

UTILITY SPECIFICATIONS

EXISTING CONDITIONS

• INFORMATION ABOUT EXISTING UNDERGROUND FACILITIES AND SUBSURFACE CONDITIONS INDICATED ON THESE DRAWINGS IS NOT BASED ON AN EXHAUSTIVE INVESTIGATION OF SUCH FACILITIES OR CONDITIONS, AND THE ENGINEER MAKES NO WARRANTY TO ANY PARTY REGARDING THEM. EXISTING UTILITY LINE LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE, AND ACTUAL UTILITIES AND CONDITIONS MAY DIFFER FROM THOSE INDICATED. IF DIFFERING UTILITIES OR CONDITIONS EXIST, THEY MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT WORK, AND MAY IMPACT THE PROJECT SCOPE AND TIME REQUIREMENTS.

PROTECTION AND SAFETY

• PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS FOR PROTECTION OF ALL EXISTING UTILITIES AND SITE FEATURES WHICH ARE INTENDED TO REMAIN IN SERVICE OR IN PLACE.

• CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.

• CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY PROGRAMS AND MEASURES ON THE PROJECT SITE OR OTHERWISE RELATING TO THE PROJECT WORK, AND SHALL COMPLY WITH ALL SAFETY CODES AND REGULATIONS APPLICABLE THERETO, FOR THE PROTECTION OF WORKERS, VISITORS, AND THE GENERAL PUBLIC.

COMPLIANCE

• ALL WATER SYSTEM AND SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

- REQUIREMENTS OF THE CITY OF RALEIGH, INCLUDING THE LATEST EDITION OF CONSTRUCTION STANDARDS AND SPECIFICATIONS, CONSTRUCTION DETAILS, POLICIES AND PROCEDURES, AND FIELD DIRECTIVES BY THE UTILITY INSPECTOR.
- REGULATIONS OF NCDENR-DIVISION OF WATER QUALITY, INCLUDING NCA 27 REGULATIONS AND MINIMUM DESIGN CRITERIA FOR THE PERMITTING OF GRAVITY SEWERS.
- REGULATIONS OF NCDENR-PUBLIC WATER SUPPLY, RULES GOVERNING PUBLIC WATER SYSTEMS.
- STREET RIGHT-OF-WAY ENCROACHMENT PERMIT REQUIREMENTS, AS APPLICABLE.
- OSHA REQUIREMENTS RELATED TO SAFETY.
- REQUIREMENTS OF THE N.C. PLUMBING CODE.

NOTIFICATIONS

• NOTIFY THE ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING WATERLINE OR SANITARY SEWER WORK. THE ENGINEER MUST OBSERVE CONNECTIONS, INSTALLATION, BACKFILLING, AND TESTING WORK, IN ORDER TO PROVIDE NECESSARY PROJECT CERTIFICATIONS AND CLOSE-OUT DOCUMENTS.

• NOTIFY THE APPLICABLE UTILITY AND ROADWAY AUTHORITIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO BEGINNING UTILITY WORK.

• NOTIFY THE GEOTECHNICAL ENGINEER AND TESTING SERVICE AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING TRENCHING OR BACKFILLING WORK.

TRENCHING AND BACKFILLING

• WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 6 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE BEDDING.

• WHERE THE DESIGNED TRENCH BOTTOM CONSISTS OF UNSUITABLE BEARING SOIL, UNDERCUT TRENCH BOTTOM AND REPLACE UNDERCUT MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

• BACKFILL SOIL SHALL BE SUITABLE MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

• BACKFILL SOIL SHALL BE PLACED IN LOOSE LIFTS OF 8 INCH MAXIMUM THICKNESS AND COMPACTED TO 98% OF THE SOIL'S MAXIMUM DRY DENSITY, WITHOUT DAMAGING OR DISPLACING PIPE.

• INSTALL MARKING TAPE OR TRACER WIRE OVER UTILITY LINES AS REQUIRED BY THE LOCAL UTILITY AUTHORITY.

STORAGE AND HANDLING

• PIPING, FITTINGS, GASKETS, AND OTHER MATERIALS SHALL BE KEPT CLEAN WHILE BEING STORED AND DURING CONSTRUCTION ACTIVITIES. PIPE BUNDLES SHALL BE STORED ON FLAT SURFACES WITH UNIFORM SUPPORT, AND PROTECTED FROM PROLONGED EXPOSURE TO SUNLIGHT WITH A COVERING ALLOWING AIR FLOW UNDERNEATH. GASKETS SHALL NOT BE EXPOSED TO OIL, GREASE, OZONE, EXCESSIVE HEAT OR DIRECT SUNLIGHT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR STORAGE AND HANDLING OF ALL MATERIALS.

CLEARANCES

• SANITARY SEWER MAINS AND POTABLE WATER MAINS SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET BETWEEN THE OUTSIDE EDGES OF EACH PIPE.

• WHERE UTILITY AND/OR DRAINAGE LINES CROSS, THE FOLLOWING VERTICAL CLEARANCES SHALL BE PROVIDED FROM THE OUTSIDE EDGES OF EACH PIPE:

- SANITARY SEWER OVER OR UNDER STORM DRAINAGE: 24 INCHES.
- POTABLE WATER OVER SANITARY SEWER: 18 INCHES, WITH WATER MAIN JOINTS SPACED AT MAXIMUM EQUIDISTANT LOCATIONS FROM THE POINT OF CROSSING.
- POTABLE WATER UNDER SANITARY SEWER: 18 INCHES, WITH BOTH PIPELINES CONSTRUCTED OF FERROUS MATERIAL HAVING JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR 10 FEET EACH WAY OF THE POINT OF CROSSING, AND WITH A FULL SECTION OF WATER MAIN PIPE CENTERED AT THE POINT OF CROSSING.
- POTABLE WATER OVER OR UNDER STORM DRAINAGE: 18 INCHES.

• IF THE SPECIFIED SEPARATIONS CANNOT BE ACHIEVED, CONSULT THE ENGINEER FOR ALTERNATIVES PRIOR TO PIPELINE INSTALLATION.

UTILITY SPECIFICATIONS (cont.)

WATER SYSTEM

• WATER MAIN PIPING SHALL BE DUCTILE IRON PIPE PER AWWA C151, PRESSURE CLASS 350, WITH INTERIOR CEMENT MORTAR LINING AND EXTERIOR BITUMINOUS SEAL JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER AWWA C111. FITTINGS SHALL BE COMPACT MECHANICAL JOINT DUCTILE IRON PER AWWA C153, PRESSURE CLASS 350.

• PROVIDE ALL WATER SYSTEM MATERIALS IN ACCORDANCE WITH LOCAL WATER AUTHORITY REQUIREMENTS.

• INSTALL WATERLINES TO PROVIDE 36" COVER TO FINISHED GRADE, UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER AND INSPECTOR.

• ALL WATERLINE BENDS, CROSSES, TEES, AND ENDS SHALL BE RESTRAINED USING CONCRETE BLOCKING OR A MECHANICAL JOINT WEDGE-ACTION RESTRAINT SYSTEM RATED FOR 350 PSI.

• DO NOT OPERATE WATER SYSTEM VALVES WITHOUT PERMISSION OF THE WATER AUTHORITY.

• CONTRACTOR SHALL COORDINATE EXACT FIRE HYDRANT, WATER METER, AND BACKFLOW PREVENTER LOCATIONS WITH WATER AUTHORITY INSPECTOR PRIOR TO INSTALLATION.

BACKFLOW PREVENTION

• BACKFLOW PREVENTER ASSEMBLIES AND ENCLOSURES SHALL CONFORM TO ALL LOCAL WATER AUTHORITY REQUIREMENTS, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE INITIAL TESTING AND CERTIFICATIONS AS REQUIRED FOR ACCEPTANCE.

FIRE PROTECTION

• WATER MAINS SHALL BE INSTALLED AND MADE OPERATIONAL AS SOON AS PRACTICAL TO PROVIDE ACTIVE FIRE HYDRANT SERVICE DURING BUILDING CONSTRUCTION.

• COORDINATE TYPE AND LOCATION OF HYDRANTS, FIRE DEPARTMENT CONNECTIONS, AND OTHER FIRE PROTECTION SYSTEM COMPONENTS WITH LOCAL FIRE CODE OFFICIAL PRIOR TO INSTALLATION.

SANITARY SEWER

• SANITARY SEWER MAIN PIPING SHALL BE DUCTILE IRON PIPE PER AWWA C151, PRESSURE CLASS 350, WITH INTERIOR EPOXY LINING AND EXTERIOR BITUMINOUS SEAL JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER AWWA C111.

• SANITARY SEWER MAIN PIPING SHALL BE PVC PIPE PER ASTM D3034, SDR 35. JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER ASTM F477.

• SANITARY SEWER MAINS SHALL BE INSTALLED WITH 36 INCHES MINIMUM COVER TO FINISHED GRADE, EXCEPT AS OTHERWISE SPECIFIED.

• SANITARY SEWER SERVICE LINES AND CLEANOUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE N.C. PLUMBING CODE, AND HAVE 24 INCHES MINIMUM COVER TO FINISHED GRADE. SERVICE LINES SHALL MAINTAIN MAXIMUM SERVICE DEPTH USING A 2.1% SLOPE UNLESS OTHERWISE SPECIFIED.

• SERVICE PIPE AND FITTINGS WITHIN PUBLIC STREET RIGHTS-OF-WAY SHALL BE CAST IRON WITH GASKETED JOINTS, AND IN OTHER AREAS SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS, EXCEPT ALL CLEANOUTS SHALL BE FITTED WITH THREADED BRONZE PLUGS.

• SERVICE LINE CLEANOUTS IN VEHICULAR AREAS SHALL BE TRAFFIC BEARING CLEANOUTS.

CONNECTIONS

• FOR CONNECTIONS TO EXISTING UTILITY AND DRAINAGE LINES, CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE AND MATERIAL, AND PROVIDE APPROPRIATE CONNECTION FITTINGS.

• ANY CONNECTION TO EXISTING UTILITIES, OR ANY UTILITY SERVICE INTERRUPTION, SHALL BE FIRST COORDINATED WITH THE GOVERNING UTILITY AUTHORITY AND PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THAT AUTHORITY.

• SITE UTILITY CONTRACTOR SHALL EXTEND WATER AND SANITARY SEWER SERVICES TO WITHIN 5 FEET OF THE POINT OF BUILDING PENETRATION FOR EACH UTILITY.

• BUILDING PLUMBER SHALL PROVIDE TRANSITION MATERIALS AND FITTINGS, AND MAKE PROPER CONNECTIONS TO SITE UTILITY STUB-OUTS FOR ALL WATER AND SANITARY SEWER SERVICES.

• SITE UTILITY CONTRACTOR SHALL EXTEND ROOF DRAINAGE PIPING TO WITHIN 5 FEET OF DOWNSPOUT LOCATIONS, FOR EXTENSION AND CONNECTION TO DOWNSPOUTS BY OTHERS.

TESTING AND ACCEPTANCE

• THE GEOTECHNICAL ENGINEER SHALL PROVIDE MATERIAL AND DENSITY TESTING DURING THE COURSE OF THE WORK. PRIOR TO PLACEMENT OF ANY BASE OR PAVEMENT, CONTRACTOR SHALL PROVIDE PROOF-ROLLING OF ALL TRENCH AREAS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

• PRIOR TO ANY SANITARY SEWER OR WATER SYSTEM IMPROVEMENTS BEING PLACED INTO SERVICE:

- CONTRACTOR SHALL SUCCESSFULLY TEST ALL WATER MAINS FOR WATER LEAKAGE AND WATER QUALITY IN ACCORDANCE WITH CITY OF RALEIGH AND NCDENR REQUIREMENTS.
- CONTRACTOR SHALL SUCCESSFULLY TEST ALL SANITARY SEWER MAINS FOR DEFLECTION AND LEAKAGE, AND TEST ALL SANITARY MANHOLES FOR LEAKAGE, IN ACCORDANCE WITH CITY OF RALEIGH AND NCDENR REQUIREMENTS.
- CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF INSTALLED SANITARY SEWER MAINS AND PROVIDE DOCUMENTATION PER LOCAL REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE TO ENGINEER A SET OF MARKED UP DRAWINGS SHOWING UTILITY CHANGES, DIMENSIONAL ADJUSTMENTS, DISCOVERED SUBSURFACE UTILITIES, AND OTHER AS-BUILT INFORMATION.
- CONTRACTOR SHALL PROVIDE DOCUMENTATION OF ALL TESTING RESULTS TO ENGINEER.
- ALL IMPROVEMENTS SHALL PASS FINAL INSPECTION BY ENGINEER AND THE UTILITY AUTHORITY.
- ENGINEER SHALL SUBMIT ALL CERTIFICATIONS AND OTHER CLOSE-OUT DOCUMENTS TO APPLICABLE LOCAL AND STATE AUTHORITIES.

OTHER

• CONTRACTOR SHALL PROVIDE PRIMARY COORDINATION WITH UTILITY SERVICE PROVIDERS FOR BUILDING UTILITY SERVICES. THIS WORK SHALL INCLUDE MAKING APPLICATIONS FOR SERVICE, COORDINATING AND SCHEDULING WORK BY OTHERS, VERIFYING ROUTINGS AND EQUIPMENT LOCATIONS, FURNISHING AND INSTALLING CONDUIT AND PADS, AND RELATED WORK AS NEEDED.

• CONTRACTOR SHALL PROVIDE PROPER RESTORATION AND CLEAN-UP OF ALL AREAS DISTURBED BY UTILITY CONSTRUCTION.

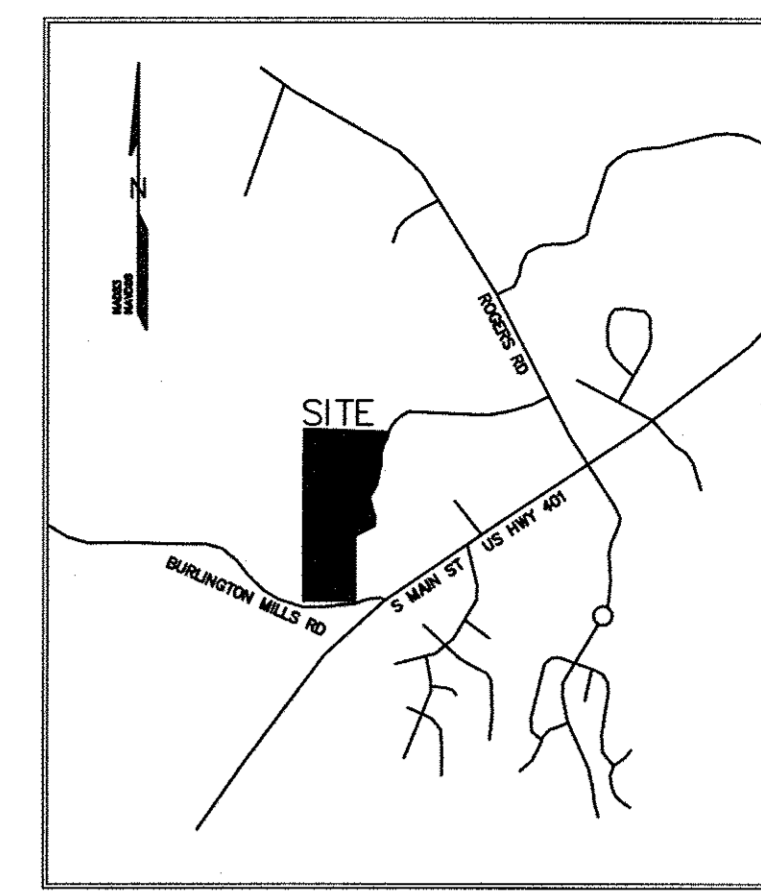


# MATTINGLY SUBDIVISION MAJOR SUBDIVISION - PRELIMINARY

## ROLESVILLE, North Carolina

SITE DATA:

OWNER/DEVELOPER:	LLOYDS OF ROLESVILLE 2008 SOUTH MAIN STREET WAKE FOREST, NC 27587 PHONE: 919-554-8775 CONTACT: LLOYD MATTINGLY	MAXIMUM BUILDING HEIGHT:	35'	
APPLICANT/DEVELOPER:	CIVIL CONSULTANTS, INC. 3708 LYCKAN PARKWAY SUITE 201 DURHAM, NC 27707 PHONE: 919-490-1645 CONTACT: KEITH GETTLE, P.E.	MINIMUM RESIDENTIAL LOT SIZE REQUIRED:	R1 20,000 SF	
PROJECT:	PLANNED UNIT DEVELOPMENT (R&PUD)	MINIMUM RESIDENTIAL LOT SIZE PROPOSED:	R&PUD 8000 SF	
PIN:	1758-68-2706 (6.48 AC) CO 1758-59-6055 (17.96 AC) R1 1758-69-0358 (2.93 AC) R1	EXISTING IMPERVIOUS SURFACE:	TBD	
PROPOSED ZONING:	R&PUD	PROPOSED IMPERVIOUS SURFACE:	TBD	
RIVER BASIN:	NEUSE RIVER BASIN	COMMERCIAL PARKING:	FLEX/OFFICE (4) BUILDING 6000 SF = 24,000 SF 1 SPACE PER 500 SF (24,000 / 500) = 48 PROVIDED 56 PROVIDED	
NO. OF LOTS:	50 RESIDENTIAL LOTS	MEDICAL/OFFICE (3) @ 6000 SF = 18,000 SF 4.5 / 1000 = 81 SPACES 81 PROVIDED	OPEN SPACE REQUIRED:	RESIDENTIAL = 19.7 AC (10%) 19.7AC-1.26 (ROW)=18.44AC TOTAL = 18.54AC X10% = 1.84 AC 50% ACRES USEABLE = .92AC
PROJECT DENSITY:	RESIDENTIAL 2.5 UNITS/ACRE	OPEN SPACE PROVIDED:	6.08 ACRES TOTAL (31%) 4.27 ACRES IN BUFFER 0.75 WALKWAY, OPEN AREA	
RESIDENTIAL BUILDING SETBACKS REQUIRED:	25' FRONT 0-10' AGGREGATE SIDE 25' REAR			
COMMERCIAL BUILDING SETBACKS PROVIDED:	20' FRONT 15' SIDE 35' REAR			



**DRAWING INDEX:**

C1	COVER SHEET
C2	EXISTING CONDITIONS & DEMOLITION PLAN
C3	SITE PLAN
C4	UTILITY PLAN
C5	BUFFER PLAN

**LEGEND**

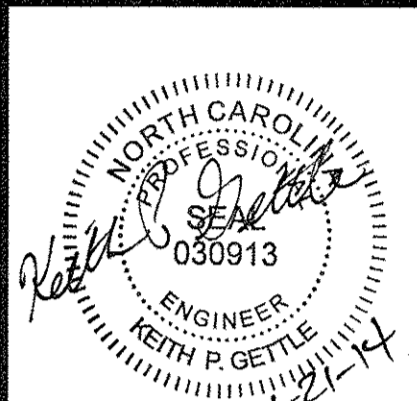
	NEW	EXISTING
DRAINAGE STRUCTURE	□	□
SANITARY SEWER MANHOLE	⊙	⊙
SANITARY SEWER CLEANOUT	⊙	⊙
WATER VALVE	⊙	⊙
FIRE HYDRANT	⊙	⊙
OVERHEAD UTILITY LINE	OH	XOH
UNDERGROUND ELECTRIC LINE	E	XE
UNDERGROUND TELECOM/DATA LINE	TD	XTD
FIBER OPTIC CABLE	FO	XFO
GAS LINE	G	XG
STORM DRAINAGE PIPE	SD	XSD
SANITARY SEWER LINE	SS	XSS
WATER LINE	W	XW
SURFACE ELEVATION CONTOUR	400	400
SURFACE SPOT ELEVATION	356.44	356.44
CLEARING LIMIT/TREE LINE	~	~
LIMIT OF DISTURBANCE	- - -	- - -
ELECTRICAL TRANSFORMER PAD	T	T
TYPICAL KEYED NOTE LABEL	1	1

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**MATTINGLY SUBDIVISION**  
ROLESVILLE, NORTH CAROLINA  
**COVER SHEET**

REV.	DATE	DESCRIPTION	BY
1	1-13-14	PER TOWN COMMENT	KFG
2	4-21-14	PER TOWN REVIEW	KFG

DATE:	OCTOBER 2, 2013
HORIZONTAL SCALE:	1" = 80'
VERTICAL SCALE:	1" = 2'
PROJECT MANAGER:	KFG
DRAWN BY:	KFG
PROJECT NO.:	20023
DRAWING NAME:	20023.DWG

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SHEET NO.  
**C1**



- DEMOLITION NOTES**
- PROPERTY BOUNDARY AND EXISTING CONDITIONS INFORMATION TAKEN FROM A FIELD SURVEY BY CAWTHORNE, MOSS AND PANCIERA, PC ENTITLED "SURVEY FOR LLOYDS OF ROLESVILLE, LLC, DATED JULY 24, 2013.
  - PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY.
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  - ALL VEGETATIVE MATERIAL GENERATED BY CLEARING AND GRUBBING ACTIVITIES SHALL BE COMPLETELY REMOVED FROM THE PROJECT SITE AND DISPOSED LEGALLY. NO ONSITE BURNING OF CLEARED MATERIAL SHALL OCCUR.
  - ALL PAVEMENT, CURB, PIPE, STRUCTURES AND OTHER PHYSICAL SITE FEATURES THAT ARE INDICATED OR REQUIRED TO BE REMOVED SHALL BE DISPOSED LEGALLY IN AN OFFSITE LOCATION.

N/F  
BERTIE WALL WIGGINS  
& BESSIE WAKE DIXON  
D.B. 11256 PG. 2438  
PIN 1758.01-49-4277

N/F  
MITCHELL C. AMIANO  
& SAMANTHA A. AMIANO  
D.B. 7117 PG. 385  
PIN 1758.07-58-6361

N/F  
MITCHELL C. AMIANO  
& SAMANTHA A. AMIANO  
D.B. 7117 PG. 385  
PIN 1758.07-58-6361

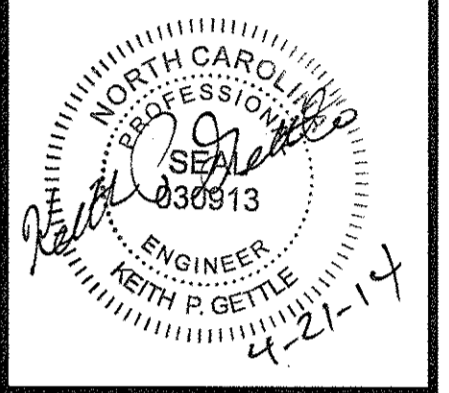
N/F  
LLOMEL, INC.  
D.B. 9286 PG. 1428  
B.M. 1995 PG. 1171  
PIN 1758.07-68-2706

N/F  
THALES ACADEMY, INC.  
D.B. 14046 PG. 2735  
B.M. 4013 PG. 1110  
PIN 1758.07-69-5550

**MATTINGLY SUBDIVISION**  
ROLESVILLE, NORTH CAROLINA  
**EXISTING CONDITIONS & DEMOLITION PLAN**

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919-486-1605 PHONE  
LIC. 9C-1030



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1	1-13-14	PER TOWN COMMENT RFG
2	4-21-14	PER TOWN COMMENT RFG

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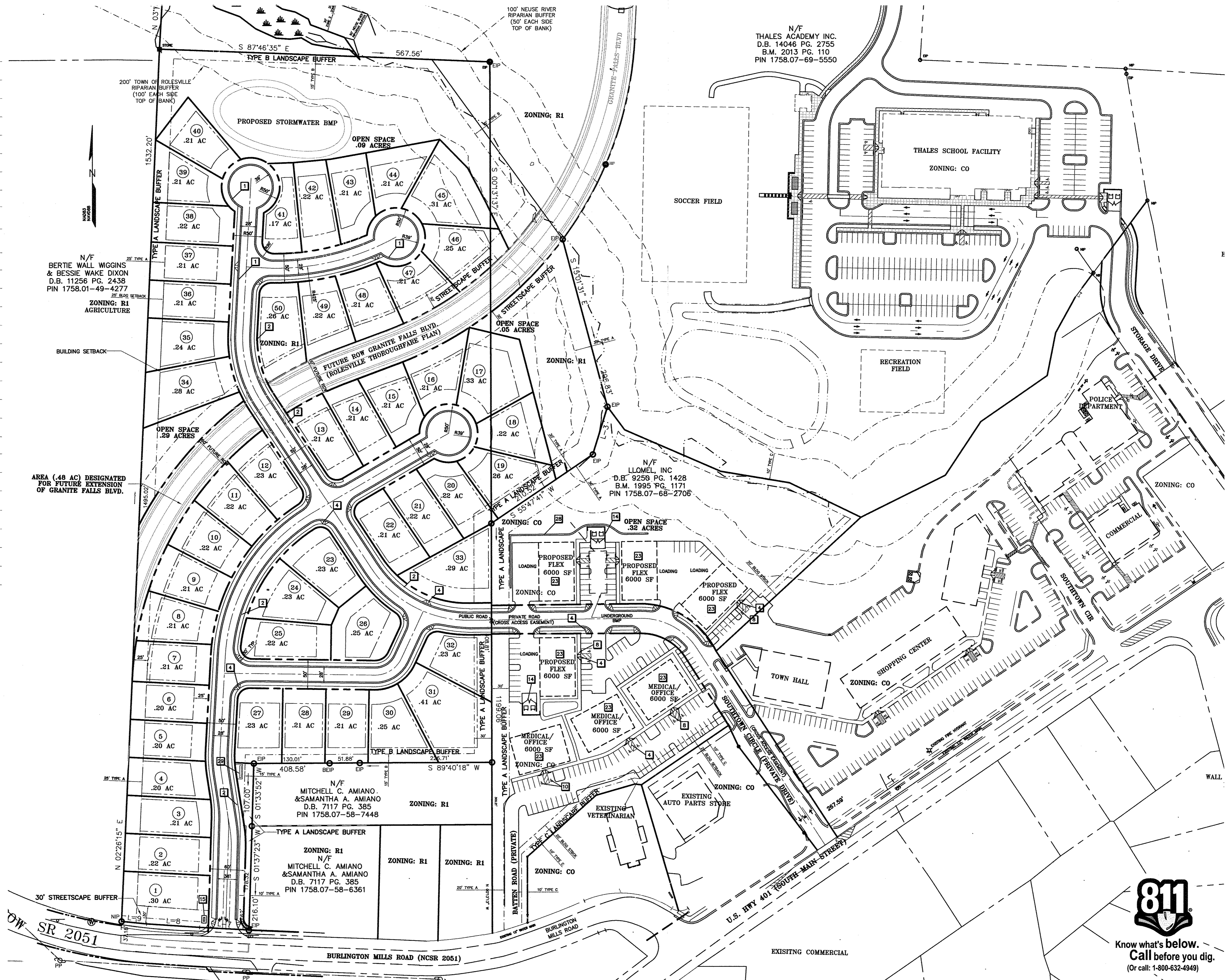
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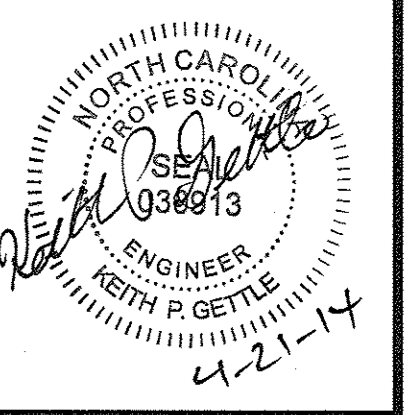
SHEET NO.  
**C2**

**KEY KEYED NOTES - SITE PLAN**

- 1 CONCRETE CURB AND GUTTER, SEE DETAILS AND SITE NOTES.
- 2 STANDARD CONCRETE WALK, 5' WIDE UNLESS OTHERWISE NOTED, SEE DETAIL.
- 3 TURN-DOWN CONCRETE WALK, 6' WIDE UNLESS OTHERWISE NOTED, SEE DETAIL.
- 4 HANDICAP RAMP, SEE DETAIL.
- 5 LONGITUDINAL CURB TRANSITION (BULLNOSE), SEE DETAIL.
- 6 STANDARD-DUTY BITUMINOUS PAVING, SEE DETAIL. USE FOR ALL PARKING SPACES.
- 7 HEAVY-DUTY BITUMINOUS PAVING, SEE DETAIL. USE FOR ALL DRIVE AISLES AND SERVICE LANES.
- 8 WHEEL STOP, SEE DETAIL. SET 24" FROM EDGE OF PARKING SPACE.
- 9 4" WIDE PARKING SPACE STRIPING. SEE SITE NOTES FOR PAINT SPECIFICATION.
- 10 UNIVERSAL HANDICAPPED SYMBOL AND HANDICAPPED ACCESS AISLE STRIPING. SEE DETAILS, AND SEE SITE NOTES FOR PAINT SPECIFICATION.
- 11 HANDICAPPED PARKING SIGNS ON POST, SEE DETAILS. INSTALL ONE R7-8 AND ONE R7-8D SIGN AT EACH HANDICAPPED PARKING SPACE, AND ADD A "VAN ACCESSIBLE" SIGN AT EACH VAN SPACE.
- 12 HANDICAP ACCESSIBLE PASSENGER LOADING ZONE SIGN, SEE DETAIL.
- 13 BICYCLE PARKING, SEE DETAIL.
- 14 CONCRETE DUMPSTER PAD AND ENCLOSURE WITH GATE AND PROTECTIVE BOLLARDS, SEE DETAILS.
- 15 MONUMENT SIGN BY OTHERS, PROVIDE ELECTRICAL SERVICE IN CONDUIT PER OWNER REQUIREMENTS.
- 16 TIE IN TO EXISTING PAVEMENT, SEE SITE NOTES FOR REQUIREMENTS.
- 17 TIE IN TO EXISTING CURB AND GUTTER OR SIDEWALK, SEE SITE NOTES FOR REQUIREMENTS.
- 18 CONCRETE PAVING TYPE 1, SEE DETAIL.
- 19 PAINTED STOP BAR, 12" WIDE, SOLID WHITE. SEE SITE NOTES FOR PAINT SPECIFICATION.
- 20 PAINTED DRIVE AISLE DIRECTIONAL ARROWS, 8" WIDE, SOLID WHITE. SEE SITE NOTES FOR PAINT SPECIFICATION.
- 21 PAINTED CROSSWALK, USING 6" WIDE, WHITE DIAGONAL BARS. SEE SITE NOTES FOR PAINT SPECIFICATION.
- 22 PAINTED "NO PARKING FIRE LANE" MARKINGS IN ACCORDANCE WITH LOCAL REQUIREMENTS-SEE NOTES FOR PAINT SPECIFICATION.
- 23 BUILDING FOOTPRINT. SEE SITE NOTES FOR LIMITATIONS ON USE OF FOOTPRINT INFORMATION AS SHOWN.
- 24 30" NCDOT-STANDARD STOP SIGN, MOUNTED ON GALVANIZED STEEL POST.
- 25 HANDICAP ACCESSIBLE PASSENGER LOADING ZONE SIGN, SEE DETAIL.
- 26 SPEED / UNLOADING TABLE w/5' WIDE CONCRETE WALKWAY, SEE DETAIL.
- 27 STANDARD CONCRETE WALK, 6' WIDE WITH TURN-DOWN AT EACH END, SEE DETAILS.
- 28 MODULAR BLOCK WALL, WITH 4' HIGH BLACK VINYL COATED CHAINLINK FENCE ALONG TOP OF WALL.
- 29 USPS MAILBOX KIOSK



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**MATTINGLY SUBDIVISION**  
 ROLESVILLE, NORTH CAROLINA  
**SITE PLAN**

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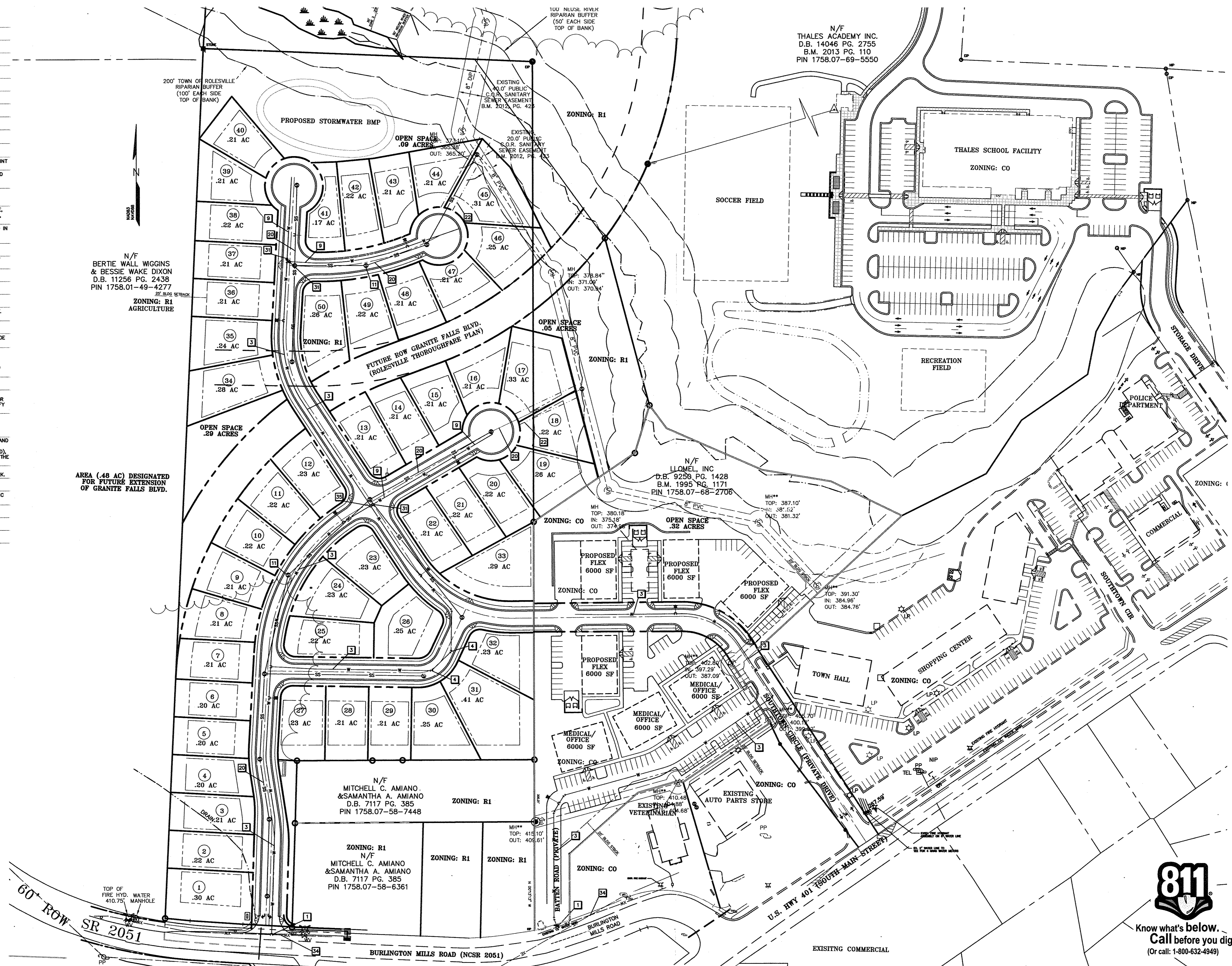
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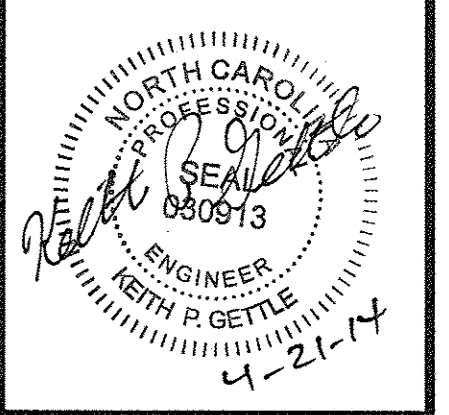
SHEET NO.  
**C3**

KEY KEYED NOTES - UTILITY PLAN

- 1 CONNECT TO EXISTING 12" WATERLINE BY CUTTING IN A 12" X 8" MJ TEE.
- 2 8" X 6" MJ TEE WITH RESTRAINT.
- 3 8" DIAMETER DUCTILE IRON WATERLINE.
- 4 45, 90, 22.5 OR 11.25 DEGREE MJ BEND AND RESTRAINT.
- 5 8" X 6" MJ TEE WITH RESTRAINT.
- 6 6" GATE VALVE WITH VALVE BOX AND CONCRETE COLLAR.
- 7 8" GATE VALVE WITH VALVE BOX AND CONCRETE COLLAR.
- 8 6" GATE VALVE WITH VALVE BOX, AND FIRE HYDRANT ASSEMBLY.
- 9 8" DIAMETER DUCTILE IRON WATERLINE.
- 10 2" WATER SERVICE TAP AND CLASS 200 PVC SERVICE LINE, AND 2" METER ASSEMBLY IN METER BOX, FOR DOMESTIC SERVICE.
- 11 4"-6" DIA PRECAST SANITARY SEWER MANHOLE - SEE COR DETAIL S-20
- 12 4" PVC CLASS 200 WATER SERVICE LINE WITH DUCTILE IRON RESTRAINED JOINT FITTINGS DESIGNED FOR USE ON PVC PIPE.
- 13 3" BACKFLOW PREVENTER DEVICE LOCATED IN AN INSULATED ABOVE-GROUND ENCLOSURE. DEVICE SHALL BE AN AMES C500 COLT 3000GV, OR APPROVED CITY OF RALEIGH EQUAL.
- 14 2" WATER SERVICE TAP AND 2" METER ASSEMBLY IN METER BOX, FOR LANDSCAPE IRRIGATION SERVICE. IRRIGATION SYSTEM BY OTHERS.
- 15 BACKFLOW PREVENTER DEVICE IN AN INSULATED ABOVE-GROUND ENCLOSURE. FOR LANDSCAPE IRRIGATION SERVICE. DEVICE SHALL BE A 2" AMES 4000R, REDUCED-PRESSURE PRINCIPLE ASSEMBLY. IRRIGATION SYSTEM BY OTHERS.
- 16 8" BACKFLOW PREVENTER DEVICE - AMES C500 RPD "N" STYLE INSTALLED IN AN ABOVE GROUND HEATED ENCLOSURE (ASSE 1060)
- 17 6" DUCTILE IRON WATER LINE FOR FIRE PROTECTION SPRINKLER SYSTEM.
- 18 FIRE DEPARTMENT CONNECTION AND SIGN. VERIFY LOCATION WITH ARCHITECT AND FIRE OFFICIAL.
- 19 4" PVC SANITARY SEWER LATERAL.
- 20 8" DIAMETER DUCTILE IRON PUBLIC SANITARY SEWER MAIN. SEE SHEET FOR PROFILE.
- 21 CONNECT TO EXISTING SANITARY MANHOLE USING NEW FLEXIBLE BOOT. CORE-DRILL MANHOLE AND INSTALL BOOT PER INSPECTOR'S REQUIREMENTS.
- 22 8" PVC PUBLIC SANITARY SEWER WITH 20" WIDE CITY OF RALEIGH EASEMENT.
- 23 4" PVC SANITARY SEWER CLEANOUT SPACED AT A MAXIMUM OF 75'.
- 24 4" PVC PRIVATE SANITARY SEWER WITH 20" WIDE PRIVATE EASEMENT. PROVIDE 4" PVC CLEANOUTS AT A MINIMUM SPACING OF 75 FEET.
- 25 UNDERGROUND ELECTRIC SERVICE LINE AND PAD-MOUNTED TRANSFORMER (SHOWN SCHEMATICALLY). CONTRACTOR SHALL MAKE APPLICATION FOR ELECTRIC SERVICE, COORDINATE INSTALLATION, AND PROVIDE ALL MATERIALS AND WORK NOT PROVIDED BY THE ELECTRIC COMPANY. VERIFY ROUTING AND LOCATIONS WITH ARCHITECT AND SERVICE PROVIDER.
- 26 ELECTRIC METER LOCATION ON BUILDING (SHOWN SCHEMATICALLY). VERIFY LOCATION WITH ARCHITECT AND SERVICE PROVIDER.
- 27 GAS SERVICE LINE AND METER (SHOWN SCHEMATICALLY). SIZING AND INSTALLATION BY GAS COMPANY. CONTRACTOR SHALL MAKE APPLICATION FOR GAS SERVICE, AND SHALL COORDINATE LINE AND METER INSTALLATION. VERIFY ROUTING AND LOCATIONS WITH ARCHITECT AND SERVICE PROVIDER.
- 28 TELEPHONE AND INTERNET SERVICE LINES (SHOWN SCHEMATICALLY). INSTALLATION BY SERVICE PROVIDERS. VERIFY ROUTINGS, LOCATIONS, AND TERMINATION DETAILS WITH ARCHITECT AND SERVICE PROVIDERS.
- 29 PROVIDE ADEQUATE TRAFFIC CONTROL AND SAFETY MEASURES FOR PUBLIC AND WORKER SAFETY DURING THE PROGRESS OF THE WORK. CONFORM TO STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD, AND REQUIREMENTS OF THE ROADWAY AND MUNICIPAL AUTHORITIES.
- 30 PAVEMENT OUT AND PATIO AS NEEDED FOR UTILITY LINE INSTALLATION. CONFORM TO ALL RIGHT-OF-WAY ENCROACHMENT CONDITIONS FOR THE WORK.
- 31 8"x6" REDUCER
- 32 1" WATER SERVICE TAP & 1" METER ASSEMBLY IN METER BOX, FOR DOMESTIC SERVICE AND 2" PVC CLASS 200, WATER LINE TO FIELD HOUSE.
- 33 6" PVC PRIVATE SANITARY SEWER LATERAL.
- 34 APPROXIMATE LOCATION OF EXISTING WATER MAIN.
- 35 8"x6" MJ CROSS RESTRAINT



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 LAND PLANNERS & CIVIL ENGINEERS  
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 3700 LOCKLAN PARKWAY - SUITE 201 - DURHAM, NC 27707  
 Lic. 6C-1030



MATTINGLY SUBDIVISION  
 ROLESVILLE, NORTH CAROLINA  
 UTILITY PLAN

REV.	DATE	DESCRIPTION	BY	KPG
1	1-13-14	PER TOWN COMMENT		

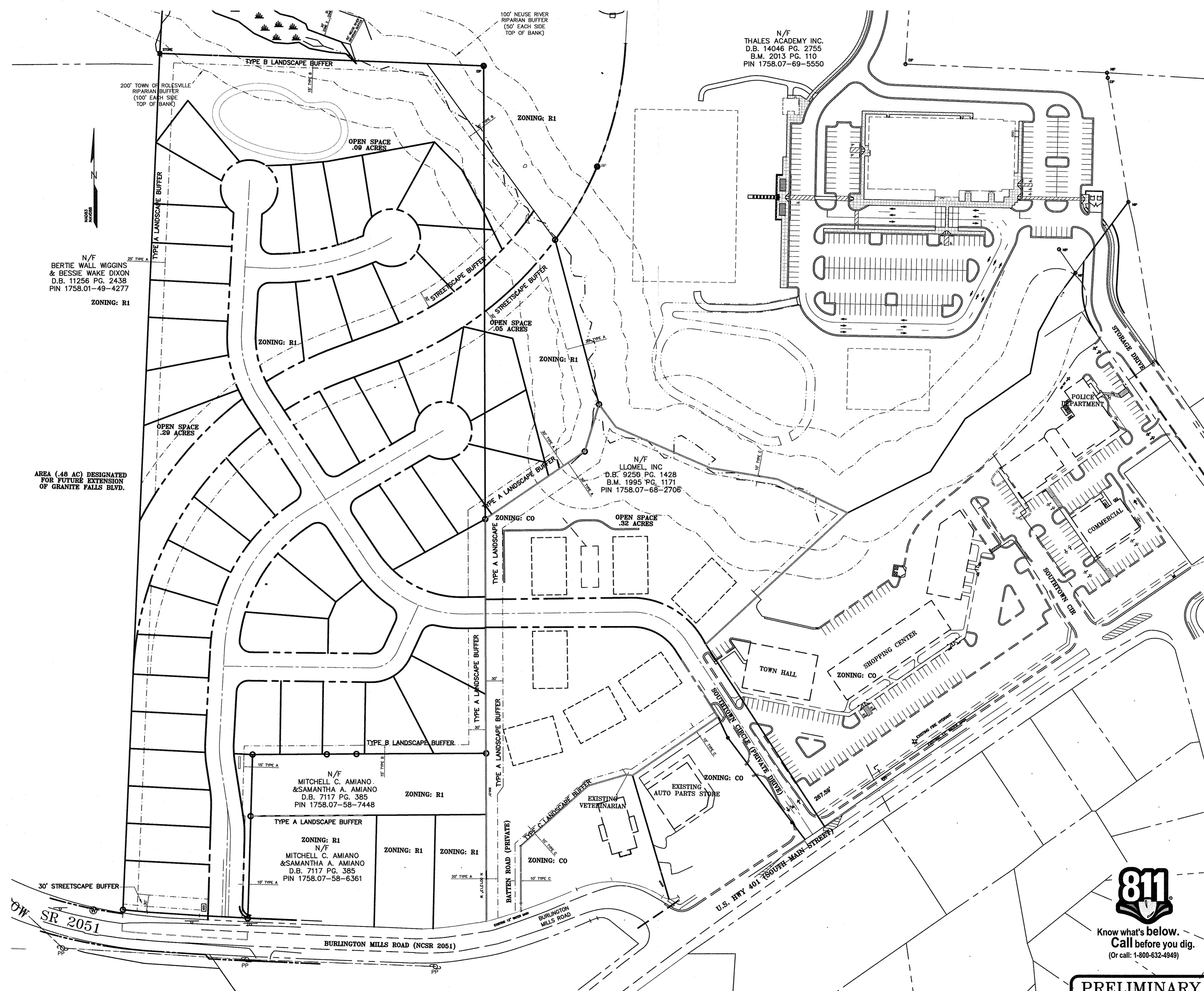
DATE: OCTOBER 2, 2013  
 HORIZONTAL SCALE: 1" = 80'  
 VERTICAL SCALE: 1" = 4'  
 PROJECT MANAGER: KPG  
 DRAWN BY: KPG  
 PROJECT NO.: 20023  
 DRAWING NAME: 20023.DWG

SHEET NO.  
**C4**

**811**  
 Know what's below.  
 Call before you dig.  
 (Or call: 1-800-632-4949)

CONTRACTOR'S RECORD DRAWING MARKUP OF AS-BUILT CHANGES DURING CONSTRUCTION.  
 CONTRACTOR'S INITIALS: \_\_\_\_\_

**PRELIMINARY**  
 DO NOT USE FOR CONSTRUCTION



N/F  
BERTIE WALL WIGGINS  
& BESSIE WAKE DIXON  
D.B. 11256 PG. 2438  
PIN 1758.01-49-4277  
ZONING: R1

AREA (.48 AC) DESIGNATED  
FOR FUTURE EXTENSION  
OF GRANITE FALLS BLVD.

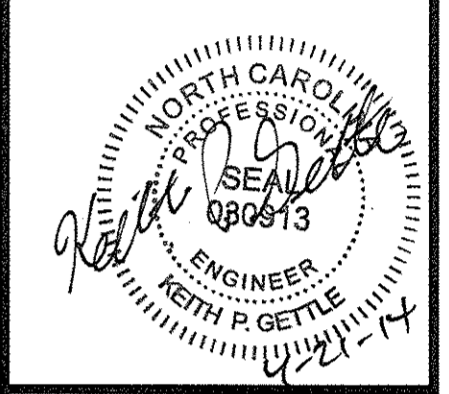
N/F  
THALES ACADEMY INC.  
D.B. 14046 PG. 2755  
B.M. 2013 PG. 110  
PIN 1758.07-69-5550

N/F  
LLOMEL, INC  
D.B. 9256 PG. 1428  
B.M. 1995 PG. 1171  
PIN 1758.07-68-2706

N/F  
MITCHELL C. AMIANO  
& SAMANTHA A. AMIANO  
D.B. 7117 PG. 385  
PIN 1758.07-58-7448

N/F  
MITCHELL C. AMIANO  
& SAMANTHA A. AMIANO  
D.B. 7117 PG. 385  
PIN 1758.07-58-6361

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LIC. #C-1030



MATTINGLY SUBDIVISION  
ROLESVILLE, NORTH CAROLINA  
BUFFER PLAN

REV.	DATE	DESCRIPTION

DATE: OCTOBER 2, 2013  
HORIZONTAL SCALE: 1"=60'  
VERTICAL SCALE: 1"=2'  
PROJECT MANAGER: KPG  
DRAWN BY: KPG  
PROJECT NO: 20023  
DRAWING NAME: 20023.DWG

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SHEET NO.  
**C5**