



WATER QUALITY CALCULATIONS

REDEVELOPMENT OF TRACT 3 (SHOPPING CENTER), TRACT 10 (RED HOT & BLUE RESTAURANT), TRACT 11 (MEDICAL OFFICE BUILDING), AND TRACT 12 (MAGNOVIA BANK)

| TRACT NUMBER | EXISTING AREAS (ACRES) | | | PROPOSED AREAS (ACRES) | | |
|-------------------|------------------------|--------------|--------------|------------------------|--------------|--------------|
| | PERVIOUS | IMPERVIOUS | TOTAL | PERVIOUS | IMPERVIOUS | TOTAL |
| 3 | 4.53 | 15.78 | 20.31 | 3.05 | 17.26 | 20.31 |
| 10 | 0.77 | 0.68 | 1.45 | 0.34 | 1.11 | 1.45 |
| 11 | 0.61 | 0.66 | 1.27 | 0.32 | 0.95 | 1.27 |
| 12 | 0.62 | 0.54 | 1.16 | 0.39 | 0.77 | 1.16 |
| TRYON RD. | 0.35 | 0.98 | 1.33 | 0.12 | 1.21 | 1.33 |
| KILLDAIRE RD. | 0.36 | 1.30 | 1.66 | 0.36 | 1.30 | 1.66 |
| NEW WAVERLY PLACE | 0.29 | 2.68 | 2.97 | 0.29 | 2.68 | 2.97 |
| COLLINADES WAY | 0.23 | 2.01 | 2.24 | 0.24 | 2.00 | 2.24 |
| TOTALS | 7.76 | 24.63 | 32.39 | 5.11 | 27.28 | 32.39 |

| | |
|--|--|
| EXISTING IMPERVIOUS AREA = 24.63 ACRES | EXISTING PERVIOUS AREA = 7.76 ACRES |
| PROPOSED IMPERVIOUS AREA = 27.28 ACRES | PROPOSED PERVIOUS AREA = 5.11 ACRES |
| INCREASE IN IMPERVIOUS AREA = 2.65 ACRES | DECREASE IN PERVIOUS AREA = 2.65 ACRES |
| INCREASE IMPERVIOUS PERCENTAGE = 10.7 % | DECREASE PERVIOUS PERCENTAGE = 34.1 % |

THE AMOUNT OF IMPERVIOUS AREA INCREASE FROM EXISTING CONDITIONS TO PROPOSED RE-DEVELOPMENT CONDITIONS IS LESS THAN 12%. THEREFORE, BY TOWN OF CARY DEVELOPMENT ORDINANCE, STORMWATER DETENTION IS NOT REQUIRED.

NITROGEN EXPORT CALCULATIONS

NITROGEN EXPORT FROM THE REDEVELOPED PORTION OF THE SITE, TRACTS 3, 10, 11, 12, AND ONE-HALF (1/2) OF THE RIGHTS-OF-WAY OF THE FRONTAGE ALONG TRYON ROAD & KILLDAIRE FARM ROAD EXCEEDS 10 LBS/CYR. THEREFORE, IT WILL BE NECESSARY TO PROVIDE BEST MANAGEMENT PRACTICE (BMP) FACILITIES TO REDUCE NITROGEN EXPORT TO ≤ 10 LBS/CYR.

STORMWATER RUN-OFF FROM BUILDINGS H1 AND H2 WILL BE TREATED BY BIORETENTION AREA #1. STORMWATER RUN-OFF FROM THE NORTHERN HALF OF PRKG III WILL BE TREATED BY BIORETENTION AREA #3. THE RUN-OFF FROM BUILDING J WILL BE TREATED BY BIORETENTION AREA #4. THE SOUTHERN ONE-THIRD (1/3) OF THE PARKING LOT FOR BUILDING F WILL BE TREATED BY A GRASS SWALE AND THEN SAND FILTER #1 IN SERIES. THE CENTER PORTION OF THE PARKING LOT FOR BUILDING F WILL BE TREATED BY A GRASS SWALE AND THEN SAND FILTER #2 IN SERIES.

COPIES OF THE TOWN OF CARY (T.O.C.) NITROGEN EXPORT CALCULATION SPREAD SHEETS ARE PRESENTED BASED ON THE FOLLOWING IMPERVIOUS AREAS FOR PROPOSED CONDITIONS.

LEGEND:

- TRACT BOUNDARY LINE
- PROPOSED PERVIOUS AREA
- PROPOSED BUILDING

06-11-07
 06-17-07
 06-22-07
 APPROVED BY: *ORC* DATE: 06-11-07
 PLANNING: *JCB* DATE: 06-17-07
 ENGINEERING: *TS* DATE: 06-22-07



6-11-2007
 Steven M. Rice
 PROFESSIONAL ENGINEER DATE

Waverly Place Redevelopment

IN
 Town of Cary
 North Carolina
 Wake County

PROPOSED IMPERVIOUS AREA PLAN

JUNE 11, 2007

REVISIONS:

| NO. | DATE | DESC. |
|-----|----------|---------------------|
| 1 | 10-30-06 | 1ST MUSB SUBMISSION |
| 2 | 3-8-07 | 2ND MUSB SUBMISSION |
| 3 | 4-2-07 | 3RD MUSB SUBMISSION |
| 4 | 5-1-07 | 4TH MUSB SUBMISSION |
| 5 | 6-11-07 | 5TH MUSB SUBMISSION |

ISSUED FOR PERMITTING
 NOT FOR CONSTRUCTION

PREPARED FOR:
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 SCALE: 1" = 100'
 0 50 100 200 feet

FILE: _____
 DWG. NO: C.3.1
 JOB. NO: 06017.00 SHEET 9 OF 30