### REQUEST FOR COMMITTEE ACTION

### **HENDERSON COUNTY**

### TECHNICAL REVIEW COMMITEE

MEETING: May 15, 2018

SUBJECT: Major Site Plan Review for Family Dollar

PRESENTER: Toby Linville

ATTACHMENTS: Staff Report

SUMMARY OF REQUEST: Applicant requesting permits for Retail Sales and Service

Suggested Motion: I move that the TRC approve the major site plan for Family Dollar



# **Henderson County, North Carolina Code Enforcement Services**

### 1. Committee Request

1.1. **Applicant:** SP FDS, LLC

1.2. Request: Major Site Plan Approval

1.3. **PIN:** 9577936931 1.4. **Size:** 1.59 acres +/-

1.5. **Location:** The subject area is located off Spartanburg Hwy near intersection with E Blue Ridge Rd.

1.6. Supplemental Requirements:

### SR 7.14. Retail Sales and Services Less than or Equal to 50,000 Square Feet (Gross Floor Area)

- (1) Site Plan. Major Site Plan required in accordance with §200A-331 (Major Site Plan Review).
- (2) Lighting. *Adequate lighting* shall be placed in areas used for vehicular/pedestrian access including, but not limited to: stairs, sidewalks, crosswalks, intersections, or changes in grade. *Lighting mitigation* required.

Map A: Aerial Photo/Pictometry

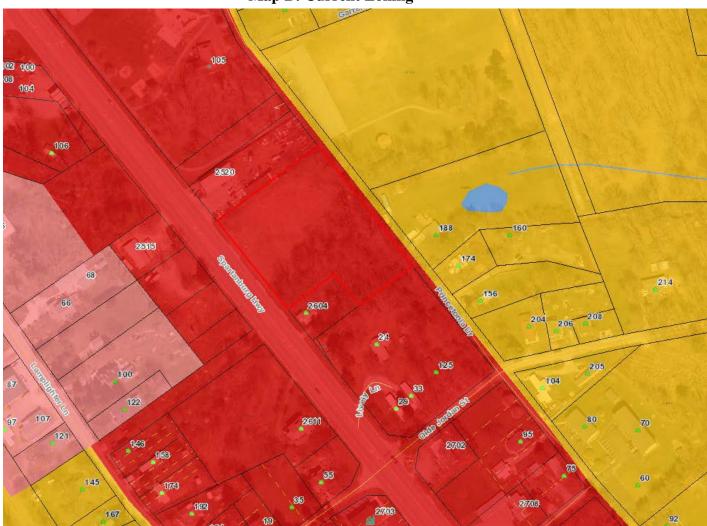




### 2. <u>Current Conditions</u>

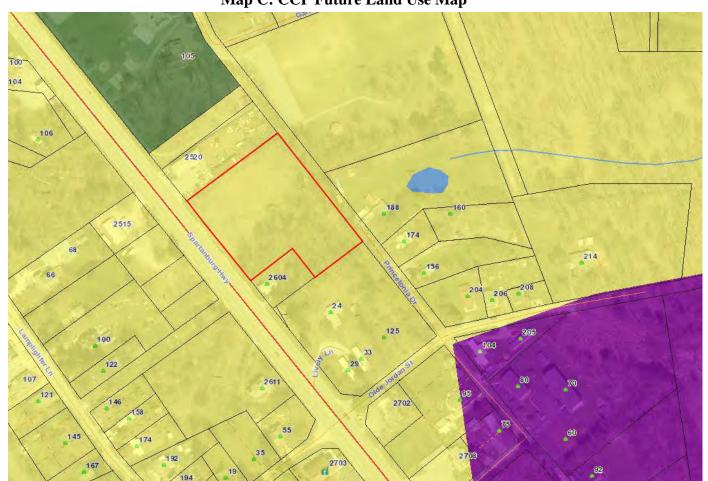
- **2.1 Current Use:** This parcel is currently vacant.
- **2.2 Adjacent Area Uses:** The surrounding properties consist of mixed residential and commercial uses.
- **2.3 Zoning:** The surrounding property is community Commercial. Property east is Residential One.

**Map B: Current Zoning** 



- **3.** <u>Floodplain /Watershed Protection</u> The property is not located in a Special Flood Hazard Area. The property is not in a Water Supply Watershed district.
- 4. Water and Sewer Public water and septic system will serve this property.

**Public Water:** City of Hendersonville **Public Sewer:** City of Hendersonville



**Map C: CCP Future Land Use Map** 

### 5. Staff Comments

**The 2020 CCP:** The CCP Future Land Use Map places the Subject Area in the Urban Services Area. The text and map of the 2020 CCP suggest that the Subject Area would be more suitable for the following:

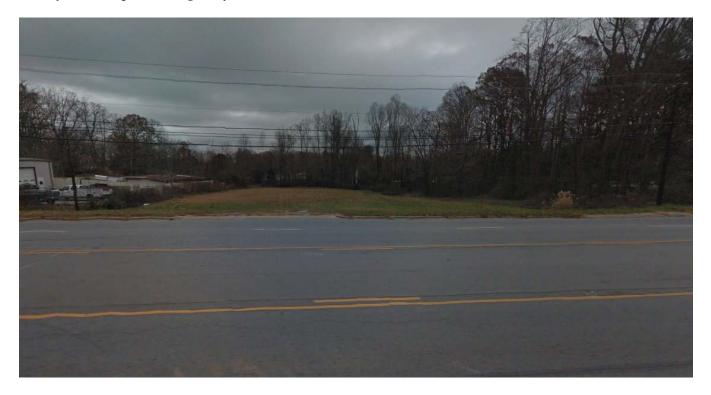
- 1. The Urban Services Area is that area within which most urban services and urbanscale development is currently concentrated, and within which such development should generally be concentrated through the year 2020.
- 2. Growth and development will be proactively managed through extensive planning. Much of the USA falls within municipal planning jurisdictions and will be managed by those jurisdictions. Land use planning for areas falling within the County's jurisdiction should be comparable and compatible in its approach and intensity with planning conducted within the various municipal jurisdictions.

### 6. Staff Recommendations

Staff's Position at this time, under the guidelines of current plans, policies and studies, is to approve the Major Site Plan because it is consistent with the current surrounding land uses and future land use recommendations.

### 7. Photographs

Family Dollar-Spartanburg Hwy





Family Dollar-Spartanburg Hwy



# HENDERSON COUNTY MAJOR SITE PLAN REVIEW APPLICATION

Name: DFM Land Company, LLC Complete Address: PO Box 515, Saluda, NC 28773  Applicant: Name: SP FDS, LLC Complete Address: 4004 Barrett Drive, Suite 106, Raleigh, NC 27609  Agent: Name: Will Stronach Complete Address: 4004 Barrett Drive, Suite 106, Raleigh, NC 27609  Agent Form (Circle One): Yes No  Plan Preparer: Name: Jason Henderson, PE Complete Address: 718 Lowndes Hill Road, Greenville, SC 29607  GENERAL INFORMATION  Date of Application: 4/30/2018  Site Plan Attached (Circle One) Yes No  PARCEL INFORMATION  PIN: 9577936931 Tract Size (Acres): 1.58  Zoning District: CC Fire District: Blue Ridge  Supplemental Requirement# Watershed: French Broad  Permitted by Right X Floodplain: n/a	lete Address: PO Box 515, Saluda, NC 28773  : SP FDS, LLC Phone: 919-783-7003  lete Address: 4004 Barrett Drive, Suite 106, Raleigh, NC 27609  : Will Stronach Phone: 919-783-7003  lete Address: 4004 Barrett Drive, Suite 106, Raleigh, NC 27609  Form (Circle One): Yes No  er:  : Jason Henderson, PE Phone: 864-326-4204  lete Address: 718 Lowndes Hill Road, Greenville, SC 29607
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Permitted by Right X Floodplain: n/a	Requirement# Watershed: French Broad
	Right X Floodplain: n/a
Special Use Permit	
Location / Property to be developed: (unassaigned) US 176	rermit

# SITE DEVELOPMENT PLANS FOR:

# Family Dollar Store 716851

Spartanburg Highway East Flat Rock, NC



DWG. NO.

# LOCATION MAP

# SITE CONTACTS

### PLANNING / ZONING AGENCY: | Henderson County Planning Department ADDRESS: 100 North King Street Hendersonville, NC 28792 PHONE: (828) 697-48119 CONTACT: Autumn Radcliff EMAIL: autumnr@hendersoncountync.org FIRE DISTRICT AGENCY: | Henderson County Fire Marshal ADDRESS: 211 First Avenue East Hendersonville, NC 28792 PHONE: (828) 697-4728 CONTACT EMAIL: **STORMWATER** AGENCY: | Henderson County Water Resources 100 North King Street, Suite 118 Hendersonville, NC 28792 PHONE: (828) 694-6521 CONTACT: Natalie Berry EMAIL: | nberry@hendersoncountync.org

N.C.D.O.T.

ADDRESS: 4142 Haywood Road

EMAIL: slcannon@ncdot.gov

PHONE: (828) 891-7911 CONTACT: Steve Cannon

AGENCY: | NCDOT - Division 14, District 1 Office

Mills River, NC 28742

# DESCRIPTION

<u> </u>	
TITLE SHEET	C001
EXISTING CONDITIONS & DEMOLITION PLAN	C002
SITE PLAN	C101
GRADING & DRAINAGE PLAN	C201
SPOT ELEVATIONS PLAN	C202
PHASE I EROSION CONTROL PLAN	C211
PHASE II EROSION CONTROL PLAN	C212
UTILITY PLAN	C301
LANDSCAPE PLAN & DETAILS	L101
SITEWORK NOTES & DETAILS	C501-C506

SHEET INDEX

### **DEVELOPER**

COMPANY: | SP FDS, LLC ADDRESS: 4004 Barrett Drive, Suite 106 Raleigh, NC 27609

(919) 783-7003 PHONE: CONTACT: Will Stronach will@stronachproperties.com COMPANY: ADDRESS: PHONE:

Bluewater Civil Design, PLLC 718 Lowndes Hill Road Greenville, SC 29607 864.326.4204 Jason S. Henderson, P.E. jason@bluewatercivil.com

**CIVIL ENGINEER** 

**SURVEYOR** COMPANY: MSP & Associates Land Surveying, Inc. ADDRESS: 301 E Hillcrest Drive Greenville, SC 29609 864-370-2232

CONTACT: Mike Perdue mperdue@mspsurveying.com

**ARCHITECT** COMPANY:

AGENCY: | City of Hendersonville Water and Sewer

Hendersonville, NC 28792

AGENCY: | City of Hendersonville Water and Sewer

Hendersonville, NC 28792

ADDRESS: 305 Williams Street

EMAIL: asteurer@hvlnc.gov

ADDRESS: 305 Williams Street

PHONE: (828) 233-3207 CONTACT: Adam Steurer

AGENCY: Duke Energy

ADDRESS:

PHONE:

EMAIL:

CONTACT:

EMAIL: asteurer@hvlnc.gov ELECTRIC

CONTACT: Adam Steurer

PHONE:

(828) 233-3207

C.L. Helt Architect, Inc. ADDRESS: 1136 Greenwood Cliff Charlotte, NC 28204 PHONE: 704-342-1686 CONTACT James Zink jamesz@clhelt.com

I hereby certify that these plans were prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of North Carolina and that I am competent to prepare this document.

5-1-2018 JASON HENDERSON - NC PE# 031306 DATE

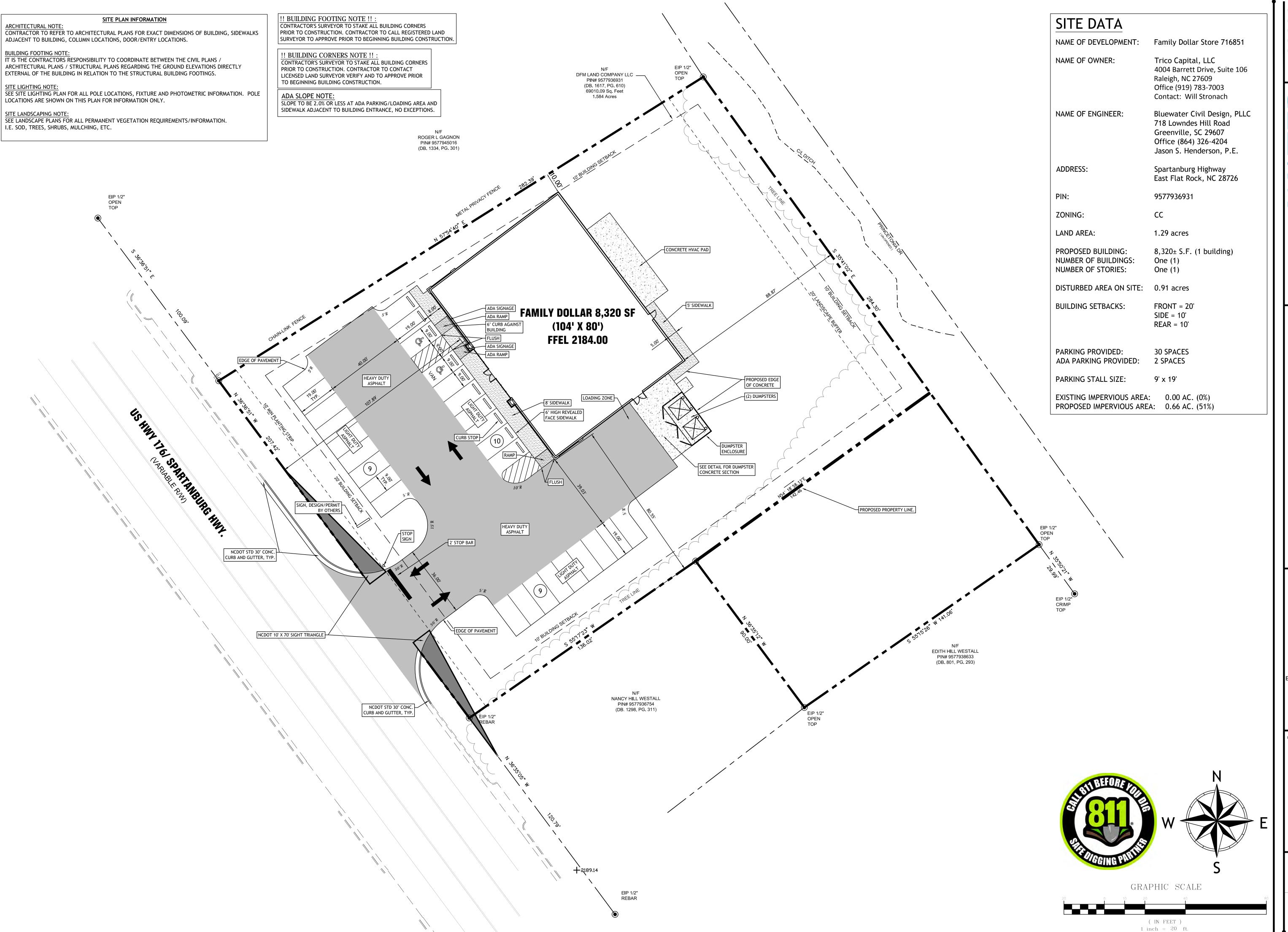
SC C04212 - GA PEF005865

TITLE SHEET



Certificates of Authorization: SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

**EXISTING** CONDITIONS & DEMOLITION PLAN



DWG Name: 2018-015 D1.dwg

Drawing Scale: as noted

Date of Project: 4-2018

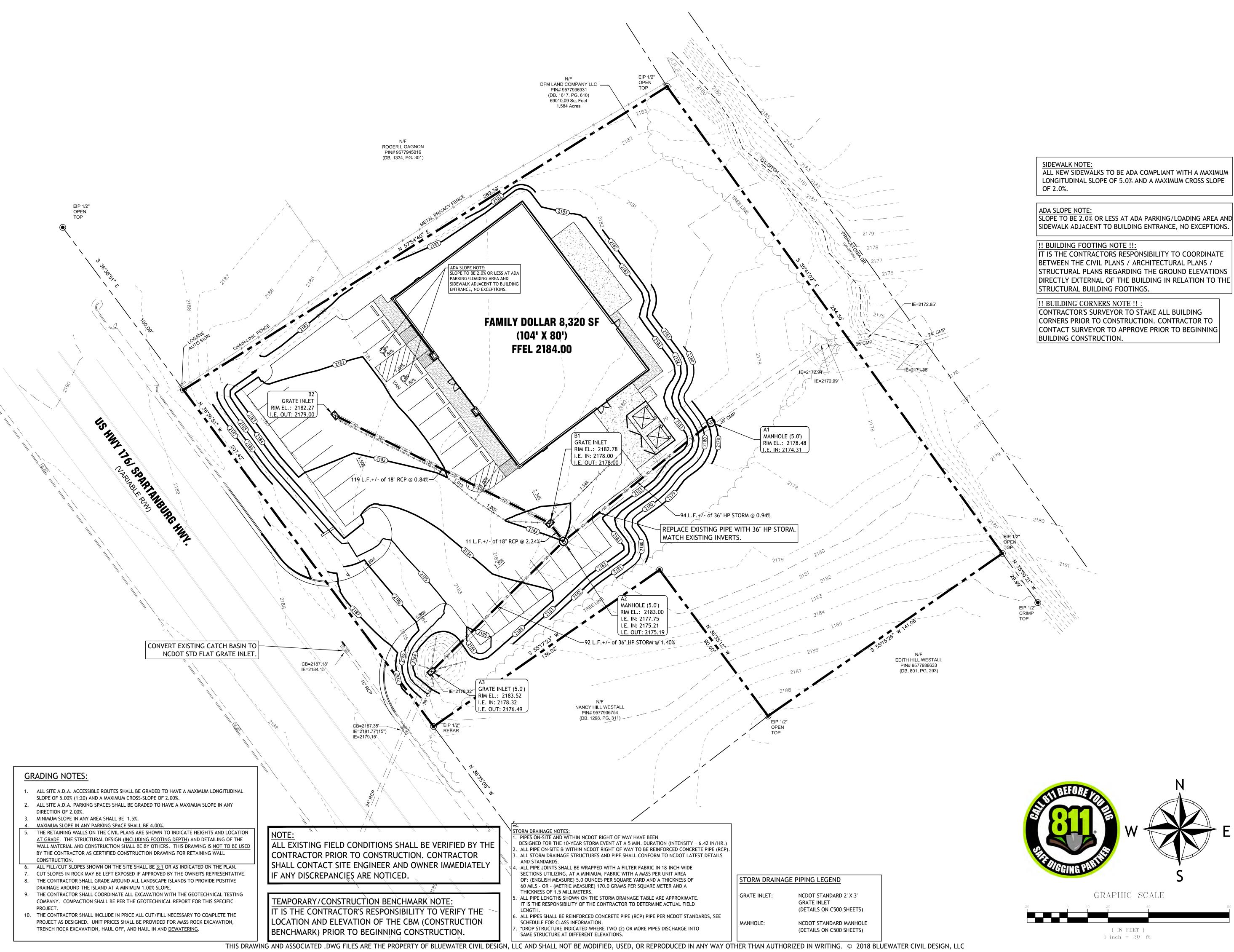
Engineer of Record:

Jason Henderson, P.E. Alabama PE# 32054 Louisiana PE# 38895

Certificates of Authorization: SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

16851 DOLL Spartanburg Henderson C

SITE PLAN

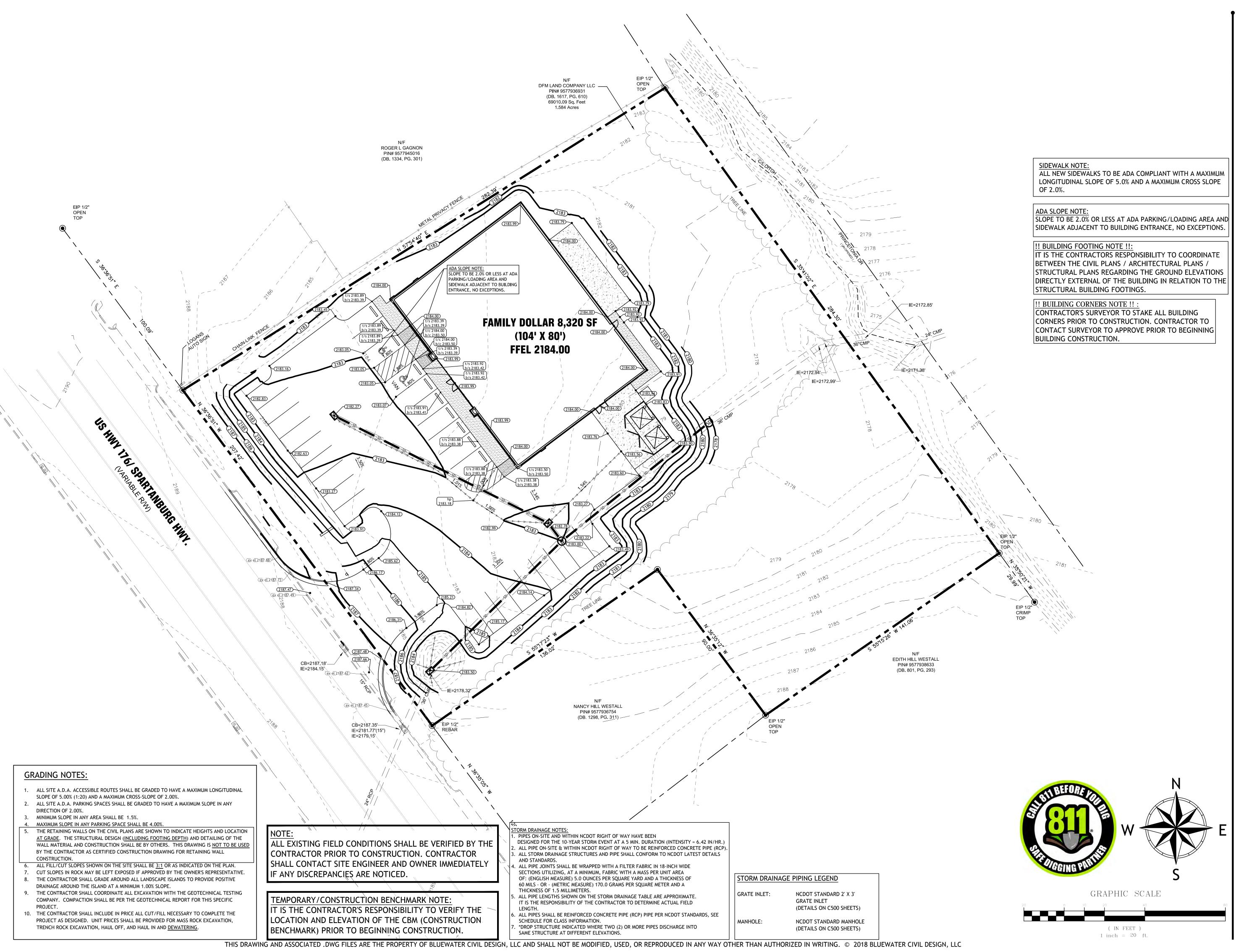


DWG Name: 2018-015 D1.dwg

Drawing Scale: as noted

Certificates of Authorization SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

GRADING & DRAINAGE PLAN



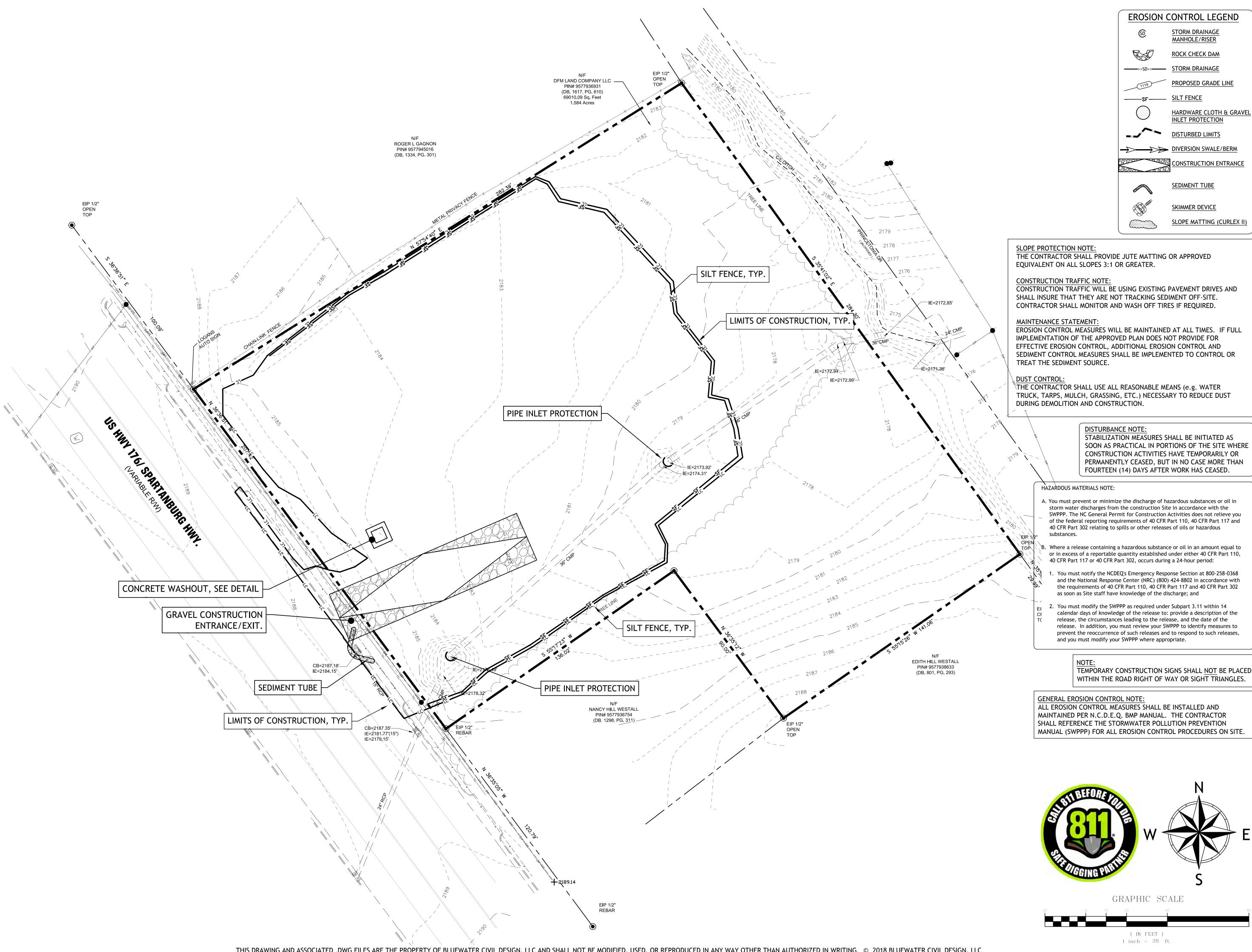
DWG Name: 2018-015 D1.dwg

Drawing Scale: as noted

Certificates of Authorization:

SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

SPOT ELEVATIONS PLAN



Project Number: 2018-015 DWG Name: 2018-015 D1.dwg

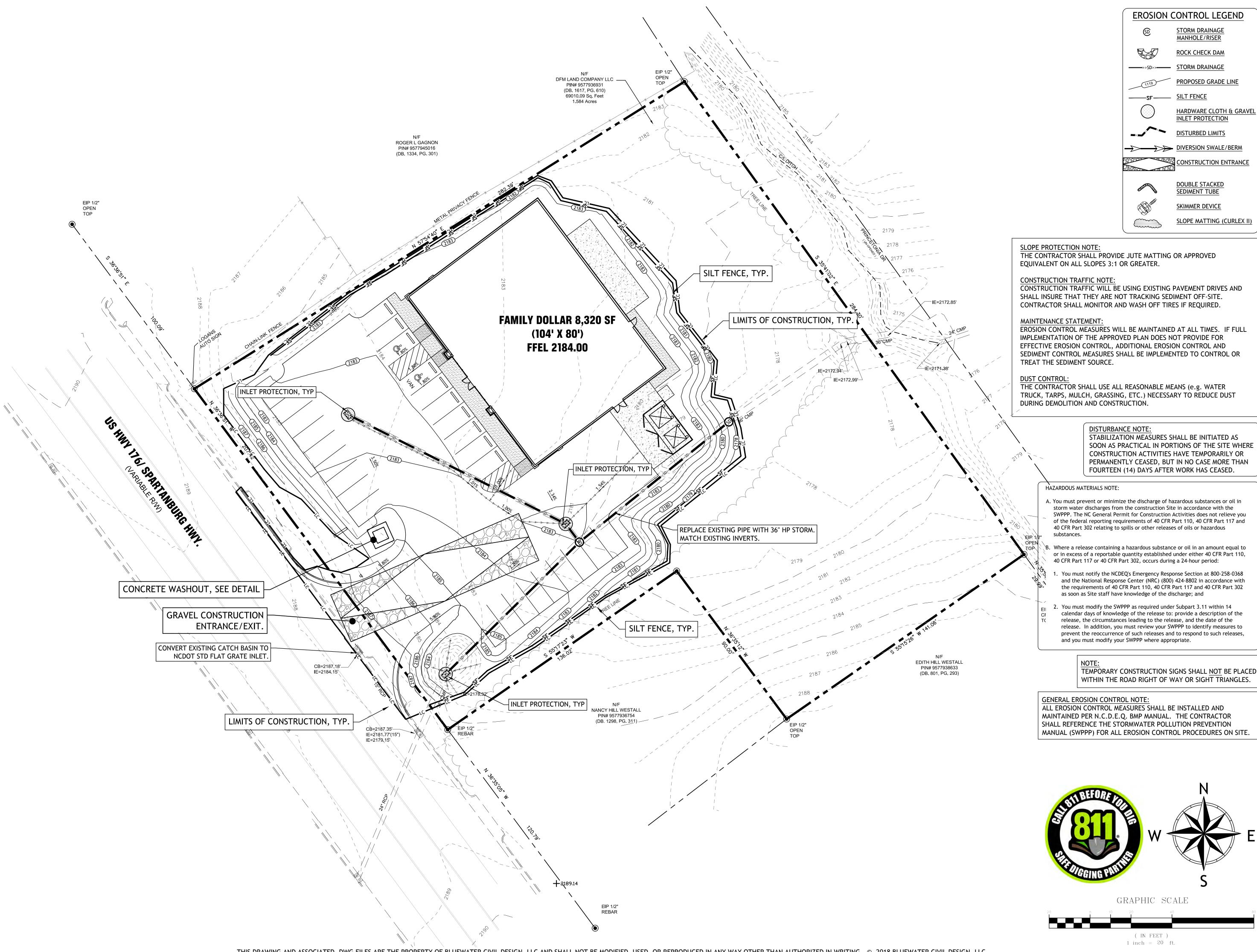
Drawing Scale: as noted

Date of Project: 4-2018

SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

16851 DOLL STORE

PHASE I EROSION CONTROL PLAN



Project Number: 2018-015

DWG Name: 2018-015 D1.dwg

Drawing Scale: as noted

SC C04212 - GA PEF005865

NC P0868 - AL CA4065E

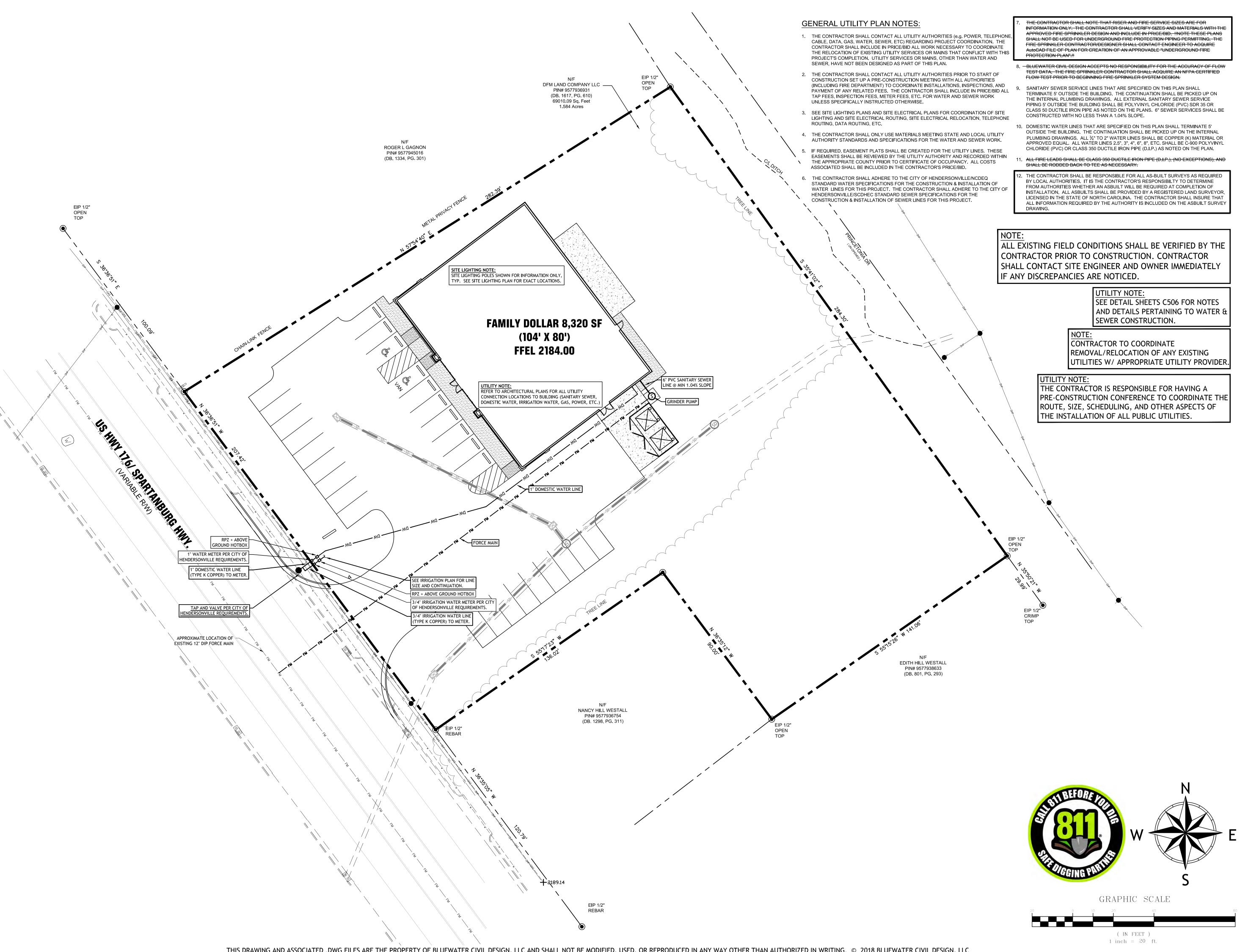
16851

STORE

DOLL

SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE PERMANENTLY CEASED, BUT IN NO CASE MORE THAN

PHASE I EROSION CONTROL PLAN



DWG Name: 2018-015 D1.dwg Drawing Scale: as noted

Date of Project: 4-2018

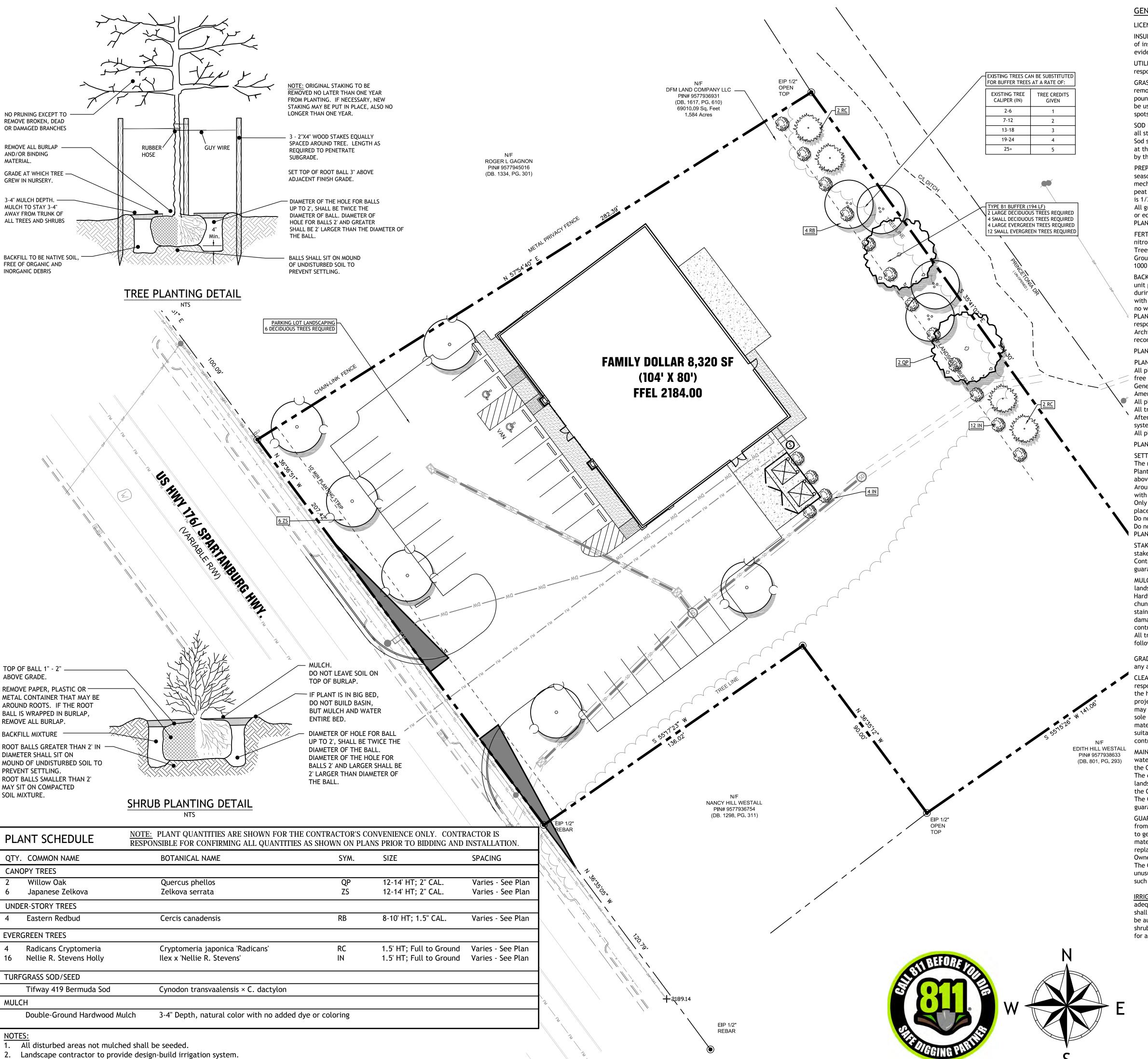
Alabama PE# 32054 Louisiana PE# 38895

Jason Henderson, P.E.

SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

16851 DOLL

UTILITY PLAN



GENERAL LANDSCAPE NOTES AND SPECIFICATIONS

LICENSES: The contractor will be responsible for obtaining all licenses necessary to complete project. INSURANCE: With the submittal of bid documents, the Landscape Contractor shall also submit a certificate of insurance for workman's compensation and a contractor's general liability. Contractors not providing evidence of such insurance will be ineligible to receive the contract for the job.

UTILITY LOCATION: The Landscape Contractor is responsible for contacting the utility locator service and is responsible for any damage done to utilities.

GRASS SEED INSTALLATION: Lawn areas shall be fine graded to a smooth, positively draining slope, removing all stones over 3/4". Agricultural limestone shall be incorporated into the soil at a rate of 50 pounds per 1000 square feet. Apply specified seed at recommended rate. Straw mulch or hydromulch shall be used as deemed necessary by the responsible to establish a full stand of grass and will repair any bare spots 1'- 0" square due to uneven seed distribution, drought or erosion.

SOD INSTALLATION: Sodded lawn areas shall be fine graded to a smooth, positively draining slope, removing all stones over 3/4". Sod shall be healthy, thick sod placed so that joints are butt tight. Staple as necessary. Sod shall be trimmed to match bed lines shown on plan. Startup fertilizer shall be incorporated into the soil at the manufacturer's recommended rate. Any area of sod that fails to root, settles or dies will be replaced by the Landscape Contractor.

PREPARATION OF GROUND COVER AND SEASONAL COLOR BEDS: The existing soil in ground cover and seasonal color beds shall be thoroughly cultivated 6 inches deep to a fine texture (no clods over 1/2") with a mechanical tiller. A plant mix of 60% screened shredded topsoil, 20% sand, and 20% well rotted sawdust or peat shall then be thoroughly incorporated into the existing soil with the tiller so that the soil mix (6" deep)

is 1/2 original soil and 1/2 plant mix. All groundcover and seasonal cover beds shall receive a 2" layer of fine textured, screened, pine bark mulch

PLANTINGS NOT DONE IN THIS MANNER SHALL BE REMOVED AND PROPERLY REPLANTED.

FERTILIZING: Upon completion of plantings, all shrubs shall receive 1/6 cup of 16-4-8 fertilizer (50% of nitrogen slow release) evenly broadcast at the base of plants.

Trees shall receive 1/4 cup of 16-4-8 fertilizer (50% of nitrogen slow release) per inch of caliper. Groundcover beds shall be fertilized at the rate of 20 pounds of 16-4-8 (50% of nitrogen slow release) per 1000 square feet.

BACKFILL: Landscape Contractor to verify any additional backfill/topsoil needed prior to beginning work. A unit price for topsoil shall be included in all bid documents to allow for circumstances that might arise during installation. If additional topsoil is available, the Contractor shall backfill the parking lot islands with topsoil. Islands and planters shall be free of deleterious material. Grade planters and islands so that no water pools in planting area. Do not allow air pockets to form when backfilling.

PLANT QUANTITIES: Plant quantities are shown for the contractor's convenience only. Contractor is responsible for confirming all quantities prior to bidding and installation. Please contact the Landscape Architect if there is difficulty in locating a particular plant. If necessary, a substitute plant will be recommended.

PLANTS SHALL BE INSTALLED AS SHOWN

PLANT QUALITY:

All plants shall be nursery grown, have a full habit of growth as is characteristic of that species, and shall be

General plant quality shall be as specified in the "USA Standard for Nursery Stock" (published by the American Association of Nurserymen).

All plants must be container grown or balled & burlapped.

All trees must be straight trunked and full headed.

After being dug at the nursery source, all trees in leaf shall be acclimated for two weeks under a mist system prior to installation.

All plants are subject to rejection by the owner before, during and after installation.

PLANTING HOLE SIZE: Refer to appropriate details on the Landscape Plan.

The root ball of container grown plants shall be scarified in several places prior to planting. Plant shrubs and trees so that after initial settlement, the top of the root balls will be even with or slightly

above the adjacent soil line. Around root balls, 1/2 of the original soil shall be removed from the planting hole and thoroughly mixed

with the same quantity peat moss or well rotted, fine textured bark. Only in areas where the existing soil is 100% fertile, loose topsoil (brown or black in color) can plants be

placed directly in the soil with no amendments. Do not break the root ball.

Do not allow air pockets to form when backfilling.

PLANTINGS NOT DONE IN THIS MANNER SHALL BE REMOVED AND PROPERLY REPLANTED.

STAKING OF TREES: Deciduous trees, 1 1/2" in caliper and over, and evergreen trees, 8' and taller shall be staked. Rubberhose to be used to cover the wire at the point of its contact with the tree. The Landscape Contractor is responsible for all wind damage to trees, (provided winds are less than 60mph) during the guarantee period, and may stake other trees (for his own protection) at his option. Set trunks plumb.

MULCHING: All plants & plant beds must be completely mulched. Pre-emerge shall be applied to all landscape areas prior to sod & mulching to reduce weed intrusion

Hardwood mulch: All beds to receive a 3" layer of aged hardwood bark mulch (free of wood chips or large chunks of bark). Fresh hardwood bark mulch is not recommended to be used, as water run-off may cause staining on adjacent concrete surfaces. Mulch color shall be natural with no added dyes or coloring. All damages incurred by the use of fresh hardwood mulch shall be the responsibility of the landscape

All trees located in lawn areas shall receive a minimum 3' diameter ring of mulch. Mulch in these areas is to

follow the above listed guidelines.

GRADING: All final grading shall be the responsibility of the Landscape Contractor. The responsibility for any additional grading, if needed, shall be determined prior to bidding. CLEAN UP: Final clean up of any disturbances occurring as a result of landscape operations shall be the responsibility of the Landscape Contractor. The Landscape Contractor has the complete responsibility for

the handling of all surplus excavated materials including the removal of any excess materials from the project site. The Contractor specifically understands and agrees that due to the sequence of the work, he may need to retain select exacerbated materials on site to meet later needs of the project. It shall be the sole responsibility of the Contractor as to any decisions made to haul off excess material or to retain material on site for later use. The Contractor shall have the complete responsibility for having adequate, suitable material on-site to replace unsuitable material or to otherwise conform to the requirements of the

MAINTENANCE: The Landscape Contractor is responsible for maintaining, in full, all planting (including water, spraying, mulching, fertilizing, etc.) of planting areas and lawns until the job is accepted in full, by

The contractor shall remove & dispose of all plant material existing on site that does not conform with the landscape plan. All landscaped areas shall be treated as specified on the landscape plan or as directed by the Owner. This shall include all grass areas used for erosion control purposes.

The Owner will contract for a program of landscape maintenance services throughout the one (1) year guarantee period unless otherwise determined.

GUARANTEE: The Landscape Contractor shall guarantee all plant material and workmanship for one year from the date of acceptance by the Owner. Any plant material which dies, turns brown, defoliates or fails to germinate prior to total acceptance of the work shall be promptly removed from the site & replaced with material of the same species, quantity, size and meeting all plant list specifications. Any required plant replacements shall promptly be made before or at the end of the guarantee period (as per direction of the

The Contractor will not be responsible for defects resulting from neglect by the Owner, abuse by others, or unusual phenomena or incidents beyond the Landscape Contractor's control which result from natural causes such as floods, lightning, storms, freezing rains, or winds over 60 mph, fire, vandalism or theft.

IRRIGATION: The Landscape Contractor shall provide turn-key irrigation system capable of providing adequate amounts of water for all installed vegetation to thrive. Planter beds adjacent to any building face shall have drip style irrigation. Irrigation controls to be mounted in owner approved location. Controls shall be automatic with rain sensors. When feasible, contractor to provide separate zones for grass and shrub/groundcover irrigation. Contractor to provide copy of irrigation design to Owner prior to installation for approval.

GRAPHIC SCALE

( IN FEET ) 1 inch = 20 ft.

LANDSCAPE PLAN & DETAILS

Bluewater Civil Design, PLLC

NC-P-0868

roject Number: 2018-015

Drawing Scale: as noted

Date of Project: 4-2018

ngineer of Record

owg Name: 2018-015 D1.dwg

Jason Henderson, P.E.

Certificates of Authorization:

SC C04212 - GA PEF005865

NC P0868 - AL CA4065E

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2.1. Survey Information provided by MSP & Associates, INC (864-370-2232). The Contractor shall verify all benchmarks, easements, the location and invert elevation of all underground utilities within the construction area, verify property corners, and verify topography before any construction is begun.

2.2. The Contractor shall contact all utility companies prior to excavation to request a locate for all buried cables and underground utilities in the construction area or utilities that will be impacted by construction.

3.1. The Contractor shall have copies of any necessary encroachment and construction permits prior to entering any right-of-way or beginning construction.

3.2. Permits typically required include but are not limited to: State NPDES Coverage, Local Issuing Authority Grading Permit, DOT Encroachment Permits (access and utility taps), State or Local Water Authority water extension permit, State or Local Sewer Authority sewer extension permit, Fire Marshall approval, and Local Municipality Zoning and Site Plan Approval.

3.3. The Contractor shall immediately notify the Owner's Representative when notices or verbal instructions are received from regulatory authorities, inspectors, or similar. The Contractor shall proceed with work associated with such notices or instructions once approved to do so by the Owner's Representative or as required by law.

4.1. By Law, the Contractor shall comply with all OSHA regulations, including safety protocol, safety gear, safety education,

4.2. The Contractor is exclusively responsible for the conditions of the site, including safety of all persons and property throughout the term of the project construction, 24 hrs per day/ 7 days per week.

4.3. The Engineer's review of the Contractor's work product and performance will not include review of the Contractors safety programs. Such reviews are to be by OSHA inspectors and the Owner's Representative. 4.4. The Contractor is responsible for providing and maintaining all necessary traffic control devices during construction.

Under no circumstances shall equipment be loaded or off-loaded on an open roadway. If such activity is required the Contractor shall coordinate shutting down the road with the appropriate DOT and utililize appropriate traffic control warning devices. SWPPP:

5.1. The Contractor is responsible for reviewing the requirements in the SWPPP drawings and maintaining all records as required by Local, State, and Federal Laws.

5.2. The SWPPP manual/plans shall be kept on-site in a secure location accessible to the inspector at all times during construction.

5.3. The Contractor shall post a 24-Hour Contact and phone # and rain gauge at the job site.

6. Pre-construction Meeting: 6.1. The Contractor shall immediately contact the state or local issuing authority, utility companies, etc. and set up a pre-construction conference at the site

6.2. The Contractor shall make sure the Engineer of Record, Owner, Inspector, Superintendent, and any relevant erosion control sub-contractor are in attendance.

6.3. The Contractor shall develop an attendance sign in sheet and keep minutes of the meeting with the SWPPP. 7. Tree Protection:

7.1. The Contractor shall protect trees that are noted to remain on the plans or as marked in the field by Owner's Representative. Trees that are to be protected shall have a protective fencing installed around the critical root zone (1' for every 1" DBH) and shall not disturb the root zone of such trees unless approved to do so in writing by the Owner's Representative.

7.2. The Contractor shall remove all trees and vegetation that interfere with new construction not noted to be protected. Remove debris from site or burn in accordance with local laws. 7.3. The Contractor shall be responsible for obtaining all necessary dumping or burning permits.

8. Earthwork:

8.1. The Contractor shall grade the site to the lines and grades shown and shall proof-roll and test compaction on all areas. 8.2. The Contractor shall retain the services of a testing company to test all areas to insure they meet the minimum

compaction requirements as noted in these notes or as required by the Owner's Geotechnical Engineer's report. 8.3. The Grading Contractor shall proof-roll the construction area. All soft spots shall be undercut and re-compacted with suitable structural fill material and re-tested. Proof-rolling shall be observed by a qualified Geotechnical Engineer or Engineering Technician.

8.4. All proposed elevations shown are finish grade elevation and the Grading Contractor shall deduct quantities from the finished grades as required due to depth of pavement sections, sidewalks, turf areas with topsoil, building foundations, etc. to develop the true finished sub-grade

8.5. Any topsoil in the construction area shall be stripped to a depth as required (see Geotechnical Report for referenced depths) and stockpiled as directed by the Owner's Representative. Topsoil shall be re-used on-site unless approved otherwise. 8.6. The contractor shall reference the Geotechnical Report for compaction requirements

8.7. All excavation shall be "Classified Excavation". Excavation shall be "Classified" as "Common Excavation" or "Rock Excavation". Rock Excavation is removing material that has been observed by the testing company to only be removed by blasting or with an air hammer. Common Excavation is removing of materials by means of ripping and do not fall in the category of rock excavation as defined above (includes boulders, typical weathered rock, etc.)

8.8. The classification of soils include: topsoil, fill material, unsuitable material, and rock excavation. The classification of soils is the responsibility of the geotechnical soil testing firm. 8.9. Rock Excavation is classified as:

8.9.A. Massive rock excavation - Material of 1 c.y. or more unable to be excavated with a single tooth ripper drawn by a crawler tractor having a minimum draw bar rated at not less than 53,000 pounds (Caterpillar D-8 or equivalent). 8.9.B. Trench excavation - Material of  $\frac{1}{2}$  c.y. or more which cannot be excavated with a power shovel having the capacity of at least that of a Caterpillar 225.

8.10. Fill material (including off site borrow) shall be from a source approved by the soil testing company and shall be free of roots, organics and boulders larger than 1 cubic foot. Fill shall be placed in 10" lifts and compacted as specified. The fill shall meet the specifications as required by the testing company or as indicated in the Geotechnical Report.

8.11. All existing pavement to be left in a fill area shall be scarified prior to placement of any fill material. 8.12. All slopes steeper than 4:1 receiving fill shall be plowed and scarified to enhance the bonding of new fill with existing

8.13. The Grading Contractor shall include in contract price the total cost and unit price for all cut/fill necessary for earthwork

balance including if necessary unit prices for hauling in material and hauling off material. 8.14. The wetting/drying of soils to achieve specified compaction shall be included in the Grading Contractor's contract price.

8.15. All private roads and parking lots shall have a minimum 5'-0" wide grassed shoulder with a maximum 2.0% cross slope. All

public roads shall have a 6'-0" wide grassed shoulder with a maximum 2.0% cross slope. 8.16. Tolerances for final constructed grades shall be plus or minus 0.05 feet. The final graded surface under all building slabs shall be within a tolerance of 3/8" when measured with a 10' straight edge. All designated ADA accessible paths shall have a maximum 2.00% (1:50) cross-slope and maximum 5.00% (1:20) running slope, no exceptions. All designated ADA accessible parking spaces and landings (including 4' area out from all doorways) shall have a maximum 2.00% (1:50) slope in any direction, no exceptions. All designated ADA accessible ramps shall have a maximum slope of 8.33% (1:12), no exceptions.

9.1. Reinforced Concrete Pipe (RCP) shall conform to ASTM C 76, latest edition. RCP with cover less than 15' and greater than 2' shall be CLASS III bell and spigot type and installed with flexible plastic (Bitumen) gaskets at all joints, unless otherwise noted. All other depths of cover shall be CLASS IV or V as noted. Gaskets shall comply with AASHTO M-198 751, Type B, and shall be installed in strict accordance with pipe manufacturer's recommendations.

9.2. All corrugated plastic pipe shall meet the requirements of AASHTO M-294, Type S, shall be smooth interior with annular corrugated exterior. HI-Q Sure-Lock 10.8 pipe, ADS, N-12, or approved equal. All joints shall be bell and spigot and shall meet the requirements of AASHTO M-294, shall be watertight, meeting the requirements of ASTM D 3212. The gaskets shall be made of Polyisoprene meeting the requirements of ASTM F 477. Installation shall conform to AASHTO M-294, ASTM D-2321, and manufacturers installation procedures. The maximum cover allowed over the top of CCP is 15'.

10.1. All water shall be per the approved drawing and the latest standards and specifications of the local water authority. The Contractor shall coordinate construction with the local water authority, including schedule & laydown areas. Any deviation from the approved plan shall be brought to the attention of the Engineer of Record and the appropriate inspector immediately. Deviations from the approved plan shall not be installed unless approved in writing by the local water authority. 10.2. Sanitary sewer lines and appurtenances shall be installed per the approved drawing and latest standards and specs of the

10.3. The Contractor shall insure they have the proper approvals from the <u>City of Hendersonville</u> prior to installation of any

domestic water, fire water, or sanitary sewer system. 10.4. All utility trenches shall be thoroughly compacted as required by the local authority and tested to prevent settlement and

damage to future pavement and structures. 10.5. The Contractor shall be responsible for relocating any existing utilities necessary for site construction, including all permits and fees. The Contractor is responsible for contacting all utility companies and including in his price all fees, charges,

11. Pavement: 11.1. All paving work (materials and construction) shall comply with NCDOT standards and specifications for Hot-mixed Asphalt

expenses, etc. in his cost to the Owner.

Pavement. (See Pavement Section Details for depths of layers). 11.2. All pavement shall be installed on a finished and well-drained sub-grade compacted as specified in previous notes. 11.3. Base course material for asphalt pavement shall be stone aggregate base course (ABC) and compacted to 100% modifed

11.4. Concrete pavement shall consist of a base course with stone aggregate base course compacted to 100% modified proctor. The concrete shall be poured with WWF. Concrete shall be broom finished and jointed as required.

11.5 Concrete curb and gutter ON-SITE AND OUTSIDE OF NCDOT RIGHT OF WAY shall be 18" Curb and Gutter per Town of 11.6. Concrete curb and gutter <u>WITHIN NCDOT RIGHT OF WAY</u> shall be <u>NCDOT STANDARD 30"</u> wide with standard curb

constructed with 4,000 PSI concrete with expansion joints and contraction joints installed to comply with state DOT standard specification for materials and construction of curb and gutter 11.7. All parking lot striping shall be per State D.O.T. specifications with two (2) coats of paint applied. The bases of all light poles, all bollards, and the face of all sidewalk, are to be painted TRAFFIC YELLOW. The Contractor is responsible for providing

fire lane striping and signage meeting all local requirements. Parking lot striping shall be reflective paint (see site plan for color). Stop bars, directional arrows, and parcel pickup are to be reflective paint (see site plan for color). All ADA striping shall be reflective ADA blue. 12. Erosion Control and Drainage:

12.1. All areas outside paving limits and building foundations shall have a minimum 4" layer of topsoil added and permanently grassed in accordance with state seeding specifications or landscaped per the Landscape Plan if applicable. 12.2. The Grading Contractor shall maintain positive drainage away from buildings at all times. The Contractor shall bring to

the attention of the Engineer any areas that may not drain properly during construction. 12.3. The sequence of work shall conform to the erosion control narrative. 12.4. Sediment controls during construction shall comply with all local, state, and federal laws and regulations. After all sitework is completed and grassing established, the Grading Contractor shall remove all silt from the site and legally dispose of

all silt off-site at no additional cost to the Owner, or bury on-site in non-structural area. 12.5. No work shall begin on site until approval from the Henderson County, and an NCDEQ NPDES permit has been issued, and a pre-construction meeting has been completed with the Henderson County & NCDEQ, the Owner, and the Engineer.

13. General: 13.1. The Contractor shall review the plans and specifications carefully and shall immediately notify the Engineer for a review if

any discrepancies are discovered at the site or on the drawings. 13.2. All reference to state standards and specifications are made from the North Carolina Department of Transportation Standard Specifications for Roads and Bridges, latest edition and Roadway Standard Drawings, latest edition.

13.3. All dimensions shown on the drawings are measured as shown and from outside face of building wall or to face of curb line, unless otherwise noted. Curb and Gutter is shown as three (3) lines (outside edge of gutter, face of curb, and back of curb).

13.4. All retaining wall design shall be per Architectural Plan or separate Structural Engineer's design notes and details. The Civil

Plans shall not be considered plans for retaining wall construction. 13.5. The General Contractor is responsible for posting all required bonds that General Contractors are allowed to post.

13.6. If any conflicts between the notes, details, specifications, and drawings occur then by rule the stricter shall govern

### STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. Sediment and erosion control devices shall be installed and functioning prior to beginning any project

2. Soil stabilization shall be achieved on any area of a site where land-disturbing activities have temporarily or permanently ceased according to the following schedule:

• All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1) shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 7 calendar days from the last land-disturbing activity.

• All other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from the last land-disturbing

3. To secure the project site, locate limits of construction, protect areas that are to remain undisturbed, and prevent migration of construction debris, orange construction fencing shall be installed around areas not requiring silt fencing. Any accumulation of construction debris on public roadways or adjacent properties shall be removed within 24 hours. Care shall be taken when installing construction fencing to not obscure oncoming traffic at intersections, adjacent driveways and the project construction entrance.

### <u>Inspections and Maintenance</u>

4. All sediment and erosion control devices shall be inspected every seven (7) days minimum or after every rain event. Damaged or ineffective devices shall be repaired or replaced, as necessary.

5. All sediment and erosion controls shall be inspected, at the specified inspection frequency, until construction is complete and the site is permanently stabilized.

6. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been permanently stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is permanently stabilized.

All existing and new storm water structures, affected by this project, shall be inspected and maintained clean of accumulated demolition debris or sediments. The inspection and maintenance of these structures shall be accomplished on the same schedule as the sediment and erosion control devices.

8. Disposal of all recovered sediments and construction debris shall be in accordance with all applicable City, State and Federal Regulations.

9. All erosion and sediment control plans and documentation (e.g., certification statements, inspection records, and maintenance records) shall be available on site during construction. All plans and documents shall be updated as required per NPDES General Permit.

### Best Management Practices (BMPs)

10. A stabilized construction entrance shall be installed and maintained on the project site. Storm water inlet protection shall be provided for all inlets (upstream and downstream) within 50 ft. of the construction entrance (on both sides of the public roadway).

11. During the course of construction activities erosion and sediment controls shall be used to prevent; sediment accumulation on public roadways (including street gutters), sediment laden runoff from entering into existing storm water system inlets or depositing on adjacent properties, and airborne dust migration off-site. Any accumulation of sediment from the project site on public roadways or adjacent properties shall be removed within 24 hours.

The contractor must take necessary action to minimize the tracking of mud onto the paved roadway construction areas. The contractor shall daily remove mud/soil from pavement, as may be required.

12. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized immediately after the utility installation.

13. Silt fencing shall be placed no closer than 5 ft. downhill from the toe of any fill area.

14. Temporary stockpiling of useable or waste materials for more than fourteen (14) days shall have appropriate erosion and sediment control measures installed. Temporary stockpiles shall be placed away from storm water inlet structures, adjacent property and public roadways.

15. Litter, construction debris, oils, fuels, building products with significant potential for impact (such as stockpiles of freshly treated lumber), and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.

16. Temporary diversion berms and/or ditches will be provided as needed during construction to protect areas from upslope runoff and/or to divert sediment laden water to appropriate traps or stable

17. If necessary, slopes which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydro seeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.

18. Cat track or surface roughening is required for all slopes greater than 4:1 prior to seeding and lying of synthetic or vegetative mats. Cat tracking or surface roughening shall produce a surface with furrows running cross slope, parallel with slope contours, and perpendicular to surface runoff.

19. The site shall be considered permanently stabilized when all surface disturbing activities are complete and either of the two following criteria are met:

a. A uniform (e.g., evenly disturbed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or

b. Equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) have been

22. Upon completion of construction activities and meeting the conditions of permanent stabilization a Notice of Termination (NOT) shall be submitted to NCDEQ Asheville Regional Office and a copy of the submitted NOT shall be sent to the Henderson County.

### NCDEQ - SEDIMENT CONTROL NOTES

**Ground Stabilization** a) Soil stabilization shall be achieved on any area of a site where land-disturbing activities have temporarily or

permanently ceased according to the following schedule:

i) All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1) shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 7 calendar days from the last land-disturbing activity.

ii) All other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from the last land-disturbing activity.

b) Conditions - In meeting the stabilization requirements above, the following conditions or exemptions shall apply:

i) Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable.

ii) All slopes 50' in length or greater shall apply the ground cover within 7 days except when the slope is flatter than 4: 1. Slopes less than 50' shall apply ground cover within 14 days except when slopes are steeper than 3:1, the 7 day-requirement applies.

iii) Any sloped area flatter than 4: 1 shall be exempt from the 7-day ground cover requirement. iv) Slopes 10' or less in length shall be exempt from the 7-day ground cover requirement except when the slope is steeper than 2: 1.

iv) Although stabilization is usually specified as ground cover, other methods, such as chemical stabilization, may be allowed on a case-by-case basis.

v) For portions of projects within the Sediment Control Commission-defined "High Quality Water Zone" (I5A NCAC 04A.0105), stabilization with ground cover shall be achieved as soon as practicable but in any event on all areas of the site within 7 calendar days from the last land disturbing act.

vi) Portions of a site that are lower in elevation than adjacent discharge locations and are not expected to discharge during construction may be exempt from the temporary ground cover requirements if identified on the approved E&SC Plan or added by the permitting authority.

### Self Inspection and Reporting Requirements

Minimum self inspection and reporting requirements are as follows unless otherwise approved in writing by the Division of Water Quality.

a) A rain gauge shall be maintained in good working order on the site unless another rain monitoring device has been approved by the Division of Water Quality.

b) A written record of the daily rainfall amounts shall be retained and all records shall be made available to Division of Water Quality or authorized agent upon request. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, the cumulative rain measurement for those un-attended days will determine if a site inspection is needed. (Note: if no rainfall occurred, the permittee must record "zero").

Erosion and sedimentation control measures shall be inspected to ensure that they are operating correctly. Inspection records must be maintained for each inspection event and for each measure. At a minimum, inspection of measures must occur at the frequency indicated below:

i) All erosion and sedimentation control measures must be inspected by or under the direction of the permittee at least once every seven calendar days, and

ii) All erosion and sediment control measures must be inspected by or under the direction of the permittee within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period.

l) Once land disturbance has begun on the site, stormwater runoff discharge outfalls shall be inspected by observation for erosion, sedimentation and other storm water discharge characteristics such as clarity, floating solids, and oil sheens. Inspections of the outfalls shall be made at least once every seven calendar days and within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period.

e) Inspections are only required to be made during normal business hours. When adverse weather conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection can be delayed until it is deemed safe to perform these duties. (Times when inspections were delayed because of safety issues should be noted in the Inspection Record.) If the inspection cannot be done on that day, it must be completed on the following business day.

### f) Twenty-four Hour Reporting for visible sediment deposition

i) The permittee shall report to the Division of Water Quality central office or the appropriate regional office any visible sediment being deposited in any stream or wetland or any noncompliance which may endanger health or the environment. (See Section VIII of this permit for contact information.) Any information shall be provided orally or electronically within 24 hours from the time the permittee became aware of the circumstances.

ii) A written submission shall be provided to the appropriate regional office of the Division of Water Quality within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the sediment deposition and actions taken to address the cause of the deposition. The Division of Water Quality staff may waive the requirement for a written report on a case-by-case basis.

g) Records of inspections made during the previous 30 days shall remain on the site and available for agency inspectors at all times during normal working hours, unless the Division of Water Quality provides a site-specific exemption based on unique site conditions that make this requirement not practical. Older records must be maintained for a period of three years after project completion and made available upon request The records must provide the details of each inspection including observations, and actions taken in accordance with this permit. The permittee shall record the required rainfall and monitoring observations on the Inspection Record form provided by the Division or a similar inspection form that is inclusive of all of the elements contained in the Division's form. Use of electronically-available records, in lieu of the required paper copies for inspection will be allowed if shown to provide equal access and utility as the hard-copy records.

### ) Inspection records must include, at a minimum, the following:

i) Control Measure Inspections: Inspection records must include at a minimum: I) identification of the measures inspected,

2) date and time of the inspection,

3) name of the person performing the inspection,

4) indication of whether the measures were operating properly,

5) description of maintenance needs for the measure, 6) corrective actions take, and

ii) Stormwater Discharge Inspections: Inspection records must include at a minimum: I) identification of the discharge outfall inspected,

2) date and time of the inspection,

3) name of the person performing the inspection, 4) evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration,

5) indication of visible sediment leaving the site,

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6) actions taken to correct/prevent sedimentation, and 7) date of actions taken. iii) Visible Sedimentation Found Outside the Site Limits: Inspection records must include:

date of actions taken, as well as the date and amounts of rainfall received.

1) an explanation as to the actions taken to control future releases. 2) actions taken to clean up or stabilize the sediment that has left the site limits, and

the date of actions taken. iv) Visible Sedimentation Found in Streams or Wetlands: All inspections should include evaluation of streams or wetlands onsite or offsite (where accessible) to determine if visible sedimentation has occurred.

i) Visible Stream Turbidity - If the discharge from a site results in an increase in visible stream turbidity, inspection records must record that evidence and actions taken to reduce sediment contributions. Sites discharging to streams named on the state's 303(d) list as impaired forsediment-related causes may be required to perform additional monitoring, inspections or application of more-stringent management practices if it is determined that the additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. If a discharge covered by this permit enters a stream segment that is listed on the Impaired Stream List for sediment-related causes, and a Total Maximum Daily Load (TMDL) has been prepared for those pollutants, the permittee must implement measures to ensure that the discharge of pollutants from the site is consistent with the assumptions and meets the requirements of the approved TMDL. The Division of Water Quality 303(d) list can be found at: http://h20.enr.state.nc.us/tmdl/General\_303d.htm/

### **EROSION CONTROL NOTES**

### SITE INFORMATION:

• Existing Condition:

VACANT

COMMERCIAL USE - PAVEMENT & BUILDING **EXCAVATION & FILLING** 

Existing Soils: Tate fine sandy loam BMPs Shown on Plan: INLET PROTECTION, SILT FENCE, OUTLET STABILIZATION,

Disturbed Area:

Schedule a Pre-Construction Meeting at the site with the Owner, Engineer, and any local inspectors at least 72 hrs prior to commencement of construction.

Install the permit box on-site.

Clearly mark the limits of disturbance.

Install construction entrance, install BMPs, and install any perimeter silt fence BMP protection prior to demolition activities.

Contractor to obtain all required demolition permit prior to beginning demolition (Person

County), utilities/tree removal, etc. Continuously maintain all BMPs throughout construction. Remove accumulated sediment

Maintenance of Sediment and Erosion Control Measures must continue until the site is permanently stabilized until the controls are removed.

Begin topsoil stripping as noted. Topsoil shall be re-used in grass or landscape areas and

Install storm drainage, utilities, etc. as grade allows. Install Hardware Cloth & Gravel Inlet protection at all catch basins as they are

Begin Rough Grading. Temporary or Permanent grassing shall be established on areas disturbed with no activity for 7 days. Continuously remove accumulated silt/sediment

Place stone as soon as possible on all areas to be paved and building pads.

Respread topsoil (4" min.) evenly on unimproved areas and areas with no impervious surfaces proposed including all slopes.

the Phase II Erosion Control Plan. Permanently grass all areas not to be paved or built upon (ie outpads) or that receives

Remove silt/sediment from all BMPs and dispose of legally or on-site as approved by the

and Engineer of Record for closeout inspection.

Remove temporary BMPs once site is accepted for closeout by local issuing authority.

Continuously maintain all BMPs thoughout construction. Remove accumulated sediment from BMPs and clean-out Sediment Basin as noted on plans. NOTE: Contractor's price for work shall be all inclusive for installing and maintaining BMPs as shown drawings.

CONTRACTOR TO PERFORM SELF INSPECTION ON ALL SEDIMENT AND EROSION CONTROL MEASURES AFTER EACH PHASE OF CONSTRUCTION TO ENSURE THE EROSION CONTROL & SEDIMENTATION PLANS ARE BEING FOLLOWED. COMPLETE THE SELF-INSPECTION REPORT

Project Number: 2018-015

Drawing Scale: as noted

Date of Project: 4-2018

Engineer of Record:

2018-015 Details.dwg

Jason Henderson, P.E

South Carolina PE# 22406 Georgia PE# 030711

Certificates of Authorization

SC C04212 - GA PEF005865

NC P0868 - AL CA4065E

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North Carolina PE# 031306 Alabama PE# 32054

SITEWORK NOTES & DETAILS

 Proposed Condition: Proposed Work:

CONSTRUCTION ENTRANCE 0.91± - ACRES FOR RE-DEVELOPMENT

**EROSION CONTROL SEQUENCE (for Contractor):** 

Phase I - Sheet C211:

Establish main Construction Entrance/ Exit during demolition.

from BMPs and clean-out Sediment as noted on plans. NOTE: Contractor's price for work shall be all inclusive for installing and maintaining BMPs as shown on drawings.

Phase II - Sheet C212:

on slopes after rough grading operations.

from BMPs. Finalize Fine Grading and construct curb & gutter.

Place slope matting (Excelsior per detail - or approved equal) on all slopes as noted on

landscaping/mulch. Establish 100% coverage with 70% density. Finalize all paving and grassing to achieve final stabilization.

Once site is finalized with 100% grass coverage and 70% density contact local inspector

Address any punchlist items from closeout inspection. Contact Engineer and schedule final walkthrough. Engineer will coordinate with Owner

to apply for NOT (Stormwater).

(OBTAIN FROM NCDENR WEBSITE) AND PROVIDE TO OWNER AND ENGINEER.

THE STANDARDS & SPECIFICATIONS SHOWN ARE FROM THE "NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL" (NCESCPDM) PREPARED BY NC DEPT. OF ENVIRONMENT AND NATURAL RESOURCES (NCDENR).

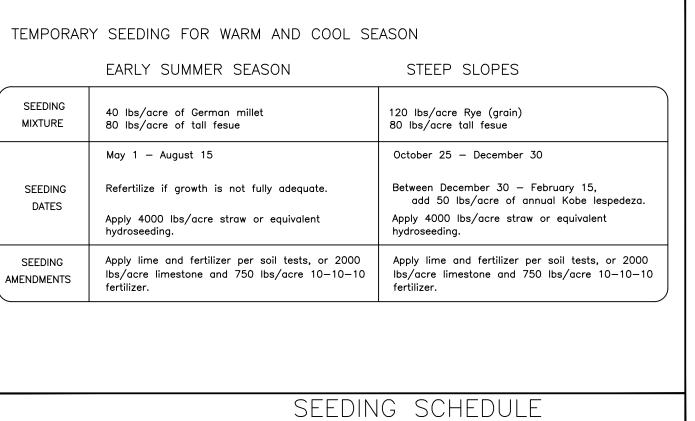
> EROSION CONTROL REQUIREMENTS & NOTES

	GENTLE SLOPES	STEEP SLOPES
SEEDING MIXTURE	80 lbs/acre of tall fesue	100 lbs/acre tall fescue 30 lbs/acre Sericea lespedeza (unscarified after August 15) 10 lbs/acre Kobe lespedeza
SEEDING DATES	FALL: August 25 — October Late winter: February 15 — April 15	FALL: August 25 — October 15 Late winter: February 15 — April 15
	To extend spring seeding into June, add 15 lbs/acre hulled Bermudagrass	To extend spring seeding into June, add 15 lbs/acre hulled Bermudagrass
	Overseeding of Kobe lespedeza over fall—seeded tall fescue is very effective.	Overseeding of Kobe lespedeza over fall—seeded tall fescue is very effective.
SEEDING AMENDMENTS	Apply lime and fertilizer per soil tests, or 4000 lbs/acre limestone and 1000 lbs/acre 10-10-10 fertilizer.	Apply lime and fertilizer per soil tests, or 4000 lbs/acre limestone and 1000 lbs/acre 10-10-10 fertilizer.

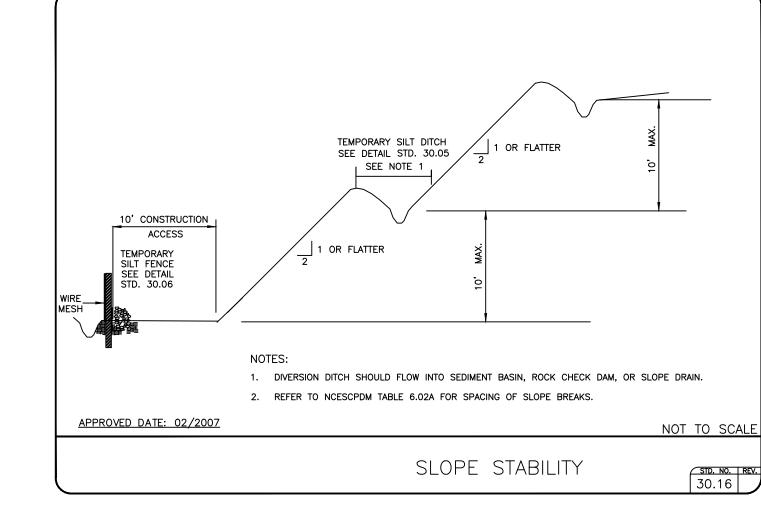
Ground Cover-- Protective cover must be established on all disturbed areas within 21 calendar days after land disturbing activity is completed or has temporarily ceased.

Graded slopes and fills--Protective cover must be established on all graded slopes and fills within 21 calendar days after a phase of grading is completed or has temporarily ceased.

SEEDING SCHEDULE



(SEASONAL)

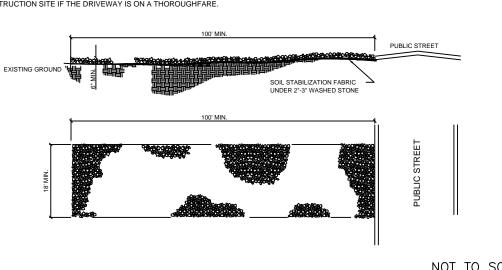


1. A STABILIZED ENTRANCE PAD OF 2"-3" WASHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE 2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.

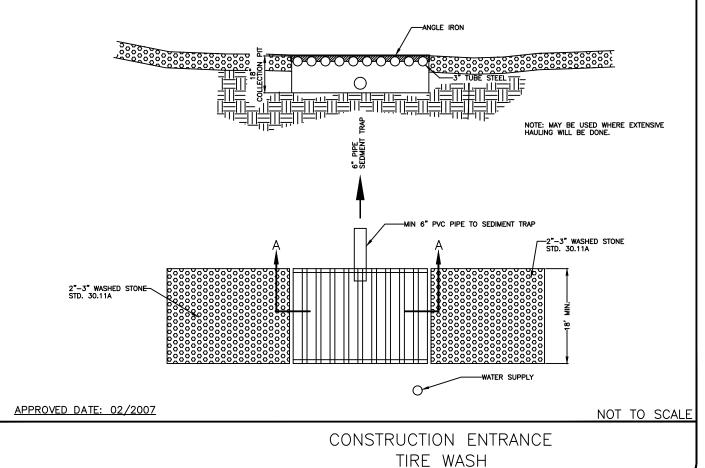
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. 4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.

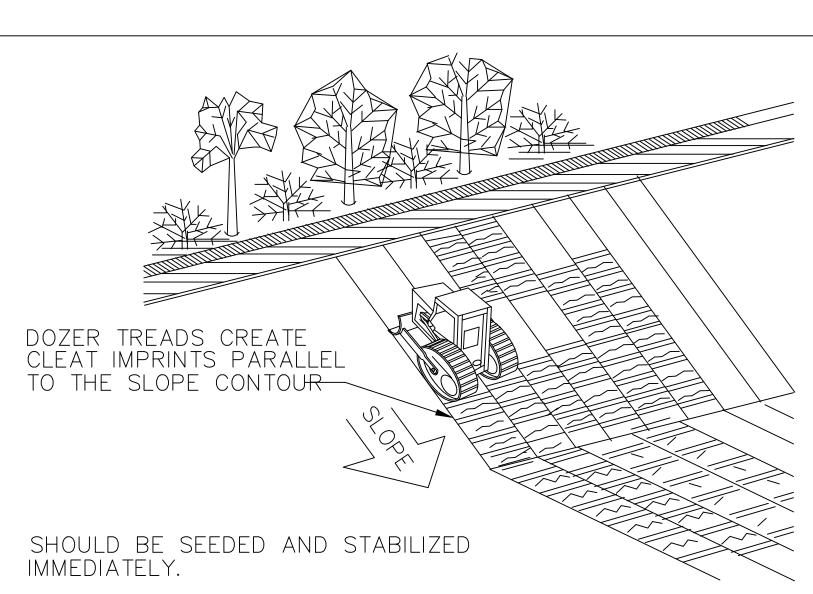
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN SEE STD. NO. 30.11B.

COUNTY MAY REQUIRE A STANDARD COMMERCIAL DRIVEWAY (STD. 10.24 & 10.25) TO ACCESS THE CONSTRUCTION SITE IF THE DRIVEWAY IS ON A THOROUGHFARE.

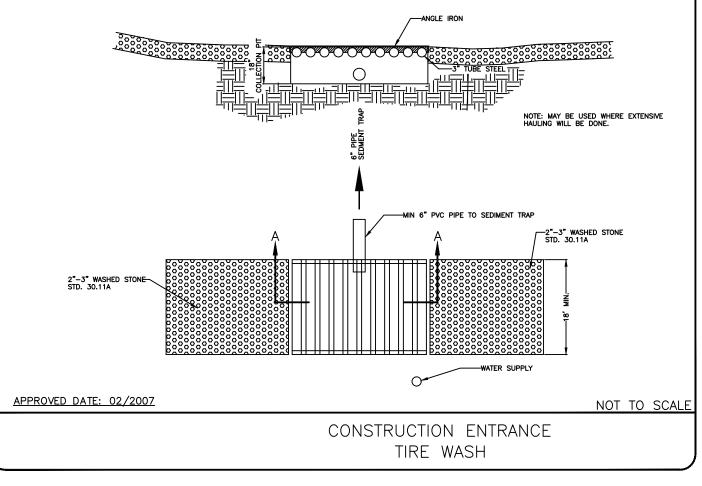


STABILIZED CONSTRUCTION ENTRANCE



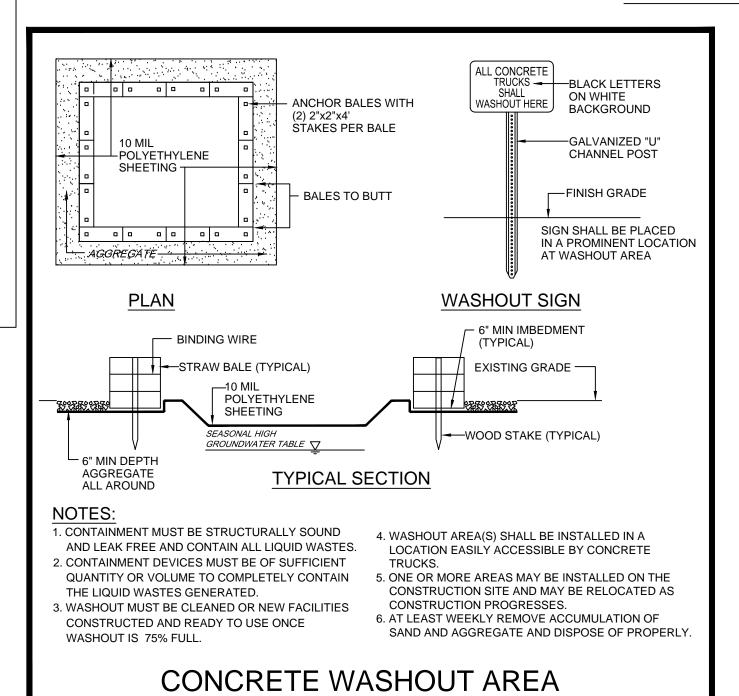


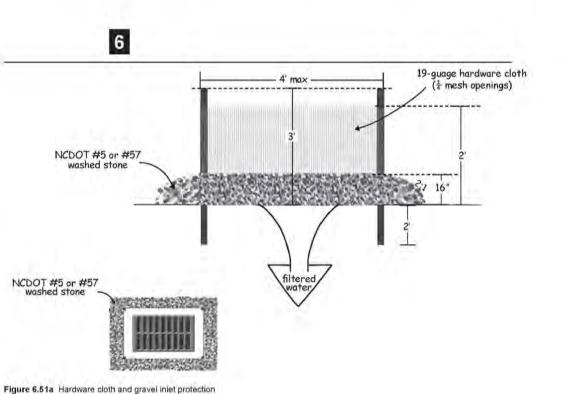
- TYPICAL DETAIL -TRACKING DETAIL



NCDOT #5 or #57 Figure 6.51a Hardware cloth and gravel inlet protection Construction 1. Uniformly grade a shallow depression approaching the inlet. Specifications 2. Drive 5-foot steel posts 2 feet into the ground surrounding the inlet. Space posts evenly around the perimeter of the inlet, a maximum of 4 feet 3. Surround the posts with wire mesh hardware cloth. Secure the wire mesh to the steel posts at the top, middle, and bottom. Placing a 2-foot flap of the wire mesh under the gravel for anchoring is recommended. 4. Place clean gravel (NC DOT #5 or #57 stone) on a 2:1 slope with a height of 16 inches around the wire, and smooth to an even grade. 5. Once the contributing drainage area has been stabilized, remove 6. Compact the area properly and stabilized it with groundcover. Maintenance Inspect inlets 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. References Inlet Protection 6.52, Block and Gravel Inlet Protection 6.54, Rock Doughnut Inlet Protection North Carolina Department of Transportation Standard Specifications for Roads and Structures

- TYPICAL DETAIL -HARDWARE CLOTH & GRAVEL





WOVEN FILTER FABRIC Construction MATERIALS Specifications 1. Use a synthetic filter fabric of at least 95% by weight of polyolefins or polyester, which is certified by the manufacturer or supplier as conforming to the requirements in ASTM D 6461, which is shown in part in Table 6.62b. Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120° F. 2. Ensure that posts for sediment fences are 1.25 lb/linear ft minimum steel with a minimum length of 5 feet. Make sure that steel posts have projections to facilitate fastening the fabric. 3. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches. Table 6.62b Specifications For Sediment Fence Fabric Specifications Grab Strength ASTM D 4632 N (lbs) X-Machine Direction 70% after 500h of exposure 500h of exposure Silt Fence support shall consist of 14 gage steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated poylmer mesh o equivalent strength.

2 These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.

3 As measured in accordance with Test Method D 4632.

1. Construct the sediment barrier of standard strength or extra strength

2. Ensure that the height of the sediment fence does not exceed 24 inches

above the ground surface. (Higher fences may impound volumes of water

3. Construct the filter fabric from a continuous roll cut to the length of the

barrier to avoid joints. When joints are necessary, securely fasten the filter

4. Support standard strength filter fabric by wire mesh fastened securely to

the upslope side of the posts. Extend the wire mesh support to the bottom of

the trench. Fasten the wire reinforcement, then fabric on the upslope side of

the fence post. Wire or plastic zip ties should have minimum 50 pound tensile

5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Support posts should be driven securely into the ground a minimum of

6. Extra strength filter fabric with 6 feet post spacing does not require wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or

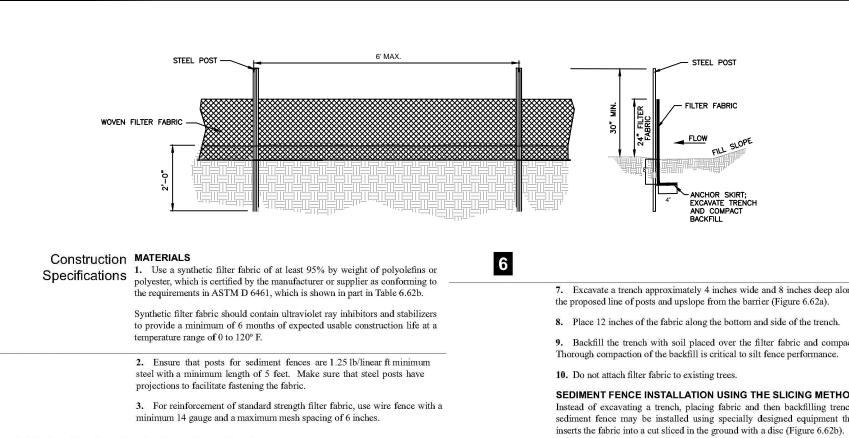
plastic zip ties should have minimum 50 pound tensile strength.

cloth only at a support post with 4 feet minimum overlap to the next post.

CONSTRUCTION

synthetic filter fabrics.

sufficient to cause failure of the structure.)



7. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier (Figure 6.62a).

9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.

SEDIMENT FENCE INSTALLATION USING THE SLICING METHOD Instead of excavating a trench, placing fabric and then backfilling trench, sediment fence may be installed using specially designed equipment that

Installation 1. The base of both end posts should be at least one foot higher than the middle of the fence. Check with a level if necessary. . Install posts 4 feet apart in critical areas and 6 feet apart on standard

3. Install posts 2 feet deep on the downstream side of the silt fence, and as close as possible to the fabric, enabling posts to support the fabric from

4. Install posts with the nipples facing away from the silt fabric. 5. Attach the fabric to each post with three ties, all spaced within the top 8 inches of the fabric. Attach each tie diagonally 45 degrees through the fabric, with each puncture at least 1 inch vertically apart. Also, each tie should be 6. Wrap approximately 6 inches of fabric around the end posts and secure

7. No more than 24 inches of a 36 inch fabric is allowed above ground 8. The installation should be checked and corrected for any deviations before

9. Compaction is vitally important for effective results. Compact the soil immediately next to the silt fence fabric with the front wheel of the tractor, skid steer, or roller exerting at least 60 pounds per square inch. Compact the upstream side first, and then each side twice for a total of 4 trips. Maintenance Inspect sediment fences at least once a week and after each rainfall. Make any

required repairs immediately. Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly.

Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanout.

Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

NOT TO SCALE

TEMPORARY SILT FENCE

NPDES Stormwater Discharge Permit for Construction Activities (NCGO1) NCDENR/Division of Energy, Mineral and Land Resources STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011) **SITE AREA DESCRIPTION STABILIZATION** TIMEFRAME EXCEPTIONS Perimeter dikes, swales, ditches, slopes 7 days 7 days If slopes are 10' or less in length and are Slopes steeper than 3:1 7 days not steeper than 2:1, 14 days are allowed. Slopes 3:1 or flatter 14 days 7 days for slopes greater than 50' in length. None, except for perimeters and HQW Zones. ▲ All other areas with slopes flatter than 4:1 14 days

roject Number: 2018-015

Drawing Scale: as noted

Date of Project: 4-2018

ngineer of Record

2018-015 Details.dwg

Jason Henderson, P.E.

South Carolina PE# 22406 Georgia PE# 030711

Certificates of Authorization

SC C04212 - GA PEF005865

NC P0868 - AL CA4065E

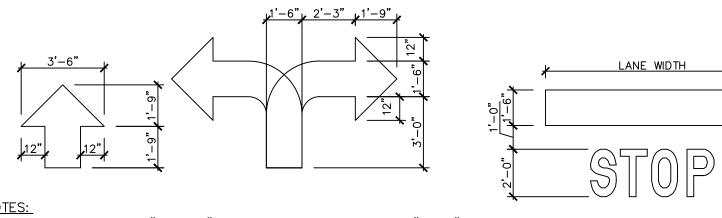
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North Carolina PE# 031306 Alabama PE# 32054

SITEWORK NOTES & DETAILS

6.51.2



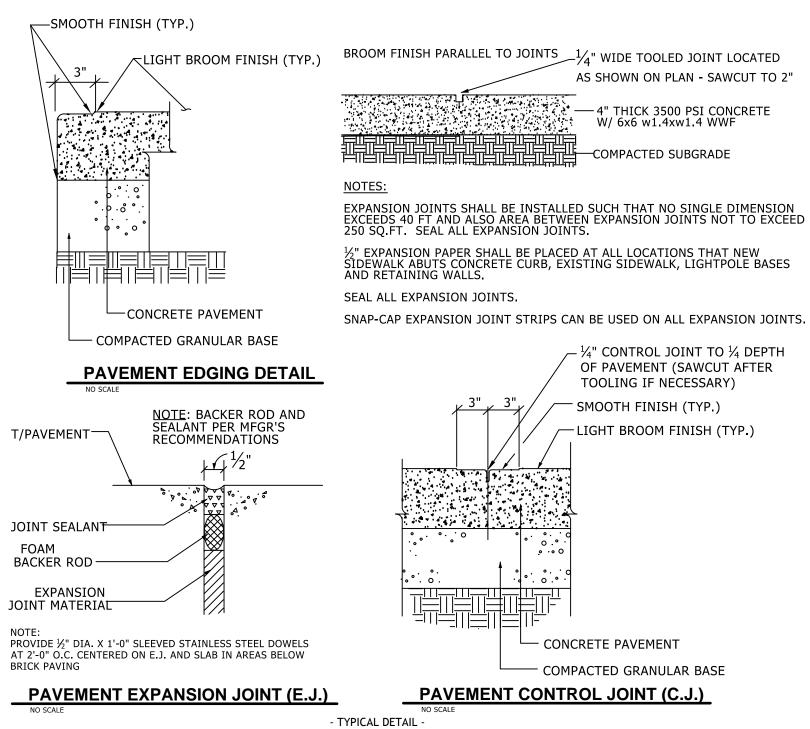
NOTES:

1. PAINT COLOR TO BE "YELLOW" FOR ARROW AND LETTERS. "STOP" LETTERS TO BE ELONGATED HELEVETICA MEDIUM — 4" WIDE STROKES.

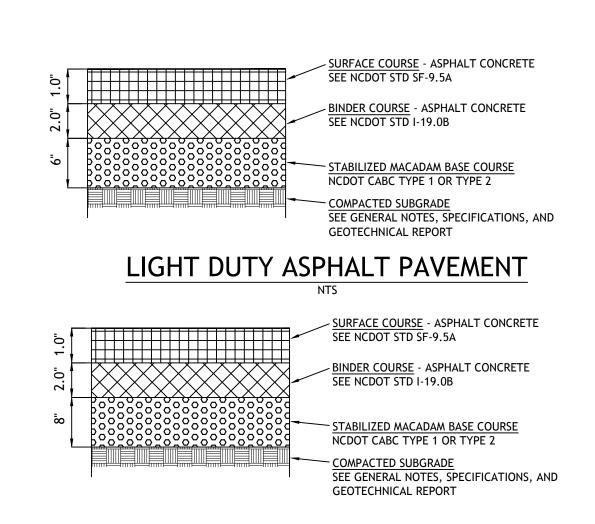
2. PAINT 2" BLACK OUTLINE AROUND ARROW AND LETTERS FOR PROJECTS WITH CONCRETE PARKING LOTS.

PAVEMENT PAINTING





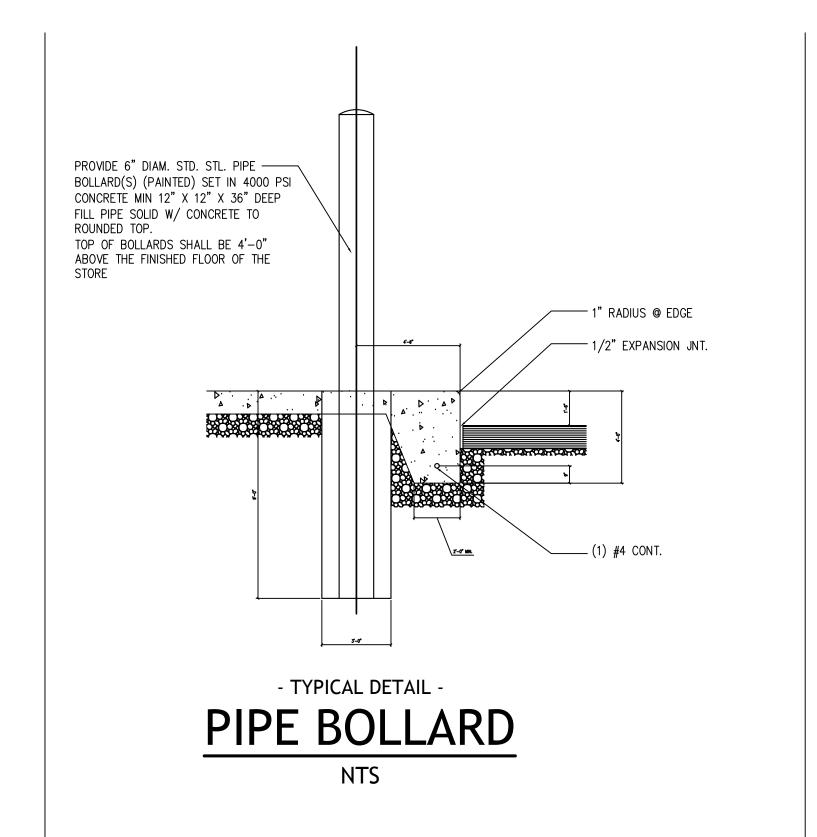
# CONCRETE SIDEWALK

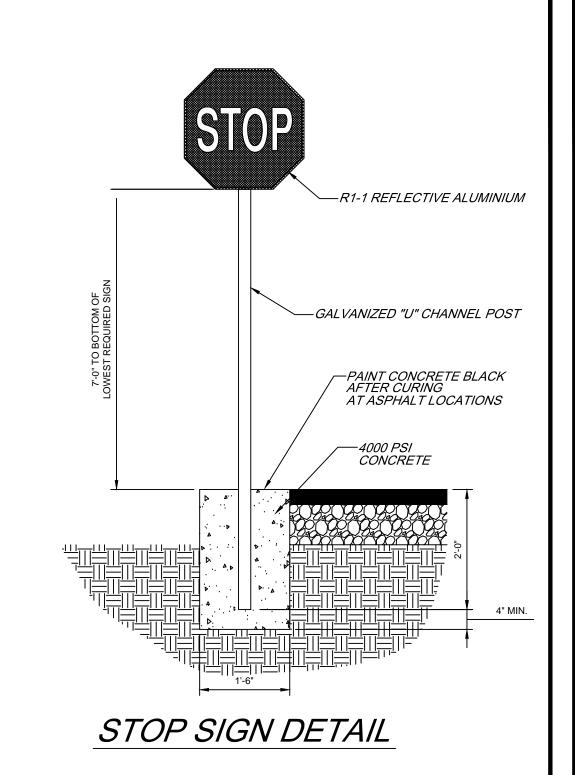


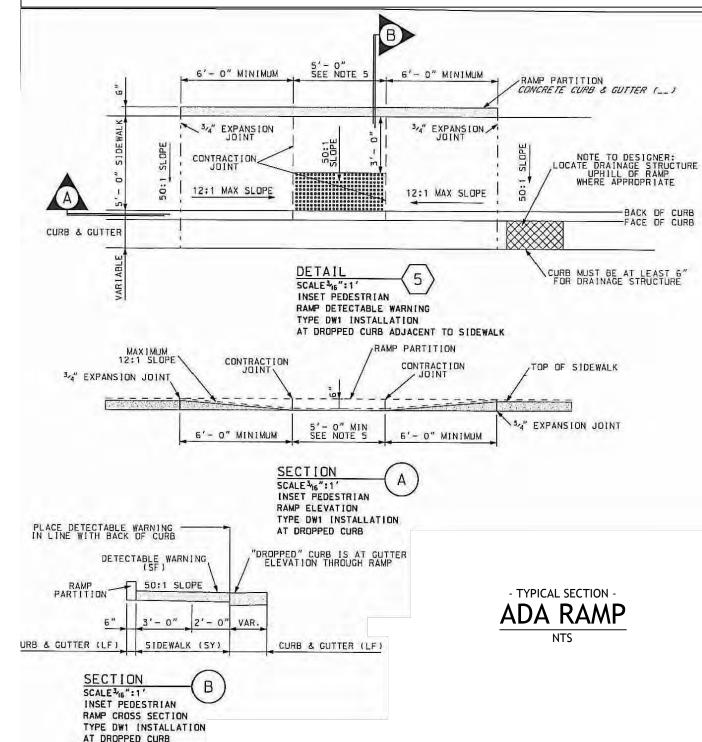
# HEAVY DUTY ASPHALT PAVEMENT

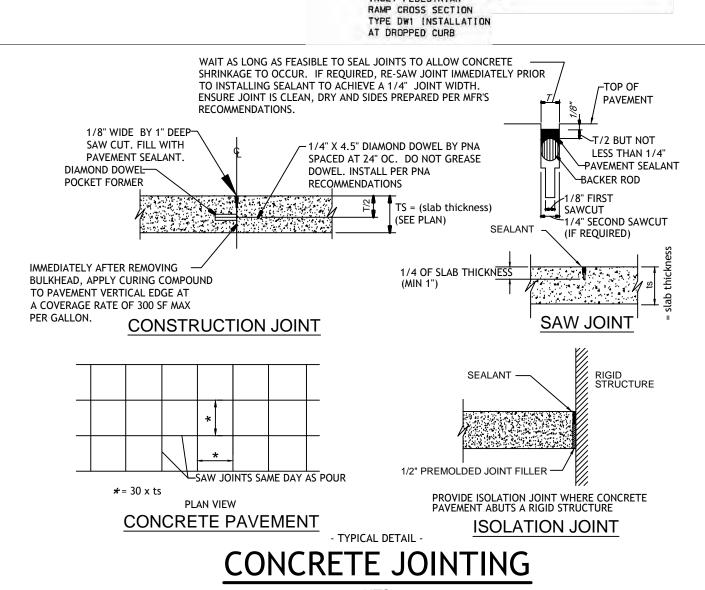
PAVEMENT NOTE:

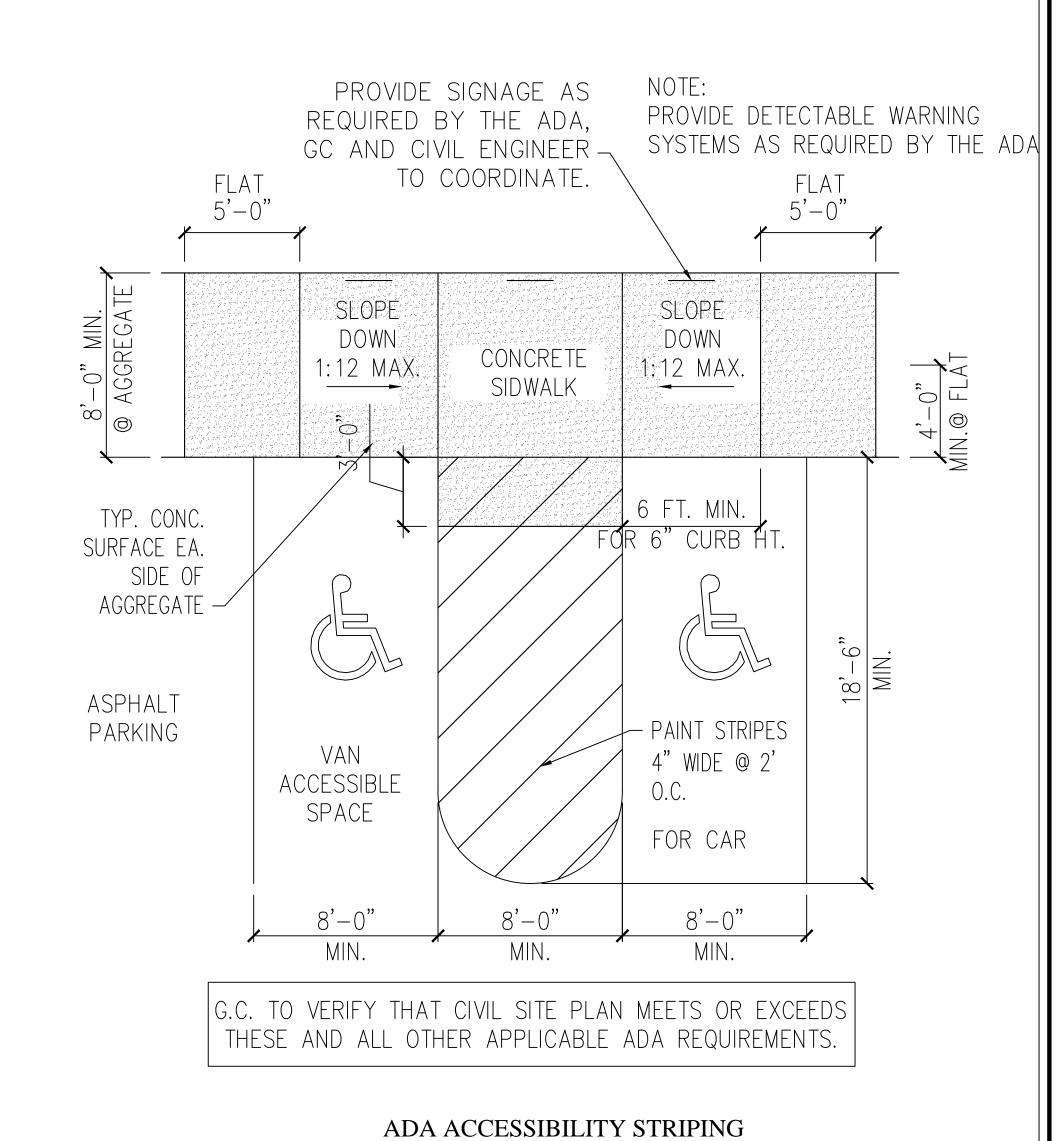
THE ABOVE PAVEMENT SECTIONS ARE TO BE APPROVED BY THE OWNER AND GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.











N.T.S.

FAMILY DOLLAR STORE 716851

SC C04212 - GA PEF005865

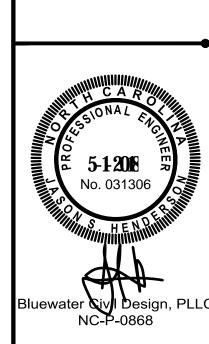
NC P0868 - AL CA4065E

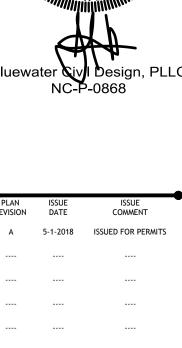
Project Number: 2018-015

Drawing Scale: as noted

2018-015 Details.dwg

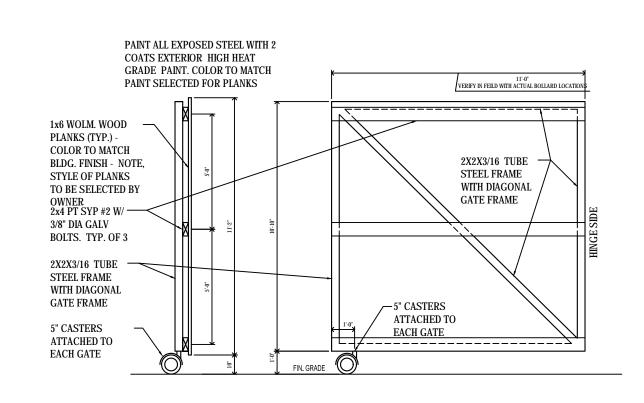
Jason Henderson, P.E



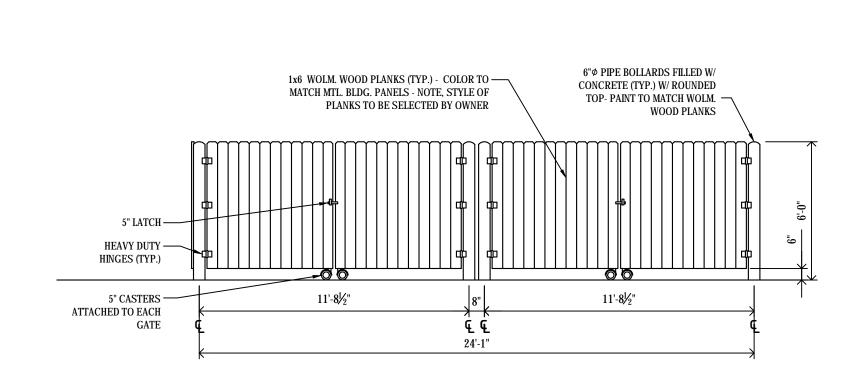


SITEWORK NOTES & DETAILS

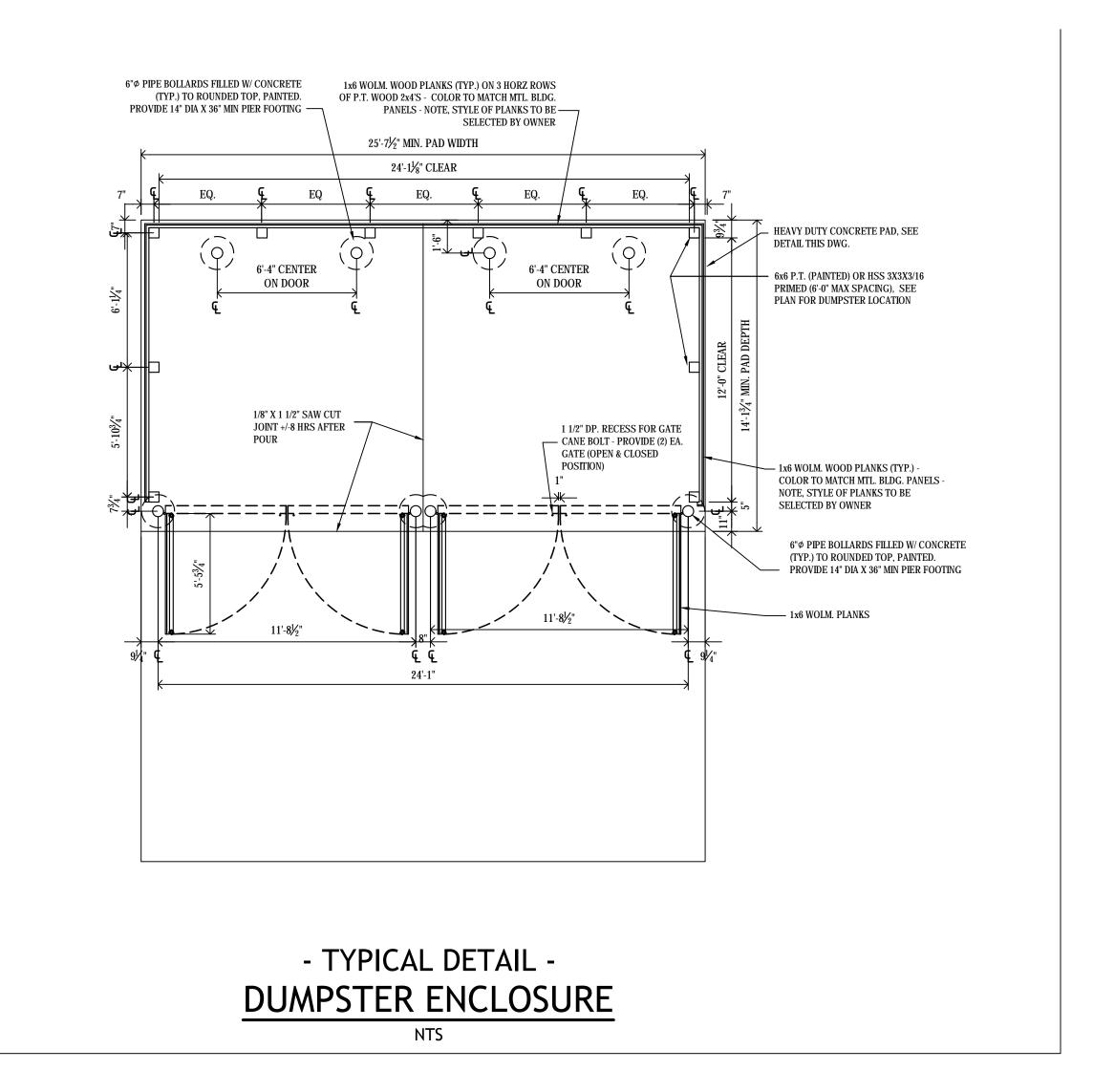
C503

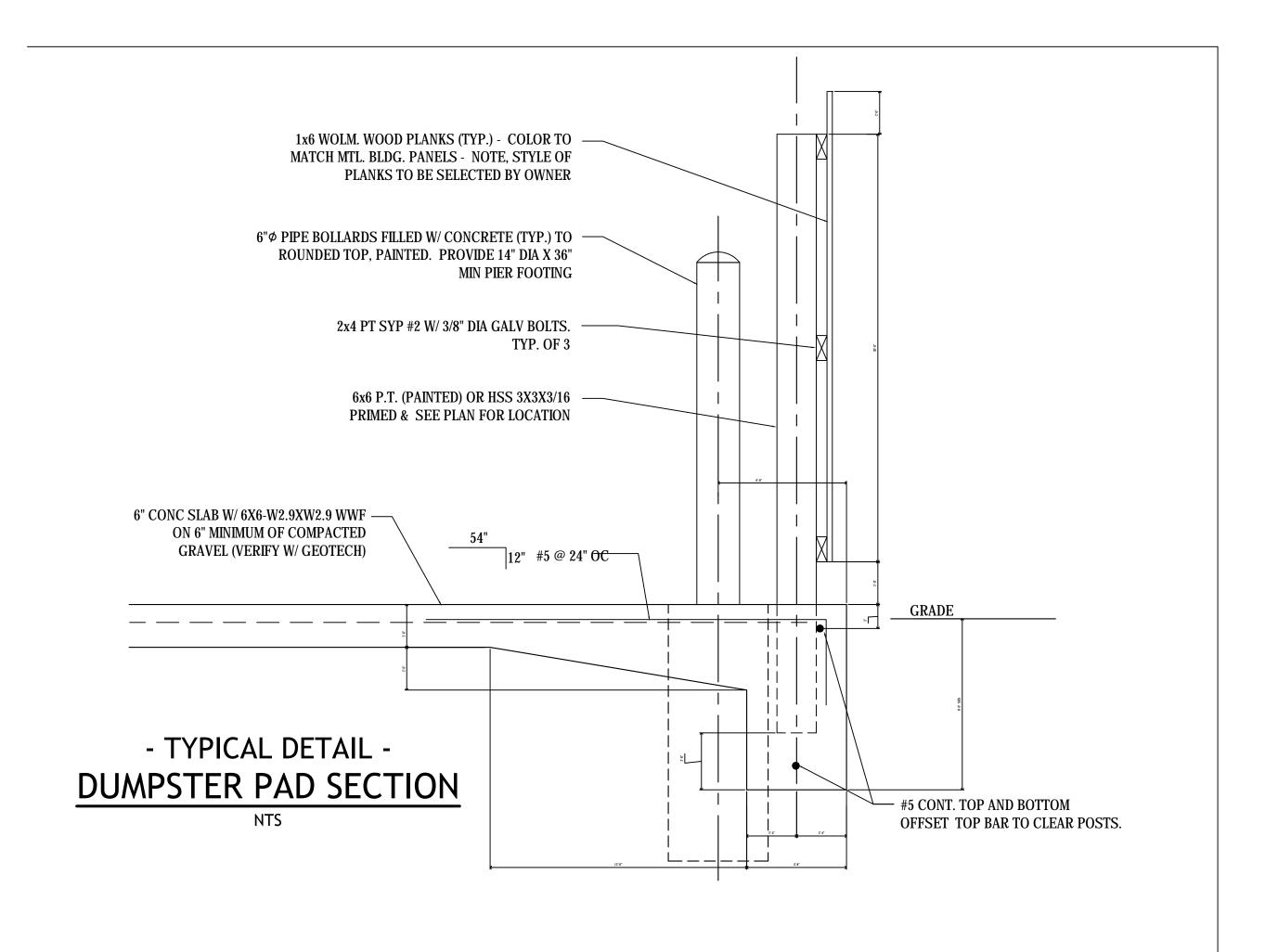


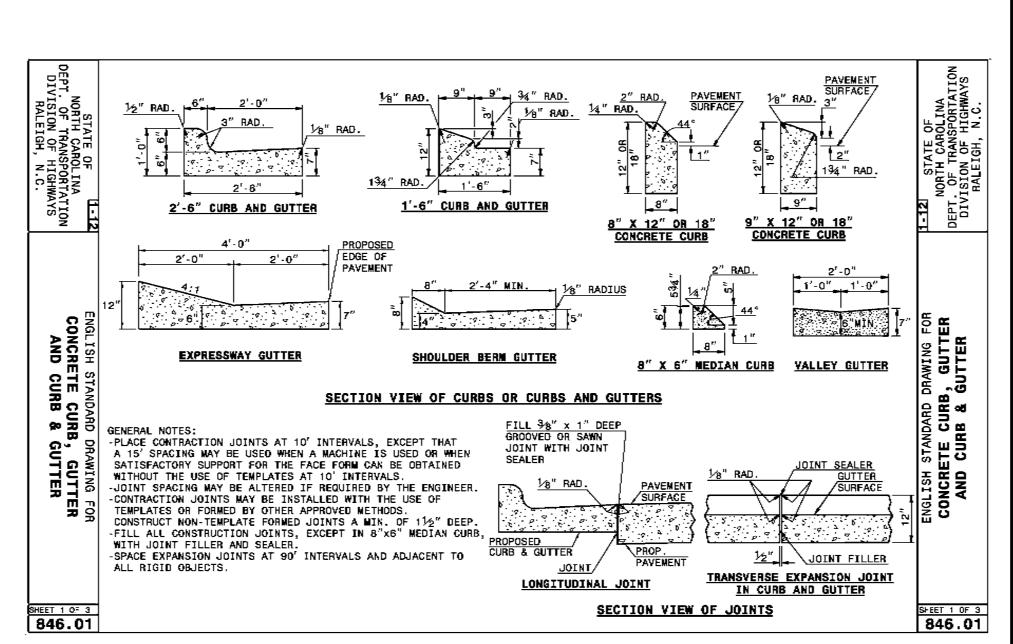
## - TYPICAL DETAIL -**DUMPSTER GATE SECTION**

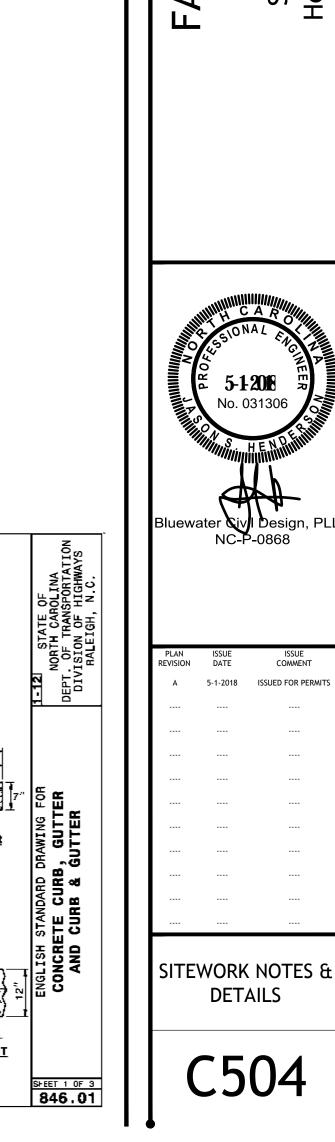


# - TYPICAL DETAIL -DUMPSTER ENCLOSURE





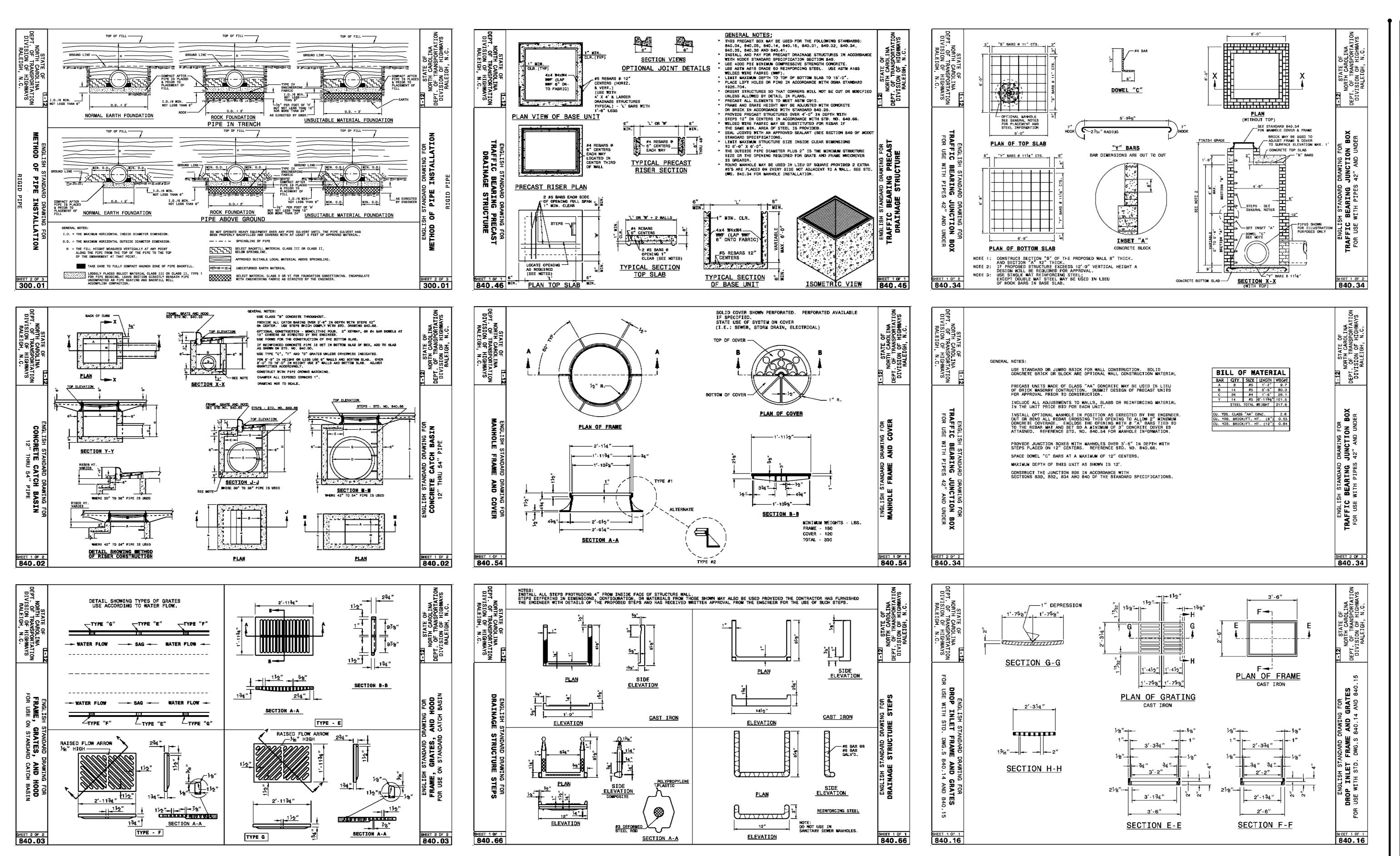




2018-015 Details.dwg

SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

Drawing Scale: as noted





Certificates of Authorization

SC C04212 - GA PEF005865

NC P0868 - AL CA4065E

**68** 

Project Number: 2018-015

Drawing Scale: as noted

Date of Project: 4-2018

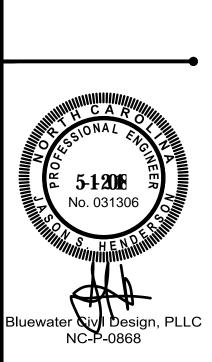
Engineer of Record:

2018-015 Details.dwg

Jason Henderson, P.E.

North Carolina PE# 031306 Alabama PE# 32054

South Carolina PE# 22406 Georgia PE# 030711

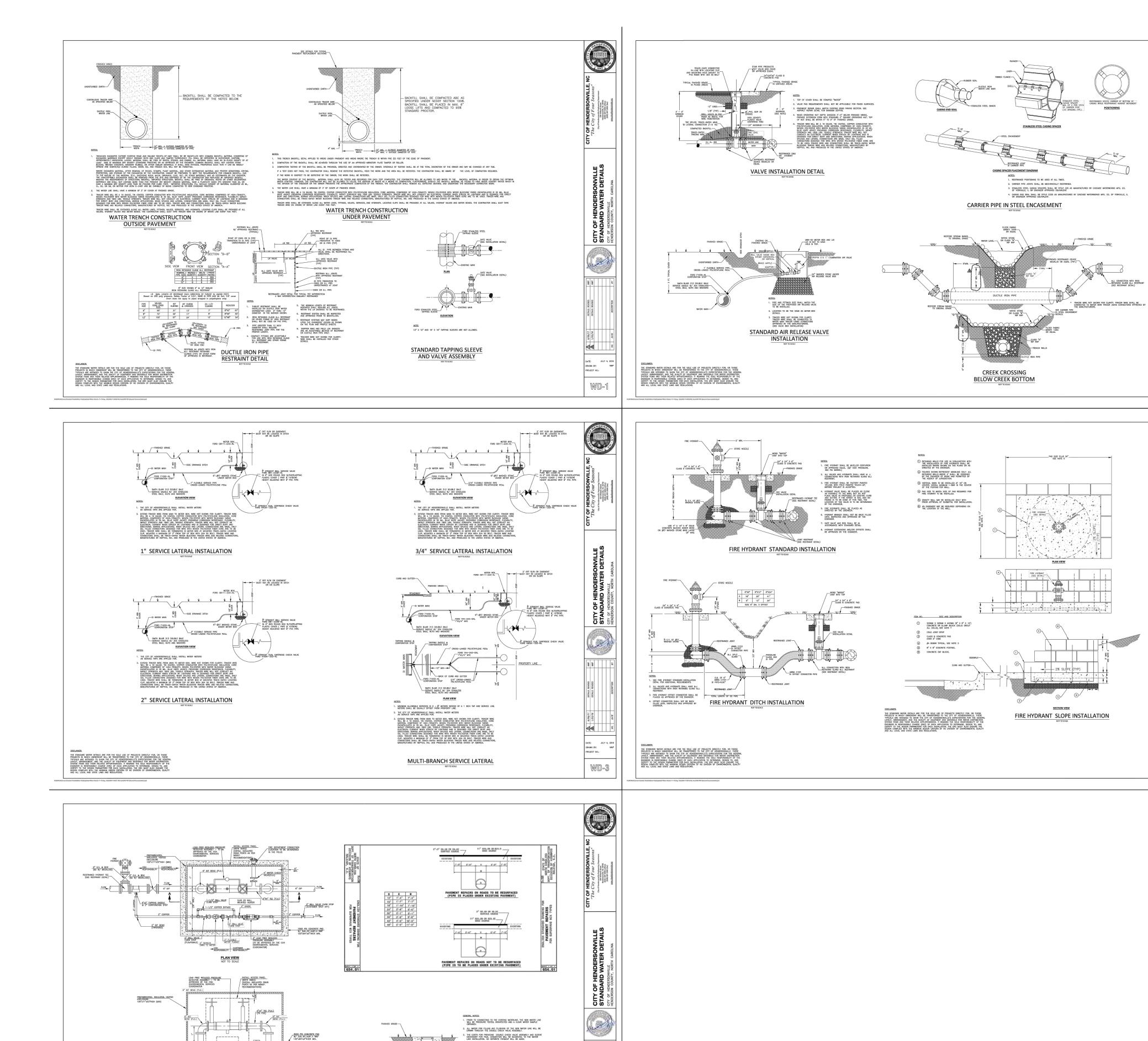


	NC-F	P-0868	
PLAN EVISION	ISSUE DATE	ISSUE COMMENT	,
Α	5-1-2018	ISSUED FOR PERMITS	

SITEWORK NOTES &

DETAILS

C505



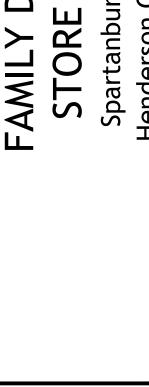
THE CONTRACTOR WILL BE REQUIRED TO HAVE THE WATER METER TESTED TO MEET ACCURACY STANDARDS OF AWAR C700. NO SEPARATE PAYMENT WILL BE MADE. THE METER MUST BEAR A CERTIFICATION TAG AT ALL TIMES.

WD-5

NEW WATER LINE PRESSURE TEST BACKFLOW PREVENTION ASSEMBLY

6" 90" BEND (MJ)
W/ MEGALUGS &
THRUST BLOCKING

COMMERCIAL WATER SERVICE
W/ FIRE LINE
NOT 10 SALE



Certificates of Authorization: SC C04212 - GA PEF005865 NC P0868 - AL CA4065E

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Project Number: 2018-015

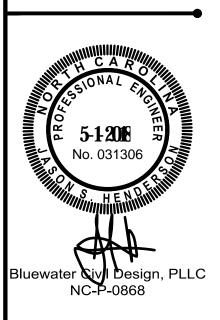
Drawing Scale: as noted Date of Project: 4-2018

Engineer of Record:

2018-015 Details.dwg

Jason Henderson, P.E.

South Carolina PE# 22406 Georgia PE# 030711 North Carolina PE# 031306 Alabama PE# 32054



PLAN REVISION	ISSUE DATE	ISSUE COMMENT
Α	5-1-2018	ISSUED FOR PERMITS

SITEWORK NOTES & **DETAILS** 

CITY OF HENDERSONVILLE
STANDARD WATER DETAILS
CITY OF HENDERSONVILE
HENDERSON COUNT, NORTH CAROLINA

WD-2

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CITY OF HENDERSONVILLE STANDARD WATER DETAILS CITY OF HENDERSON CURTY, NORTH CAROLINA HENDERSON COUNTY, NORTH CAROLINA

WD-4