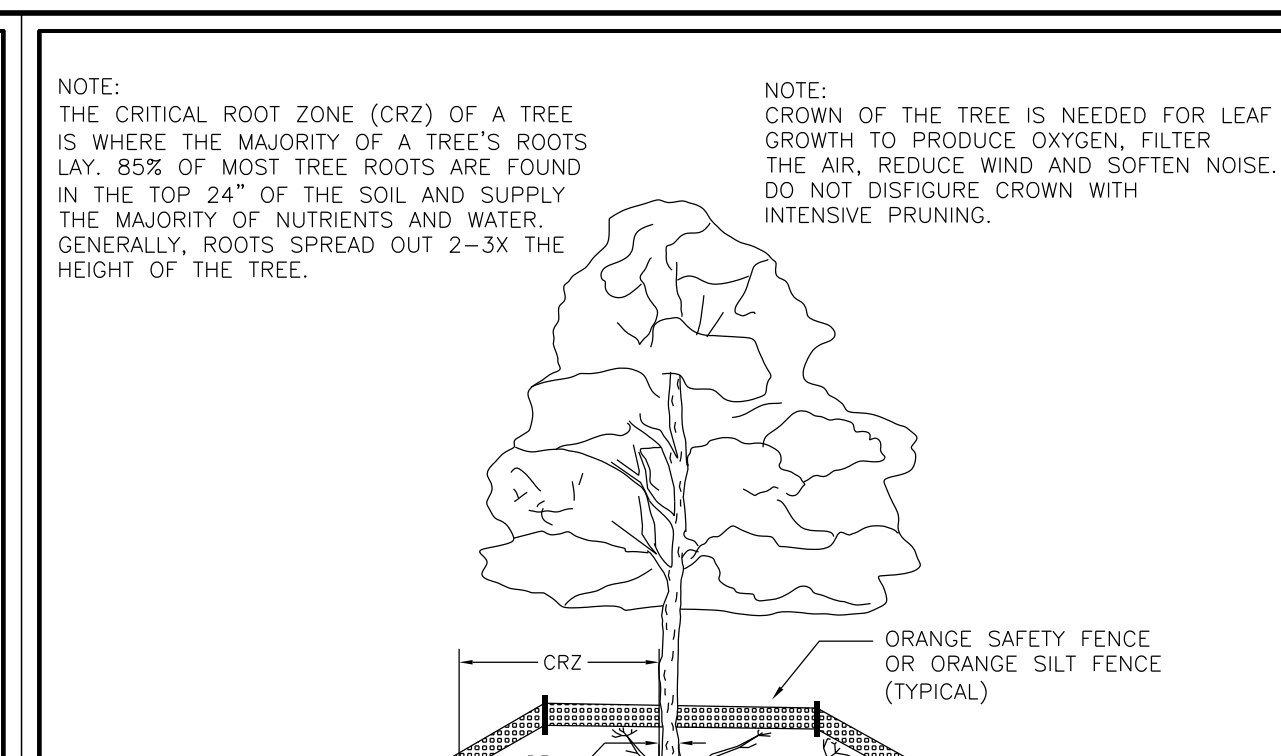


NOTES:

1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

|                      |                                     |   |
|----------------------|-------------------------------------|---|
| DATE: JAN, 2015      | STANDARD DETAIL                     | <p>CITY OF WILMINGTON<br/>NORTH CAROLINA<br/>CITY OF WILMINGTON ENGINEERING<br/>PO BOX 1810<br/>WILMINGTON, NC 28402<br/>(910) 341-7807</p> |
| DRAWN BY JSR         | TREE PROTECTION DURING CONSTRUCTION |   |
| CHECKED BY RDG, P.E. | SHEET 2 of 2                        |   |
| SCALE: NOT TO SCALE  | SD 15-09                            |   |



NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.

NOTES:

1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

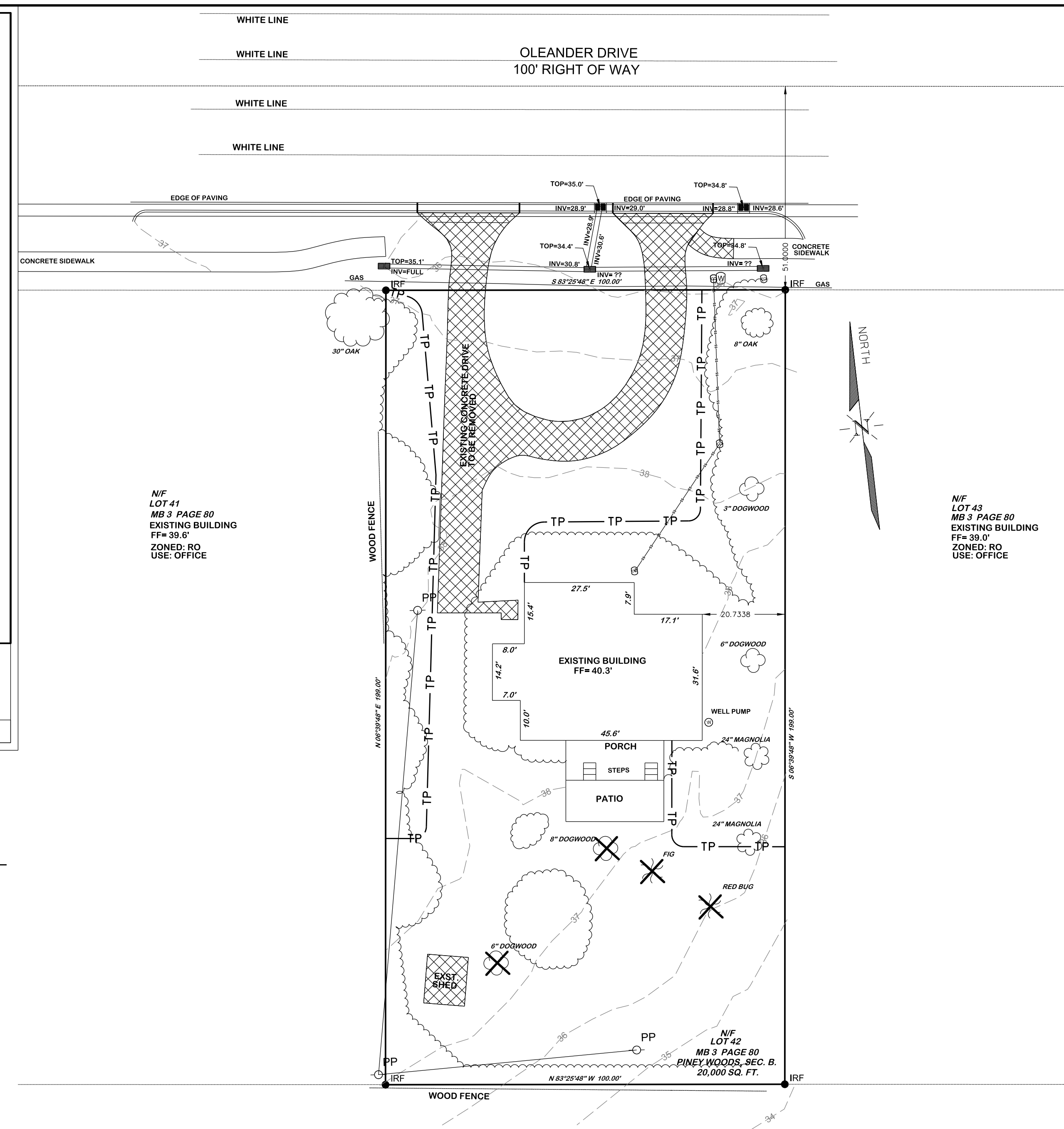
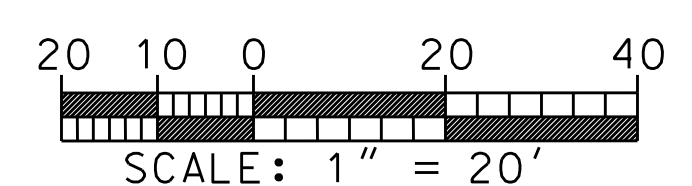
|                      |                                     |   |
|----------------------|-------------------------------------|---|
| DATE: JAN, 2015      | STANDARD DETAIL                     | <p>CITY OF WILMINGTON<br/>NORTH CAROLINA<br/>CITY OF WILMINGTON ENGINEERING<br/>PO BOX 1810<br/>WILMINGTON, NC 28402<br/>(910) 341-7807</p> |
| DRAWN BY JSR         | TREE PROTECTION DURING CONSTRUCTION |   |
| CHECKED BY RDG, P.E. | SHEET 1 of 2                        |   |
| SCALE: NOT TO SCALE  | SD 15-09                            |   |

**SITE DATA**

|   |  |
|---|--|
| PARCEL ID:                                      | R06108-009-007-000                       |
| CURRENT ZONING:                                 | RO - RESIDENTIAL OFFICE                  |
| CAMA LAND USE CLASSIFICATION:                   | URBAN                                    |
| PROJECT ADDRESS:                                | 5006 OLEANDER DRIVE WILMINGTON, NC 28403 |
| CURRENT OWNER:                                  | TARDKIC ANTE HELEN WILMINGTON, NC 28403  |
| TOTAL ACREAGE:                                  | 0.46 ACRES                               |
| EXISTING ONSITE IMPERVIOUS AREAS:               |  |
| BUILDING 1                                      | 1,750.00 SF                              |
| BUILDING 2                                      | 126.00 SF                                |
| CONCRETE DRIVE                                  | 2,155.43 SF                              |
| CONCRETE WALK                                   | 118.14 SF                                |
| TOTAL   | 4,149.57 SF                              |
| EXISTING ONSITE IMPERVIOUS AREAS TO BE REMOVED: |  |
| BUILDING 2                                      | 126.00 SF                                |
| CONCRETE DRIVE                                  | 2,155.43 SF                              |
| CONCRETE WALK                                   | 53.32 SF                                 |
| TOTAL   | 2,334.75 SF                              |

**NOTES**

1. SURVEY PROVIDED BY GEOINNOVATION, PC, DATED JULY 30, 2019.
2. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED AREAS AS SHOWN ON THE APPROVED PLANS.
3. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.



WILMINGTON MUNICIPAL GOLF COURSE  
PARID R06100-004-001-000

EXISTING BUILDING FF=40.3'

EXISTING BUILDING FF=39.0'  
ZONED: RO  
USE: OFFICE

EXISTING BUILDING FF=39.0'  
ZONED: RO  
USE: OFFICE

EXISTING BUILDING FF=39.0'  
ZONED: RO  
USE: OFFICE

EXISTING BUILDING FF=39.0'  
ZONED: RO  
USE: OFFICE

EXISTING BUILDING FF=39.0'  
ZONED: RO  
USE: OFFICE

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Public Utilities \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

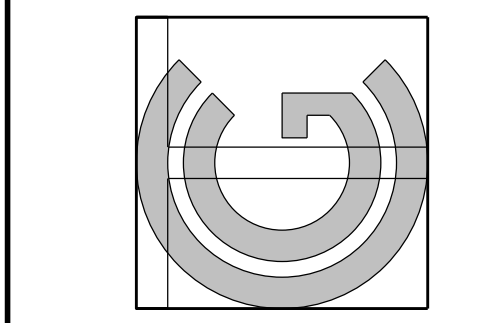
Signed: \_\_\_\_\_

**LEGEND**

|     |                                    |
|-----|------------------------------------|
| IPF | IRON PIPE FOUND                    |
| IRS | IRON PIPE SET                      |
| PP  | POWER POLE                         |
| PP  | LIGHT POLE                         |
| PP  | GUY/ANCHOR                         |
| PP  | TRANSFORMER PAD                    |
| PP  | FIBER OPTIC PEDESTAL               |
| PP  | TELEPHONE PEDESTAL                 |
| PP  | TELEPHONE MANHOLE                  |
| PP  | SANITARY SEWER MANHOLE             |
| PP  | SANITARY SEWER CLEAN-OUT           |
| PP  | STORM DRAIN MANHOLE                |
| PP  | STORM DRAIN DROP INLET/CATCH BASIN |
| PP  | FIRE HYDRANT                       |
| PP  | WATER VALVE                        |
| PP  | WATER METER                        |
| PP  | EXISTING CONTOURS                  |
| PP  | TREE PROTECTION FENCE              |
| PP  | TREE TO BE REMOVED                 |
| PP  | AREA TO BE DEMOLISHED              |

Bug-N-A-Rug Office  
670 Wellington Ave.  
Wilmington, NC 28401  
910-262-6265

**THE CULLIPHER GROUP, P.A.**  
ENGINEERING & SURVEYING SERVICES  
154483, C HIGHWAY 24  
MORRHEAD CITY, N.C. 28657  
(252) 773-0090



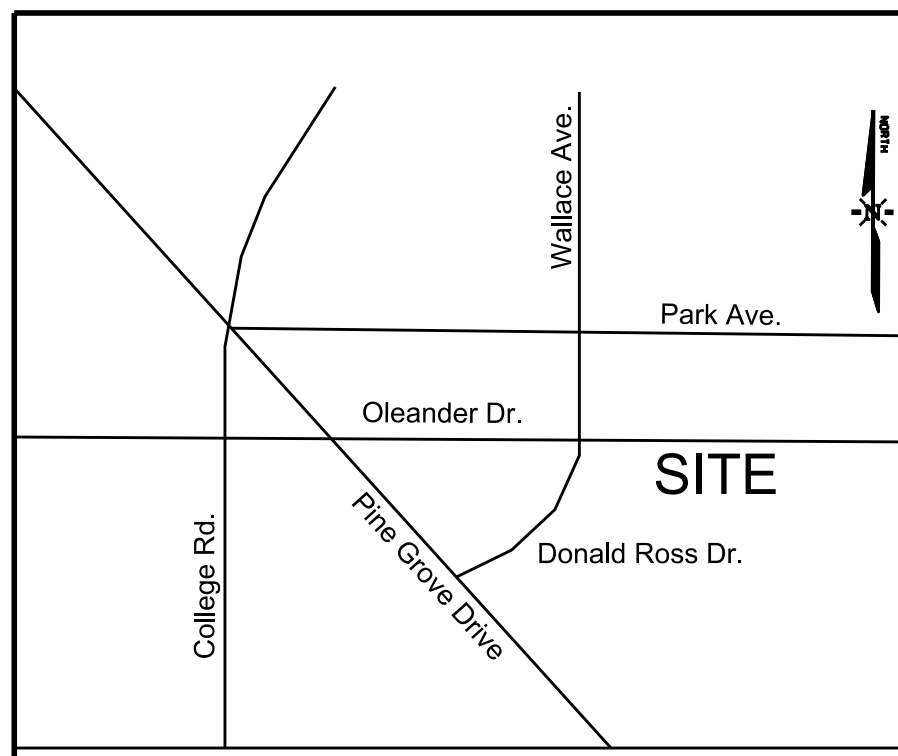
**BUG-N-A-RUG**  
5006 OLEANDER DR.

100%  
CONSTRUCTION  
DRAWINGS  
NOT FOR  
CONSTRUCTION

|            |            |
|------------|------------|
| date       | 9/3/19     |
| drafter    | CMC        |
| checked by | CMC        |
| proj. no.  | PM2776-001 |
| revisions  |            |

EXISTING  
CONDITIONS &  
DEMOLITION  
PLAN

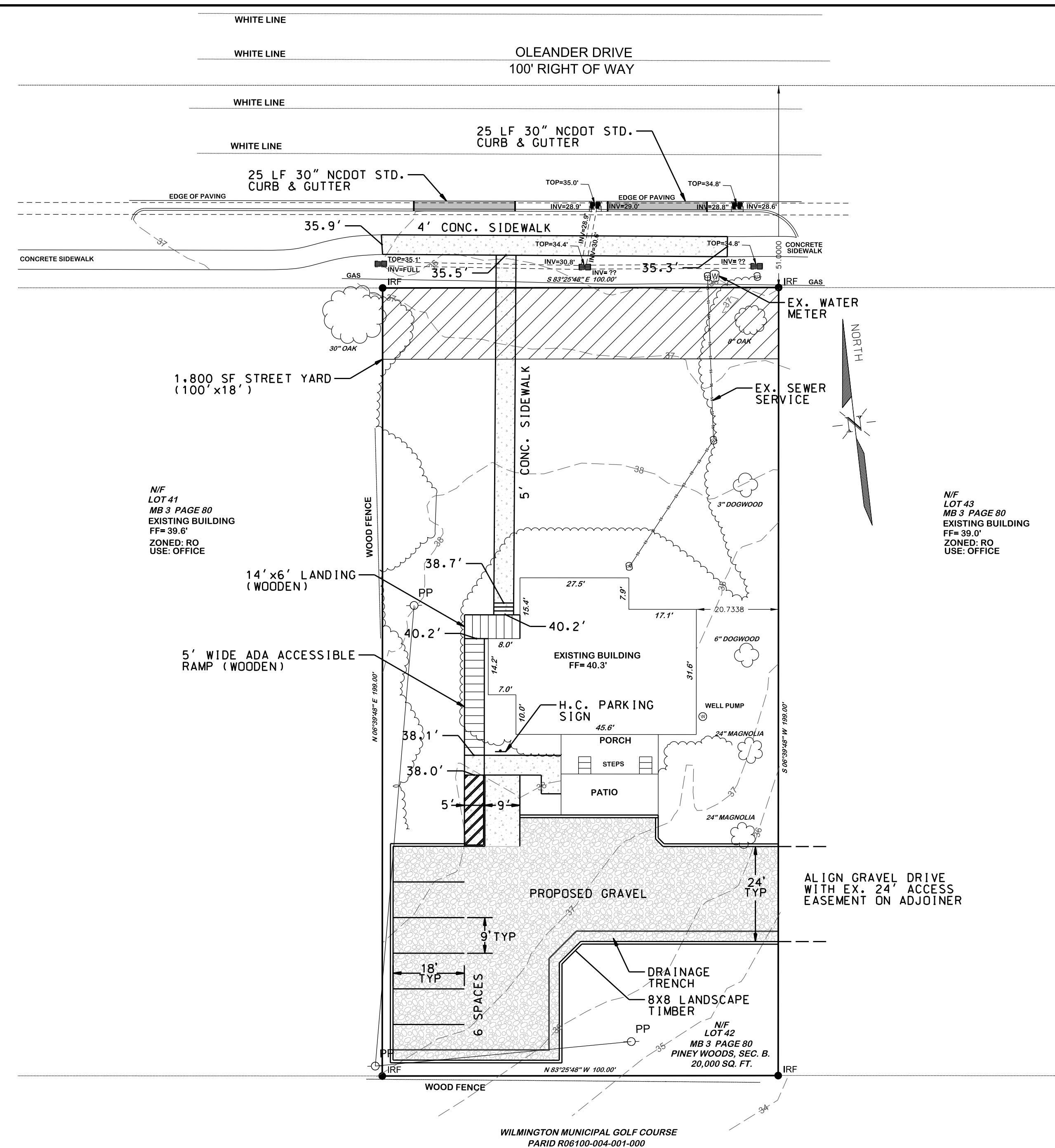
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VICINITY MAP (NTS)

**SITE DATA**

|   |  |
|---|--|
| PARCEL ID:                                      | R06108-009-006-000                         |
| CURRENT ZONING:                                 | RO-RESIDENTIAL OFFICE                      |
| CAMA LAND USE CLASSIFICATION:                   | URBAN                                      |
| PROJECT ADDRESS:                                | 5006 OLEANDER DR<br>WILMINGTON, NC 28403   |
| CURRENT OWNER:                                  | TAROLIC ANTE HELEN<br>WILMINGTON, NC 28403 |
| TOTAL ACREAGE IN PROJECT BOUNDARY:              | ±0.46 AC (19,960 S.F.)                     |
| BUILDING SIZE:                                  | ±1,750 S.F.                                |
| BUILDING HEIGHT:                                | (1 STORY)                                  |
| BUILDING SETBACKS:                              |  |
| FRONT:  | REQUIRED=60' EXISTING=73'                  |
| SIDE:   | REQUIRED=10' EXISTING=20'                  |
| REAR:   | REQUIRED=25' EXISTING=65'                  |
| CALCULATION FOR BUILDING COVERAGE:              |  |
| PROPOSED COVERAGE                               | 1,750 S.F./19,900 S.F.=8.8%                |
| PROPOSED ONSITE IMPERVIOUS AREAS:               |  |
| CONCRETE SIDEWALK/PARKING TOTAL                 | 815 S.F.                                   |
| TOTAL ONSITE IMPERVIOUS AREAS:                  |  |
| PROPOSED ONSITE IMPERVIOUS AREA                 | 815 S.F.                                   |
| EX. ONSITE IMP. AREA TO REMAIN TOTAL            | 2,250 S.F.                                 |
|   | 3,065 S.F. (14.0%)                         |
| PROPOSED ONSITE PERVIOUS AREAS:                 |  |
| GRAVEL PARKING AREA                             | 3,860 S.F. (100% PERVIOUS)                 |
| WOOD WALKWAYS/RAMPS                             | 234 S.F. (100% PERVIOUS)                   |
| PROPOSED OFFSITE IMPERVIOUS AREAS:              |  |
| CONCRETE SIDEWALK                               | 475 S.F.                                   |
| PARKING REQUIRED                                |  |
| MIN:  | 1 SPACE/300 S.F. = 6 SPACES (1 H.C.)       |
| MAX:  | 1 SPACE/200 S.F. = 8 SPACES (1 H.C.)       |
| PARKING PROVIDED:                               | 7 SPACES (1 H.C.)                          |
| FOUNDATION PLANTINGS:(52 LF X 10' FACADE X 12%) |  |
| REQUIRED:                                       | 62 S.F.                                    |
| PROVIDED:                                       | 200 S.F.                                   |
| STREETYARD REQUIREMENT:(9' MIN & 27' MAX WIDTH) |  |
| REQUIRED:                                       | 1,800 S.F.                                 |
| PROVIDED:                                       | 1,800 S.F.                                 |
| EXISTING SEWER AND WATER DEMAND:                | 360 GPD                                    |
| PROPOSED SEWER AND WATER DEMAND:                | 125 GPD @ 25 GAL/PERSON                    |



**DEVELOPMENT NOTES:**

- ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
- PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE & NEW HANOVER COUNTY REGULATIONS.

**UTILITY NOTES:**

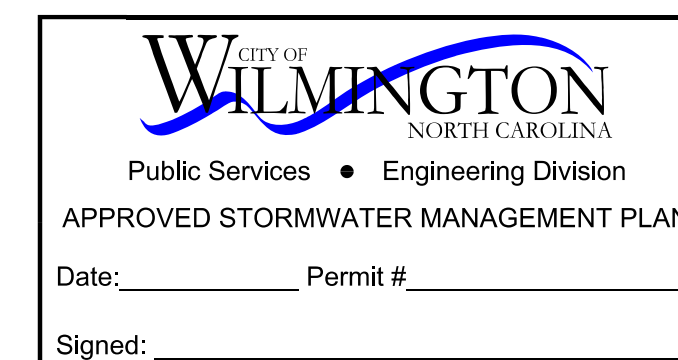
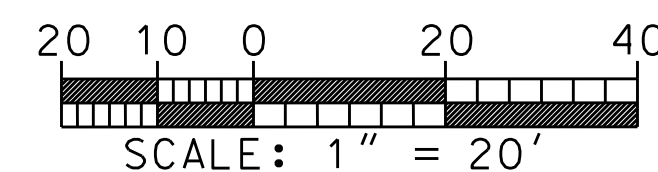
- EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS.
- ALL PROPOSED UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS & TELEPHONE SHALL BE INSTALLED UNDERGROUND.
- ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CFPWA TECHNICAL SPECIFICATIONS & STANDARDS.
- PROJECT SHALL COMPLY WITH CFPWA CROSS CONNECTION CONTROL REQUIREMENTS, WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THEIR "FINAL APPROVAL". CALL 343-3910 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCHR OR ASSE.
- WATER & SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL THE ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY THE PUBLIC WATER SUPPLY SECTION OF NCDENR, AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY SECTION OF NCDENR.
- IF CONTRACTOR DESIRES CFPWA WATER FOR CONSTRUCTION, HE/SHE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO.10 INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. CALL U-LOCO AT 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
- THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT, AT 910-392-8712. CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
- THE PROCESS FOR TELEPHONE CABLE PLACEMENT: \*FINAL GRADE WILL BE TO BE ESTABLISHED. \*POWER WILL PLACE THEIR CABLE FIRST - APPROXIMATELY 3' DEEP. \*BELLSOUTH & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2' DEEP.
- SOLID WASTE DISPOSAL BY COW CURBSIDE SERVICE.
- SITE TO UTILIZE EXISTING WATER AND SEWER SERVICES.

**GENERAL TRAFFIC NOTES:**

- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. [DETAIL SD 15-13 COWW TECH STDS]
- ALL SIGNS AND PAVEMENT MARKINGS OFF RIGHTS-OF-WAY ARE TO MEET/BE MAINTAINED TO MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS. [DETAIL SD 15-13 COWW TECH STDS]
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
- ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" TO 10'.

**FIRE & SAFETY NOTES:**

- BUILDING WILL NOT BE SPRINKLED.
- PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS.
- ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
- HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FIRE FLOW REQUIREMENTS OF STRUCTURE.
- IN ADDITION TO THE STANDARD COMMENTS, ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.

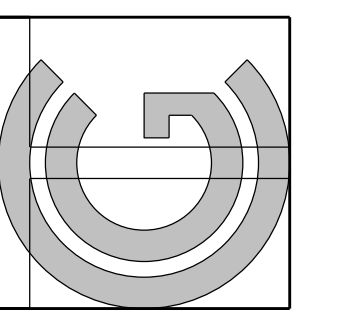


**LEGEND**

|     |                                    |
|-----|------------------------------------|
| IPF | IRON PIPE FOUND                    |
| IRS | IRON PIPE SET                      |
| PP  | POWER POLE                         |
| PP  | LIGHT POLE                         |
| PP  | GUY/ANCHOR                         |
| PP  | TRANSFORMER PAD                    |
| PP  | FIBER OPTIC PEDESTAL               |
| PP  | TELEPHONE PEDESTAL                 |
| PP  | TELEPHONE MANHOLE                  |
| SS  | SANITARY SEWER MANHOLE             |
| SS  | SANITARY SEWER CLEAN-OUT           |
| SS  | STORM DRAIN MANHOLE                |
| SS  | STORM DRAIN DROP INLET/CATCH BASIN |
| SS  | FIRE HYDRANT                       |
| SS  | WATER VALVE                        |
| SS  | WATER METER                        |
| --- | EXISTING CONTOURS                  |
| --- | PROPOSED CONCRETE                  |
| --- | PROPOSED GRAVEL                    |
| --- | PROPOSED STREET YARD               |

Bug-N-A-Rug Office  
670 Wellington Ave.  
Wilmington, NC 28401  
910-262-6265

THE CULLIPHER GROUP, P.A.  
ENGINEERING & SURVEYING SERVICES  
6-4463, C HIGHWAY 24  
MORRHEAD CITY, N.C. 28657  
(252) 773-0090



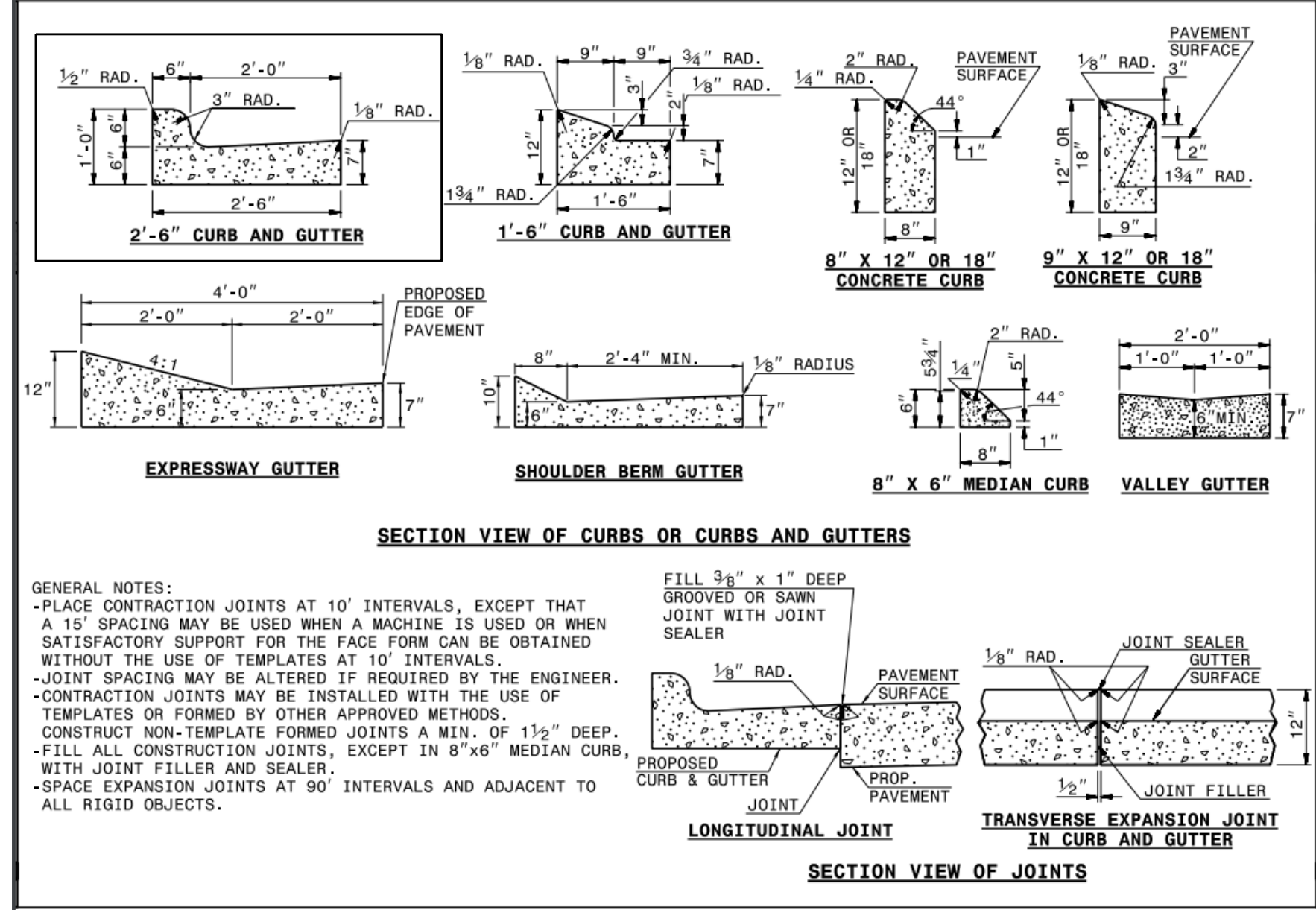
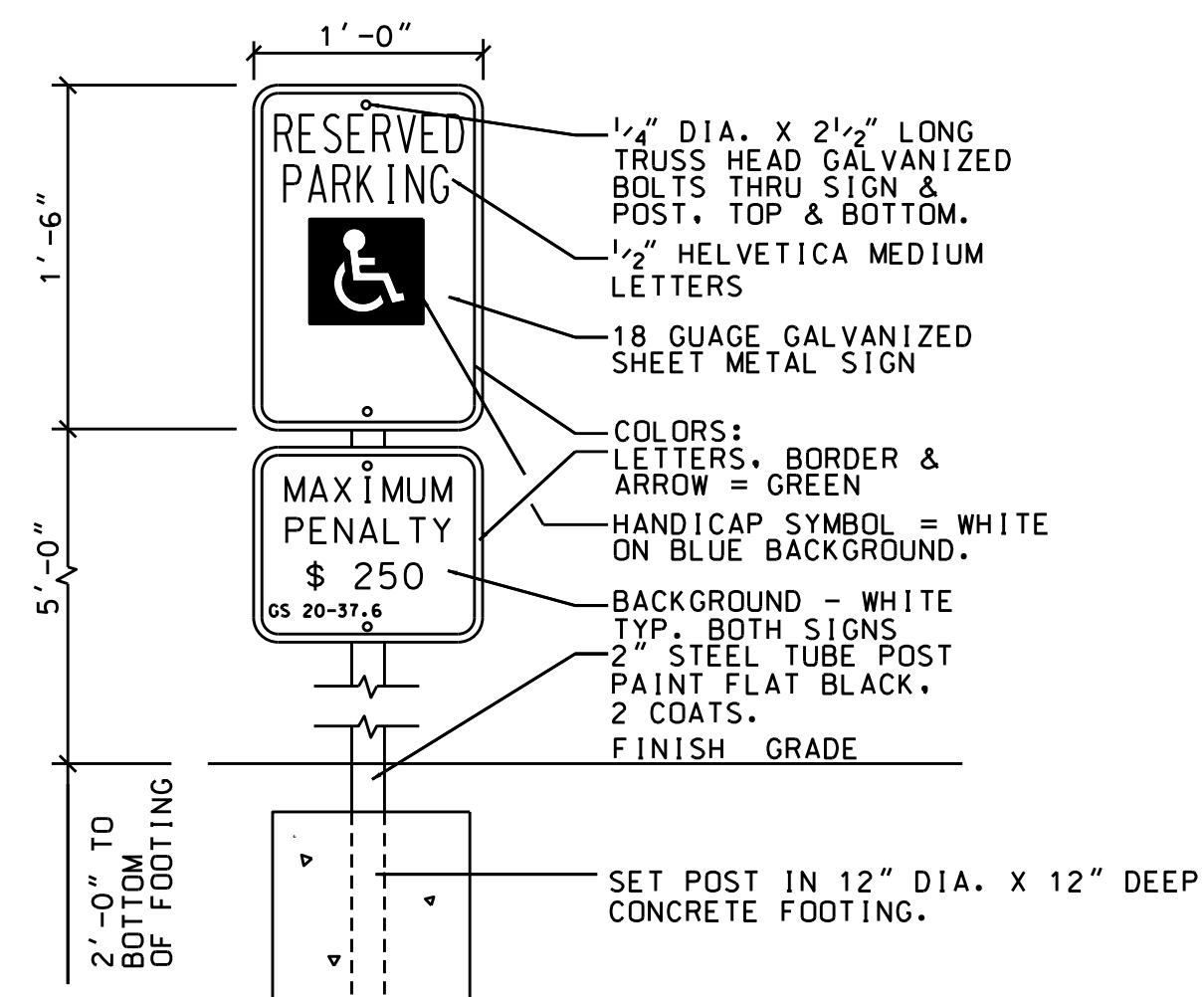
**BUG-N-A-RUG**  
5006 OLEANDER DR.

100%  
CONSTRUCTION  
DRAWINGS  
NOT FOR  
CONSTRUCTION

|            |            |
|------------|------------|
| date       | 9/3/19     |
| draftee    | CMC        |
| checked by | CMC        |
| proj. no.  | PM2776-001 |
| revisions  |            |

SITE, GRADING  
DRAINAGE &  
UTILITIES PLAN

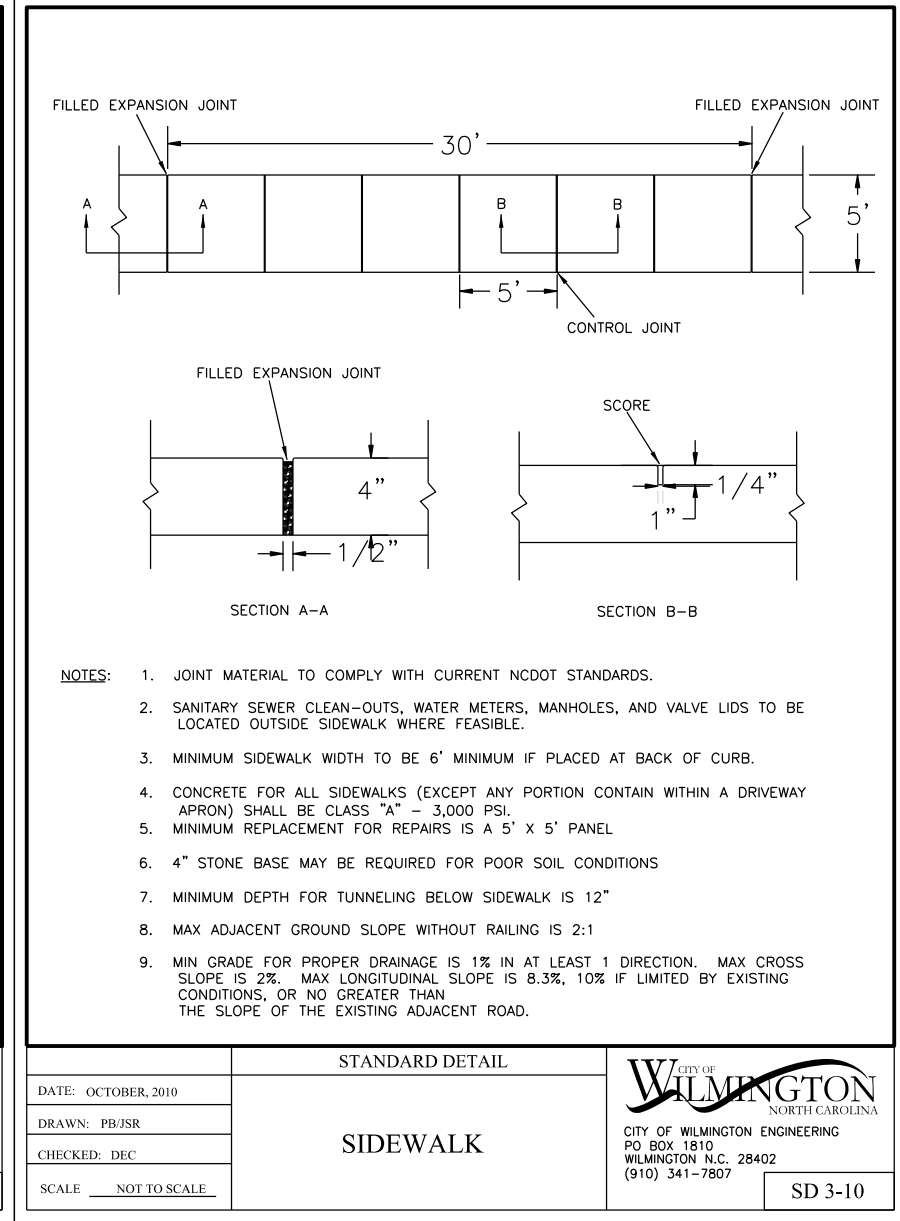
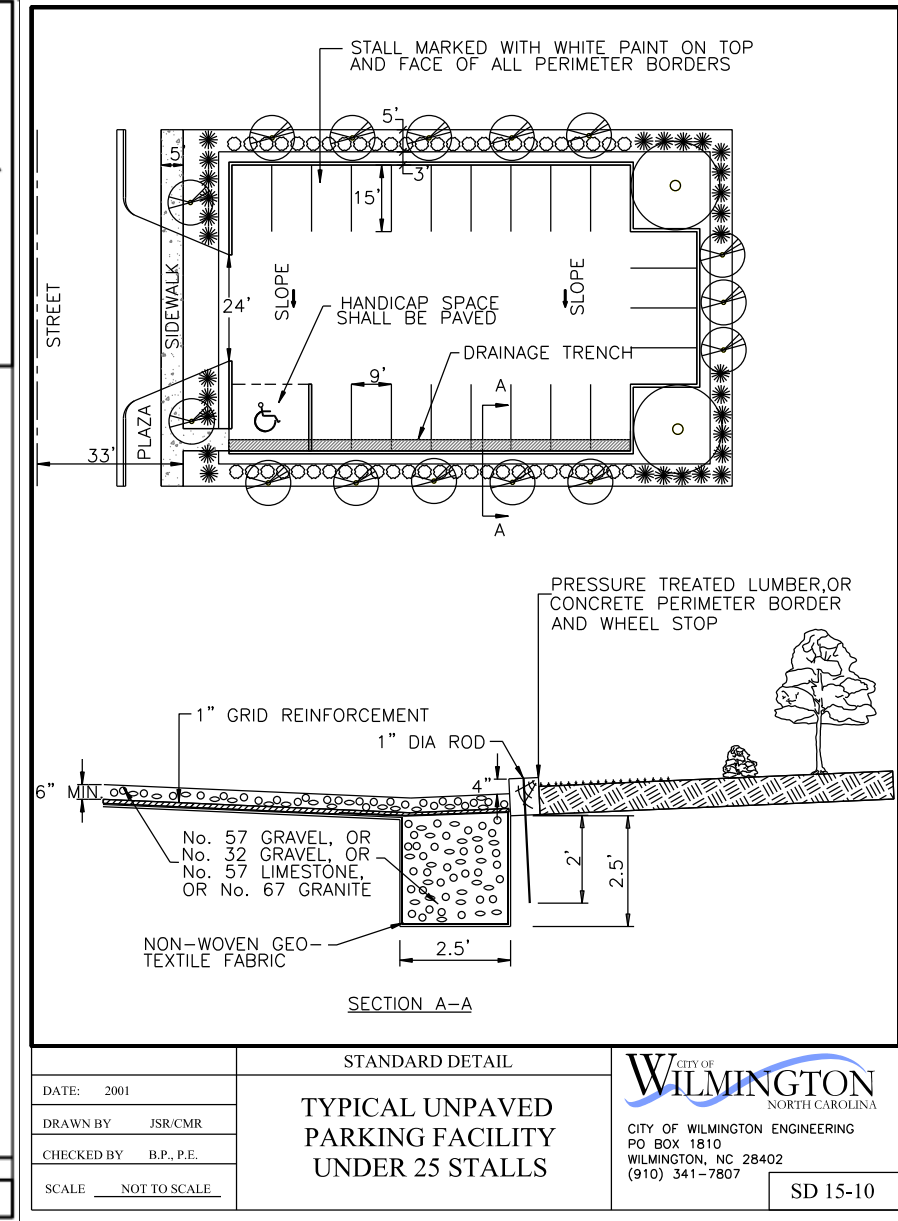
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STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE CURB & GUTTER**

SHEET 1 OF 3  
**846.01**



**CONSTRUCTION SEQUENCE:**

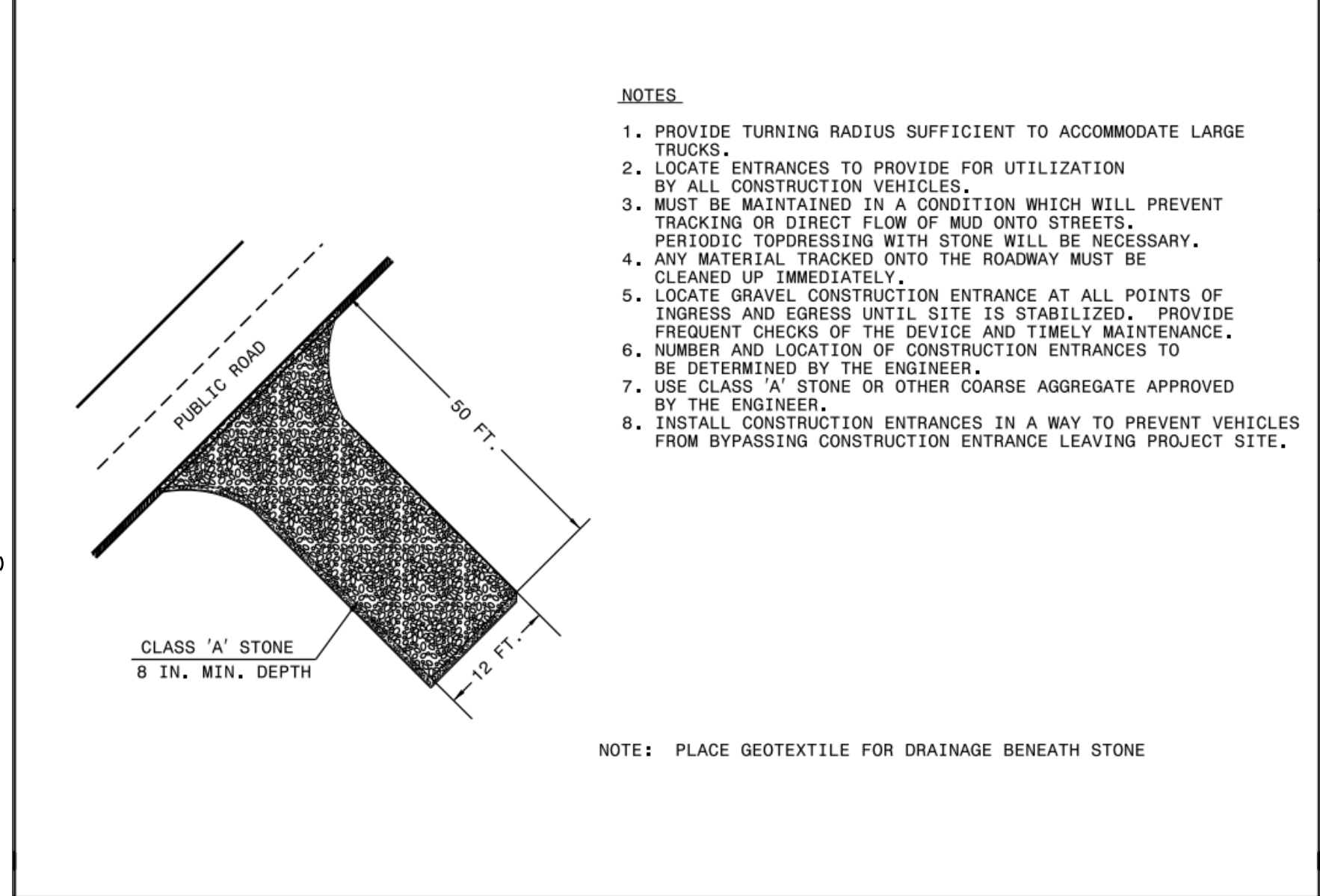
- CONSTRUCTION OF SITE TO START WITH INSTALLATION OF CONSTRUCTION ENTRANCE AND SILT FENCE ALONG ALL LOCATIONS PER PLANS. UPON INSTALLATION OF SILT FENCE, TREES SHOULD BE REMOVED IN LOCATIONS AS NECESSARY. UNGRADED AREAS SHALL BE SEEDING IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF ANY PHASE OF CONSTRUCTION. ALL OTHER AREAS MUST BE STABILIZED WITHIN 15 WORKING DAYS. CONTRACTOR TO FOLLOW NPDES STABILIZATION REQUIREMENTS PER TABLE ON THIS SHEET AS WELL AS MOST STRINGENT REQUIREMENT TO BE MET.
1. GENERAL CLEARING AND GRADING OF THIS SITE WILL NOT BE DONE UNTIL THE TEMPORARY SILT FENCE & CONSTRUCTION ENTRANCE HAS BEEN INSTALLED.
  2. NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 CERTICAL TO 3 HORIZONTAL)
  3. NO SEDIMENT WILL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION.
  4. INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION FENCE & SEDIMENT BASINS. CONTRACTOR TO BE FAMILIAR WITH USACOE GENERAL PERMIT CONDITIONS FOR ROAD CONTRACTORS. SPECIFIC CONSTRUCTION METHODS MAY BE REQUIRED ABOVE AND BEYOND WHAT IS SPECIFIED IN THIS PLAN. INSTALL ALL SECONDARY EROSION CONTROL MEASURES, SUCH AS INLET PROTECTION AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
  5. ALL EROSION CONTROL MEASURE TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION TO BE CLEANED WHEN HALF FULL.
  6. A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.
  7. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
  8. MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.
  9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

**SITE WORK NOTES:**

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND ADJACENT TO THE SITE.
2. CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
3. GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION.
4. MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
5. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
6. FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL RECOMMENDATIONS.
7. THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.
8. THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
9. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
10. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE. IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
13. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
14. EXISTING SURVEYING PERFORMED BY NORRIS & WARD LAND SURVEYORS C-1037.
15. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS/HER WORK UNLESS OTHERWISE DIRECTED BY OWNER.
17. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL, STATE AND CFPUA CODES, METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
18. ALL BACKFILL FROM UTILITY INSTALLATION MUST BE COMPACTED OR AMENDED TO PROVIDE TRAFFIC BEARING CAPACITY. GEOTECHNICAL ENGINEER TO BE CONSULTED AT CONTRACTORS COST AS NECESSARY.
19. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.
20. CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED.
21. FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.
22. ALL SIDEWALKS SHALL BE FREE OF CRACKS, BREAKS, OR ANY OTHER DEFECT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

**SITE WORK NOTES:**

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL. BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF 2-3 INCH STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL, SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
3. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, SEDIMENT TRAP Baffles, AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNATED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGE WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
5. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC. WITHOUT WIRE BACKING, STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED, IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT. NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.



**NOTES:**

1. PROVIDE TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS.
2. LOCATE ENTRANCES TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
4. LOCATE GRAVEL CONSTRUCTION ENTRANCE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. PROVIDE FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE.
5. NUMBER AND LOCATION OF CONSTRUCTION ENTRANCES TO BE DETERMINED BY THE ENGINEER.
6. USE CLASS 'A' STONE OR OTHER COARSE AGGREGATE APPROVED BY THE ENGINEER.
7. INSTALL CONSTRUCTION ENTRANCES IN A WAY TO PREVENT VEHICLES FROM BYPASSING CONSTRUCTION ENTRANCE LEAVING PROJECT SITE.

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**GRAVEL CONSTRUCTION ENTRANCE**

SHEET 1 OF 1  
**1607.01**

**SEEDING SCHEDULE**

**SEED BED PREPARATION**

- LIME----- 2 TONS/AC
- 10-10-10 ----- 1,000 LBS/AC
- SURFACE ROUGHENING: IF RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE REQUIRED EXCEPT TO BREAK UP LARGE CLODS. IF RAINFALL CAUSES THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISKING, RAKING OR HARROWING. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING.

**TEMPORARY SEEDING MIXTURE**

- (DECEMBER 1 - APRIL 15)
- RYE (GRAIN)----- 120 LBS/AC
- KOBE LESPEDEZA (SCARIFIED)---50 LBS/AC
- (OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE)
- (APRIL 15 - AUGUST 15)
- GERMAN MILLET----- 40 LBS/AC
- (AUGUST 15 - DECEMBER 30)
- RYE (GRAIN)----- 25 LBS/AC
- (IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50LB/AC KOBE.)

**PERMANENT SEEDING MIXTURE**

- TALL FESCUE----- 60 LBS/AC
- PENSACOLA BAHIAGRASS----- 50 LBS/AC
- SERICEA LESPEDEZA----- 30 LBS/AC
- KOBE LESPEDEZA----- 10 LBS/AC

1. FROM SEPTEMBER 1 - MARCH 1, USE UNSCARIFIED SERICEA SEED
2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 LBS/AC
3. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 LBS/AC.
4. BETWEEN APRIL 15 AND AUGUST 15, ADD 10 LB/AC GERMAN MILLET OR 15 LB/AC SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG 15, ADD 25 LB/AC RYE (GRAIN).

**PERMANENT SEEDING MIXTURE (SWALES & DITCHES)**

- COMMON BERMUDAGRASS----- 80 LBS/AC
- MULCHING
- STRAW(WHEAT, OATS, BARLEY, RYE)----- 1-2 TONS/AC (AFTER SEEDING)
- (STRAW QUALITY SHALL BE DRY, UNCHOPPED & UNWEATHERED)
- ASPHALT TACK-----200 GAL./TON OF MULCH

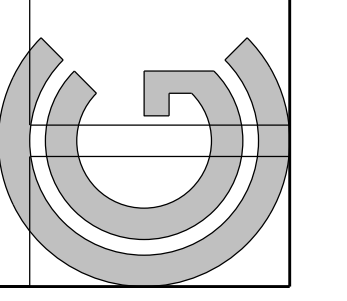
1. APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
2. A CHANNEL LINING MATERIAL (SEE DETAIL BELOW) SHALL COVER THE BOTTOM OF SWALES & DITCHES. THE LINING SHALL EXTEND ABOVE THE HIGHEST DEPTH OF FLOW WITHIN GIVEN CHANNEL. ON CHANNEL SIDE SLOPES ABOVE THIS HEIGHT APPLY STRAW AS PREVIOUSLY INSTRUCTED.

**MAINTENANCE**

IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR WITH 500 LB/AC 10-10-10 FERTILIZER. MOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

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**BUG-N-A-RUG**  
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| checked by | CMC        |
| proj. no.  | PM2776-001 |
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DETAILS

**C3.0**