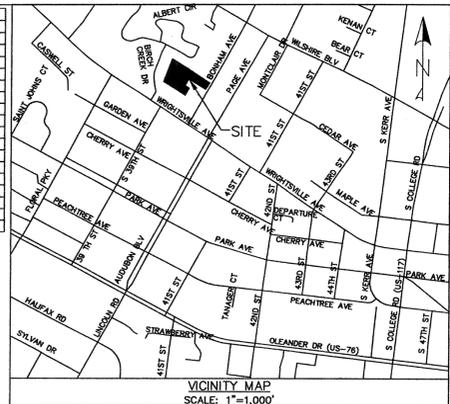


SHEET INDEX	
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6	EXISTING CONDITIONS & DEMOLITION PLAN
7	DETAIL SHEET
8	DETAIL SHEET
9	SOIL TEST & DRAINAGE AREA MAP
10	DRAINAGE AREA MAP
11	LANDSCAPE PLAN
12	LANDSCAPE PLAN
13	PLAN PROFILE & TRAFFIC CONTROL PLAN
14	SANITARY SEWER DETAIL SHEET
15	SANITARY SEWER DETAIL SHEET
16	WATER DETAIL SHEET
17	WATER DETAIL SHEET



LEGEND

- = EXISTING IRON PIPE
- = SET IRON ROD
- ⊙ = SET PK NAIL
- ⊕ = EXISTING POWER POLE
- ⊗ = EXISTING WATER METER
- ⊞ = EXISTING MAILBOX
- ⊚ = EXISTING LIGHT POLE
- ⊛ = EXISTING FIRE HYDRANT
- ⊘ = EXISTING TREE
- ⊙ = EXISTING TREE (TO BE REMOVED)
- 36 — = EXISTING CONTOUR
- C — = CENTERLINE
- R/W — = R/W
- OHE — = EXISTING OVERHEAD LINE
- — = EXISTING DITCH
- — — = EXISTING FENCE
- — — = PROPERTY LINE
- — — = ADJACENT LOT LINES (APPROX.)
- — — = PROPOSED BUFFER/SOLID FENCE
- — — = PROPOSED SETBACK
- — — = PROPOSED STREET YARD
- ▨ = PROPOSED IMPERVIOUS CONCRETE
- ▨ = PROPOSED FOUNDATION PLANTING
- ▨ = PROPOSED LIMITS OF DISTURBANCE
- ▨ = PROPOSED OPEN SPACE
- ▨ = PROPOSED ACTIVE RECREATION (OPEN SPACE)
- ▨ = PROPOSED PASSIVE RECREATION (OPEN SPACE)

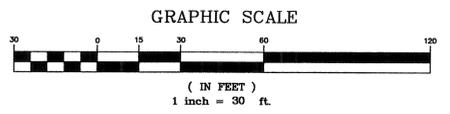
FINAL DRAWING FOR REVIEW PURPOSES ONLY

OPEN SPACE
 REQUIRED OPEN SPACE = 0.35 * 106,955 = 37,434.25 SF = 0.86 ACRES
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 PROVIDED OPEN SPACE = 44,195.60 SF = 1.02 ACRES (TOTAL SITE AREA MINUS STREET YARD AREAS, INTERIOR LANDSCAPING ISLANDS, FOUNDATION PLANTING AREAS, BUFFERS, IMPERVIOUS SURFACE AREAS, & WOOD DECK PATIOS)

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013018
 SIGNED [Signature]

Approved Construction Plan
 Name Dawn D. Dreyfus Date 6/11/13
 Planning [Signature]
 Public Utilities [Signature]
 Traffic [Signature] 6-10-13
 Fire [Signature] 6-10-13



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON	3-15-13
2	REVISED PER CITY OF WILMINGTON	4-18-13
3	REVISED PER CITY OF WILMINGTON	4-30-13
4	REVISED PER CLIENT	5-10-13
5	REVISED TO ADJUST LIMITS OF DISTURBANCE WITHIN BONHAM AVENUE R/W.	5-20-13

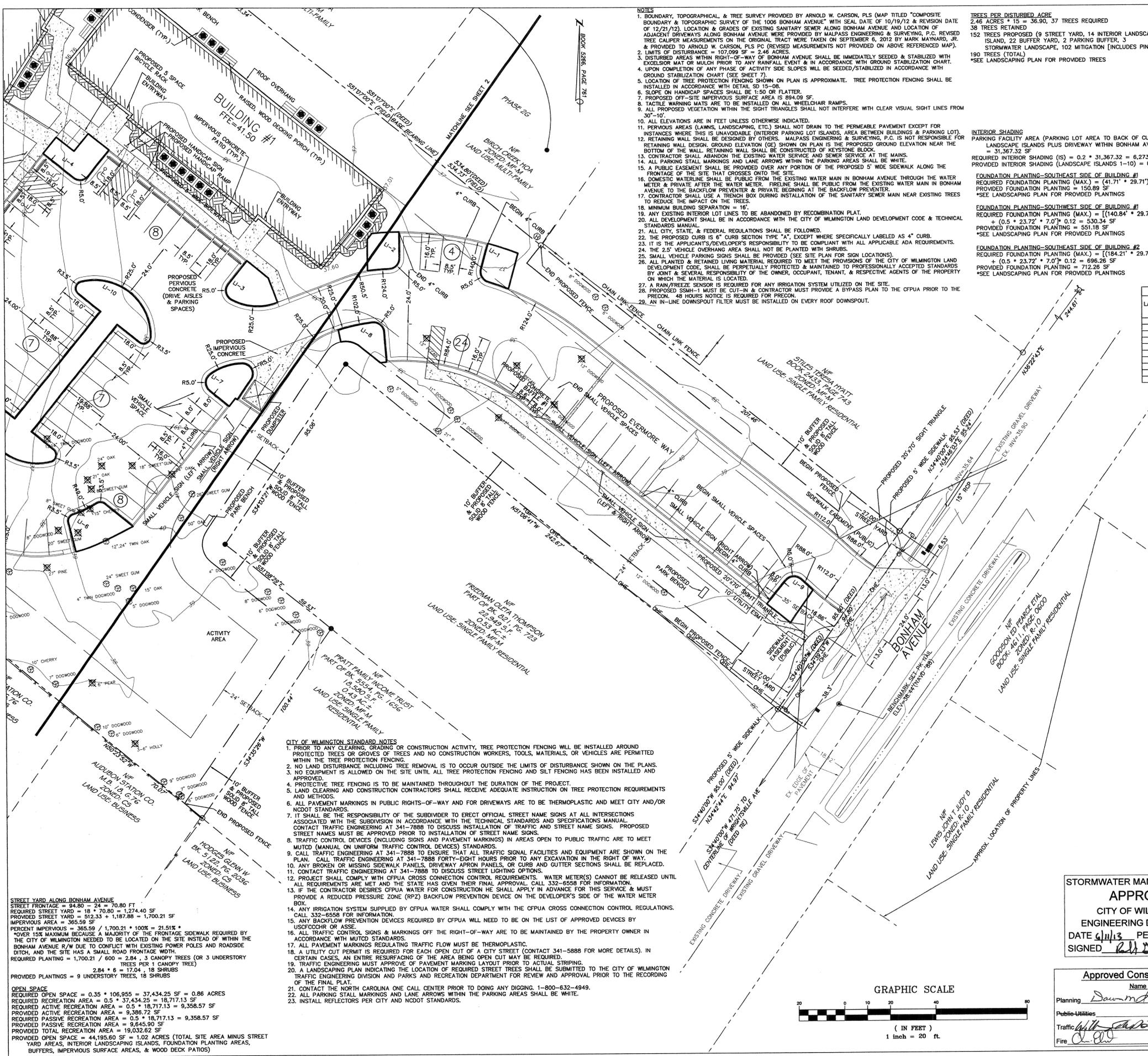
COVER SHEET
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1124 STRIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-5243
 Fax 910-392-5205 License No. C-2320



DATE: 2-7-13
 SCALE: 1"=30'
 DRAWN: JCB
 CHECKED: JSM
 PROJECT NO: 219
 SHEET NO: 1A
 OF: 17

CP 1284



- NOTES**
- BOUNDARY, TOPOGRAPHICAL, & TREE SURVEY PROVIDED BY ARNOLD W. CARSON, PLS (MAP TITLED "COMPOSITE BOUNDARY & TOPOGRAPHICAL SURVEY OF THE 1006 BONHAM AVENUE" WITH SEAL DATE OF 10/19/12 & REVISION DATE OF 12/21/12). LOCATION & GRADES OF EXISTING SANITARY SEWER ALONG BONHAM AVENUE AND LOCATION OF ADJACENT DRIVEWAYS ALONG BONHAM AVENUE WERE PROVIDED BY MALPASS ENGINEERING & SURVEYING, P.C. REVISION 2 TREE CALIPER MEASUREMENTS ON THE ORIGINAL TRACT WERE TAKEN ON SEPTEMBER 5, 2012 BY MARK MATYARD, JR. & PROVIDED TO ARNOLD W. CARSON, P.S. PC (REVISED MEASUREMENTS NOT PROVIDED ON ABOVE REFERENCED MAP).
 - LIMITS OF DISTURBANCE = 107,099 SF = 2.46 ACRES.
 - DISTURBED AREAS WITHIN RIGHT-OF-WAY OF BONHAM AVENUE SHALL BE IMMEDIATELY SEEDED & STABILIZED WITH EXCELLENT MAT OF MULCH PRIOR TO ANY RAINFALL EVENT & IN ACCORDANCE WITH GROUND STABILIZATION CHART.
 - UPON COMPLETION OF ANY PHASE OF ACTIVITY SIDE SLOPES WILL BE SEEDED/STABILIZED IN ACCORDANCE WITH GROUND STABILIZATION CHART (SEE SHEET 7).
 - LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 10-08.
 - SLOPE ON HANDICAP SPACES SHALL BE 1:50 OR FLATTER.
 - PROPOSED OFF-SITE IMPERVIOUS SURFACE AREA IS 894.09 SF.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.
 - ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.
 - PERVIOUS AREAS (LAWNS, LANDSCAPING, ETC.) SHALL NOT DRAIN TO THE PERMEABLE PAVEMENT EXCEPT FOR INSTANCES WHERE THIS IS UNAVOIDABLE (INTERIOR PARKING LOT ISLANDS, AREA BETWEEN BUILDINGS & PARKING LOT).
 - RETAINING WALL SHALL BE DESIGNED BY OTHERS. MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR RETAINING WALL DESIGN. GROUND ELEVATION (EG) SHOWN ON PLAN IS THE PROPOSED GROUND ELEVATION NEAR THE BOTTOM OF THE WALL. RETAINING WALL SHALL BE CONSTRUCTED OF KEYSTONE BLOCK.
 - CONTRACTOR SHALL ABANDON THE EXISTING WATER SERVICE AND SEWER SERVICE AT THE MAINS.
 - ALL PARKING STALL MARKINGS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - A PUBLIC EASEMENT SHALL BE PROVIDED OVER ANY PORTION OF THE PROPOSED 5' WIDE SIDEWALK ALONG THE FRONTAGE OF THE SITE THAT CROSSES ONTO THE SITE.
 - DOMESTIC WATERLINE SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE THROUGH THE WATER METER & PRIVATE AFTER THE WATER METER. FIRELINE SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE TO THE BACKFLOW PREVENTER & PRIVATE BEGINNING AT THE BACKFLOW PREVENTER.
 - CONTRACTOR SHALL USE A TRENCH BOX DURING INSTALLATION OF THE SANITARY SEWER MAIN NEAR EXISTING TREES TO REDUCE THE IMPACT ON THE TREES.
 - MINIMUM BUILDING SEPARATION = 16'.
 - ANY EXISTING INTERIOR LOT LINES TO BE ABANDONED BY RECOMBINATION PLAN.
 - ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE & TECHNICAL STANDARDS MANUAL.
 - ALL CITY, STATE, & FEDERAL REGULATIONS SHALL BE FOLLOWED.
 - THE PROPOSED CURB IS 6" CURB SECTION TYPE "A", EXCEPT WHERE SPECIFICALLY LABELED AS 4" CURB.
 - IT IS THE APPLICANT'S/DEVELOPER'S RESPONSIBILITY TO BE COMPLIANT WITH ALL APPLICABLE ADA REQUIREMENTS.
 - THE 2.5' VEHICLE OVERHANG AREA SHALL NOT BE PLANTED WITH SHRUBS.
 - SMALL VEHICLE PARKING SIGNS SHALL BE PROVIDED (SEE SITE PLAN FOR SIGN LOCATIONS).
 - ALL PLANTED & RETAINED LIVING MATERIAL REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED & MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT & SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, & RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.
 - A RAIN/FREEZE SENSOR IS REQUIRED FOR ANY IRRIGATION SYSTEM UTILIZED ON THE SITE.
 - PROPOSED SSMH-1 MUST BE CUT-IN & CONTRACTOR MUST PROVIDE A BYPASS PLAN TO THE CPFA PRIOR TO THE PRECON. 48 HOURS NOTICE IS REQUIRED FOR PRECON.
 - AN IN-LINE DOWNSPOUT FILTER MUST BE INSTALLED ON EVERY ROOF DOWNSPOUT.

TREES PER DISTURBED ACRE
 2.46 ACRES * 15 = 36.90, 37 TREES REQUIRED
 38 TREES RETAINED
 152 TREES PROPOSED (9 STREET YARD, 14 INTERIOR LANDSCAPE ISLAND, 22 BUFFER YARD, 2 PARKING BUFFER, 3 STORMWATER LANDSCAPE, 102 MITIGATION INCLUDES PINE P)
 190 TREES (TOTAL)
 *SEE LANDSCAPING PLAN FOR PROVIDED TREES

INTERIOR SHADING
 PARKING FACILITY AREA (PARKING LOT AREA TO BACK OF CURB MINUS LANDSCAPE ISLANDS PLUS DRIVEWAY WITHIN BONHAM AVE. R/W) = 31,367.32 SF
 REQUIRED INTERIOR SHADING (IS) = 0.2 * 31,367.32 = 6,273.47 SF
 PROVIDED INTERIOR SHADING (LANDSCAPE ISLANDS 1-10) = 6,797 SF

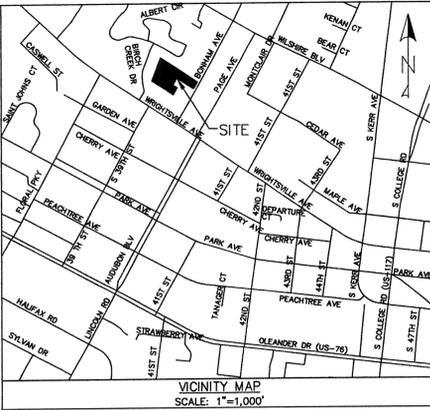
FOUNDATION PLANTING—SOUTHWEST SIDE OF BUILDING #1
 REQUIRED FOUNDATION PLANTING (MAX.) = [(41.71' * 29.71') * 0.12 = 148.71 SF
 PROVIDED FOUNDATION PLANTING = 150.89 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING—SOUTHWEST SIDE OF BUILDING #1
 REQUIRED FOUNDATION PLANTING (MAX.) = [(140.84' * 29.71') + (70.09' * 2.17') * (0.5 * 23.72' * 7.0')] * 0.12 = 530.34 SF
 PROVIDED FOUNDATION PLANTING = 551.18 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING—SOUTHWEST SIDE OF BUILDING #2
 REQUIRED FOUNDATION PLANTING (MAX.) = [(184.21' * 29.71') + (113.46' * 2.17') * (0.5 * 23.72' * 7.0')] * 0.12 = 696.26 SF
 PROVIDED FOUNDATION PLANTING = 712.26 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

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 - = PROPOSED STREET YARD
 - = PROPOSED IMPERVIOUS CONCRETE
 - = PROPOSED FOUNDATION PLANTING

INTERIOR LANDSCAPING ISLANDS

LANDSCAPE ISLAND	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	PERCENT IMPERVIOUS	INTERIOR SHADING (SF)
LI-1	217.17	0	0	354
LI-2	217.86	0	0	354
LI-3	284.49	0	0	707
LI-4	312.76	0	0	354
LI-5	286.65	0	0	354
LI-6	351.90	0	0	707
LI-7	244.73	0	0	707
LI-8	217.76	0	0	157
LI-9	220.36	0	0	354
LI-10	1,466.02	0	0	2,749

SITE DATA
 PROPERTY OWNER: 128MM LLC
 PROJECT ADDRESS: 1006 BONHAM AVENUE
 PIN NUMBER: R05514-001-022-000, PART OF R05514-001-021-000, PART OF R05514-001-020-000
 ZONING DISTRICT: MF-M
 FLOOD AREA: THIS LOT IS LOCATED IN ZONES "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP (FIRM) NUMBER 3720313700-L DATED 4-3-08 (PER ARNOLD W. CARSON, PLS)
 BUILDING SETBACKS, REQUIRED: FRONT-35', REAR-29', INTERIOR SIDE-24', CORNER LOT SIDE-34' (ADDITIONAL 4' REAR & SIDE DUE TO BUILDING HEIGHT)
 BUILDING SETBACKS, PROPOSED: FRONT-272.66', REAR-29.5', INTERIOR SIDE-25.5'
 SITE AREA: 106,955 SF = 2.46 ACRES ±
 INSURANCE RATE MAP MAP NUMBER 3720313700-L DATED 4-3-08 (PER ARNOLD W. CARSON, PLS)
 EXISTING BUILDING AREA: 1,911.65 SF = 0.05 ACRES
 EXISTING BUILDING LOT COVERAGE: 1,911.65 / 106,955 * 100% = 1.79%
 PROPOSED BUILDING AREA (FOOTPRINT EXCLUDING PATIOS): 13,862.85 SF = 0.32 ACRES
 PROPOSED BUILDING LOT COVERAGE: 13,862.85 / 106,955 * 100% = 12.97%
 ALLOWABLE MAXIMUM BUILDING HEIGHT (BASED ON REQUIRED SETBACK USED): 45'
 PROPOSED BUILDING HEIGHT (AVG. EX. GROUND ELEV. TO HALFWAY BETWEEN HIGHEST PEAK & EAVE): 41.14' (BLDG #1) & 44.63' (BLDG #2)
 NUMBER OF PROPOSED BUILDINGS: 2 (42 UNITS TOTAL)
 BUILDING SIZE:

BUILDING	SQUARE FOOTAGE (1ST STORY)	SQUARE FOOTAGE (2ND STORY)	SQUARE FOOTAGE (3RD STORY)	NUMBER OF UNITS	NUMBER OF ONE BEDROOM UNITS	NUMBER OF TWO BEDROOM UNITS	NUMBER OF THREE BEDROOM UNITS	EXISTING / PROPOSED
HOUSE	1,510.02	N/A	N/A	N/A	N/A	N/A	N/A	EXISTING (TO BE REMOVED)
SHED	401.63	N/A	N/A	N/A	N/A	N/A	N/A	EXISTING (TO BE REMOVED)
1	5,990.73	5,990.73	6,020.85	18	6	6	6	PROPOSED
2	7,872.12	7,872.12	7,902.24	24	6	12	6	PROPOSED

TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS ON-SITE:

BEFORE DEVELOPMENT	AFTER DEVELOPMENT	% OF SITE
BUILDINGS	1,911.65	1.79
PAVEMENT	977.90	0.91
TOTAL	2,889.55	2.70

BUILDINGS (INCLUDES ROOF OVERHANG)	EX. (SF)	PROPOSED (SF)	TOTAL (SF)	% OF SITE
BUILDINGS	0	15,008.86	15,008.86	14.03
PAVEMENT	0	3,606.29	3,606.29	3.37
PERVIOUS PAVEMENT (AFTER 75% CREDIT)	0	6,762.39	6,762.39	6.33
SIDEWALK	0	3,547.29	3,547.29	3.32
OTHER (CONCRETE PATIOS & CONDENSERS)	0	1,164.60	1,164.60	1.09
TOTAL	0	30,089.43	30,089.43	28.14

OFF STREET PARKING CALCULATIONS:
 MIN. PARKING REQ. (RESIDENTIAL) = [1.5 x 12] (1 BDRM) + [2 x 12] (2 BDRM) + [2.25 x 12] (3 BDRM) = 81 SPACES
 MAX. PARKING REQ. (RESIDENTIAL) = 2.5 x 42 = 105 SPACES
 NUMBER OF PROPOSED PARKING SPACES = 84 (20 SPACES ARE SMALL VEHICLE SPACES)
 MAX. NUMBER OF ALLOWABLE SMALL VEHICLE SPACES = 0.25 x 81 = 20 SPACES
 MIN. NUMBER OF REQ. HANDICAPPED SPACES PER ADA STANDARDS FOR ACCESSIBLE DESIGN = 4 SPACES
 NUMBER OF PROPOSED HANDICAPPED SPACES = 4 SPACES
 NUMBER OF REQ. BICYCLE PARKING SPACES = 10 SPACES
 NUMBER OF PROPOSED BICYCLE PARKING SPACES = 10 SPACES
 THIS SITE IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR ANY OTHER ZONING OVERLAY DISTRICT
 PER THE CITY OF WILMINGTON ZONING MAP (MAP 3137-3, DATED: JULY 30, 2008)
 CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN.

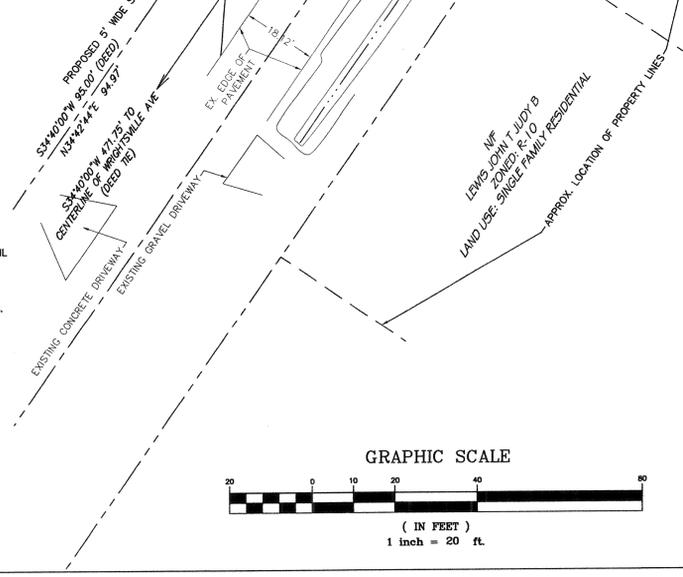
CITY OF WILMINGTON STANDARD NOTES

- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
- NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
- PROTECTIVE TREE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
- LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CALL TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY APRON PANELS, OR CURB AND GUTTER SECTIONS SHALL BE REPLACED.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- PROJECT SHALL COMPLY WITH CPFA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CPFA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE & MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- ANY IRRIGATION SYSTEM SUPPLIED BY CPFA WATER SHALL COMPLY WITH THE CPFA CROSS CONNECTION CONTROL REGULATIONS. CALL 332-6558 FOR INFORMATION.
- ALL BACKFLOW PREVENTION DEVICES REQUIRED BY CPFA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFOODCOR OR ASSE.
- ALL TRAFFIC CONTROL SIGNS & MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- ALL PAVEMENT MARKINGS REGULATING TRAFFIC FLOW MUST BE THERMOPLASTIC.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET (CONTACT 341-5888 FOR MORE DETAILS). IN CERTAIN CASES, AN ENTIRE RESURFACING OF THE CANOA BEING OPEN CUT MAY BE REQUIRED.
- TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS.

STREET YARD ALONG BONHAM AVENUE
 STREET FRONTAGE = 94.80 - 24 = 70.80 FT
 REQUIRED STREET YARD = 18 * 70.80 = 1,274.40 SF
 PROVIDED STREET YARD = 912.33 + 1,187.88 = 2,100.21 SF
 IMPERVIOUS AREA = 365.59 SF
 PERCENT IMPERVIOUS = 365.59 / 2,100.21 * 100% = 17.41%
 COVER 10% MAXIMUM BECAUSE A MAJORITY OF THE FRONTAGE SIDEWALK REQUIRED BY THE CITY OF WILMINGTON NEEDED TO BE LOCATED ON THE SITE INSTEAD OF WITHIN THE BONHAM AVENUE R/W DUE TO CONFLICT WITH EXISTING POWER POLES AND ROADSIDE DITCH, AND THE SITE HAS A SMALL ROAD FRONTAGE WIDTH.
 REQUIRED PLANTING = 1,700.21 / 600 = 2.84 * 3 CANOPY TREES (OR 3 UNDERSTORY TREES PER 1 CANOPY TREE)
 PROVIDED PLANTINGS = 9 UNDERSTORY TREES, 18 SHRUBS

OPEN SPACE
 REQUIRED OPEN SPACE = 0.35 * 106,955 = 37,434.25 SF = 0.86 ACRES
 REQUIRED RECREATION AREA = 0.5 * 37,434.25 = 18,717.13 SF
 REQUIRED ACTIVE RECREATION AREA = 0.5 * 18,717.13 = 9,358.57 SF
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 PROVIDED TOTAL RECREATION AREA = 19,032.62 SF

PROVIDED OPEN SPACE = 44,195.60 SF = 1.02 ACRES (TOTAL SITE AREA MINUS STREET YARD AREAS, INTERIOR LANDSCAPING ISLANDS, FOUNDATION PLANTING AREAS, BUFFERS, IMPERVIOUS SURFACE AREAS, & WOOD DECK PATIOS)



STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013018
 SIGNED [Signature]

Approved Construction Plan

Name: Dawn M. Driffling Date: 6/11/13
 Planning: [Signature] Date: 6-10-13
 Public Utilities: [Signature] Date: 6-10-13
 Fire: [Signature] Date: 6-10-13

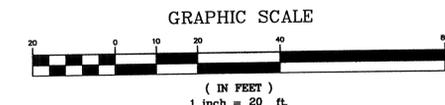
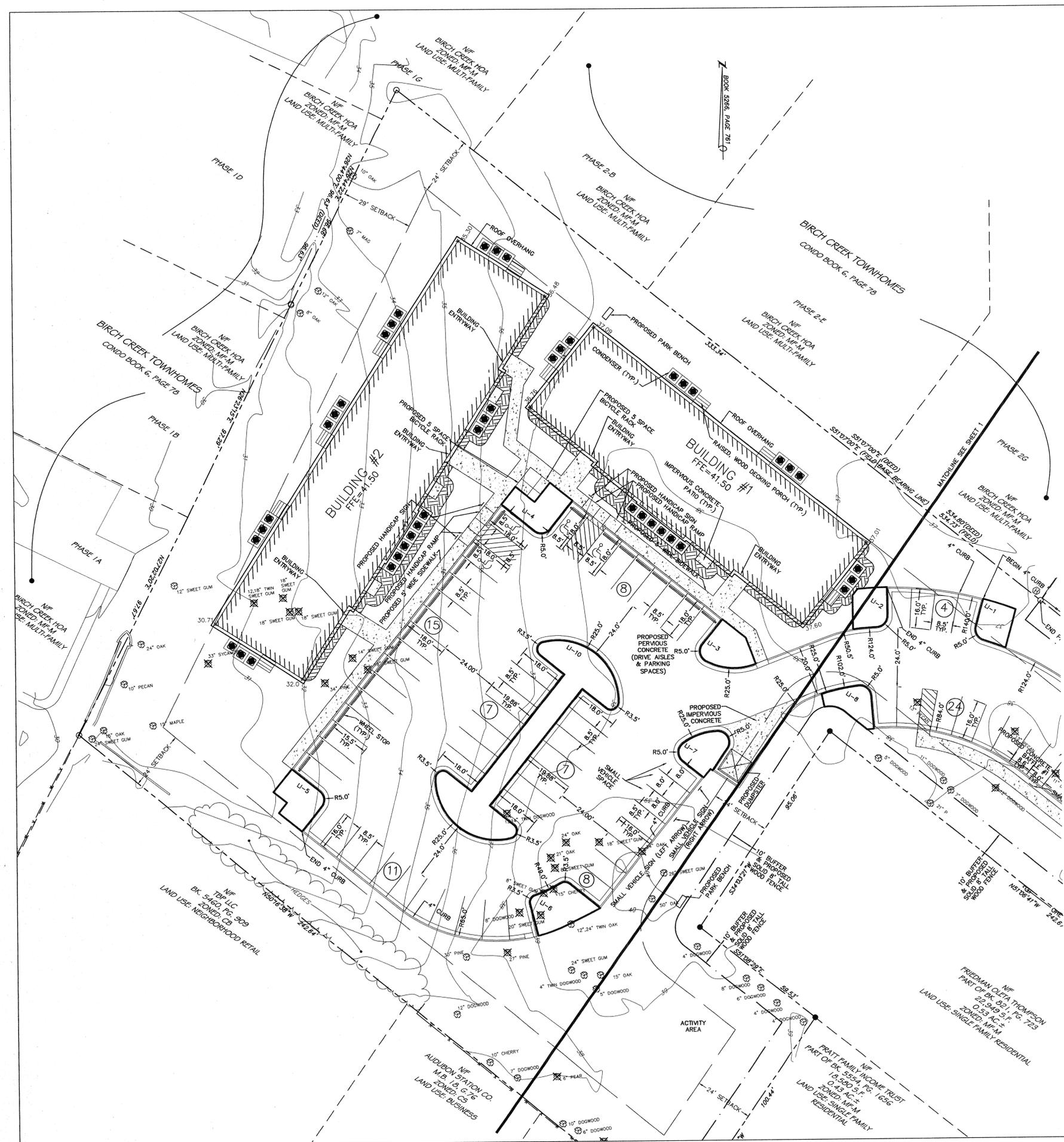
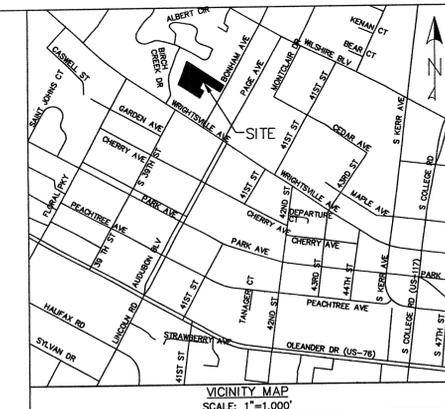
SITE PLAN
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

DATE: 1-7-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 219

MALPASS ENGINEERING & SURVEYING, P.C.
 1154 SHELBY ROAD BOULDERVALE
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-362-0243
 Fax 910-362-0203 License No. C-2320

Owner: 128MM LLC
 P.O. BOX 1229
 WILMINGTON, NORTH CAROLINA 28402

SHEET NO. 1
 OF 17



REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADAPT LAYOUT.	1-11-13
2	REVISED PER CITY OF WILMINGTON.	3-15-13
3	REVISED PER CITY OF WILMINGTON.	4-18-13
4	REVISED PER CITY OF WILMINGTON.	4-30-13
5	REVISED PER CLIENT.	5-10-13

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 6/11/13 PERMIT # 2013013
SIGNED [Signature]

Approved Construction Plan
Name Dawn M. Driskell Date 6/11/13
Public Utilities
Traffic 6-10-13
Fire 6-10-13

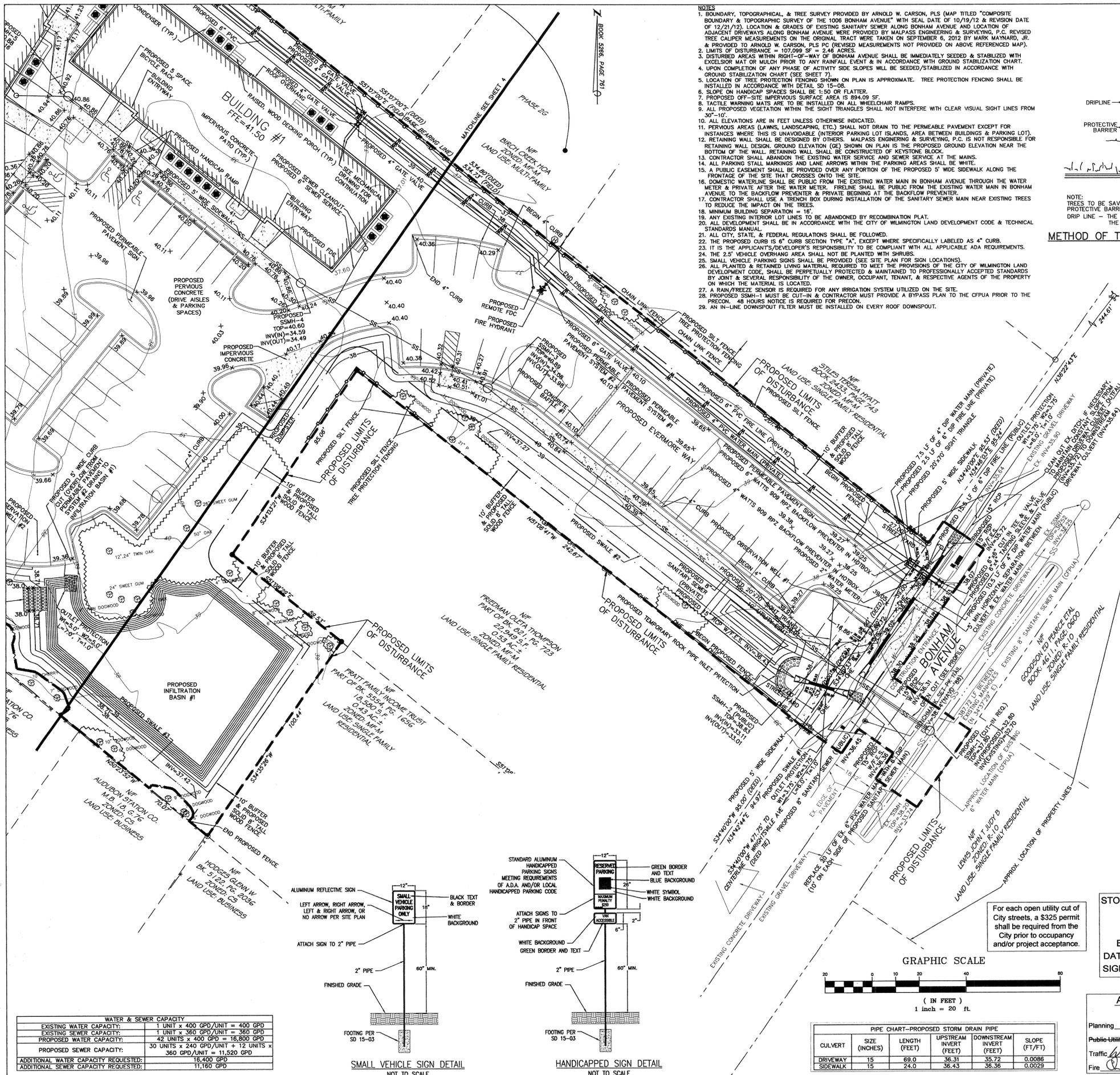
SITE PLAN
1006 BONHAM AVENUE
EVERMORE APARTMENTS
CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA



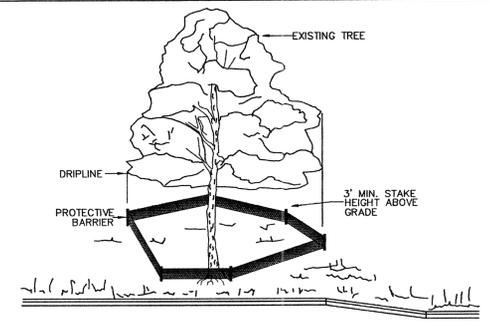
MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHEPARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-0245 Fax 910-392-0203 License No. C-2320

DATE: 1-7-13
SCALE: 1"=20'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 219
SHEET NO: 2
OF: 17

CP 1284



- NOTES**
- BOUNDARY, TOPOGRAPHICAL, & TREE SURVEY PROVIDED BY ARNOLD W. CARSON, PLS (MAP TITLED "COMPOSITE BOUNDARY & TOPOGRAPHICAL SURVEY OF THE 1006 BONHAM AVENUE" WITH SEAL DATE OF 10/19/12 & REVISION DATE OF 12/21/12). LOCATION & GRADES OF EXISTING SANITARY SEWER ALONG BONHAM AVENUE AND LOCATION OF ADJACENT DRIVEWAYS ALONG BONHAM AVENUE WERE PROVIDED BY MALPASS ENGINEERING & SURVEYING, P.C. REVISED TREE CALIPER MEASUREMENTS ON THE ORIGINAL TRACT WERE TAKEN ON SEPTEMBER 6, 2012 BY MARK WAYNARD, JR. & PROVIDED TO ARNOLD W. CARSON, PLS (REVISED MEASUREMENTS NOT PROVIDED ON ABOVE REFERENCED MAP).
 - LIMITS OF DISTURBANCE = 107,099 SF = 2.46 ACRES.
 - UNDISTURBED AREAS WITHIN RIGHT-OF-WAY OF BONHAM AVENUE SHALL BE IMMEDIATELY SEEDED & STABILIZED WITH EXCELISOR MAT OR MULCH PRIOR TO ANY RAINFALL EVENT & IN ACCORDANCE WITH GROUND STABILIZATION CHART.
 - UPON COMPLETION OF ANY PHASE OF ACTIVITY SIDE SLOPES WILL BE SEEDED/STABILIZED IN ACCORDANCE WITH GROUND STABILIZATION CHART (SEE SHEET 7).
 - LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 15-03.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.
 - ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.
 - PERVIOUS AREAS (LAWNS, LANDSCAPING, ETC.) SHALL NOT DRAIN TO THE PERMEABLE PAVEMENT EXCEPT FOR INSTANCES WHERE THIS IS UNAVOIDABLE (INTERIOR PARKING LOT ISLANDS, AREA BETWEEN BUILDINGS & PARKING LOT).
 - RETAINING WALL SHALL BE DESIGNED BY OTHERS. MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR RETAINING WALL DESIGN. GROUND ELEVATION (GE) SHOWN ON PLAN IS THE PROPOSED GROUND ELEVATION NEAR THE BOTTOM OF THE WALL. RETAINING WALL SHALL BE CONSTRUCTED OF KEYSTONE BLOCK.
 - CONTRACTOR SHALL ABANDON THE EXISTING WATER SERVICE AND SEWER SERVICE AT THE MAINS.
 - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - A PUBLIC EASEMENT SHALL BE PROVIDED OVER ANY PORTION OF THE PROPOSED 5' WIDE SIDEWALK ALONG THE FRONTAGE OF THE SITE THAT CROSSES ONTO THE SITE.
 - DOMESTIC WATERLINE SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE THROUGH THE WATER METER & PRIVATE AFTER THE WATER METER. PRELINE SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE TO THE BACKFLOW PREVENTER & PRIVATE BEGINNING AT THE BACKFLOW PREVENTER.
 - CONTRACTOR SHALL USE A TRENCH BOX DURING INSTALLATION OF THE SANITARY SEWER MAIN NEAR EXISTING TREES TO REDUCE THE IMPACT ON THE TREES.
 - MINIMUM BUILDING SEPARATION = 16'
 - ANY EXISTING INTERIOR LOT LINES TO BE ABANDONED BY RECOMBINATION PLAT.
 - ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE & TECHNICAL STANDARDS MANUAL.
 - ALL CITY, STATE, & FEDERAL REGULATIONS SHALL BE FOLLOWED.
 - THE PROPOSED CURB IS 6" CURB SECTION TYPE "A", EXCEPT WHERE SPECIFICALLY LABELED AS 4" CURB.
 - IT IS THE APPLICANT'S RESPONSIBILITY TO BE COMPLIANT WITH ALL APPLICABLE ADA REQUIREMENTS.
 - THE 2.5' VEHICLE OVERHANG AREA SHALL NOT BE PLANTED WITH SHRUBS.
 - SMALL VEHICLE PARKING SIGNS SHALL BE PROVIDED (SEE SITE PLAN FOR SIGN LOCATIONS).
 - ALL TREES & RETAINED LIVING MATERIAL REQUIRE THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED & MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT & SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, & RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.
 - A RAIN/FREEZE SENSOR IS REQUIRED FOR ANY IRRIGATION SYSTEM UTILIZED ON THE SITE.
 - PROPOSED SSMH-1 MUST BE CUT-IN & CONTRACTOR MUST PROVIDE A BYPASS PLAN TO THE CPFA PRIOR TO THE PRECON. 48 HOURS NOTICE IS REQUIRED FOR PRECON.
 - AN IN-LINE DOWNSPOUT FILTER MUST BE INSTALLED ON EVERY ROOF DOWNSPOUT.



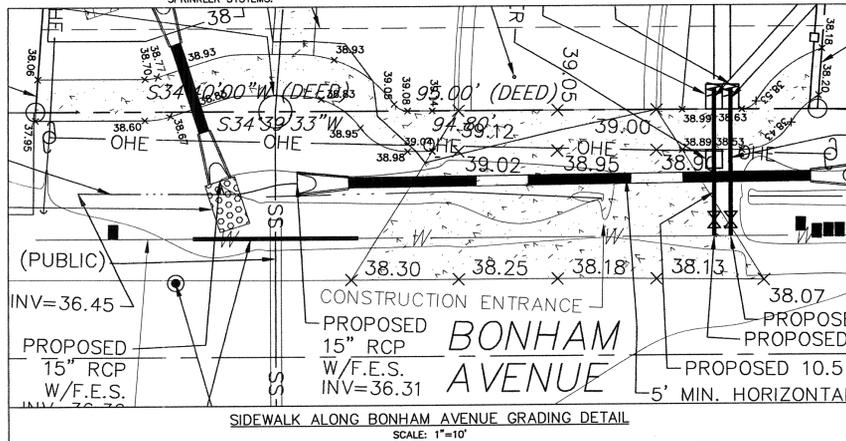
METHOD OF TREE PROTECTION DURING CONSTRUCTION
SD 15-08
NOT TO SCALE



- LEGEND**
- = EXISTING IRON PIPE
 - = SET IRON ROD
 - = EXISTING POWER POLE
 - = EXISTING WATER METER
 - = EXISTING MAILBOX
 - = EXISTING LIGHT POLE
 - = EXISTING FIRE HYDRANT
 - = EXISTING TREE
 - = EXISTING CONTOUR
 - = CENTERLINE
 - = R/W
 - = EXISTING OVERHEAD LINE
 - = EXISTING DITCH
 - = EXISTING FENCE
 - = EXISTING WATER MAIN
 - = EXISTING SANITARY SEWER MAIN
 - = PROPERTY LINE
 - = ADJACENT LOT LINE (APPROX.)
 - = PROPOSED BUFFER/SOLID FENCE
 - = PROPOSED CULVERT
 - = PROPOSED STREET YARD
 - = PROPOSED WATER MAIN
 - = PROPOSED SANITARY SEWER
 - = PROPOSED GATE VALVE
 - = PROPOSED FIRE HYDRANT
 - = APPROX. EX. SPOT ELEVATION
 - = PROPOSED SPOT ELEVATION
 - = PROPOSED CONTOUR
 - = PROPOSED SILT FENCE
 - = PROPOSED TREE PROTECTION FENCE
 - = PROPOSED LIMITS OF DISTURBANCE
 - = PROPOSED UTILITY EASEMENT

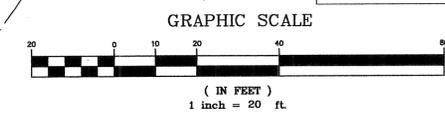
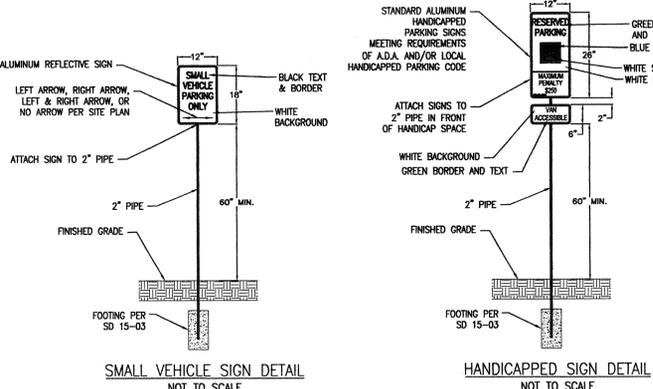
- UTILITY SEPARATION NOTES**
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 3'.
 - SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 3' OR D.I.P. SHALL BE USED.
 - HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER SHALL BE 10' BETWEEN EDGE OF PIPES.
 - VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER:
WATER OVER SANITARY SEWER: >18" OR USE D.I.P. (ON BOTH) 10' ON EITHER SIDE OF CROSSING.
SANITARY SEWER OVER WATER: USE D.I.P. (ON BOTH) 10' ON EITHER SIDE OF CROSSING.
 - A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER OR USE D.I.P. ON SANITARY SEWER 10' ON EITHER SIDE OF CROSSING.
 - VERTICAL SEPARATION BETWEEN WATER AND STORM SEWER:
WATER OVER STORM SEWER: >18" OR USE D.I.P. ON WATER 10' ON EITHER SIDE OF CROSSING.
STORM SEWER OVER WATER: EITHER SIDE OF CROSSING.
 - ALL SANITARY SEWER MANHOLES WITH A DROP OF 30" OR GREATER SHALL HAVE AN INSIDE DIAMETER OF 5' WITH AN INSIDE DROP STRUCTURE.
 - GRAVITY SANITARY SEWER WITHIN 50' OF WETLANDS SHALL BE D.I.P. AND MEET WATER MAIN MATERIALS, TESTING METHODS AND ACCEPTABILITY STANDARDS (ISA NCAC 18C).
 - SANITARY SEWER MANHOLES MUST BE GREATER THAN 50' FROM WETLANDS, AS MEASURED TO THE CLOSEST OUTSIDE EDGE.

- FIRE AND LIFE SAFETY NOTES**
- PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS OR FDC'S. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
 - FIRE HYDRANTS CANNOT BE FURTHER THAN 8' FROM THE CURB.
 - NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
 - ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
 - PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE & LIFE SAFETY DIVISION AT 910-343-0696.
 - A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
 - FDC'S CAN BE NO FURTHER THAN 150' FROM A FIRE HYDRANT.
 - FDC'S CAN BE NO FURTHER THAN 40' FROM FIRE DEPARTMENT VEHICLE PLACEMENT.
 - BUILDING CONSTRUCTION TYPE ACCORDING TO THE INTERNATIONAL BUILDING CODE IS V-B.
 - 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.
 - TAMPER SWITCHES SHALL BE INSTALLED ON ALL VALVES THAT ARE CAPABLE OF TURNING THE WATER SUPPLY OFF TO THE SPRINKLER SYSTEMS.



WATER & SEWER CAPACITY

EXISTING WATER CAPACITY:	1 UNIT x 400 GPD/UNIT = 400 GPD
EXISTING SEWER CAPACITY:	1 UNIT x 360 GPD/UNIT = 360 GPD
PROPOSED WATER CAPACITY:	42 UNITS x 400 GPD = 16,800 GPD
PROPOSED SEWER CAPACITY:	30 UNITS x 240 GPD/UNIT + 12 UNITS x 360 GPD/UNIT = 11,520 GPD
ADDITIONAL WATER CAPACITY REQUESTED:	16,400 GPD
ADDITIONAL SEWER CAPACITY REQUESTED:	11,160 GPD



PIPE CHART-PROPOSED STORM DRAIN PIPE

CULVERT	SIZE (INCHES)	LENGTH (FEET)	UPSTREAM INVERT (FEET)	DOWNSIDE INVERT (FEET)	SLOPE (FT/FT)
DRIVEWAY	15	69.0	36.31	35.72	0.0086
SIDEWALK	15	24.0	36.43	36.36	0.0029

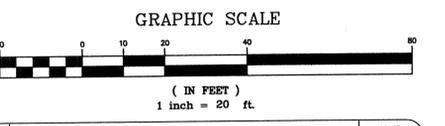
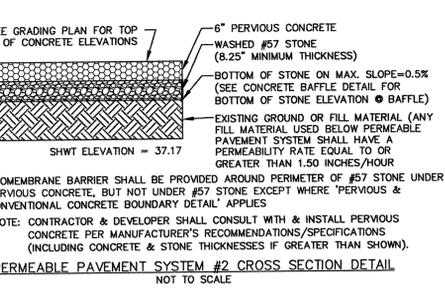
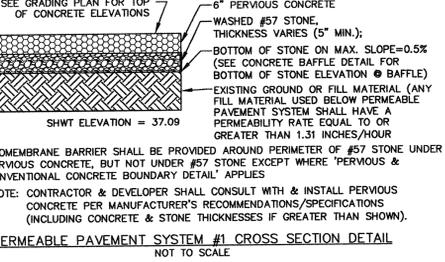
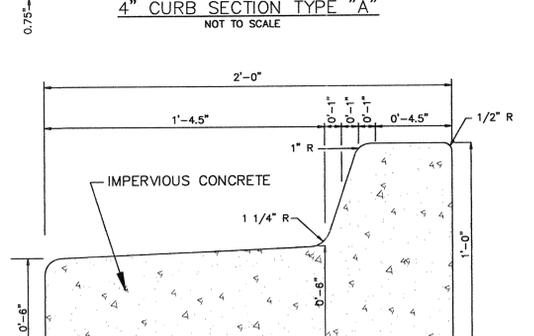
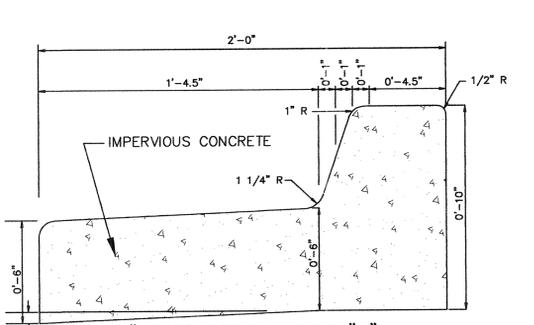
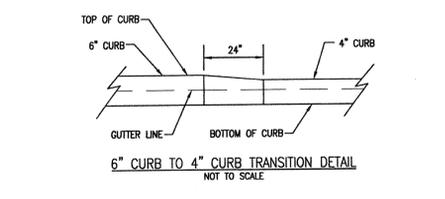
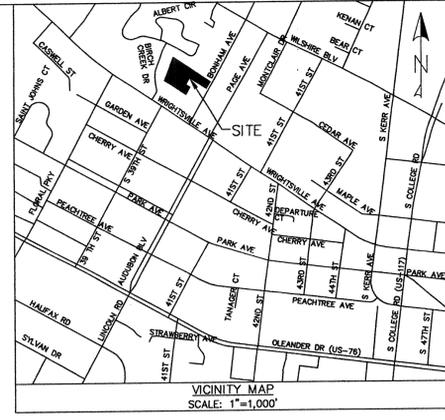
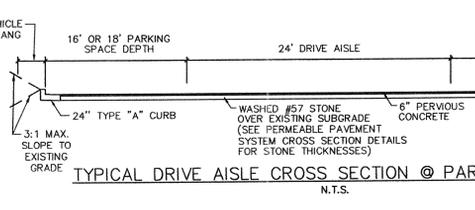
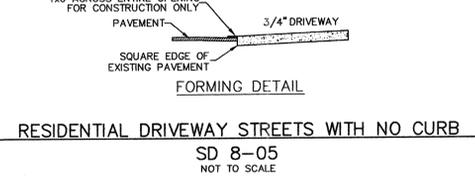
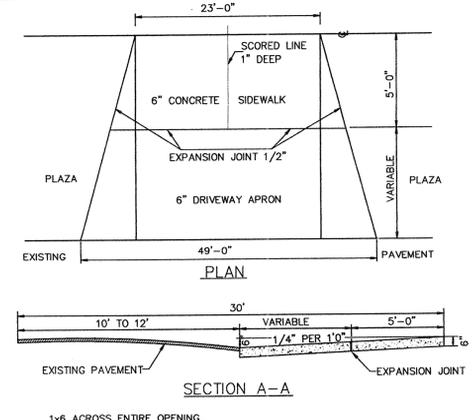
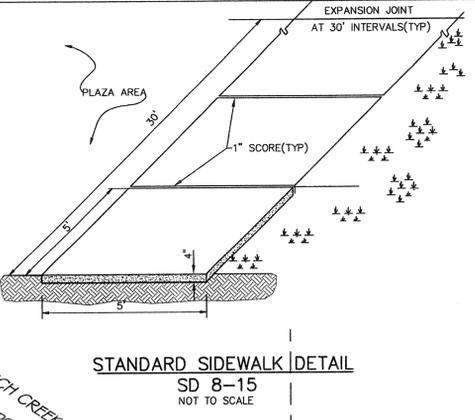
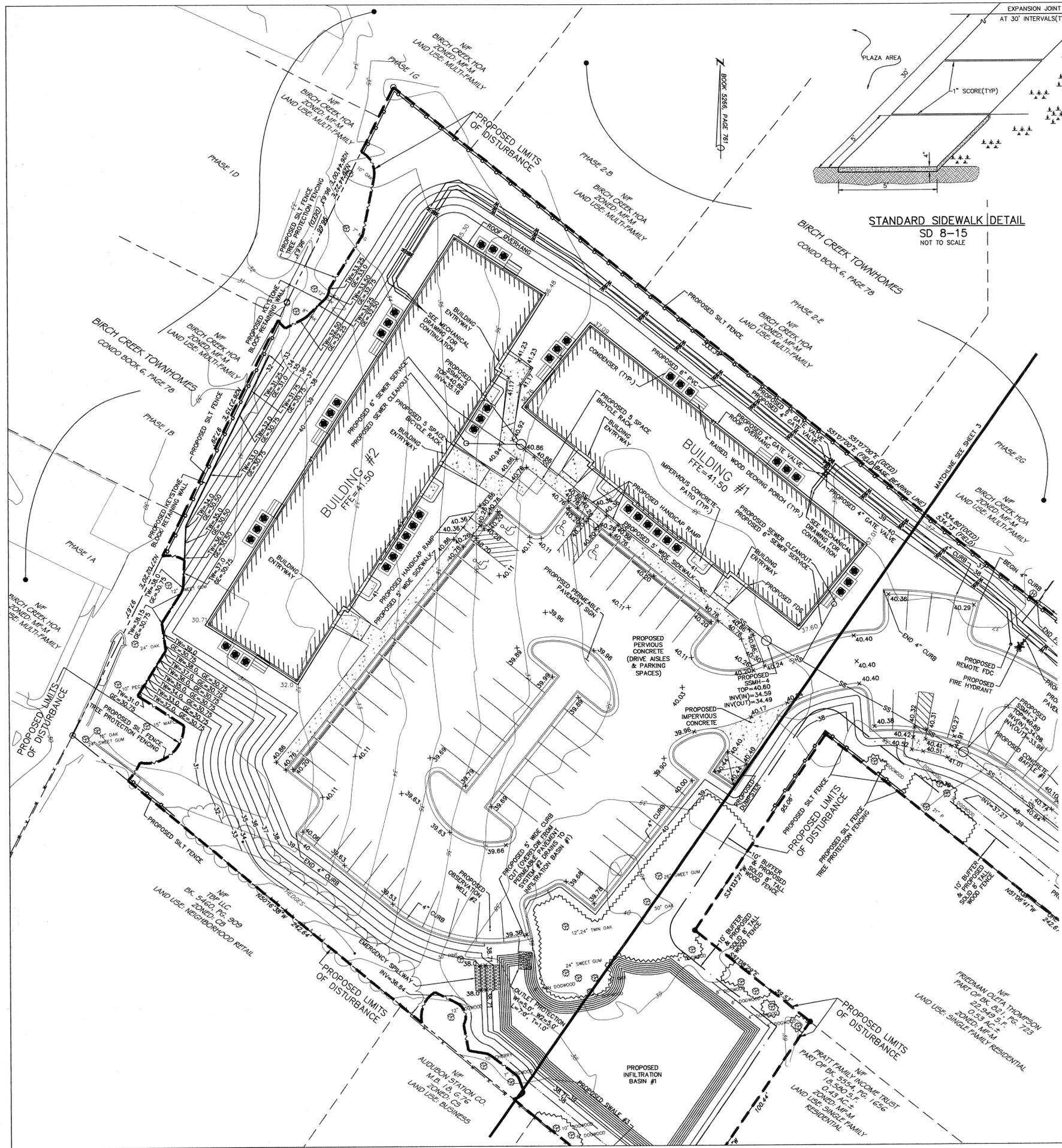
STORMWATER MANAGEMENT PLAN APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 6/1/13 PERMIT # 2013013
SIGNED [Signature]

Approved Construction Plan
Name: [Signature] Date: 6/1/13
Planning: [Signature] 6/1/13
Public Utilities: [Signature] 6-10-13
Fire: [Signature] 6-10-13

DRAINAGE & UTILITY PLAN
1006 BONHAM AVENUE
EVERMORE APARTMENTS
CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA
DATE: 1-7-13
SCALE: 1"=20'
DRAWN: JCB
CHECKED: JBM
PROJECT NO: 219
SHEET NO: 3
OF: 17

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-8848 Fax 910-392-8203 License No. C-2320

Owner: 128M LLC
P.O. BOX 1229
WILMINGTON, NORTH CAROLINA 28402



REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADJUST LAYOUT	1-11-13
2	REVISED PER CITY OF WILMINGTON	3-15-13
3	REVISED PER CITY OF WILMINGTON	4-18-13
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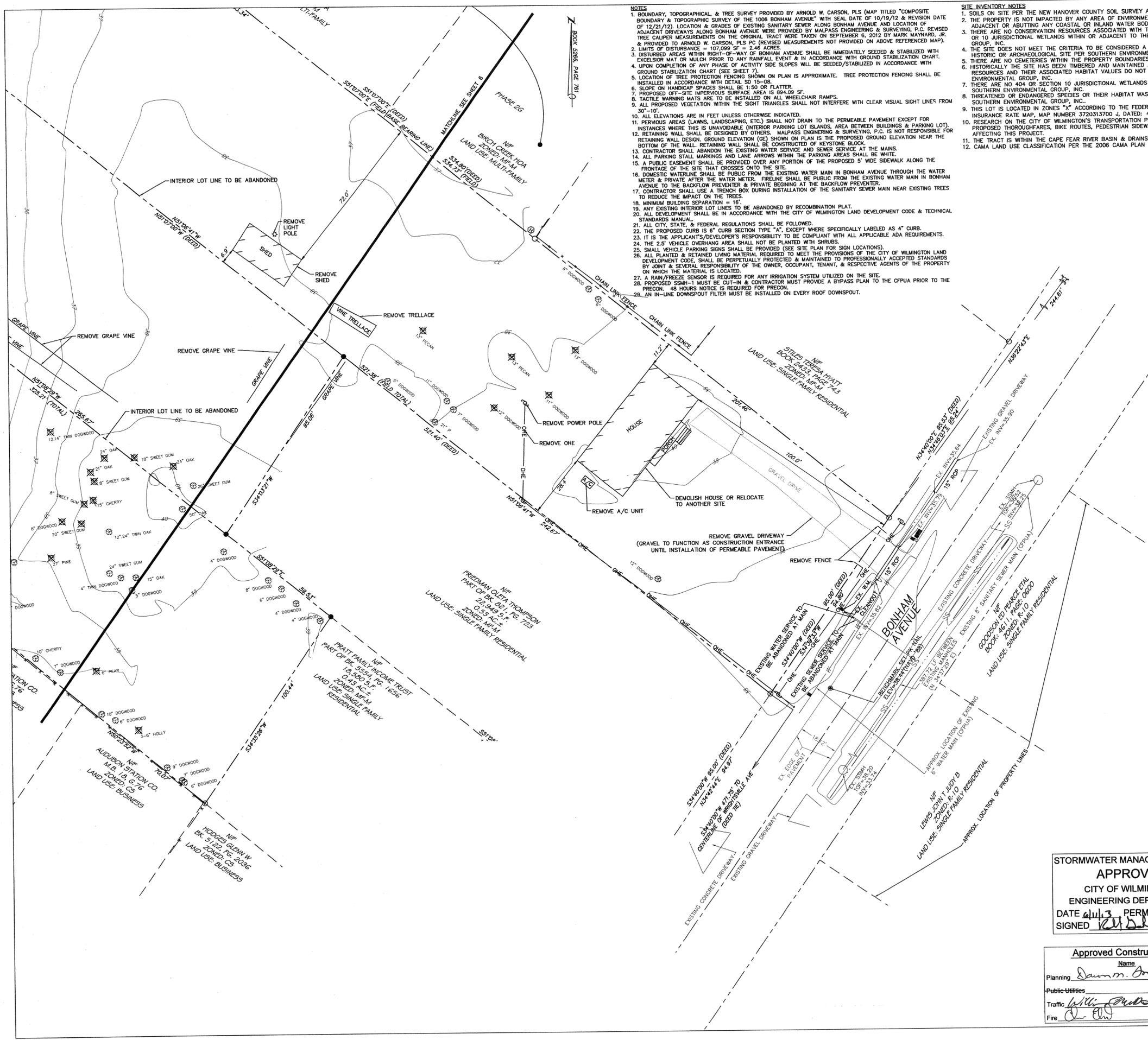
Approved Construction Plan
 Name: Dawn M. [Signature] Date: 6/11/13
 Planning: [Signature] 6/11/13
 Public Utilities: [Signature] 6/11/13
 Fire: [Signature] 6/11/13

DRAINAGE & UTILITY PLAN
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHREYAS BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-8243 License No. C-2300
 Fax 910-392-0203

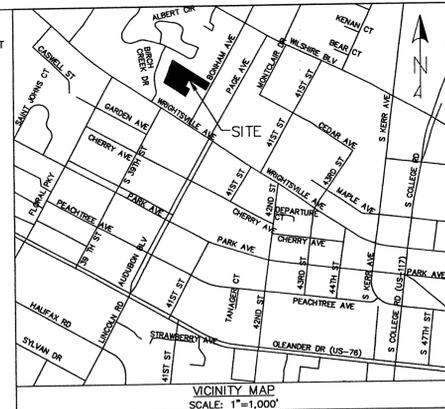
DATE: 1-7-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 219
 SHEET NO. 4 OF 17

CP1284



- NOTES**
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 - UPON COMPLETION OF ANY PHASE OF ACTIVITY SLOPE SIZES WILL BE SEEDING/STABILIZED IN ACCORDANCE WITH GROUND STABILIZATION CHART (SEE SHEET 7).
 - LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 15-08.
 - SLOPE ON HANDICAP SPACES SHALL BE 1:50 OR FLATTER.
 - PROPOSED OFF-SITE IMPERVIOUS SURFACE AREA IS 894.09 SF.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.
 - ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.
 - PERVIOUS AREAS (LAWNS, LANDSCAPING, ETC) SHALL NOT DRAIN TO THE PERMEABLE PAVEMENT EXCEPT FOR INSTANCES WHERE THIS IS UNAVOIDABLE (INTERIOR PARKING LOT ISLANDS, AREA BETWEEN BUILDINGS & PARKING LOT).
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 - PROPOSED SSM-1 MUST BE CUT-IN & CONTRACTOR MUST PROVIDE A BYPASS PLAN TO THE CPFA PRIOR TO THE PRECON. 48 HOURS NOTICE IS REQUIRED FOR PRECON.
 - AN IN-LINE DOWNSPOUT FILTER MUST BE INSTALLED ON EVERY ROOF DOWNSPOUT.

- SITE INVENTORY NOTES**
- SOILS ON SITE PER THE NEW HANOVER COUNTY SOIL SURVEY ARE SH (SEAGATE PART) & JO (JOHNSTON).
 - THE PROPERTY IS NOT IMPACTED BY ANY AREA OF ENVIRONMENTAL CONCERN (AEC), AS THE PROPERTY IS NOT ADJACENT OR ABUTTING ANY COASTAL OR INLAND WATER BODY PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THERE ARE NO CONSERVATION RESOURCES ASSOCIATED WITH THIS PROJECT, AS THERE ARE NO SECTION 404 OR 10 JURISDICTIONAL WETLANDS WITHIN OR ADJACENT TO THE PROPERTY PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THE SITE DOES NOT MEET THE CRITERIA TO BE CONSIDERED A LOCAL, STATE OR FEDERAL RECOGNIZED HISTORIC OR ARCHAEOLOGICAL SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THERE ARE NO CEMETERIES WITHIN THE PROPERTY BOUNDARIES PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - HISTORICALLY THE SITE HAS BEEN TIMBERED AND MAINTAINED AS A RESIDENTIAL YARD; THEREFORE FOREST RESOURCES AND THEIR ASSOCIATED HABITAT VALUES DO NOT APPEAR ON THE SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THERE ARE NO 404 OR SECTION 10 JURISDICTIONAL WETLANDS WITHIN THE PROPERTY BOUNDARIES PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THREATENED OR ENDANGERED SPECIES OR THEIR HABITAT WAS NOT OBSERVED DURING THE SITE VISIT PER SOUTHERN ENVIRONMENTAL GROUP, INC.
 - THIS LOT IS LOCATED IN ZONES "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, MAP NUMBER 3720313700 J, DATED: 4-3-06 (PER ARNOLD W. CARSON, PLS).
 - RESEARCH ON THE CITY OF WILMINGTON'S TRANSPORTATION PLANNING WEBSITE RESULTED IN NO FINDINGS OF PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS, OR TRANSIT FACILITIES AFFECTING THIS PROJECT.
 - THE TRACT IS WITHIN THE CAPE FEAR RIVER BASIN & DRAINS TO BURNT MILL CREEK (C.S.W).
 - CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN.



- LEGEND**
- = EXISTING IRON PIPE
 - = SET IRON ROD
 - ⊙ = SET PK NAIL
 - ⊕ = EXISTING POWER POLE
 - ⊖ = EXISTING WATER METER
 - ⊞ = EXISTING MAILBOX
 - ⊛ = EXISTING LIGHT POLE
 - ⊜ = EXISTING FIRE HYDRANT
 - ⊝ = EXISTING TREE
 - ⊞ = EXISTING TREE (TO BE REMOVED)
 - = EXISTING CONTOUR
 - = CENTERLINE
 - = R/W
 - = EXISTING OVERHEAD LINE
 - = EXISTING DITCH
 - = EXISTING FENCE
 - = EXISTING WATER MAIN
 - = EXISTING SANITARY SEWER MAIN
 - = PROPERTY LINE
 - = ADJACENT LOT LINES (APPROX.)

SITE DATA

PROPERTY OWNER: 128MM LLC
 PROJECT ADDRESS: 1006 BONHAM AVENUE
 PIN NUMBER: R05514-001-022-000, PART OF R05514-001-021-000, PART OF R05514-001-020-000
 ZONING DISTRICT: MF-4
 FLOOD AREA: THIS LOT IS LOCATED IN ZONES "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, MAP NUMBER 3720313700 J, DATED: 4-3-06 (PER ARNOLD W. CARSON, PLS)
 BUILDING SETBACKS, REQUIRED: FRONT-35', REAR-29', INTERIOR SIDE-24', CORNER LOT SIDE-34' (ADDITIONAL 4' REAR & INTERIOR SIDE DUE TO BUILDING HEIGHT)
 BUILDING SETBACKS, PROPOSED: FRONT-272.66', REAR-29.5', INTERIOR SIDE-25.5'
 SITE AREA: 106,955 SF = 2.46 ACRES ±
 EXISTING BUILDING AREA: 1,911.65 SF = 0.05 ACRES
 EXISTING BUILDING LOT COVERAGE: 1,911.65 / 106,955 * 100% = 1.79%
 PROPOSED BUILDING AREA (FOOTPRINT EXCLUDING PATIOS): 13,862.85 SF = 0.32 ACRES
 PROPOSED BUILDING LOT COVERAGE: 13,862.85 / 106,955 * 100% = 12.97%
 ALLOWABLE MAXIMUM BUILDING HEIGHT (BASED ON REQUIRED SETBACK USED): 45'
 PROPOSED BUILDING HEIGHT (AVG. EX. GROUND ELEV. TO HALFWAY BETWEEN HIGHEST PEAK & EAVE): 41.14' (BLDG #1) & 44.63' (BLDG #2)
 NUMBER OF EXISTING BUILDINGS: 2 (42 UNITS TOTAL)
 NUMBER OF PROPOSED BUILDINGS: 2

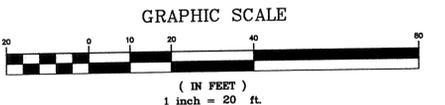
BUILDING	SQUARE FOOTAGE (1ST STORY)	SQUARE FOOTAGE (2ND STORY)	SQUARE FOOTAGE (3RD STORY)	NUMBER OF UNITS	NUMBER OF ONE BEDROOM UNITS	NUMBER OF TWO BEDROOM UNITS	NUMBER OF THREE BEDROOM UNITS	EXISTING / PROPOSED
HOUSE	1,510.02	N/A	N/A	N/A	N/A	N/A	N/A	EXISTING (TO BE REMOVED)
SHED	401.63	N/A	N/A	N/A	N/A	N/A	N/A	EXISTING (TO BE REMOVED)
1	5,990.73	5,990.73	6,020.85	18	6	6	6	PROPOSED
2	7,872.12	7,872.12	7,902.24	24	6	12	6	PROPOSED

TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS ON-SITE:

BUILDINGS	BEFORE DEVELOPMENT		AFTER DEVELOPMENT	
	AREA (SF)	% OF SITE	EX. (SF)	PROPOSED (SF)
BUILDINGS (INCLUDES ROOF OVERHANG)	1,911.65	1.79	0	15,008.86
PAVEMENT	977.90	0.91	0	3,606.29
PERVIOUS PAVEMENT (AFTER 75% CREDIT)	0	0	6,762.39	6,762.39
SIDEWALK	0	0	3,547.29	3,547.29
OTHER (CONCRETE PATIOS & CONDENSERS)	0	0	1,164.60	1,164.60
TOTAL	2,889.55	2.70	30,089.43	30,089.43

OFF STREET PARKING CALCULATIONS:

MIN. PARKING REQ. (RESIDENTIAL) = [1.5 x 12] (1 BDRM) + [2 x 18] (2 BDRM) + [2.25 x 12] (3 BDRM) = 81 SPACES
 MAX. PARKING REQ. (RESIDENTIAL) = 2.5 x 42 = 105 SPACES
 NUMBER OF PROPOSED PARKING SPACES = 84 (20 SPACES ARE SMALL VEHICLE SPACES)
 MAX. NUMBER OF ALLOWABLE SMALL VEHICLE SPACES = 0.25 x 81 = 20 SPACES
 MIN. NUMBER OF REQ. HANDICAPPED SPACES PER ADA STANDARDS FOR ACCESSIBLE DESIGN = 4 SPACES
 NUMBER OF PROPOSED HANDICAPPED SPACES = 4 SPACES
 NUMBER OF REQ. BICYCLE PARKING SPACES = 10 SPACES
 NUMBER OF PROPOSED BICYCLE PARKING SPACES = 10 SPACES
 THIS SITE IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR ANY OTHER ZONING OVERLAY DISTRICT PER THE CITY OF WILMINGTON ZONING MAP (MAP 3137-3, DATED: JULY 30, 2008)
 CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN.



REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADD TREES TO BE REMOVED.	1-11-13
2	REVISED PER CITY OF WILMINGTON.	3-15-13
3	REVISED PER CITY OF WILMINGTON.	4-16-13
4	REVISED PER CITY OF WILMINGTON.	5-10-13
5	REVISED PER CLIENT.	5-10-13
6	REVISED TO ADJUST NOTE #2 & SHOW EXISTING SEWER SERVICE TO BE ABANDONED.	5-20-13

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013016
 SIGNED [Signature]

Approved Construction Plan

Name: Dawn M. Orloff Date: 6/11/13
 Planning: [Signature] 6/11/13
 Traffic: [Signature] 6-10-13
 Fire: [Signature] 6-10-13

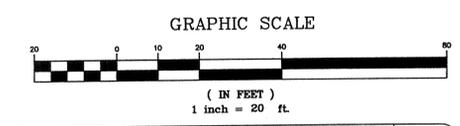
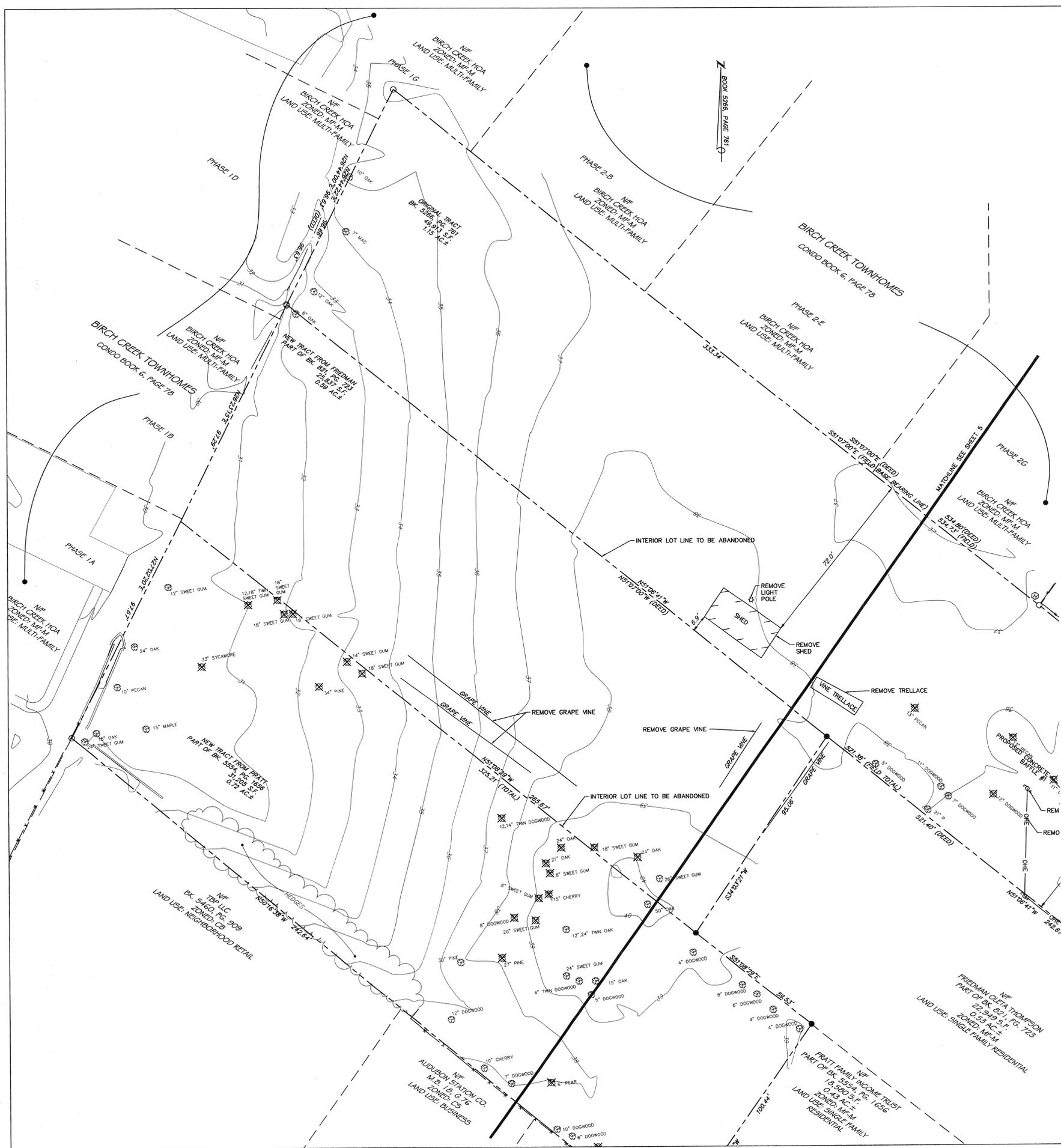
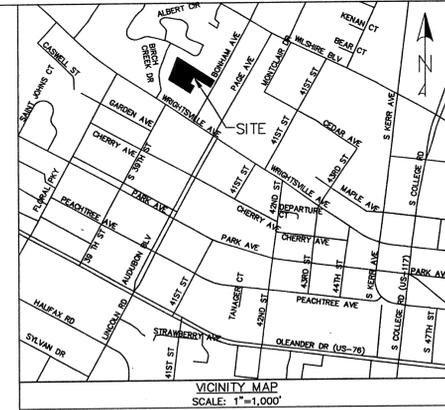
EXISTING CONDITIONS & DEMOLITION PLAN
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1154 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-0943 License No. C-2320 Fax 910-392-0203

Owner: 128MM LLC
 P.O. BOX 1229 WILMINGTON, NORTH CAROLINA 28402

DATE: 1-7-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JBM
 PROJECT NO: 219
 SHEET NO: 5
 OF: 17

CP 1284



REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADD TREES TO BE REMOVED.	1-11-13
2	REVISED PER CITY OF WILMINGTON.	3-15-13
3	REVISED PER CLIENT.	5-10-13

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 6/11/13 PERMIT # 2013014
SIGNED [Signature]

Approved Construction Plan
Name Dawn M. Brothery Date 6/11/13
Planning [Signature]
Public Utilities [Signature]
Traffic [Signature] 6-10-13
Fire [Signature] 6-10-13

EXISTING CONDITIONS & DEMOLITION PLAN
EVERMORE APARTMENTS
CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-5243
Fax 910-392-5203 License No. C-2380

Owner: 128M LLC
P.O. BOX 1229
WILMINGTON, NORTH CAROLINA 28402

DATE: 1-7-13
SCALE: 1"=20'
DRAWN: JCB
CHECKED: JSM
PROJECT NO: 219
SHEET NO: 6
OF: 17



Permanent Seeding
 Specifications #6.11 - Specifications
 (Specifications are as per the "Erosion and Sediment Control Planning and Design Manual" of the state of North Carolina)
 Table 6.11a - Seeding No. 10CP for: Well-to Poorly Drained soils with Good Moisture Retention; Low Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Tall fescue 80
 Pensacola Bahiagrass 50
 Sericea lespedeza 30
 Kobe lespedeza 10

Seeding Notes
 1. From Sept. 1 - Mar. 1, use unscarified sericea seed
 2. On poorly drained sites omit sericea and increase Kobe to 30 lb/acre.
 3. Where a neat appearance is desired, omit sericea and increase Kobe to 40 lb/acre.

Nurse plants
 Between Apr. 15 & Aug. 15, add 10 lb/acre German millet or 15 lb/acre Sudangrass. Prior to Aug 1 or after Aug 15, add 25 lb/acre rye (grain).

Seeding dates
 Best Possible
 Early spring: Feb. 15 - Mar. 20 Feb. 15 - Apr. 30
 Fall: Sept. 1 - Sept. 30 Sept. 1 - Oct. 31

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, netting, or riving or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
 Maintenance - If growth is less than fully adequate, reseed, refertilize in the second year, according to soil tests or topdress with 500 lb/acre 10-10-10 fertilizer. Mow as needed when sericea is omitted from the mixture. Reseed, fertilize, and mulch damaged areas immediately.

Table 6.11a - Seeding No. 20CP for: Well-to Poorly Drained soils with Good Moisture Retention; High Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Tall fescue (blend of two or three improved varieties) 200
 Rye (grain) 25

Seeding dates
 Best Possible
 Early spring: Sept. 1 - Oct. 31 or Feb. 15 - Apr. 30

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, netting, or riving or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
 Maintenance - Fertilize according to soil tests or apply 40 lb/acre nitrogen in Jan. or Feb., 40 lb in Sept. and 40 lb in Nov. from a 12-4-8, 16-4-8, or similar turf fertilizer. Avoid fertilizer applications during warm weather, as this increases soil salinity to disease. Reseed, fertilize, and mulch damaged areas immediately. Mow to a height of 2.5-3.5 inches as needed.

Table 6.11a - Seeding No. 30CP for: Dry Sands to Sandy Loams; High Maintenance, Fine Turf
 Seeding mixture
 Species Rate (lb/1,000 ft²)
 Tifway or Tifway II 200
 Hybrid Bermudagrass 10

Seeding Notes
 1. Turf seed (Practice 6.12, Sodding). Moisture is essential during initial establishment. Sod must be kept well watered for 2-3 weeks, but can be planted earlier or later than sprigs.
 2. Common Bermuda can be seeded or sprigged but does not produce a high-quality turf. It is also less cold tolerant than the hybrids, more weed prone, and a pest in flower beds and specimen plantings.

Planting dates
 Apr. - July

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer, or 50 lb/acre nitrogen from turf-type slow-release fertilizer. Add 25-50 lb/acre nitrogen at 2- to 3-week intervals through midsummer.
 Sprigging - Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.
 Furrows should be 4-6 inches deep and 2 ft apart. Place sprigs about 2 ft apart in the row with one end at or above ground level (Figure 6.11a).
 Broadcast at rates shown above, and press sprigs into the top 1/2-2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.
 Mulch - Do not mulch.
 Maintenance - Water as needed and mow to 3/4- to 1-inch height. Topdress with 40 lb/acre nitrogen in Apr., 50 lb in May, 50 lb in June, 30 lb in July, and 25-30 lb in Aug.

Table 6.11a - Seeding No. 40CP for: Well-Drained Sandy Loams to Dry Sands, Coastal Plain and Eastern Edge of Piedmont; Low-to Medium-Care Lawns
 Seeding mixture
 Species Rate
 Centipedegrass 10-20 lb/acre (seed) or 33 lb/acre (sprigs)

Seeding dates
 Apr. - June
 (Sprigging can be done through July where water is available for irrigation.)

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 300 lb/acre 10-10-10. Sprigging - Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.
 Furrows should be 4-6 inches deep and 2 ft apart. Place sprigs about 2 ft apart in the row with one end at or above ground level (Figure 6.11a).
 Broadcast at rates shown above, and press sprigs into the top 1/2-2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.
 Mulch - Do not mulch.
 Maintenance - Fertilize very sparingly - 20 lb/acre nitrogen in spring with no phosphorus. Centipedegrass cannot tolerate high pH or excess fertilizer.

Table 6.11a - Seeding No. 50CP for: Well-Drained Sandy Loams to Dry Sands; Low Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Pensacola Bahiagrass 50
 Sericea lespedeza 30
 Common Bermudagrass 10
 German millet 10

Seeding Notes
 1. Where a neat appearance is desired, omit sericea.
 2. Use common Bermuda only on isolated sites where it cannot become a pest. Bermudagrass may be replaced with 5 lb/acre centipedegrass.

Seeding dates
 Apr. 1 - July 15

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor by tacking with asphalt, riving, or netting or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
 Maintenance - Refertilize the following Apr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a neat appearance is desired, omit sericea and mow as often as needed.

Table 6.11a - Seeding No. 70CP for: Grass-lined Channels; Coastal Plain, Lower Piedmont, and Dry Soils in the Central Piedmont
 Seeding mixture
 Species Rate (lb/acre)
 Common Bermudagrass 40-80 (1-2 lb/1,000 ft²)

Seeding dates
 Coastal Plain: Apr. - July
 Piedmont: Apr. 15 - June 30

Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.
 Mulch - Use jute, excelsior matting, or other effective channel lining material to cover the bottom of channels and ditches. The lining should extend above the highest calculated depth of flow. On channel side slopes above this height, and in drainages not requiring temporary linings, apply 4,000 lb/acre grain straw and anchor straw by stapling netting over the top.
 Mulch and anchoring materials must not be allowed to wash down slopes where they can clog drainage devices.
 Maintenance - A minimum of 3 weeks is required for establishment. Inspect and repair mulch frequently. Refertilize the following Apr. with 50 lb/acre nitrogen.

Refer to Appendix B.02 for botanical names.

Temporary Seeding
 Specifications #6.10 - Specifications
 (Specifications are as per the "Erosion and Sediment Control Planning and Design Manual" of the state of North Carolina)
 Table 6.10a - Temporary Seeding Recommendations for Late Winter and Early Spring
 Seeding mixture
 Species Rate (lb/acre)
 Rye (grain) 120
 Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains) 50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.
Seeding dates
 Mountains - Above 2500 ft: Feb. 15-May 15
 Below 2500 ft: Feb. 1-May 1
 Piedmont - Jan. 1-May 1
 Coastal Plain - Dec. 1-Apr. 15

Soil amendments - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre 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.
 Maintenance - Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Table 6.10b Temporary Seeding Recommendations for Summer
 Seeding mixture
 Species Rate (lb/acre)
 German millet 40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

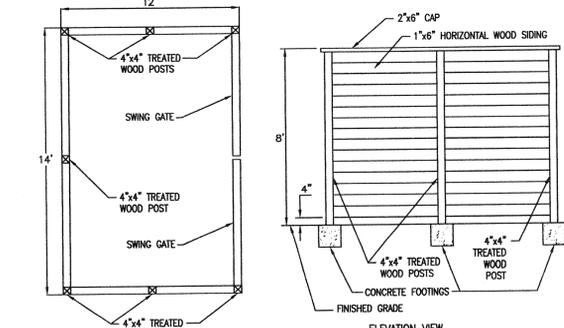
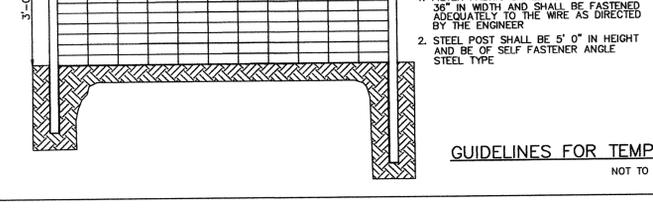
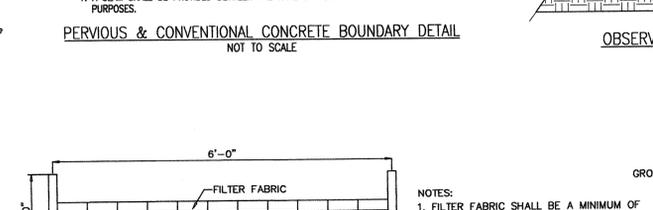
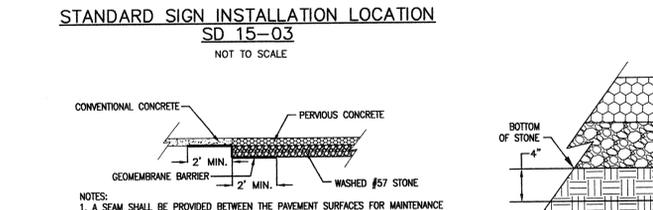
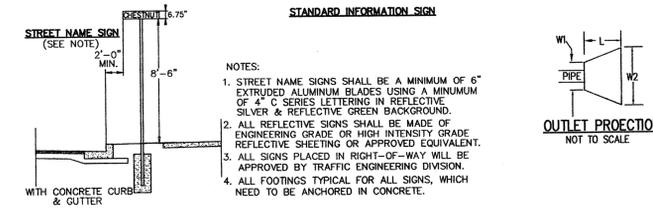
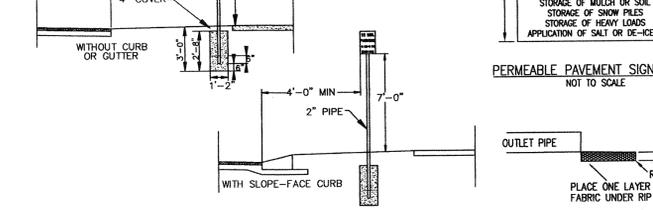
Seeding dates
 Mountains - May 15-Aug. 15
 Piedmont - May 1-Aug. 15
 Coastal Plain - Apr. 15-Aug. 15

Soil amendments - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre 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.
 Maintenance - Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Table 6.10c Temporary Seeding Recommendations for Fall
 Seeding mixture
 Species Rate (lb/acre)
 Rye (grain) 120

Seeding dates
 Mountains - Aug. 15-Dec. 30
 Coastal Plain and Piedmont - Aug. 15-Dec. 30

Soil amendments - Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre 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.
 Maintenance - Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

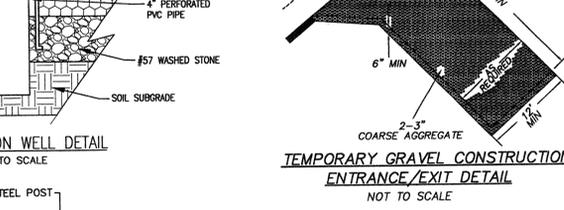
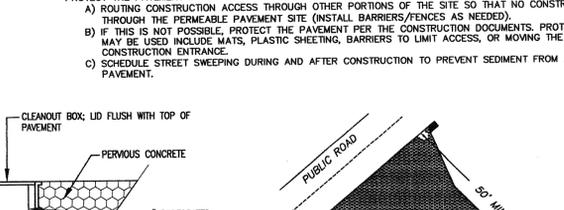
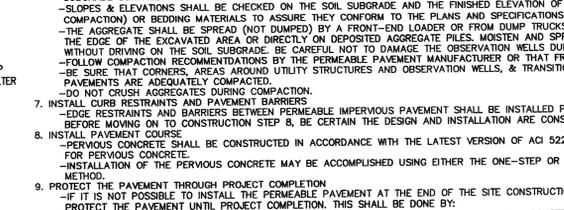


NOTES:
 1. CONCRETE FOOTINGS FOR THE FENCE POSTS SHALL BE DESIGNED BY THE FENCE CONTRACTOR.
 2. IF STRUCTURE DESIGN IS REQUIRED FOR DUMPSTER GATE & GATE, THEN DEVELOPER SHALL CONSULT WITH A STRUCTURAL ENGINEER.
 3. MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR STRUCTURAL INTEGRITY OF DUMPSTER GATE, GATE OR PAD.

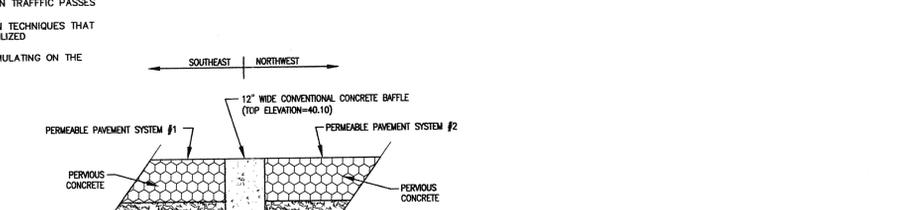
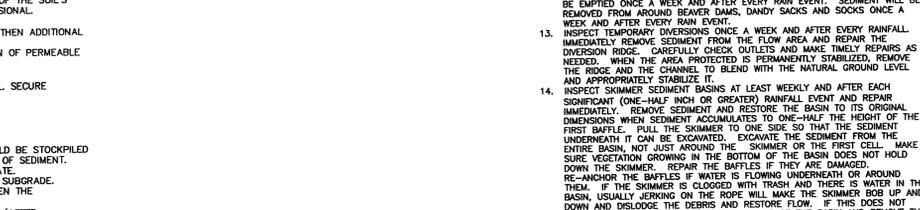
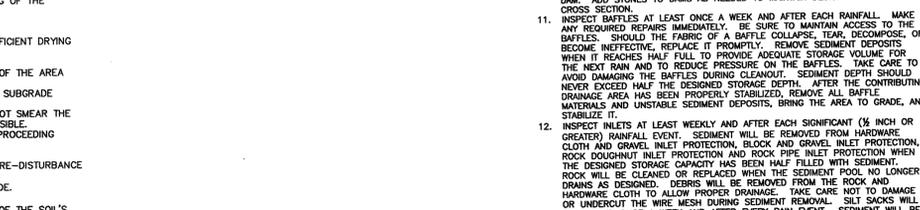
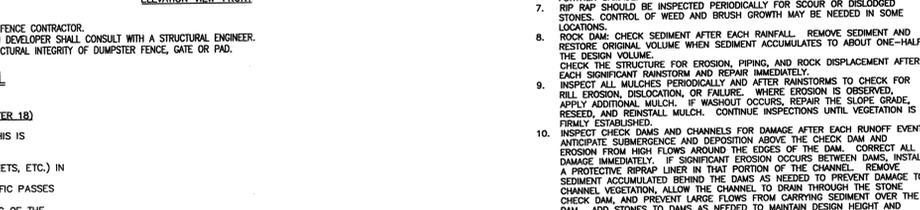
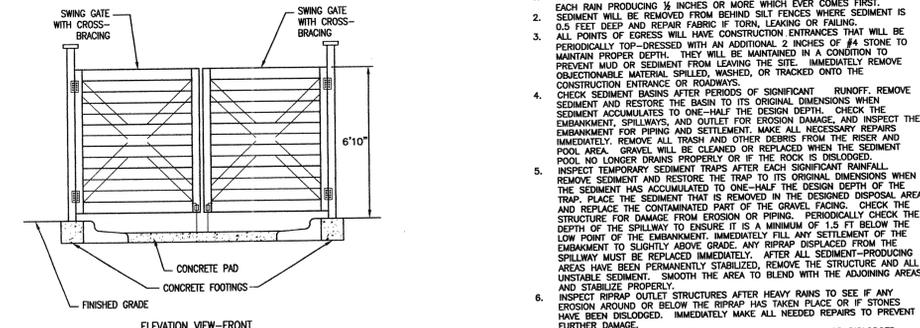
CONSTRUCTION SEQUENCE FOR INSTALLATION OF PERMEABLE PAVEMENT (NCDENR STORMWATER BMP MANUAL CHAPTER 18)
 1. ENSURE ACCEPTABLE CONDITIONS FOR CONSTRUCTION
 -PERVIOUS SURFACES MUST BE GRADED TO DRAIN AWAY FROM THE PERMEABLE PAVEMENT, EXCEPT WHERE THIS IS UNAVOIDABLE, SUCH AS PARKING LOT ISLANDS, AND AREA BETWEEN BUILDINGS & PARKING LOT.
 -IMPERVIOUS AREAS THAT WILL DRAIN TO THE PERMEABLE PAVEMENT ARE COMPLETED.
 -AREAS ADJACENT TO THE PERMEABLE PAVEMENT ARE STABILIZED (VEGETATION, MULCH, STRAW, FIBER BLANKETS, ETC.) IN ORDER TO PREVENT EROSION & POSSIBLE CONTAMINATION WITH SEDIMENTS.
 -CONSTRUCTION ACCESS TO OTHER PORTIONS OF THE SITE IS ESTABLISHED SO THAT NO CONSTRUCTION TRAFFIC PASSES THROUGH THE PERMEABLE PAVEMENT SITE DURING INSTALLATION. INSTALL BARRIERS/FENCES AS NEEDED.
 -WEATHER FORECAST CALLS FOR A WINDOW OF DRY WEATHER TO PREVENT EXCESS COMPACTION OR SMEARING OF THE SOIL SUBGRADE WHILE IT IS EXPOSED.
 -ALL PERMEABLE PAVEMENT AREAS ARE CLEARLY MARKED ON THE SITE.
 2. EXCAVATE PERMEABLE PAVEMENT AREA & PREPARE SUBGRADE SURFACE
 -EXCAVATE TO DRY SUBGRADE CONDITIONS & AVOID EXCAVATING IMMEDIATELY AFTER STORMS WITHOUT A SUFFICIENT DRYING PERIOD.
 -DO NOT ALLOW EQUIPMENT TO CROSS THE PAVEMENT AREA AFTER EXCAVATION HAS BEGUN.
 -OPERATE EXCAVATION EQUIPMENT FROM OUTSIDE THE EXCAVATION AREA OR FROM UNEXCAVATED PORTIONS OF THE AREA USING AN EXCAVATION STAGING PLAN.
 -USE EQUIPMENT WITH TRACKS RATHER THAN TIRES TO MINIMIZE SOIL COMPACTION WHEN EQUIPMENT ON THE SUBGRADE SURFACE IS UNAVOIDABLE.
 -DIG THE FINAL 9 TO 12 INCHES BY USING THE TEETH OF THE EXCAVATOR BUCKET TO LOOSEN SOIL & DO NOT SMEAR THE SUBGRADE SURFACE. FINAL GRADING OR SMOOTHING OF SUBGRADE SHOULD BE DONE BY HAND IF POSSIBLE.
 -THE FINAL SUBGRADE SURFACE SHALL NOT EXCEED 0.5% SLOPE. THE FINAL SUBGRADE SHALL BE SURVEYED BEFORE PROCEEDING WITH INSTALLATION.
 -MINIMIZE THE TIME BETWEEN EXCAVATION AND PLACEMENT OF THE AGGREGATE.
 -AFTER THE SUBGRADE SLOPE IS VERIFIED, SCARIFY THE SOIL SUBGRADE SURFACE TO MAINTAIN THE SOILS PRE-DISTURBANCE INFILTRATION RATE.
 -DO NOT SCARIFY THE PAVEMENT, USE THE EXCAVATOR BUCKET'S TEETH TO RAKE THE SURFACE OF THE SUBGRADE.

3. TEST THE SUBGRADE SOIL INFILTRATION RATE (INFILTRATION SYSTEMS ONLY)
 -IMMEDIATELY AFTER EXCAVATION & BEFORE THE AGGREGATE IS PLACED, CONDUCT A DIRECT MEASUREMENT OF THE SOIL'S INFILTRATION RATE. INFILTRATION TESTING SHALL BE PERFORMED BY AN APPROPRIATELY-QUALIFIED PROFESSIONAL.
 -RESULTS OF THE INFILTRATION TESTING SHALL BE PROVIDED TO THE ENGINEER.
 -IF THE SOIL TEST SHOWS INFILTRATION RATES THAT ARE LOWER THAN THE RATE(S) USED IN THE DESIGN, THEN ADDITIONAL INFILTRATION RATE TESTING, OR TRENCHING OF THE SOIL WILL BE NEEDED.
 -CONTRACTOR SHALL CONTACT & RECEIVE APPROVAL FROM ENGINEER OF RECORD TO CONTINUE INSTALLATION OF PERMEABLE PAVEMENT.
 4. PLACE GEOTEXTILES AND GEOMEMBRANE (IF APPLICABLE)
 -FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE APPROPRIATE OVERLAP BETWEEN ROLLS OF MATERIAL. SECURE THE MATERIAL TO ENSURE IT DOES NOT MOVE OR WRINKLE WHEN PLACING AGGREGATE.
 5. PLACE OBSERVATION WELL(S) ACCORDING TO THE PLAN AND VERIFY THAT THE ELEVATIONS ARE CORRECT.
 6. PLACE & COMPACT AGGREGATE BASE
 -INSPECT ALL AGGREGATES TO ENSURE THEY ARE CLEAN, FREE OF FINES, AND CONFORM TO THE PLANS.
 -IF AGGREGATE DELIVERED TO THE SITE CANNOT BE IMMEDIATELY PLACED INTO THE EXCAVATION, THEY SHOULD BE STOCKPILED ON AN IMPROVED SURFACE, GEOTEXTILE, OR ON AN IMPROVED MATERIAL TO KEEP THE AGGREGATE FREE OF SEDIMENT.
 -IF AGGREGATE BECOMES CONTAMINATED WITH SEDIMENT, THEN IT SHALL BE REPLACED WITH CLEAN AGGREGATE.
 -BEFORE PLACING THE AGGREGATE BASE, REMOVE ANY ACCUMULATION OF SEDIMENTS ON THE FINISHED SOIL SUBGRADE.
 -IF THE EXPOSED SUBGRADE HAS BEEN SUBJECT TO RAINFALL BEFORE PLACEMENT OF THE AGGREGATE, THEN THE SUBGRADE SURFACE MUST BE SCARIFIED TO BREAK UP THE RESULTING SURFACE CRUST.
 -SLOPES & ELEVATIONS SHALL BE CHECKED ON THE SOIL SUBGRADE AND THE FINISHED ELEVATION OF BASE (AFTER COMPACTION) OR BEDDING MATERIALS TO ASSURE THEY CONFORM TO THE PLANS AND SPECIFICATIONS.
 -THE AGGREGATE SHALL BE SPREAD (NOT DUMPED) BY A FRONT-END LOADER OR FROM DUMP TRUCKS DEPOSITING FROM NEAR THE EDGE OF THE EXCAVATED AREA OR DIRECTLY ON DEPOSITED AGGREGATE PILES. MOISTEN AND SPREAD THE WASHED STONE WITH A PLUMBER'S SHANK OR BY HAND. THE PERMEABLE PAVEMENT MANUFACTURER OR THAT FROM INDUSTRY GUIDELINES.
 -BE SURE THAT CORNERS, AREAS AROUND UTILITY STRUCTURES AND OBSERVATION WELLS, & TRANSITION AREAS TO OTHER PAVEMENTS ARE ADEQUATELY COMPACTED.
 -DO NOT CRUSH AGGREGATES DURING COMPACTION.

7. INSTALL CURB RESTRAINTS AND PAVEMENT BARRIERS
 -EDGE RESTRAINTS AND BARRIERS BETWEEN PERMEABLE PAVEMENT SHALL BE INSTALLED PER THE PLAN.
 -BEFORE MOVING ON TO CONSTRUCTION STEP 8, BE CERTAIN THE DESIGN AND INSTALLATION ARE CONSISTENT.
 8. INSTALL PAVEMENT COURSE
 -PERVIOUS CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF ACI 922.1 SPECIFICATION FOR PERVIOUS CONCRETE.
 -INSTALLATION OF THE PERVIOUS CONCRETE MAY BE ACCOMPLISHED USING EITHER THE ONE-STEP OR TWO-STEP METHOD.
 9. PROTECT THE PAVEMENT THROUGH PROJECT COMPLETION
 -IF IT IS NOT POSSIBLE TO INSTALL THE PERMEABLE PAVEMENT AT THE END OF THE SITE CONSTRUCTION TIMELINE, THEN PROTECT THE PAVEMENT UNTIL PROJECT COMPLETION. THIS SHALL BE DONE BY:
 A) ROUTING CONSTRUCTION ACCESS THROUGH OTHER PORTIONS OF THE SITE SO THAT NO CONSTRUCTION TRAFFIC PASSES THROUGH THE PERMEABLE PAVEMENT SITE (INSTALL BARRIERS/FENCES AS NEEDED).
 B) IF THIS IS NOT POSSIBLE, PROTECT THE PAVEMENT PER THE CONSTRUCTION DOCUMENTS. PROTECTION TECHNIQUES THAT MAY BE USED INCLUDE MATS, PLASTIC SHEETING, BARRIERS TO LIMIT ACCESS, OR MOVING THE STABILIZED CONSTRUCTION ENTRANCE.
 C) SCHEDULE STREET SWEEPING DURING AND AFTER CONSTRUCTION TO PREVENT SEDIMENT FROM ACCUMULATING ON THE PAVEMENT.



SITE AREA DESCRIPTION	GROUND STABILIZATION	
	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FEET OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERMETERS AND HOW ZONES)
*NEW HANOVER COUNTY LAND QUALITY SEEDING DEADLINES: 21 CALENDAR DAYS FOR ALL SLOPES & 15 WORKING DAYS FOR ALL OTHER AREAS.		



REV NO.	DESCRIPTION	DATE
1	REVISED TO ADD DETAILS	4-18-13
2	REVISED PER CITY OF WILMINGTON	4-30-13
3	REVISED PER CLIENT	5-10-13

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013018
 SIGNED [Signature]

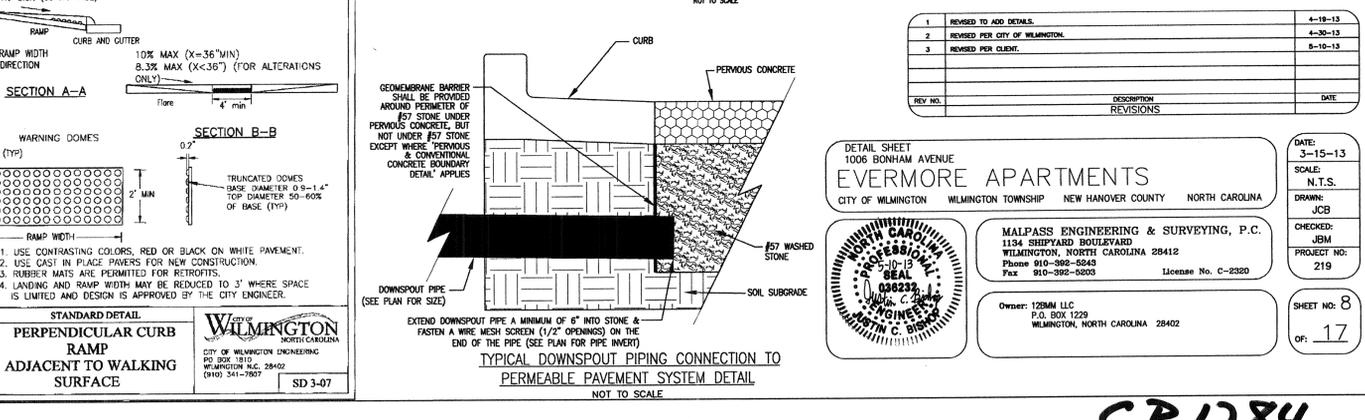
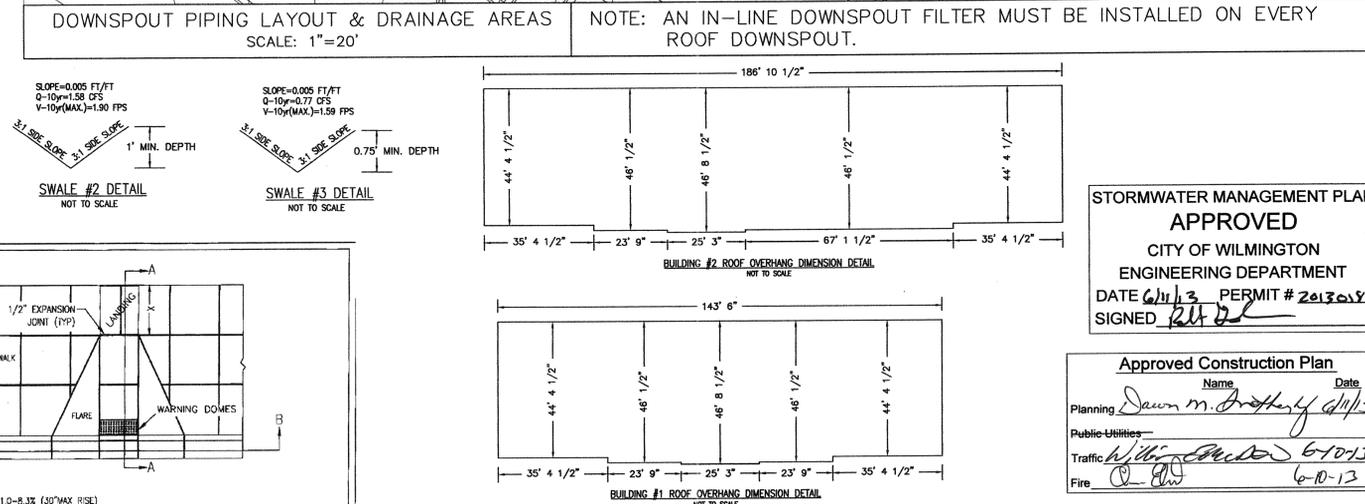
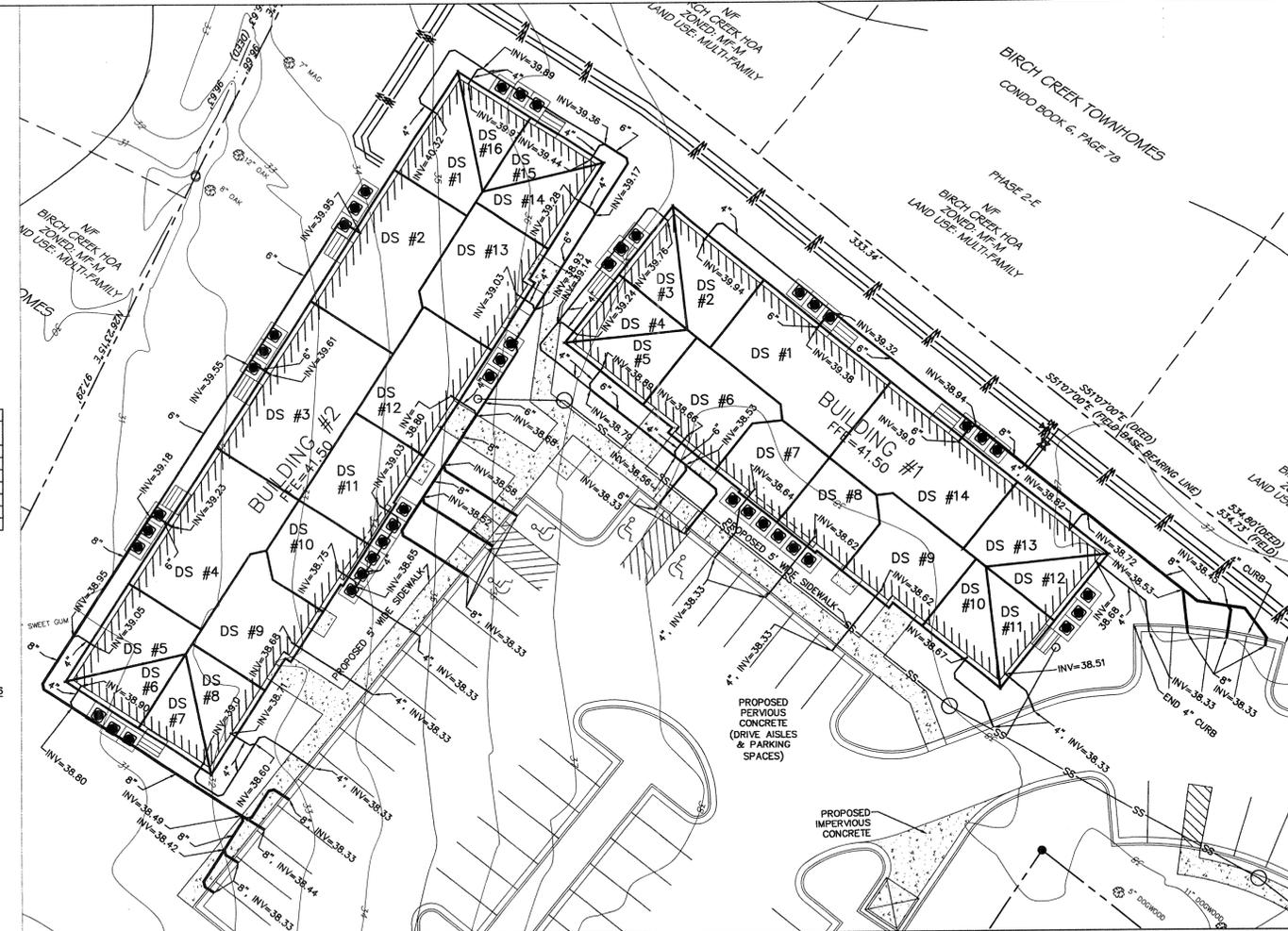
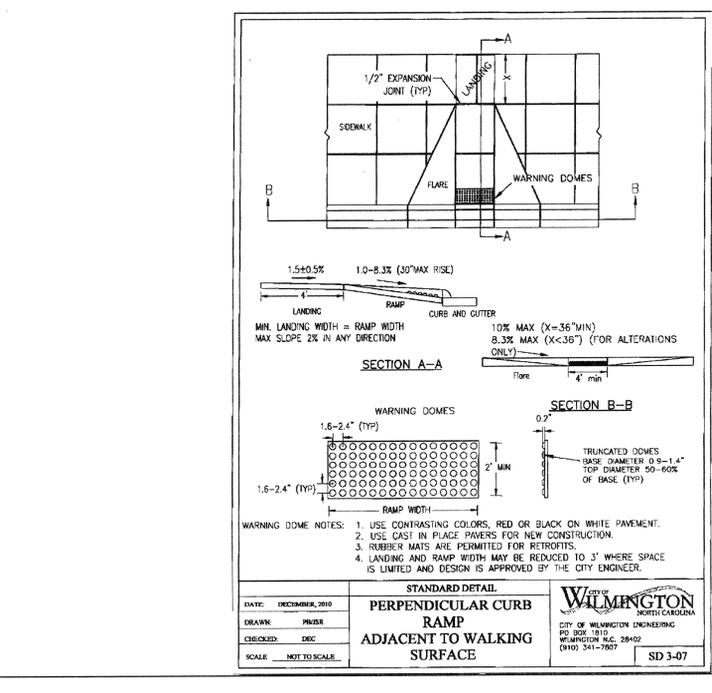
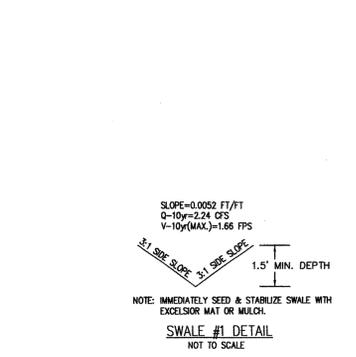
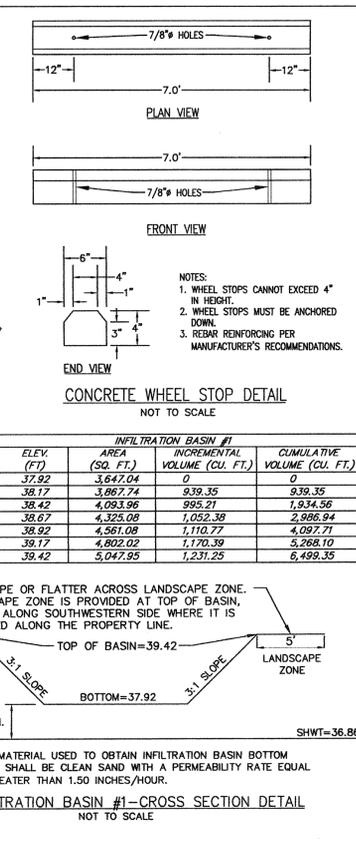
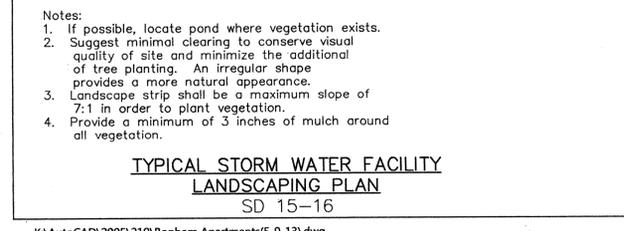
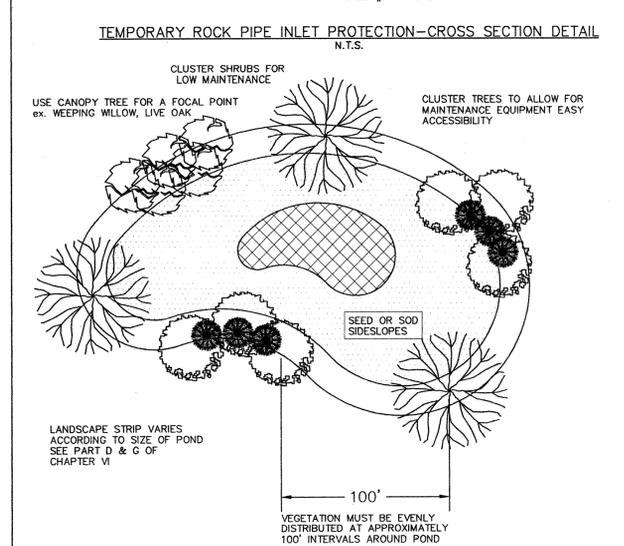
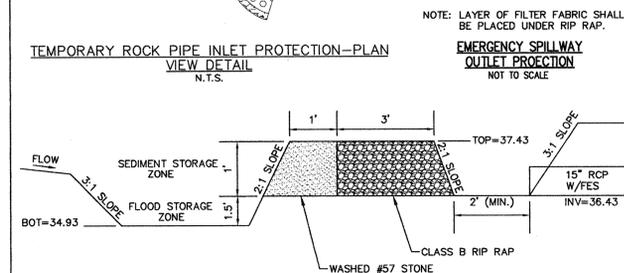
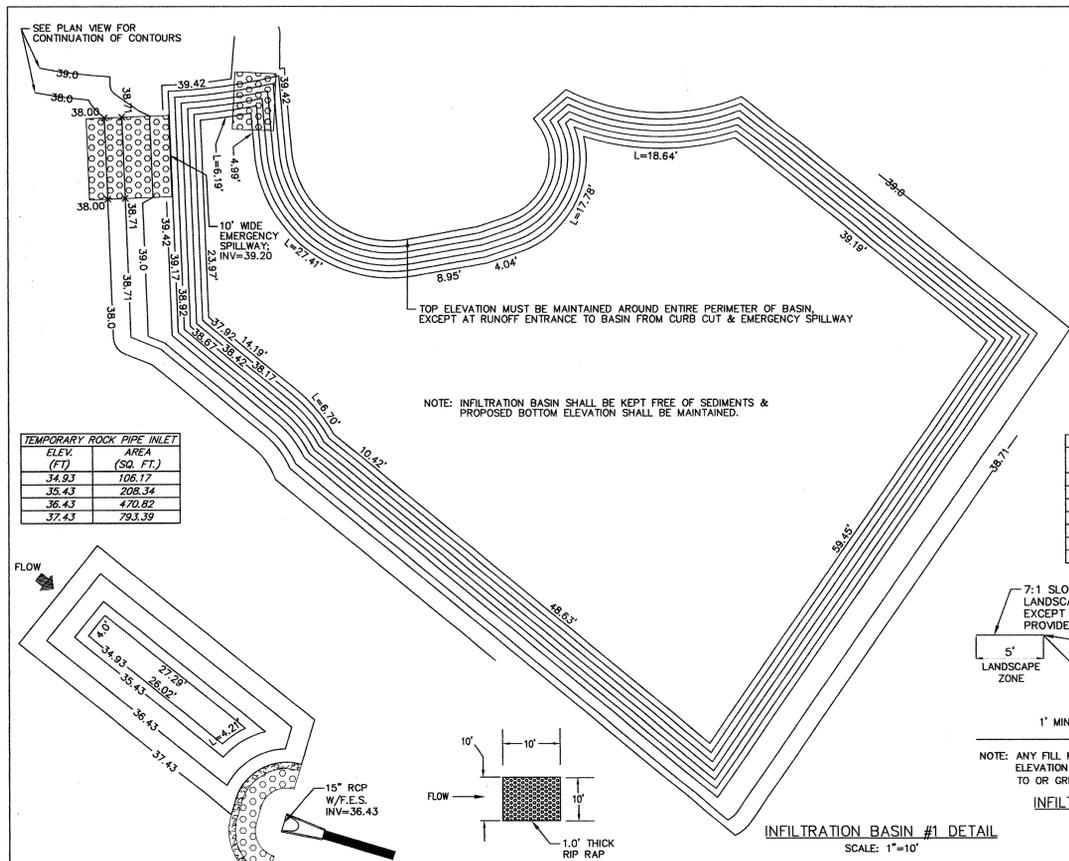
Approved Construction Plan
 Name: Dawn Driffling Date: 6/11/13
 Public Utilities: [Signature]
 Traffic: [Signature] 6-10-13
 File: [Signature] 6-10-13

DETAIL SHEET
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-368-8248
 Fax 910-368-8203 License No. C-2820

Professional Seal
 MALPASS ENGINEERING & SURVEYING, P.C.
 5-11-13
 03823
 P.E. JOHN W. MALPASS

DATE: 5-15-13
SCALE: N.T.S.
DRAWN: JCB
CHECKED: JEM
PROJECT NO.: 219
SHEET NO.: 7
OF: 17



STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON ENGINEERING DEPARTMENT

DATE 6/11/13 PERMIT # 2013048

SIGNED [Signature]

Approved Construction Plan

Name [Name] Date [Date]

Planning [Signature] 6/11/13

Public Utilities [Signature] 6/10/13

Fire [Signature] 6-10-13

REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADD DETAILS.	4-18-13
2	REVISED PER CITY OF WILMINGTON.	4-30-13
3	REVISED PER CLIENT.	8-16-13

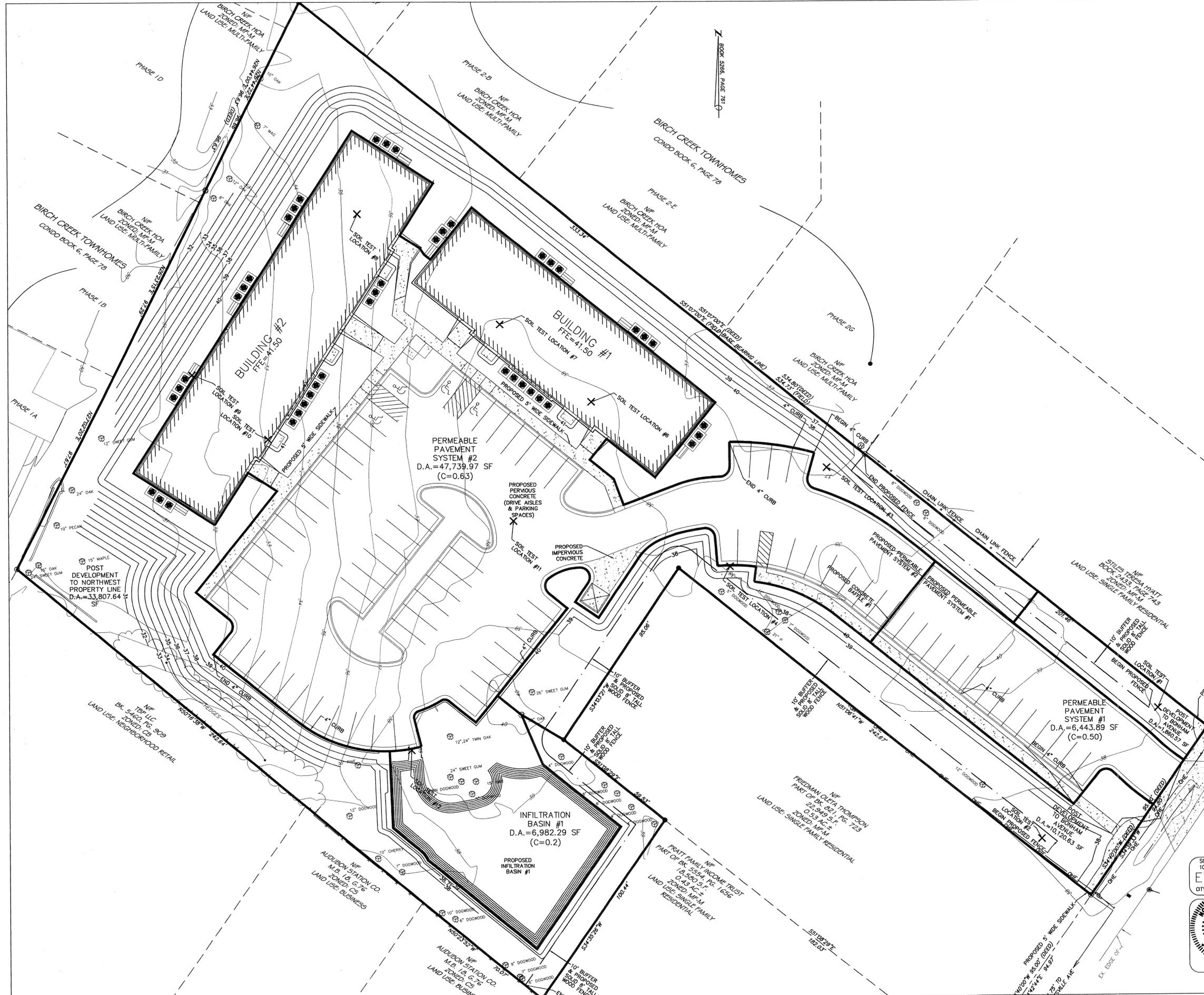
DETAIL SHEET 1006 BONHAM AVENUE EVERMORE APARTMENTS CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C. 1134 SHEPARD BOULEVARD WILMINGTON, NORTH CAROLINA 28412 Phone 910-392-6843 Fax 910-392-6803 License No. C-2320

Owner: 128M LLC P.O. BOX 1229 WILMINGTON, NORTH CAROLINA 28402

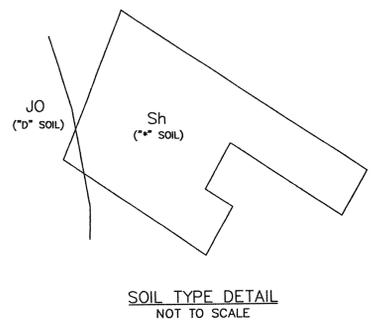
DATE: 3-15-13 SCALE: N.T.S. DRAWN: JCB CHECKED: JSM PROJECT NO: 219 SHEET NO: 8 OF: 17

CP1284



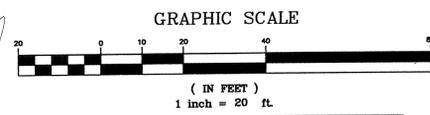
SOIL TEST RESULTS PER S&ME, INC.				
TEST LOCATION	EXISTING GROUND ELEVATION (FEET)*	SHWT (INCHES BELOW GROUND SURFACE)**	SHWT ELEVATION (FEET)***	HYDRAULIC CONDUCTIVITY RATE (INCHES PER HOUR)**
1	38.00	11 (PERCHED)	37.09	5.71
		27 (APPARENT)	35.75	1.31
2	37.42	10 (PERCHED)	36.59	6.19
		8 (PERCHED)	36.15	
3	36.81	21 (APPARENT)	35.06	5.33
		13 (PERCHED)	36.87	6.76
4	37.95	27 (APPARENT)	35.70	2.90
		18 (APPARENT)	36.81	2.67
6	38.31	33 (APPARENT)	35.56	
		11 (PERCHED)	37.17	3.14
7	38.08	27 (APPARENT)	35.83	
		13	34.41	5.14
8	35.49	8	30.70	4.36
9	31.36	10	32.04	2.24
10	32.87	24	36.45	4.99
11	38.45	21	36.86	2.76
12	38.61			

* INFORMATION PROVIDED BY ARNOLD W. CARSON, PLS.
 ** INFORMATION PROVIDED BY S&ME, INC.
 *** CALCULATED BASED ON INFORMATION PROVIDED BY OTHERS



STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013015
 SIGNED [Signature]

Approved Construction Plan
 Name: Dawn M. J. [Signature] Date: 6/11/13
 Planning: [Signature] 6/11/13
 Public Utilities: [Signature]
 Traffic: [Signature] 6/10/13
 Fire: [Signature] 6/10/13



REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADJUST DRAINAGE AREAS.	4-18-13
2	REVISED PER CITY OF WILMINGTON.	4-30-13
3	REVISED PER CLIENT.	5-10-13

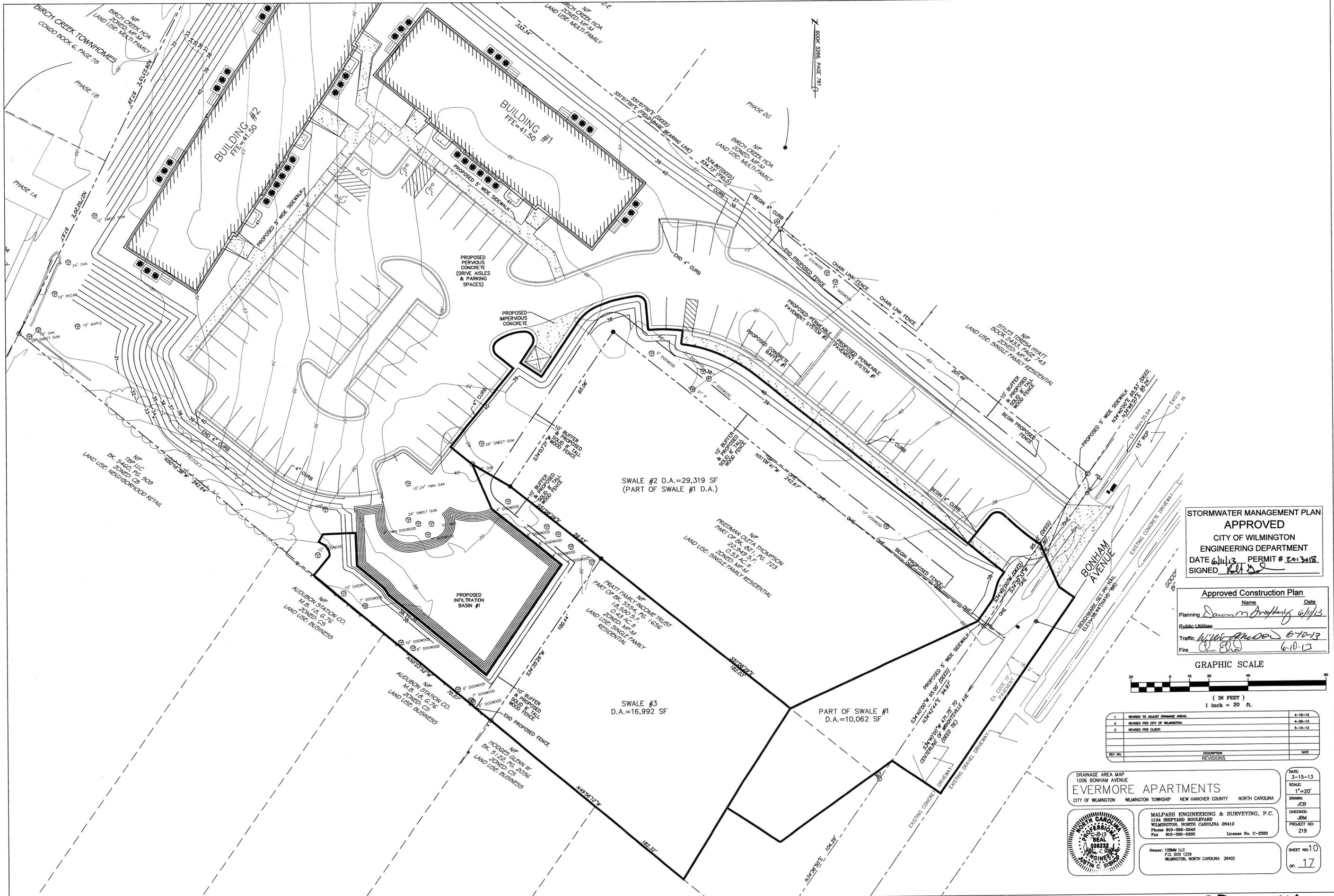
SOIL TEST & DRAINAGE AREA MAP
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIFFARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-0243 License No. C-2320
 Fax 910-392-0255

Owner: 128MM LLC
 P.O. BOX 1229
 WILMINGTON, NORTH CAROLINA 28402

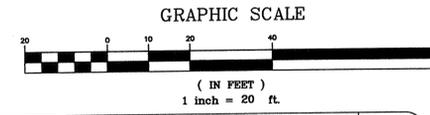
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SCALE: 1"=20'
DRAWN: JCB
CHECKED: JBM
PROJECT NO.: 219
SHEET NO.: 9
OF: 17

CP 1284



STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013018
 SIGNED [Signature]

Approved Construction Plan
 Name _____ Date _____
 Planning Dawn M. Brophy 6/11/13
 Public Utilities _____
 Traffic Willie McLeod 6-10-13
 Fire [Signature] 6-10-13



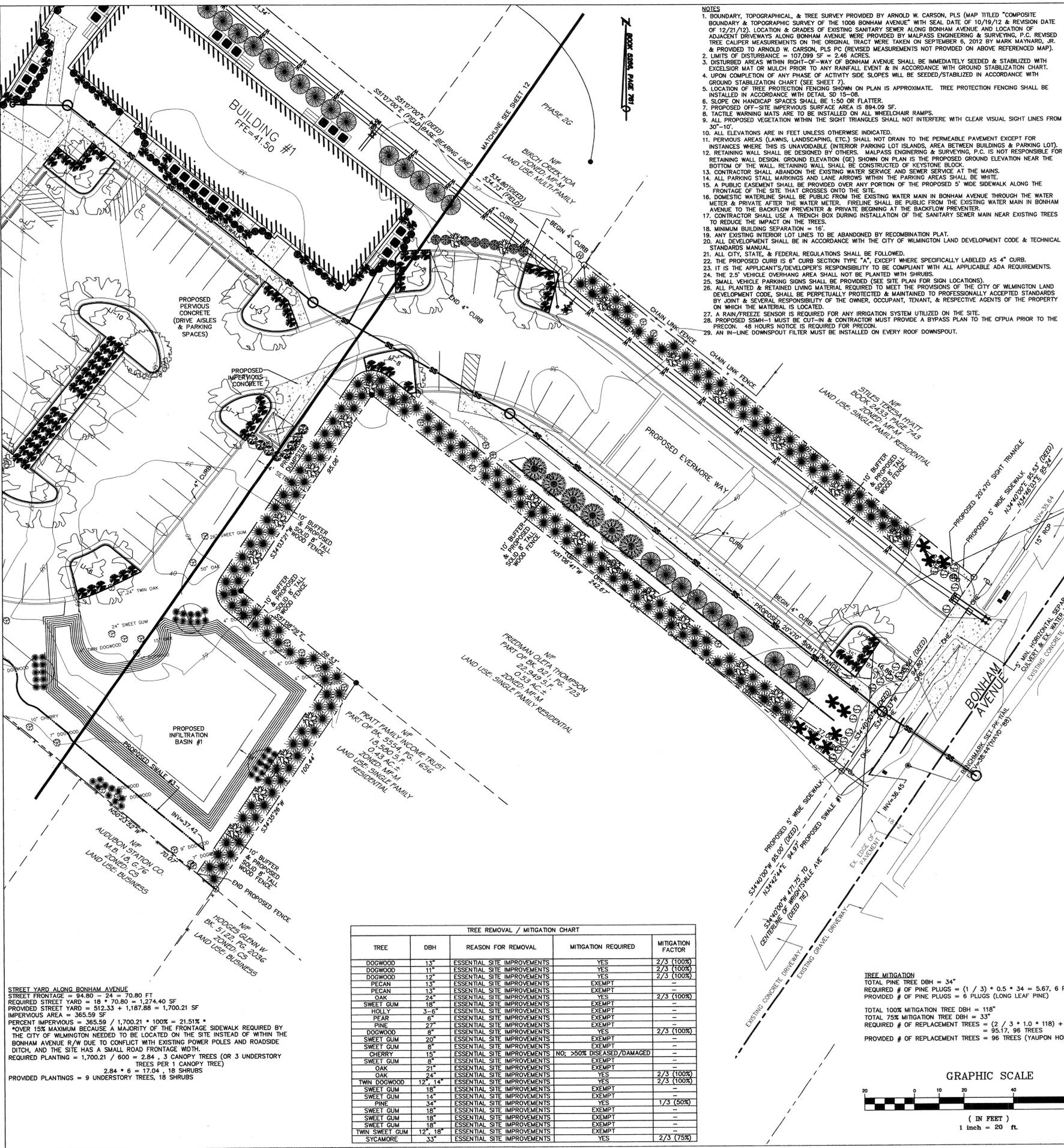
REV. NO.	DESCRIPTION	DATE
1	REVISED TO ADJUST DRAINAGE AREAS	4-19-13
2	REVISED PER CITY OF WILMINGTON	4-30-13
3	REVISED PER CLIENT	5-10-13

EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

DATE: 3-15-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 219
 SHEET NO: 10
 OF: 17

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHELBY RD BOULYARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-8243 License No. C-2320
 Fax 910-392-5203

Owner: 128M LLC
 P.O. BOX 1229
 WILMINGTON, NORTH CAROLINA 28402



- NOTES**
- BOUNDARY, TOPOGRAPHICAL, & TREE SURVEY PROVIDED BY ARNOLD W. CARSON, PLS (MAP TITLED "COMPOSITE BOUNDARY & TOPOGRAPHIC SURVEY OF THE 1006 BONHAM AVENUE WITH SEAL DATE OF 10/19/12 & REVISION DATE OF 12/21/12). LOCATION & GRADES OF EXISTING SANITARY SEWER ALONG BONHAM AVENUE AND LOCATION OF ADJACENT DRIVEWAYS ALONG BONHAM AVENUE WERE PROVIDED BY MALPASS ENGINEERING & SURVEYING, P.C. REVISED TREE CALIPER MEASUREMENTS ON THE ORIGINAL TRACT WERE TAKEN ON SEPTEMBER 6, 2012 BY MARK MAYNARD, JR. & PROVIDED TO ARNOLD W. CARSON, PLS PC (REVISED MEASUREMENTS NOT PROVIDED ON ABOVE REFERENCED MAP).
 - LIMITS OF DISTURBANCE = 107,099 SF = 2.46 ACRES.
 - DISTURBED AREAS WITHIN RIGHT-OF-WAY OF BONHAM AVENUE SHALL BE IMMEDIATELY SEEDDED & STABILIZED WITH EXCELISOR MAT OR MULCH PRIOR TO ANY RAINFALL EVENT & IN ACCORDANCE WITH GROUND STABILIZATION CHART.
 - UPON COMPLETION OF ANY PHASE OF ACTIVITY SIDE SLOPES WILL BE SEEDDED/STABILIZED IN ACCORDANCE WITH GROUND STABILIZATION CHART (SEE SHEET 7).
 - LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 15-08.
 - SLOPE ON HANDICAP SPACES SHALL BE 1:50 OR FLATTER.
 - PROPOSED OFF-SITE IMPERVIOUS SURFACE AREA IS 894.09 SF.
 - TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.
 - ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.
 - PERVIOUS AREAS (LAWNS, LANDSCAPING, ETC.) SHALL NOT DRAIN TO THE PERMEABLE PAVEMENT EXCEPT FOR INSTANCES WHERE THIS IS UNAVOIDABLE (INTERIOR PARKING LOT DRAINS, AREA BETWEEN BUILDINGS & PARKING LOT).
 - RETAINING WALL SHALL BE DESIGNED BY OTHERS. MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR RETAINING WALL DESIGN. GROUND ELEVATION (GE) SHOWN ON PLAN IS THE PROPOSED GROUND ELEVATION NEAR THE BOTTOM OF THE WALL. RETAINING WALL SHALL BE CONSTRUCTED OF KEYSTONE BLOCK.
 - CONTRACTOR SHALL ABANDON THE EXISTING WATER MAIN AND SEWER SERVICE AT THE MAINS.
 - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - A PUBLIC EASEMENT SHALL BE PROVIDED OVER ANY PORTION OF THE PROPOSED 5' WIDE SIDEWALK ALONG THE FRONTAGE OF THE SITE THAT CROSSES ONTO THE SITE.
 - DOMESTIC WATERLINE SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE THROUGH THE WATER METER & PRIVATE AFTER THE WATER METER. FIRE MAIN SHALL BE PUBLIC FROM THE EXISTING WATER MAIN IN BONHAM AVENUE TO THE BACKFLOW PREVENTER & PRIVATE BEGINNING AT THE BACKFLOW PREVENTER.
 - CONTRACTOR SHALL USE A TRENCH BOX DURING INSTALLATION OF THE SANITARY SEWER MAIN NEAR EXISTING TREES TO REDUCE THE IMPACT ON THE TREES.
 - MINIMUM BUILDING SEPARATION = 15'.
 - ANY EXISTING INTERIOR LOT LINES TO BE ABANDONED BY RECONSTRUCTION PLAT.
 - ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE & TECHNICAL STANDARDS MANUAL.
 - ALL CITY, STATE, & FEDERAL REGULATIONS SHALL BE FOLLOWED.
 - THE PROPOSED CURB IS 8" CURB SECTION TYPE "A", EXCEPT WHERE SPECIFICALLY LABELED AS 4" CURB.
 - IT IS THE APPLICANT'S/DEVELOPER'S RESPONSIBILITY TO BE COMPLIANT WITH ALL APPLICABLE ADA REQUIREMENTS.
 - THE 2.5' VEHICLE OVERHANG AREA SHALL NOT BE PLANTED WITH SHRUBS.
 - SMALL VEHICLE PARKING SIGNS SHALL BE PROVIDED (SEE SITE PLAN FOR SIGN LOCATIONS).
 - ALL PLANTED & RETAINED LIVING MATERIAL REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED & MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT & SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, & RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.
 - A RAIN/FREEZE SENSOR IS REQUIRED FOR ANY IRRIGATION SYSTEM UTILIZED ON THE SITE.
 - PROPOSED SOIL #1 MUST BE CUT-IN & CONTRACTOR MUST PROVIDE A BYPASS PLAN TO THE CPFA PRIOR TO THE PRECON. 48 HOURS NOTICE IS REQUIRED FOR PRECON.
 - AN IN-LINE DOWNSPOUT FILTER MUST BE INSTALLED ON EVERY ROOF DOWNSPOUT.

TREES PER DISTURBED ACRE
 2.46 ACRES SET 15 = 36.90, 37 TREES REQUIRED
 38 TREES SET 15 = 31,367.32 SF
 152 TREES PROPOSED (9 STREET YARD, 14 INTERIOR LANDSCAPE ISLAND, 22 BUFFER YARD, 2 PARKING BUFFER, 3 STORMWATER LANDSCAPE, 102 MITIGATION (INCLUDES PINE PLUGS))
 190 TREES (TOTAL)
 *SEE LANDSCAPING PLAN FOR PROVIDED TREES

INTERIOR SHADING
 PARKING FACILITY AREA (PARKING LOT AREA TO BACK OF CURB MINUS LANDSCAPE ISLANDS PLUS DRIVEWAY WITHIN BONHAM AVE. R/W)
 REQUIRED INTERIOR SHADING (IS) = 0.2 * 31,367.32 = 6,273.47 SF
 PROVIDED INTERIOR SHADING (LANDSCAPE ISLANDS 1-10) = 6,797 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED TREES

FOUNDATION PLANTING - SOUTH EAST SIDE OF BUILDING #1
 REQUIRED FOUNDATION PLANTING (MAX.) = (41.71' * 29.71') * 0.12 = 148.71 SF
 PROVIDED FOUNDATION PLANTING = 150.89 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING - SOUTH WEST SIDE OF BUILDING #1
 REQUIRED FOUNDATION PLANTING (MAX.) = [(140.84' * 29.71') + (70.08' * 2.17') + (0.5' * 23.72' * 7.0')] * 0.12 = 530.34 SF
 PROVIDED FOUNDATION PLANTING = 551.18 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING - SOUTH EAST SIDE OF BUILDING #2
 REQUIRED FOUNDATION PLANTING (MAX.) = [(184.21' * 29.71') + (113.46' * 2.17') + (0.5' * 23.72' * 7.0')] * 0.12 = 696.26 SF
 PROVIDED FOUNDATION PLANTING = 712.26 SF
 *SEE LANDSCAPING PLAN FOR PROVIDED PLANTINGS

INTERIOR LANDSCAPING ISLANDS				
LANDSCAPE ISLAND	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	PERCENT IMPERVIOUS	INTERIOR SHADING (SF)
LI-1	217.17	0	0	354
LI-2	217.86	0	0	354
LI-3	284.49	0	0	707
LI-4	312.78	0	0	354
LI-5	286.65	0	0	354
LI-6	351.90	0	0	707
LI-7	244.73	0	0	707
LI-8	217.76	0	0	157
LI-9	220.36	0	0	354
LI-10	1,466.02	0	0	2,749



- VICINITY MAP**
 SCALE: 1"=1,000'
- LEGEND**
- = EXISTING IRON PIPE
 - = SET IRON ROD
 - ⊙ = SET PK NAIL
 - ⊕ = EXISTING POWER POLE
 - ⊖ = EXISTING WATER METER
 - ⊞ = EXISTING MAILBOX
 - ⊗ = EXISTING LIGHT POLE
 - ⊛ = EXISTING FIRE HYDRANT
 - ⊚ = EXISTING TREE
 - = EXISTING CONTOUR
 - = CENTERLINE
 - = R/W
 - = EXISTING OVERHEAD LINE
 - = EXISTING DITCH
 - = EXISTING FENCE
 - = PROPERTY LINE
 - = ADJACENT LOT LINES (APPROX.)
 - = PROPOSED BUFFER/SOLID FENCE
 - = PROPOSED SETBACK
 - = PROPOSED STREET YARD
 - = PROPOSED WATER MAIN
 - = PROPOSED SANITARY SEWER
 - = PROPOSED GATE VALVE
 - = PROPOSED FIRE HYDRANT
 - = PROPOSED SWALE

PLANT SCHEDULE

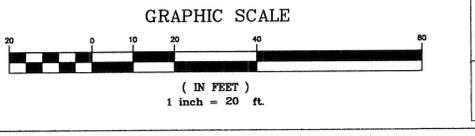
TREES	QTY	BOTANICAL NAME / COMMON NAME	CALIPER	HEIGHT @ PLANTING
	11	QUERCUS PHELLOS / WILLOW OAK	2" (MIN.)	
	3	CERCIS CANADENSIS / RED BUD	2" (MIN.)	8'-10'
	9	MAGNOLIA STELLATA / STAR MAGNOLIA	2" (MIN.)	8'-10'
	24	PRUNUS SERRULATA / JAPANESE FLOWERING CHERRY	2" (MIN.)	8'-10'
	3	BETULA NIGRA / RIVER BIRCH	2" (MIN.)	
	96	ILEX VOMITORIA / YAUPON HOLLY	2" (MIN.)	
	6	PINUS PALUSTRIS / LONG LEAF PINE	PLUGS	
SHRUBS	QTY	BOTANICAL NAME / COMMON NAME		HEIGHT @ PLANTING
	8	PITTIOSPORUM TOBIRA / DWARF PITTIOSPORUM		12" (MIN.)
	18	ILEX CRENATA / HELLERI		12" (MIN.)
	119	ILEX VOMITORIA NANA / DWARF YAUPON HOLLY		12" (MIN.)
	71	HEMEROCALLIS SPP. / DAYLILY		12" (MIN.)
	184	LIGUSTRUM JAPONICUM / WAX LEAF LIGUSTRUM		36" (MIN.)
	8	ILEX CORNUTA / DWARF BUFORD HOLLY		36" (MIN.)
	40	PENNISETUM ALOOPECUROIDES CASSIAN / DWARF FOUNTAIN GRASS		12" (MIN.)

STREET YARD ALONG BONHAM AVENUE
 STREET FRONTAGE = 94.80 - 24 = 70.80 FT
 REQUIRED STREET YARD = 18 * 70.80 = 1,274.40 SF
 PROVIDED STREET YARD = 512.33 + 1,187.88 = 1,700.21 SF
 IMPERVIOUS AREA = 365.59 SF
 PERCENT IMPERVIOUS = 365.59 / 1,700.21 * 100% = 21.51%
 *OVER 15% MAXIMUM BECAUSE A MAJORITY OF THE FRONTAGE SIDEWALK REQUIRED BY THE CITY OF WILMINGTON NEEDED TO BE LOCATED ON THE SITE INSTEAD OF WITHIN THE BONHAM AVENUE R/W DUE TO CONFLICT WITH EXISTING POWER POLES AND ROADSIDE DITCH, AND THE SITE HAS A SMALL ROAD FRONTAGE WIDTH.
 REQUIRED PLANTING = 1,700.21 / 800 = 2.13 * 3 CANOPY TREES (OR 3 UNDERSTORY TREES PER 1 CANOPY TREE)
 2.84 * 6 = 17.04, 18 SHRUBS
 PROVIDED PLANTINGS = 9 UNDERSTORY TREES, 18 SHRUBS

TREE	DBH	REASON FOR REMOVAL	MITIGATION REQUIRED	MITIGATION FACTOR
DOGWOOD	13"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
DOGWOOD	11"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
DOGWOOD	12"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
PECAN	13"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
PECAN	13"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SWEET GUM	18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
HOLLY	3-6"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
PEAR	6"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
PINE	22"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
DOGWOOD	8"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
SWEET GUM	20"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SWEET GUM	8"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
CHERRY	15"	ESSENTIAL SITE IMPROVEMENTS	NO >50% DISEASED/DAMAGED	—
SWEET GUM	8"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
OAK	21"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
OAK	7"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
TWIN DOGWOOD	12", 14"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (100%)
SWEET GUM	18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SWEET GUM	14"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
PINE	34"	ESSENTIAL SITE IMPROVEMENTS	YES	1/3 (50%)
SWEET GUM	18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SWEET GUM	18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SWEET GUM	18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
TWIN SWEET GUM	12", 18"	ESSENTIAL SITE IMPROVEMENTS	EXEMPT	—
SYCAMORE	33"	ESSENTIAL SITE IMPROVEMENTS	YES	2/3 (75%)

TREE MITIGATION
 TOTAL PINE TREE DBH = 34"
 REQUIRED # OF PINE PLUGS = (1 / 3) * 0.5 * 34 = 5.67, 6 PLUGS
 PROVIDED # OF PINE PLUGS = 6 PLUGS (LONG LEAF PINE)

TOTAL 100% MITIGATION TREE DBH = 118"
 TOTAL 75% MITIGATION TREE DBH = 33"
 REQUIRED # OF REPLACEMENT TREES = (2 / 3 * 1.0 * 118) + (2 / 3 * 0.75 * 33) = 95.17, 96 TREES
 PROVIDED # OF REPLACEMENT TREES = 96 TREES (YAUPON HOLLY)



STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013015
 SIGNED [Signature]

Approved Construction Plan
 Name [Signature] Date 6/11/13
 Planning [Signature] 6/10/13
 Public Utilities [Signature] 6/10/13
 Fire [Signature] 6/10/13

REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON	4-10-13
2	REVISED PER CITY OF WILMINGTON	4-30-13
3	REVISED PER CLIENT	5-10-13
4	REVISED TO ADJUST LIMITS OF DISTURBANCE UNDER TREES PER DISTURBED ACRE.	5-20-13

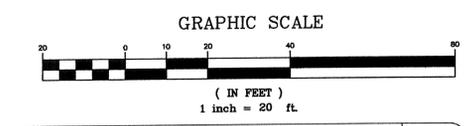
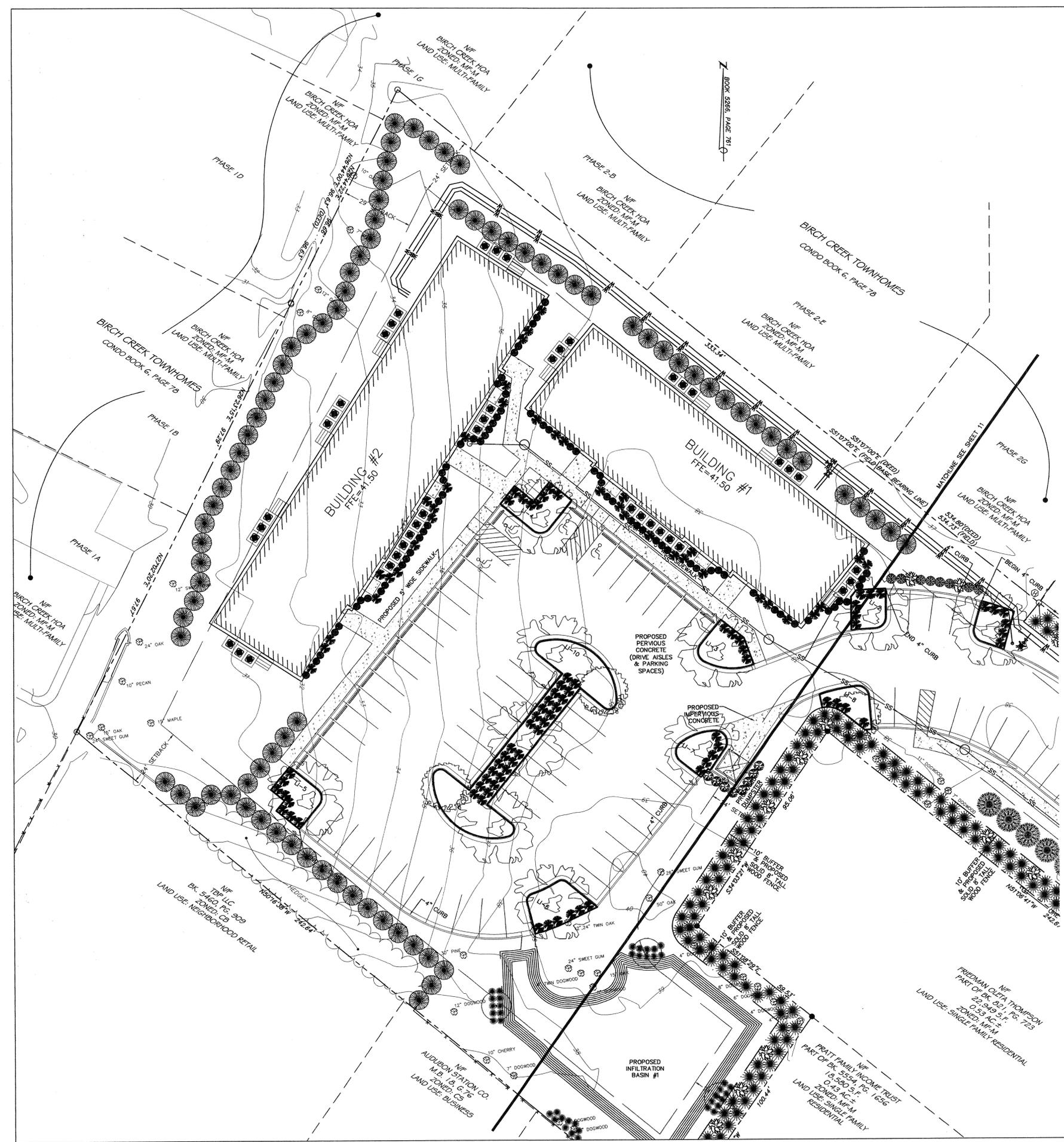
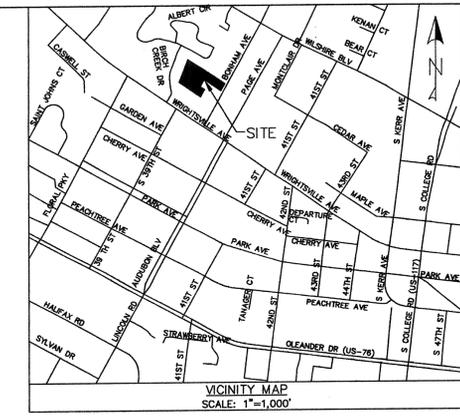
LANDSCAPE PLAN
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1154 SHELBY BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-0243
 Fax 910-392-0253 License No. C-2320

Owner: 1258M LLC
 P.O. BOX 1229
 WILMINGTON, NORTH CAROLINA 28402

DATE: 3-15-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 219
 SHEET NO: 11
 OF: 17

CP1284



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON	4-18-13
2	REVISED PER CLIENT	5-10-13

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE 6/11/13 PERMIT # 2013014
 SIGNED [Signature]

Approved Construction Plan

Name	Date
Planning <u>Dawn M. Griffith</u>	<u>6/11/13</u>
Public Utilities	
Traffic <u>[Signature]</u>	<u>6/10/13</u>
Fire <u>[Signature]</u>	<u>6/10/13</u>

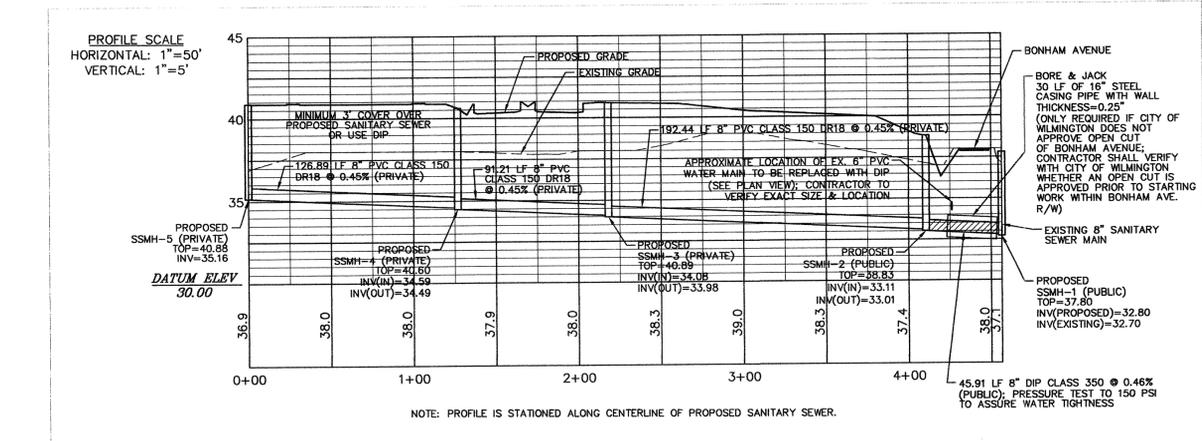
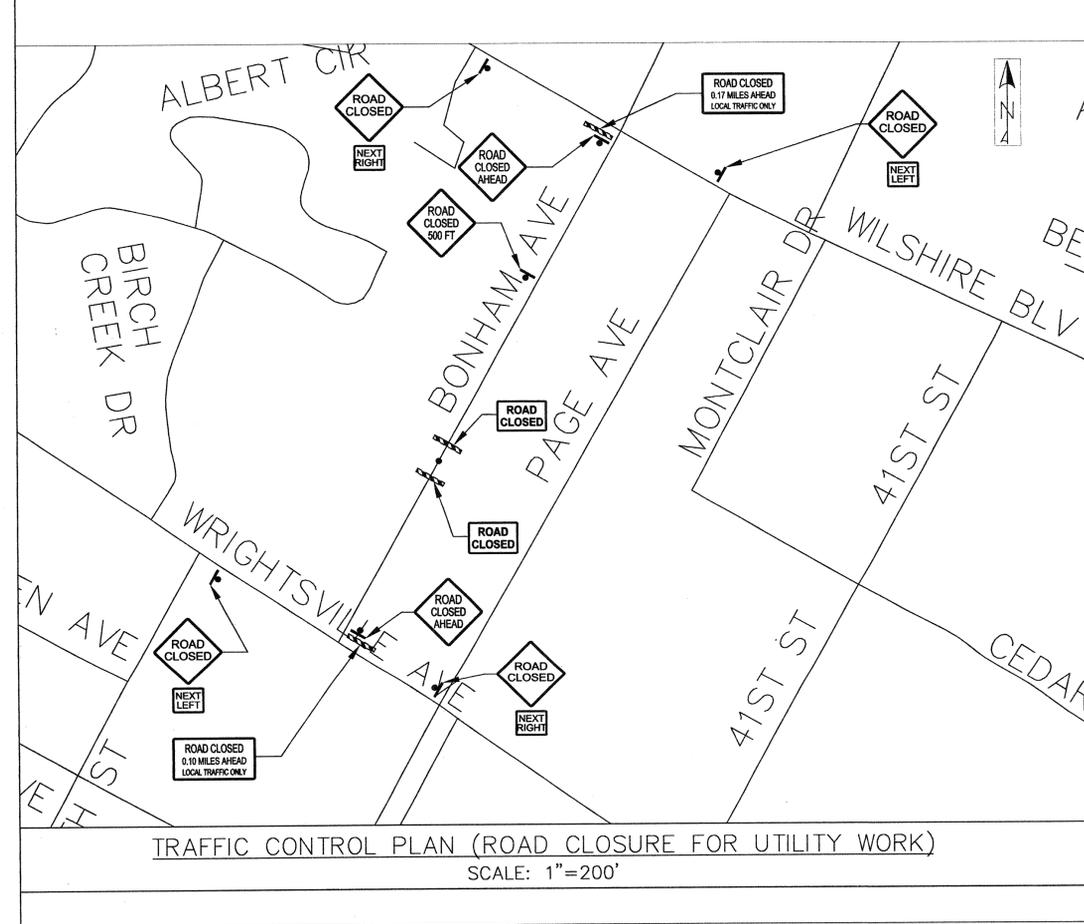
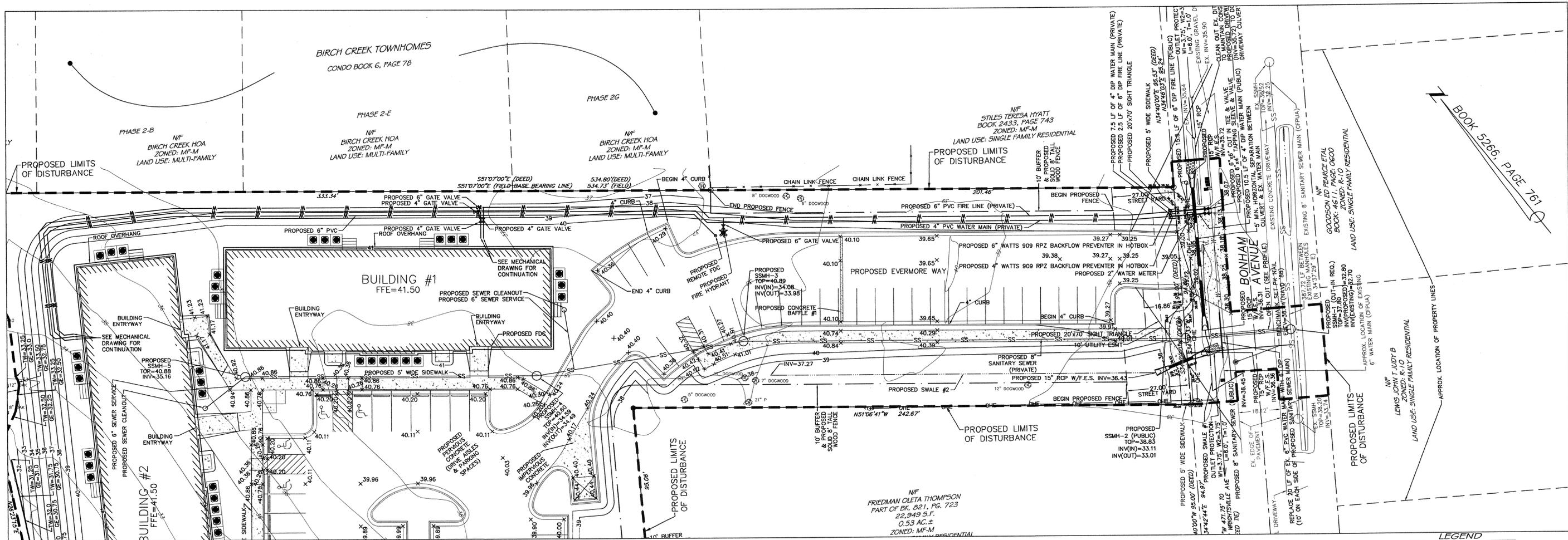
LANDSCAPE PLAN
 1006 BONHAM AVENUE
EVERMORE APARTMENTS
 CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA



MALPASS ENGINEERING & SURVEYING, P.C.
 1154 SHEPARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-6843
 Fax 910-392-0203 License No. C-2320

Owner: 1288M LLC
 P.O. BOX 1229
 WILMINGTON, NORTH CAROLINA 28402

DATE: 3-15-13
 SCALE: 1"=20'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 219
 SHEET NO: 12
 OF: 17



- TRAFFIC CONTROL PLAN LEGEND:**
- Type III Barricade
 - Signs
 - Point of Road Closure
- TRAFFIC CONTROL PLAN SIGN LEGEND:**
- R112 48" X 30" ROAD CLOSED
 - R113 60" X 30" ROAD CLOSED
 - W20-3 30" X 30" ROAD CLOSED
 - 24" X 18" NEXT LEFT / NEXT RIGHT

TRAFFIC CONTROL PLAN NOTE:

- CONTRACTOR MUST CONTACT THE CITY OF WILMINGTON FOR PERMISSION TO ALTER ANY EXISTING SIGNAGE.
- CONTRACTOR MUST INSTALL WARNING SIGNS IN ACCORDANCE WITH MUTCD STANDARDS.
- SEE SHEET 15 FOR PAVEMENT REPAIR DETAIL.

STANDARD SEWER NOTES
(REQUIRED ON ALL SEWER PLAN AND PROFILE SHEETS)

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
 - SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
 - ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
 - MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
 - NO FLEXIBLE COUPLINGS SHALL BE USED.
 - ALL STAINLESS STEEL FASTENERS SHALL BE 316.

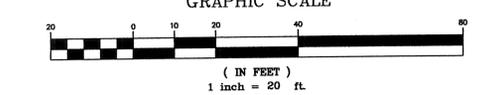
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE 6/11/13 PERMIT # 2013018
SIGNED [Signature]

Approved Construction Plan

Name: Dawn D. [Signature] Date: 6/11/13
Planning: [Signature] 6/11/13
Public Utilities: [Signature] 6/10/13
Traffic: [Signature] 6/10/13
Fire: [Signature] 6/10/13

- LEGEND**
- EXISTING IRON PIPE
 - SET IRON ROD
 - SET PK NAIL
 - EXISTING POWER POLE
 - EXISTING WATER METER
 - EXISTING MAILBOX
 - EXISTING LIGHT POLE
 - EXISTING FIRE HYDRANT
 - EXISTING TREE
 - EXISTING CONTOUR
 - CENTERLINE
 - R/W
 - EXISTING OVERHEAD LINE
 - EXISTING DITCH
 - EXISTING FENCE
 - EXISTING WATER MAIN
 - EXISTING SANITARY SEWER MAIN
 - PROPERTY LINE
 - ADJACENT LOT LINES (APPROX.)
 - PROPOSED BUFFER/SOLID FENCE
 - PROPOSED CULVERT
 - PROPOSED STREET YARD
 - PROPOSED WATER MAIN
 - PROPOSED SANITARY SEWER
 - PROPOSED GATE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED SPOT ELEVATION
 - PROPOSED CONTOUR
 - PROPOSED LIMITS OF DISTURBANCE
 - PROPOSED SWALE



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON	4-18-13
2	REVISED PER CITY OF WILMINGTON	4-30-13
3	REVISED PER CITY OF WILMINGTON	5-10-13
4	REVISED TO INDICATE OPEN CUT OF BONHAM AVE. ADJACENT LIMITS OF DISTURBANCE, & SHOW TRAFFIC CONTROL PLAN.	5-20-13

PLAN PROFILE
1006 BONHAM AVENUE
EVERMORE APARTMENTS
CITY OF WILMINGTON WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHEPARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-5243
Fax 910-392-5255 License No. C-2320

Owner: 122MM LLC
P.O. BOX 1229
WILMINGTON, NORTH CAROLINA 28402

DATE: 3-15-13
SCALE: 1"=20'
DRAWN: JCB
CHECKED: JBM
PROJECT NO: 219
SHEET NO: 13
OF: 17

CP1284