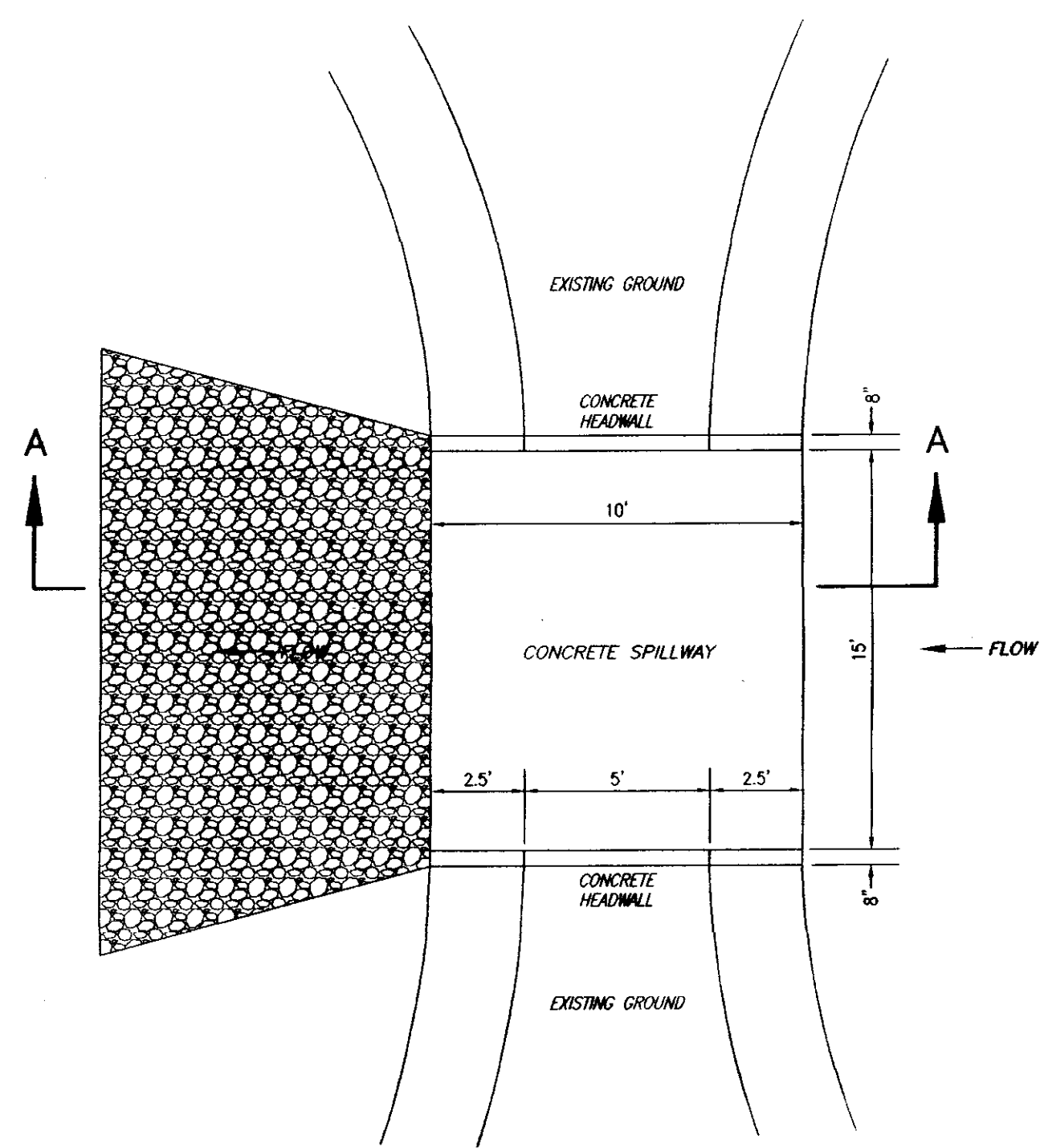
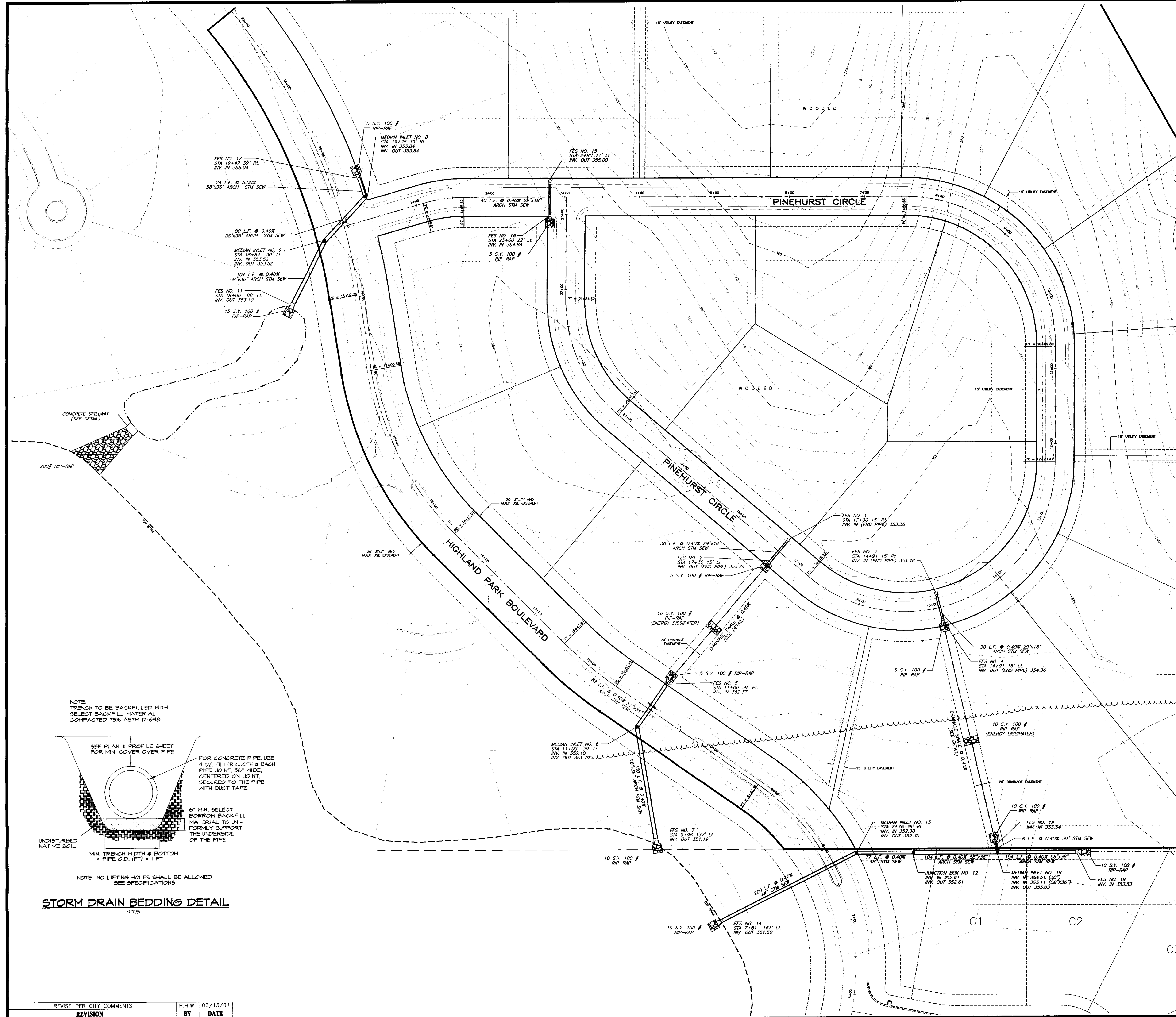


Project:	<b>PINEHURST AT HIGHLAND PARK OF RIDGELAND</b>		
Client:	<b>TRAVIS PROPERTIES, LLC RIDGELAND, MISSISSIPPI</b>		
Title:	<b>WATER AND SEWER LAYOUT</b>		
Designed By:	P.H.W.	Date:	05/03/01
Drawn By:	P.H.W.	Date:	05/03/01
Checked By:	R.W.S.	Date:	05/03/01
Scale:	1"=60'		
HARRIS & STEED, INC. Consulting Engineers Jackson, Mississippi		Drawing No.	<b>4 OF 13</b>
303 LARK AND OWE, SUITE F - JACKSON, MS 39201 TEL: 601/664-0288 - FAX: 601/664-0297		Project No.	<b>S-170</b>

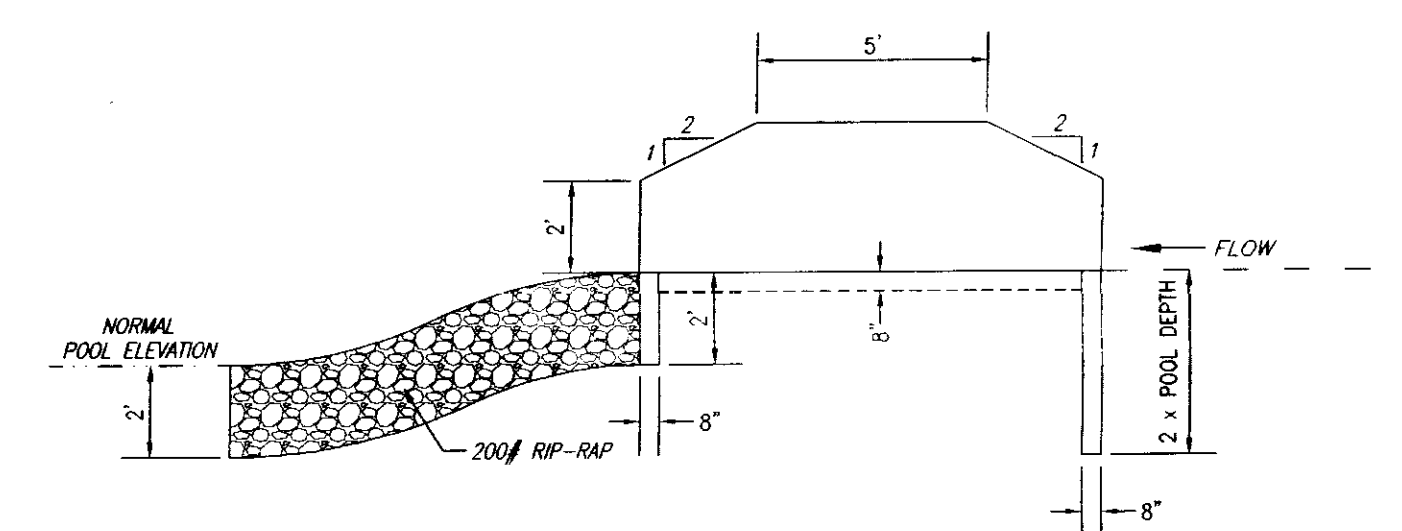
REVISION	BY	DATE
	P.H.W.	06/13/01

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CONCRETE SPILLWAY  
PLAN VIEW



SECTION A-A

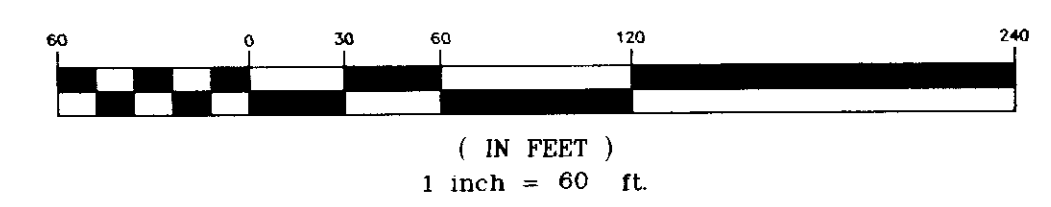
NOTES:  
1. STEEL - #7 BARS @ 12" O.C. EACH WAY  
2. 4000 PSI CONCRETE

**RECORD DRAWING**  
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SYSTEMS ONLY.

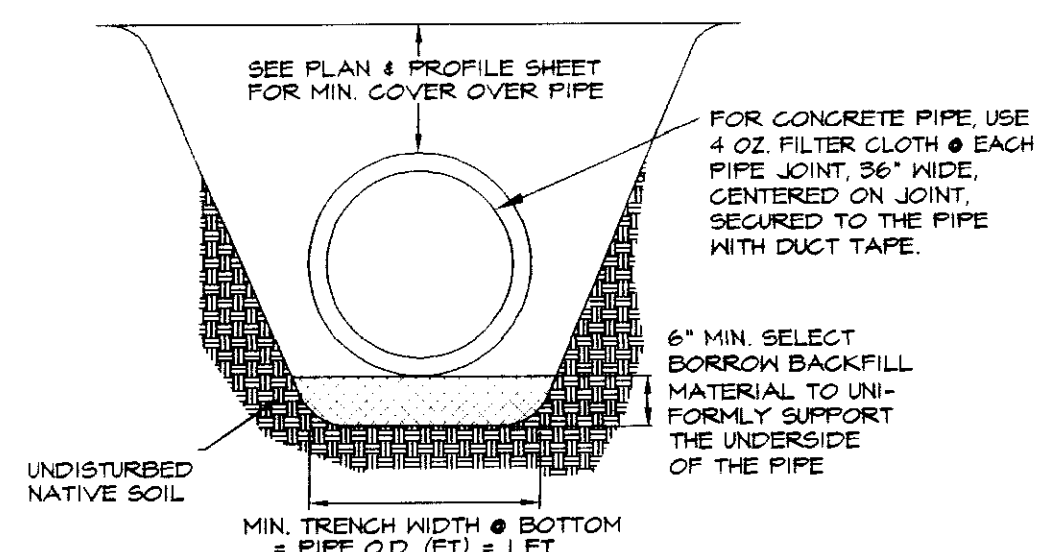
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GRAPHIC SCALE

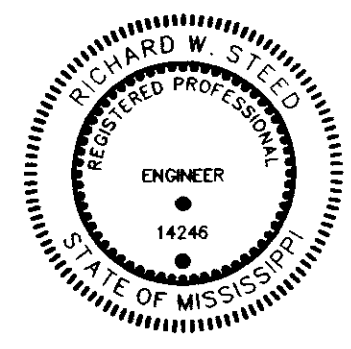


NOTE:  
TRENCH TO BE BACKFILLED WITH  
SELECT BACKFILL MATERIAL  
COMPACTED 95% ASTM D-698



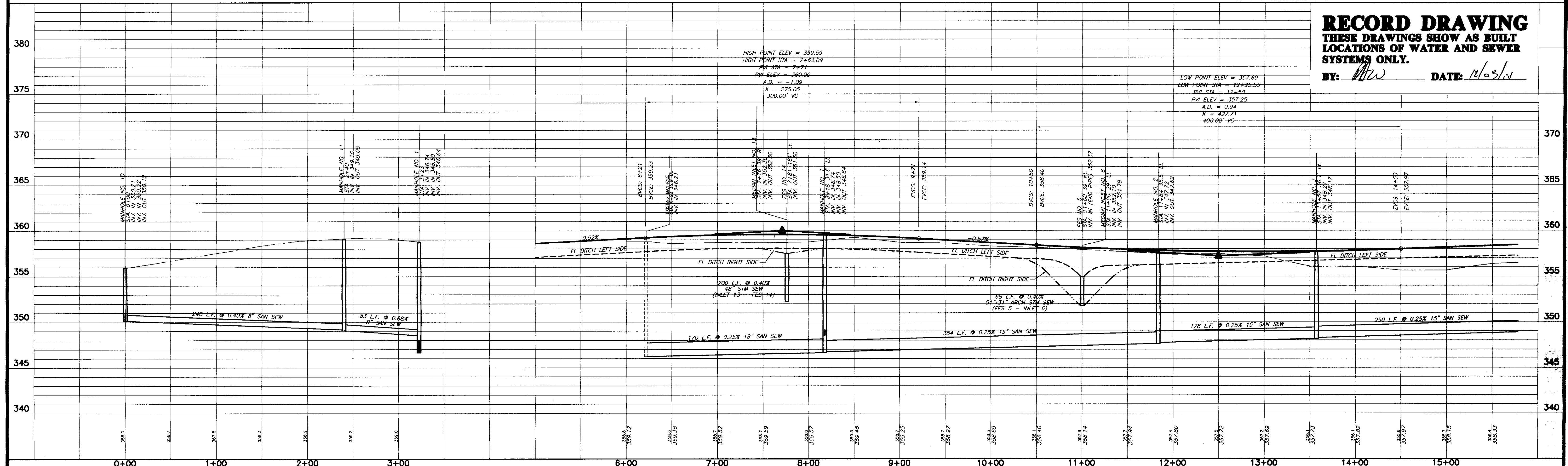
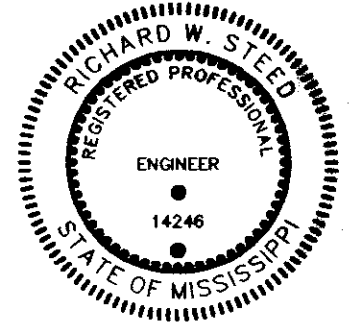
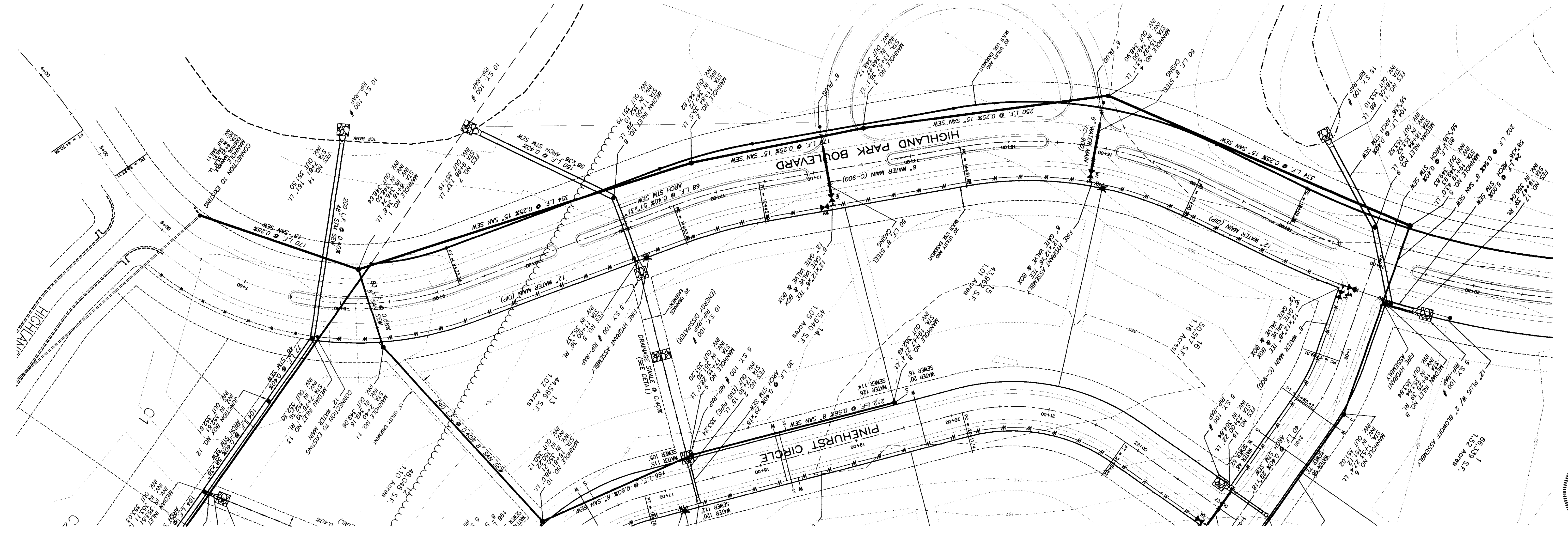
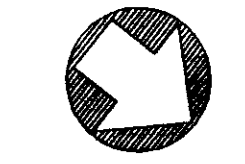
STORM DRAIN BEDDING DETAIL  
N.T.S.

NOTE: NO LIFTING HOLES SHALL BE ALLOWED  
SEE SPECIFICATIONS



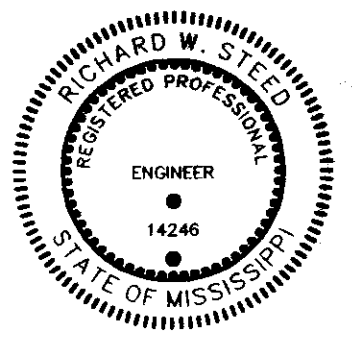
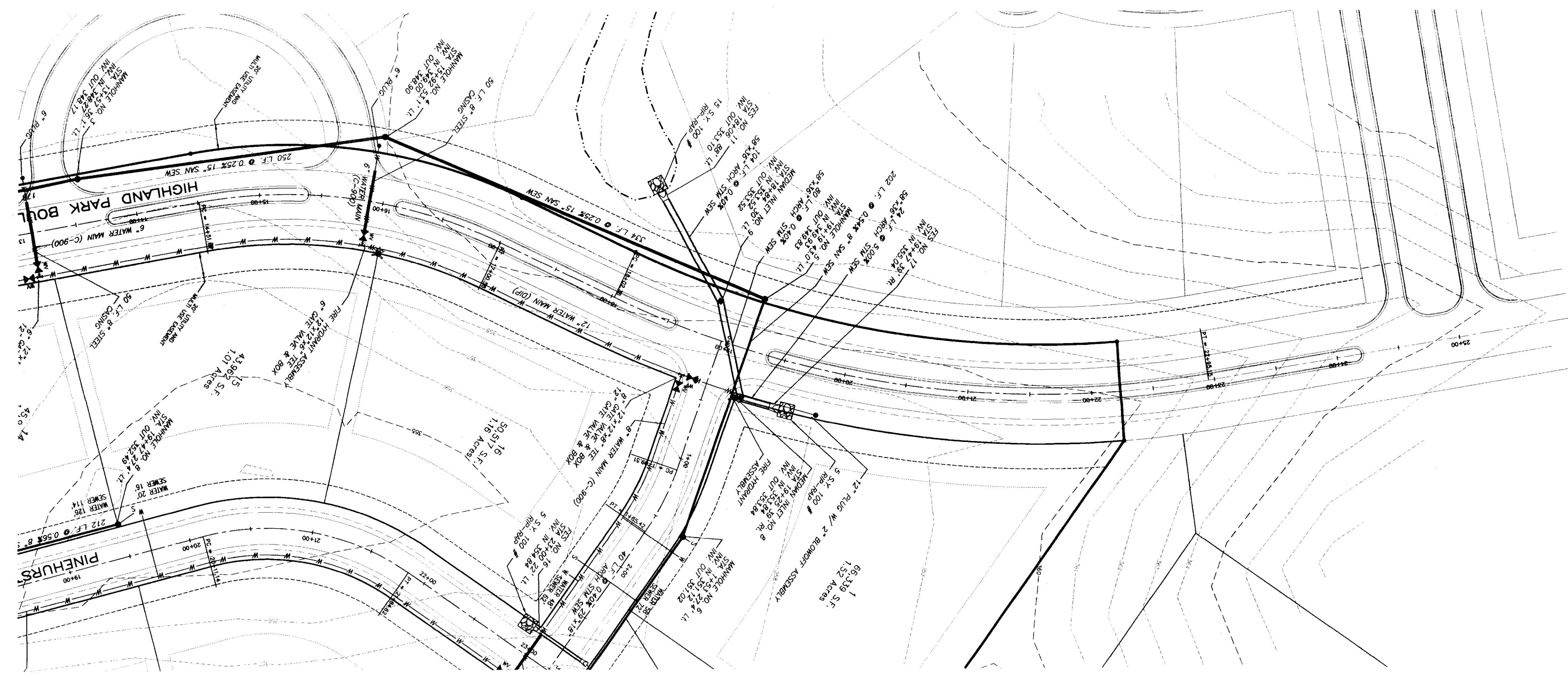
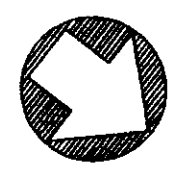
Project:		<b>PINEHURST AT HIGHLAND PARK OF RIDGELAND</b>	
Client:		<b>TRAVIS PROPERTIES, LLC RIDGELAND, MISSISSIPPI</b>	
Title:		<b>DRAINAGE AND GRADING LAYOUT</b>	
Designed By:	P.H.W.	Date:	05/03/01
Drawn By:	P.H.W.	Date:	05/03/01
Checked By:	R.W.S.	Date:	05/03/01
Scale:	1"=60'		
HARRIS & STEED, INC. Consulting Engineers Jackson, Mississippi		Drawing No.	<b>5 OF 13</b>
300 HIGHLAND CIRCLE, SUITE 100, JACKSON, MS 39201 PH: (601) 954-0388 FAX: (601) 954-0389		Project No.	<b>9-170</b>



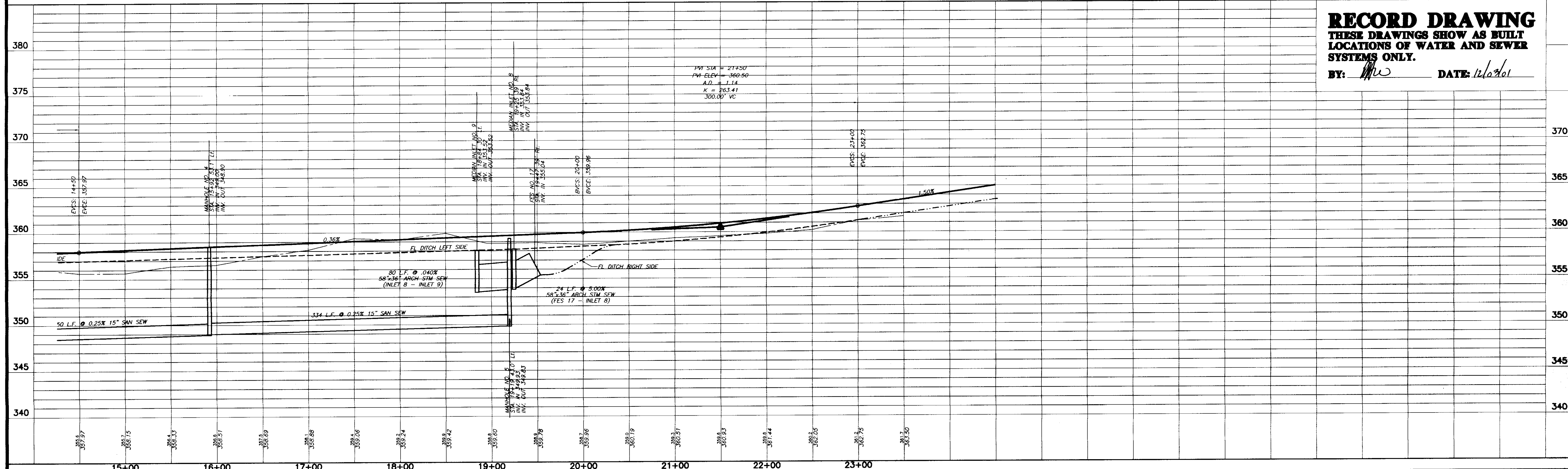


**RECORD DRAWING**  
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**LOCATIONS OF WATER AND SEWER**  
**SYSTEMS ONLY.**  
 BY: *MW* DATE: *11/03/01*

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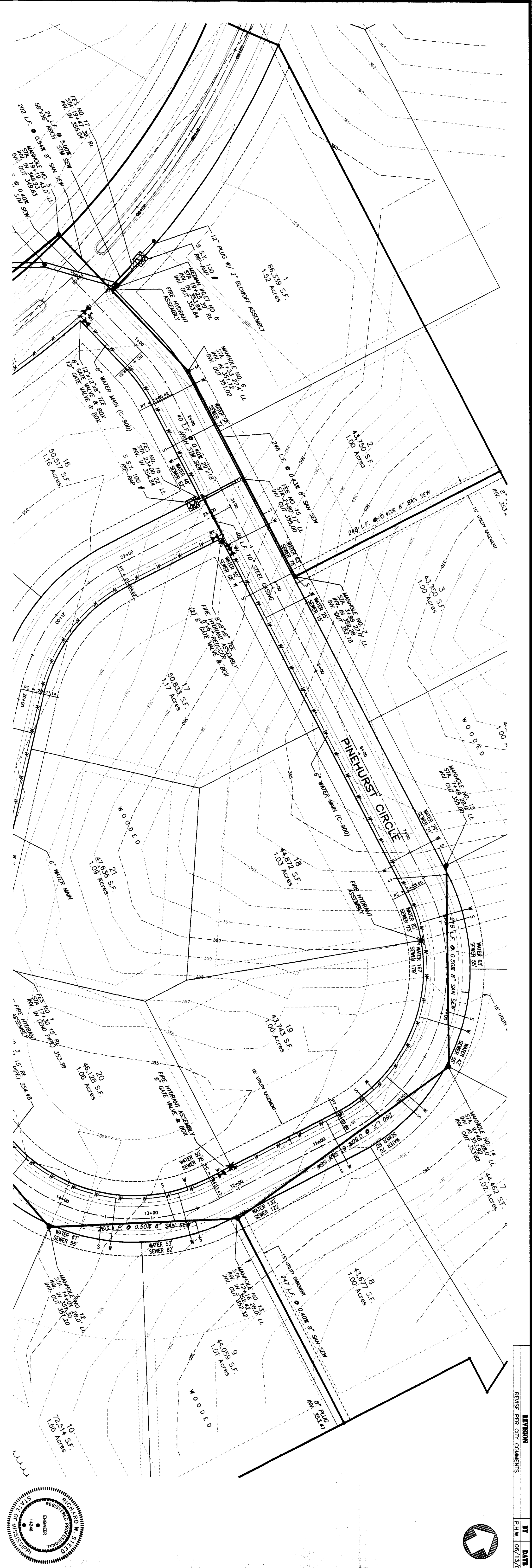
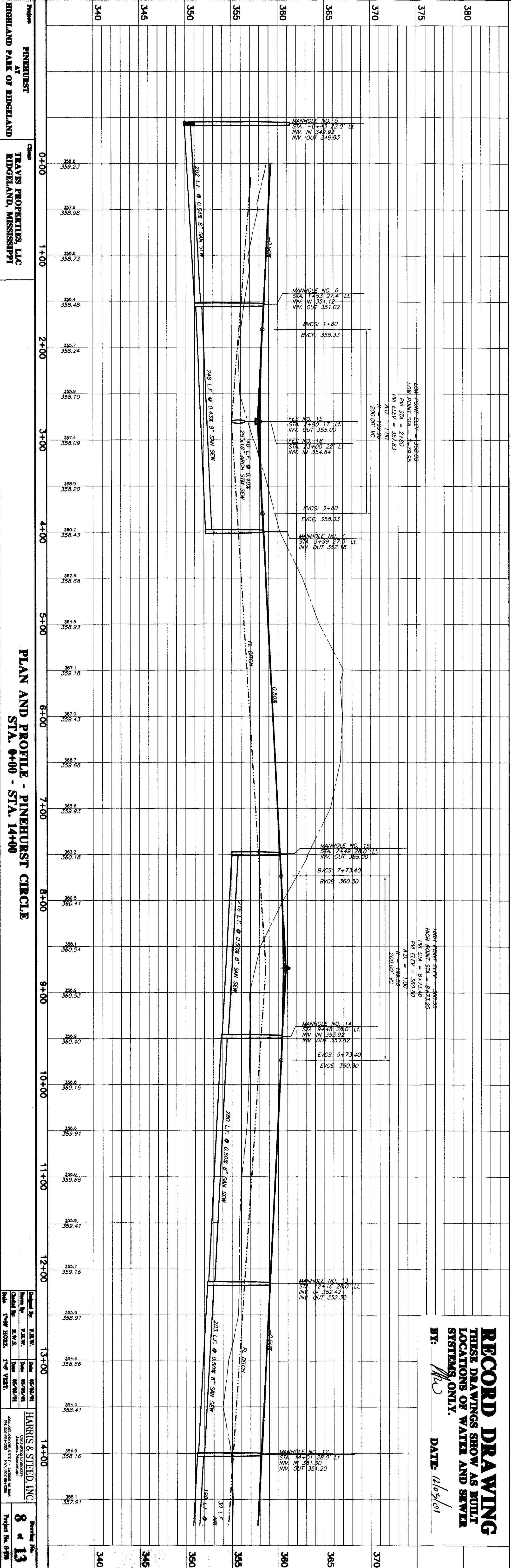
**RECORD DRAWING**  
 THESE DRAWINGS SHOW AS BUILT  
 LOCATIONS OF WATER AND SEWER  
 SYSTEMS ONLY.  
 BY: *MW* DATE: 12/03/01



Project: <b>PINKHURST AT HIGHLAND PARK OF RIDGELAND</b>	Client: <b>TRAVIS PROPERTIES, LLC RIDGELAND, MISSISSIPPI</b>	<b>PLAN AND PROFILE - HIGHLAND PARK BOULEVARD                  STA. 15+50 - STA. 22+23.28</b>	Drawing No. <b>7 of 13</b> Project No. 8470
Design By: P.H.W. Date: 05/01/01 Check By: P.H.W. Date: 05/01/01 Drawn By: R.W.S. Date: 05/01/01 Scale: 1"=30' HORIZ. 1"=6' VERT.		<b>HARRIS &amp; STEED, INC.</b> Consulting Engineers Jackson, Mississippi <small>300 LAURELWOOD DRIVE, SUITE 100 JACKSON, MS 39201                  TEL: 601/556-0200 FAX: 601/556-0200</small>	

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**PROJECT:** PINEHURST AT TRAVIS PROPERTIES, LLC  
**LOCATION:** RIDGELAND, MISSISSIPPI

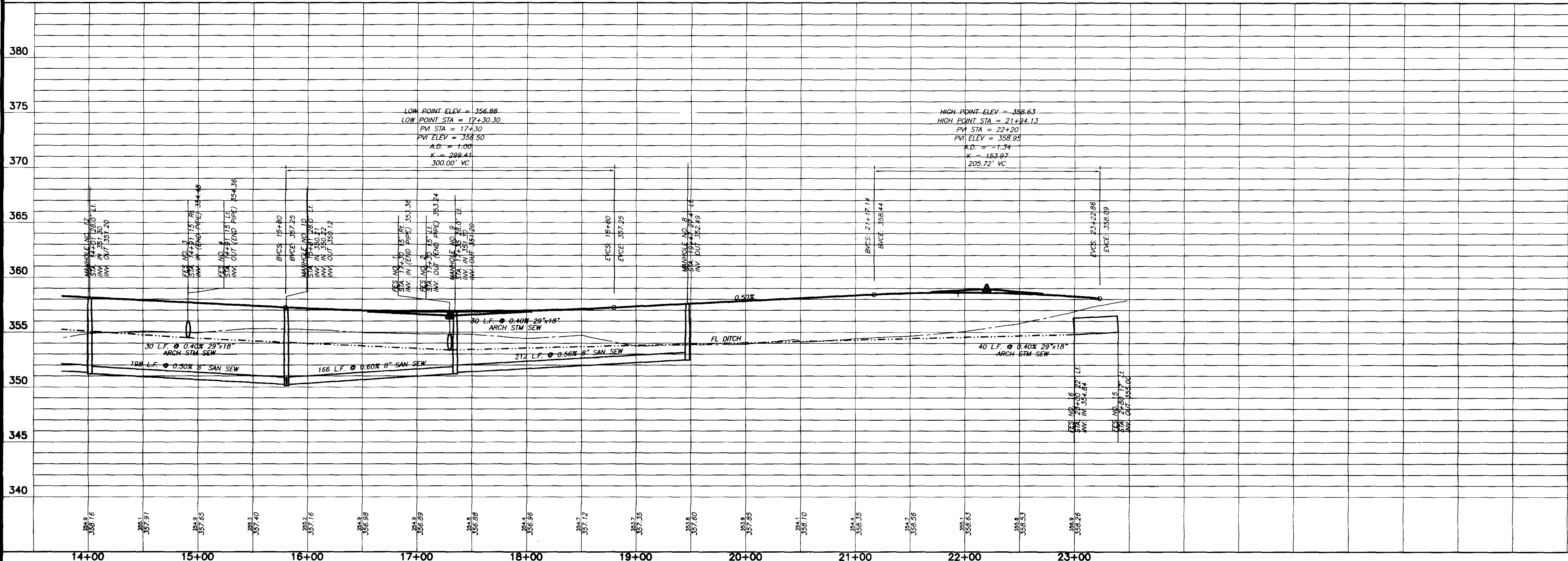
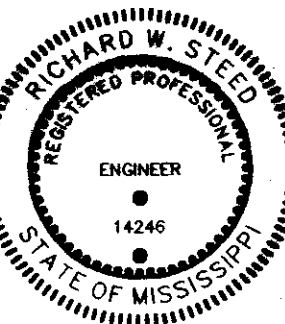
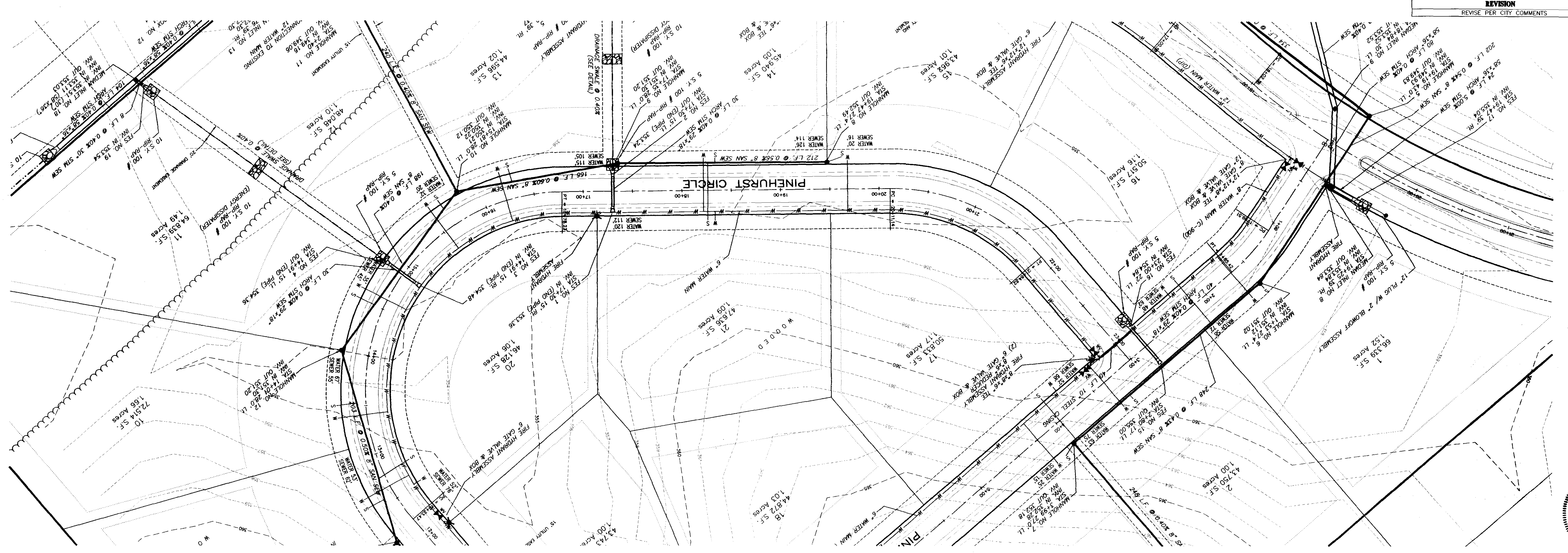
**PLAN AND PROFILE - PINEHURST CIRCLE**  
STA. 0+00 - STA. 14+00

**DATE:** 12/6/01

**PROJECT NO.:** 8 of 13

**DATE:** 08/15/01





**RECORD DRAWING**  
 THESE DRAWINGS SHOW AS BUILT  
 LOCATIONS OF WATER AND SEWER  
 SYSTEMS ONLY.

BY: *[Signature]* DATE: 12/03/01

C:\SISK\PROJ\15-170\001.dwg Wed Jan 09 10:11:11 2002 Paul Wilhelm



**CLASS "A" BEDDING**

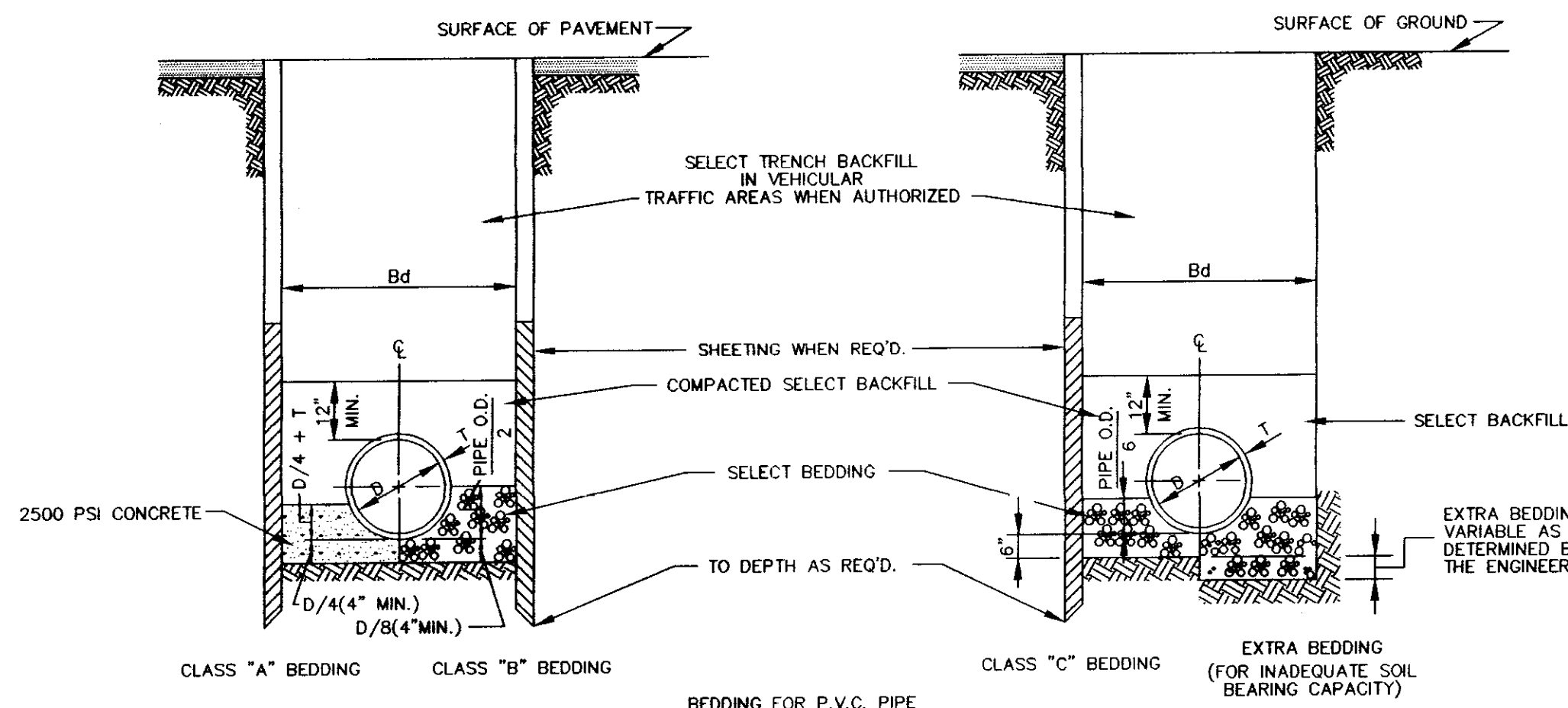
MATERIAL SHALL BE 2500 PSI CONCRETE CRADLES. THE PIPE SHALL BE LAID ON CONCRETE SADDLES CONSTRUCTED TO PROVIDE VERTICAL AND LATERAL SUPPORT FOR THE PIPE WHILE THE CRADLE IS BEING PLACED. PIPE SUPPORTS OF WOOD BLOCKS, LOOSE BRICK, ETC., WILL NOT BE PERMITTED. THE CRADLE SHALL BE POURED AFTER THE JOINTS HAVE BEEN MADE. CARE BEING TAKEN TO PREVENT MOVEMENT OF THE PIPE. WHENEVER THE CONTRACTOR PLACES CONCRETE OUTSIDE THE DIMENSIONS SHOWN ON THE DRAWINGS, THE COST OF SUCH CONCRETE WILL BE AT THE CONTRACTOR'S EXPENSE.

**CLASS "B" BEDDING**

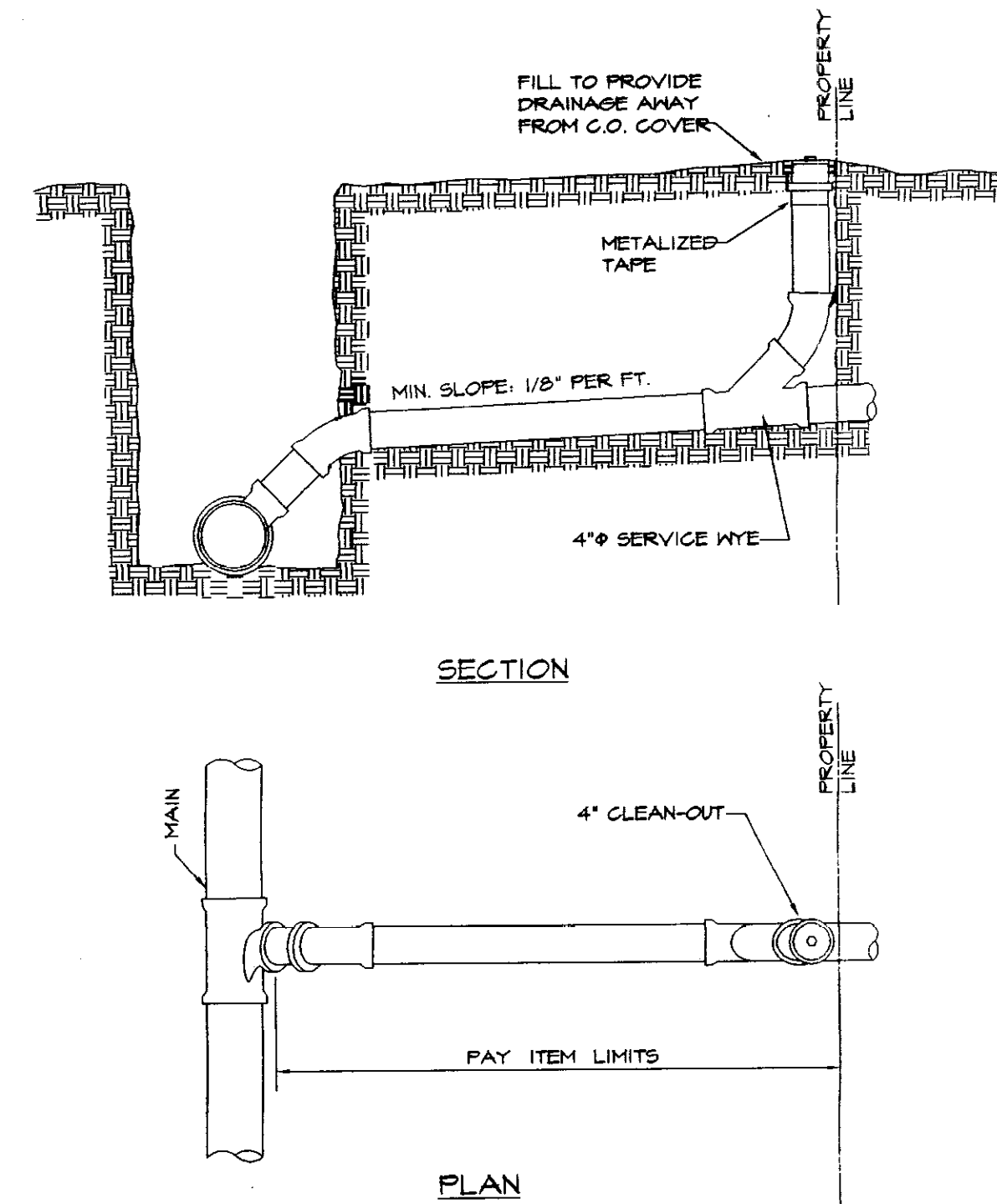
MATERIAL SHALL BE SELECT BEDDING AS SPECIFIED. MATERIAL SHALL BE CAREFULLY PLACED AND THOROUGHLY COMPACTED BY TAMPING.

**CLASS "C" BEDDING (STANDARD BEDDING)**

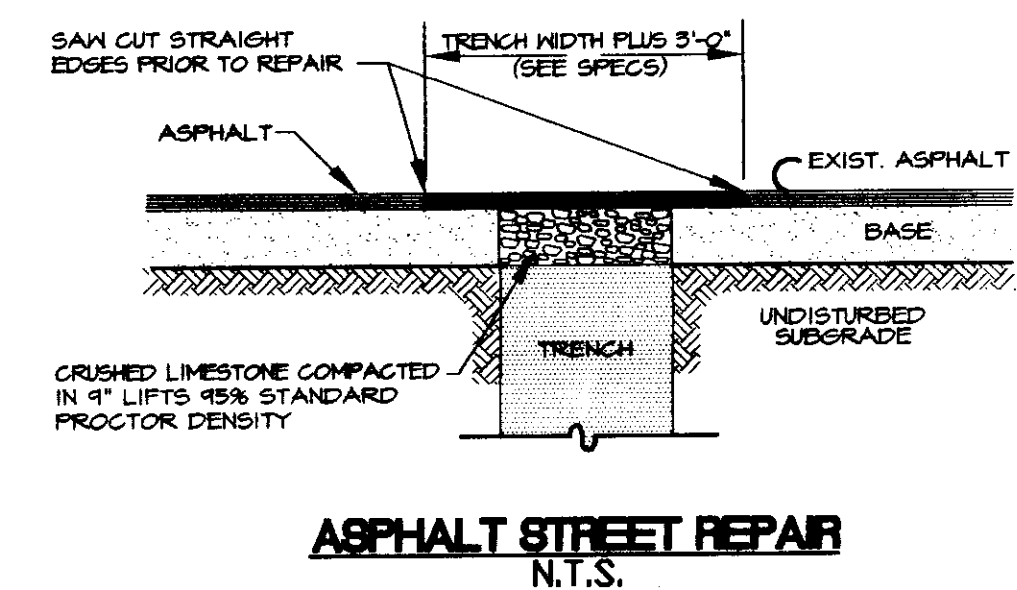
MATERIAL SHALL BE THE SAME AS FOR CLASS "B" BEDDING AND SHALL BE PLACED AS SHOWN BY STANDARD DETAILS FOR THE TYPE OF PIPE USED.



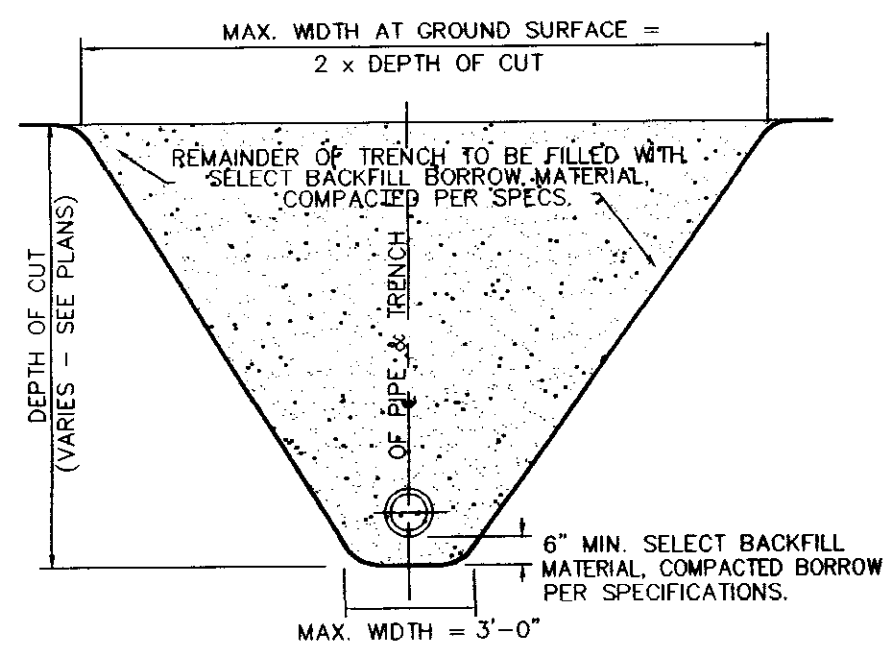
**TYPICAL TRENCH DETAILS**  
NOT TO SCALE



**SEWER SERVICE**



**ASPHALT STREET REPAIR**  
N.T.S.

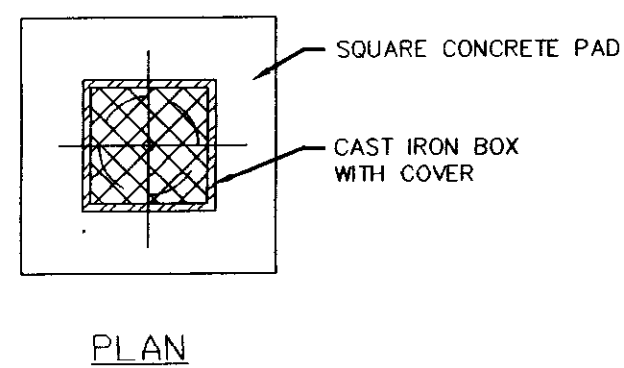
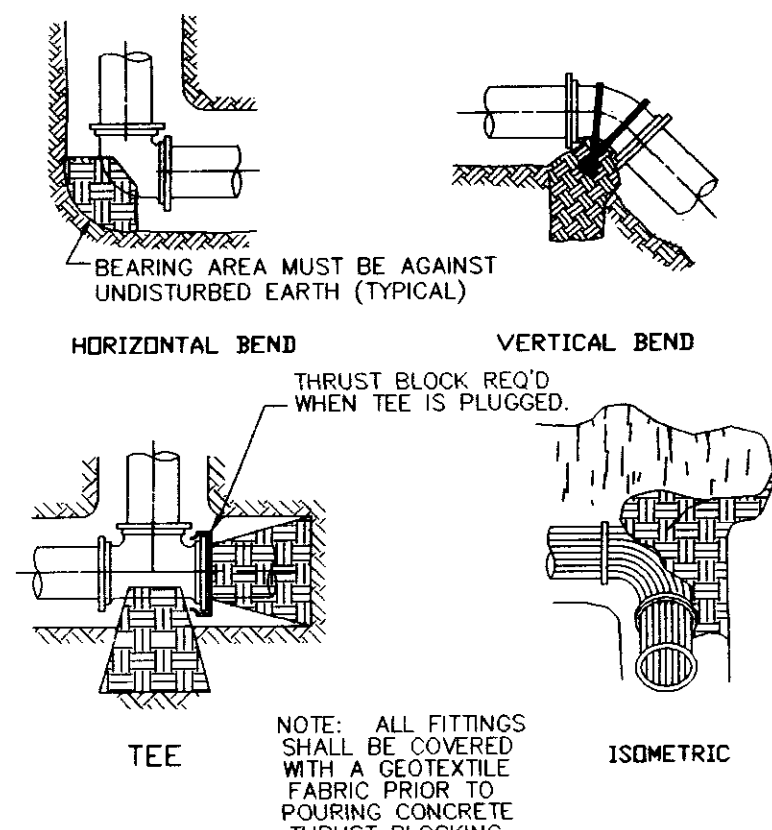


**SEWER TRENCH & BEDDING DETAIL**  
N.T.S.

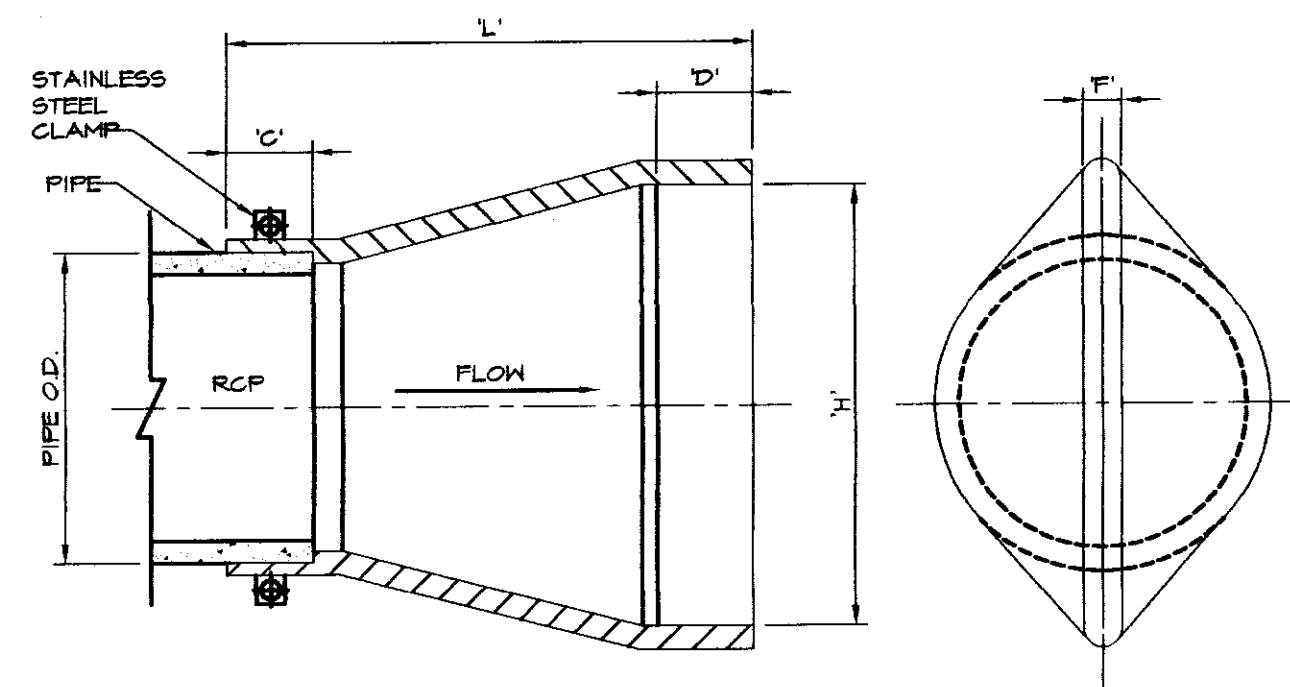
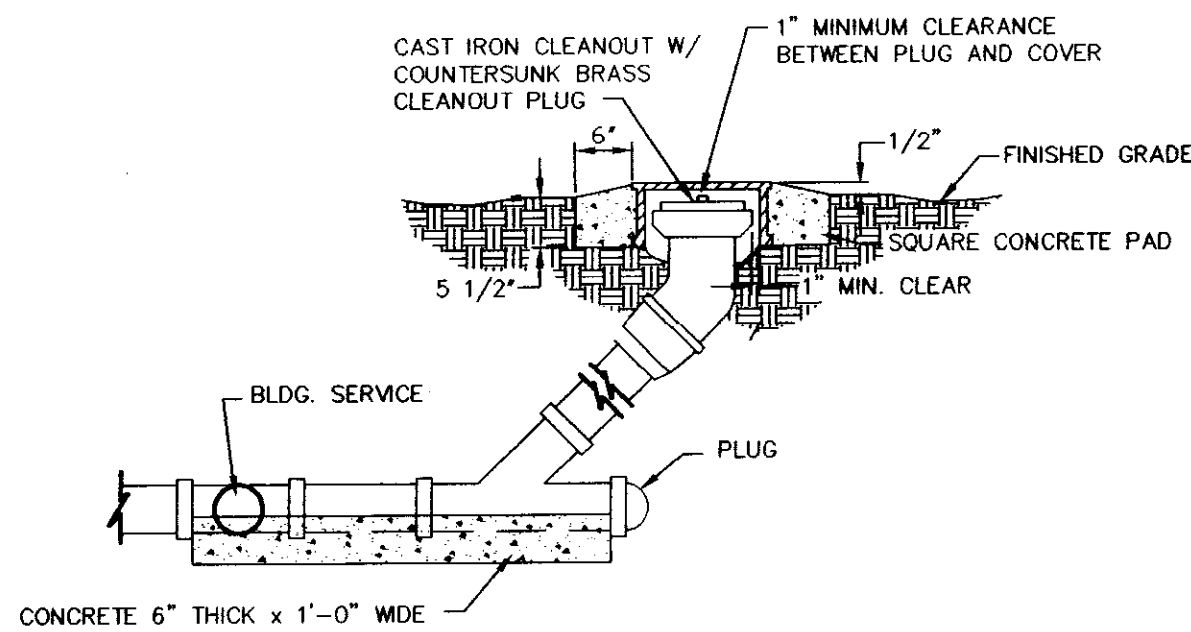
**BEARING AREAS FOR THRUST BLOCKING**  
IN SQUARE FEET

FITTING:	4" DIA.	6" DIA.	8" DIA.	10" DIA.	12" DIA.	14" DIA.
TEES	0.9	1.9	4.7	4.7	6.7	9.0
90°	1.3	2.7	6.7	6.7	9.4	12.7
45°	0.7	1.5	3.6	3.6	5.1	6.9
22 1/2°	0.4	0.8	1.8	1.8	2.6	3.5

**THRUST BLOCKING**  
N.T.S.

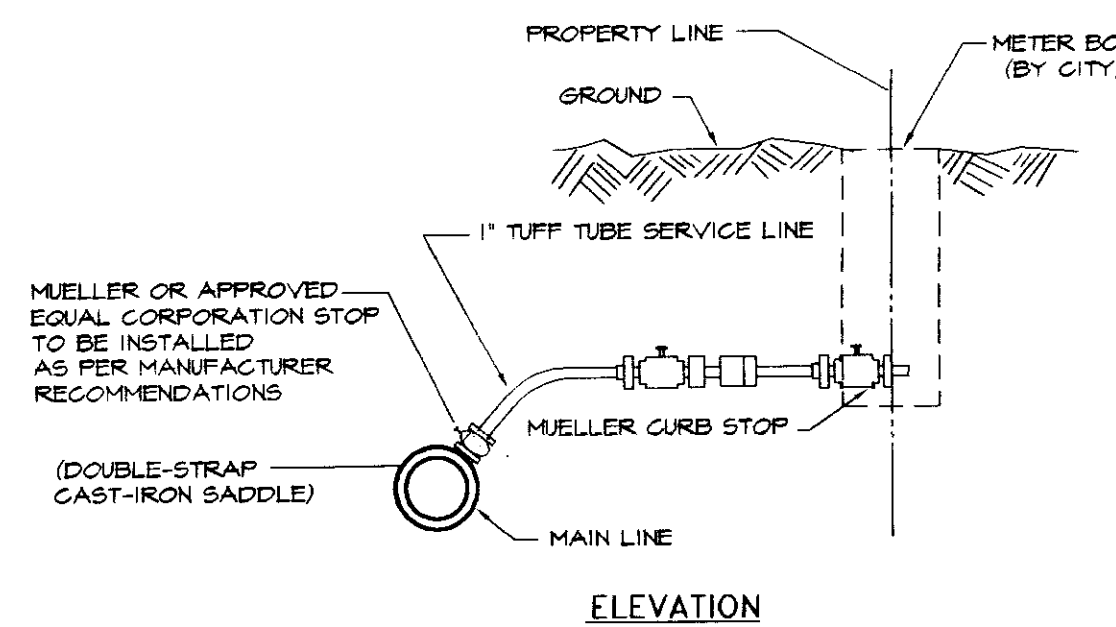


**CLEANOUT DETAIL**  
N.T.S.

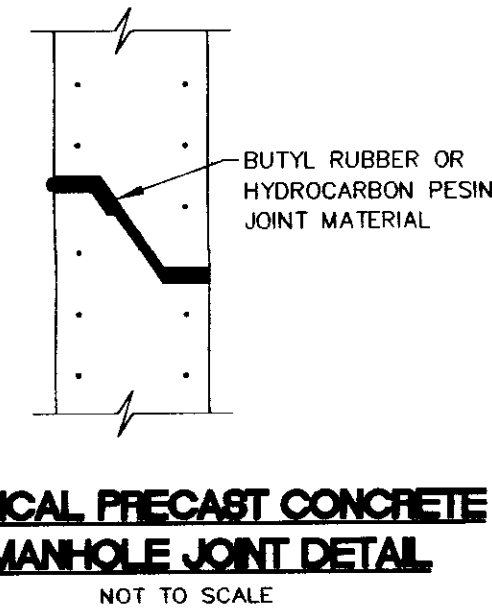


**TIDEFLEX CHECK VALVE**

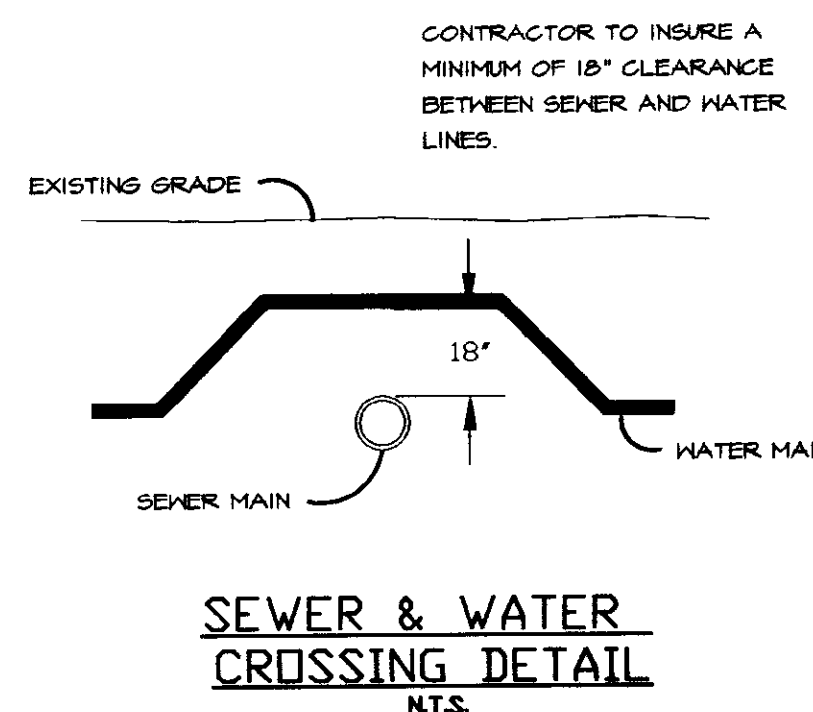
VALVE IS TO BE MOUNTED WITH THE OUTLET IN THE VERTICAL POSITION



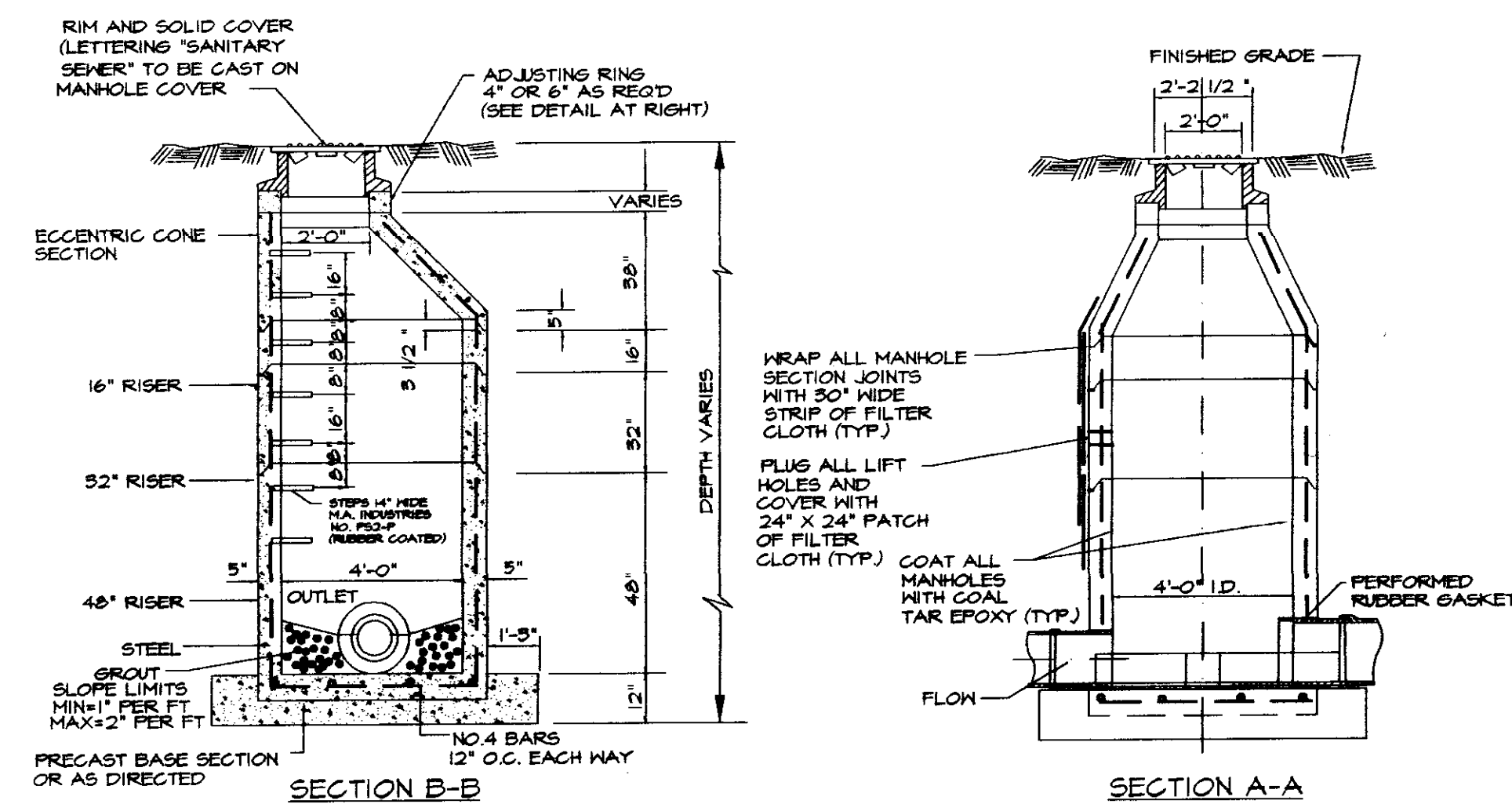
**TYPICAL WATER SERVICE CONNECTION**  
N.T.S.



**TYPICAL PRECAST CONCRETE MANHOLE JOINT DETAIL**  
NOT TO SCALE



**SEWER & WATER CROSSING DETAIL**  
N.T.S.

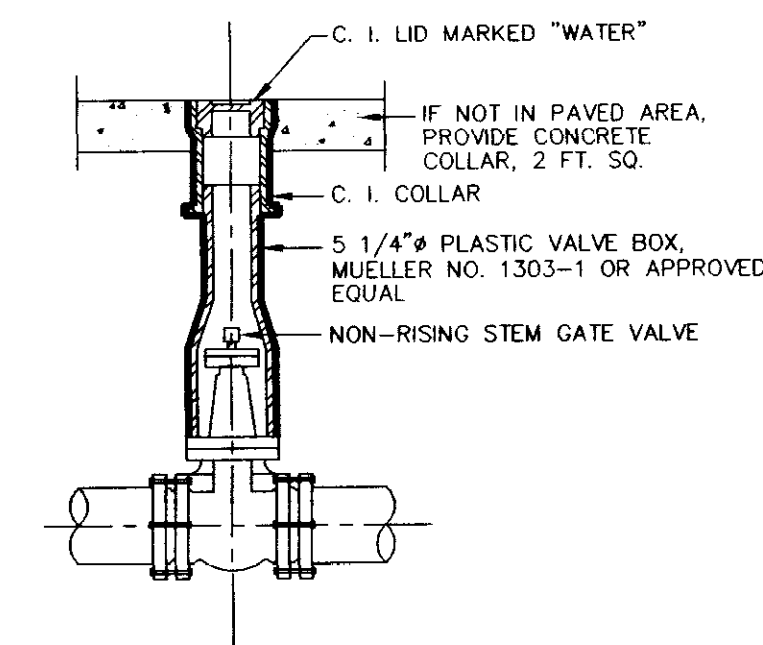


**TYPICAL PRECAST CONCRETE SEWER MANHOLE DETAIL**  
N.T.S.

VALVE SIZE (NOM.)	PIPE O.D.	L	H	F
16"	16"	24"	22-1/4"	1-1/4"
18"	18"	26"	26-3/4"	1-1/4"
24"	24"	36"	37-1/4"	1-3/4"
30"	30"	38"	43-3/4"	2"
36"	36"	50"	51-3/8"	2-3/8"
42"	42"	64"	61-1/2"	2-1/2"

**SANITARY SEWER NOTES:**

- MANHOLE INTERIOR TO BE COATED WITH 20 MIL THICKNESS GUDDEN TOP SERVICE BLACK BITUMINOUS COATING (OR APPROVED EQUAL) APPLIED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
- MAXIMUM PERMITTED INFILTRATION/EXFILTRATION IS 200 GALLONS PER INCH DIAMETER PER MILE PER DAY.
- PIPE TO MANHOLE CONNECTIONS: PVC PIPE - INSTALL PREMOLDED FLEXIBLE MANHOLE JOINT SEAL DEVICE TO CONNECT PIPE TO MANHOLE WALL.
- INSTALLATION OF SANITARY SEWER MAINS & SERVICES: WHEN A SEWER SERVICE LINE CROSSES ABOVE A WATER SUPPLY MAIN OR WITHIN 18" BELOW A WATER MAIN, OR WITHIN 10' ON EITHER SIDE, THE SEWER SERVICE OR MAIN SHALL BE 160 P.S.I. PVC WATER PIPE FOR A DISTANCE OF 10' EITHER SIDE OF THE WATER SUPPLY MAIN.

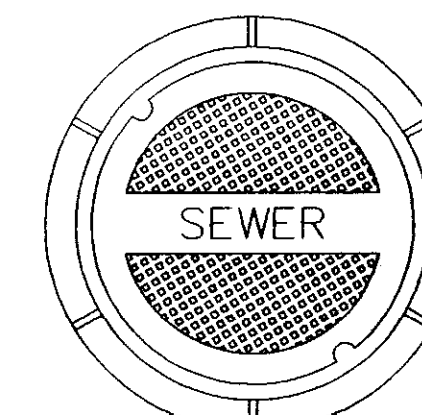
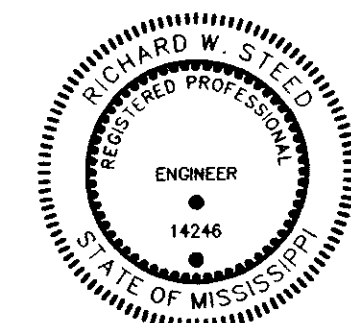


**GATE VALVE BOX & COVER**  
N.T.S.

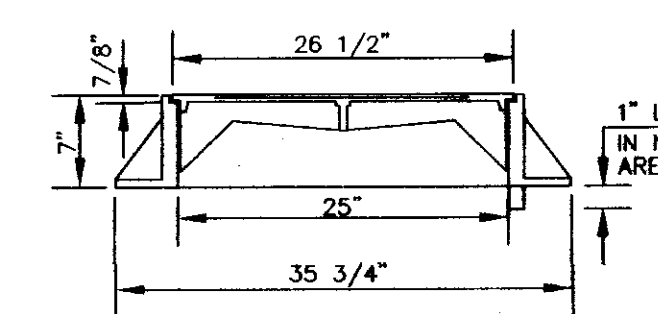
- VALVE BOX SECTIONS SHALL BE OF THE ADJUSTABLE SCREW TYPE
- FURNISH PLASTIC VALVE BOX EXTENSIONS AS REQUIRED.

**RECORD DRAWING**  
THESE DRAWINGS SHOW AS BUILT LOCATIONS OF WATER AND SEWER SYSTEMS ONLY.

BY: *[Signature]* DATE: 12/29/01



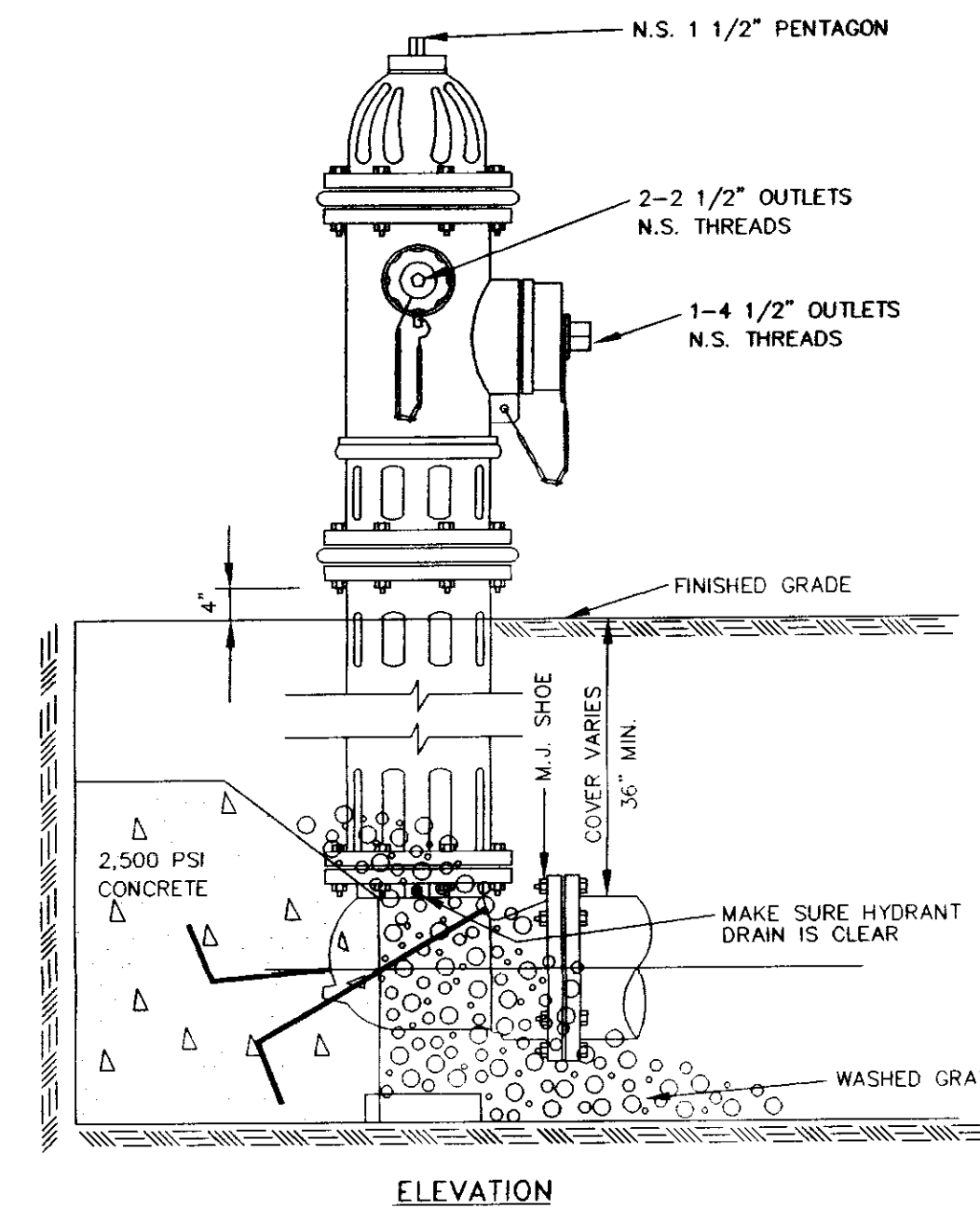
**TOP PLAN OF COVER**



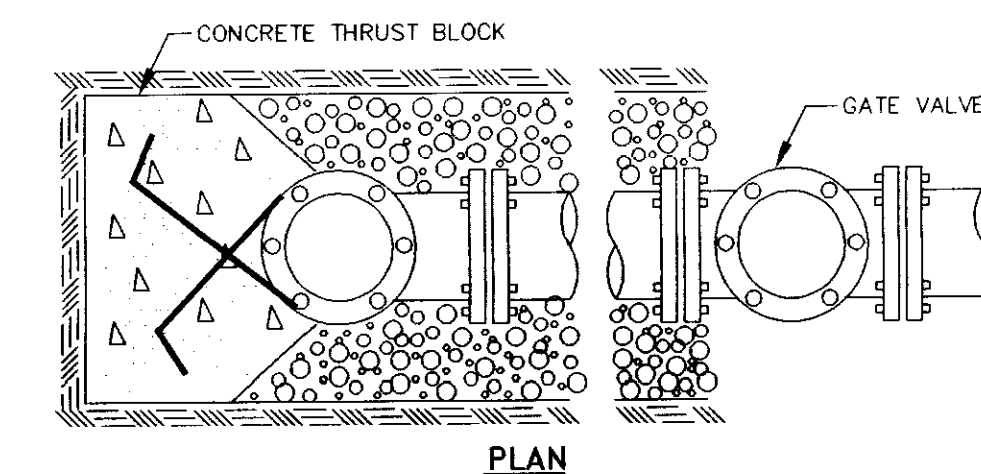
**SECTION**

FRAME & COVER WEIGHT 420 LBS.

**STANDARD MANHOLE FRAME AND COVER**  
NOT TO SCALE



**ELEVATION**



**PLAN**

**TYPICAL FIRE HYDRANT INSTALLATION**

NOTE: GATE VALVES WILL BE REQUIRED ON ALL FIRE HYDRANT LEGS.  
NOT TO SCALE

**Project:** PINEHURST AT HIGHLAND PARK OF RIDGELAND  
**Client:** TRAVIS PROPERTIES, LLC RIDGELAND, MISSISSIPPI

**Title:** STANDARD WATER AND SEWER DETAILS

DESIGN: P.H.W.	DATE: 05/03/01	HARRIS & STEED, INC. Consulting Engineers Jackson, Mississippi 302 LAGUNA DRIVE, SUITE F - JACKSON, MS 39201 P.O. BOX 664-0388 - FAX: 901.664.0389	DRAWING NO. 11 OF 13
DRAWN: P.H.W.	DATE: 05/03/01		Project No. S-170
CHECKED: P.H.W.	DATE: 05/03/01		
SCALE: NONE			