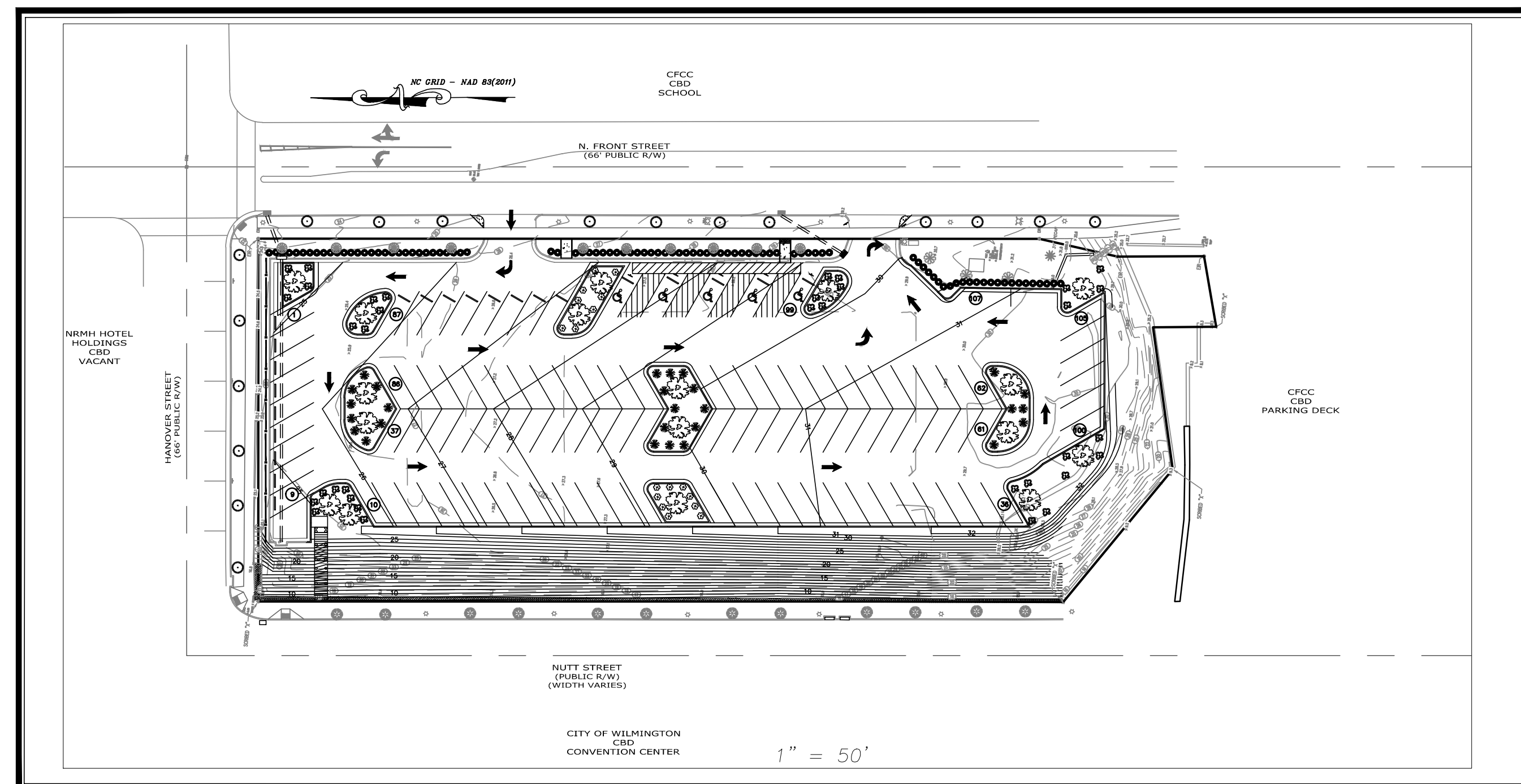
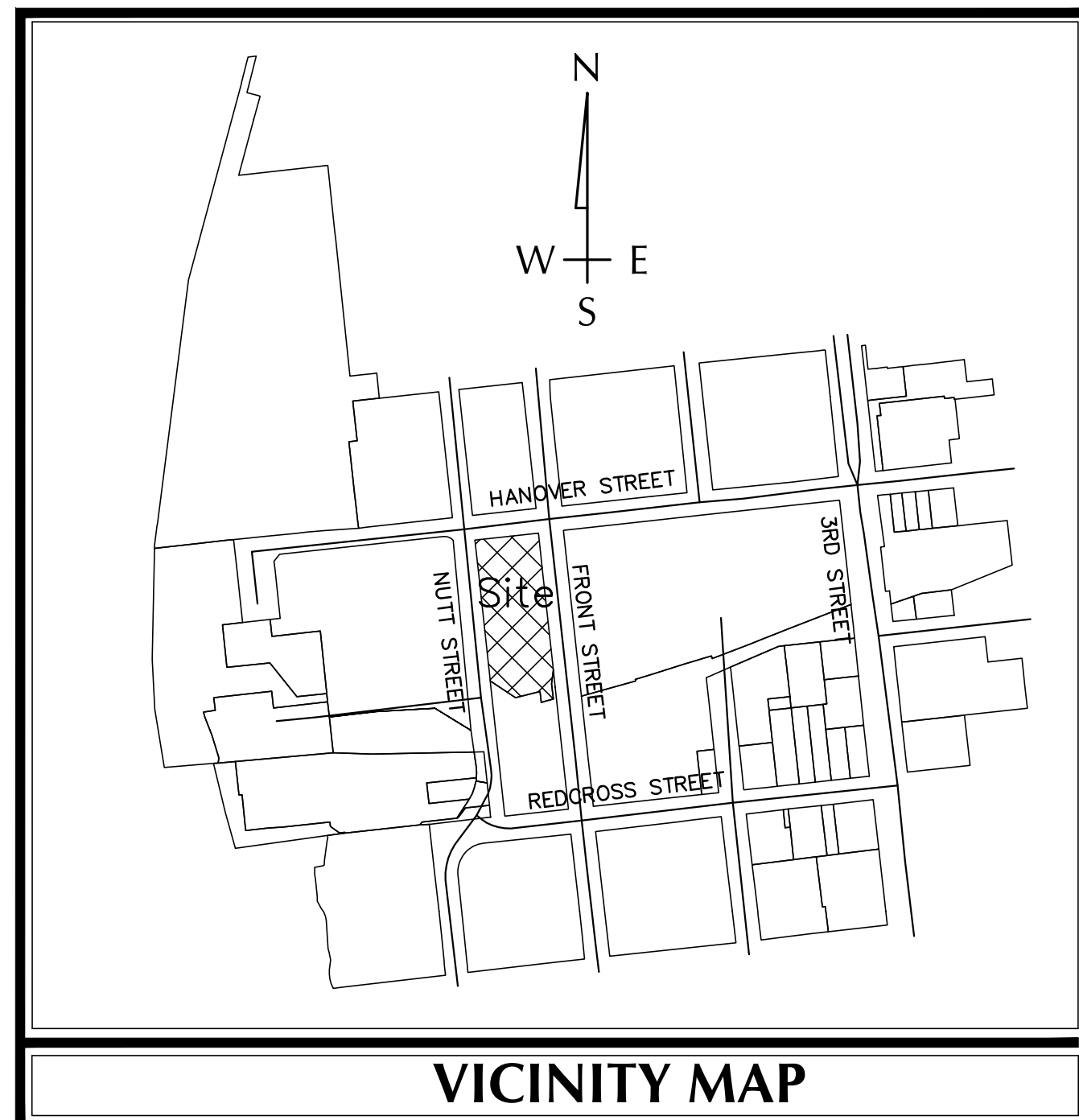


Site Development For  
*FRONT STREET PARK*  
615 N FRONT STREET  
MAY, 2018  
WILMINGTON, NORTH CAROLINA



INDEX OF SHEETS	
SHT C-0	COVER SHEET
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GENERAL NOTES:

1. NEW HANOVER COUNTY PARCEL NO.:  
R04716-006-001-000
2. TOTAL AREA: 1.58 AC.±
3. EXISTING ZONING: CBD (CENTRAL BUSINESS DISTRICT)
4. THE MAJORITY OF THIS PROPERTY IS NOT IN A FLOOD  
ZONE "X" PER FEMA FLOOD INSURANCE RATE MAP  
#3720311800K, EFFECTIVE DATE JUNE 2, 2006.
5. CAMA LAND CLASSIFICATION: URBAN

DEVELOPMENT DATA:

TOTAL TRACT AREA = 68,749 SF = 1.58 ac

TOTAL DISTURBED AREA = 1.45 ac

IMPERVIOUS SURFACES:

EXISTING IMPERVIOUS AREA:	48,803 SF
(BUILDING, PARKING LOT, CONCRETE SLABS, WALL, ETC.)	
PROPOSED PARKING LOT -	42,072 S.F.
(PAVEMENT & CURB & GUTTER)	
PROPOSED SIDEWALK -	90 S.F.
FUTURE IMPERVIOUS AREA -	6,641 S.F.
TOTAL -	48,803 S.F. (70.99%)

PROVIDED: 102 SPACES WITH 5 HC FOR TOTAL OF 107 SPACES

5 HC - REQ'D

5 HC - PROV'D

NOTE:

ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH CITY  
OF WILMINGTON & THE STATE OF NORTH CAROLINA

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
PROPERTY BOUNDARY		
EASEMENT		
STREAM		
STRUCTURE		
MINOR CONTOURS		
MAJOR CONTOURS		
GAS LINE		
OVERHEAD POWER		
WATER LINE		
SANITARY SEWER LINE		
SANITARY SEWER MANHOLE		
STORM DRAINAGE PIPE		
STORM DRAINAGE STRUCTURE		
TREE		
CONCRETE		
SILT FENCE		
TREE PROTECTION FENCE		
FIRE HYDRANT ASSEMBLY		
DISTURBED LIMITS		

**PORT CITY CONSULTING  
ENGINEERS, PLLC  
6216 STONEBRIDGE ROAD  
WILMINGTON, NC 28409  
910-599-1744 LICENSE No. P-1032  
mhargrove@ec.rr.com**

OWNER
615 N FRONT STREET, LLC 1221 ARBORETUM DRIVE WILMINGTON, NC 28405 TEL: 914.522-0605 bob@newellfunding.com

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED PLAN – NO PERMIT REQUIRED  
Signed: \_\_\_\_\_

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

PORT CITY CONSULTING ENGINEERS, PLLC  
6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409  
910-599-1744 LICENSE No. P-1032

615 NORTH FRONT STREET | DEMO  
615 N FRONT STREET, LLC  
1221 ARBORETUM DRIVE  
WILMINGTON, NC 28405

[illegible]

PROJECT NUMBER:	17041
SIGNED BY:	MNH
CHECKED BY:	MNH
DRAWN BY:	MNH
DATE:	5/23/18

OVER  
HEET

C-0

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**ANDREW  
CONSULTING ENGINEERS**  
Building Strong Communities Block by Block

3811 Peachtree Avenue Suite 300  
Wilmington, NC 28403  
P: 910.202.5555 F: 910.202.5558  
[www.AndrewEngineers.com](http://www.AndrewEngineers.com)

A circular professional engineer seal for Mark N. Hargrove. The outer ring contains the text "NORTH CAROLINA" at the top and "MARK N. HARGROVE" at the bottom. The inner circle contains the text "PROFESSIONAL" at the top, "SEAL" in the center, "019742" below the seal, and "ENGINEER" at the bottom.

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#### COORDINATION NOTES

- THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
- ALL WORK IS TO BE IN ACCORDANCE WITH NEW HANOVER COUNTY, THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CPFAA) AND THE STATE OF NORTH CAROLINA.
- THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
- ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

#### GENERAL NOTES:

- EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY FIELD SURVEY BY BASE LINE SURVEY, PLLC.
- REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
- CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.
- ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
- ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
- CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
- CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

#### DEMOLITION NOTES

- CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY
- CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
- DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
- ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
- EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION
- ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
- CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
- PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
- ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.

#### EROSION AND SEDIMENT CONTROL NOTES

#### GENERAL NOTES:

- CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.
- PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES
- DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
- THE WALL ON NUTT STREET SHALL STAY IN PLACE UNTIL ALL GRADING ACTIVITY HAS TAKEN PLACE ON THE SIDESLOPE. ONCE THE ENKAMAT HAS BEEN INSTALLED, THE WALL CAN BE REMOVED.
- WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SODDED AND PLANTED AREAS UNTIL FINAL APPROVAL BY NEW HANOVER COUNTY.
- ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.
- ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

#### MAINTENANCE PLAN

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
- ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
- SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.
- INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.  
  
INSPECT SILT SACKS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE SILT SACK OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE THE SILT SACK DURING SEDIMENT REMOVAL. REPLACE AS NEEDED.
- FOR THE BLOCK AND GRAVEL INLET PROTECTION, INSPECT THE BARRIER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (3/4 INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED.  
  
REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.  
  
WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.
- DURING THE ESTABLISHMENT PERIOD OF GRASSED SWALES, CHECK GRASS-LINED CHANNELS AFTER EVERY RAINFALL. AFTER GRASS IS ESTABLISHED, PERIODICALLY CHECK THE CHANNEL. CHECK IT AFTER EVERY HEAVY RAINFALL. IMMEDIATELY MAKE REPAIRS. IT IS PARTICULARLY IMPORTANT TO CHECK THE CHANNEL OUTLET AND ALL ROAD CROSSINGS FOR BANK STABILITY AND EVIDENCE OF PIPING OR SCOUR HOLES. REMOVE ALL SIGNIFICANT SEDIMENT ACCUMULATIONS TO MAINTAIN THE DESIGNED CARRYING CAPACITY. KEEP THE GRASS IN A HEALTHY, VIGOROUS CONDITION AT ALL TIMES, SINCE IT IS THE PRIMARY EROSION PROTECTION FOR THE CHANNEL.
- ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.

#### PERMANENT SEEDING SCHEDULE

Seeding Mixture	
SPECIES	RATE (LB/ACRE)
CAROLINA COASTAL SEED MIX (BLEND)	200
Seeding Dates	
MARCH - JUNE	
Soil Amendments	
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.	
CHECK WITH OWNER PRIOR TO APPLYING. ALL CHEMICALS MUST BE PREAPPROVED BY GE.	
Mulch	
DO NOT MULCH.	
Maintenance By Owner	
FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.	

#### TEMPORARY SEEDING-LATE WINTER/EARLY SPRING

Seeding Mixture	WINTER AND EARLY SPRING
-----------------	-------------------------

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.	

#### SUMMER

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	120
	50

#### FALL

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	40

#### Seeding dates

COASTAL PLAIN - DEC.1-APR. 15 - LATE WINTER AND EARLY SPRING  
APRIL 15 - AUG. 15 - SUMMER  
AUG. 15 - DEC. 30 - FALL

#### 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.

#### GENERAL GRADING NOTES

- REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
- CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE NCDOT.
- ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

#### SITE NOTES

- ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
- CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
- DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.
- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
- ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.
- FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
- ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

#### GENERAL STORM SEWER NOTES

- ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEW HANOVER COUNTY AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
- BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.
- ALL STORM SEWER PIPES TO BE HDPE ADS N-12 OR EQUIVALENT, UNLESS OTHERWISE SPECIFIED.
- ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

#### Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	



Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

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

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

#### EXISTING UTILITY NOTES

- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

#### UTILITY CONTACTS:

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949

#### NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TWELVE WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT  
1-800-632-4949 or 811

EMERGENCY DIAL 911

POLICE - FIRE - RESCUE

#### NPDES NOTES

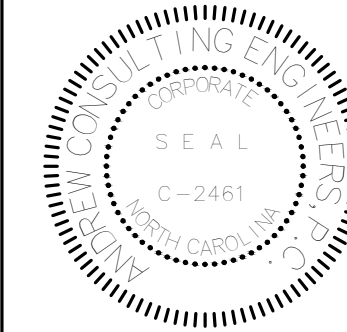
GROUND STABILIZATION		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 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 PERIMETERS AND HQW ZONES)

#### BUILDING WASTES HANDLING

- NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVE AVAILABLE.
- EARTHEN-MATERIALS STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS OR BUFFERS.
- INSPECTIONS
- SAME WEEKLY INSPECTION REQUIREMENTS
- SAME RAIN GAUGE & INSPECTIONS AFTER 0.5" RAIN EVENT
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS".
- INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.
- SEDIMENT BASINS
- OUTLET STRUCTURES MUST WITHDRAW FROM BASIN SURFACE UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWO-APPROVED FLOCCULENTS.

#### NPDES - SPECIFIC PLAN SHEET NOTES

- THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.
- THIS PAGE CAN BE APPROVED BY THE COUNTY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.
- THIS PAGE OF APPROVED PLANS IS ENFORCEABLE EXCLUSIVELY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.
- THE COUNTY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT A PART OF THE APPROVED PLANS FOR THE PURPOSES OF ENFORCEMENT ACTION UNDER THE COUNTY CODE.



615 NORTH FRONT STREET DEMO  
615 N FRONT STREET, LLC  
1221 ARBORETUM DRIVE  
WILMINGTON, NC 28405

NO.	DESCRIPTION	DATE	MARK

PROJECT NUMBER: 17041  
DESIGNED BY: MNH  
CHECKED BY: MNH  
DRAWN BY: MNH  
DATE: 5/23/18

SHEET TITLE:

GENERAL NOTES

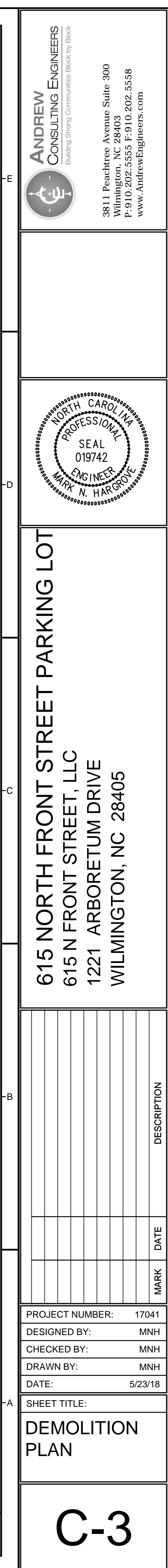
C-1

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

PORT CITY CONSULTING ENGINEERS, PLLC  
6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409  
910-599-1744 LICENSE No. P-1032









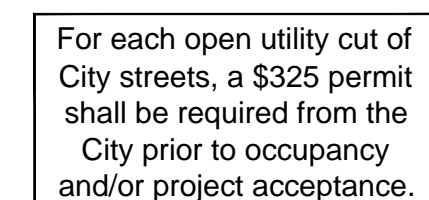
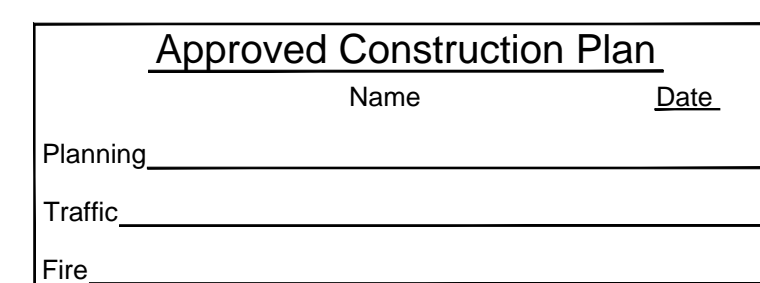
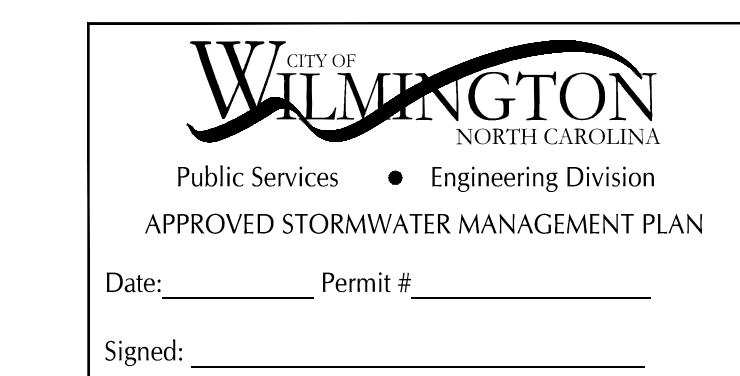
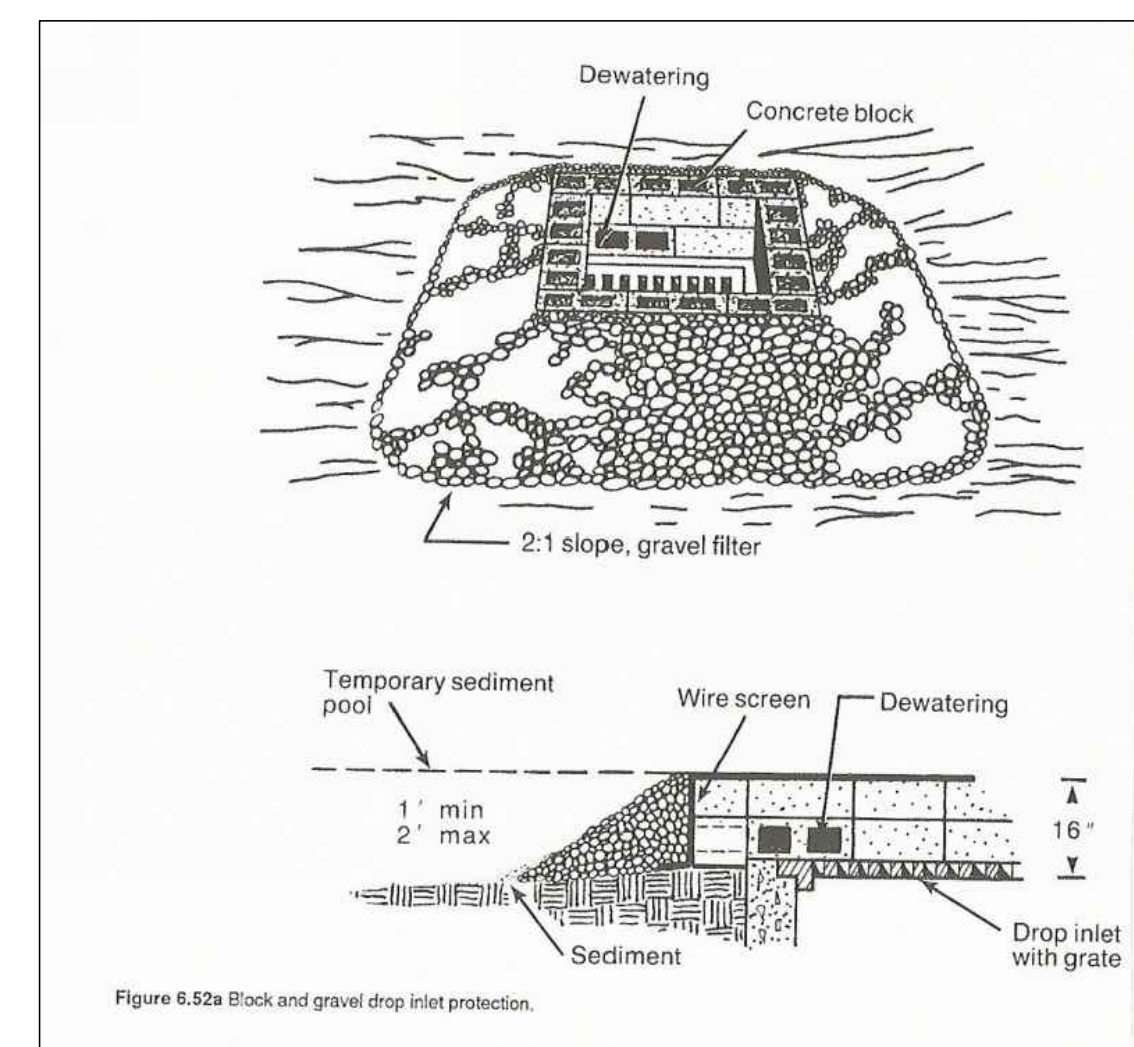
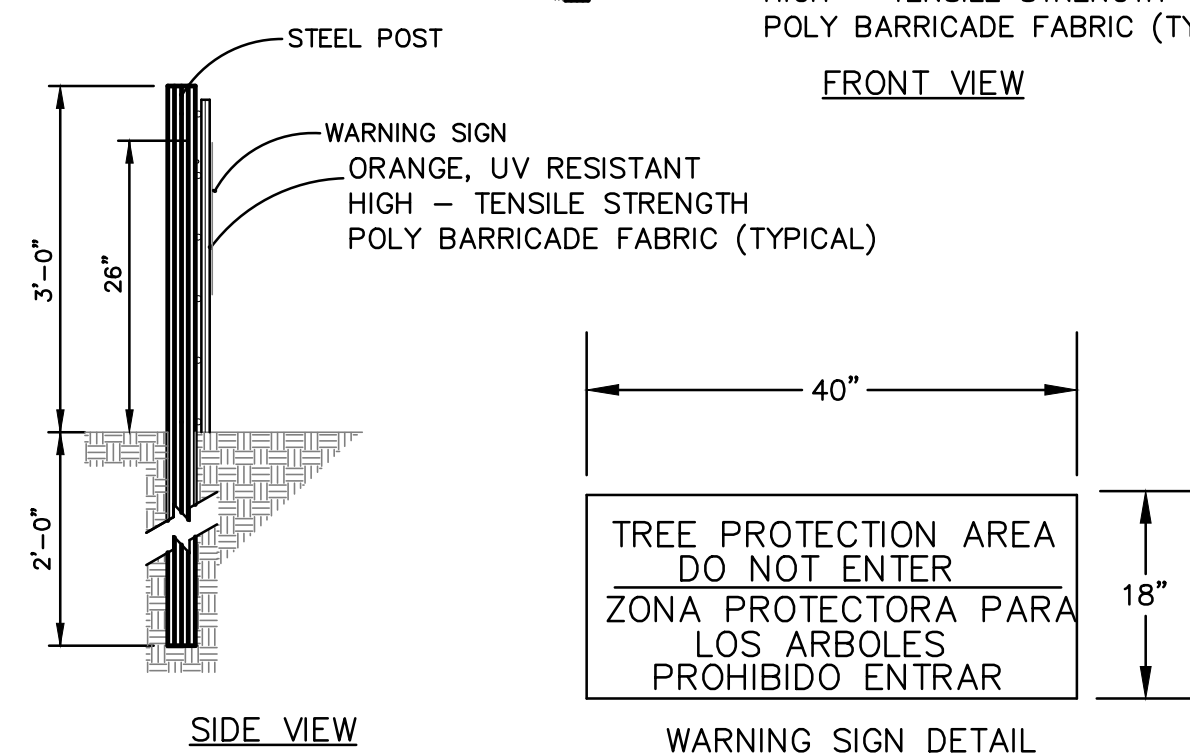
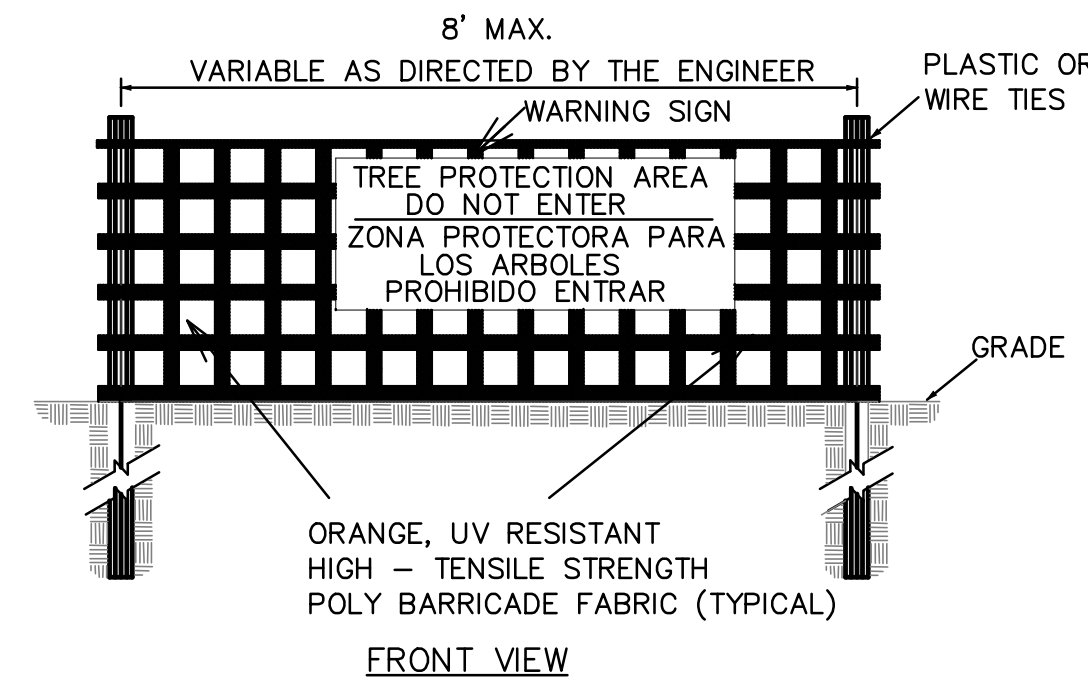
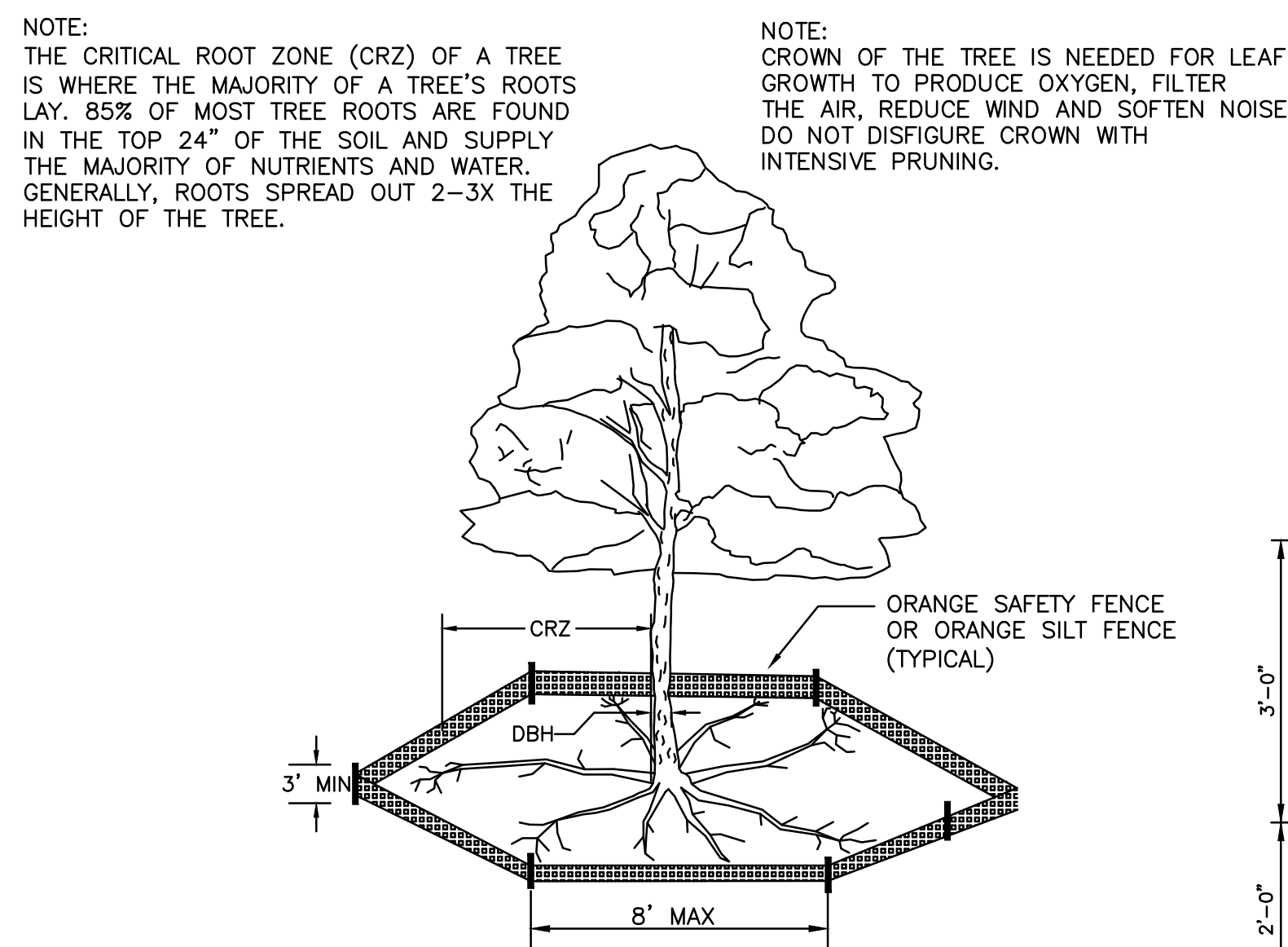
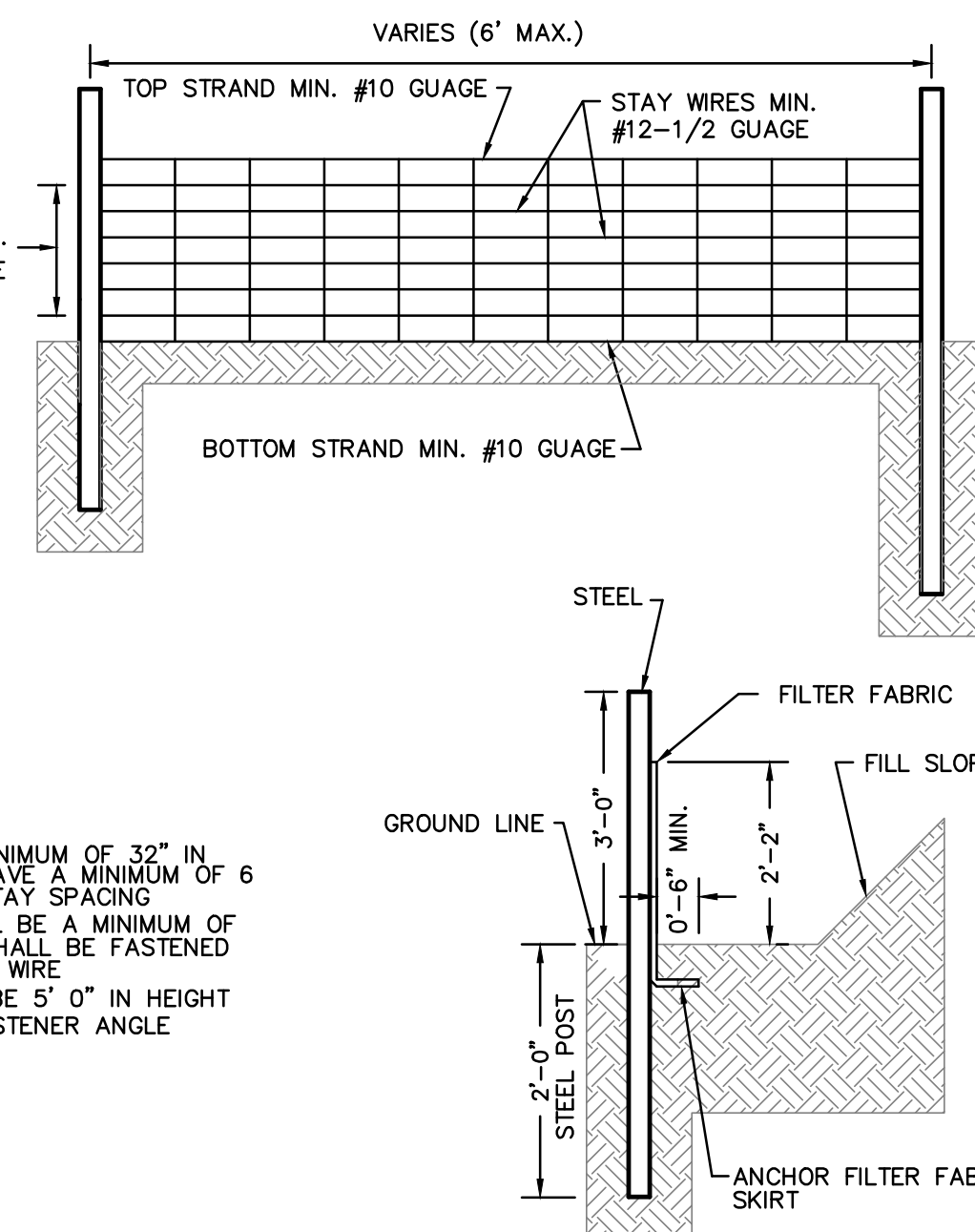
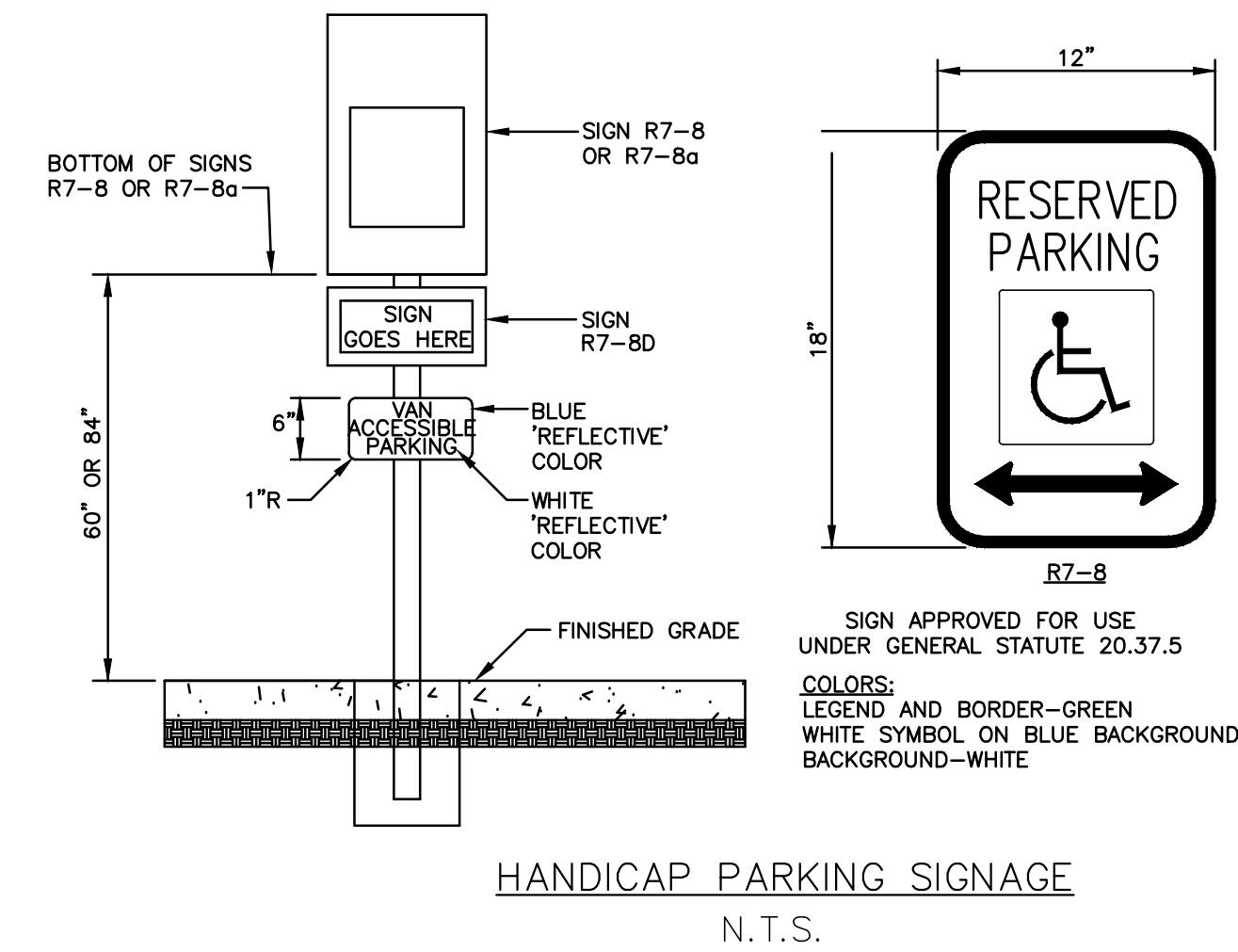
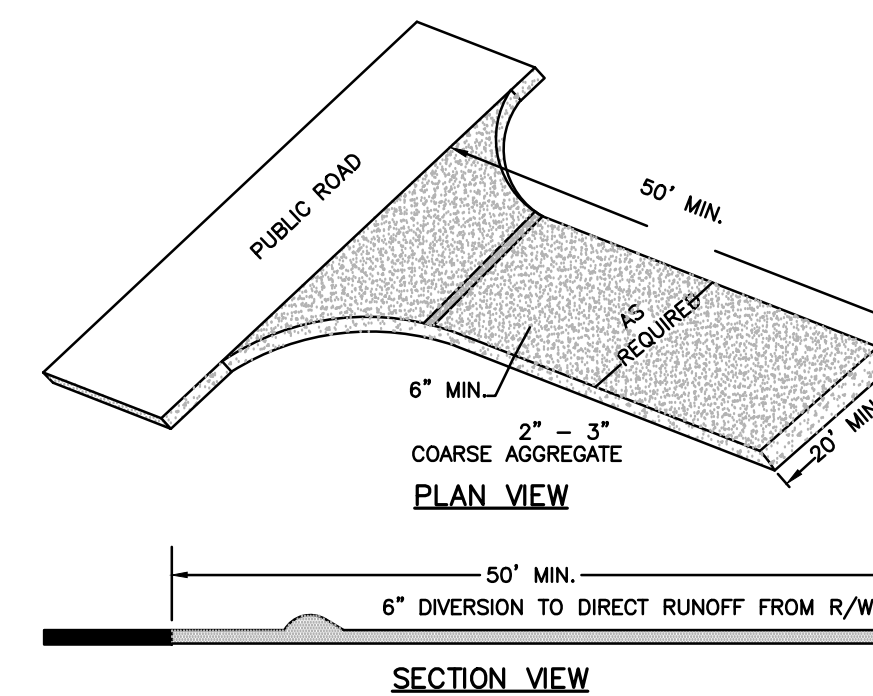
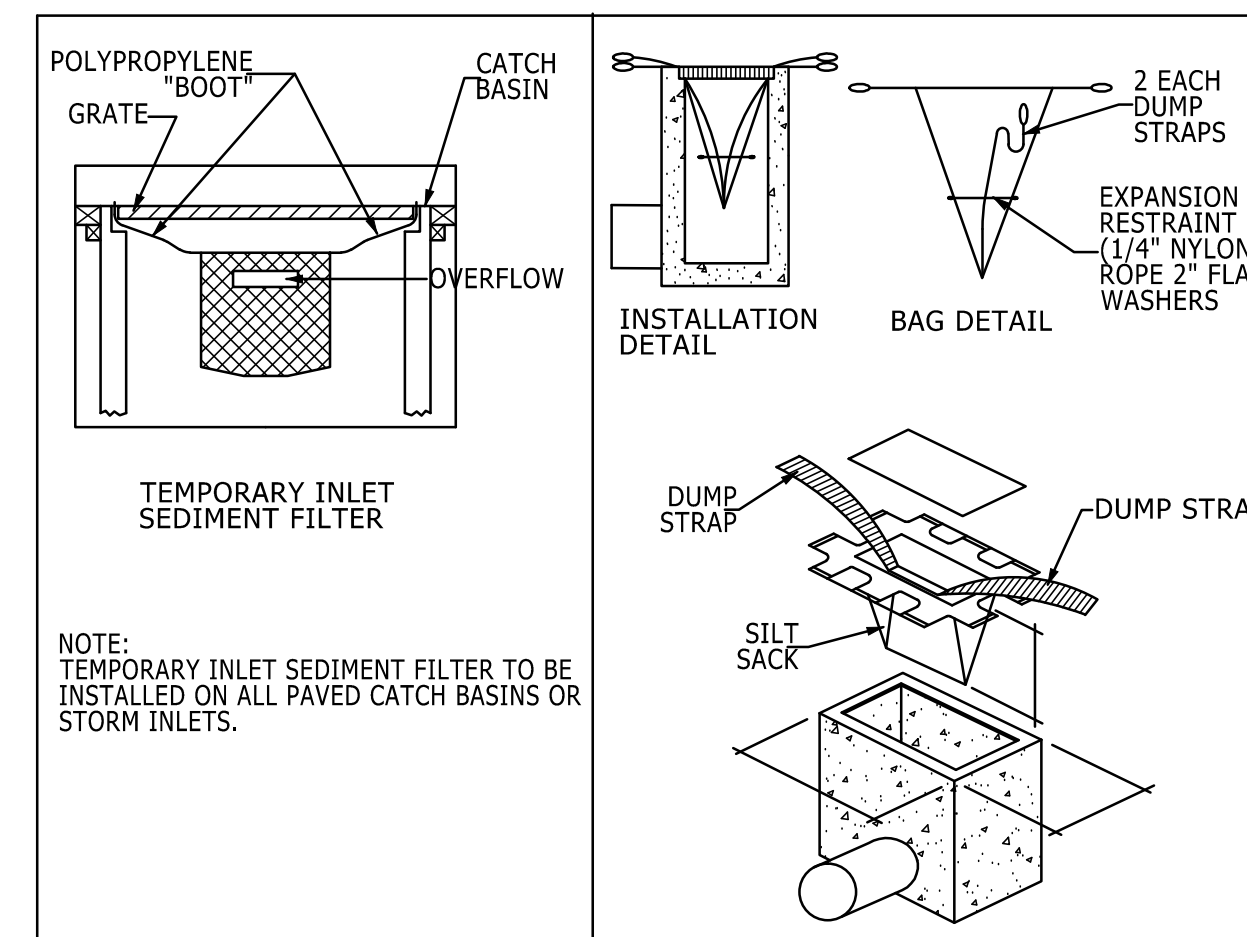
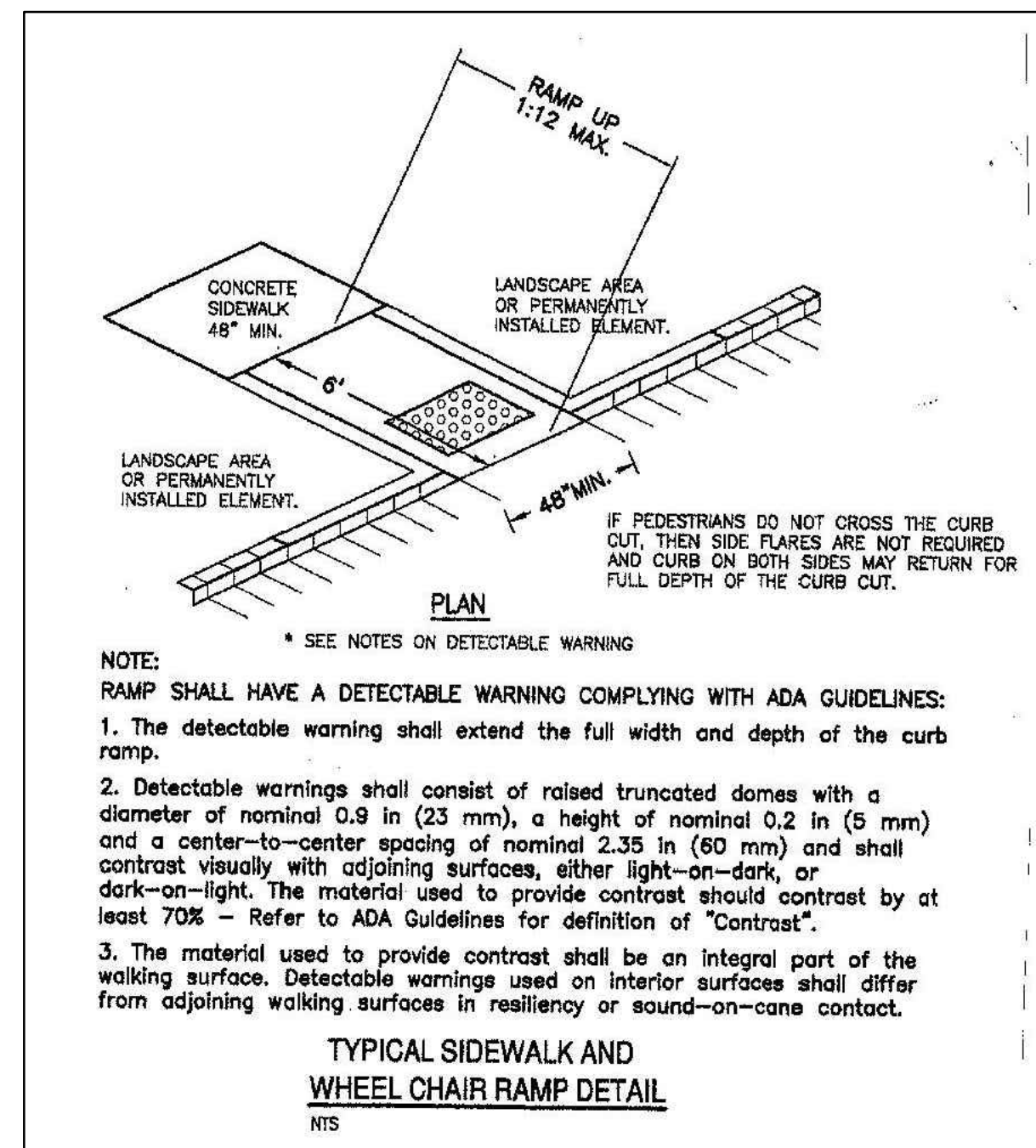
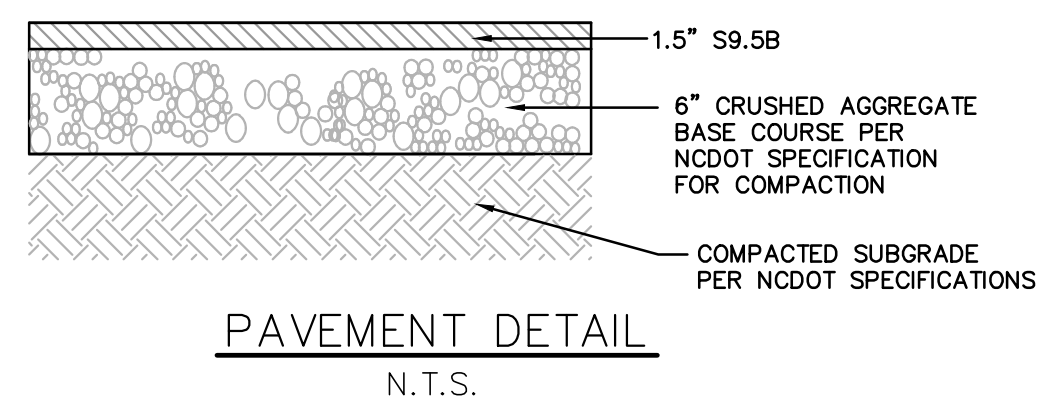












PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

PORT CITY CONSULTING ENGINEERS, PLLC  
6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409  
910-599-1744 LICENSE No. P-1032

615 NORTH FRONT STREET DEMO  
615 N FRONT STREET, LLC  
1221 ARBORETUM DRIVE  
WILMINGTON, NC 28405

**ANDREW  
CONSULTING ENGINEERS**  
Building Strong Communities Block by Block

3811 Peachtree Avenue Suite 300  
Wilmington, NC 28403  
P: 910.202.5555 F: 910.202.5558  
[www.AndrewEngineers.com](http://www.AndrewEngineers.com)

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "MARK N. HARGROVE" at the bottom. Inside this ring, the word "PROFESSIONAL" is at the top and "ENGINEER" is at the bottom. In the center of the seal, the words "SEAL" and the license number "019742" are printed.

DESCRIPTION

MARK	DATE
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PROJECT NUMBER:	17041
-----------------	-------

DESIGNED BY:	MNH
--------------	-----

CHECKED BY: MNH

DRAWN BY: MNH

DATE: 5/23/18

SHEET TITLE:

MISC

DETAILS

## DETAILS

\_\_\_\_\_

10. *Journal of the American Medical Association*, 2000; 283: 2689-2693.

C 70

6-70

## Conclusion

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[illegible]

**NEW TIMBER STAIRS**  
**615 NORTH FRONT STREET**  
**WILMINGTON, NORTH CAROLINA**  
**JUNE 2018**

**GENERAL STRUCTURAL NOTES**

1. THESE STRUCTURAL NOTES ARE AN INTEGRAL PART OF THE STRUCTURAL DRAWINGS AND ARE TO BE USED IN CONJUNCTION WITH THE JOB SPECIFICATIONS. WHEN THERE ARE NO SPECIFICATIONS IN ADDITION TO THESE NOTES THE NOTES SHALL GOVERN. WHEN THERE IS A SPECIFICATION IN ADDITION TO THE NOTES THE MOST STRINGENT OF THE TWO SHALL GOVERN.

2. BUILDING CODE - NC BUILDING CODE 2012 EDITION.

3. DESIGN LOADS:

IMPORTANCE FACTORS: WIND (I) W 1.0  
SNOW (I) S 1.0  
SEISMIC (I) E 1.0

LIVE LOADS: BOARDWALK: 100 PSF

GROUND SNOW LOAD: 10 PSF  
FLAT ROOF SNOW LOAD: 7 PSF  
SNOW EXPOSURE CATEGORY: 1.0  
SLOPED ROOF FACTOR: 0.92  
THERMAL FACTOR: 1.0

WIND LOAD: BASIC WIND SPEED: 130 MPH (ASCE 7-05)  
EXPOSURE CATEGORY: C  
DIRECTIONALITY (Kd) .85

LATERAL DESIGN CATEGORY: WIND: Vx & Vy

4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND DETAILS AT JOB SITE.  
5. U.N.O. MEANS "UNLESS NOTED OTHERWISE".  
6. ALL SPECIFICATIONS REFER TO LATEST EDITION.

MISCELLANEOUS:

1. DIMENSIONS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE DIMENSIONS OF THE STRUCTURAL DRAWINGS AND ADVISING THE ENGINEER OF ANY DIFFERENCES IN DIMENSIONS BETWEEN THE FRAMING PLANS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION.

2. CONSTRUCTION SAFETY: THESE STRUCTURAL DRAWINGS DO NOT CONTAIN NECESSARY COMPONENTS FOR SAFETY DURING CONSTRUCTION.

TIMBER AND MISCELLANEOUS

1. ALL HARDWARE AND NAILS SHALL BE HOT DIP GALVANIZED (ASTM 153) UNLESS NOTED OTHERWISE. USE CUT WASHERS UNDER ALL BOLT HEADS AND NUTS UNLESS NOTED OTHERWISE. NAIL SIZES AND NUMBER ARE NOT SHOWN. USE ACCORDING TO GOOD CARPENTRY PRACTICE. USE COMMON NAILS ONLY.

2. PROVIDE TREATMENT CERTIFICATES ON ALL LUMBER BY AN INDEPENDENT 3RD PARTY INSPECTOR AWPB OR SPIB APPROVED AND SUBJECT TO APPROVAL BY ENGINEER.

3. ALL WOOD MATERIALS SHALL HAVE FIELD CUTS TREATED WITH KOPPERS #50.

4. USE OVERSIZED WASHERS UNDER ALL BOLTS AND NUTS.

5. SCREW WOOD DECK TO JOIST WITH STAINLESS STEEL SCREWS.

FOUNDATIONS - PILING:

1. TIMBER FOUNDATION PILES SHALL MEET REQUIREMENTS OF ASTM D25 AND THE NORTH CAROLINA BUILDING CODE 2012 EDITION.

TIMBER PILES TO BE PRESSURE TREATED IN ACCORDANCE WITH EITHER OF THE FOLLOWING:  
A. THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) C3 STANDARD.  
B. THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) C24 STANDARD.

DRIVE PILING TO THE MINIMUM EMBED DEPTH AS SPECIFIED BELOW AS PER NORTH CAROLINA STATE BUILDING CODE 2012 EDITION.

2. MINIMUM BLOW COUNT AT TERMINATION TO BE DETERMINED AFTER CONTRACTOR TO SUBMIT HAMMER INFORMATION TO ENGINEER FOR APPROVAL.

3. MINIMUM EMBEDMENT DEPTH = 18'-0".

**WOOD MATERIAL SCHEDULE**

MATERIAL	SIZE *	S.Y. PINE GRADE	SURFACE	MOISTURE CONTENT	USE CATEGORY AND CCA RETENTION
GIRDERS	PT 2x12	#1 DENSE	S4S	S-DRY 19	UC5B
STRINGERS	PT 2x10	#1	S4S	S-DRY 19	UC5B
FLOOR DECKING	PT 2x6	#1 PRIME	S4S	ADAT/KDAT 19	UC3B
PILES	PT 8x8	ROUGH	S4S	ADAT/KDAT 19	UC3B
STAIR STRINGERS	PT 2x12	#1 PRIME	S4S	ADAT/KDAT 19	UC3B
STAIR TREADS	PT 2x6, PT 2x8	#1 PRIME	S4S	ADAT/KDAT 19	UC3B

\* UNLESS OTHERWISE NOTED.

**LOCATION MAP**  
NO SCALE

**AREA MAP**  
NO SCALE

**SHEET INDEX**

SHEET NUMBER	SHEET NAME
S-001	STRUCTURAL NOTES/COVER SHEET
S-101	PLAN VIEWS AND ELEVATION
S-301	SECTION AND DETAILS

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[illegible]

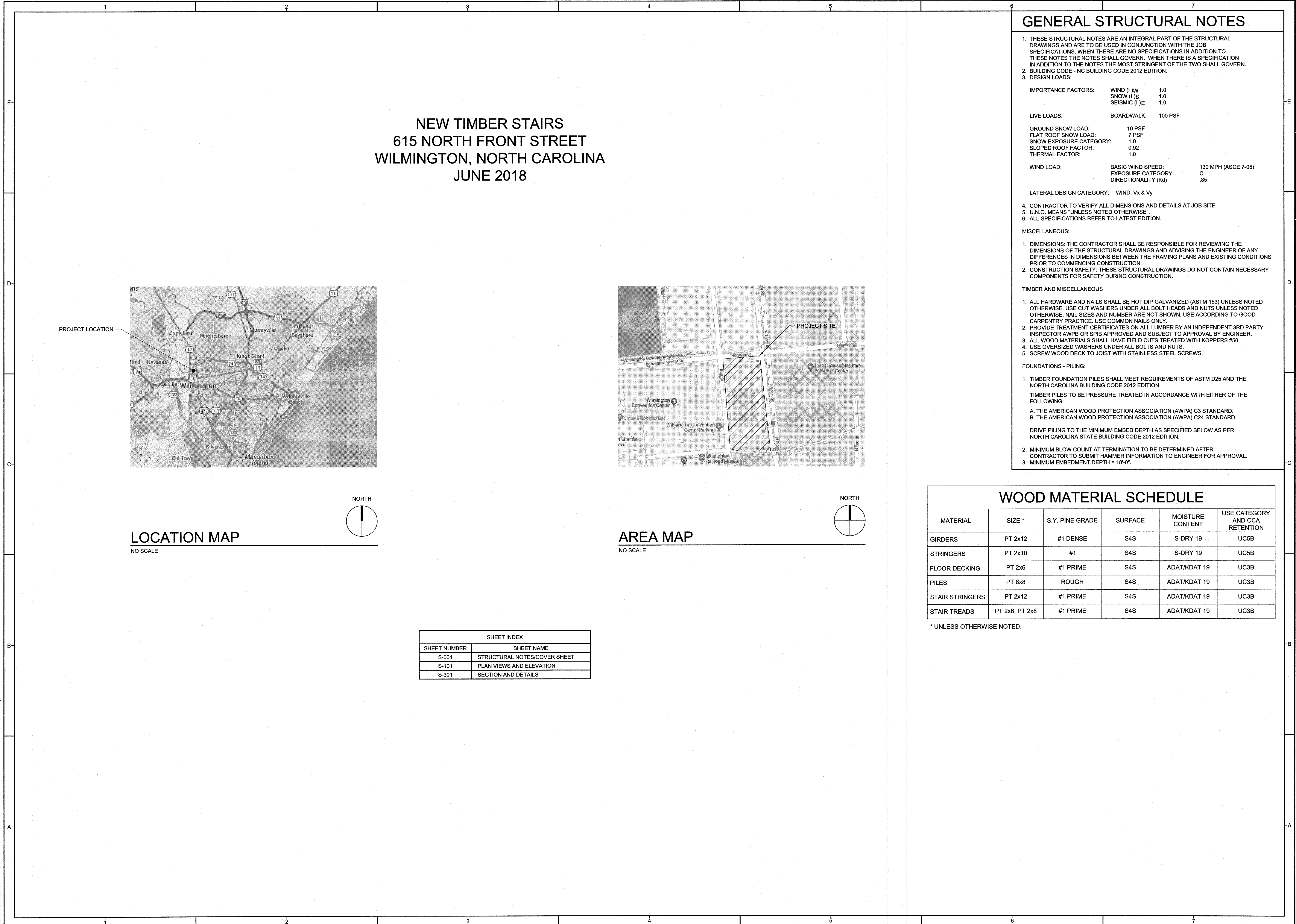
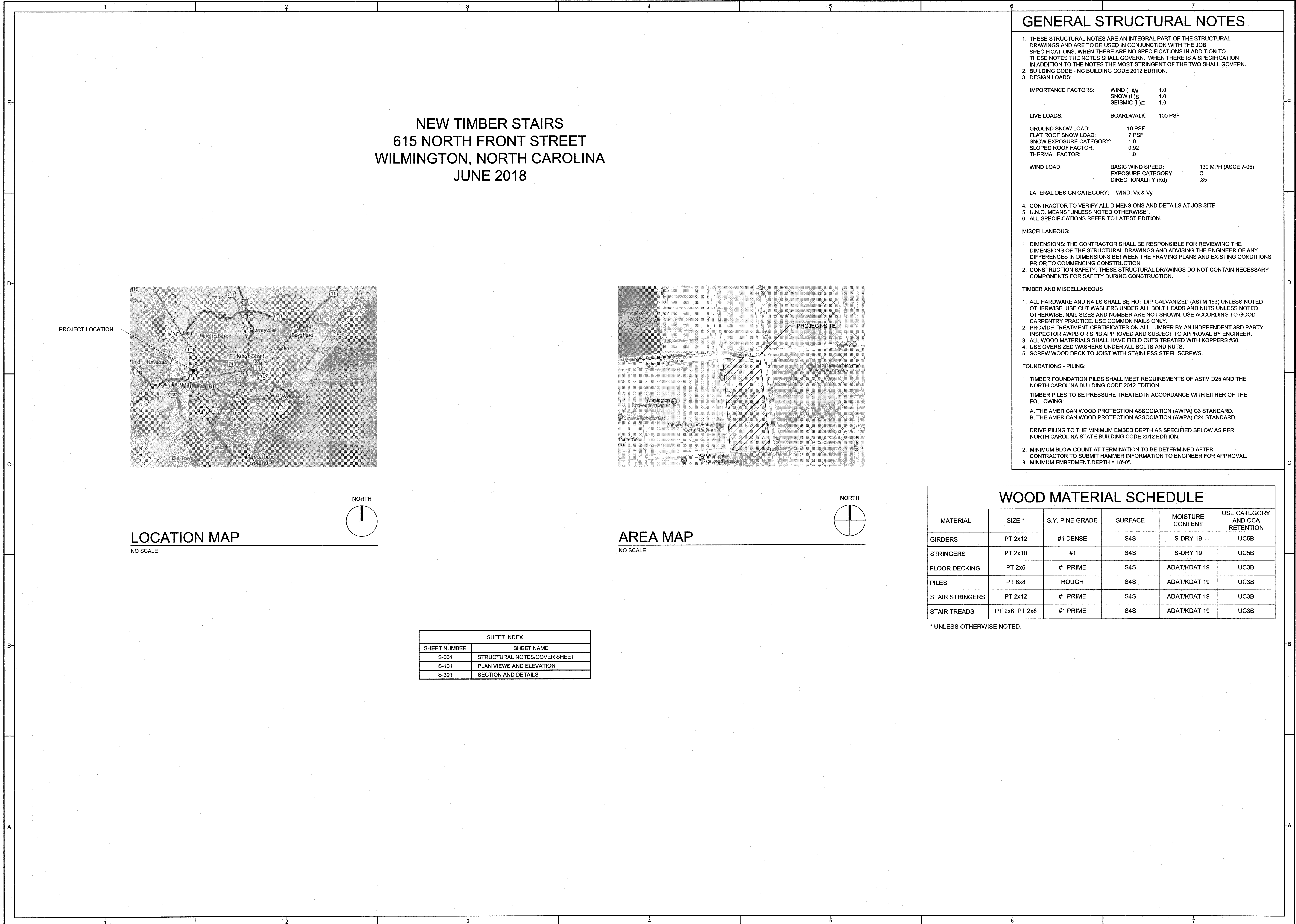
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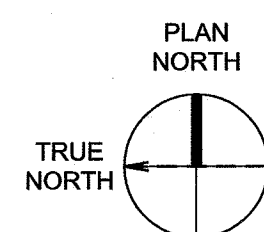
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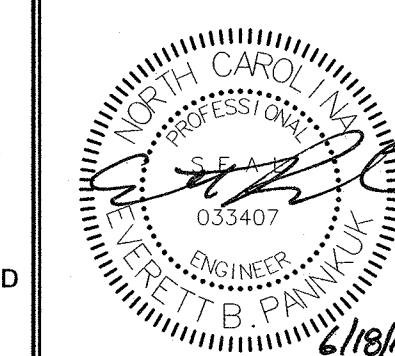
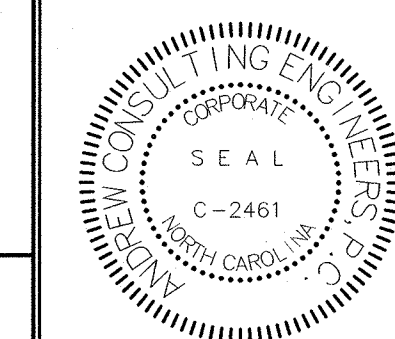
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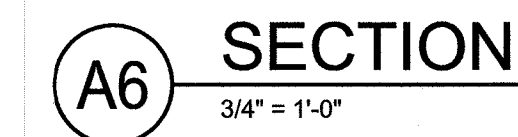
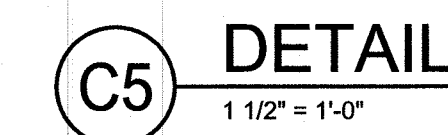
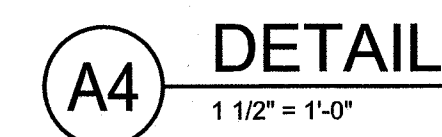
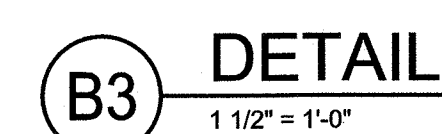
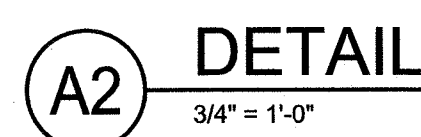
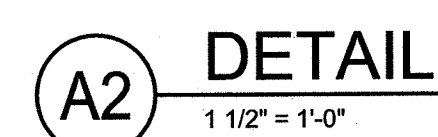
PROJECT NUMBER:	1802
DESIGNED BY:	EBR
CHECKED BY:	NWA
DRAWN BY:	RTW
DATE:	06/18/18

A	SHEET TITLE:
	<b>PLAN VIEWS AND ELEVATION</b>

S-101

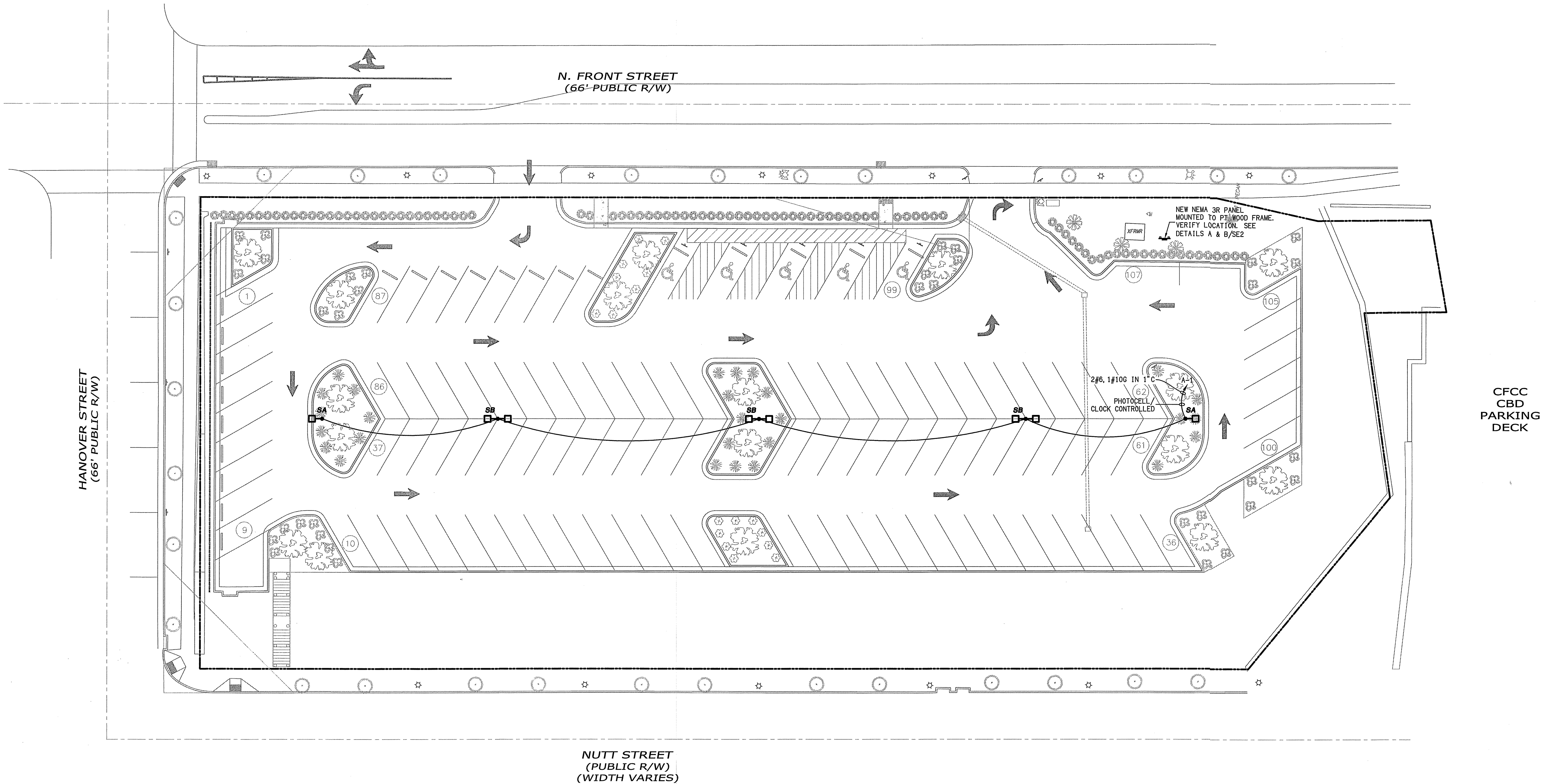




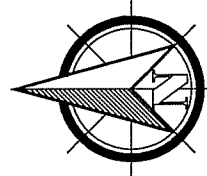
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PROJECT NUMBER:	18025
DESIGNED BY:	EBP
CHECKED BY:	NWA
DRAWN BY:	RTW
DATE:	06/18/18

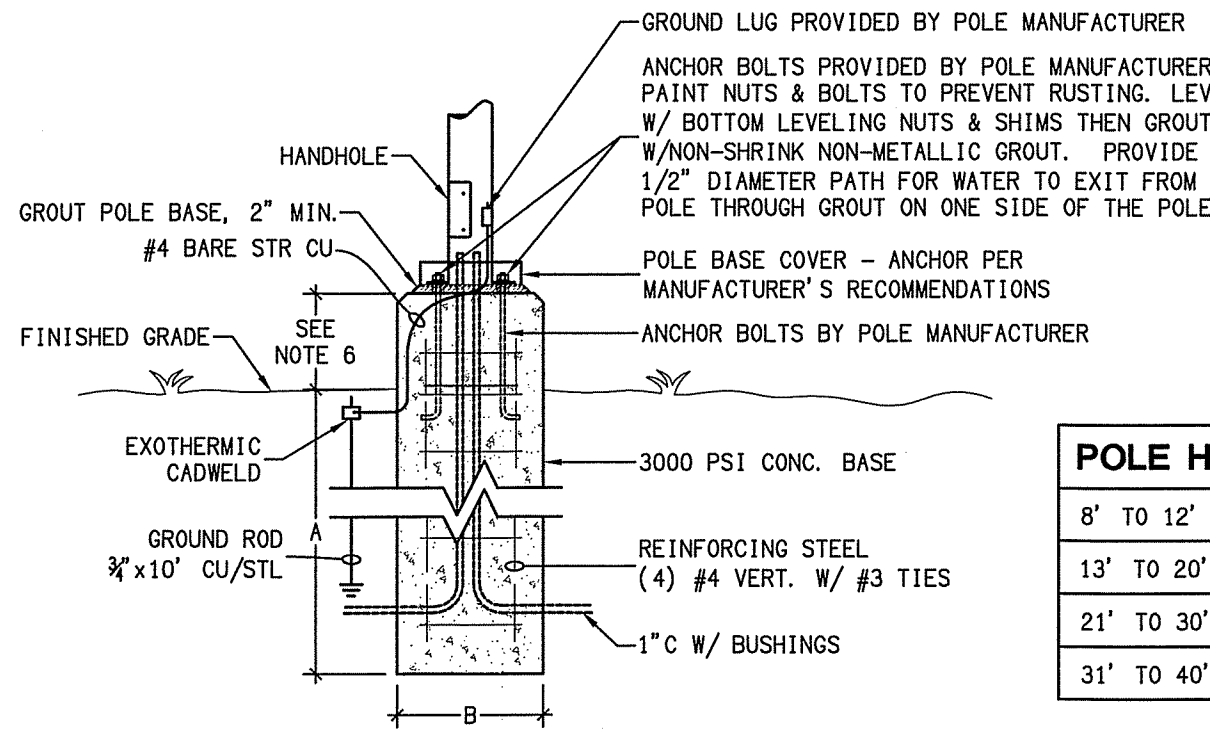
TIME- 14.27 DATE- 06/22/2018 DRAWING LOCATION- F:\PROJECTS\2018\1813A\Drawings\1813A.dwg



NUTT STREET  
(PUBLIC R/W)  
(WIDTH VARIES)



**A**  
**SE1** **PARKING LOT LIGHTING PLAN**  
SCALE: 1" = 20' -0"



POLE HEIGHT	A	B
8' TO 12'	36"	12"
13' TO 20'	42"	16"
21' TO 30'	72"	24"
31' TO 40'	78"	30"

- NOTES:
1. FORM CONCRETE WITH SONOTUBE FIBERBOARD FORMS. STRIP SONOTUBE FORM AFTER CURING.
  2. ALL HARDWARE, INCLUDING ANCHOR BOLTS AND NUTS, SHALL BE GALVANIZED.
  3. 3000 PSI CONCRETE SHALL HAVE A 28 DAY CURE.
  4. EXPOSED AREA OF POLE BASE SHALL HAVE RUB FINISH AND BE CLEARED OF ALL CASING MATERIAL.
  5. WHEN POLE BASE IS LOCATED IN FINISHED SIDEWALK OR SIMILAR FINISHED AREA, THE TOP OF THE CONCRETE BASE SHALL BE FLUSH WITH ADJACENT AREA SO THAT POLE POLE BASE COVER SITS DIRECTLY ON THE SIDEWALK.
  6. HEIGHT OF POLE BASE ABOVE FINAL GRADE IN PARKING LOT OR AREAS IMMEDIATELY ADJACENT TO PARKING LOT SHALL BE 24" ABOVE GRADE. HEIGHT OF POLE BASE IN LANDSCAPED AREAS SHALL BE 4" ABOVE GRADE. E.C. SHALL CONFIRM POLE BASE HEIGHTS WITH ARCHITECT PRIOR TO INSTALLING BASE.

**B**  
**SE1** **LIGHT POLE BASE DETAIL**  
SCALE: NTS

**LIGHTING FIXTURE SCHEDULE**

SYMBOL	DESCRIPTION	LAMP						MFG.	MODEL	MOUNTING	REMARKS
		NO	WATT	TYPE	COLOR TEMP	LUMENS	VOLT				
SA	POLE LIGHT W/ TYPE III DISTRIBUTION	1	135	LED	4000K	16,053	120	PHILIPS GARCO	ECF-S-48L-900-NW -G2-3-120-BK	ARM MOUNT TO SQ. POLE	VERIFY FINISH. SEE NOTES.
SB	DOUBLE POLE LIGHT W/ TYPE V DISTRIBUTION	2	135	LED	4000K	17,723	120	PHILIPS GARCO	ECF-S-48L-900-NW -G2-5-120-BK	ARM MOUNT TO SQ. POLE	VERIFY FINISH. SEE NOTES.

- LIGHTING FIXTURE SCHEDULE NOTES:
1. HEIGHT OF OPTICS TO BE 20' -0" ABOVE SURROUNDING GRADE. PROVIDE SQUARE STRAIGHT ALUMINUM POLE WITH FINISH TO MATCH FIXTURE. SELECTION OF POLE SIZE WILL BE SUBJECT TO WIND LOAD RATING OF SITE LOCATION.
  2. FIELD SET THE LIGHT DISTRIBUTION OF PARKING AREA LIGHT FIXTURES.
  3. PROVIDE FUSES AT FIXTURES.

**ELECTRICAL SYSTEM AND EQUIPMENT**  
METHOD OF COMPLIANCE

PREScriptive ☒ PERFORMANCE ☐ ENERGY COST BUDGET ☐

PROVIDE A STANDARD RISER DIAGRAM WHICH INDICATES DESIGNATED POINTS FOR CHECK METERING. - SEE PLANS  
PROVIDE A STANDARD PANEL SCHEDULE DESCRIPTION WHICH IDENTIFIES DIFFERENT ENDUSE LOADS. - SEE PLANS

LIGHTING SCHEDULE  
LAMP TYPE REQUIRED IN FIXTURE }  
NUMBER OF LAMPS IN FIXTURE }  
BALLAST TYPE USED IN THE FIXTURE } SEE PLANS  
NUMBER OF BALLASTS IN FIXTURE }  
TOTAL WATTAGE PER FIXTURE }  
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED } N/A  
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED } SPECIFIED=1,080 WATTS, ALLOWED=5,220 WATTS

EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)  
MOTOR HORSEPOWER  
NUMBER OF PHASES  
MINIMUM EFFICIENCY } N/A  
MOTOR TYPE  
# OF POLES

DESIGNER STATEMENT  
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE  
THERMAL ENVELOPE REQUIREMENTS OF THE LATEST NORTH CAROLINA STATE ENERGY CODE.

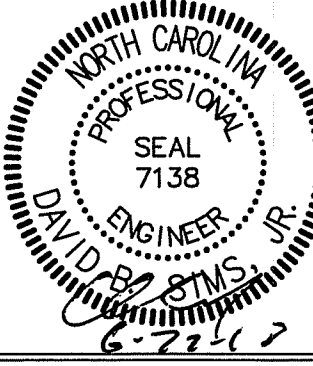
SIGNED:   
NAME: DAVID SIMS JR., PE  
TITLE: ENGINEER

symbol	date	description	by
REVISIONS			

615 N. FRONT STREET  
PARKING LOT LIGHTING  
WILMINGTON, NC

DAVID SIMS & ASSOCIATES  
Consulting Engineers, P.C.  
Arboretum Centre  
108 Giles Avenue - Suite 100 - Wilmington, N.C. 28403 Phone -(910) 791-8016  
NC License: C-11150

des by :  
dwn by :  
proj number : 18134  
date : 5/22/18



SHEET NO.

**SE1**  
OF



ELECTRICAL SPECIFICATIONS

- 1601 GENERAL
- A. INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NORTH CAROLINA STATE BUILDING CODE, VOLUME I AND VOLUME X, NATIONAL ELECTRIC CODE, LOCAL BUILDING CODES AND ORDINANCES AND OTHER NATIONAL CODES AND ORDINANCES. IN THE CASE OF CONFLICT BETWEEN THE CODE AND THE DRAWINGS AND SPECIFICATIONS OR BETWEEN THE VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- B. PROVIDE AND PAY ALL LICENSES, FEES, PERMITS, POWER COMPANY CONNECTION CHARGES, IF ANY, INSURANCE, ETC., REQUIRED FOR EXECUTION OF THIS WORK.
- C. ELECTRICAL CONTRACTOR SHALL PROVIDE THE MATERIALS, PERFORM THE WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE ELECTRICAL SYSTEM OPERABLE AND READY FOR USE BY THE OWNER.
- D. GUARANTEE: EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER.
- E. IT IS UNDERSTOOD AND AGREED THAT THESE PLANS AND SPECIFICATIONS SHALL BE FULFILLED IN THEIR TRUE SPIRIT AND INTENT SO THAT ANY MINOR MATERIALS OR DEVICES ESSENTIAL TO PROPER AND CONVENIENT OPERATION, REQUIRED OR IMPLIED, SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR WITHOUT EXTRA CHARGE, EVEN THOUGH NOT SPECIFICALLY CALLED OUT.
- F. INSTALLATION SHALL COMPLY WITH OSHA STANDARDS.
- G. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM THE JOB SITE. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY.
- H. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE SPECIFICATIONS, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- I. DIVISION I SHALL BECOME APART OF THESE SPECIFICATIONS BY REFERENCE.
- J. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE CONTACT SEISMIC CONTROL AND ISOLATIONS, INC. PHONE: 910 799-8204. ALL REQUIRED INSPECTIONS FOR THESE DESIGNS SHALL BE PERFORMED BY APPROVED INSPECTORS AND AGENCIES PROVIDED BY OWNER AND OWNER'S AGENT.
- 1602 SCOPE
- WORK SHALL INCLUDE BUT IS NOT LIMITED TO:
- A. PROVIDE 120/208V-3-4W SERVICE TO THE LOT.
- B. PROVIDE AND INSTALL FIXTURES AS SHOWN ON THE PLANS.
- C. PROVIDE AND INSTALL WIRING DEVICES, PANELS, AND CONDUIT.
- D. PROVIDE REQUIRED DEMOLITION.
- 1603 MATERIALS
- A. CONDUCTORS
1. ALL WIRE SHALL BE COPPER. WIRE #8 AND LARGER SHALL BE STRANDED.
2. USE WIRE WITH THHN/THWN INSULATION FOR ALL WIRE.
3. POWER CONDUCTORS SHALL BE #12 AWG MINIMUM. PILOT AND CONTROL CIRCUITS MAY BE #14 AWG.
- B. CONDUIT
1. UNDERGROUND CONDUIT SHALL BE PVC. CHANGE TO RIGID GALVANIZED BELOW CONCRETE FLOOR AND STUB UP THROUGH FLOOR WITH RIGID GALVANIZED.
2. ARMOR CLAD CABLE SHALL BE ALLOWED IN CONCEALED AREAS.
3. OTHER ABOVE GRADE CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS. IF EXPOSED TO MECHANICAL DAMAGE CONDUIT SHALL BE RIGID GALVANIZED.
4. CONNECTIONS TO EQUIPMENT AND FIXTURES SHALL BE MADE WITH SEAL TIGHT FLEX CONDUIT FOR EXTERIOR CONNECTIONS AND GREENFIELD FOR INTERIOR CONNECTION.
- C. WIRING DEVICES SHALL BE ONE MAKE, UNDERWRITERS APPROVED, MANUFACTURED BY PASS & SEYMOUR, HUBBELL OR EQUAL. DEVICE COVERS SHALL BE WEATHERPROOF FOR EXTERIOR COVERS. WIRING DEVICES SHALL BE STANDARD GRADE. COLOR SHALL BE DETERMINED BY THE ARCHITECT.
- D. DISTRIBUTION EQUIPMENT SHALL BE THE LATEST PRODUCTS, MANUFACTURER SHALL BE G.E., SQUARE D, WESTINGHOUSE, OR ITE. INTERIOR EQUIPMENT SHALL BE NEMA 1 AND EXTERIOR EQUIPMENT SHALL BE NEMA 3R MINIMUM.
- E. COORDINATE WITH POWER COMPANY TO OBTAIN BREAKER KAIC RATINGS. DRAWINGS SHALL INDICATE MINIMUM RATING. ALL BREAKERS SHALL BE BOLT ON TYPE. MAIN PANEL SHALL BE SERVICE ENTRY RATED AND LABELED. BREAKERS SHALL BE SERIES AND CURRENT LIMITING RATED.
- F. PROVIDE MOTOR RATED SWITCHES FOR SWITCHES SERVING MOTORS AS REQUIRED.
- G. FUSES SHALL BE CURRENT LIMITING TIME DELAY FUSES "CLASS RK5".
- H. ALL EQUIPMENT AND FIXTURES SHALL BE UL APPROVED.
- I. PROVIDE LAMPS FOR ALL FIXTURES. LAMPS SHALL BE G.E., OR PENNSYLVANIA.
- 1604 EXECUTION
- A. UNLESS OTHERWISE NOTED, SET ALL RECEPTACLES SET ALL RECEPTACLES AT 16" AFF, AND SET ALL SWITCHES AT 48" AFF.
- B. HOLES SHALL BE DRILLED OR CUT. DO NOT BREAK HOLES.
- C. THE ELECTRICAL CONTRACTOR SHALL DO ALL CUTTING, PATCHING AND PAINTING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED UNDER THIS CONTRACT, AND SHALL ESTABLISH ALL FINISHES WHEN CUTTING AND PATCHING OCCUR TO THEIR ORIGINAL CONDITION. QUALIFIED WORKERS SHALL DO ALL CUTTING AND PATCHING WORK (I.E. DRY WALL CUTTING AND PATCHING SHALL BE DONE BY QUALIFIED DRY WALL CRAFTSMEN).
- D. PATCHING SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. ALL PATCHING SHALL BE DONE BY A CRAFTSMAN SKILLED IN THE WORK BEING PERFORMED.
- E. WIRE SHALL BE COLOR CODED AS FOLLOWS:
- |         |         |
|---------|---------|
| PHASE A | 120/208 |
| PHASE B | BLACK   |
| PHASE C | RED     |
| NEUTRAL | BLUE    |
| GROUND  | WHITE   |
|         | GREEN   |
- F. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EQUIPMENT AND POWER REQUIREMENTS FOR ALL EQUIPMENT BEFORE RUNNING SERVICE.
- G. CONDUIT AND WIRING IN FINISHED AREAS SHALL BE CONCEALED. ANY EXPOSED CONDUIT SHALL BE RUN IN A NEAT FASHION AND SHALL BE RUN PERPENDICULAR AND PARALLEL TO THE BUILDING LINES.
- H. TELEPHONE AND COMPUTER OUTLETS SHALL BE DUPLEX RECEPTACLE BOXES WITH 3/4" EMT STUBBED INTO THE CEILING WITH PULL STRINGS INSTALLED.
- I. CONTRACTOR SHALL PRESERVE ALL FIRE RATED WALLS AND CEILINGS. VERIFY RATING WAS OFF THE ARCHITECTURAL PLAN. THIS SHALL INCLUDE USING CAULKING THAT IS UL APPROVED FOR THE APPLICATIONS, OFFSETTING BOXES AS REQUIRED AND PROVIDING RATED CAPS OR COVERS FOR LIGHTS, AS REQUIRED.
- 1605 DIRECTORY CARDS, NAME PLATES & EQUIPMENT LABELS
- A. PROVIDE A TYPED DIRECTORY CARD IN EACH PANELBOARD INDICATING ELECTRICAL DEVICES OR EQUIPMENT SERVED BY EACH CIRCUIT BREAKER. FURNISH BLANK COVERPLATE.
- B. PROVIDE NAMEPLATES FOR PANELS AND DISCONNECTS. NAMEPLATES SHALL BE LAMINATED PLASTIC. EACH NAMEPLATE SHALL IDENTIFY THE PANEL AND THE VOLTAGE. NAMEPLATES SHALL BE MELAMINE PLASTIC, 0.125 INCH THICK, BLACK WITH WHITE CENTER CORE. SURFACE SHALL BE MATTE FINISH. CORNERS SHALL BE SQUARE. ACCURATELY ALIGN LETTERING AND ENGRAVE INTO CORE. MINIMUM SIZE OF NAMEPLATES SHALL BE 1X2.5 INCHES. LETTERING SHALL BE A MINIMUM OF 0.25 INCHES HIGH, NORMAL BLOCK STYLE.
- 1606 TEST & ADJUSTMENTS
- A. TEST AND ADJUST THE ELECTRICAL SYSTEM AND RELATED WORK PROVIDED UNDER THIS DIVISION OF THE SPECIFICATIONS.
- B. TEST ALL CIRCUITS WITH A "MEGGER" TEST TO DETERMINE THAT THE SYSTEM IS FREE OF SHORT CIRCUITS AND THAT PHASE CONDUCTORS ARE NOT GROUNDED. CHECK ALL ELECTRICAL EQUIPMENT FOR PROPER OPERATIONS.
- 1607 GROUNDING
- A. THE SERVICE EQUIPMENT, CONDUIT SYSTEM SUPPORT CABINETS, EQUIPMENT AND NEUTRAL CONDUCTOR SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. GROUNDING CONDUCTORS SHALL BE SO ROUTED AS TO PERMIT, AS FAR AS PRACTICAL, THE SHORTEST AND MOST DIRECT PATH TO THE GROUND ELECTRODE SYSTEM. ALL GROUND CONNECTIONS SHALL HAVE A CLEAN CONTACT SURFACE.
- B. RUN A SEPARATE EQUIPMENT GROUND IN ALL FEEDS.
- 1608 SUBSTITUTION
- A. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS SPECIFIED.
- B. REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO FULLY IDENTIFY AND APPRAISE THE PRODUCTS.
- C. APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.
- 1609 VISIT TO SITE
- ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITION.
- 1610 SHOP DRAWINGS
- AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF THE SHOP DRAWINGS COVERING LIGHTING FIXTURES, PANELS, CIRCUIT, BREAKERS, AND WIRING DEVICES, AND ANY SPECIAL EQUIPMENT WHICH HE INTENDS TO USE. SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER FOR HIS APPROVAL.

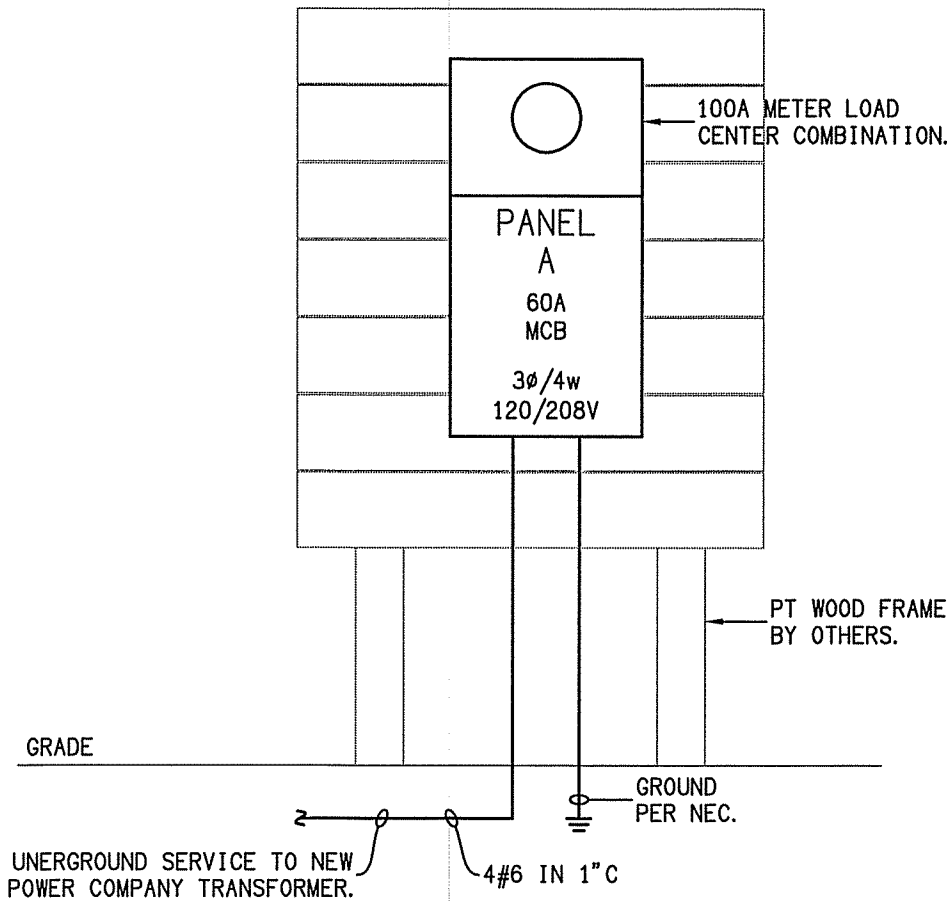
ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	SINGLE POLE MOUNTED LED LIGHT FIXTURE
	DOUBLE POLE MOUNTED LED LIGHT FIXTURE
	ELECTRICAL PANEL, SURFACE

ELECTRICAL ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
GFI	GROUND FAULT INTERRUPTING
3R	WEATHERPROOF ENCLOSURE
UNO	UNLESS NOTED OTHERWISE
RGS	RIGID GALVANIZED STEEL
WP	WEATHERPROOF
AHU	AIR HANDLING UNIT
HP	HEAT PUMP

NOTES:

1. FOR 20A - 1Ø - 120 VOLT SERVICE WIRE SIZE SHALL BE AS FOLLOWS:

DIST. TO 1st CONNECTION	WIRE SIZE
60' TO LESS	#12
60' TO 100'	#10
OVER 100'	#8



**A POWER RISER**  
SCALE: NTS

RISER NOTES:

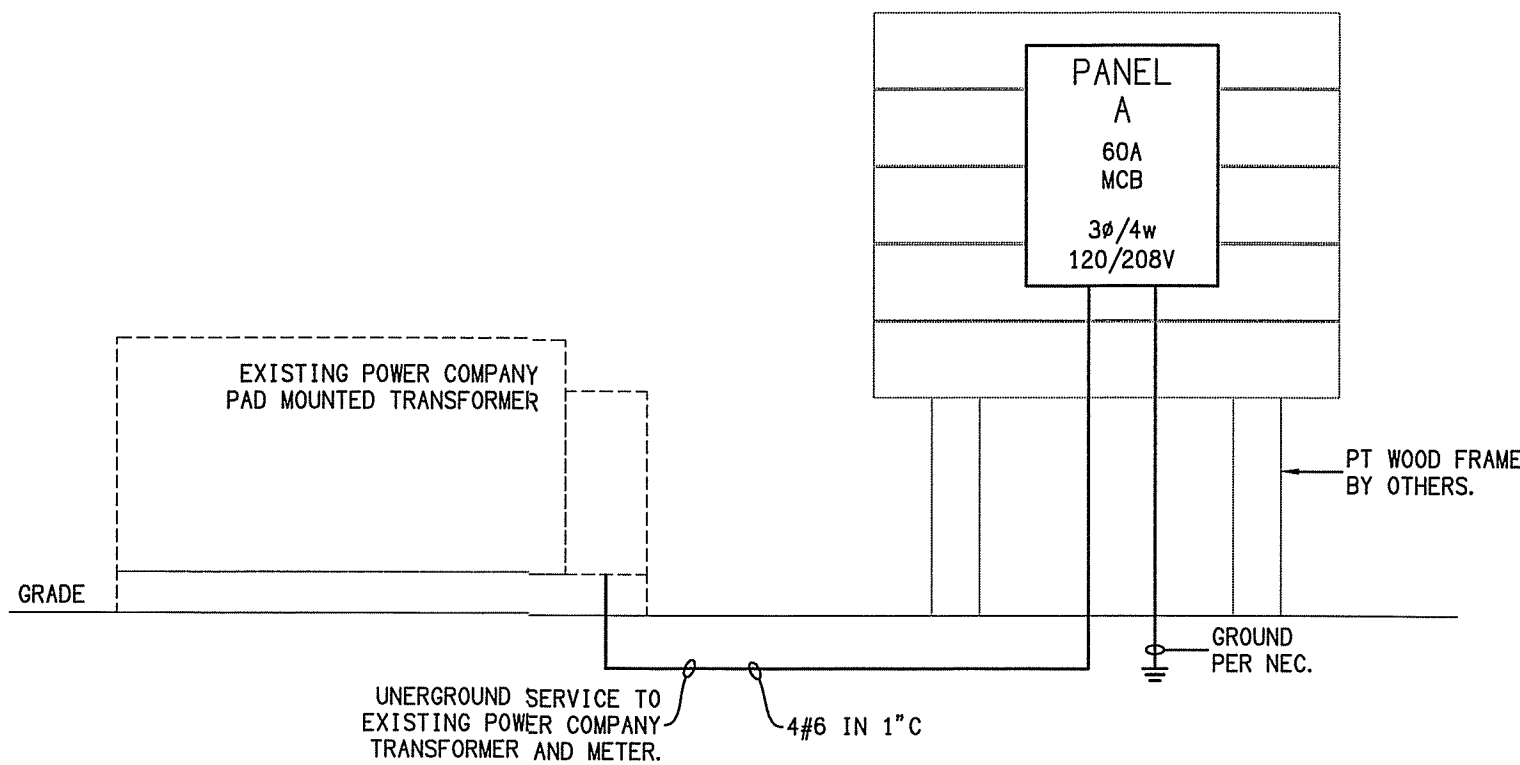
1. CONTRACTOR SHALL PROVIDE CONCRETE PAD, PLUS ALL LABOR, MATERIALS AND PAY ALL POWER COMPANY CONNECTION FEES TO PROVIDE A COMPLETE AND OPERATING SYSTEM FOR THE OWNER.

2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A PLAQUE STATING THE FAULT CURRENT AT THE MAIN SERVICE DISCONNECT. THE CONTRACTOR SHALL PROVIDE VERIFICATION FROM THE POWER COMPANY BEFORE PLAQUE IS PLACED. THIS DESIGN ASSUMES A 20,000 MAXIMUM FAULT CURRENT AT THE POWER COMPANY TRANSFORMER. IF FAULT CURRENT IS LARGER THAN SHOWN THEN CONTRACTOR SHALL CONTACT THIS ENGINEER.

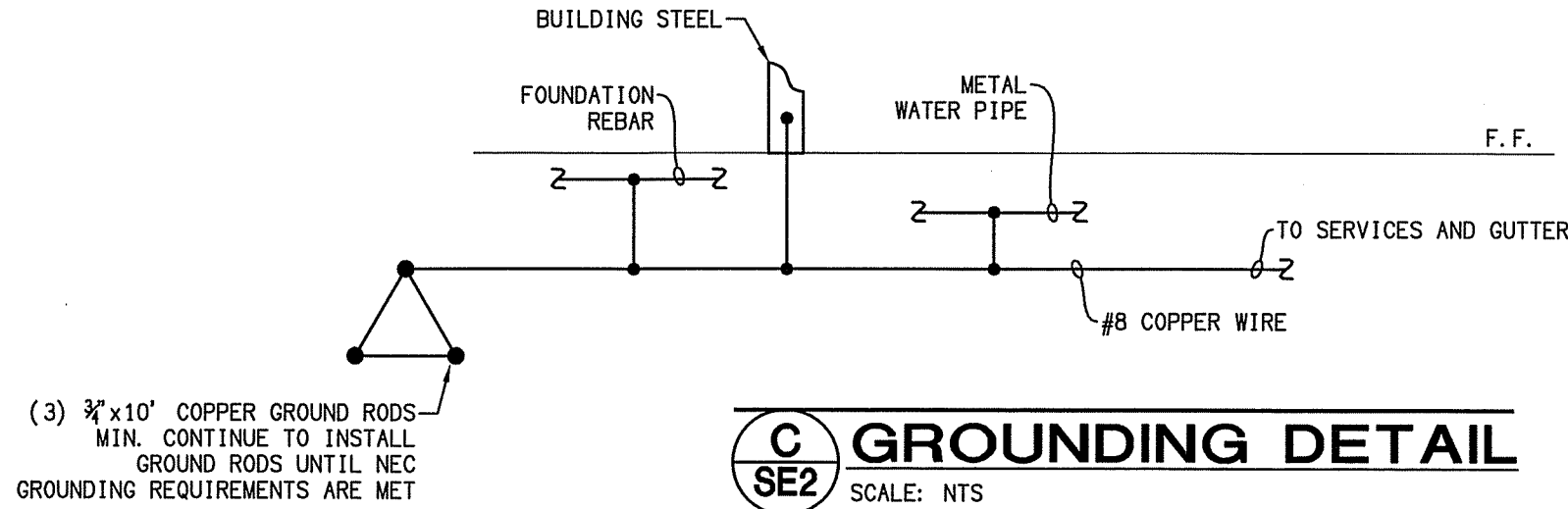
3. MAIN SERVICE DISCONNECT(S) SHALL BE SERIES RATED TO ALLOW SECONDARY BREAKERS TO BE AS FOLLOWS:

300A - 400A	22,000A1C
225A & SMALLER	10,000A1C

4. CONNECT ALL AVAILABLE GROUNDING MEANS PER NEC 250.50.



**B POWER RISER - ALTERNATE**  
SCALE: NTS



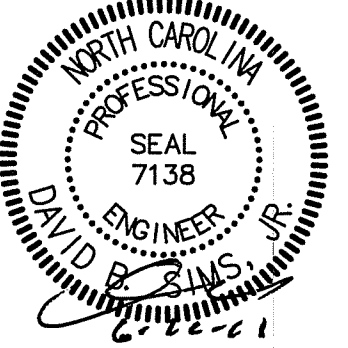
**C GROUNDING DETAIL**  
SCALE: NTS

PANEL - A																	
TYPE		LOAD CENTER	MOUNTING			SURFACE			ENCLOSURE			NEMA-3R	PHASE	3	WIRE	4	
VOLTS		120/208	MAIN	60A	MCB	FRAME			100A	SHORT CIR. RATING			22,000	RMS	SYM	MIN	
CKT. NO.	CKT. BUS TRIP	DESCRIPTION	PHASE			LOADING			A	B	C	PHASE			DESCRIPTION	CKT. BUS TRIP	CKT. NO.
			A	B	C	A	B	C				A	B	C			
1	20/1	SITE LIGHTS	10											BLANK		2	
3	20/1	SPARE												BLANK		4	
5	20/1	SPARE												BLANK		6	
7	-	BLANK												BLANK		8	
9	-	BLANK												BLANK		10	
11																12	
13																14	
15																16	
17																18	
19																20	
21																22	
23																24	
25																26	
27																28	
29																30	
31																32	
33																34	
35																36	
37																38	
39																40	
41																42	
SUBTOTAL			10	0	0				0	0	0						
			TOTAL PANEL LOAD: Aø 10A Bø 0A Cø 0A										NEUTRAL TERMINAL BAR <input checked="" type="checkbox"/>				
													GROUND TERMINAL BAR <input checked="" type="checkbox"/>				
NOTES:																	

615 N. FRONT STREET  
PARKING LOT LIGHTING  
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des by :  
dwn by :  
proj number : 18134  
date : 5/22/18



SHEET NO.

SE2

OF

symbol	date	description	by
REVISIONS			