

SITE DATA
 PROPERTY OWNER: GREENFIELD STREET PROPERTIES, LLC
 PROJECT ADDRESS: 110 GREENFIELD STREET
 PIN NUMBER: R05417-014-003-000
 ZONING DISTRICT: UM

FLOOD AREA: THIS TRACT IS LOCATED IN ZONE "X" & "AE" ELEV. 9' ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 3720311700K, DATED: 6/2/2006 (PER BATEMAN CIVIL SURVEY COMPANY, PC)
 MAXIMUM ALLOWABLE BUILDING HEIGHT: 4 STORIES OR 45' (ALONG ARTERIAL STREETS), 35' OR 2 STORIES (ALONG RESIDENTIAL & COLLECTOR STREETS)
 MAXIMUM EXISTING BUILDING HEIGHT (AVG. EX. GROUND ELEV. TO HALFWAY BETWEEN HIGHEST PEAK & EAVE): 20+2.5+(10.81-5.81) = 27.50' (BUILDING #1; APPROX. PER GOOGLE EARTH)
 MAXIMUM PROPOSED BUILDING HEIGHT (AVG. EX. GROUND ELEV. TO ROOF ELEV.): 29+(11.7-9) = 31.70' (BUILDING #3)
 BUILDING SETBACKS, REQUIRED: NONE
 SITE AREA: 88,619 SF ± 2.03 ACRES ±
 NUMBER OF PROPOSED BUILDINGS: 2
 NUMBER OF EXISTING BUILDINGS: 3 (2 TO BE DEMOLISHED & 1 TO REMAIN)
 BUILDING SIZE (GROSS FLOOR AREA):

BUILDING	POST DEVELOPMENT SQUARE FOOTAGE FIRST STORY	POST DEVELOPMENT SQUARE FOOTAGE SECOND STORY
1	14,926 (BREWERY) & 3,070 (RESTAURANT)	N/A
2	2,500 (RESTAURANT) & 1,140 (RETAIL)	2,770 (OFFICE)
3	3,764 (RETAIL)	2,894 (OFFICE)

TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS ON-SITE (REPLACEMENT OF EXISTING PARKING AREAS DUE TO STORM DRAIN PIPE SYSTEM & UTILITIES INSTALLATION REMAIN LISTED/TREATED AS EXISTING, NOT PROPOSED):

BEFORE DEVELOPMENT			AFTER DEVELOPMENT				
BUILDINGS	AREA (SF)	% OF SITE	BUILDINGS (FOOTPRINT)	EX. (SF)	PROPOSED (SF)	TOTAL (SF)	% OF SITE
BUILDINGS	24,140	27.24	BUILDINGS (FOOTPRINT)	18,062	7,658	25,720	29.03
PARKING	18,607	21.00	PARKING	11,554	4,611	16,165	18.24
OTHER	15,226	17.63	PARKING-PERVIOUS (AFTER 100% CREDIT REDUCTION)	0	0	0	0.00
TOTAL	58,373	65.87	SIDEWALK	0	2,396	2,396	2.70
			OTHER (RAMP, WALL, ETC.)	245	6,928	7,173	8.12
			*FUTURE	0	888	888	1.00
			TOTAL	29,881	22,481	52,362	59.09

TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS ON-SITE WITHIN AREA CLASSIFIED AS CONSERVATION (78,477 SF) PER THE CAMA LAND USE PLAN (REPLACEMENT OF EXISTING PARKING AREAS DUE TO STORM DRAIN PIPE SYSTEM & UTILITIES INSTALLATION REMAIN LISTED/TREATED AS EXISTING, NOT PROPOSED):

BEFORE DEVELOPMENT			AFTER DEVELOPMENT				
BUILDINGS	AREA (SF)	% OF SITE	BUILDINGS (FOOTPRINT)	EX. (SF)	PROPOSED (SF)	TOTAL (SF)	% OF SITE
BUILDINGS	21,691	23.64	BUILDINGS (FOOTPRINT)	18,062	3,402	21,464	27.35
PARKING	18,607	21.00	PARKING	11,554	4,611	16,165	20.60
OTHER	14,986	19.10	PARKING-PERVIOUS (AFTER CREDIT REDUCTION)	0	0	0	0.00
TOTAL	55,284	70.45	SIDEWALK (EXPOSURE PATIOS)	0	1,895	1,895	2.41
			OTHER (RAMP, WALL, ETC.)	245	3,769	4,014	5.12
			*FUTURE	0	888	888	1.13
			TOTAL	29,881	14,565	44,426	56.61

TOTAL PROPOSED IMPERVIOUS AREAS OFF-SITE (INCLUDES FRONTAGE SIDEWALK ON-SITE):

DRIVEWAY/CURB	AREA (SF)
SIDEWALK	5,748
TOTAL	6,865

OFF STREET PARKING CALCULATIONS:

MIN. PARKING REQ. = N/A
 MAX. PARKING ALLOWED = 1 SPACE / 200 SF x 5,664 SF (OFFICES) + 1 SPACE / 1,000 SF x 14,926 SF (BREWERY) + 1 SPACE / 65 SF x 0.6 x 5,570 SF (RESTAURANT-ASSUME KITCHEN & RESTROOM FACILITIES ARE 40% OF AREA) + 1 SPACE / 200 SF x 4,904 SF (RETAIL) = 119 SPACES
 NUMBER OF PROPOSED PARKING SPACES = 81
 MIN. NUMBER OF REG. HANDICAPPED SPACES PER ADA STANDARDS FOR ACCESSIBLE DESIGN = 4
 NUMBER OF PROPOSED HANDICAPPED SPACES = 4
 NUMBER OF REG. BICYCLE PARKING SPACES = 1 SPACE / 5,000 SF x 5,664, OR 2 SPACES, WHICHEVER IS GREATER (OFFICES) + 1 SPACE / 1,000 SF x 25,400, OR 5 SPACES, WHICHEVER IS GREATER (COMMERCIAL/RETAIL) = 27
 REQUIRED NUMBER OF BICYCLE PARKING SPACES = 28
 PROVIDED NUMBER OF LOADING SPACES = 1
 PROVIDED NUMBER OF LOADING SPACES = 1
 THIS SITE IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR ANY OTHER ZONING OVERLAY DISTRICT PER THE CITY OF WILMINGTON (MAP 3117-4288) DATED OCTOBER 27, 2013
 CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN & CONSERVATION.

- CITY OF WILMINGTON STANDARD NOTES**
1. 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.
 2. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
 3. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
 4. PROTECTIVE TREE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
 5. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
 6. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
 7. 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 NAME SIGNS MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
 8. 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.
 9. 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.
 10. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY APRON PANELS, OR CURB AND GUTTER SECTIONS SHALL BE REPLACED.
 11. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
 12. PROJECT SHALL COMPLY WITH CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 332-6558 FOR INFORMATION.
 13. IF THE CONTRACTOR DESIRES CFPWA 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.
 14. ANY IRRIGATION SYSTEM SUPPLIED BY CFPWA WATER SHALL COMPLY WITH THE CFPWA CROSS CONNECTION CONTROL REGULATIONS. CALL 332-6558 FOR INFORMATION.
 15. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCOCHR OR ASSE.
 16. ALL TRAFFIC CONTROL SIGNS & MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 17. ALL PAVEMENT MARKINGS REGULATING TRAFFIC FLOW MUST BE THERMOPLASTIC.
 18. 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 AREA BEING OPEN CUT MAY BE REQUIRED.
 19. TRAFFIC ENGINEERING MUST APPROVE TRAFFIC LAYOUT PRIOR TO ACTUAL STRIPING.
 20. 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.
 21. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949.
 22. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 23. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS.

SITE INVENTORY NOTES

1. SOIL ON SITE PER THE NEW HANOVER COUNTY SOIL SURVEY IS URBAN LAND (U).
2. THERE ARE NO CAMA ACES WITHIN THE BOUNDARIES OF THE SUBJECT SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
3. THERE ARE NO KNOWN CONSERVATION RESOURCES WITHIN OR ADJACENT TO THE SUBJECT SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
4. ACCORDING TO THE NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE HPWEB GIS SERVICE, THE SUBJECT SITE CONTAINS NO LOCAL, STATE, OR FEDERALLY RECOGNIZED HISTORIC STRUCTURE(S) OR ARCHEOLOGICAL RESOURCES WITHIN ITS BOUNDARIES PER SOUTHERN ENVIRONMENTAL GROUP, INC.
5. THERE ARE NO KNOWN CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS WITHIN THE BOUNDARIES OF THE SUBJECT SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
6. THE SITE IS AN EXISTING COMMERCIAL/INDUSTRIAL SITE WITH NO FORESTED AREAS.
7. THERE ARE NO SECTION 404 WETLANDS WITHIN THE BOUNDARIES OF THE SUBJECT SITE PER SOUTHERN ENVIRONMENTAL GROUP, INC.
8. THE SUBJECT SITE CONTAINS NO NATURAL AREAS OR HABITAT FOR ANY OF THE LISTED SPECIES WITHIN NEW HANOVER COUNTY PER SOUTHERN ENVIRONMENTAL GROUP, INC.
9. THIS TRACT IS ZONED IN ZONE "X" & "AE" ELEV. 9' ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 3720311700K, DATED: 6/2/2006 (PER BATEMAN CIVIL SURVEY COMPANY, PC).
10. THERE ARE NO KNOWN EXISTING OR PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS, OR TRANSIT FACILITIES LOCATED WITHIN THE BOUNDARIES OF THE SUBJECT PARCEL PER SOUTHERN ENVIRONMENTAL GROUP, INC. ONLY EXISTING FRONTAGE SIDEWALK AROUND BLOCK IS LOCATED IN FRONT OF ADJACENT PROPERTY ON GREENFIELD STREET. FRONTAGE SIDEWALKS ALONG SOUTH FRONT STREET, GREENFIELD STREET, & SOUTH 2ND STREET ARE PROPOSED AS PART OF THE DEVELOPMENT PLAN FOR THIS PROJECT.
11. THE TRACT IS WITHIN THE CAPE FEAR RIVER BASIN & DRAINS TO GREENFIELD CREEK (SC.S.W).
12. CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN & CONSERVATION.

FIRE AND LIFE SAFETY NOTES

1. PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS OR FDOS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDOC.
2. FIRE HYDRANTS CANNOT BE FURTHER THAN 8' FROM THE CURB.
3. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
4. ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
5. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE & LIFE SAFETY DIVISION AT 910-343-0696.
6. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
7. FDOS CAN BE NO FURTHER THAN 150' FROM A FIRE HYDRANT.
8. FDOS CAN BE NO FURTHER THAN 40' FROM FIRE DEPARTMENT VEHICLE PLACEMENT.
9. TAMPER SWITCHES SHALL BE INSTALLED ON ALL VALVES THAT ARE CAPABLE OF TURNING THE WATER SUPPLY OFF TO THE SPRINKLER SYSTEMS.
10. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FLOW REQUIREMENTS OF STRUCTURE.
11. IN ADDITION TO THE STANDARD COMMENTS, ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROPERTY.
12. BUILDING CONSTRUCTION TYPE ACCORDING TO THE INTERNATIONAL BUILDING CODE IS II-B (BUILDING #1) & V-B (BUILDINGS #2 & 3).

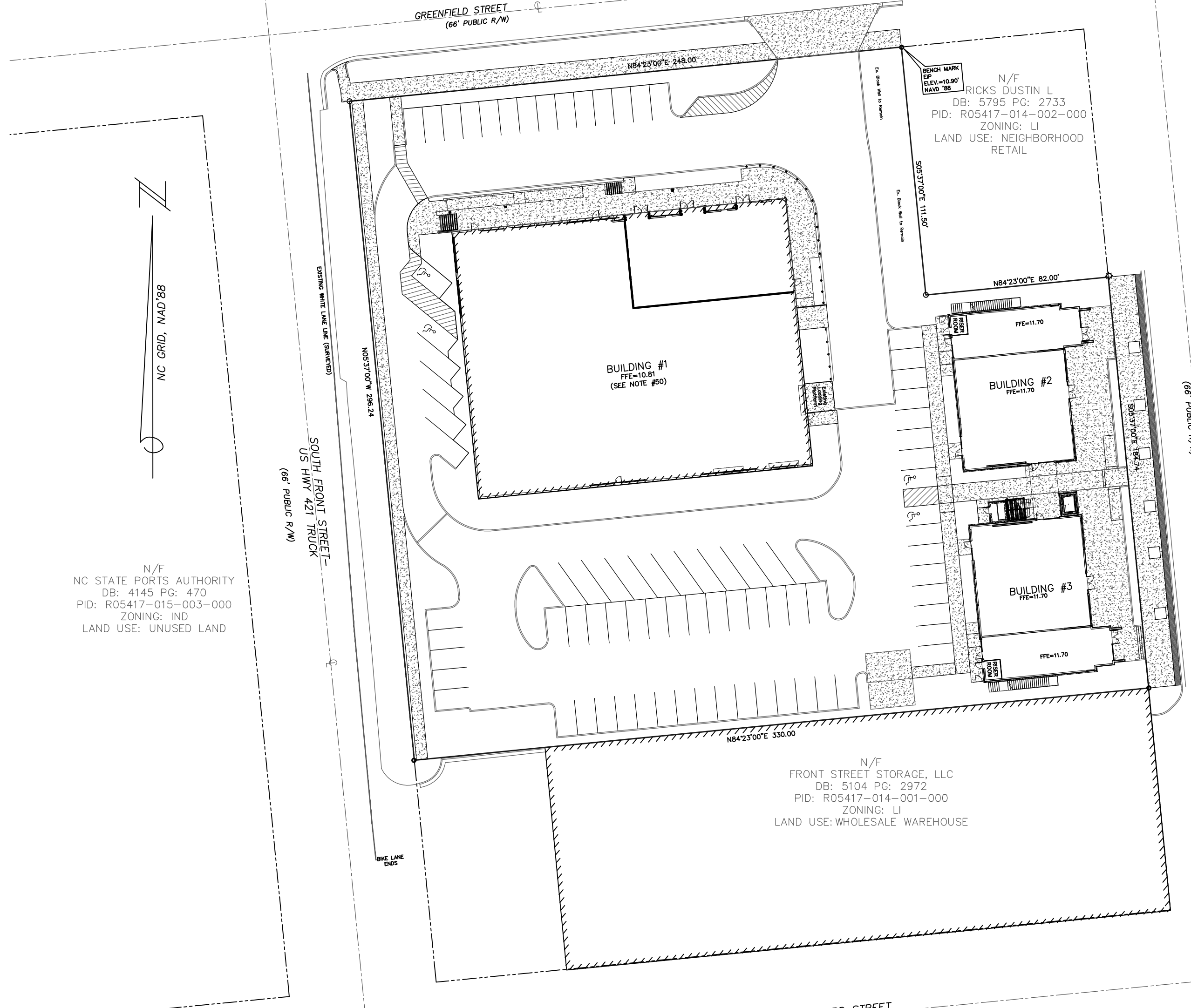
N/F
 KIDDER GEO W HRS
 DB: 1252 PG: 1340
 PID: R05417-001-001-000
 ZONING: IND
 LAND USE: UNUSED LAND

N/F
 SOUTH FRONT, LLC
 DB: 5510 PG: 1138
 PID: R05413-035-002-000
 ZONING: MF-H
 LAND USE: MULTI-FAMILY RESIDENTIAL

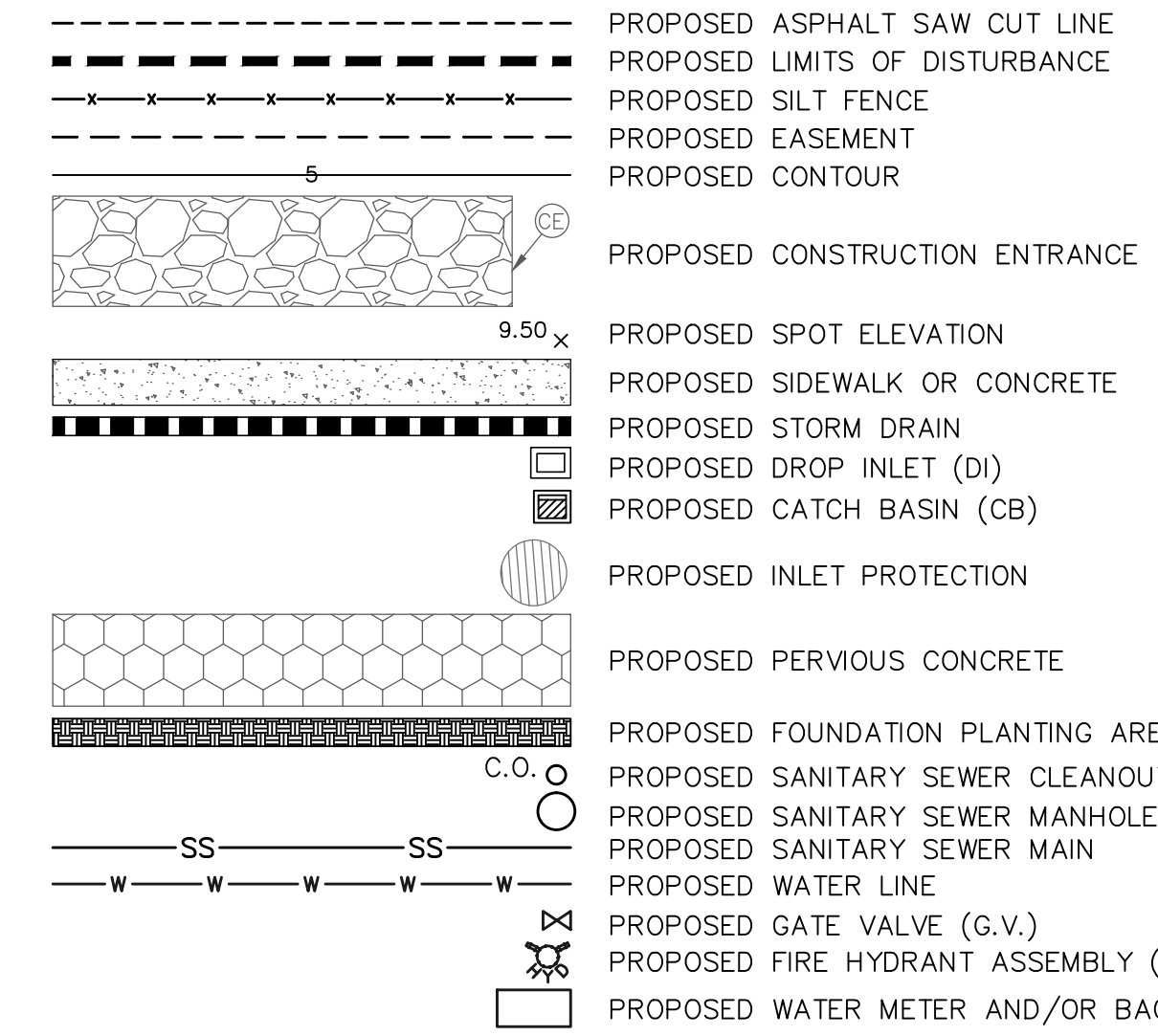
N/F
 SOUTH FRONT, LLC
 DB: 5964 PG: 504
 PID: R05413-035-002-000
 ZONING: MF-H
 LAND USE: MULTI-FAMILY RESIDENTIAL

N/F
 BRICKS DUSTIN L
 DB: 5795 PG: 2733
 PID: R05417-014-002-000
 ZONING: LI
 LAND USE: NEIGHBORHOOD RETAIL

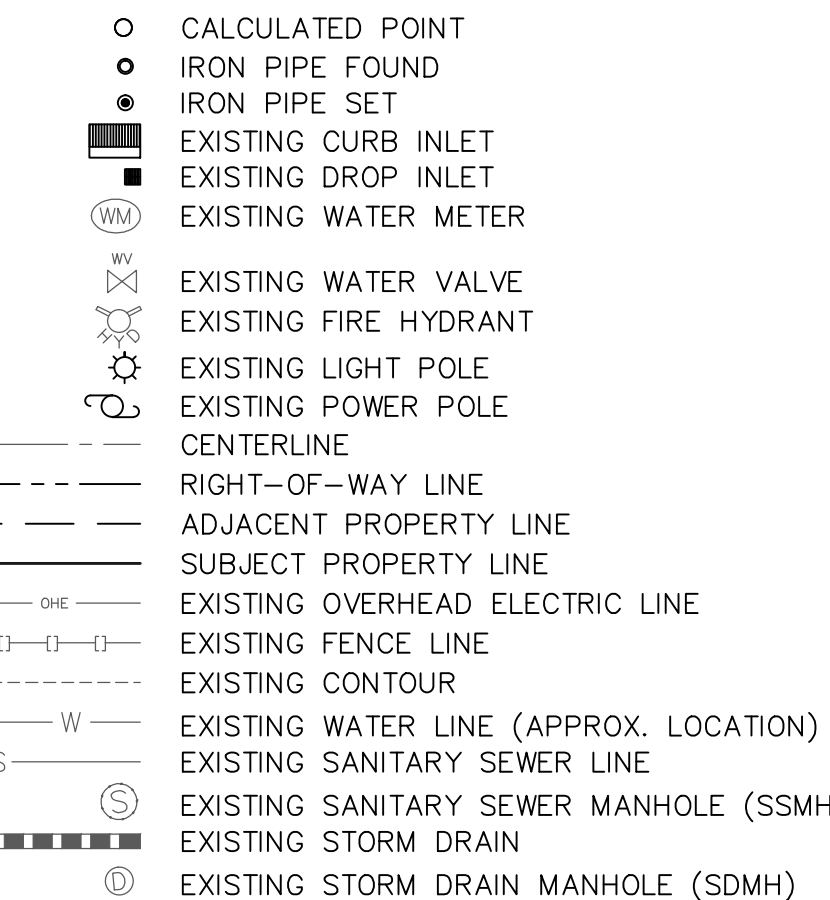
N/F
 SOUTH FRONT BLOCK, LLC
 DB: 5964 PG: 504
 PID: R05417-013-004-000
 ZONING: UMX
 LAND USE: MIXED USE



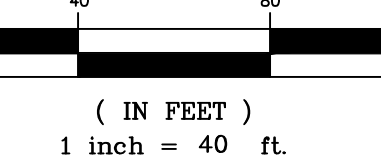
LEGEND (PROPOSED)



LEGEND (EXISTING)



GRAPHIC SCALE



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



Approved Construction Plan

Name: _____ Date: _____

Planning: _____ Traffic: _____ Fire: _____

Signed: _____

GREENFIELD COMMERCIAL
 WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone: 910-392-8243 Fax: 910-392-8203 License No. C-2920

Owner: GREENFIELD STREET PROPERTIES, LLC
 110 S. CAROLINA DRIVE
 WILMINGTON, NORTH CAROLINA 28403
 PHONE: 910-251-6030

FINAL DRAWING FOR REVIEW PURPOSES ONLY

DATE: 2-7-17
 SCALE: 1"=40'
 DRAWN: JCB
 CHECKED: JBM
 PROJECT NO: 274
 SHEET NO: 1 OF 18

REV NO.	DESCRIPTION REVISIONS	DATE
1	REVISION PER TRC COMMENTS.	3-3-17
2	REVISION PER CLIENT.	4-27-17
3	REVISION TO ADJUST SHEET INDEX, AND ADD NOTES, ITEMS TO LEGEND, & WATER & SEWER CAPACITY.	4-12-17
4	REVISION PER TRC COMMENTS.	5-26-17
5	REVISION PER TRC COMMENTS.	6-19-17
6	REVISION PER NCDOT & CITY COMMENTS.	7-12-17
7	REVISION PER CLIENT TO RAISE SITE ELEVATION ADJUSTING TO BUILDING #1 & AT ENTRANCE TO SITE.	7-26-17
8	REVISION TO MAKE FIRE OF BUILDING #1.	9-8-17
9	REVISION TO ADJUST SITE DATA, BUILDING #1 INTERIOR LAYOUT & WALKWAY EAST SIDE OF BUILDING, WATER & SEWER CAPACITY, AND CITY COMMENTS.	11-19-18
10	REVISION TO ADJUST NOTE #9, DELETE NOTE #33, CHANGE NOTES #46-48, & DELETE NOTE #46-50.	3-29-19
11	REVISION PER CLIENT TO RAISE SITE ELEVATION ADJUSTING TO BUILDING #1 & AT ENTRANCE TO SITE.	4-26-19
12	REVISION PER TRC COMMENTS & CLIENT.	5-14-19
13	REVISION TO ADD TO NOTE #43.	5-18-19
14	REVISION TO ADJUST NOTE #45 AND ADD NOTE #24.	7-26-19

TOTAL LENGTH OF PUBLIC SANITARY SEWER MAIN = 34.26 LF
 TOTAL LENGTH OF PRIVATE SANITARY SEWER MAIN = 200.00 LF
 TOTAL LENGTH OF PUBLIC WATER MAIN = 51 LF
 TOTAL LENGTH OF PRIVATE WATER MAIN = 293 LF
 TOTAL LENGTH OF PUBLIC FIRE LINE = 40 LF
 TOTAL LENGTH OF PRIVATE FIRE LINE (INCLUDES LINES TO EACH BUILDING & FIRE HYDRANT) = 404 LF

WATER & SEWER CAPACITY		
EXISTING SEWER CAPACITY (APPROX.):	3 LOADING BAYS X 100 GPD/LOADING BAY + 5 EMPLOYEES X 25 GPD/EMPLOYEE + 2 EMPLOYEES X 25 GPD/EMPLOYEE = 475 GPD	
EXISTING WATER CAPACITY (APPROX.):	475 GPD	
PROPOSED SEWER CAPACITY:	4,904 SF X 130 GPD/1,000 SF + (0.6 X 5,570 SF) X 1 SEAT/15 SF + 50 GPD/SEAT + 5,664 SF X 1 EMPLOYEE/200 SF X 1 SHIFT + 25 GPD/EMPLOYEE/SHIFT + 14,926 SF X 1 EMPLOYEE/1,000 SF X 1 SHIFT X 25 GPD/EMPLOYEE/SHIFT = 10,631 GPD	
PROPOSED WATER CAPACITY:	10,631 GPD	

PRELIMINARY PLAN NOT FOR RECORDATION, CONVEYANCES, OR SALES

INTERIOR LANDSCAPE ISLANDS			
LANDSCAPE ISLAND	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	PERCENT IMPERVIOUS
LI-1	217.24	0.00	0.00
LI-2	217.08	0.00	0.00
LI-3	260.65	0.00	0.00
LI-4	218.19	0.00	0.00
LI-5	229.61	0.00	0.00
LI-6	218.54	0.00	0.00
LI-7	217.41	0.00	0.00
LI-8	436.17	0.00	0.00
LI-9	435.92	0.00	0.00
LI-10	430.80	0.00	0.00
LI-11	218.91	0.00	0.00

FOUNDATION PLANTING-NORTH SIDE OF BUILDING #1
 REQUIRED AREA = $[150.10' \times (20' + 5')] \times 0.12 = 450.30$ SF
 PROVIDED AREA = 455.24 SF
 *SEE LANDSCAPE PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING-WEST SIDE OF BUILDING #1
 REQUIRED AREA = $[(120.17' \times (20' + 5')) + (120.17' \times 5' \times 0.5)] \times 0.12 = 396.56$ SF
 PROVIDED AREA = 401.67 SF
 *SEE LANDSCAPE PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING-SOUTH SIDE OF BUILDING #1
 REQUIRED AREA = $[150.30' \times (20' + 5')] \times 0.12 = 450.90$ SF
 PROVIDED AREA = 465.18 SF
 *SEE LANDSCAPE PLAN FOR PROVIDED PLANTINGS

FOUNDATION PLANTING-EAST SIDE OF BUILDING #1
 REQUIRED AREA = $[(120.17' \times (20' + 5')) + (120.17' \times 5' \times 0.5)] \times 0.12 = 396.56$ SF
 PROVIDED AREA = 401.72 SF
 *SEE LANDSCAPE PLAN FOR PROVIDED PLANTINGS

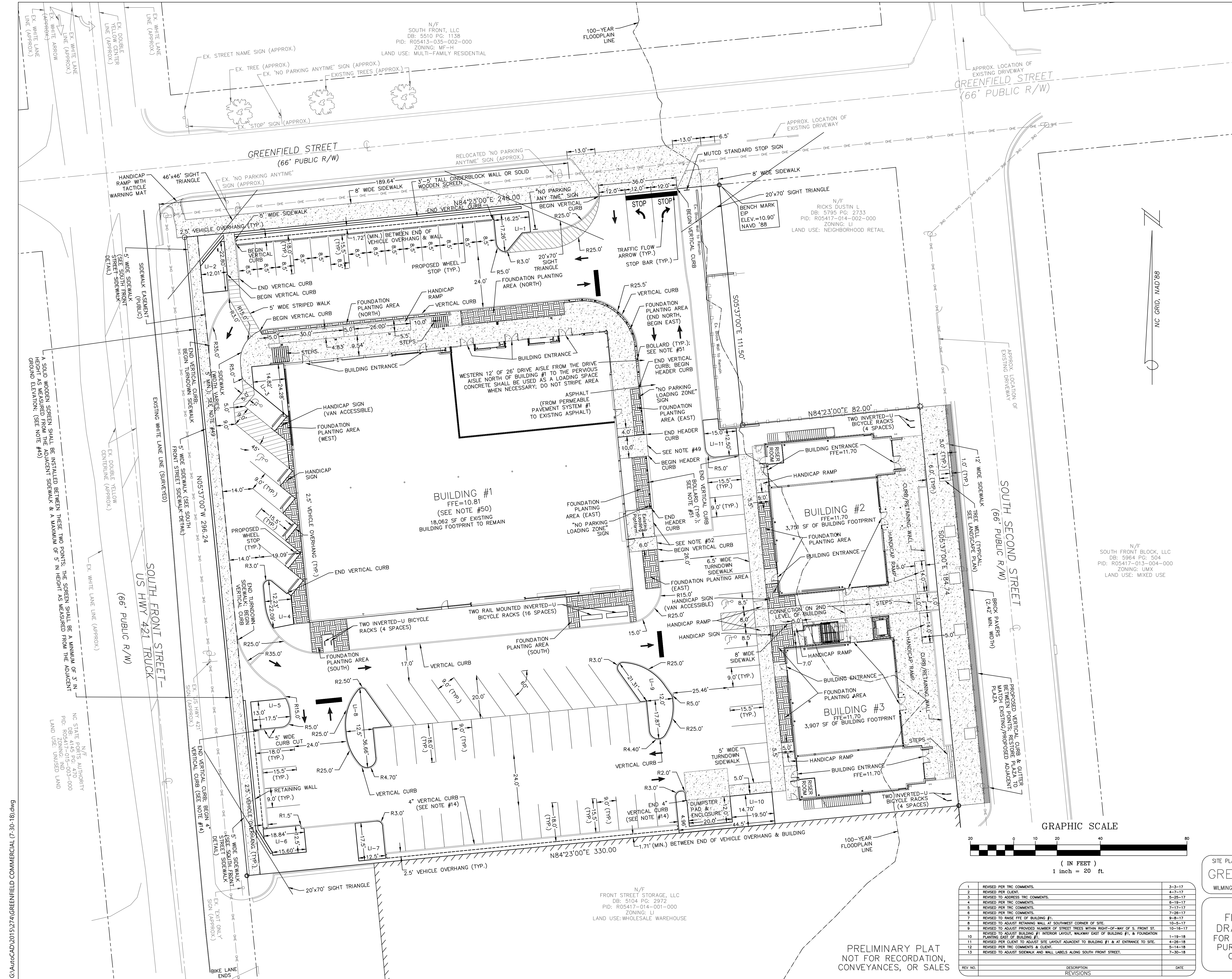
FOUNDATION PLANTING-WEST SIDE OF BUILDINGS #2 & 3 COMBINED
 REQUIRED AREA = $4,822 \times 0.12 = 578.64$ SF
 PROVIDED AREA = 579.36 SF
 *SEE LANDSCAPE PLAN FOR PROVIDED PLANTINGS

INTERIOR SHADING
 PARKING FACILITY AREA (PARKING LOT AREA TO BACK OF CURB (OR BACK OF SIDEWALK ADJACENT TO PARKING SPACES/DRIVE AISLES), EXCLUDING LANDSCAPE ISLANDS)
 REQUIRED INTERIOR SHADING (IS) = $0.2 \times 39,866 = 7,973.20$ SF
 PROVIDED = 4 TREES
 *SEE LANDSCAPING PLAN FOR PROVIDED INTERIOR SHADING & TREES

STREET TREES-SOUTH FRONT STREET
 REQUIRED = $1 / 30' \times 296.24' = 9.87$, 10 TREES
 PROVIDED = 4 TREES
 *DEVELOPER SHALL PAY CITY IN-LIEU OF INSTALLING THE 6 OTHER REQUIRED TREES.
 **SEE LANDSCAPE PLAN FOR PROVIDED TREES

STREET TREES-GREENFIELD STREET
 REQUIRED = $1 / 30' \times 248.00' = 8.27$, 8 TREES
 PROVIDED = 8 TREES
 *SEE LANDSCAPE PLAN FOR PROVIDED TREES

STREET TREES-SOUTH SECOND STREET
 REQUIRED = $1 / 30' \times 184.74' = 6.16$, 6 TREES
 PROVIDED = 6 TREES
 *SEE LANDSCAPE PLAN FOR PROVIDED TREES



CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____
Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

SITE PLAN
GREENFIELD COMMERCIAL
 WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

FINAL DRAWING FOR REVIEW PURPOSES ONLY

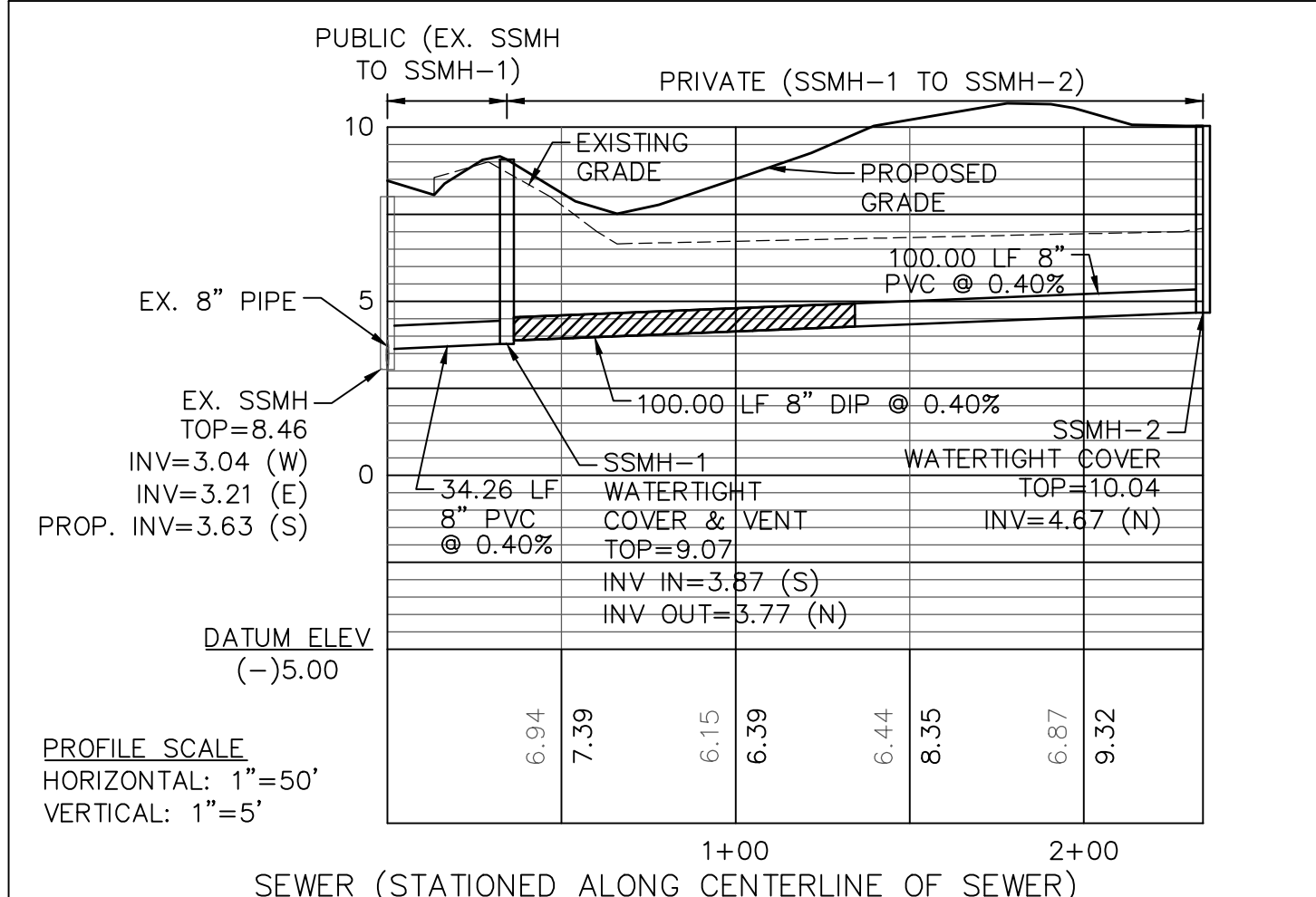
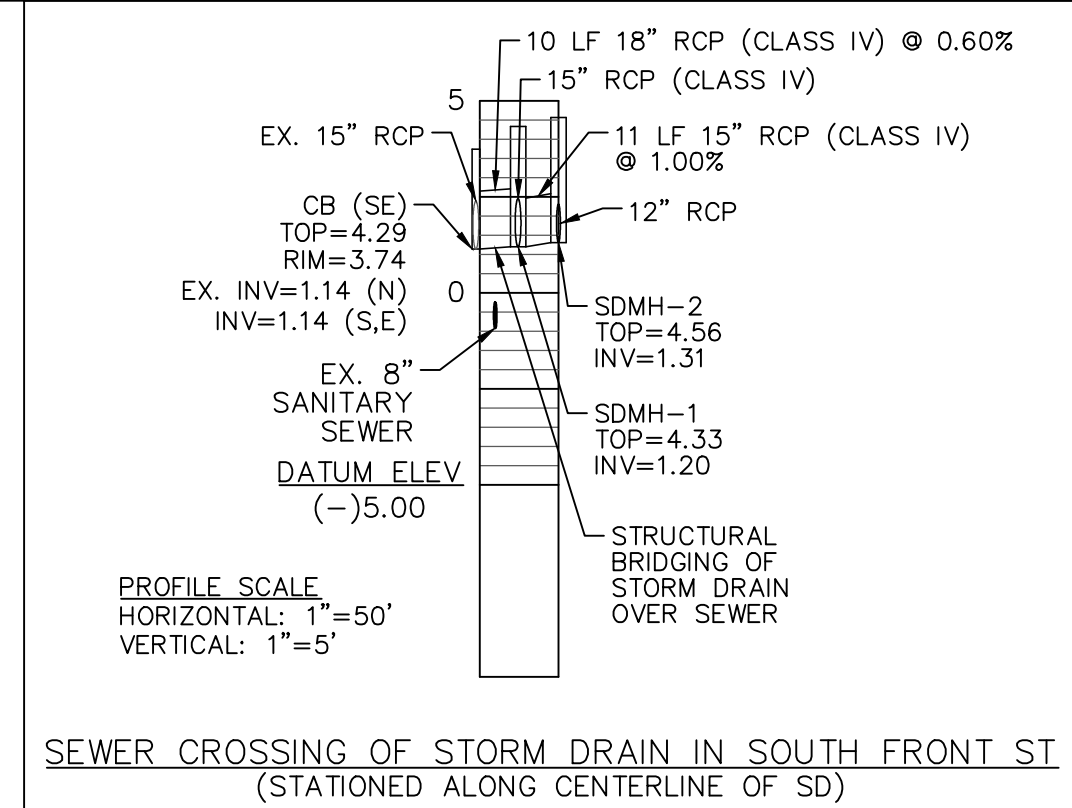
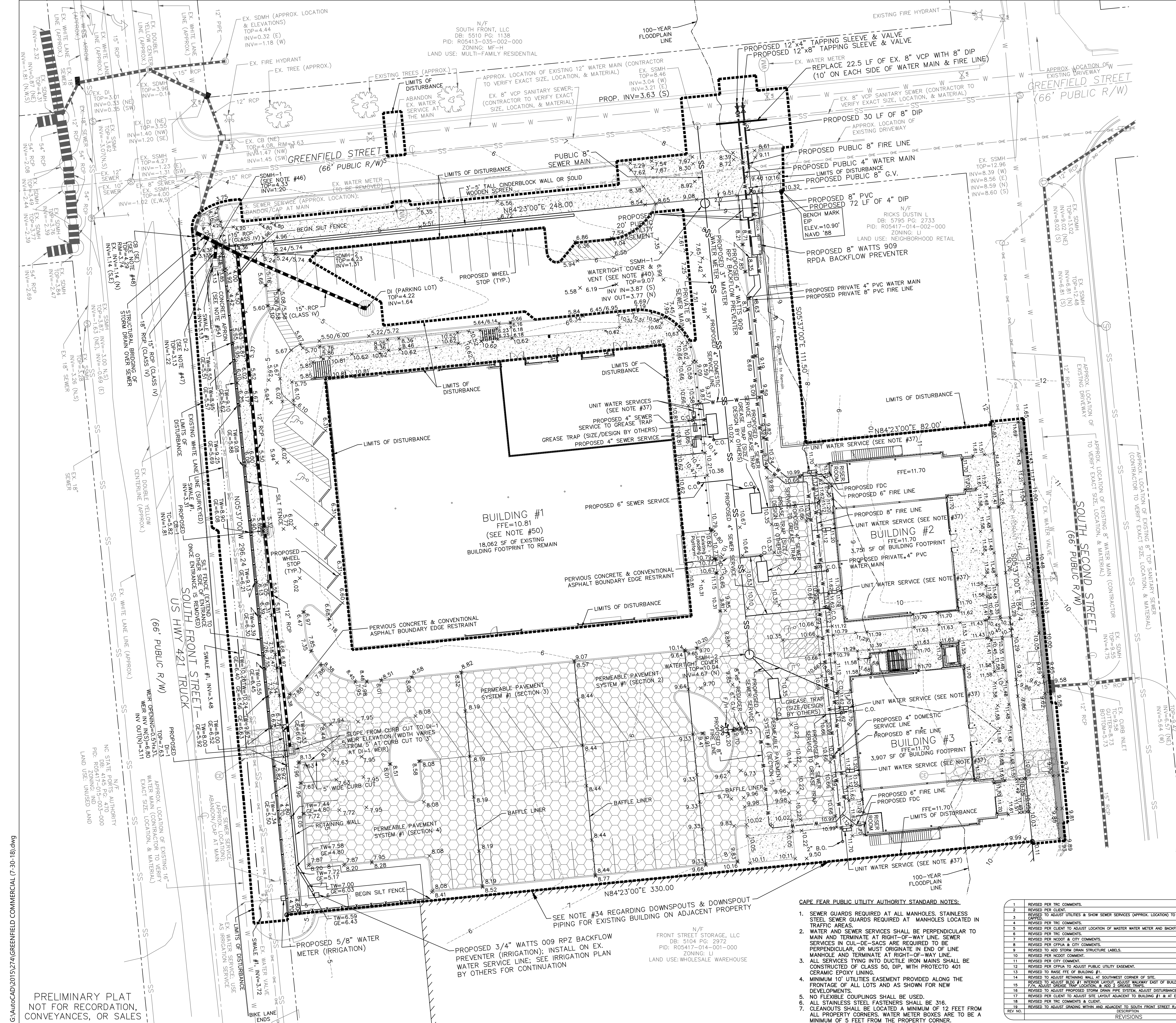
MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-5243
 Fax 910-392-5203 License No. C-2920

Owner: GREENFIELD STREET PROPERTIES, LLC
 10 S. CARDINAL DRIVE
 WILMINGTON, NORTH CAROLINA 28403
 PHONE: 910-251-5630

DATE: 2-7-17
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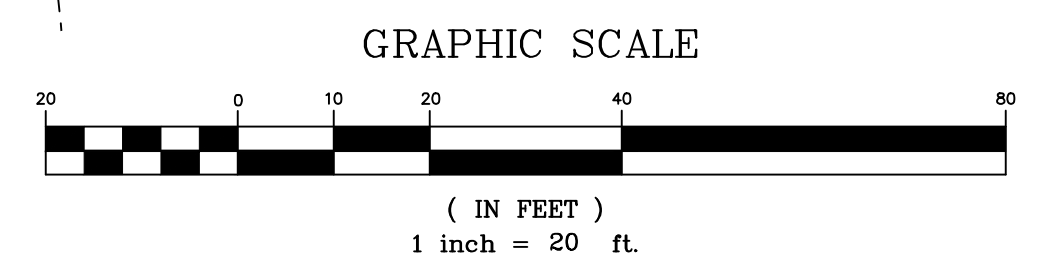
PRELIMINARY PLAT
 NOT FOR RECORDATION,
 CONVEYANCES, OR SALES



- UTILITY SEPARATION NOTES:**
1. WATER MAINS SHALL HAVE A MINIMUM COVER OF 3'.
 2. SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 3' OR D.I.P. SHALL BE USED.
 3. HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER SHALL BE 10' BETWEEN EDGE OF PIPES.
 4. VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER: WATER OVER SANITARY SEWER: >18" BETWEEN PIPES 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.
 5. HORIZONTAL SEPARATION BETWEEN STORM SEWER & SANITARY SEWER SHALL BE 5' BETWEEN EDGE OF PIPES.
 6. A 24" VERTICAL SEPARATION BETWEEN PIPES SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER: WHERE SEPARATION IS LESS THAN 24" & SANITARY IS OVER STORM USE D.I.P. ON SANITARY SEWER 10' ON EITHER SIDE OF CROSSING. WHERE SEPARATION IS LESS THAN 12" & STORM IS OVER SANITARY BRIDGING IS REQUIRED (SEE SANITARY SEWER DETAIL). WHERE SEPARATION IS 12"-24" & STORM IS OVER SANITARY BRIDGING OR D.I.P. ON SANITARY SEWER 10' ON EITHER SIDE OF CROSSING.
 7. HORIZONTAL SEPARATION BETWEEN WATER AND STORM SEWER SHALL BE 5' BETWEEN EDGE OF PIPES.
 8. VERTICAL SEPARATION BETWEEN WATER AND STORM SEWER: WATER OVER STORM SEWER: >18" BETWEEN PIPES OR USE D.I.P. ON WATER 10' ON EITHER SIDE OF CROSSING. STORM SEWER OVER WATER: USE D.I.P. ON WATER 10' ON EITHER SIDE OF CROSSING.
 9. ALL SANITARY SEWER MANHOLES WITH A DROP OF 30" OR GREATER SHALL HAVE AN INSIDE DIAMETER OF 5' WITH AN INSIDE DROP STRUCTURE.
 10. GRAVITY SANITARY SEWER WITHIN 50' OF WETLANDS SHALL MEET WATER MAIN MATERIALS, TESTING METHODS AND ACCEPTABILITY STANDARDS (15A NCAC 18C).
 11. SANITARY SEWER MANHOLES MUST BE GREATER THAN 50' FROM WETLANDS, AS MEASURED TO THE CLOSEST OUTSIDE EDGE.
 12. NO PIPE JOINTS SHALL BE INSIDE ANY INTERFERENCE MANHOLE/CATCH BASIN.

- SOUTH FRONT STREET SHOULDER CLOSURE NOTES:**
1. CONSTRUCTION PLANS SHALL BE USED IN CONJUNCTION WITH THE NCDOT & CITY OF WILMINGTON APPROVED TRAFFIC CONTROL PLAN.
 2. WHERE CURBING IS REMOVED, IT SHALL BE REMOVED & REPLACED TO AN EXISTING JOINT.
 3. CONTRACTOR SHALL CONTACT DUKE ENERGY TO BRACE POLE(S), IF NECESSARY.

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



City of WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____
 Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

REV. NO.	DESCRIPTION	DATE
1	REVISED PER TRC COMMENTS.	2-3-17
2	REVISED PER CLIENT.	4-7-17
3	REVISED TO ADJUST UTILITIES & SHOW SEWER SERVICES (APPROX. LOCATION) TO BE ABANDONED/REMOVED.	4-12-17
4	REVISED PER TRC COMMENTS.	5-25-17
5	REVISED PER CLIENT TO ADJUST LOCATION OF MASTER WATER METER AND BACKFLOW PREVENTERS.	5-30-17
6	REVISED PER TRC COMMENTS.	6-19-17
7	REVISED PER NCDOT & CITY COMMENTS.	7-17-17
8	REVISED PER CLIENT & CITY COMMENTS.	7-28-17
9	REVISED TO ADD STORM DRAIN STRUCTURE LABELS.	7-28-17
10	REVISED PER NCDOT COMMENT.	7-31-17
11	REVISED PER TRC COMMENT.	8-1-17
12	REVISED PER CPWA TO ADJUST PUBLIC UTILITY EASEMENT.	8-17-17
13	REVISED TO MAKE PIPE OF BUILDING #1.	8-28-17
14	REVISED PER CLIENT TO ADJUST RETAINING WALL AT SOUTHWEST CORNER OF SITE.	8-28-17
15	REVISED TO ADJUST BLDG #1 INTERIOR LAYOUT, ADJUST WALKWAY EAST OF BUILDING #1, RELOCATE TRAILER AND BRIDGE TRUCK LOCATION, AND ADD 2 GREASE TRAPS.	10-17-17
16	REVISED TO ADJUST PROPOSED STORM DRAIN PIPE SYSTEM, ADJUST DISTURBANCE, & ADD NOTES.	3-29-18
17	REVISED PER CLIENT TO ADJUST SITE LAYOUT ADJACENT TO BUILDING #1 & AT ENTRANCE TO SITE.	4-28-18
18	REVISED PER TRC COMMENTS & CLIENT.	5-14-18
19	REVISED TO ADJUST GRADING WITHIN AND ADJACENT TO SOUTH FRONT STREET R/W.	7-30-18

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:**
1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
 2. WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE. ALL SERVICES TYPING INTO DIAPHRAGM MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CEMENT EPOXY LINING.
 3. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
 4. NO FLEXIBLE COUPLINGS SHALL BE USED.
 5. ALL STAINLESS STEEL FASTENERS SHALL BE 316.
 6. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS, WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

PRELIMINARY PLAT
 NOT FOR RECORDATION,
 CONVEYANCES, OR SALES

G:\AutoCAD\2015\2127\GREENFIELD COMMERCIAL (7-30-18).dwg

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 6.11p - Seeding No. 10P 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
 Koba lespedeza 10

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

Nurse plants
 Between Apr. 15 & Aug. 15, add 10 lb/acre German millet or 15 lb/acre Sudangrass. Prior to May 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

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
 Seeding mixture for Late Winter and Early Spring
 Species Rate (lb/acre)
 Rye (grain) 120
 Annual lespedeza (Koba 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 6.11q - Seeding No. 20P 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: Sept. 15 - Oct. 15
 Possible: 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 stolon losses to disease. Reseed, fertilize, and mulch damaged areas immediately. Mow to a height of 2.5-3.5 inches as needed.

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 6.11r - Seeding No. 30P for: Well-Drained Sandy Loams to Sandy Loams; High Maintenance, Fine Turf
 Seeding mixture
 Species Rate (lb/1,000 ft²)
 Hybrid Bermudagrass Minimum: 3
 Rapid cover: 10

Seeding Notes
 1. Sprig or sod (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 6.11d).
 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 25-50 lb in Aug.

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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

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

Seeding dates
 Mar. - 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 6.11d).
 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. Centipede cannot tolerate high pH or excess fertilizer.

Table 6.10d 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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

Table 6.11t - Seeding No. 50P 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 centipede.

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.
 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 6.10e 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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

Table 6.11u - Seeding No. 70P 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)

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.
 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 6.10f 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

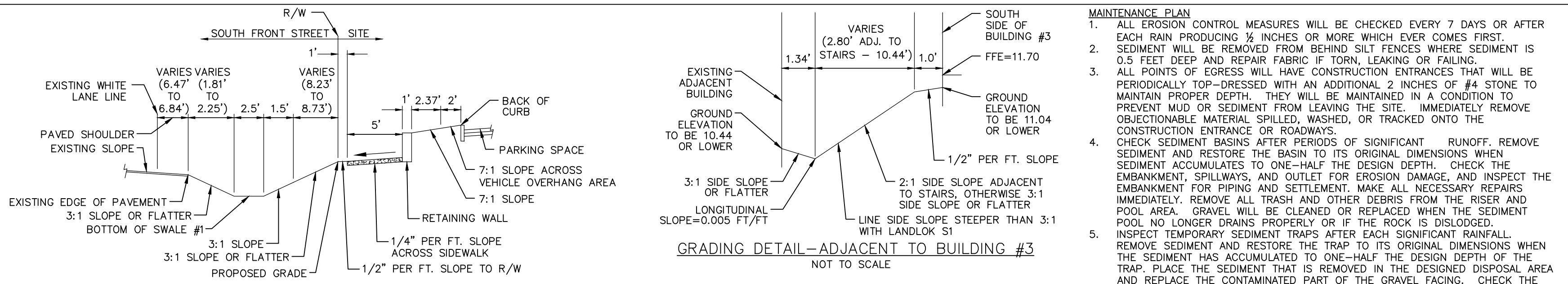
Soil amendments - Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring 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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

Table 6.11v - Seeding No. 80P for: Well-Drained Sandy Loams to Dry Sands; Low Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Common Bermudagrass 40-80 (1-2 lb/1,000 ft²)

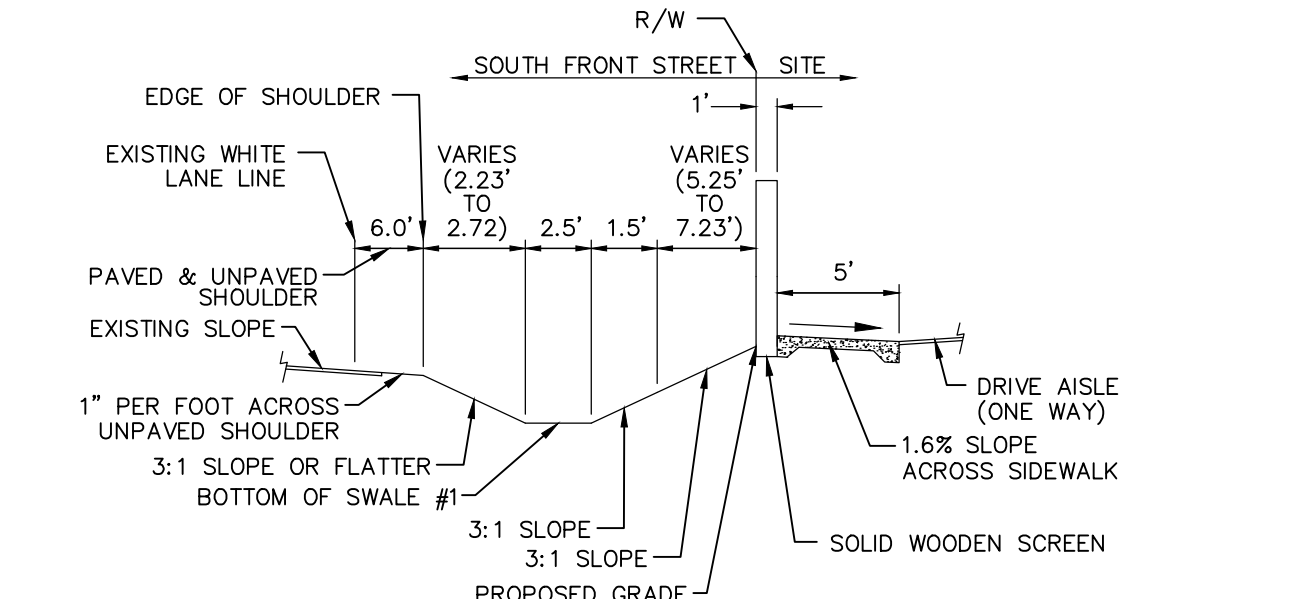
Soil amendments - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.
 Mulch - Use jute, excelsior matting, or other effective channel lining material to cover the bottom of channels and ditches. The lining should 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.
 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 6.10g Temporary Seeding Recommendations for Fall
 Seeding mixture
 Species Rate (lb/acre)
 Rye (grain) 120

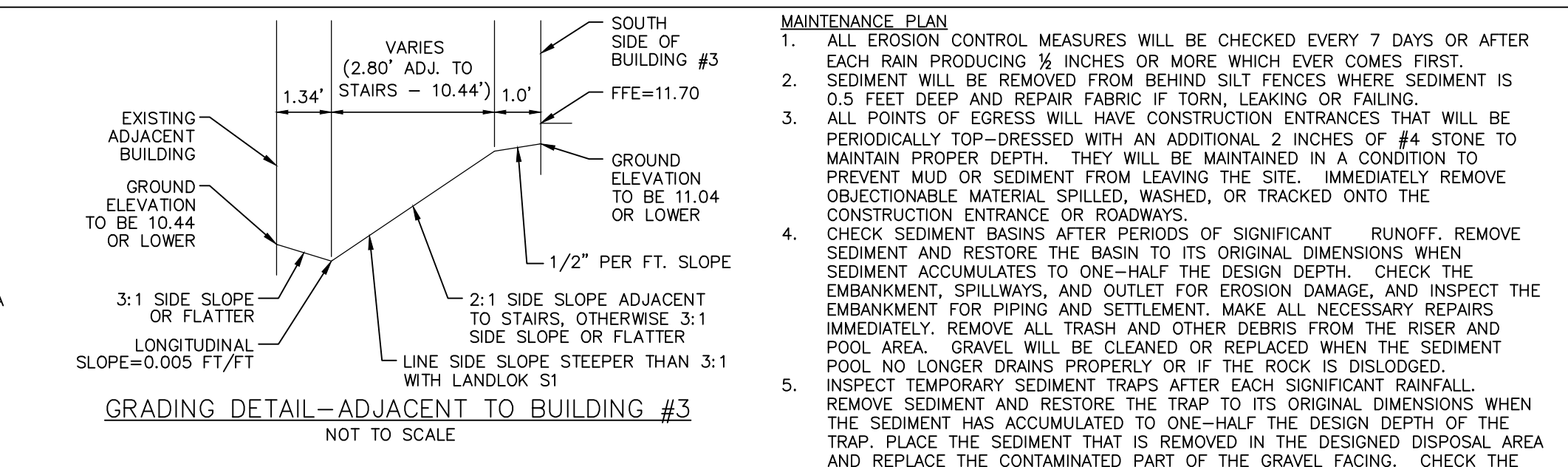
Soil amendments - Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.
 Mulch - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring 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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.



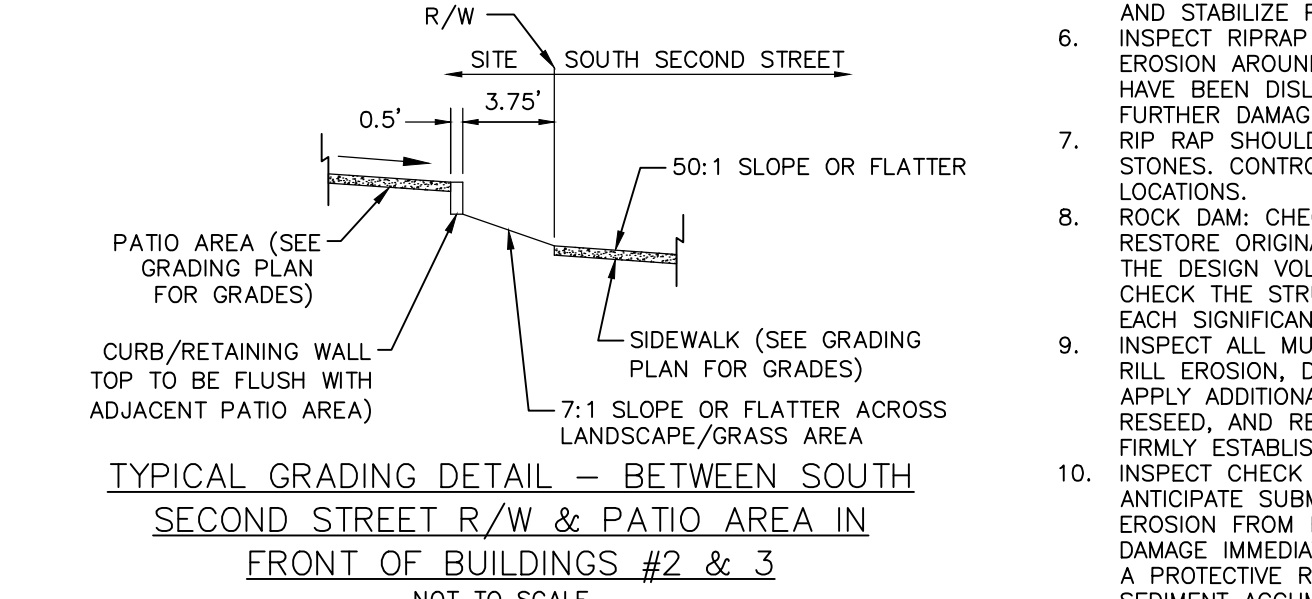
TYPICAL GRADING DETAIL - BETWEEN PERPENDICULAR PARKING (SOUTHERN PORTION OF SITE) & SOUTH FRONT STREET
 NOT TO SCALE



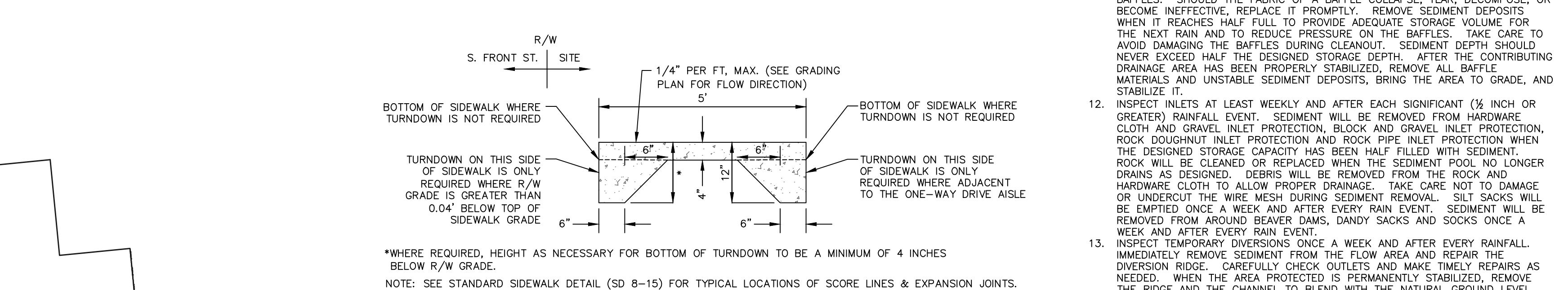
TYPICAL GRADING DETAIL - BETWEEN ONE WAY DRIVE AISLE & SOUTH FRONT STREET
 NOT TO SCALE



TYPICAL GRADING DETAIL - ADJACENT TO BUILDING #3
 NOT TO SCALE

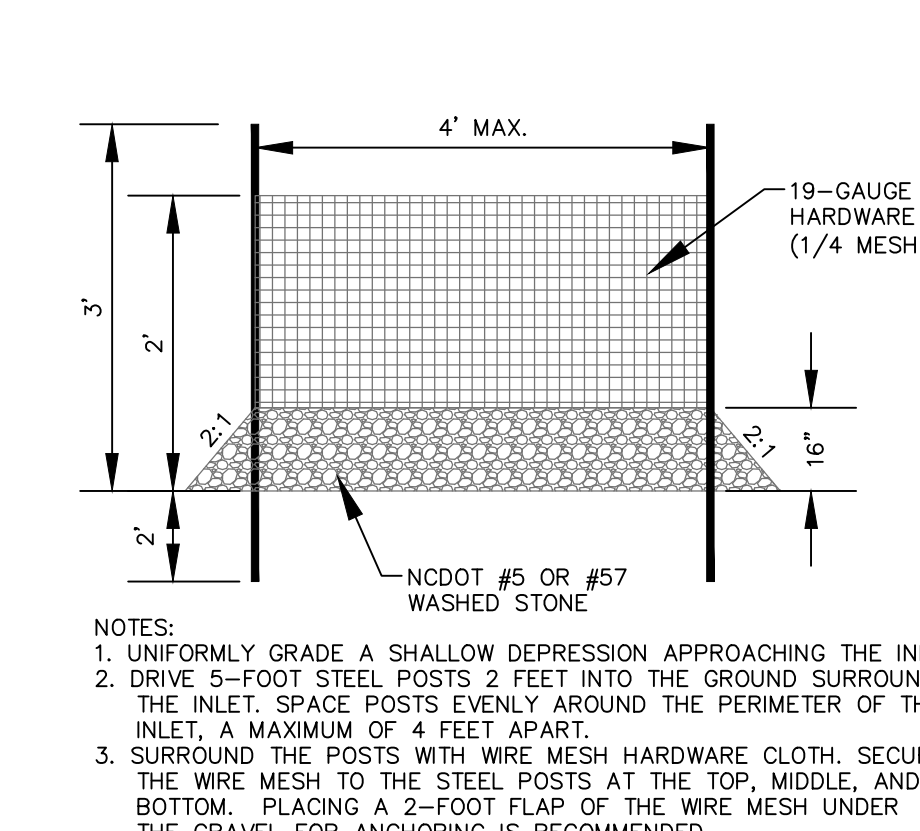


TYPICAL GRADING DETAIL - BETWEEN SOUTH SECOND STREET R/W & PATIO AREA IN FRONT OF BUILDINGS #2 & 3
 NOT TO SCALE

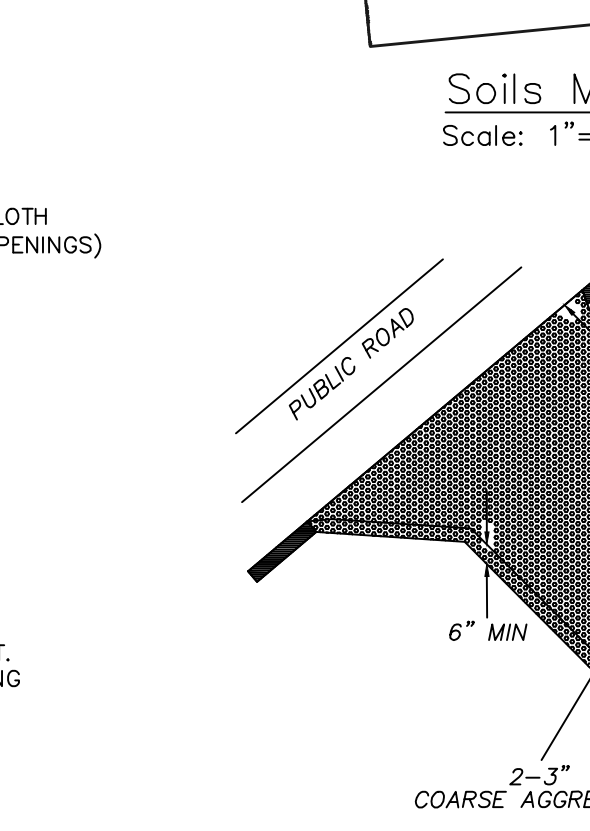


SOUTH FRONT STREET SIDEWALK DETAIL
 NOT TO SCALE

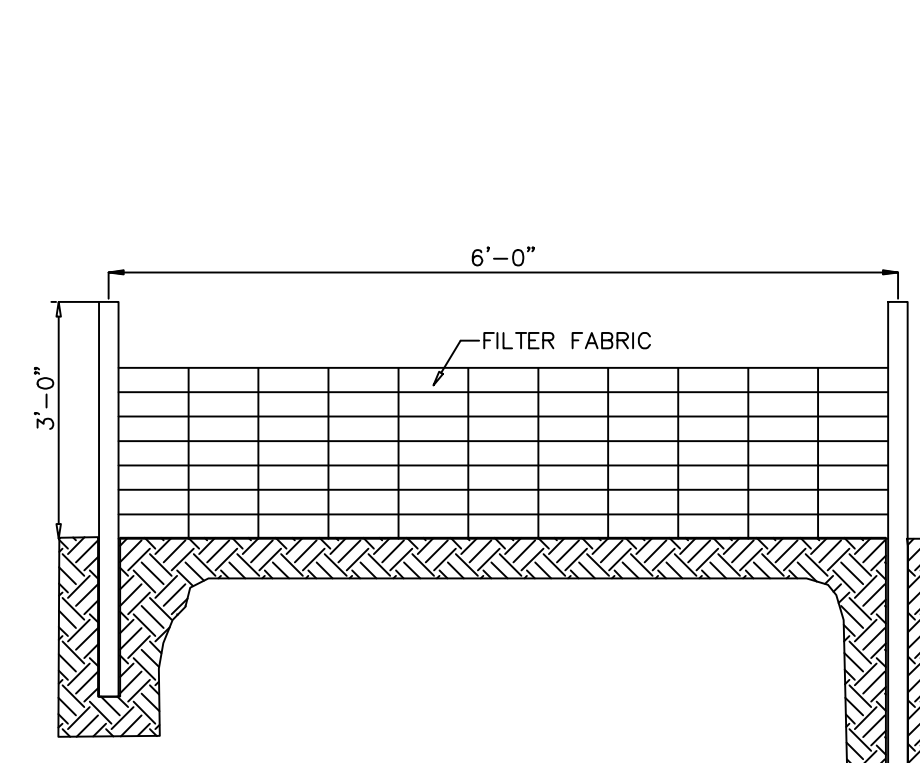
SITE AREA DESCRIPTION	GROUND STABILIZATION	
	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW ZONES)	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FEET OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:3, 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 PERIMETERS AND HOW ZONES)
**NEW HANOVER COUNTY LAND QUALITY SEEDING DEADLINES: 21 CALENDAR DAYS FOR ALL SLOPES & 15 WORKING DAYS FOR ALL OTHER AREAS. **THE SHORTER STABILIZATION TIME FRAME BETWEEN THE ABOVE CHART AND THE NEW HANOVER COUNTY LAND QUALITY SEEDING DEADLINES, FOR THE RESPECTIVE AREAS, SHALL BE FOLLOWED.		



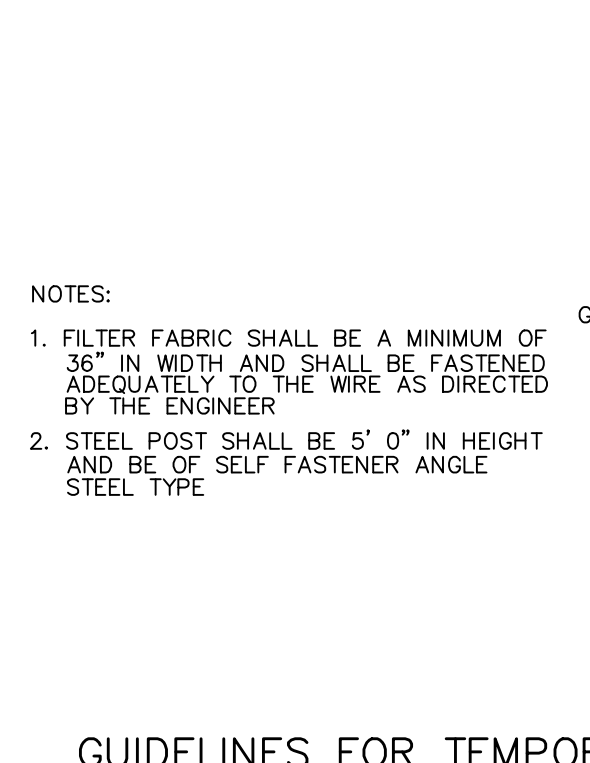
HARDWARE CLOTH & GRAVEL INLET PROTECTION DETAIL
 NOT TO SCALE



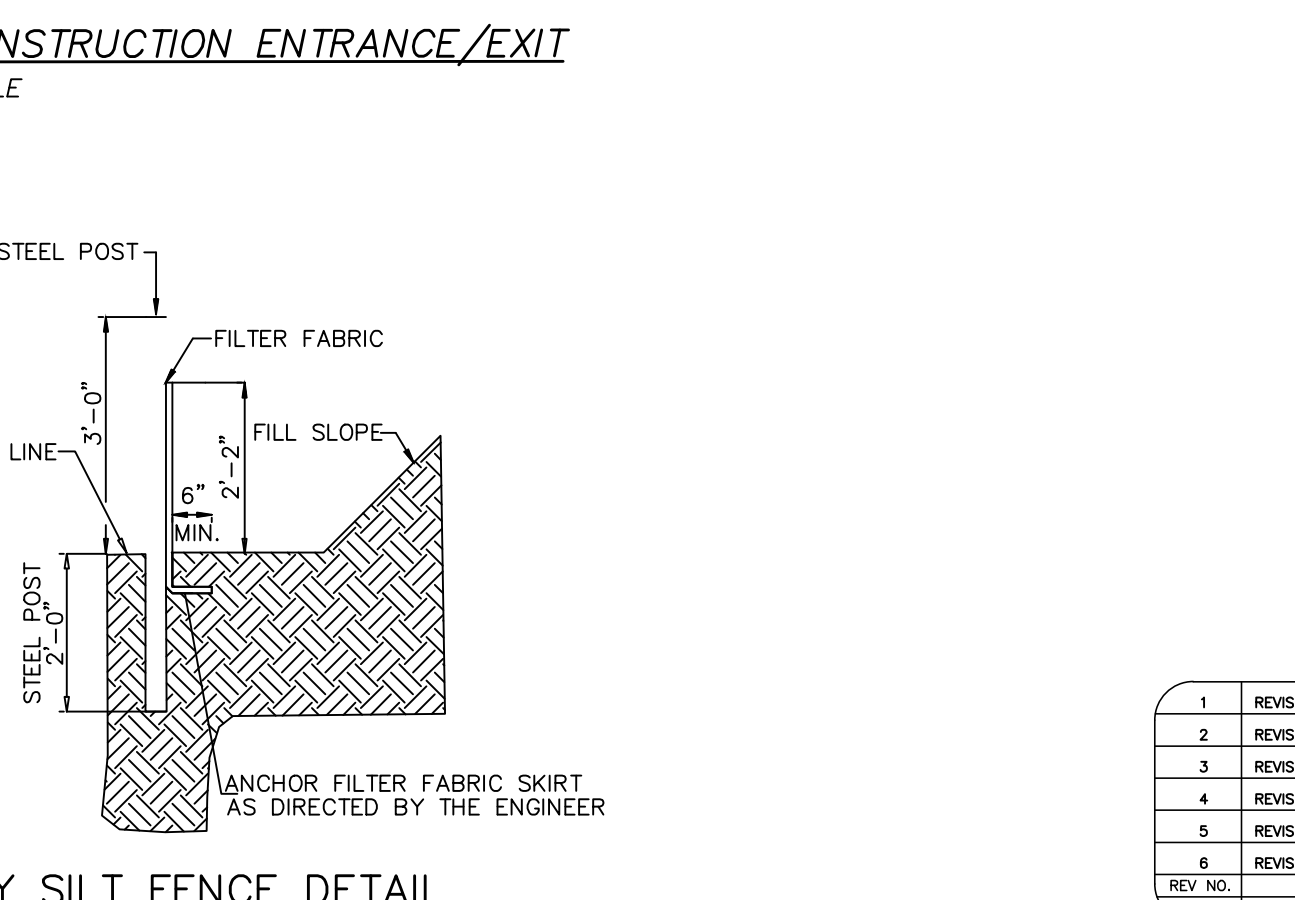
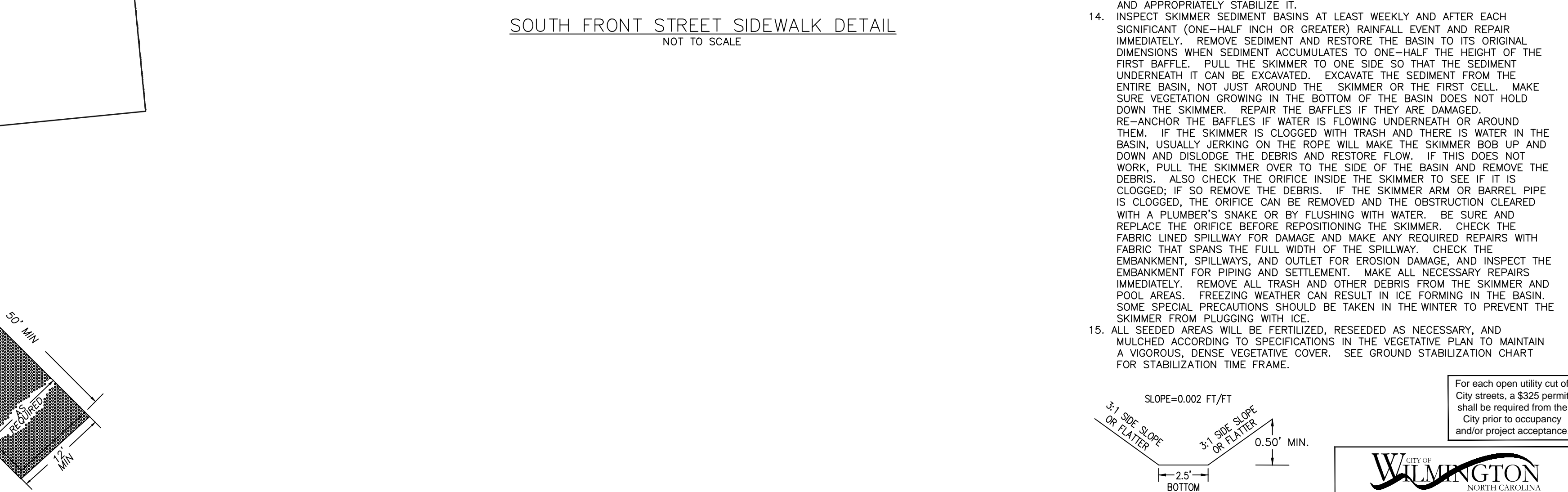
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
 NOT TO SCALE



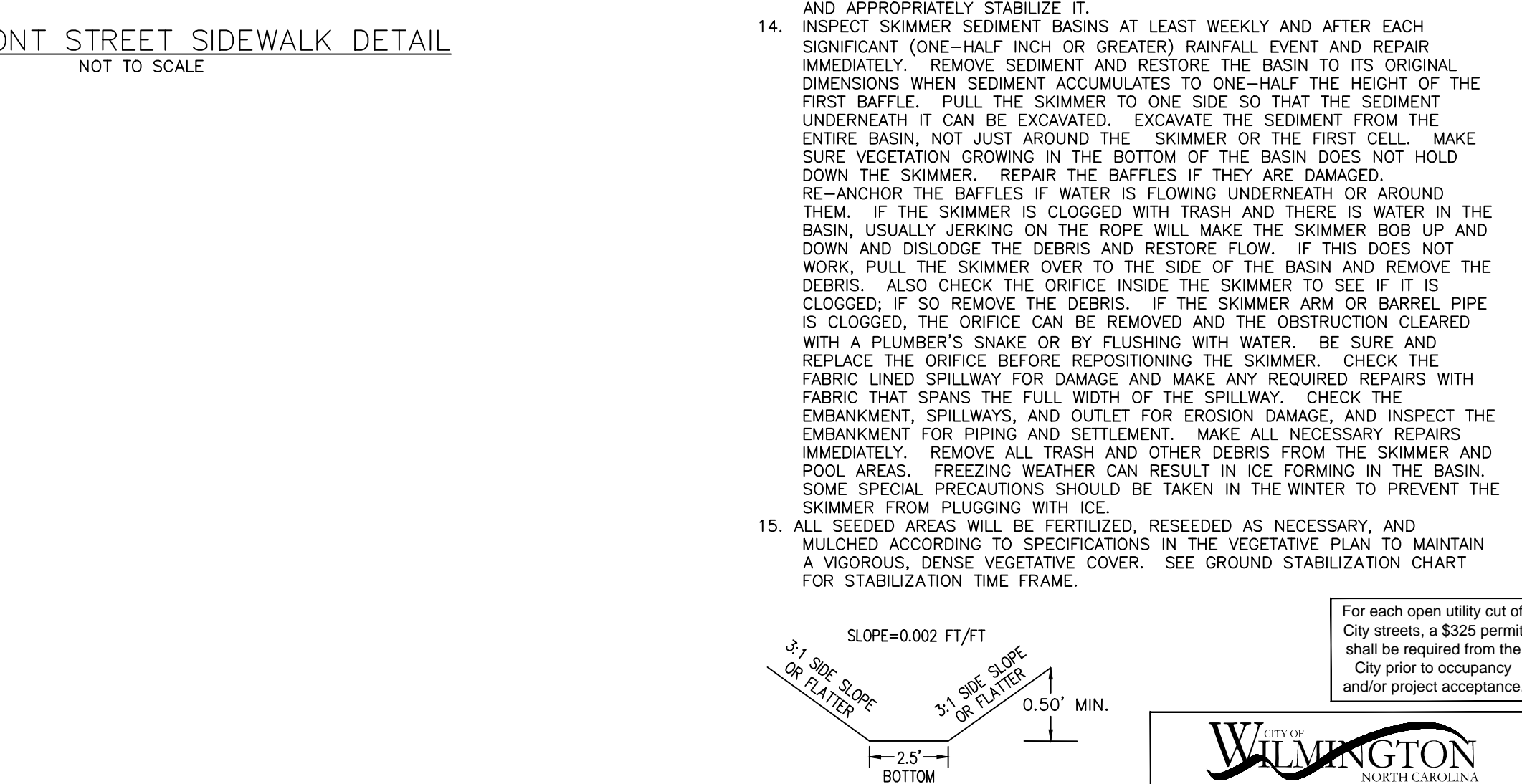
GUIDELINES FOR TEMPORARY SILT FENCE DETAIL
 NOT TO SCALE



TEMPORARY SILT FENCE DETAIL
 NOT TO SCALE



GUIDELINES FOR TEMPORARY SILT FENCE DETAIL
 NOT TO SCALE



SWALE #1 DETAIL
 NOT TO SCALE

Table 6.11w - Seeding No. 90P for: Well-Drained Sandy Loams to Dry Sands; Low Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Common Bermudagrass 40-80 (1-2 lb/1,000 ft²)

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

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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

Table 6.11x - Seeding No. 100P for: Well-Drained Sandy Loams to Dry Sands; Low Maintenance
 Seeding mixture
 Species Rate (lb/acre)
 Common Bermudagrass 40-80 (1-2 lb/1,000 ft²)

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

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 Koba (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

EROSION CONTROL & STORMWATER DETAIL SHEET

GREENFIELD COMMERCIAL

WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

Owner: GREENFIELD STREET PROPERTIES, LLC
 10 S. CAROLINA DRIVE
 WILMINGTON, NORTH CAROLINA 28403
 PHONE: 910-251-5030

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-8243
 Fax 910-392-8203 License No. C-2320

DATE: 4-7-17
SCALE: N.T.S.
DRAWN: JCB
CHECKED: JBM
PROJECT NO.: 274
SHEET NO.: 5 OF 18

Approved Construction Plan
 Planning _____ Name _____ Date _____
 Traffic _____
 Fire _____

FINAL DRAWING FOR REVIEW PURPOSES ONLY

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