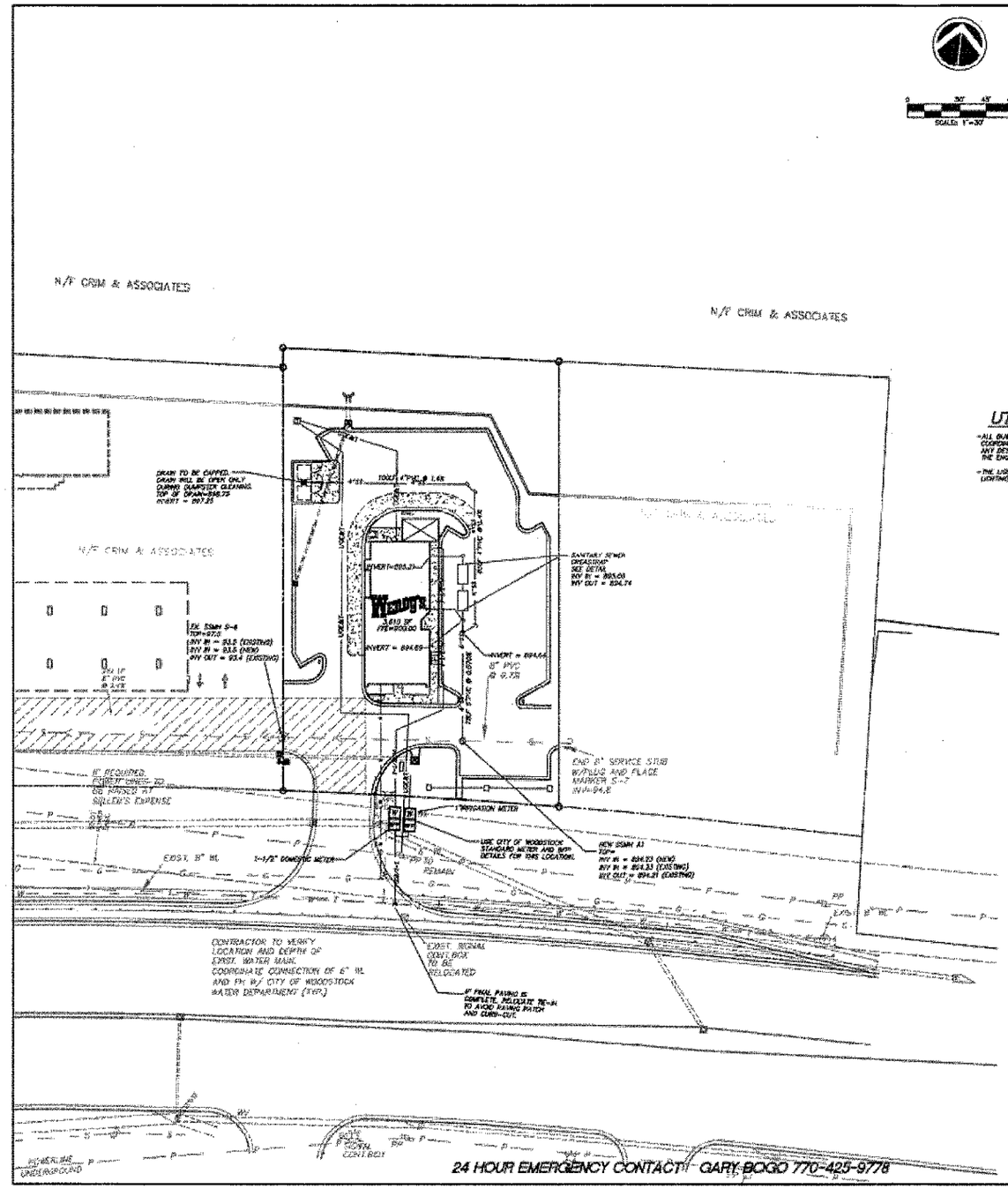

SCALE: 1"=30'

UTILITY NOTE

- ALL BUILDING UTILITY CONNECTIONS MUST BE COORDINATED WITH THE ARCHITECTURAL PLANS. ANY DISCREPANCIES MUST BE BROUGHT TO THE ENGINEER AND ARCHITECT ATTENTION.
- THE LIGHTING PLAN IS ON A SEPARATE PLAN BY LGI LIGHTING COMPANY.

UTILITY LEGEND

- GAS SERVICE
- 6" SANITARY SEWER
- OVERHEAD ELECTRIC & TELEPHONE
- UNDERGROUND ELECTRIC & TELEPHONE
- WATER SERVICE
- ELECTRICAL TRANSFORMER
- SEWER CLEAN OUT
- SANITARY SEWER MANHOLE
- FIRE HYDRANT
- WATER METER W/BACKFLOW PREVENTER
- SEWER DRAIN
- GATE VALVE
- ELECTRIC POWER POLE

SANITARY FLOW:

96 SEAT RESTAURANT: 96 SEATS X 50 GPD = 5280 GPD DEMAND

UTILITY NOTES:

1. STANDARD SPECIFICATIONS AND DETAILS OF THE GOVERNING AGENCY SHALL GOVERN ALL WATER AND SANITARY SEWER MAIN CONSTRUCTION.
2. THE BUILDING CONTRACTOR IS RESPONSIBLE FOR LOCATION, SIZE AND SPECIFICATIONS OF ALL ELECTRICAL TRANSFORMER PADS FROM THE LOCAL PUBLIC COMPANY AND PROVIDING SERVICE FROM THE TRANSFORMER TO THE BUILDING.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS AND IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
4. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE BUT NOT LIMITED TO ACCESS AND INGRESS/EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
5. SANITARY SEWER PIPE SHALL BE PVC SDR 35 ASTM 3034 FOR PIPES LESS THAN 12" DIAM. PVC PIPE SHALL BE BELL & SPIGOT TYPE WITH INTEGRAL BELL AND RUBBER GASKETS. DUCTILE IRON CLASS 52 AWA C151 AND ASTM A21.51 WITH PUSH ON OR MECHANICAL JOINTS MAY BE SUBSTITUTED FOR PVC PIPE AND USED FOR DEPTHS GREATER THAN 12'.
6. SANITARY SEWER PIPE SHALL HAVE A MINIMUM DEPTH OF 5' FEET. PERCENTAGE OF GRADES LISTED FOR SANITARY SEWER LINES WERE CALCULATED FROM THE CENTERLINE OF ONE MANHOLE TO THE CENTERLINE OF THE NEXT MANHOLE.
7. SEWER SERVICE LATERALS SHALL BE COORDINATED WITH BUILDING PLANS. ANY DISCREPANCIES SHOULD BE CLARIFIED BEFORE INSTALLATION. SEWER SERVICE LATERALS ARE TO BE PERMANENTLY MARKED ON TOC CURB.
8. ALL MANHOLES REQUIRE KOR-N-SEAL OR COLIN RUBBER BOOTS.
9. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISH GRADE, AND SHALL HAVE TRAFFIC BEARING LIDS. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS MUST MATCH FINISHED GRADE (UNLESS OTHERWISE NOTED). ALL EXISTING MANHOLES & UTILITY BOXES SHALL BE ADJUSTED AS NECESSARY TO MATCH PROPOSED GRADING.
10. ALL WATER PIPE 4" DIAMETER AND LARGER SHALL BE DUCTILE IRON, WITH 150 PSI PRESSURE RATING CONFORMING TO AWWA PIPE STANDARD SPECIFICATIONS. FITTINGS 4" AND LARGER SHALL BE CAST IRON OR DUCTILE IRON CONFORMING WITH AWA OR AWWA STANDARD SPECIFICATIONS.
11. ALL WATER PIPE 3" AND SMALLER SHALL BE TYPE K COPPER WIRE PER ANSI H23.5.
12. CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 4' OVER ALL WATER LINES.
13. CONTRACTOR SHALL COORDINATE INSTALLATION OF WATER SERVICE WITH WATER DEPARTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, FURNISHING AND/OR FEES ASSOCIATED WITH ALL APPARATUS INCLUDING BUT NOT LIMITED TO: WATER METERS, BACK FLOW PREVENTERS, POST INDICATOR VALVES, AND ENCLOSURES.
14. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF WATER AND SEWER LINE IS (10') TEN FEET. THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINES IS (18") EIGHTEEN INCHES.
15. ALL FIRE HYDRANTS SHALL CONFORM TO LOCAL REQUIREMENTS.
16. ALL DOMESTIC WATER LEADS SHALL HAVE REDUCED PRESSURE VALVES AS DIRECTED BY THE OWNER'S ARCHITECT.
17. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED FOR LOCATION AND NUMBER BY THE CONTRACTOR.
18. ALL ELECTRIC, TELEPHONE AND GAS LINES, INCLUDING SERVICE LINES, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANIES SPECIFICATIONS.
19. CONTRACTOR TO COORDINATE INSTALLATION OF ALL UTILITIES BY OWNERS WITH HIS WORK.
20. PRIMARY ELECTRIC SERVICE IS PROVIDED BY THE POWER COMPANY. THIS INCLUDES THE TRANSFORMER AND PAD, TRENCHING, BACKFILL AND COMPACTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND FEES ASSOCIATED WITH POWER SERVICE AS WELL AS SECONDARY SERVICE.
21. GAS AND UNDERGROUND ELECTRIC LINES ARE SHOWN FOR COORDINATION ONLY. EXACT LOCATION WILL BE FIELD DETERMINED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND FEES ASSOCIATED WITH GAS AND ELECTRIC SERVICE.
22. COMPACTION EQUIPMENT TO BE USED ON ALL PIPES AND SERVICES UNDER PAVEMENT.
23. TAPE AND WIRE ALL PLASTIC PIPES AND SERVICES.

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REVISIONS

REV. PER ARCHITECTURE COORDINATION 10/24/05

WOODSTOCK PLACE II - RESTARAUNT

GEORGIA HIGHWAY 92

PREPARED FOR

WENDY'S INTERNATIONAL

WOODSTOCK, GEORGIA

1994-1020

LOWE & ASSOCIATES, INC.
CIVIL & TRANSPORTATION ENGINEERS
1395 S. MARIETTA PKWY. - BLDG. 400 - SUITE 200 - MARIETTA, GA. 30067
PHONE: 770-423-0807 FAX: 770-423-1862

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21122 JAMES A. LOWE

JOB NO: C1016

DWG NAME: C1016PD.DWG

UTILITY PLAN

SHEET 5

DATE 08/05/05

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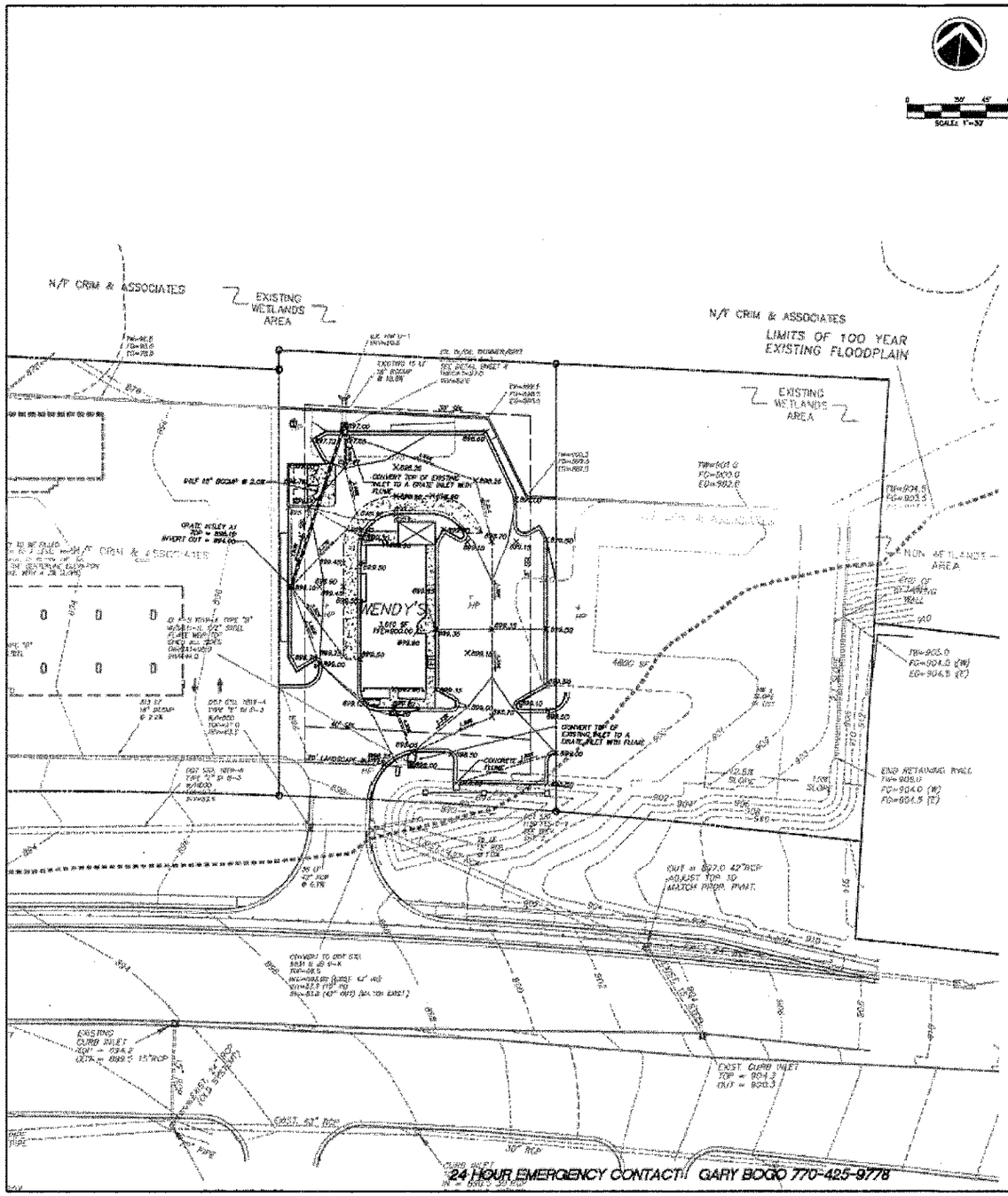

SCALE: 1"=30'

GRADING LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- FUTURE 1' CONTOUR
- FUTURE 5' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- EXISTING SETBACK LINE
- FUTURE RIGHT-OF-WAY
- FUTURE SETBACK LINE
- FUTURE PROPERTY LINE
- GRADE ELEVATION
- STORM SEWER LINE
- CONCRETE HEADWALL
- AREA INLET
- GRATE INLET
- SLOPE ARROW
- GRADE BREAK LINE
- CURB INLET

THIS SITE IS PART OF THE CRIM & ASSOCIATES COMMERCIAL / RETAIL SHOPPING CENTER.
SITE DETENTION AND WATER QUALITY ARE PROVIDED FOR THE WHOLE SITE AS PREVIOUSLY APPROVED BY THE CITY OF WOODSTOCK. THEREFORE SEPARATE DETENTION IS NOT REQUIRED FOR THIS SITE.

GRADING NOTES

1. INFORMATION CONCERNING SITE SOIL CONDITIONS WILL BE PROVIDED BY THE OWNER.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS NOT ACCEPTABLE TO THE OWNER AND ENGINEER.
3. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THE CONTRACTOR SHALL MAKE A TOPOGRAPHIC SURVEY AT HIS OWN EXPENSE AND SUBMIT IT TO THE OWNER FOR REVIEW.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITIES BEFORE CONSTRUCTION AND VERIFYING LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN.
5. ALL NEW STORM SEWER PIPE SHALL BE CONTECH MANNERIZED STEEL TYPE 2 ULTRA FLO CORRUGATED METAL PIPE WITH RE-ROLLED ENDS, HUGGER TYPE CONNECTING BANDS, AND "O" RING GASKETS. THE ULTRA FLO SHALL BE 16 GAGE FOR 18"-48".
6. CONTRACTOR SHALL PROVIDE DRAINAGE AWAY FROM THE BUILDINGS.
7. PRECAST STRUCTURES MAY BE USED AT THE CONTRACTOR'S OPTION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND COST OF THE RELOCATION OF ALL UTILITIES ALONG THE RIGHT OF WAY AND ON THE SITE ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT. SUCH AS, BUT NOT LIMITED TO SIGNAL POLES, SIGNAL CONTROLS, DRAINAGE STRUCTURES, TRAFFIC SIGNS, UTILITY POLES, GUY WIRES, ETC.
9. IN ALL AREAS WHERE NEW CURB AND GUTTER ARE INSTALLED, REMOVE ALL OLD CURB AND GUTTER AND SAW CUT A STRAIGHT EDGE ALONG ASPHALT.
10. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS, SLABS, AND PIERS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
11. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS, AS APPROVED BY THE ENGINEER.
12. ALL SLOPES AND DISTURBED AREAS NOT COVERED BY BUILDING OR PAVEMENT SHALL BE GRADED SMOOTH AND RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR TO PROVIDE TOPSOIL IF NOT AVAILABLE ON SITE. THE AREAS SHALL BE SEEDED, MULCHED, FERTILIZED AND WATERED TO PROVIDE A MATURE STAND OF GRASS. SMALL ROCKS MUST BE REMOVED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. SPOIL FROM FOOTINGS IS THE SITE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR IS TO USE THE SOIL ON SITE OR REMOVE IT FROM THE SITE.
14. EARTHWORK SHALL BE ON AN UNCLASSIFIED BASIS.
15. ANY FILL USED TO INCREASE THE ELEVATION OF THE FLOOR SLAB OR ANY FILL TO BE USED AS BACKFILL SHALL BE CLEAN, GRANULAR MATERIAL. PRIOR TO THE USE OF ANY GRANULAR FILL, GRADATION ANALYSIS SHALL BE PERFORMED ON REPRESENTATIVE SAMPLES OF THE FILL MATERIAL TO DETERMINE WHETHER THE MATERIAL IS SUITABLE AS FILL. COMPACTED FILL SHALL BE PLACED IN LAYERS OF NOT MORE THAN EIGHT INCHES IN THICKNESS, AT MOISTURE CONTENTS WITHIN THREE PERCENT OPTIMUM, AND COMPACTED TO MINIMUM DENSITY OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHOD, ASTM D-1557.
16. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

Pipe	Upstream Node	Downstream Node	Length (ft)	Section Size	Roughness (n/a)	Capacity (cfs)	Average Velocity (ft/s)	Upstream Rim Elevation (ft)	Downstream Rim Elevation (ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Contribution Slope (%)	Inlet Area (acres)	Inlet C Coefficient	Inlet Tc (min)	Inlet Intensity (in/hr)
P18	A1	EX-02	84	18 INCH	0.02	8.24	3.07	896.15	897.00	893.00	892.84	2.00	0.124	0.85	5	4.79

NOTE: THE NATIONAL METHOD WAS USED TO CALCULATE THE FLOWS FOR THE ABOVE PIPE. THE NORTH STORM SEWER PIPE WITH THE RUNOFF COEFFICIENT AND AREA AS SHOWN. THE OTHER INLETS AND PIPE THAT DRAIN THE SITE WERE DESIGNED BY SOS ENGINEERING. PLEASE REFER TO THEIR PLAN FOR DESIGN.

CALL BEFORE YOU DIG! 1-800-282-7411 GEORGIA ONE CALL SYSTEM

SURVEYOR'S NOTES:
THE ELEVATIONS AS SHOWN HEREON ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 FROM THE ELEVATION OF 882.81' ON A CHISELED SQUARE IN THE WING WALL AT NW CORNER OF BURNEY ROAD BRIDGE OVER NOONDAY CREEK, AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF CHEROKEE COUNTY, GEORGIA, NO. 13057C0310 G, DATED 9/4/98.

THE NORTH ARROW IS A MAGNETIC NORTH BASED ON THE SURVEY FROM THE DWS LAND SURVEYING, INC.

REVISIONS

WOODSTOCK PLACE II - RESTARAUNT

GEORGIA HIGHWAY 92

PREPARED FOR

WENDY'S INTERNATIONAL

WOODSTOCK, GEORGIA

1944 + 1919

LOWE & ASSOCIATES, INC.
CIVIL & TRANSPORTATION ENGINEERS
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PHONE: 770-423-0807 FAX: 770-423-1262

GEORGIA REGISTERED No. 21271 PROFESSIONAL ENGINEER JAMES A. LOWE

JOB NO: C086

DWG NAME: C086FG3

GRADING PLAN

SHEET 3

DATE 06/15/02

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