SANITARY SEWER SYSTEM REQUIREMENTS:

1. THE SANITARY SEWER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KNOWING WHO THE LOCAL SEWER AUTHORITY IS AND COORDINATING WITH THE LOCAL SEWER AUTHORITY. WHEN THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION DIFFER FROM THOSE SHOWN ON THIS PLAN, CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT STANDARDS.
2. REFER TO PIPE BEDDING DETAIL FOR BEDDING AND ANTI-SEEP COLLAR REQUIREMENTS. IF NO BEDDING DETAIL IS SHOWN, CONTRACTOR SHALL BED WATER PIPE IN ACCORDANCE WITH LOCAL ISSUING AUTHORITY'S STANDARDS AND OR SPECIFICATIONS. IF THERE ARE NO LOCAL ISSUING AUTHORITY STANDARDS OR SPECIFICATIONS, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD BEFORE PROCEEDING WITH ANY WATER INSTALLATIONS.
3. ALL SANITARY SEWER MATERIALS, SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR, USE THE FOLLOWING:
   - SANITARY PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35, WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH CLEAN STONE OF A UNIFORM MIX RANGING IN SIZE OF 1/4 TO 3/4 INCH.
   - FORCEMAIN PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 2241, SDR 21 OR LOWER IF PRESSURES ARE HIGH IN SYSTEM WITH GASKETS PER ASTM D 3139, AND ELASTOMERIC SEAL. THE PIPE SHALL BE ENCLOSED IN A RUN OF CRUSHED STONE GRAVEL MATERIAL WITH 100% PASSING THE 1 INCH SIEVE AND 3 TO 10% PASSING THE 200 SIEVE. THE MIX SHALL BE SUPPLEMENTED AS NEEDED TO REMOVE VOIDS. INCORPORATE FILTER FABRIC AROUND BEDDING OR CRADLE STONE IF GROUND WATER, SILTS, OR SANDS ARE ENCOUNTERED.
   - MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443 AND MORTARED WATER TIGHT WITH A WATERPROOF/PLUG MORTAR. THE INVERT SHALL BE MADE WITH CONCRETE OR 1/2 ROUND SECTION OF PIPE. PIPE JOINTS SHALL BE PRESS WEDGE OR CAST IN PLACE BOOT. BOTH SHALL HAVE ADDITIONAL VOIDS FILLED WITH WATERPROOF/PLUG MORTAR. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT. EXTERIOR MANHOLES SHALL BE COATED WITH A SEAL COAT ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
   - CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT. CLEANOUTS SHALL BE NO MORE THAN 90 FEET APART ON LATERALS. CLEANOUT CAPS SHALL BE BRASS WITH COUNTERSUNK PLUG MADE FLUSH TO GRADE. AN 8 INCH THICK CONCRETE COLLAR SHALL BE PLACED A MINIMUM OF 18 INCHES SURROUNDING CLEANOUTS IN ALL PAVED AREAS. TRANSITION FROM CONCRETE TO ASPHALT SHALL BE FLUSH AND SMOOTH.
   - MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "SANITARY" CAST INTO IT. THE MINIMUM SIZE SHALL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
4. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
5. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
6. ALL TAPS TO MAIN LINES SHALL BE MADE WITH SADDLES WHEN THE TAP IS 1/2 THE DIAMETER OR LESS OF THE EXISTING PIPE BUT MADE WITH A SLEEVE WHEN THE TAP IS GREATER THAN 1/2 THE DIAMETER OR EQUAL TO THE EXISTING PIPE. IF CONNECTIONS ARE REQUIRED TO EQUAL SIZE PIPES OF 8 INCHES OR GREATER, A MANHOLE SHALL BE INSTALLED OVER THE CONNECTION POINT AND INVERTS FORMED. WHEN CONNECTING TO AN EXISTING MANHOLE, THE CONNECTING PIPE HOLE SHALL BE CORED AND A PRESS WEDGE INSTALLED. THE CONNECTION SHALL BE MORTARED UP WITH WATERPROOF/PLUG MORTAR. INSIDE THE EXISTING MANHOLE, THE EXISTING INVERT SHALL BE BROKE OUT IN A MANNER THAT PROTECTS FROM DEBRIS ENTERING THE LIVE SYSTEM, WHILE A NEW INVERT IS FORMED.
7. SANITARY MANHOLES SHALL BE VISUALLY LAMPED AFTER BACKFILL TO VERIFY ALIGNMENT, CLEANLINESS, AND THERE IS NO DAMAGE TO THE SYSTEM. AFTER THE SYSTEM HAS BEEN BACKFILLED FOR 30 DAYS, THE SYSTEM SHALL BE RELAMPED AND TESTED WITH A MANDREL SIZED AT 95% OF THE INTENDED INSIDE DIAMETER.
8. GRAVITY SYSTEMS SHALL BE AIR TESTED BETWEEN MANHOLES TO 3.5 PSI FOR 5 MINUTES PER ASTM F 1417 FOR PLASTIC PIPES.
9. MANHOLES SHALL BE TESTED SEPARATELY FOR LEAKAGE OR INFILTRATION USING ASTM C 969. THE ALLOWED LEAKAGE = 0.1 GALLONS / {(FEET OF DIAMTER)(FEET OF HEAD)(#OF HOURS)} AND THE TEST SHALL RUN FOR 24 HOURS.
10. THE ENTIRE SANITARY SEWER SYSTEM MAY BE TESTED FOR INFILTRATION AND EXFILTRATION USING ASTM C 969. THE SYSTEM SHALL BE BROKEN UP INTO SECTIONS WHEN NECESSARY TO CONSIDER GROUNDWATER DEPTH, LENGTH AND ELEVATION DIFFERENCES. THE ALLOWABLE LEAKAGE SHALL BE 100 GAL/INCH OF PIPE DIAMETER/MILE/DAY.
11. ANY TESTING FAILURE SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.
12. AFTER ALL TESTING IS COMPLETE AND BEFORE THE SYSTEM IS TURNED OVER TO THE AUTHORITY HAVING JURISDICTION, THE SYSTEM SHALL BE CHECKED TO VERIFY IT IS CLEAN AND FREE OF DIRT, DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.
13. GREASE TRAPS, IF REQUIRED, SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
14. INCREASE SIZE OF MANHOLE IF IN SAME HORIZONTAL PLANE THERE IS TWO AREAS WHERE THE AREA BETWEEN TWO PIPES IS LESS THAN 8 INCHES OR ½ OF THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN ½ OF THE DIAMETER OF THE MANHOLE. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE.

WATER SYSTEM AND SERVICES REQUIREMENTS:

1. THE WATER SYSTEMS AND SERVICES SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE KNOWING WHO THE LOCAL WATER AUTHORITY IS AND COORDINATING WITH THE LOCAL WATER AUTHORITY. WHEN REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION DIFFER FROM THOSE SHOWN ON THIS PLAN, CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT STANDARDS.
2. REFER TO PIPE BEDDING DETAIL FOR PIPE BEDDING REQUIREMENTS. IF NO BEDDING DETAIL IS SHOWN, CONTRACTOR SHALL BED WATER PIPE IN ACCORDANCE WITH LOCAL ISSUING AUTHORITY'S STANDARDS AND/OR SPECIFICATIONS. IF THERE ARE NO LOCAL ISSUING AUTHORITY STANDARDS OR SPECIFICATIONS, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD BEFORE PROCEEDING WITH ANY WATER INSTALLATIONS.
3. ALL WATER PIPING, FITTINGS, AND APPURTENANCES SHALL BE PLACED A MINIMUM OF 6 INCHES BELOW FROSTLINE OR WITH A MINIMUM 5 FEET OF COVER, WHICHEVER IS GREATER. PIPE SIZES 4 INCHES AND UP SHALL BE DUCTILE IRON OR POLYVINYL CHLORIDE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE DUCTILE IRON). PIPE SIZES BELOW 4 INCHES SHALL BE TYPE 'K' COPPER OR POLYETHYLENE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE TYPE 'K' COPPER).
4. THE MINIMUM SEPARATION BETWEEN WATER SERVICES AND SEWER LINES SHALL BE 18 INCHES MEASURED VERTICALLY FROM OUTSIDE TO OUTSIDE OF PIPES AT CROSSING. A STANDARD LENGTH OF DIP WATER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXIMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST WATER SERVICE PIPE JOINT. A STANDARD LENGTH OF DIP SEWER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXIMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST SEWER SERVICE PIPE JOINT. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED. THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING.
5. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18 INCH CLEARANCE MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50). CONTRACTOR SHALL ADJUST ELEVATION OF WATER AS NEEDED TO MAINTAIN ADEQUATE SEPARATION AND BURIAL DEPTH.
6. DUCTILE IRON PIPE SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C151. (6 INCH DIAMETER AND GREATER SHALL BE CLASS 50 AND 6 INCHES AND SMALLER SHALL BE CLASS 51). DUCTILE IRON PIPE SHALL BE LINED WITH A CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH AWWA C104. GASKETS SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C111. FITTINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH AWWA C153 COMPACT FITTINGS WITH A PRESSURE RATING OF 350 PSI.
7. WHEN THE WATER SERVICE RUNS UNDER THE SEWER LINE, A GRAVEL OR CRUSHED STONE BACKFILL MEETING THE REQUIREMENTS OF SUBBASE SHALL BE PLACED AND COMPACTED AROUND THE WATER PIPE UP HALF THE DIAMETER OF THE SEWER PIPE TO PROVIDE ADEQUATE SUPPORT TO THE SEWER LINE. WATER SERVICES AND SEWER LINES RUNNING PARALLEL SHALL HAVE A MINIMUM SEPARATION OF 10 FEET MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
8. ALL PIPES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. TEN GAUGE COPPER TRACER WIRE SHALL BE PLACED WITH ALL PLASTIC PIPE. PIPE MATERIAL SHALL BE AS FOLLOWS:
   - 8.1. PVC (POLYVINYL CHLORIDE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C900 FOR PIPE 4 INCHES OR GREATER AND ASTM D 1785, SCHEDULE 40, GASKETS PER ASTM F 477-ELASTOMERIC SEAL, SOLVENT CEMENT PER ASTM D 2564 FOR PIPES SMALLER THAN 4 INCHES.
   - 8.2. PE (POLYETHYLENE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C901 AND ASTM D2737. TEN GAUGE COPPER WIRE WILL BE PLACED WITH ALL PLASTIC PIPES.
   - 8.3. DIP (DUCTILE IRON PIPE) SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH AWWA C1581 AND C600 (6 INCHES AND GREATER SHALL BE CLASS 50, SMALLER THAN 6 INCHES SHALL BE CLASS 51). DUCTILE IRON PIPE SHALL BE LINED WITH A CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH AWWA C104. GASKETS SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C111. FITTINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH AWWA C153 COMPACT FITTINGS WITH A PRESSURE RATING OF 350 PSI. STANDARD DUCTILE IRON OR CAST IRON FITTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH AWWA C110 WITH A PRESSURE RATING OF 250 PSI. THE LINING AND GASKETS FOR THE FITTING SHALL MEET THE SAME REQUIREMENTS AS THE PIPE. IF RECOMMENDED IN THE SOILS REPORT, DUCTILE IRON PIPES SHALL BE ENCASED IN POLYETHYLENE IN ACCORDANCE WITH AWWA C105 AND TAR COAT ALL FITTING BOLTS WHENEVER SOILS ARE PRIMARILY CLAY OR NOT PH BALANCED.
   - 8.4. COPPER WATER PIPE SHALL BE SUPPLIED IN ACCORDANCE WITH ASTM B 88- TYPE K, SEAMLESS WITH FITTINGS PER AWWA C800.
   - 8.5. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600 AND BE ENCASED IN SELECT BACKFILL WHICH MEANS NO STONE OR OTHER MATERIAL GREATER THAN 2 INCHES IN ANY DIRECTION. PVC, PE, AND COPPER PIPE SHALL BE PLACED PER MANUFACTURERS RECOMMENDATIONS AND EMBEDDED IN A 6 INCH SAND ENCASEMENT MEASURED FROM OUTSIDE SURFACE OF THE PIPE TO THE OUTSIDE OF SAND ENCASEMENT.
9. GATE VALVES SHALL BE NONRISING STEM, DOUBLE DISC, BRONZE DISC RESILIENT SEATED, CAST IRON OR DUCTILE IRON BODY AND BONNET IN ACCORDANCE WITH AWWA C509 AND PRESSURE RATED FOR 250 PSI. TEN GAUGE COPPER TRACER WIRE WILL BE PLACED WITH ALL PIPES.
10. VALVE BOX SHALL BE CAST IRON WITH A BASE COMPATIBLE WITH VALVE, 5 INCHES IN DIAMETER, SCREW TYPE EXTENSION AT TOP AND A COVER THAT READS "WATER".
11. THRUST RESTRAINTS SHALL BE USED AT ALL FITTINGS PLUGS AND APPURTENANCES THAT CAUSE A CHANGE IN DIRECTION, FLOW OR ARE SUBJECT TO THRUST OR HAMMERING BY WATER FLOW. THRUST RESTRAINTS WILL INCLUDE CONCRETE THRUST BLOCKS (3000PSI), ANCHORING JOINTS AND TIE RODS. CONCRETE THRUST BLOCKS SHALL BE USED UNLESS SPACE, ACCESS OR MAINTENANCE RESTRAINTS PROHIBIT THEIR USE.
12. CURB STOPS SHALL HAVE A BRONZE BODY, GROUND KEY PLUG OR BALL WITH WIDE TEE HEAD. THE CURB STOP SHALL BE COMPATIBLE WITH ADJOINING PIPES. THE SERVICE BOX SHALL HAVE A TELESCOPING TOP SECTION WITH A LENGTH THAT WILL PLACE THE ADJUSTMENT CENTERED WHEN BURIED TO THE APPROPRIATE DEPTH. THE SERVICE BOX SHALL BE OF A SIZE AND TYPE THAT IS COMPATIBLE WITH THE CURB STOP. THE COVER SHALL HAVE THE LETTERING "WATER".
13. ALL METERS, VAULTS AND BACKFLOW SHALL MEET THE REQUIREMENTS OF THE LOCAL HEALTH DEPARTMENT AND OTHER AGENCIES HAVING JURISDICTION.
14. FIRE HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL WATER AUTHORITY AND FIRE DEPARTMENT (HAVING JURISDICTION) AND AWWA C502. DRAIN STONE SHALL HAVE 100% PASSING THE 1-1/2 INCH SIEVE, 90-100% PASSING THE 1 INCH SIEVE, 35-95% PASSING THE 3/8 INCH SIEVE AND 0-15% PASSING THE 1/4 INCH SIEVE. ALL HYDRANTS SHALL INCLUDE A GATE VALVE AND BOX LOCATED AT THE HYDRANT BRANCH TO SHUT OFF THE HYDRANT LINE.
15. ALL BEDDING AND ENCASEMENTS SHALL BE COMPACTED WITH CARE TO ACHIEVE PROPER COMPACTION WITHOUT DAMAGING THE PIPE, FITTINGS OR APPURTENANCES.
16. ALL WATER MAIN FITTINGS AND VALVES SHALL BE TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA C600. TEST WATER SHALL BE POTABLE. TEST PRESSURE SHALL NOT BE LESS THAN 1.25 TIMES THE WORKING PRESSURE AT THE HIGHEST POINT AND 1.5 TIMES THE WORKING PRESSURE AT THE TESTING POINT. THE PRESSURE MAY NOT DROP MORE THAN 5 PSI DURING THE 2 HOUR TEST. LEAKAGE SHALL NOT EXCEED MORE THAN (L=(SD(P)^0.5)/133,200) WHERE "L= ALLOWABLE LEAKAGE, IN GALLONS PER HOUR" "S= LENGTH OF PIPE TESTED, IN FEET" " D= NOMINAL DIAMETER OF PIPE, IN INCHES" "P=AVERAGE TEST PRESSURE DURING TEST, IN POUNDS PER SQUARE INCH (GAUGE) DURING THE SAME 2 HOUR DURATION".
17. ALL TAP AND/OR CONNECTION MATERIAL AND WORK SHALL BE DONE IN ACCORDANCE WITH AND COORDINATED WITH THE LOCAL WATER AUTHORITY AND HEALTH DEPARTMENT (HAVING JURISDICTION). WHEN THE AUTHORITY SO REQUIRES, THE TAPS AND/OR CONNECTIONS SHALL BE DONE BY THE AUTHORITY THEMSELVES AND PAID FOR BY THE CONTRACTOR.
18. OTHER FITTING AND APPURTENANCES NOT PART OF THE MAIN LINE TESTING SHALL BE TESTED BY VISUAL INSPECTION FOR LEAKAGE UNDER NORMAL WORKING PRESSURES.
19. ALL MAIN LINES AND APPROPRIATE APPURTENANCES SHALL BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE REQUIREMENTS OF THE APPROPRIATE HEALTH DEPARTMENT AND LOCAL WATER AUTHORITY.
20. THE CONTRACTOR SHALL COORDINATE ALL TESTING AND DISINFECTING WITH THE WATER AUTHORITY AND HEALTH DEPARTMENT. IF PROFESSIONAL ENGINEER CERTIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK AND HIRE A THIRD PARTY ENGINEER AS NECESSARY.
21. ANY TESTING FAILURE SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.
22. IF CLEAN STONE IS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION AND IS APPROVED BY OWNER AND/OR ENGINEER OF RECORD, THEN THE BEDDING MATERIAL SHALL BE WRAPPED IN FILTER FABRIC AND ANTI-SEEP COLLARS SHALL BE PROVIDED TO PREVENT THE MIGRATION OF FINES.

MISCELLANEOUS UTILITY NOTES:

ELECTRIC:
1. CONTRACTOR SHALL INSTALL THE TRANSFORMER PAD PER THE LOCAL UTILITY SUPPLIER'S REQUIREMENTS.
2. 90° BENDS AND PULL BOXES SHALL BE AVOIDED BY ALL PRACTICAL MEANS POSSIBLE.
3. PULL BOXES AND OTHER SURFACE ACCESS POINTS SHALL NOT BE LOCATED WITHIN PEDESTRIAN AREAS (WHERE SHOPPING CARTS WILL BE USED) OR IN FRONT OF THE BUILDING CANOPY. PULL BOXES SHALL BE LOCATED IN AREAS THAT WILL REMAIN ACCESSIBLE AND NOT BLOCKED BY PARKED VEHICLES.
4. UNDERGROUND CONDUIT SHALL BE USED FOR SERVICE CONNECTIONS MADE IN FRONT OF THE ALDI BUILDING.
5. CONDUIT SIZING SHALL BE COORDINATED WITH AOR AND LOCAL SUPPLIER.
6. MINIMUM CONDUIT COVER SHALL BE TWO (2) FEET, OR AS REQUIRED BY LOCAL ELECTRIC PROVIDER.
7. CONTRACTOR IS RESPONSIBLE FOR THE CONDUIT(S) INSTALLATION AND TRENCHING AND SHALL COORDINATE WITH LOCAL UTILITY SUPPLIER FOR FEES AND REQUIREMENTS.

TELEPHONE:
1. 90° BENDS AND PULL BOXES SHALL BE AVOIDED BY ALL PRACTICAL MEANS POSSIBLE.
2. PULL BOXES AND OTHER SURFACE ACCESS POINTS SHALL NOT BE LOCATED WITHIN PEDESTRIAN AREAS (WHERE SHOPPING CARTS WILL BE USED) OR IN FRONT OF THE BUILDING CANOPY. PULL BOXES SHALL BE LOCATED IN AREAS THAT WILL REMAIN ACCESSIBLE AND NOT BLOCKED BY PARKED VEHICLES.
3. UNDERGROUND CONDUIT SHALL BE USED FOR SERVICE CONNECTIONS MADE IN FRONT OF THE ALDI BUILDING.
4. CONDUIT SIZING SHALL BE COORDINATED WITH THE AOR AND LOCAL SUPPLIER.
5. MINIMUM CONDUIT COVER SHALL BE TWO (2) FEET, OR AS DIRECTED BY LOCAL UTILITY PROVIDER.
6. CONTRACTOR IS RESPONSIBLE FOR THE CONDUIT(S) INSTALLATION AND TRENCHING AND SHALL COORDINATE WITH LOCAL UTILITY SUPPLER FOR FEES AND REQUIREMENTS.

GAS:
1. GAS SERVICE SIZE SHALL BE AS REQUIRED BY THE GAS SERVICE PROVIDER.
2. MINIMUM SERVICE LINE COVER SHALL BE THREE (3) FEET.
3. VALVE COVERS, METER BOX COVERS AND OTHER SURFACE ACCESS POINTS SHALL NOT BE LOCATED WITHIN PEDESTRIAN AREAS (WHERE SHOPPING CARTS WILL BE USED) OR IN FRONT OF THE BUILDING CANOPY. VALVES AND METER BOXES SHALL BE LOCATED IN AREAS THAT WILL REMAIN ACCESSIBLE AND NOT BLOCKED BY PARKED VEHICLES.

PAVEMENT AND STRUCTURAL SUBBASE

1. THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY THE APPLICABLE STATE'S "DEPARTMENT OF TRANSPORTATION". THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND ENGINEER OF RECORD. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
2. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
3. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS FOR THICKNESS OF 8 INCHES OR GREATER AND +/- ½ INCH FOR THICKNESS LESS THAN 8 INCHES.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "EARTHWORK".
5. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "EARTHWORK".

REFER TO GENERAL CONSTRUCTION CONDITIONS FOR FILTER FABRIC REQUIREMENTS, IF APPLICABLE.

ASPHALT PAVEMENT REQUIREMENTS:

1. ASPHALT SHALL BE THE TYPE(S) SPECIFIED ON THE DRAWINGS. REFER TO PAVING LEGEND AND PAVING DETAILS PROVIDED. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.
2. ASPHALT SHALL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45°F AND RISING. ASPHALT SHALL NEVER BE PLACED ON FROZEN MATERIAL, DURING ANY TYPE OF PRECIPITATION OR WHEN PRECEDING PRECIPITATION HAS SATURATED ANY PORTION OF THE SUBBASE AND/OR SUBGRADE.
3. SURFACES ABUTTING THE NEW ASPHALT SHALL BE TACK COATED PRIOR TO PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTER, EXISTING AND NEW STRUCTURES. TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF 0.05 TO 0.15 GALLONS PER SQUARE YARD.
4. ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THE THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 1/4 INCH FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER, FROM THOSE SPECIFIED ON THE DRAWINGS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INCH IN ANY DIRECTION. IF ANY PAVEMENT SECTION TEST CORES FAIL TO MEET SECTION SPECIFICATIONS, THAT SECTION WILL BE CONSIDERED FAILED. CONTRACTOR SHALL, AT THEIR SOLE EXPENSE, PAY FOR ADDITIONAL TESTING TO DETERMINE THE LIMITS OF THE FAILING SECTION. UPON DETERMINING THE FAILING SECTION, CONTRACTOR SHALL REMOVE AND REPLACE THE FAILING SECTION OF THEIR SOLE EXPENSE OR AGREE TO COMPENSATION WITH THE OWNER.
5. PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE ROLLING SHALL BE DONE IN SUCH A MANNER THAT WILL MATCH JOINTS AND LEAVE A SMOOTH UNIFORM SURFACE, WHILE PROVIDING THE PROPER COMPACTION, WHICH SHALL BE 95% OF THE LABORATORY DENSITY.
6. WHEN MATCHING INTO EXISTING PAVEMENT ALL MATCH JOINTS SHALL BE SAW CUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PROPOSED OR EXISTING WHICH EVER IS GREATER.
7. PAVING EQUIPMENT SHALL BE OF GOOD CONDITION AND QUALITY. ASPHALT SHALL BE PLACED BY MECHANICAL EQUIPMENT EXCEPT IN SMALL AREAS THAT ARE INACCESSIBLE TO A PAVER. THE BINDER JOINTS AND THE TOP JOINTS SHALL BE OFFSET. THE TOP COURSE SHALL BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL. ASPHALT SHALL BE TRANSPORTED IN COVERED TRUCKS AND SCHEDULED IN SUCH A MANNER THAT SHALL MAINTAIN ASPHALT TEMPERATURE. ASPHALT SHALL BE REJECTED WHEN THE TEMPERATURES FALL BELOW 250 DEGREES F OR THE MINIMUM TEMPERATURES SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, WHICHEVER IS HIGHER.
8. ALL SUB-BASE, ASPHALT, CURB OR OTHER WORK PERFORMED IN A STATE, COUNTY, OR MUNICIPAL RIGHT-OF-WAY SHALL BE FURNISHED, INSTALLED, INSPECTED AND COMPLETED IN ACCORDANCE WITH THEIR SPECIFICATION, DETAILS AND OTHER REQUIREMENTS.

SITE CONCRETE - INCLUDING CURB, SIDEWALKS & GUTTERS

1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS, UNLESS OTHERWISE NOTED. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/- ½ INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH +/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 ½% FOR SLIP FORM WORK AND 6% +/- 1 ½% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.
2. SIDEWALKS, GUTTERS, AND CURBS SHALL BE PLACED ON COMPACTED SUBBASE CONSISTENT WITH THE PAVEMENT SUBBASE AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: SIDEWALKS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF COMPACTED SUBBASE AND CURBS SHALL BE PLACED ON A MINIMUM OF 4 INCHES OF COMPACTED SUBBASE.
3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED. WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
5. SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH, BUT CONSISTENT THROUGH OUT THE PROJECT.
6. EXPANSION JOINTS SHALL BE PLACED AS PER DETAILS (OR AT A MAXIMUM OF 40FT IF NO DETAIL IS SHOWN) AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES, AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED, ½ INCH MATERIAL WITH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOL JOINTED TO ⅓ THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO ⅓ THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X 5FT.

TERMITE CONTROL

1. PROVIDE SOIL TREATMENT FOR TERMITE CONTROL IN STATES THAT REQUIRE TERMITE CONTROL.
2. WARRANTY: SUBMIT MANUFACTURER'S STANDARD WARRANTY. INCLUDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE MATERIALS. WARRANTY PERIOD: 5 YEARS.
3. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. SOIL TREATMENT MATERIALS: SOIL TREATMENT MATERIALS SHALL BEAR FEDERAL REGISTRATION NUMBER OF U.S. ENVIRONMENTAL PROTECTION AGENCY AND ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. IF ACCEPTABLE, PRODUCTS MAY INCLUDE CHLOROPYRIFOS, PERMATHRIN, CYPERMETHRINE, FENVALERATE, ISOFENPHOSE.
5. TREAT SOIL IN STRICT COMPLIANCE WITH NATIONAL PEST CONTROL ASSOCIATION STANDARDS AND WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND RECOMMENDATIONS.
6. TREAT AREAS UNDER FLOOR SLABS PRIOR TO PLACEMENT OF CONCRETE IF POSSIBLE TO AVOID DRILLING. TREAT AREAS OUTSIDE FOUNDATION WALLS AFTER EXCAVATION, FILLING AND GRADING ARE COMPLETE. DO NOT APPLY TREATMENT TO FROZEN OR EXCESSIVELY WET SOILS.
7. POST SIGNS AND OTHER WARNINGS INDICATING THAT SOIL POISONING HAS BEEN APPLIED. PROTECT PERSONS AND PROPERTY FROM INJURY OR DAMAGE FROM SOIL TREATMENT WORK.

SEEDING & LANDSCAPING

1. TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS". IF ENOUGH TOP SOIL IS NOT AVAILABLE ONSITE, THE CONTRACTOR IS REQUIRED TO IMPORT AS NECESSARY. ALL DISTURBED LAWN AREAS ARE TO RECEIVE TOPSOIL, SEED, MULCHING, AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
2. TOPSOIL SHALL CONSIST OF FERTILE, NATURAL AGRICULTURAL SOIL SUBSTANTIALLY FREE OF SUBSOIL, STUMPS, ROOTS, BRUSH, STONE, CLAY LUMPS, OR SIMILAR OBJECTS LARGER THAN 2 INCHES IN THE GREATEST DIAMETER. TOPSOIL FOR REUSE SHALL BE SCREENED IF REQUIRED TO MEET SIZE AND DEBRIS REMOVAL. TOPSOIL SHALL BE APPROVED BY THE OWNER AT ITS SOURCE PRIOR TO TRANSPORTING. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING TOPSOIL, SEED, FERTILIZER, ETC. OFF STRUCTURES, PAVEMENTS, AND OTHER SITE AMENITIES; AND WILL CLEAN UP UNWANTED DEPOSITS, AT THEIR EXPENSE AND AT NO ADDITIONAL COST TO THE CONTRACT.
3. AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
4. LOOSEN AND TILL SUBGRADE OF LAWN AREAS TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES MEASURING 1.5 INCHES IN ANY DIMENSION. REMOVE STICKS, SOD, RUBBISH AND OTHER EXTRANEOUS MATTER. LIMIT PREPARATION TO AREAS WHICH WILL BE PLANTED PROMPTLY AFTER PREPARATION.
5. PREPARATION OF UNCHANGED GRADES: WHERE LAWNS ARE TO BE PLANTED IN AREAS THAT HAVE NOT BEEN ALTERED OR DISTURBED BY EXCAVATING, GRADING, OR STRIPPING OPERATIONS, PREPARE SOIL FOR LAWN PLANTING AS FOLLOWS: TILL TO A DEPTH OF 6 INCHES. APPLY SOIL AMENDMENTS AND INITIAL FERTILIZERS AS SPECIFIED. TILL SOIL TO A HOMOGENEOUS MIXTURE AND FINE TEXTURE AND COMPLETE FINE GRADING.
6. CLEAN ALL LAWN AREAS TO BE SEEDED OF ALL DEBRIS, BRANCHES, STUMPS, BRUSH, LOGS, METAL, STICKS, STONES, ETC. LARGER THAN TWO INCHES IN DIAMETER.
7. ROLL, RAKE, AND/OR, DRAG LAWN AREAS TO REMOVE RIDGES AND FILL DEPRESSIONS TO MEET FINISH GRADES AND TO CREATE A SMOOTH, MOWABLE LAWN SURFACE.
8. LIME: NATURAL DOLOMITIC LIMESTONE CONTAINING AT LEAST 85% OF TOTAL CARBONATES, AND 30% MAGNESIUM CARBONATES; GROUND SO THAT AT LEAST 90% PASSES A TEN MESH SIEVE, AND AT LEAST 50% PASSES A 100 MESH SIEVE.
9. THE TOPSOIL SOIL SHALL HAVE A PH OF 6.0 TO 6.8 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2 INCH SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE ¼ INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
10. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
11. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE. WORK INTO SOIL AT A RATE OF 1000 LBS PER ACRE BEFORE SEEDING.
12. LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE"; "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS" AT A RATE OF 200 LBS PER ACRE. MULCH ALL SEEDED AREAS WITH APPROVED STRAW AT A RATE OF 4000 LBS PER ACRE. MAINTAIN MULCH AS NECESSARY AND CLEAN UP UPON SATISFACTORY GERMINATION.
13. STEEP SLOPE MIX (WHEN NOT GIVEN ON PLANS) TYPE B UNMOWED-1V:3H OR STEEPER APPLY AT A RATE OF 100 LBS. PER ACRE USING THE FOLLOWING PROPORTIONS BY WEIGHT: 15% CREEPING RED FESCUE, 35% CHEMUNG CROWNVETCH, 25% KENTUCKY 31 TALL FESCUE, AND 25% EMPIRE BIRDSFOOT TREFOIL.
14. WHEN PLACING BY HYDROSEEDING, APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. INOCULATE AT 4X MANUFACTURER'S RATE. A NON-HARMFUL COLOR ADDITIVE WHICH COLORS THE HYDROSEED MIXTURE GREEN SHALL BE ADDED TO THE MIXTURE TO ALLOW VISUAL METERING OF ITS APPLICATION. THE HYDROSEED MIXTURE SHALL BE SPRAYED UPGRADE AND UNIFORMLY ON THE SURFACE OF THE SOIL TO FORM AN ABSORBENT COVER, ALLOWING PERCOLATION OF WATER TO THE UNDERLYING SOIL. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
15. IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1,000 SQUARE FEET, SEED AT 5 POUNDS PER 1,000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THEN ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER IMMEDIATELY. STRAW MAY NEED TO BE SECURED TO PREVENT IT FROM BLOWING AWAY.
16. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR, ANY OTHER MEANS NECESSARY TO ENSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST THREE TIMES. WATER BY APPROVED MEANS IMMEDIATELY AFTER MULCHING AND THEREAFTER A MINIMUM OF TWO TIMES EACH WEEK, OR MORE WHEN WEATHER CONDITIONS REQUIRE, TO A DEPTH OF 4 INCH SOIL SATURATION. MOW ALL SEEDED AREAS TO 2 INCH HEIGHT UNTIL FINAL ACCEPTANCE. IN THE EVENT GRASS BECOMES TOO LONG, RESULTING IN EXCESSIVE CLIPPINGS THAT COULD DAMAGE THE LAWN, THE CONTRACTOR SHALL REMOVE THE CLIPPINGS AT THEIR EXPENSE. LAWN SHALL BE PRESENTED TO OWNER IN A CONDITION THAT IT MAY BE MAINTAINED WITH STANDARD MOWING EQUIPMENT.
17. WHERE SUBSTANTIAL LAWN REMAINS (BUT IS THIN), MOW, RAKE, AERATE (IF COMPACTED), FILL LOW SPOTS, REMOVE HUMPS, AND SCARIFY SOIL, FERTILIZE, AND SEED. REMOVE WEEDS BEFORE SEEDING, IF EXTENSIVE. APPLY SELECTIVE CHEMICAL WEED KILLERS AS REQUIRED. APPLY MULCH IF REQUIRED TO MAINTAIN MOIST CONDITION.
18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
19. PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
20. TWO LAYERS OF WEED BARRIER MADE FROM FIBERGLASS AND ULTRAVIOLET LIGHT RESISTANT SHALL BE PLACED UNDER ALL PLANTING BEDS PRIOR TO MULCHING.
21. PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
22. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
23. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, ¾ TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN TO A MINIMUM DEPTH OF 3". COLOR TO BE CHOSEN BY OWNER.
24. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE. CONTRACTOR SHALL MAINTAIN PLANTS UNTIL COMPLETION AND FINAL ACCEPTANCE OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PRUNING, CULTIVATING, EDGING, REMULCHING, FERTILIZING, WEEDING, WATERING AS REQUIRED FOR HEALTHY GROWTH, AND APPLICATION OF APPROPRIATE INSECTICIDES AND FUNGICIDES NECESSARY TO MAINTAIN PLANTS FREE OF INSECT AND DISEASE. REPAIR ALL WASHOUTS, GULLIES, AND AREAS OF UNSATISFACTORY GERMINATION BY REPLACING TOPSOIL, RESTAKING, AND RESEEDING, AS REQUIRED. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION. RESTORE PLANTING SAUCER AND REMOVE DEAD MATERIAL. TIGHTEN AND REPAIR GUIDE WIRES AND DEFICIENCIES WITHIN THE FIRST 24 HOURS OF INITIAL PLANTING, AND NOT LESS THAN TWICE PER WEEK UNTIL FINAL ACCEPTANCE. CONTRACTOR SHALL REQUEST AN INSPECTION BY THE OWNER UPON ESTABLISHMENT OF A UNIFORMLY GERMINATED LAWN. FOLLOWING THE FINAL ACCEPTANCE, THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL LANDSCAPING IN THE PREMISES.
25. ANTIDESICCANT: PROTECTIVE FILM EMULSION, PROVIDING A PROTECTIVE FILM OVER PLANT SURFACES, BUT PERMEABLE TO PERMIT TRANSPIRATION. MIXED AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. APPLY TO ALL BROADLEAF EVERGREEN SHRUBS PER MANUFACTURER'S RECOMMENDATIONS. ONLY APPLICABLE IF PLANTING OR MAINTAINING THROUGH CONTRACT IN TEMPERATURES BELOW FREEZING.

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS

1. PAVEMENT MARKING SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL PROVIDE TWO (2) COATS OF PAINT FOR ALL PAVEMENT MARKINGS. IF THE INFORMATION ON THE PLANS AND DETAILS IS NOT COMPLETE AND THE AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THIS, USE THE FOLLOWING:
   - 1.A. PAINT COLORS SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST EDITION.
   - 1.B. COLORS SHALL BE AS FOLLOWS:
     - 1.B.1. YELLOW- PARKING STALLS, PARKING ISLANDS, WHEEL STOPS.
     - 1.B.2. WHITE- STOP BARS AND LETTERING, PEDESTRIAN CROSSINGS, HANDICAP PARKING SYMBOL AND CHARACTERS, AND TRAFFIC CONTROL LETTERING AND CHARACTERS.
     - 1.B.3. RED- FIRE LANES
     - 1.B.4. BLUE- BACKGROUND OF HANDICAP PARKING SYMBOL.
2. THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER. ALL PAINTING SHALL BE APPLIED IN APPROPRIATE WEATHER CONDITIONS (E.G. TEMPERATURE, WIND, PRECIPITATION), AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. THE SIGNAGE AND PAVEMENT MARKINGS SHALL BE THE TYPE AND AT THE GENERAL LOCATION SHOWN ON THE DRAWINGS. THE SIGNAGE AND PAVEMENT MARKING SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE MUTCD.
4. POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.
6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR ¾ STRENGTH IS ACHIEVED.
7. ALL HANDICAP STRIPING AND SIGNAGE, INCLUDING SPACES, CROSSWALK, ACCESSIBLE PATH, AND CURB RAMPS, SHALL MEET AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING INSPECTOR AND FIRE DEPARTMENT.
8. ALL PAINTINGS ON PAVEMENT SURFACES SHALL BE OF SUFFICIENT COATINGS AS TO PROVIDE AN OPAQUE VIEW (NO VISIBLE PAVEMENT SECTIONS) MINIMUM TWO COATS

ALL UTILITY MATERIALS, INSTALLATION, TESTING, AND PROCEDURES SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE LOCAL AUTHORITY HAVING JURISDICTION.

IF THERE IS A DISCREPANCY BETWEEN STATED STANDARDS AND SPECIFICATIONS ON THESE PLANS AND THE STATED STANDARDS AND SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION, THE CONTRACTOR SHALL ADHERE TO THE STANDARDS AND SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, READING, UNDERSTANDING, AND ADHERING TO THE THE MANUAL OF STANDARDS FOR DESIGN AND CONSTRUCTION SPECIFICATIONS IF THIS DOCUMENT IS PROVIDED FOR AT THE AGENCY HAVING JURISDICTION.

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Project Information

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DEKALB, COUNTY
ZONING (COUNTY) - R-85 (RESIDENTIAL MEDIUM LOT)

DRAWING DATE:	8.22.19
DRAWN BY:	MKS
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
01.31.20	ADDRESS COMMENTS

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Sheet Title

SITE SPECIFICATIONS SHEET 2 OF 2

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