## LOCATION MAP REF. AERO ATLAS

(Z) Euro	No.	DESCRIPTION
	C1.1	COVER SHEET
	C2.1	EXISTING CONDITIONS
	C3.1	SITE DEMOLITION PLAN
	C4.1	SITE PLAN
_	□5.1	GRADING PLAN
	C6.1	UTILITY PLAN
	C7.1	EROSION CONTROL PLAN - INITIAL PHASE
	C8.1	EROSION CONTROL PLAN - INTERMEDIATE PHASE
	C9.1	EROSION CONTROL PLAN - FINAL PHASE
	C10.1	EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES
3	C11.1	TREE REMOVAL PLAN
	C11.2	LANDSCAPE PLAN
	C12.1-12.2	PROFILES
•	C13.1- C13.12	CONSTRUCTION DETAILS



CITY OF ATLANTA

www.atlantaga.gov

TIM KEANE CHARLETTA WILSON JACKS DEPARTMENT OF CITY PLANNING Office of Zoning and Developmen 55 TRINITY AVENUE, S.W. SUITE 3350 - ATLANTA, GEORGIA 30303-0308 404-330-6145 - FAX: 404-658-7491

November 6, 2017 Julie L. Sellers

Atlanta, Georgia 30309

1230 Peachtree Street NE, Suite 1200

KASIM REED

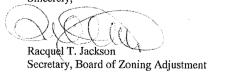
C13.12

Application of Julie L. Sellers for a variance to reduce the front yard setback (Northside Drive) from 40 feet to 26.5 feet, the front yard setback (Fielder Avenue) from 40 feet to 5 feet and the north side yard

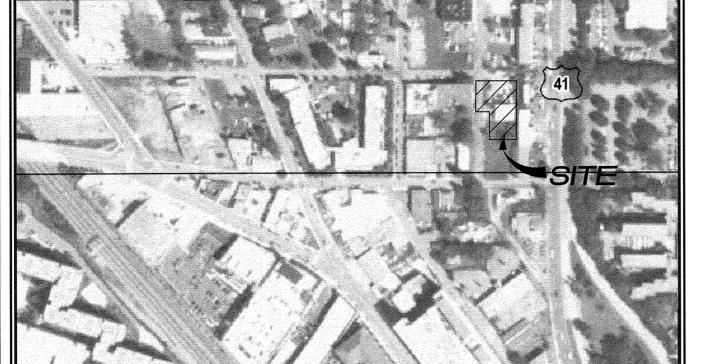
setback from 20 feet to 0 feet for the construction of a storage facility for properties located at 924 Northside Drive, N.W., 0 Northside Drive, N.W. (3 parcels identified by parcel ID numbers: 17 01500008075, 17 01500008077, 17 01500008078) and 0 Fielder Avenue, N.W. (17 01500008057) (pending lot consolidation), fronting 245 feet on the west side of Northside Drive and 75 feet on the east side of Fielder Avenue and beginning 100 feet from the northwest intersection of Northside Drive and 8th Street and 221 feet from the northeast intersection of Fielder Avenue and 8th Street. Zoned I-1 (Light Industrial). Land Lot 149 and 150 of the 17th District, Fulton County, Georgia. Owner: Clairmont Dresdon, LLC & Joseph Barton Council District 3, NPU E

As a result of the public hearing held on November 2, 2017, the Board of Zoning Adjustment approved the above

A copy of this letter should be submitted to the Office of Buildings along with your application for a building permit. Information related to applications heard by the Board of Zoning Adjustment (BZA), including additional copies of this letter, may be found online using the City's online permitting system, Accela Citizen: https://aca.accela.com/Atlanta\_Ga/Default.aspx. A search can be performed by entering any of the following information: case number, case type, date submitted. Thank you in advance for your cooperation and please do not hesitate to call with



cc: Keyetta M. Holmes, Zoning Administrator Charletta Wilson Jacks, Director



FEMAFLOOD MAP

## **GENERAL NOTES:**

Information regarding the reputed presence, size, character and location of existing underground utilities and structures is shown hereon. There is no certainty of the accuracy of this information and it shall be considered in that light by those using this drawing. The location and arrangement of underground utilities and structures shown hereon may be inaccurate and utilities and structures not shown may be encountered. The owner, his employees, his consultants and his contractors shall hereby distinctly understand that the surveyor is not responsible for the correctness

or sufficiency of this information. All pipe lengths are scaled lengths from center of structure. Contractor shall verify All dimensions are to face of curb, face of building, or center of structure, unless

otherwise noted. All curb radii are <u>5</u>, unless otherwise noted. Contractor shall verify the location of All utilities. Contractor shall have All utilities flagged with invert elevations Prior to construction. Notify engineer of All discrepancies or additional utilities encountered.

There are no waters of the state within 200' of the site There are no wetlands located on the site. All construction shall conform to City of Atlanta Standards and Specifications.

All non-paved disturbed areas to be seeded with material suitable to season and to be maintained until stabilized. 10. All junction boxes to have ring and cover access. 11. No parking, storage, or other construction site activities are to occur within tree

. No bury pits are proposed for this site. 13. Topographic and Boundary information has been taken from Boundary and Topographic Survey for Broward Management, LLC, dated 04.04.17, last revised 07.18.17

## CITY OF ATLANTA SITE DEVELOPMENT NOTES:

No graded slope shall exceed 2H:1V.

Prior to the land disturbing activities, the contractor shall schedule a pre-construction meeting with the area Erosion Control Inspector. Call (404) The escape of sediment from the site shall be prevented by the installation of

land disturbing activities. Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the

erosion and sediment control measures and practices prior to, or concurrent with,

Any disturbed area left idle for a period greater than 14 days shall be stabilized with mulch and temporary seeding. Any disturbed areas remaining idle for 30 days shall be stabilized with permanent

Erosion and sediment control measures shall be inspected at least weekly, after each rain, and repaired as necessary.

Additional erosion and sediment control measures shall be installed if determined necessary by on-site inspection. Silt fence shall meet the requirements of Section 171- Type C temporary silt fence, of the Georgia Department of Transportation Standard Specifications, 1993 edition,

and be wire reinforced. 0. The property owner and contractor are equally responsible for all erosion control activities. 11. It is the responsibility of the contractor to obtain qualified professional advice when

questions arise concerning design and effectiveness of erosion control devices, not 12. All temporary and permanent seeding must be performed at the appropriate season. In such instances where the establishment of vegetation is inopportune due to season or drought, disturbed areas shall be temporarily stabilized using 2"-4" of mulch (Ds1). Additional plantings will be necessary if a sufficient stand of grass fails

to grow." 13. The City's designee will verify adequate cover (100% cover, 70% density) of permanent stabilization (Ds3, Ds4). 14. Silt fences shall not be placed in stream buffer or floodplains, unless utilized for the construction of an exempt activity (i.e. roadway drainage structures, sewer/water crossings, or drainage structures) per the approved plans. For such disturbances within the buffer, the area shall be immediately stabilized using erosion control

matting and/or blankets once the activity is complete. 15. Individual builder (within a common development) must file a Notice of Intent (NOI) with EPD for coverage under NPDES GAR 100003 as secondary permittee 14 days prior to land disturbance activity. NOI must be posted on site at all times. 16. Sediment storage volume @ 67 cy/acre must be installed prior to any other land

disturbance activity and in place until final stabilization occurs. 17. For each site on which land disturbing activity occurs, each entity or person acting as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion and sedimentation control activities on behalf of said entity or person and meets the applicable (Level 1A) education or training certification requirements (O.C.G.A.

18. Subcontractors involved with land disturbance activities shall meet the education requirements (Level 1) described in O.C.G.A 12-7-19.

## **CITY OF ATLANTA EROSION CONTROL NOTES:**

1. Provision to prevent erosion of soil from the site shall be, as minimum, in conformance with the requirements of the City/County/State Erosion and Sedimentation Ordinance and the City/County/State Code of Laws dealing with erosion and sedimentation.

2. Prior to any other construction, a stabilized construction entrance shall be constructed at each point of entry to or exit from the site. The construction exits shall be maintained in a condition which will prevent tracking

or flow of mud onto Public right of way. This may require periodic top dressing with stone, as conditions demand, and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicle or site onto Public roadway or into storm drain must be removed immediately. 4. Prior to commencing land disturbance activity, the limits of Land Disturbance shall be clearly and accurately demarcated with stakes, ribbons, or other appropriate

means. The location and extent of all authorized land disturbance activity shall be demarcated for the duration of the construction activity. No land Disturbance shall occur outside the approved limits indicated on the approved plans. 5. Immediately after the establishment of construction entrances/exits, all perimeter

erosion control devices and storm water management devices shall be installed prior to any other construction. 6. The Owner agrees to provide and maintain off-street parking on the subject

property during the entire construction period. 7. The Contractor shall furnish and maintain all necessary barricades while roadway

rontage improvements are being made. 8. The construction of the site will initiate with the installation of erosion control measures sufficient to control sediment deposits and erosion. All sediment control

will be maintained until all upstream ground within the construction area has been completely stabilized with permanent vegetation and all roads/driveways have been 9. Erosion control devices shall be installed immediately after ground disturbance

occurs. The location of some of the erosion control devices may have to be altered from that shown on the approved plans if drainage patterns during construction are different from the final proposed drainage patterns. It is the Contractor's responsibility to accomplish erosion control for all drainage patterns created at various stages during construction. Any difficulty in controlling erosion during any phase of construction shall be reported to the Engineer immediately.

10. All silt barriers must be placed as access is obtained during clearing. No grading shall be done until silt barrier installation and detention facilities are constructed. 11. The Contractor shall maintain all erosion control measures until permanent vegetation has been established. The Contractor shall clean out all sediment ponds when required by the Project Engineer or City/County/State Inspector. The Contractor shall inspect erosion control measures at the end of each working day to insure measures are functioning properly.

12. The Contractor shall remove accumulated silt when the silt is within one-third of the height of the silt fence utilized for erosion control. In the detention pond. silt shall be removed when the storage volume has been reduced by one—third. 13. Failure to install, operate or maintain all erosion control measures will result in all construction being stopped on the job site until such measures are corrected back to City/County/State Standards.

14. All construction shall conform to City/County/State Standards and Specifications, whether or not the review comments were made.

15. A copy of the approved land disturbance plan and permit shall be present on the site whenever land disturbance activity is in progress. 16. All sewer easements disturbed must be dressed and grassed to control erosion. 17. All open swales must be grassed, and rip—rap must be placed as required to control

erosion. A minimum of 4.5 square yards of 50—lb stones shall be placed at all downstream headwalls. The placement of rip-rap at the downstream headwalls shall be placed immediately upon the installation of pipes and drainage ditches. 18. Silt barriers to be placed at downstream toe of all cut and fill slopes.

19. Provide silt gates at all inlet headwalls. 20. Provide sediment traps at all catch basins, junction boxes, manholes, and drop

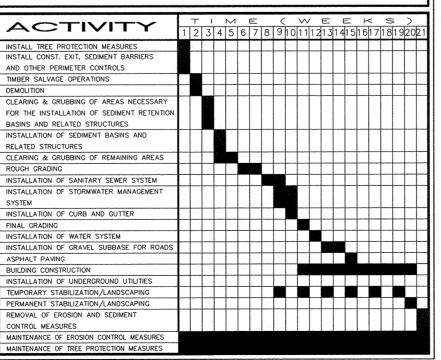
## CITY OF ATLANTA APPLICABLE CODES:

1. International Building Code, 2012 edition, with 2014 Georgia Amendments 2. International Fire Code, 2012 edition with Georgia Amendments 3. Internationa Fuel Gas Code, 2012 edition with Georgia Amendments 4. International Mechanical Code, 2012 edition with Georgia Amendments 5. International Plumbing Code, 2012 edition with Georgia Amendments 6. International Energy Conservation Code, 2009 edition with Georgia Supplements and Amendments

7. National Electrical Code, 2014 edition with no amendments 8. national Fire Protection Association 101 Llife Safety Code, 2012 edition

with Georgia Amendments 9. Rules and Regulations of Safety Fire Commissioner for State Minimum Fire Safety Standards, chapter 120-3-3 January 15,2014 (Georgia Safety Fire Law) 10. Georgia State Handicapped Accessibility Law 120-3-20a / 2010 ADA Standards for

APPROXIMATE CONSTRUCTION SCHEDULE



THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INST. OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ALL EXPOSED AREAS WILL BE GRASSED IF THEY WILL BE LEFT EXPOSED FOR 14 DAYS

APPROXIMATE PROJECT START DATE: 11-01-2017
APPROXIMATE PROJECT COMPLETION DATE: 11-01-2018

## TEMPORARY SILT FENCE:

Description: Water permeable filter fence material composed of strong rot proof synthetic fibers formed into a matrix of woven or nonwoven fabric. Either type of fabric shall be free of any treatment or coating which might significantly alter it's physical properties after installation. The fabric shall contain stabilizers and/or inhibitors to make the filaments resistant to deterioration resulting from exposure to sunlight or heat. The fabric shall be a pervious sheet of synthetic fibers oriented into a stable network so that the fibers retain their relative position with respect to

CONSTRUCTION PLANS FOR:

924 NORTHSIDE DR. STORAGE

LAND LOTS 149 & 150, 17TH DISTRICT,

CITY OF ATLANTA, FULTON COUNTY, GEORGIA

ZONING: I-1

Edges of the fabric shall be finished to prevent the outer yarn from pulling away from the material. The fabric shall be free of defects or flaws which significantly affect the physical and/or filtering properties. The fabric shall have a minimum width of thirty six (36) inches. Sheets of fabrics may be sewn or bonded together. No deviation from any physical standard will be permitted due to the presence of the

Steel: Posts shall be round, U.T. or C shaped with a minimum weight of 1.3 pounds per foot, and have projections for fastening the wire to the fence for Type fabric. Provide plastic safety caps on all metal silt fence posts.

B. 4 feet centers maximum type C.

C. Fabric: Georgia D.O.T. Qualified Products List #36 only.

D. Fasteners: Wire staples will be No. 17 gage minimum, shall have a crown at least 3/4 inch wide and legs at least 1/2 inch long. Staples shall be evenly spaced with at least 5 per post. Nails shall be 14 gage minimum, 1 inch long with 3/4inch button heads. Nails shall be evenly spaced with at least 4 per post.

III. Installation: Temporary silt fence installation shal conform to the standards set forth in the Manual for Erosion and Sediment Control in Georgia.

IV. Maintenance: The developer/contractor shall maintain the silt fence until the LDA is complete and final stabilization is achieved. Filter fabric shall be removed and replaced whenever it has deteriorated or been otherwise damaged to such extent that it reduces the effectiveness of the silt fence. Installation of fabric fence material in areas of concentrated flow is not recommended unless prope provisions are made to supplement or otherwise strengthen the fence to withstand

Note: Vendor must supply letter of warranty for aforementioned specification. In addition, this letter should state that the fabric is on the Georgia DOT QPL #36.

Before starting any land-disturbing activities, the Contractor is required to schedule a pre-construction meeting with Erosion & Sediment Control.

Call (404) 546-1305 failure to schedule may result in a Stop Work Order

## **WETLAND CERTIFICATION:**

r Permit Revocation.

he design professional, whose seal appears hereon, certifies the following; The National Wetland Inventory maps have been consulted; and the appropriate plan sheet DOES NOT indicate areas of United States Army Corps of Engineers Jurisdictional Wetlands as shown on the maps; and if wetlands are indicated, the land owner or developer has been advised that and disturbance of protected wetlands shall not occur unless the appropriate federal wetlands alteration (Section 404) permit has been obtained.

GEORGIA REG. No. 19115

FOR THE FIRM OF TRAVIS PRUITT & ASSOCIATES, INC.

THE WORD, "CERTIFY", AS USED IN ANY OF ITS FORMS HEREIN, IS AN EXPRESSION OF PROFESSIONAL OPINION ONLY AND SHALL NOT BE CONSTRUED OR UNDERSTOOD TO BE A STATEMENT OF FACT, A WARRANTY, OR A GUARANTEE OF ANY KIND, EXPRESSED OR IMPLIED.

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS

PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

GA SWCC LEVEL II CERTIFICATION NO. 0000015208 FOR THE FIRM - TRAVIS PRUITT & ASSOCIATES, INC. OWNER/DEVELOPER

# BROWARD MANAGEMENT, LLC

6780 Roswell RD, Suite C-200 SANDY SPRINGS, GA 30328 24 HOUR EMERGENCY CONTACT Mr. John Coclough 770-241-5930 770-241-5930

JOHNC.BROWARD@GMAIL.COM

01500008078, 17 01500008073

TAX PARCEL ID: CITY OF ATLANTA: 17 01500008057, 17 01500008075, 17 01500008077, 17

FULTON COUNTY 17 015000080574, 17 015000080756, 17 015000080772, 17

## SITE AREA:

0.7 ACRES

DISTURBED AREA:

± 0.7 ACRES

SITE ZONING: I-1

### **BUILDING SETBACK LINES:**

FRONT YARD ALONG NORTHSIDE DRIVE: 26.5 FEET (PER VARIANCE V-17-198) FRONT YARD ALONG FIELDER AVENUE: 5 FEET

(PER VARIANCE V-17-198) NORTH SIDE YARD: 0' FEET (PER VARIANCE V-17-198)

BŮILĎING ŠUMMÁRÝ 3-STORY PLUS BASEMENT

BUILDING 61,988 SQUARE FEET BUILDING HEIGHT: 48.3'

PARKING SUMMARY:

REQUIRED\* PROVIDED REGULAR PARKING: ADA ACCESSIBLE PARKING:

TOTAL PARKING SPACES: \*ONE SPACE PER 50 INDIVIDUAL UNITS/COMPARTMENTS

PLUS ONE SPACE FOR EACH EMPLOYEE ON THE PEAK WORKING SHIFT.

## FAR: 2.0 (MAX 2.0)

## PROJECT DESCRIPTION:

CONSTRUCTION OF A NEW 3- STORY CLIMATE CONTROLLED SELF STORAGE WITH BASEMENT

# **BUILDING INFORMATION:**

OCCUPANCY CLASSIFICATION: S-1 CONSTRUCTION TYPE: II-A BUILDING IS SPRINKLERED



PREPARED BY: David J Blumenthal GSWCC Level II Certification No.0000013061 Expiration date: 06/29/2021

LOOD HAZARD NOTE This property does not lie within a 100 year flood hazard zo as defined by the F.E.M.A. Flood Insurance Rate Map FULTON COUNTY County Community Panel Number 13121C024 dated SEPTEMBER 18, 2013.

OF THE ENGINEER AND MAY NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY WAY WITHOUT THE WRITTEN PERMISSION OF THIS ENGINEER.

Travis Pruitt & Associates, Inc. THESE DRAWINGS AND THEIR REPRODUCTIONS ARE THE PROPERT DATE: 08/17/2011 SCALE: N/A CN:170067CVR1 LSV: COVER

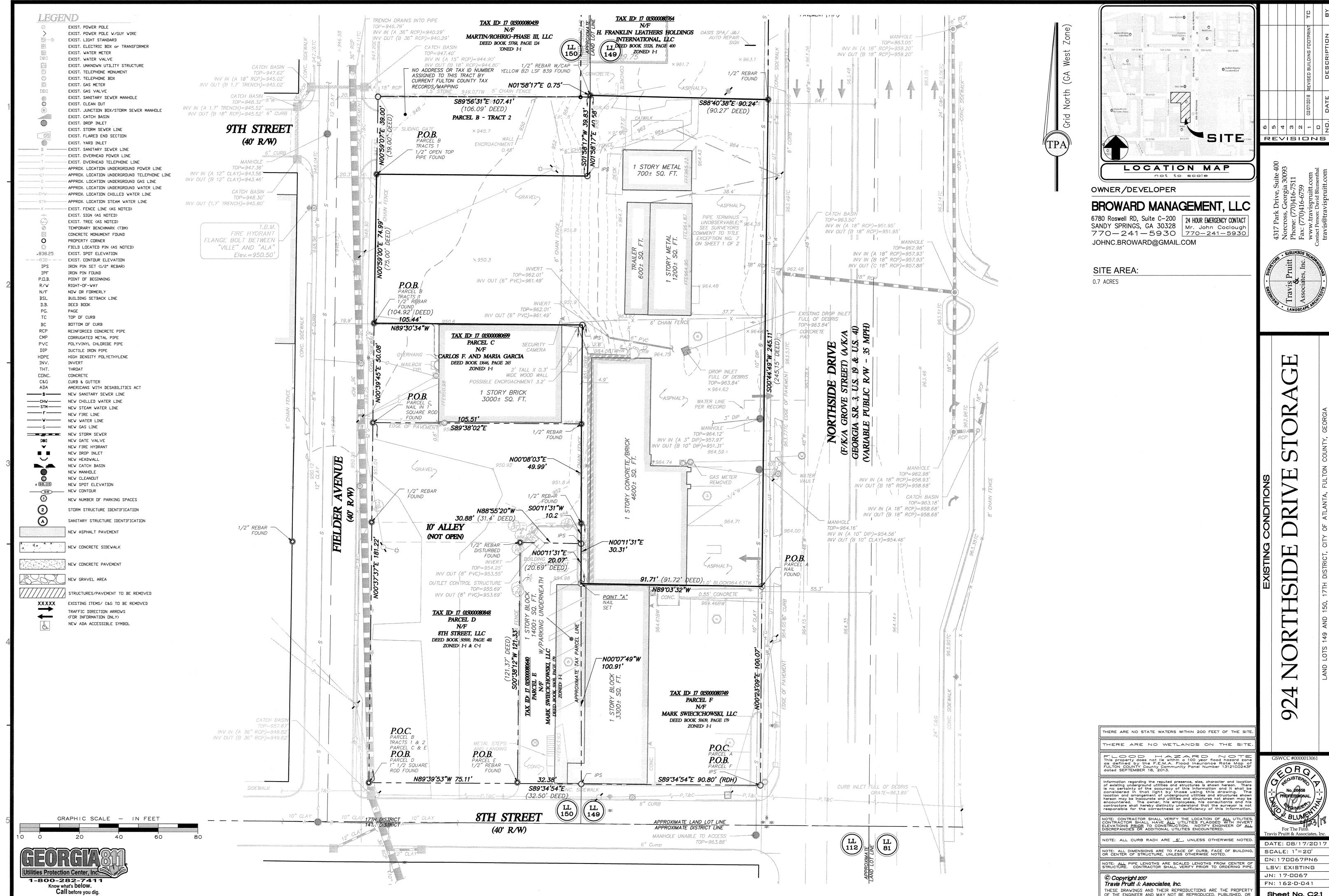
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REVISIONS



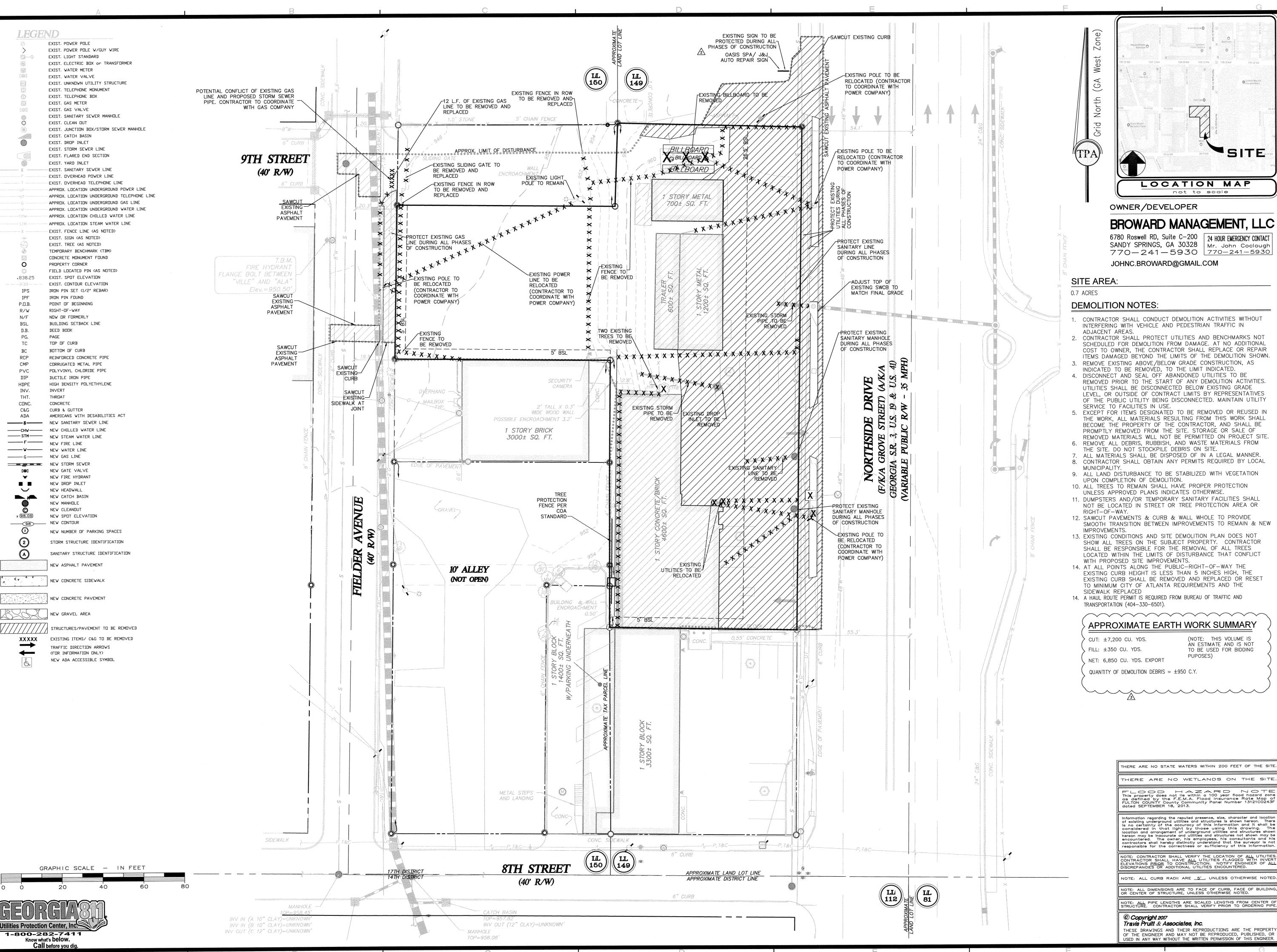
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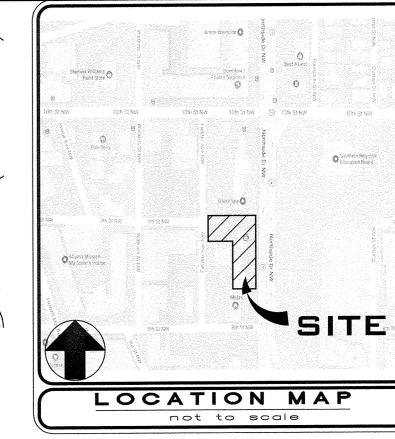


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OWNER/DEVELOPER

6780 Roswell RD, Suite C-200 24 HOUR EMERGENCY CONTACT SANDY SPRINGS, GA 30328 Mr. John Coclough 770-241-5930 770-241-5930

REVISIONS

JOHNC.BROWARD@GMAIL.COM

- CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES WITHOUT INTERFERING WITH VEHICLE AND PEDESTRIAN TRAFFIC IN
- SCHEDULED FOR DEMOLITION FROM DAMAGE. AT NO ADDITIONAL COST TO OWNER, THE CONTRACTOR SHALL REPLACE OR REPAIR ITEMS DAMAGED BEYOND THE LIMITS OF THE DEMOLITION SHOWN. 3. REMOVE EXISTING ABOVE/BELOW GRADE CONSTRUCTION, AS INDICATED TO BE REMOVED, TO THE LIMIT INDICATED.
- . DISCONNECT AND SEAL OFF ABANDONED UTILITIES TO BE REMOVED PRIOR TO THE START OF ANY DEMOLITION ACTIVITIES. UTILITIES SHALL BE DISCONNECTED BELOW EXISTING GRADE LEVEL, OR OUTSIDE OF CONTRACT LIMITS BY REPRESENTATIVES OF THE PUBLIC UTILITY BEING DISCONNECTED. MAINTAIN UTILITY SERVICE TO FACILITIES IN USE.
- . EXCEPT FOR ITEMS DESIGNATED TO BE REMOVED OR REUSED IN THE WORK, ALL MATERIALS RESULTING FROM THIS WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE PROMPTLY REMOVED FROM THE SITE. STORAGE OR SALE OF REMOVED MATERIALS WILL NOT BE PERMITTED ON PROJECT SITE. 6. REMOVE ALL DEBRIS, RUBBISH, AND WASTE MATERIALS FROM THE SITE. DO NOT STOCKPILE DEBRIS ON SITE.
- 7. ALL MATERIALS SHALL BE DISPOSED OF IN A LEGAL MANNER. 8. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY LOCAL
- 9. ALL LAND DISTURBANCE TO BE STABILIZED WITH VEGETATION UPON COMPLETION OF DEMOLITION.
- 10. ALL TREES TO REMAIN SHALL HAVE PROPER PROTECTION UNLESS APPROVED PLANS INDICATES OTHERWISE
- 11. DUMPSTERS AND/OR TEMPORARY SANITARY FACILITIES SHALL NOT BE LOCATED IN STREET OR TREE PROTECTION AREA OR
- SMOOTH TRANSITION BETWEEN IMPROVEMENTS TO REMAIN & NEW 13. EXISTING CONDITIONS AND SITE DEMOLITION PLAN DOES NOT
- SHOW ALL TREES ON THE SUBJECT PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE THAT CONFLICT WITH PROPOSED SITE IMPROVEMENTS. 14. AT ALL POINTS ALONG THE PUBLIC-RIGHT-OF-WAY THE
- EXISTING CURB HEIGHT IS LESS THAN 5 INCHES HIGH, THE EXISTING CURB SHALL BE REMOVED AND REPLACED OR RESET TO MINIMUM CITY OF ATLANTA REQUIREMENTS AND THE
- 14. A HAUL ROUTE PERMIT IS REQUIRED FROM BUREAU OF TRAFFIC AND TRANSPORTATION (404-330-6501).

## APPROXIMATE EARTH WORK SUMMARY

(NOTE: THIS VOLUME IS

AN ESTIMATE AND IS NOT

TO BE USED FOR BIDDING

PUPOSES)

NET: 6,850 CU. YDS. EXPORT

QUANTITY OF DEMOLITION DEBRIS = ±950 C.Y.

THERE ARE NO STATE WATERS WITHIN 200 FEET OF THE SIT THERE ARE NO WETLANDS ON THE SIT This property does not lie within a 100 year flood hazard zone as defined by the F.E.M.A. Flood Insurance Rate Map of FULTON COUNTY County Community Panel Number 13121C0243F dated SEPTEMBER 18, 2013.

Information regarding the reputed presence, size, character and locatio of existing underground utilities and structures is shown hereon. Ther is no certainty of the accuracy of this information and it shall be considered in that light by those using this drawing. The location and arrangement of underground utilities and structures show hereon may be inaccurate and utilities and structures not shown may be encountered. The owner, his employees, his consultants and his contractors shall hereby distinctly understand that the surveyor is not responsible for the correctness or sufficiency of this information

NOTE: CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES CONTRACTOR SHALL HAVE ALL UTILITIES FLAGGED WITH INVEFELEVATIONS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ALD DISCREPANCIES OR ADDITIONAL UTILITIES ENCOUNTERED. NOTE: ALL CURB RADII ARE 5', UNLESS OTHERWISE NOT

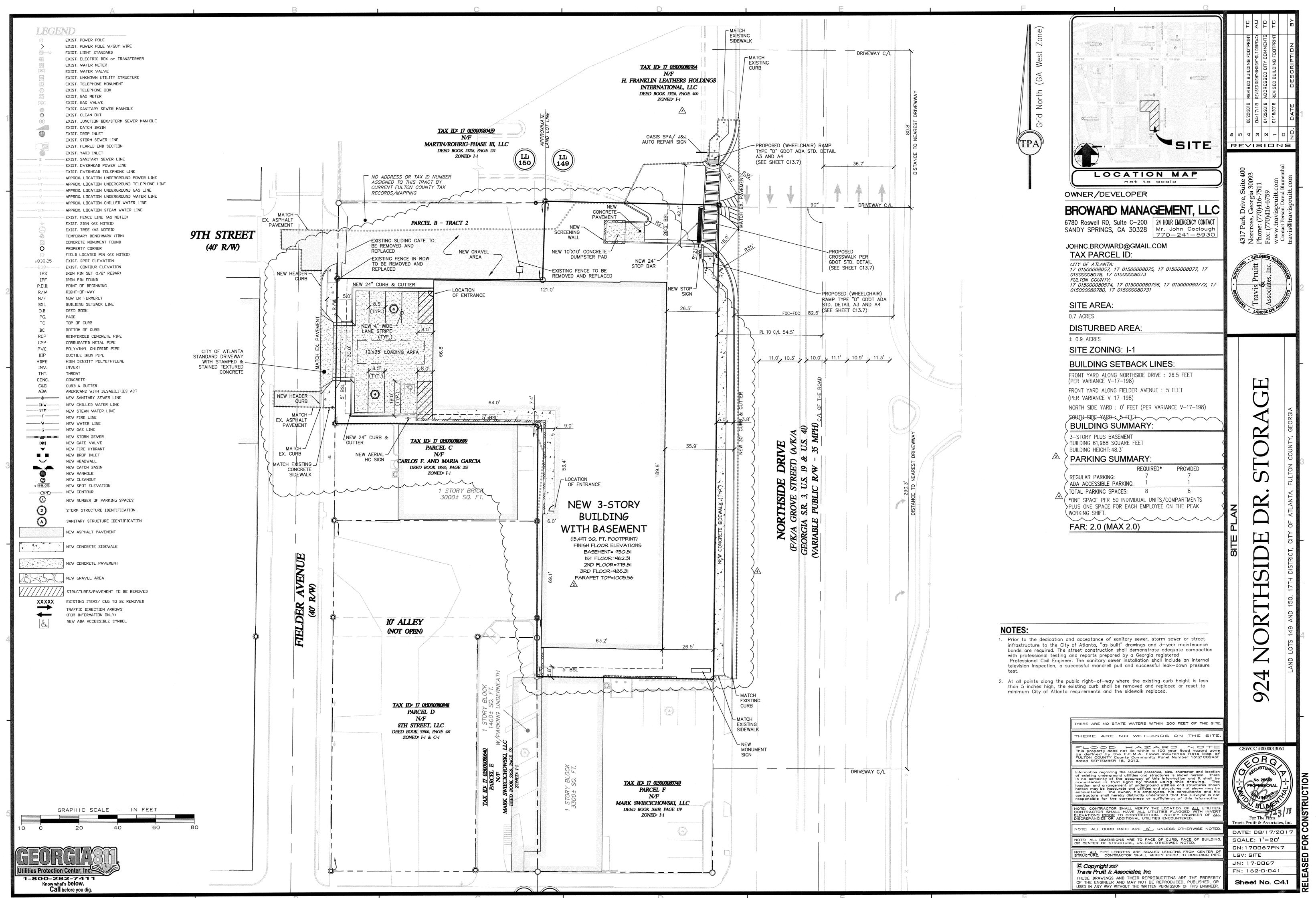
NOTE: ALL DIMENSIONS ARE TO FACE OF CURB, FACE OF BUILD OR CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED. NOTE: ALL PIPE LENGTHS ARE SCALED LENGTHS FROM CENTER STRUCTURE. CONTRACTOR SHALL VERIFY PRIOR TO ORDERING P

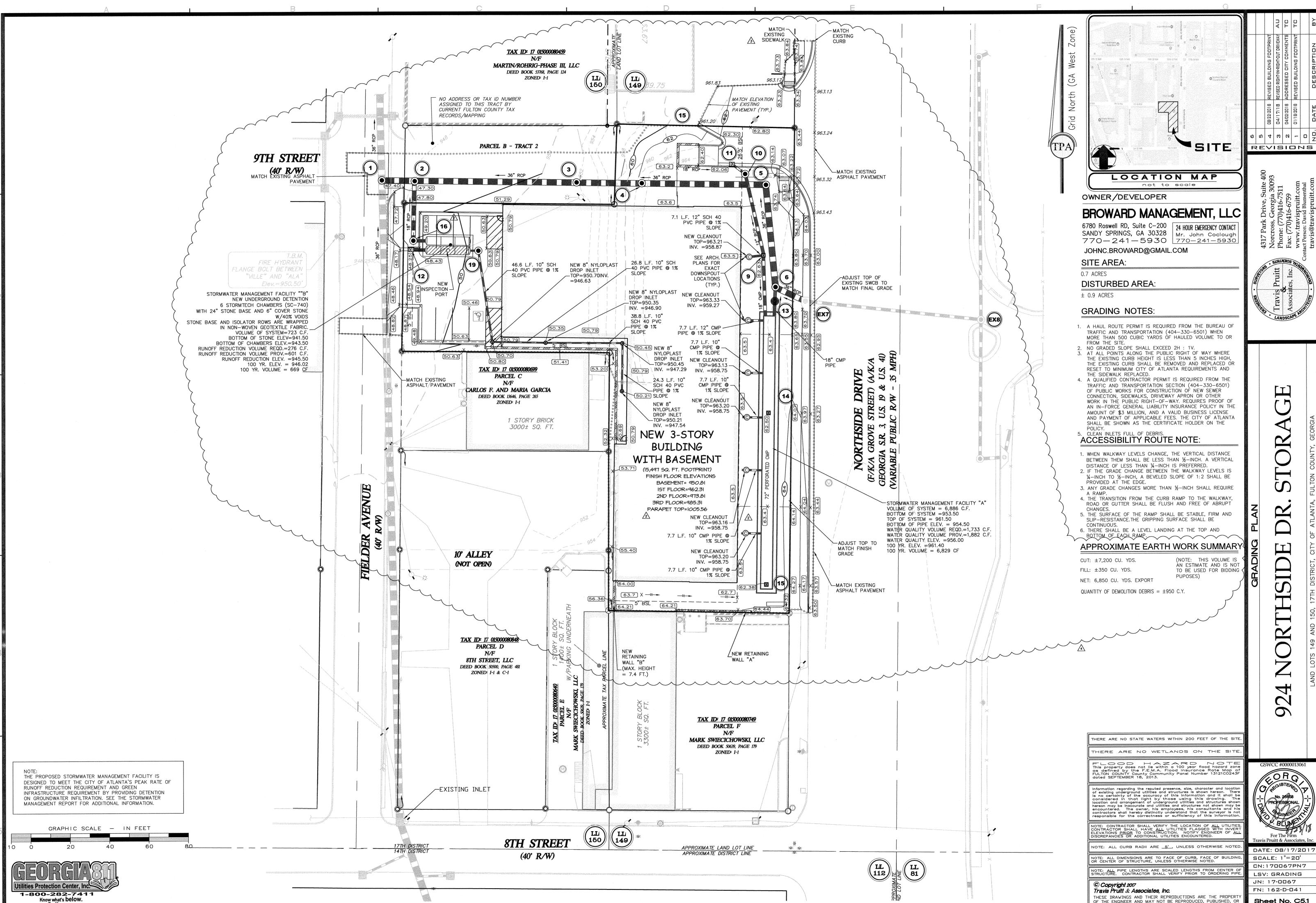
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s Pruitt & Associates, I DATE: 08/17/201 SCALE: 1"=20' CN:170067PN7 LSV: DEMOLITION JN: 17-0067 FN: 162-D-041

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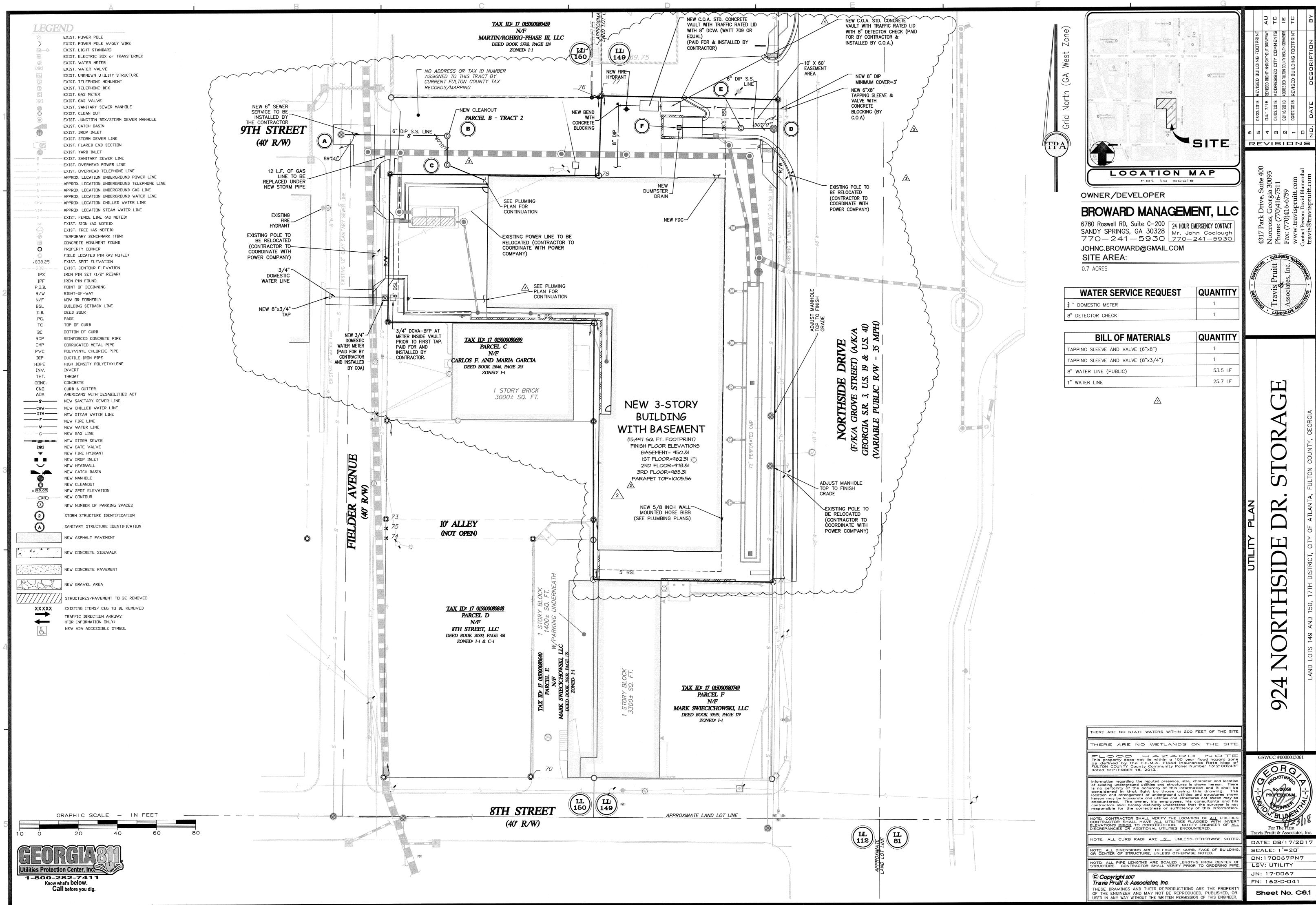
Know what's below.

Call before you dig.

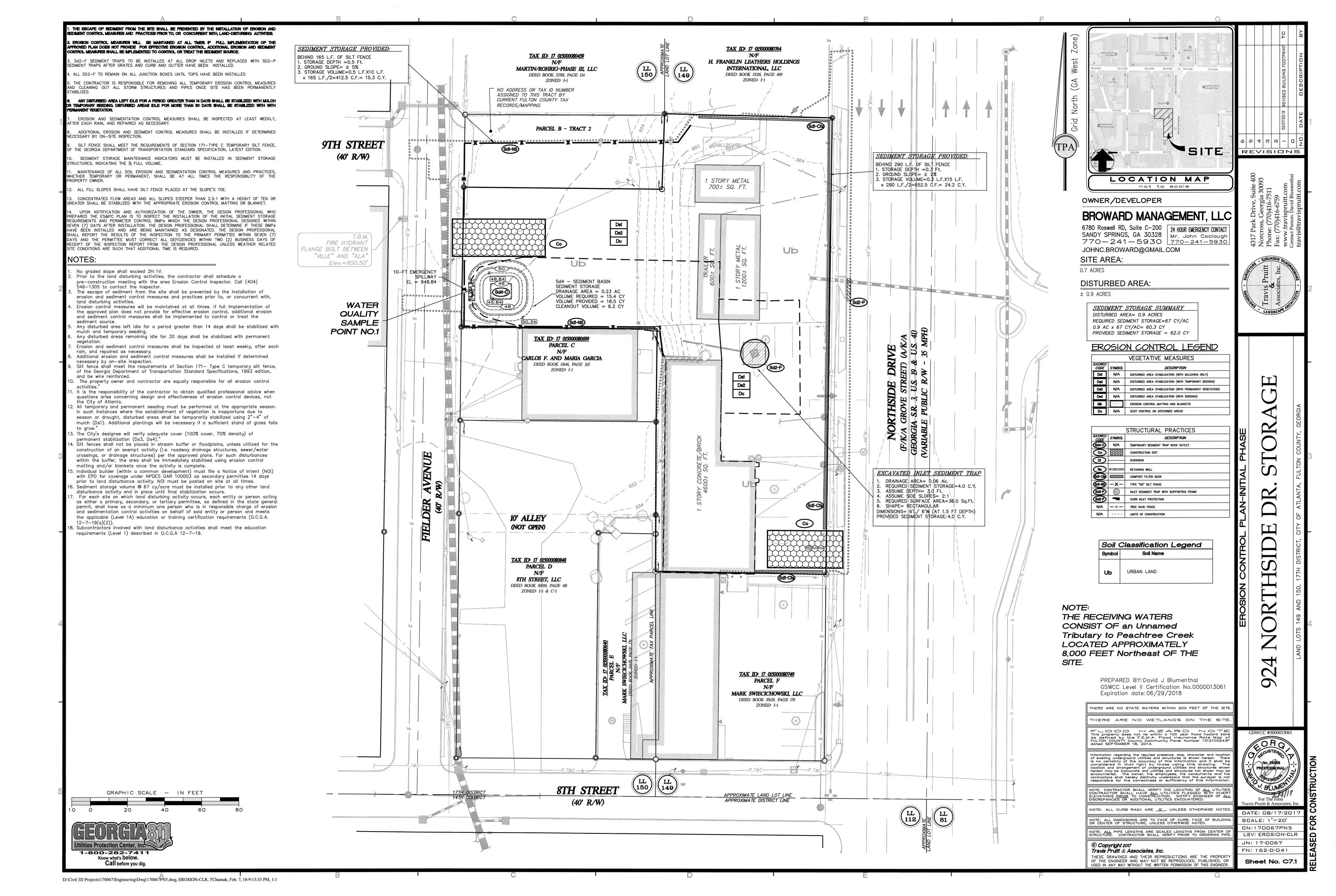
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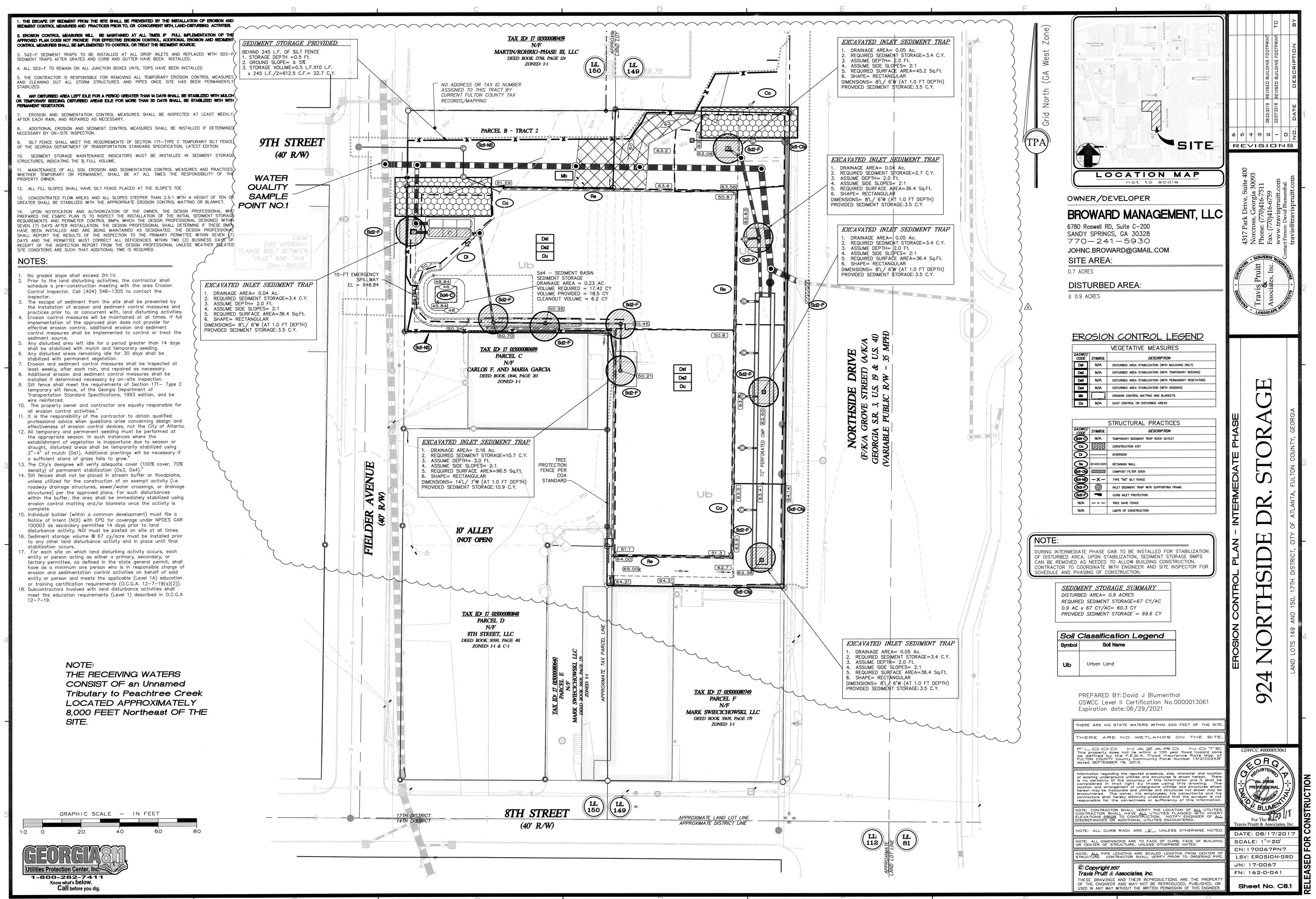
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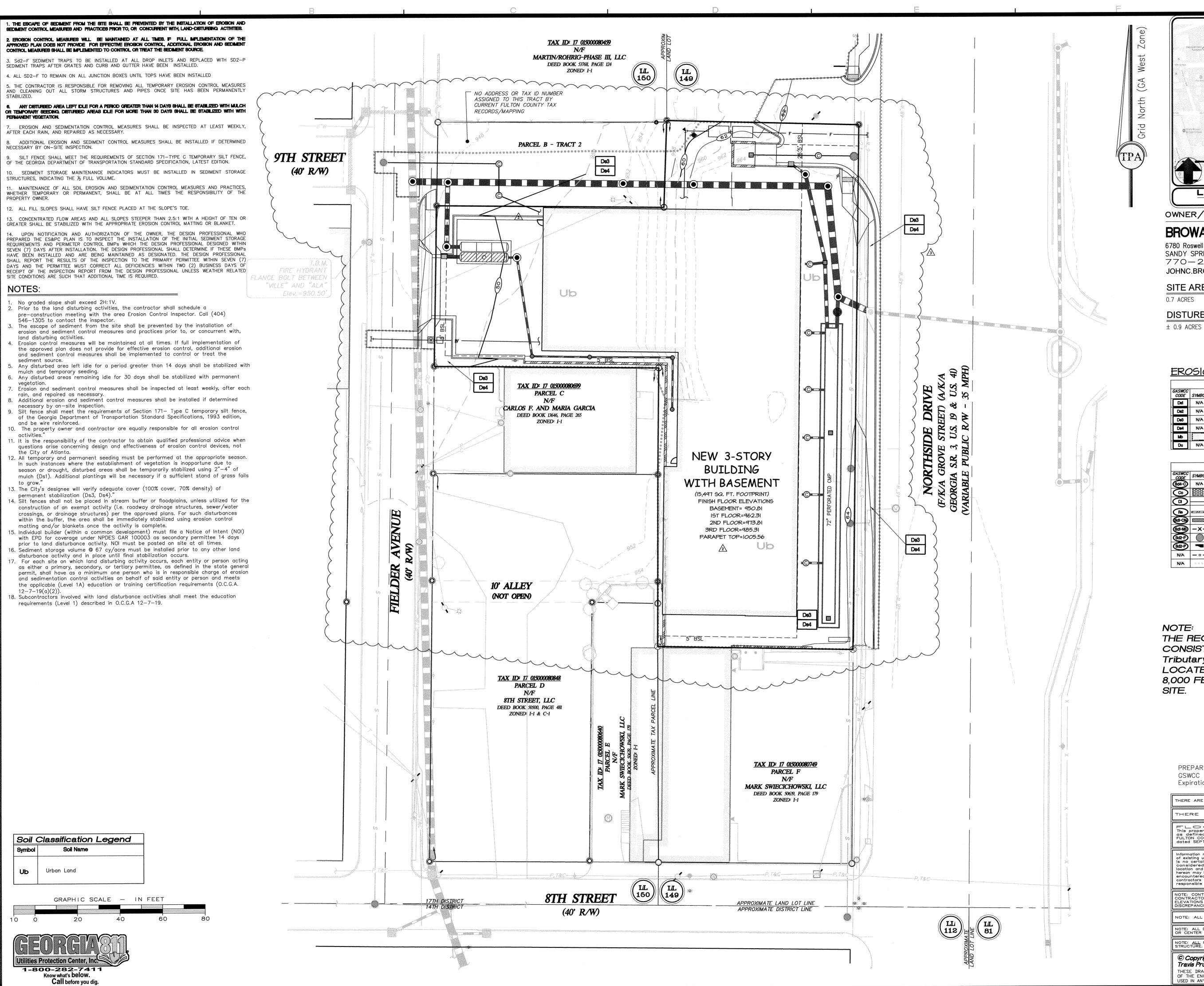
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Saurbers Regional Couperion Baard REVISIONS LOCATION MAP not to scale

OWNER/DEVELOPER

# BROWARD MANAGEMENT, LLC 6780 Roswell RD, Suite C-200 SANDY SPRINGS, GA 30328 24 HOUR EMERGENCY CONTACT Mr. John Coclough

770-241-5930 770-241-5930 JOHNC.BROWARD@GMAIL.COM

SITE AREA:

**DISTURBED AREA:** 

## EROSION CONTROL LEGEND

		VEGETATIVE MEASURES
GASWCC CODE	SYMBOL	DESCRIPTION
Def	N/A	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
De2	N/A	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
De3	N/A	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
De4	N/A	DISTURBED AREA STABILIZATION (WITH SODDING)
Mb		EROSION CONTROL MATTING AND BLANKETS
Du	N/A	DUST CONTROL ON DISTURBED AREAS

		STRUCTURAL PRACTICES
GASWCC CODE	SYMBOL	DESCRIPTION
<b>8d4-</b> C	N/A	TEMPORARY SEDIMENT TRAP ROCK OUTLET
<b>®</b>		CONSTRUCTION EXIT
(a)		DIVERSION
Re		RETAINING WALL
(8d1-Cla		COMPOST FILTER SOCK
(8d1-N8)	-x-	TYPE "NS" SILT FENCE
8d2+F)		INLET SEDIMENT TRAP WITH SUPPORTING FRAME
<b>8d2</b> ₽	~	CURB INLET PROTECTION
N/A		TREE SAVE FENCE
N/A	0000	LIMITS OF CONSTRUCTION

NOTE: THE RECEIVING WATERS CONSIST OF an Unnamed Tributary to Peachtree Creek LOCATED APPROXIMATELY 8,000 FEET Northeast OF THE

> PREPARED BY: David J Blumenthal GSWCC Level II Certification No.0000013061 Expiration date: 06/29/2021

THERE ARE NO STATE WATERS WITHIN 200 FEET OF THE SITE.
THERE ARE NO WETLANDS ON THE SITE.
This property does not lie within a 100 year flood hazard zone as defined by the F.E.M.A. Flood Insurance Rate Map of FULTON COUNTY County Community Panel Number 13121C0243F dated SEPTEMBER 18, 2013.
Information regarding the reputed presence, size, character and location of existing underground utilities and structures is shown hereon. There is no certainty of the accuracy of this information and it shall be considered in that light by those using this drawing. The location and arrangement of underground utilities and structures shown hereon may be inaccurate and utilities and structures not shown may be encountered. The owner, his employees, his consultants and his contractors shall hereby distinctly understand that the surveyor is not responsible for the correctness or sufficiency of this information.

NOTE: CONTRACTOR SHALL VERIFY THE LOCATION OF <u>ALL</u> UTILITIES CONTRACTOR SHALL HAVE <u>ALL</u> UTILITIES FLAGGED WITH INVER ELEVATIONS <u>PRIOR</u> TO CONSTRUCTION. NOTIFY ENGINEER OF <u>AL</u> DISCREPANCIES OR ADDITIONAL UTILITIES ENCOUNTERED. NOTE: ALL CURB RADII ARE <u>5'</u>, UNLESS OTHERWISE NOTE

NOTE: ALL DIMENSIONS ARE TO FACE OF CURB, FACE OF BUILD OR CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED. NOTE: <u>ALL</u> PIPE LENGTHS ARE SCALED LENGTHS FROM CENTER STRUCTURE. CONTRACTOR SHALL VERIFY PRIOR TO ORDERING P

Travis Pruitt & Associates, Inc. THESE DRAWINGS AND THEIR REPRODUCTIONS ARE THE PROPERT OF THE ENGINEER AND MAY NOT BE REPRODUCED, PUBLISHED, OF USED IN ANY WAY WITHOUT THE WRITTEN PERMISSION OF THIS ENGINEER

vis Pruitt & Associates, DATE: 08/17/201

SCALE: 1"=20' CN:170067PN7 LSV: EROSION-FNL JN: 17-0067 FN: 162-D-041

Sheet No. C9.1

- Stripping of vegetation, regrading, and other development activities shall be conducted in such a manner so as to minimize erosion. The minimum area of disturbance for this Project has been shown on the Plans. Refer to the Construction Plans for the limits of clearing for this Project.
- 2. Cut and fill operations shall be kept to a minimum. The minimum amount of grading for this Project has been shown on the Plans. Refer to the Construction Plans for the proposed grading of this Project.
- Development plans must conform to topography and soil type, so as to create the lowest practical erosion potential. The layout of the Project was designed to conform to the topography and soil type within the Project wherever possible except where the property lines, easements and buffers have modified this layout. The lowest practical erosion potential has been designed into the Plans. Erosion control measures have been installed to reduce the erosion potential in critical areas. Refer to the Construction Plans for the location of the vegetative and structural erosion control measures for this Project.
- Whenever feasible, natural vegetation shall be retained, protected, and supplemented The minimum area of disturbance for this Project has been shown on the Plans. Tree Protection fence or tape has been installed at the limits of clearing. Additional vegetation has been added to compensate for the removal of the existing vegetation as required by the Issuing Authority. Refer to the Construction Plans for the limits of clearing, tree protection measures and landscaping for this Project.
- 5. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum. The minimum area of disturbance for this Project has been shown on the Plans. All disturbed areas are to be seeded within 7 days of completion of disturbance. Temporary seeding may be required during construction depending on the site conditions. Refer to the Construction Plans for the limits of clearing for this
- 6. Disturbed soil shall be stabilized as quickly as practicable. All disturbed areas are to be seeded within 7 days of completion of disturbance. Temporary seeding may be required during construction depending on the site conditions. Refer to the Construction Plans for the stabilization methods for this Project.
- Temporary vegetation or mulching shall be employed to protect exposed critical areas during development. All disturbed areas are to be seeded within 7 days of completion of disturbance. Temporary seeding may be required during construction depending on the site conditions. Refer to the Construction Plans for the stabilization methods and critical areas for this Project.
- 8. Permanent vegetation and structural erosion control measures shall be installed as soon as practicable. All disturbed areas are to be seeded within 7 days of completion of disturbance. Temporary seeding may be required during construction depending on the site conditions. Refer to the Construction Plans for the stabilization methods and structural erosion control measures for this Project.
- 9. To the extent necessary, sediment in run-off water shall be trapped by the use of debris basins, silt traps, or similar measures until the disturbed area is stabilized. Refer to the Construction Plans for the location of the structural erosion control measures for this Project.
- 10. Adequate provisions shall be provided to minimize damage from surface water to the cut face of excavations or the sloping surfaces of fills. All slopes are to be surfaced roughened prior to placement of seed. All slopes are to be seeded within 7 days of completion of disturbance. Mulching shall be placed on all slopes that have not been stabilized prior to the arrival of inclement weather. Temporary seeding may be required during construction depending on the site conditions. Down drain structures (temporary or permanent) and diversions are to be installed where shown. Erosion control matting and blankets are to be installed where shown. Refer to the Construction Plans for the location of the structural erosion control measures for this
- 11. Cuts and fills shall not endanger adjoining property. Refer to the Construction Plans for the location of the top and toe of the cut and fill slopes for this development. Adequate provisions have been made to protect the adjacent property from the slopes of this Project.
- 12. Fills shall not encroach upon natural water courses or constructed channels in a manner so as to adversely affect other property owners. Refer to the Construction Plans for the location of the toe of the fill slopes adjacent to the natural water courses within this Project.
- 13. Grading equipment shall cross flowing streams by the means of bridges or culverts. except when such methods are not feasible, provided in any case that such crossings shall be kept to a minimum. Refer to the Construction Plans for the location of any stream crossing and the structural erosion control measures for this Project.
- 14. Provisions shall be provided for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation or adjacent waters beyond the levels specified in this permit. Refer to the Construction Plans for the location of the structural erosion control measures for this Project. Refer to the Comprehensive Monitoring Program for the monitoring procedures of the structural erosion control measures for this Project.
- 15. Except as provided in Note 16, below, no construction activities shall be conducted within a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. Refer to the Construction Plans for the location of any state waters buffer disturbance for
- 16. No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any state waters classified as 'trout streams' except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as 'trout streams' which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the local issuing authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirements for any adjacent trout streams. Refer to the Construction Plans for the location of any trout stream buffer disturbance for this Project. No trout streams
- 17. Except as provided above, for buffers required pursuant to Notes 15 and 16, no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. Between the time final stabilization of the site is achieved and upon the submittal of a Notice of Termination, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed. Buffer disturbance is limited to storm water

POTENTIAL SOURCES OF POLLUTION

Sediment from Clearing and Grubbing Sediment from Construction Shipping/packing material Food/drink containers

Illegal dumping PETROLEUM Fuel tanks Fuel drums/cans Heavy Equipment

SITE DESCRIPTION AND INFORMATION

A DESCRIPTION OF THE NATURE OF THE CONSTRUCTION ACTIVITY: SCOPE OF WORK INCLUDES REMOVING AND REPLACING EXISTING SIDEWALKS, CURB AND GUTTERS AND

PARKING SPACES TO BRING THE SITE INTO COMPLIANCE WITH ADA REQUIREMENTS FOR ADA ACCESSIBLE PARKING SPACES AND ADA ACCESSIBLE ACCESS ROUTES. EXISTING ADA ACCESSIBLE PARKING: SPACES AND MEET CURRENT ADA REQUIREMENTS FOR SIZE AND SLOPE, THEREFORE, NONCOMPLIANT SIDEWALKS, RAMPS, AND PARKING SPACES ARE BEING REMOVED AND RELOCATED. NEW ADA ACCESSIBLE PARKING: SPACES NEED TO BE REGRADED TO MEET ADA SLOPE REQUIREMENTS AND

ASPHALT AREAS ARE TO BE REPLACED TO PROVIDE TRANSITION BACK TO EXISTING GRADE. NEW CURB RAMP,

SIDEWALKS, AND CURB AND GUTTER ARE TO BE INSTALLED TO PROVIDE ADA ACCESSIBLE ACCESSIBLE ROUTE THAT 2. A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH DISTURB SOIL FOR MAJOR PORTIONS OF THE SITE: Refer to the Construction Plans for the description of the intended sequence of major activities and the approximate schedule for these

TOTAL AREA OF SITE: Q.7 Acres TOTAL DISTURBED AREA OF SITE: ± Q.9 ACRES

PRE-CONSTRUCTION RUNOFF COEFFICIENT: <u>C=0.80</u>
POST-CONSTRUCTION RUNOFF COEFFICIENT: <u>C=0.90</u> EXISTING SOIL DATA: Refer to the Construction Plans for the Soil

4. A SITE MAP INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES, AREAS OF SOIL DISTURBANCE, AN OUTLINE OF AREAS WHICH ARE NOT TO BE DISTURBED. THE LOCATION OF MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS IDENTIFIED IN THE PLAN. THE LOCATION OF AREAS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR. SURFACE WATERS (INCLUDING WETLANDS) AND LOCATIONS WHERE STORM WATER IS DISCHARGED TO A SURFACE WATER: Refer to the Construction Plans for the drainage patterns and slopes, limits of clearing, location of structural and non structural control items, location and types of stabilization practices, location of surface waters and storm water discharge locations.

RECEIVING WATERS: an Unnamed Tributary to Peachtree Creek
AREA OF WETLANDS: 0.0 ACRES

6. SECONDARY PERMITTEES: Refer to the Notice of Intent for the list of the secondary

7. 8. EXISTING SOILS INFORMATION: Refer to Soil Chart

8. 9. EXISTING RUNOFF WATER QUALITY: None available

CONTROLS

9. LOCATION OF SURFACE WATERS ON THE CONSTRUCTION SITE: Refer to the Construction Plans for the location and limits of any surface waters on this site.

1. STABILIZATION MEASURES: A description of interim and permanent stabilization measures, including site-specific scheduling of the implementation of the measures. Refer to the Construction Plans for the description and schedule of the interim and permanent stabilization measures. All disturbed areas shall be seeded or stabilized within 7 days of disturbance. Site plans should ensure that existing vegetation is preserved and that disturbed portions of the site are stabilized. Refer to the Construction Plans for the limits of clearing and disturbed area stabilization. All disturbed areas shall be seeded or stabilized within 7 days of disturbance. Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Refer to the Construction Plans for stabilization methods and location within the Project. Stabilization shall also include impervious surfaces. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the Plan. Refer to the Construction Plans for the approximate dates of the construction activities. Except as provided below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the

2. STRUCTURAL PRACTICES: A description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drainage inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. Refer to the Construction Plans for the location, size and type of the structural practice within the

nstruction activity in that portion of the site has temporarily or permanently ceased.

Refer to the Construction Plans for type of stabilization methods and the approximate

date. All disturbed areas shall be seeded or stabilized within 7 days of disturbance.

SEDIMENT BASINS: For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 1800 cubic feet (67 cubic vards) of storage area per acre drained does not apply to flows from off-site areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations where a temporary sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent controls is not attainable, sediment traps, silt fences, or equivalent sediment controls are required for all side slopes and down slope boundaries of the construction area. When the sediment fills to a volume at most of 22 cubic yards per acre for each acre of drainage area, the sediment shall be removed to restore the original design volume. This sediment must be properly disposed. Sediment basins may not be appropriate at some construction projects. Careful consideration must be used to determine when a sediment basin is not to be used and a written rationale explaining the decision not to use sediment basins must be included in the Plan. Refer to the Construction Plans for the location and design of the sediment basin in each jo drainage basin. Sediment basin shall be cleaned out when the storage volume capacity has been reduced by 22 cubic yards per acre of disturbed area. Clean out stakes has been shown in each basin. The sediment from these basins shall be either disposed of in an approved landfill or mixed into the existing soil and used for onsite grading. No contaminated soil may be used onsite. Unsuitable soil may be used in pervious areas only. Sediment removed from the basin shall be placed within the limits of clearing.

4. STORM WATER MANAGEMENT: A description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site. Refer to the Construction Plans for the location and design of the measures of the storm water management facilities. Refer to the Hydrology Study for the design calculations of the storm water management facilities. Additional water quality volume and/or channel storage volume has been provided to allow additional settlement of suspended soils and for the treatment of pollutants as required by local ordinances.

5. STORM WATER MANAGEMENT FACILITIES: Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The Plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels. Refer to the Construction Plans for the location and type of the storm water management facilities.

6. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected [e.g. no significant changes in the hydrological regime of the receiving water(s)]. Refer to the Construction Plans for the location and size of the rip-rap storm drainage outlet protection, check dams and rock filter dams. These structures will provide velocity dissipation of the developed flow to a non-erosive velocity in the watercourse.

WASTE DISPOSAL. No solid materials, including building materials, shall be discharged to waters of the State, except as authorized by a Section 404 permit. Refer to the Construction Plans for the location of the solid waste collection area. All solid waste shall be disposed in the solid waste collection container and taken to an approved landfill. No onsite burial of solid waste will be allowed without an approved solid waste

8. Off-site vehicle tracking of dirt, soils, and sediments and the generation of dust shall be minimized or eliminated to the maximum extend practical. The Plan shall include the best management practice to be implemented at the site or common development. Refer to the Construction Plans for the location of the construction exit to control the off-site vehicle tracking of dirt, soils and sediments. All vehicles leaving the Project shall exit via the construction exit. All disturbed areas shall be covered with mulch, temporary or permanent vegetation and/or impervious surfaces as soon as practical. All other areas shall be sprayed with an adhesive-water solution as required to control dust from the Project. Construction traffic shall be kept off of these areas as much as possible.

9. All permittees shall ensure and demonstrate that their Plan is in compliance with applicable State and/or local waste disposal, sanitary sewer or septic tank reaulations Refer to the Construction Plans for the location of the solid waste collection area. All solid waste from this Project shall be disposed in the solid waste collection container and taken to an approved landfill. Refer to the Construction Plans for the location and size of the sanitary sewer or septic tank design. The sanitary sewer or septic tank design shall be approved by the Local Jurisdiction prior to construction.

10. The Plan shall include best management practices for the remediation of all petroleur spills and leaks as appropriate. Refer to the Construction Plans for the location of the fueling and equipment storage area for the Project. All fuel storage shall be provided off-site. All fueling and equipment storage shall be performed at the designated location shown on the Plans. A covered fifty-five gallon drum and a shovel shall be placed at this location. All spills during fueling or leaks from the equipment shall be removed to full depth of soil contamination and the soil shall be placed in the drum. When the drum is full, the drum shall be properly disposed of at an approved hazardous waste landfill. Any spill of over twenty-five gallons must be reported to the Georgia Environment Protection Department at 1-800-241-4113 and the National Response Center at 1-800-424-8802. The Plan does not authorize the discharge of hazardous substances or oil resulting from an onsite spill.

11. MAINTENANCE. A description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan in good and effective operating condition. Refer to the Construction Plans for all maintenance and operation procedures of the vegetation erosion and sediment control measures and other protective measures. The Owner of the property is responsible to ensure that proper maintenance is performed on all measures.

INSPECTIONS. An inspection schedule must be incorporated in the Erosion, Sedimentation and Pollution Control Plan that is in compliance with the requirements of Part V.A.6. of the permit. Refer to the Construction Plans for the inspection schedule of all vegetation, erosion and sediment control measures and other protective measures. All measures shall be inspected by the Contractor at least once a week and after every rain event. Refer to the Comprehensive Monitoring Program for details of this inspection.

13. NON-STORM WATER DISCHARGES. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution measures for the non-storm water component(s) of the discharge. The following non-storm water discharges are made part of the Erosion, Sedimentation and Pollution Control Plan: discharges from fire fighting activities: fire hydrant flushing: potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants. All discharges shall be at non-erosive velocities or shall be reduced through the use of velocity dissipation devices.

### OTHER CONTROLS

WASTE DISPOSAL:

Waste Materials

All waste materials will be collected and stored in a securely lidded metal dumpster ented from a licensed solid waste management company in the project county. The dumpster will meet all local and any State solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week or more often if necessary, and the trash will be nauled to an approved solid waste landfill. No construction waste materials will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the office trailer and 24-hour emergency contact will be responsible for seeing that these procedures are followed.

All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be instructed in these practices and 24-hour emergency contact will be responsible for seeing that these

All sanitary waste will be collected from the portable units a minimum or three times per week by a licensed sanitary waste management contractor, as required by local regulation.

OFFSITE VEHICLE TRACKING:

A stabilized construction entrance has been provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be swept daily to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material form the construction site will be covered with a tarpaulin.

MAINTENANCE/ INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls.

Less than one half of the site will be denuded at one time. All control measures will be inspected at least once each week and following any storm

All measures will be maintained in good working order; if a repair is necessary, it will be

initiated within 24 hours of report Built up sediment will be removed from silt fence when it has reached one-third the

Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.

The sediment basin will be inspected for depth of sediment, and built up sediment will be removed when it reaches one—third of the design capacity or at the end of the job. Diversion dike will be inspected and any breaches promptly repaired.

Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.

A maintenance inspection report will be made after each inspection. The 24-hour emergency contact will select individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and

Personnel selected for inspection and maintenance responsibilities will receive training from the 24-hour emergency contact. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present onsite during

Paints(enamel and latex) Metal Studs Concrete

Petroleum Based Products Cleaning Solvents Masonry Block Roofing Shingles

## SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to water runoff.

The following good housekeeping practices will be followed onsite during the construction An effort will be made to store only enough product required to do the job.

All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure. Products will be kept in their original containers with the original manufacture's label. Substances will not be mixed with one another unless recommended by the

Whenever possible, all of a product will be used up before disposing of the container. Manufacturers' recommendations for proper use disposal will be followed. The site superintendent will inspect daily to ensure proper use disposal of materials

These practices are used to reduce the risks associated with hazardous materials. Products will be kept in original containers unless they are not resealable Original labels and material safety data will be retained; they contain important product

If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

PRODUCT SPECIFIC PRACTICES

The following product specific practices will be followed onsite: PETROLEUM PRODUCTS:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

SPILL CONTROL PRACTICES

In addition to good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

All spills will be cleaned up immediately after discovery.

The spill area will be kept well ventilated and personnel will wear appropriate protective clothing

Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size.

The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

The 24-hour emergency contact will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

GENERAL EROSION CONTROL NOTES:

Silt fence must meet the requirements of Section 171 - Temporary Silt Fence, of the Department of ransportation, State of Georgia, Standard Specifications, latest edition.

Additional erosion control measures will be employed where determined necessary by actual site conditions. Provisions to prevent erosion of soil from the site shall be, as minimum, in conformance with the requirements of the City/County/State Erosion and Sedimentation Ordinance and the City/County/State Code of Laws dealing

with erosion and sedimentation. Prior to any other construction, a stabilized construction entrance shall be constructed at each point of entry to/or exit from the site.

5. The construction exits shall be maintained in a condition which will prevent tracking or flow of mud onto Public right of way. This may require periodic top dressing with stone, as conditions demand, and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicle or site onto Public roadway or into storm drain must be removed immediately. 6. Prior to commencing land disturbance activity, the limits of Land Disturbance shall be clearly and accurately

demarcated with stakes, ribbons, or other appropriate means. The location and extent of all authorized land

sediment deposits and erosion. All sediment control will be maintained until all upstream ground within the

disturbance activity shall be demarcated for the duration of the construction activity. No Land Disturbance shall occur outside the approved limits indicated on the approved plans. 7. Immediately after the establishment of construction entrances/exits, all perimeter erosion control devices and storm water management devices shall be installed prior to any other constructior

8. The Owner agrees to provide and maintain off-street parking on the subject property during the entire construction period. 9. The Contractor shall furnish and maintain all necessary barricades while roadway frontage improvements are being 10. The construction of the site will initiate with the installation of erosion control measures sufficient to control

construction area has been completely stabilized with permanent vegetation and all roads/driveways have been 11. Erosion control devices shall be installed immediately after ground disturbance occurs. The location of some of the erosion control devices may have to be altered from that shown on the approved plans if drainage patterns during construction are different from the final proposed drainage patterns. It is the Contractor's responsibility to accomplish erosion control for all drainage patterns created at various stages during construction. Any difficulty

in controlling erosion during any phase of construction shall be reported to the Engineer immediately. 12. All silt barriers must be placed as access is obtained during clearing. No grading shall be done until silt barrier 13. The Contractor shall maintain all erosion control measures until permanent vegetation has been established. The Contractor shall clean out all sediment ponds when required by the Project Engineer or City/County/State

Inspector. The Contractor shall inspect erosion control measures at the end of each working day to insure measures are functioning properly. 14. The Contractor shall remove accumulated silt when the silt is within one-third of the height of the silt fence utilized for erosion control. In the detention pond, silt shall be removed when the storage volume has been

15. Failure to install, operate or maintain all erosion control measures will result in all construction being stopped on the job site until such measures are corrected back to City/County/State Standards. 16. All construction shall conform to City/County/State Standards and Specifications, whether or not the review comments were made.

17. A copy of the approved land disturbance plan and permit shall be present on the site whenever land disturbance activity is in progress. 18. All sewer easements disturbed must be dressed and grassed to control erosion. 19. All open swales must be grassed, and rip—rap must be placed as required to control erosion. A minimum of 4.5

square yards of 50-lb stones shall be placed at all downstream headwalls. The placement of rip-rap at the downstream headwalls shall be placed immediately upon the installation of pipes and drainage ditches. 20. Silt barriers to be placed at downstream toe of all cut and fill slopes Provide silt gates at all inlet headwalls.

2. Provide sediment traps at all catch basins, junction boxes, manholes, and drop inlets. 23. Any disturbed area left exposed for a period greater than 7 days shall be stabilized with temporary seeding. 24. When any construction borders a drainage course:

a. The Contractor is responsible for removing any building or other excavation spoil dirt, construction trash or debris, etc. from the drainage greas shown hereon in an expeditions manner as construction progresses. . The Contractor hereby garees to stop all work and restore these areas immediately upon notification by the City/County/State Inspector and/or the Professional Engineer.

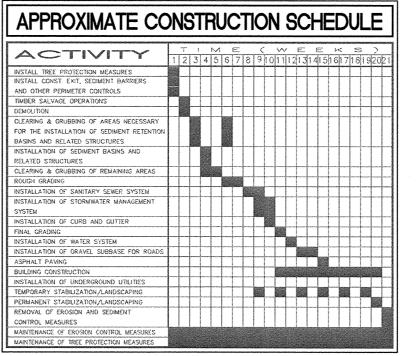
Upon completion of restoration, a professional engineer shall certify in writing to the Development Department that all clean up is complete and the drainage

course restored to original conditions and grade.

Approved plans and NPDES daily log s must be onsite at a 26. The primary permittee must retain the design professional who prepared the Erosion. Sedimentation and Pollution control plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design within seven (7) days after initial construction activities commence. The designed professional shall determine if these BMPS have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design

professional unless weather related site conditions are such that additional time is required. Amendments / Revisions to ESPCP which have significant effect on BMPS with Hydraulic component must be The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.

"Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source." 'Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.'



APPROXIMATE PROJECT START DATE: 03-01-2017 APPROXIMATE PROJECT COMPLETION DATE: 03-01-2018

1. THE ESCAPE OF SEDMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF ENOSION AND SEDMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES. 2. ERCRION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOBS NOT PROVIDE FOR EFFECTIVE ERORION CONTROL, ADDITIONAL ERORION AND SEDMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDMENT SOURCE.

Sd2-F SEDIMENT TRAPS TO BE INSTALLED AT ALL DROP INLETS AND REPLACED WITH SD2-P SEDIMENT TRAPS AFTER GRATES AND CURB AND GUTTER HAVE BEEN INSTALLED. 4. ALL SD2-F TO REMAIN ON ALL JUNCTION BOXES UNTIL TOPS HAVE BEEN INSTALLED 5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AND CLEANING OUT ALL STORM STRUCTURES AND PIPES ONCE SITE HAS BEEN PERMANENTLY STABILIZED.

ANY DISTURBED AREA LEFT IDLE FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH TEMPORARY SEEDING, DISTURBED AREAS IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH WITH

7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY. 8. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.

10. SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE 11. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.

12. ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.

CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN OR GREATER SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKE

14. UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WHICH THE DESIGN PROFESSIONAL DESIGNED WITHIN SEVEN (7) DAYS AFTER INSTALLATION. THE DESIGN PROFESSIONAL SHALL DETERMINE IF THESE BMPs HAVE BEEN INSTALLED AND ARE BEING MAINTAINED AS DESIGNATED. THE DESIGN PROFESSIONA

SITE AREA: ±0.7 ACRES

DISTURBED AREA: ±0.9 ACRES

Total Area of Wetlands: 0.0 ACRES

Disturbed Area of Wetlands: 0.0 ACRES

Disturbed Length of Wetlands:

### NARRATIVE DESCRIPTION: OVERALL PROJECT

LOCATION: Refer to the Construction Plans for the location of the Project.

A location sketch has been provided on the cover sheet. NATURE: SCOPE OF WORK INCLUDES REMOVING AND REPLACING EXISTING SIDEWALKS, CURB AND GUTTERS AND PARKING SPACES TO BRING THE SITE INTO COMPLIANCE WITH ADA REQUIREMENTS FOR ADA ACCESSIBLE ACCESSIBLE PARKING SPACES AND ADA ACCESSIBLE ACCESS ROUTES, EXISTING ADA ACCESSIBLE PARKING: SPACES AND RAMPS DO NOT MEET CURRENT ADA REQUIREMENTS FOR SIZE AND SLOPE, THEREFORE, NONCOMPLIANT SIDEWALKS, RAMPS, AND PARKING SPACES ARE BEING REMOVED AND RELOCATED.

NEW ADA ACCESSIBLE PARKING: SPACES NEED TO BE REGRADED TO MEET ADA SLOPE REQUIREMENTS AND ADJACENT ASPHALT AREAS ARE TO BE REPLACED TO PROVIDE TRANSITION BACK TO EXISTING GRADE, NEW CURB RAMP, SIDEWALKS, AND CURB AND GUTTER ARE TO BE INSTALLED TO PROVIDE ADA ACCESSIBLE ACCESSIBLE ROUTE THAT COMPLIES WITH ADA REQUIREMENTS.

SIZE: Refer to the Construction Plans for the total area of the Project. ZONING: Refer to the Construction Plans for the zoning of the Project.

CURRENT PHASE OF DEVELOPMENT

LOCATION: Refer to the Construction Plans for the location of the current phase of the Project. A location sketch has been provided on the cover sheet NATURE: SCOPE OF WORK INCLUDES REMOVING AND REPLACING EXISTING SIDEWALKS, CURB AND GUTTERS AND PARKING SPACES TO BRING THE SITE INTO COMPLIANCE WITH ADA REQUIREMENTS FOR ADA ACCESSIBLE ACCESSIBLE PARKING SPACES AND ADA ACCESSIBLE SPACES AND RAMPS DO NOT MEET CURRENT ADA REQUIREMENTS FOR SIZE AND SLOPE, THEREFORE, NONCOMPLIANT SIDEWALKS, RAMPS, AND PARKING SPACES ARE BEING REMOVED AND RELOCATED.

NEW ADA ACCESSIBLE PARKING: SPACES NEED TO BE REGRADED TO MEET ADA SLOPE REQUIREMENTS AND ADJACENT ASPHALT AREAS ARE TO BE REPLACED TO PROVIDE TRANSITION BACK TO EXISTING GRADE. NEW CURB RAMP, SIDEWALKS, AND CURB AND GUTTER ARE TO BE INSTALLED TO PROVIDE ADA ACCESSIBLE ACCESSIBLE ROUTE THAT COMPLIES WITH ADA REQUIREMENTS.

SIZE: Refer to the Construction Plans for the area of the current phase of the Project.

3. SIZE AND TYPE OF STRUCTURAL UNITS: Refer to the Construction Plans for the Project for the size, type, method and location of the structural units. SIZE AND TYPE OF PAVED AREA: Refer to the Construction Plans for the size, type and location of the payed areas within the Project. SIZE AND TYPE OF GREENBELT AREA: Refer to the Construction Plans for the size,

type and location of the greenbelt areas within the Project

 STARTING DATE OF INITIAL LAND DISTURBING ACTIVITY: DATE 03-01-2017 EXPECTED FINAL STABILIZATION WILL BE COMPLETE: 03-01-2018

5. EXISTING EROSION AND SEDIMENT CONTROL PROBLEMS: There are no existing erosion and sediment control PROPOSED EROSION AND SEDIMENT CONTROL PROBLEMS: The construction and maintenance of all erosion and sediment control features as shown on the Construction Plans will provide sediment control for this

6. PURPOSE OF PROPOSED SEDIMENT CONTROL PROGRAM: The purpose of the proposed sediment control program is to control soil erosion and sediment deposition. NATURE OF PROPOSED SEDIMENT CONTROL PROGRAM: Refer to the Construction Plans for the Project for the nature of the proposed sediment control facilities. EXTENT OF PROPOSED SEDIMENT CONTROL PROGRAM: Refer to the Construction Plans for the Project for the extent of the proposed sediment control facilities.

7. PROPOSED STORM WATER MANAGEMENT PROGRAM FOR THE DEVELOPMENT: Detention has been provided for this development to control the peak discharge rate. Refer to the Hydrology Study and the Construction Plans for the Project for details of the storm water management program. EFFECT OF THE DEVELOPMENT ON DOWNSTREAM FACILITIES: This development will have no adverse effect on the downstream facilities. Detention has been provided for this development that will reduce the developed peak rate of runoff to a discharge rate less than or equal to the existing peak rate of runoff. The velocity of the discharge system has been reduced to a non-erosive velocity.

8. MAJOR TOPOGRAPHIC FEATURES, STREAMS, EXISTING SOIL TYPES AND VEGETATION LOCATED ON THE

FREQUENCY OF REMOVAL AND DISPOSITION OF SOLID WASTE: The Contractor is to

ROJECT SITE: Refer to the Construction Plans for this Project for these items. 9. MAINTENANCE PROGRAMS FOR THE SEDIMENT CONTROL FACILITIES

Engineer of any problem with sediment control on

INSPECTION FREQUENCY: All sediment control facilities will be inspected weekly and after each rainfall event VEGETATIVE PROGRAMS: Refer to the Construction Plans for the Project for the location and type of plantings required for this development REPAIR PROCEDURES: The Contractor is to repair all sediment control facilities to Contractor is to notify the standards shown on the Construction Plans immediately. The

sediment from the sediment control facility (i.e. sediment basins, silt sediment has deposited to a depth of 1/3 of the total depth of the sediment control facility. DISPOSITION OF TEMPORARY SEDIMENT STRUCTURAL MEASURES: The temporary sediment structural measures shall remain in place until the site has been stabilized. The structures should then be removed and all disturbed areas should be re-stabilized.

AS THE PROJECT DISTURBED LESS THAN 1 ACRE, NO NPDES PERMITTING WILL BE REQUIRED.

> PREPARED BY: David J Blumenthal GSWCC Level II Certification No.0000013061

Expiration date: 06/29/2018

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JN: 17-0067 FN: 162-D-041

GSWCC #0000013061 ORG DATE: 08/17/2017

SCALE: N/A CN:170067PN5

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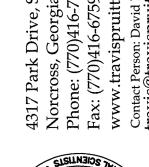
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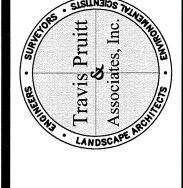
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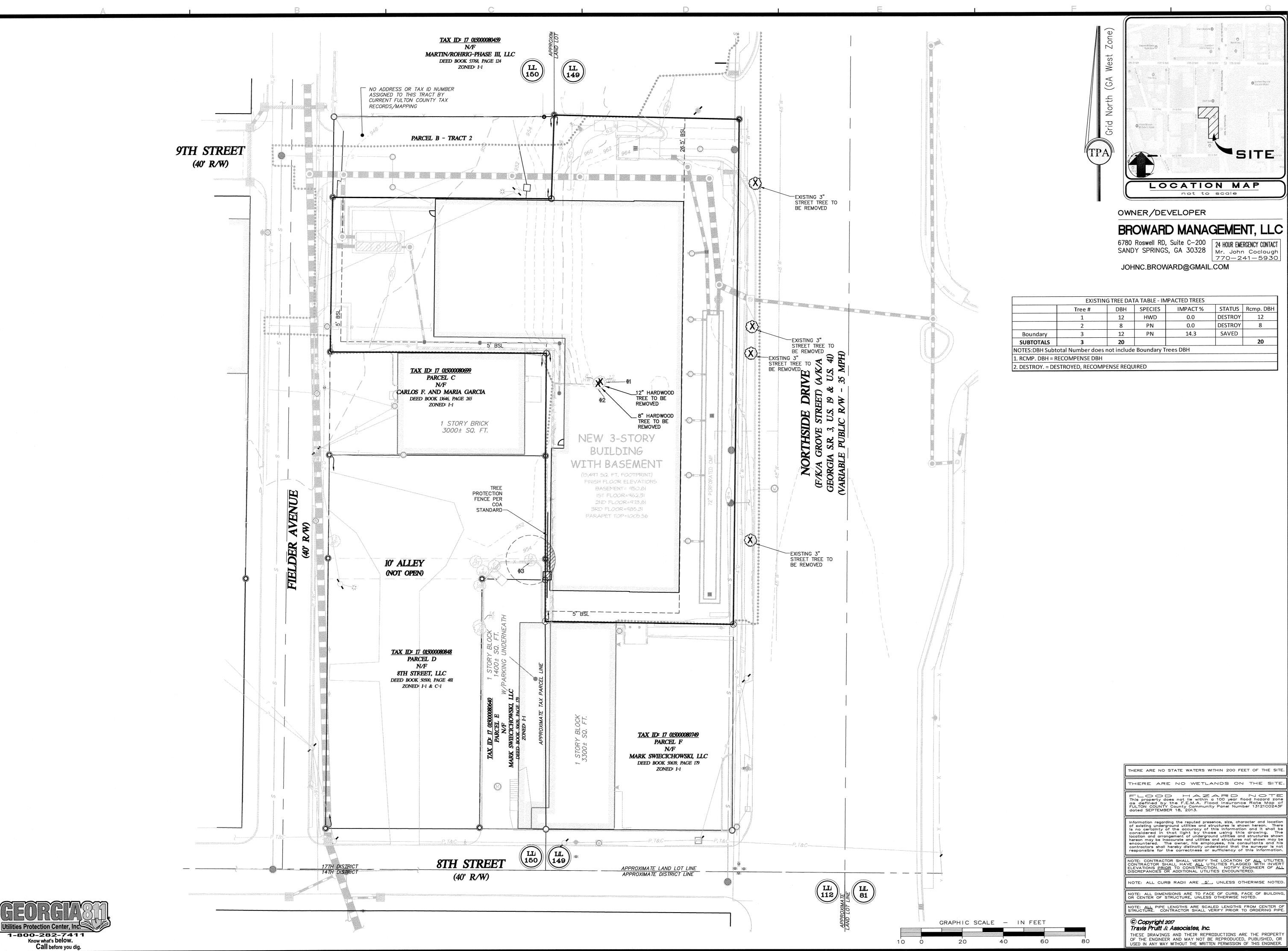
9. SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171-TYPE C TEMPORARY SILT FENCE, OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION, LATEST EDITION. STRUCTURES, INDICATING THE 1/3 FULL VOLUME.

DAYS AND THE PERMITTEE MUST CORRECT ALL DEFICIENCIES WITHIN TWO (2) BUSINESS DAYS OF RECEIPT OF THE INSPECTION REPORT FROM THE DESIGN PROFESSIONAL UNLESS WEATHER RELATED SITE CONDITIONS ARE SUCH THAT ADDITIONAL TIME IS REQUIRED.

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REVISIONS

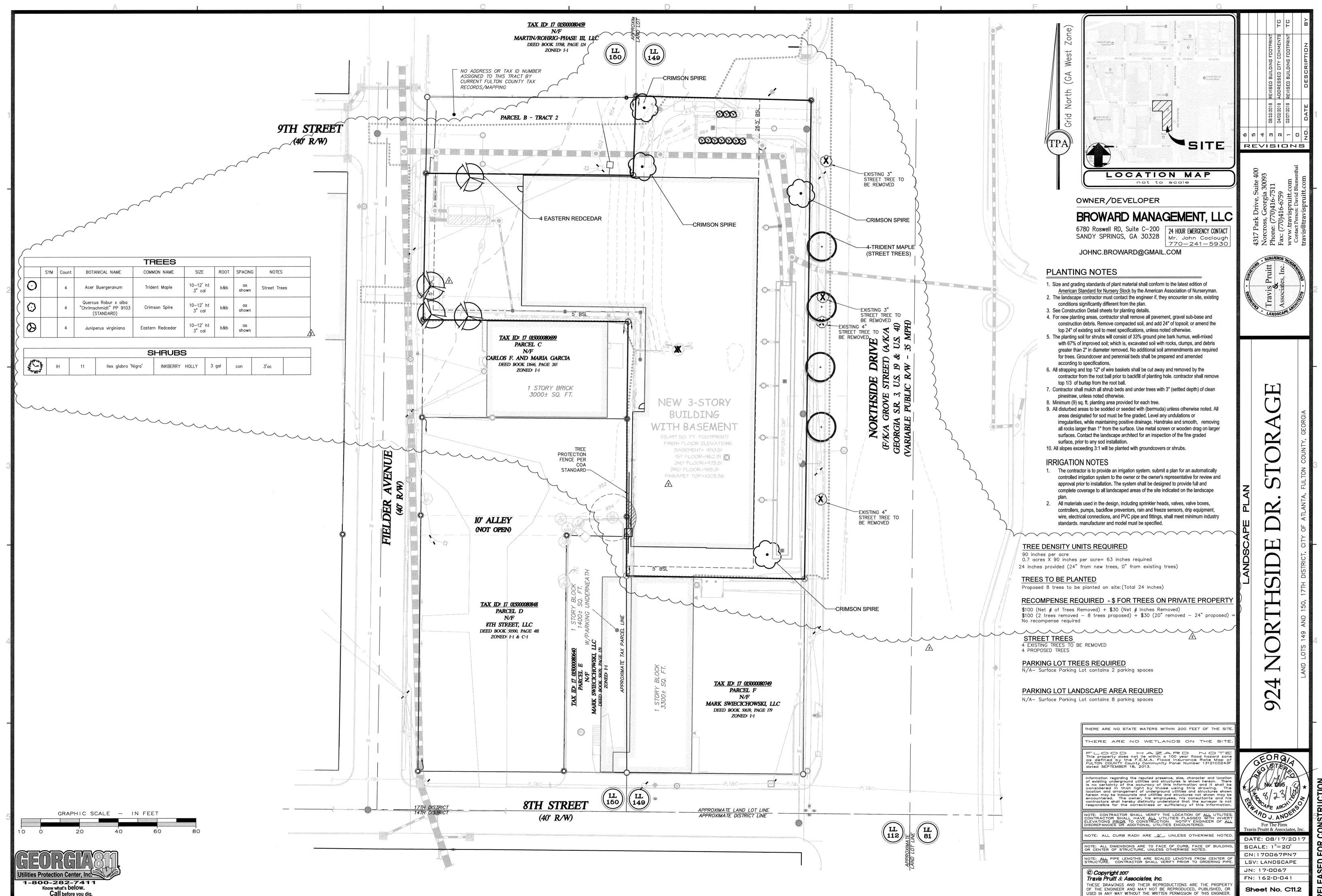
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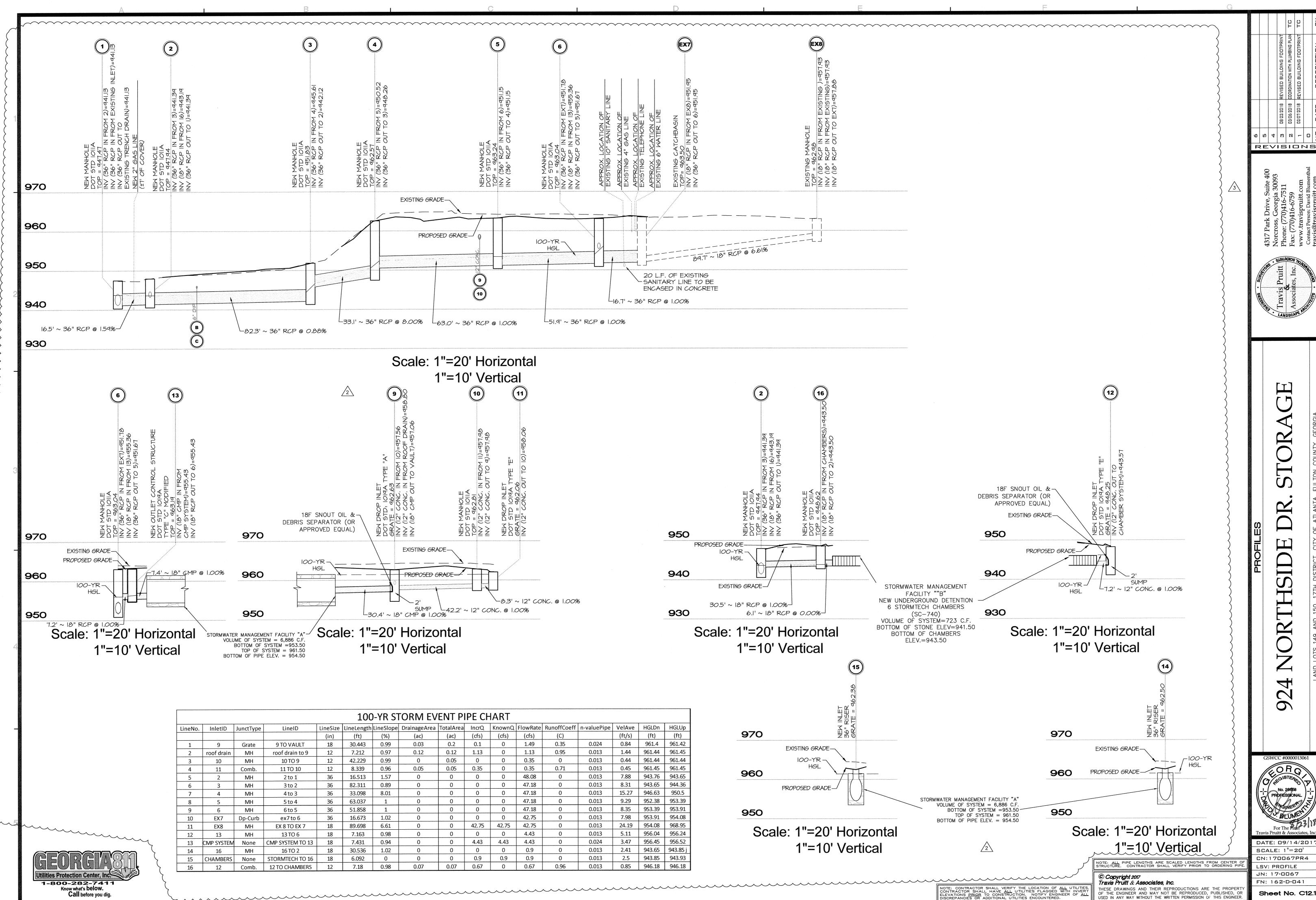
DATE: 08/17/201' SCALE: 1"=20' CN:170067PN7 LSV: TREE REMOVAL JN: 17-0067 FN: 162-D-041

Sheet No. C11.1

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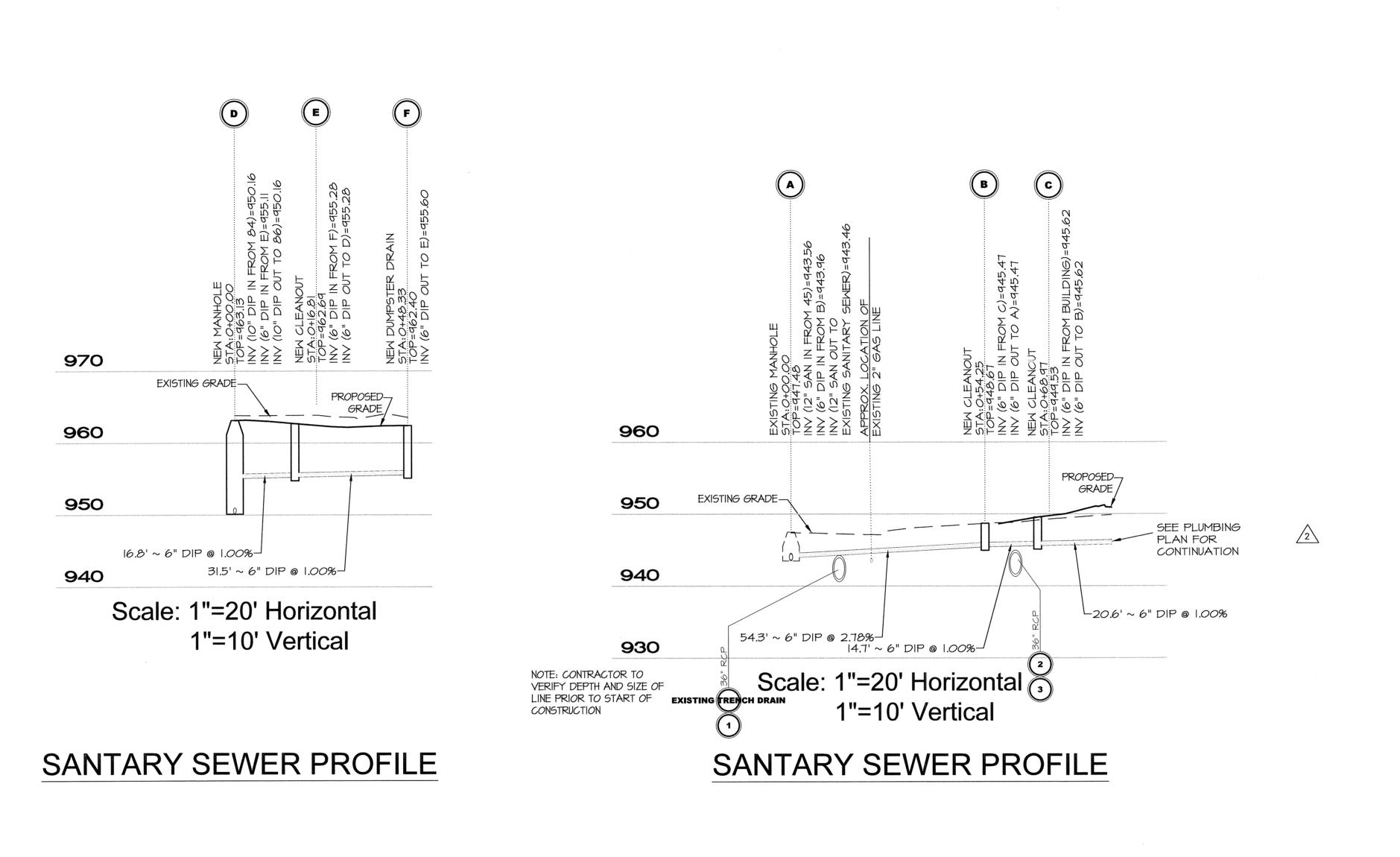
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DATE: 09/14/201

CN:170067PR4 Sheet No. C12.

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NOTE: CONTRACTOR SHALL VERIFY THE LOCATION OF <u>ALL</u> UTILITIES CONTRACTOR SHALL HAVE <u>ALL</u> UTILITIES FLAGGED WITH INVER ELEVATIONS <u>PRIOR</u> TO CONSTRUCTION. NOTIFY ENGINEER OF <u>ALI</u> DISCREPANCIES OR ADDITIONAL UTILITIES ENCOUNTERED. NOTE: ALL PIPE LENGTHS ARE SCALED LENGTHS FROM CENTER (
STRUCTURE. CONTRACTOR SHALL VERIFY PRIOR TO ORDERING PIF

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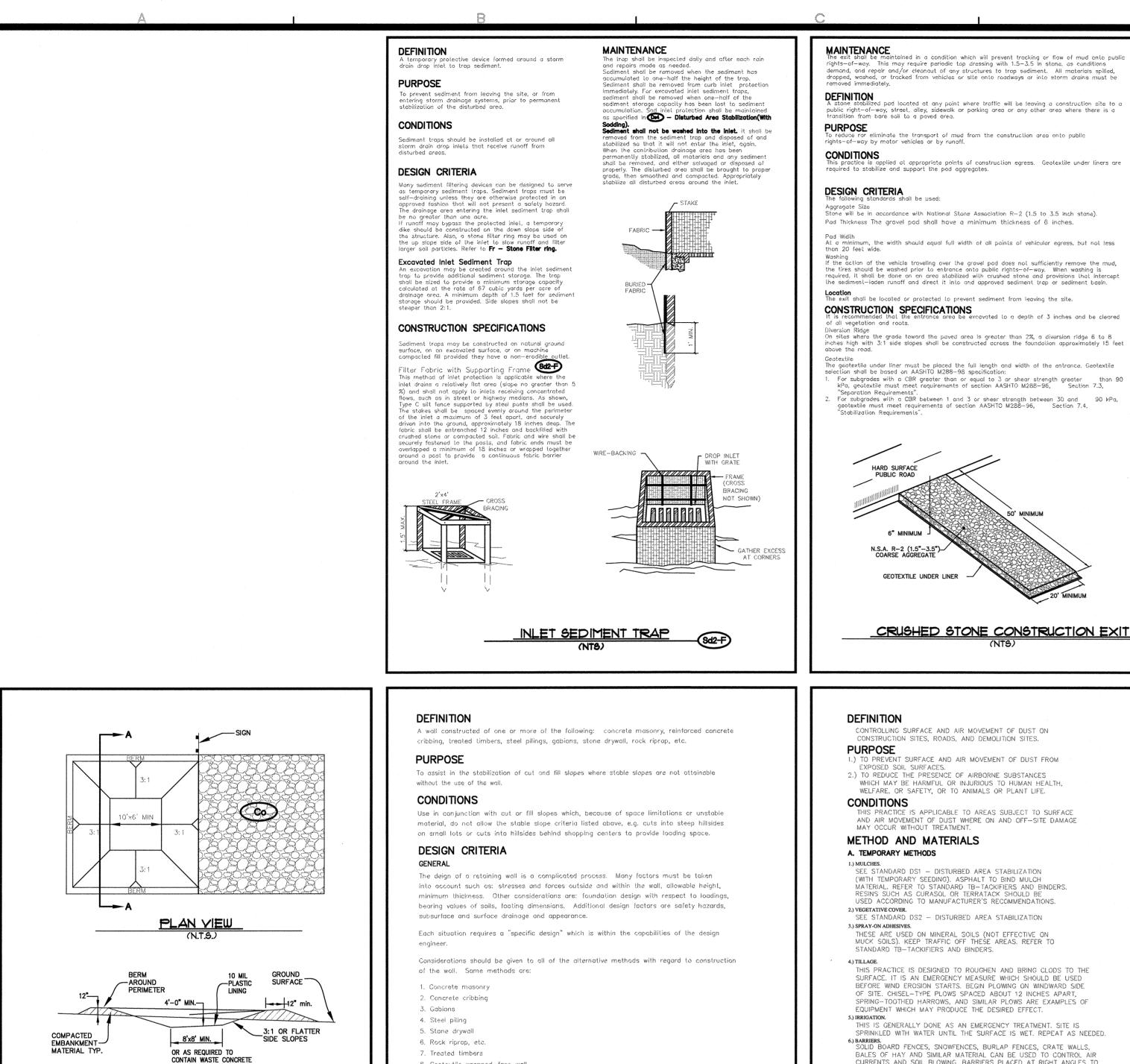
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DATE: 09/14/2015 SCALE: 1"=20' CN:170067PR4 LSV: PROFILE JN: 17-0067 FN: 162-D-041 Sheet No. C12.2

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nches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet Geotextile
The geotextile under liner must be placed the full length and width of the entrance. Geotextile
selection shall be based on AASHTO M288-98 specification:

1. For subgrades with a CBR greater than or equal to 3 or shear strength greater — than 90 kPa, geotextile must meet requirements of section AASHTO M288-96, — Section 7.3, "Separation Requirements".

For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288—96, Section 7.4, Stabilization Requirements". HARD SURFACE PUBLIC ROAD 6" MINIMUM N.S.A. R-2 (1.5"-3.5")-COARSE AGGREGATE GEOTEXTILE UNDER LINER DEFINITION CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES. PURPOSE 1.) TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES.
2.) TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE, OR SAFETY, OR TO ANIMALS OR PLANT LIFE. CONDITIONS THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT. METHOD AND MATERIALS A. TEMPORARY METHODS SEE STANDARD DS1 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING). ASPHALT TO BIND MULCH RESINS SUCH AS CURASOL OR TERRATACK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 2.) VEGETATIVE COVER. SEE STANDARD DS2 - DISTURBED AREA STABILIZATION 3.) SPRAY-ON ADHESIVES. THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD TB-TACKIFIERS AND BINDERS. THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS, BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET, REPEAT AS NEEDED. 6.) BARRIERS.
SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING, BARRIERS PLACED AT RIGHT ANGLES TO

PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

SEE STANDARD DS3 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD

THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIVE SOIL MATERIAL. SEE STANDARD TP - TOPSOILING.

COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD CR — CONSTRUCTION ROAD STABILIZATION.

DUST CONTROL ON DISTURBED AREAS

APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

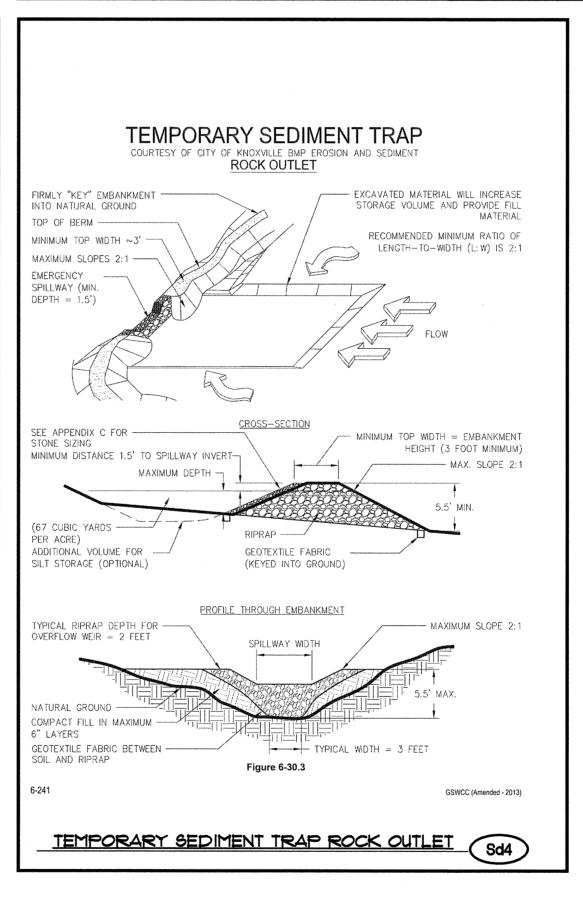
7.) CALCIUM CHLORIDE.

A. PERMANENT METHODS 1.) PERMANENT VEGETATION.

VALUABLE PROTECTION IF LEFT IN PLACE.

d pad located at any point where traffic will be leaving a construction site to a

entrance area be excavated to a depth of 3 inches and be cleared



of temporary vegetative cover with fast growing seedings for seasonal protection

To reduce runoff and sediment damage of downstream resources; to protect the soil from erosion; to improve wildlife habitat; to improve aesthetics; to improve tilth, infiltration and aeration as well as organic matter for permanent plantings.

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed

planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to

Temporary vegetative measures should be coordinated with permanent measures to assure

economical and affective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: SOME SPECIES OF TEMPORARY VEGETATION ARE NOT APPROPRIATE FOR COMPANION CROP PLANTINGS BECAUSE

OF THEIR POTENTIAL TO OUT-COMPLETE THE DESIRED SPECIES (E.G. ANNUAL RYEGRASS).

INSTALL ALL EROSION CONTROL MEASURES PRIOR TO APPLYING TEMPORARY VEGETATION.

Excessive water run—off shall be reduced by properly designed and installed erosion

control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others. No shaping or grading is required if slopes can be stabilized by hand—seeded vegetation or if hydraulic seeding equipment is to be used.

When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand—seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall. When soil has been sealed by rainfall or consists of

smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1,000 sq. ft.) shall be

applied. Fertilizer should be applied before land preparation and incorporated with a disk,

Select a grass or grass—legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker—seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one—quarter to one—half inch deep. Appropriate depth of

planting is ten limes the seed diameter. Soil should be "raked" lightly to cover seed

Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

SEEDBED DEPTHS

1" TO 4" DEPTH

DEPRESSIONS EVERY

6"- 8" HAND DUG, IF

SUGGESTED SEEDBED DEPTHS

Ds1-Disturbed Area Stabilization (With Mulching Only).

3:1 OR FLATTER

2:1 TO 3:1

2:1 OR STEEPER

Re-seed areas where an adequate stand of temporary vegetation fails to emerge or where a poor stand exists.

for longer than six months, permanent perennial vegetation shall be used. If optimum

specification Ds1 - Disturbed Area Stabilization (With Temporary Seeding).

REQUIREMENT FOR REGULATORY COMPLIANCE

PURPOSE

CONDITIONS

GRADING AND SHAPING

SEEDBED PREPARATION

SEEDING

MULCHING

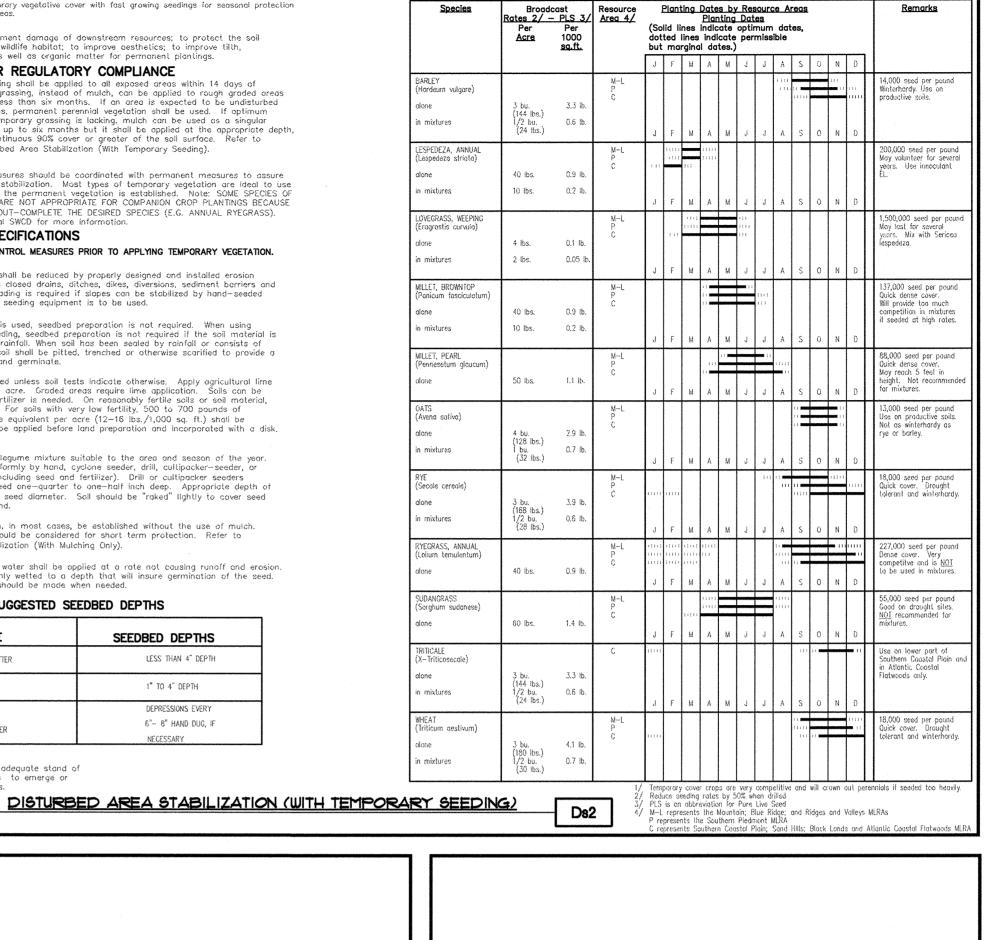
IRRIGATION

MAINTENANCE

INSTALLATION SPECIFICATIONS

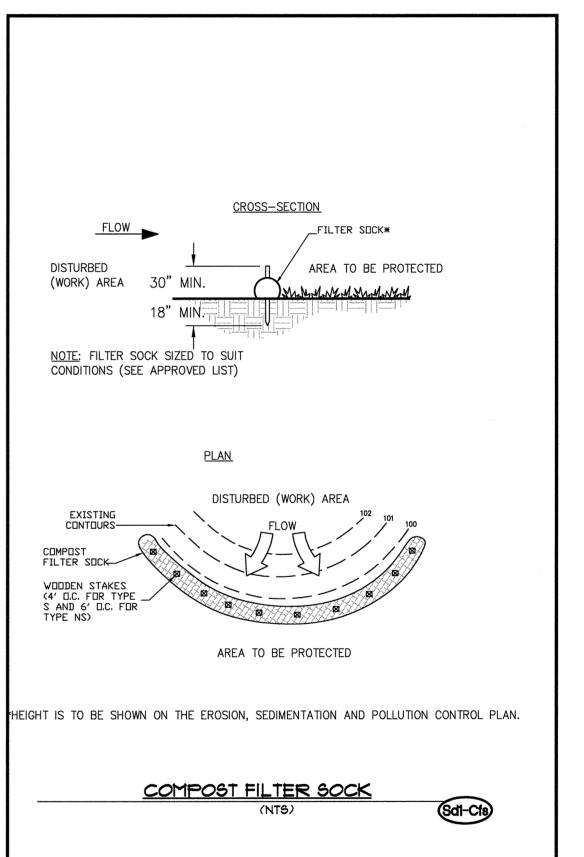
place for seed to lodge and germinate.

LIME AND FERTILIZER



PLANTS, PLANTING RATES AND PLANTING DATES FOR TEMPORARY COVER OF COMPANION CROPS 1

Remarks





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REVISIONS

GSWCC #0000013061 s Pruitt & Associates. DATE: 08/17/201

JN: 17-0067

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CONCRETE WASHOUT AREA INSTALLATION NOTES:

CONCRETE WASHOUT AREA MAINTENANCE NOTES:

1. SEE PLAN VIEW FOR:

- LOCATIONS OF CONCRETE WASHOUT AREA.

2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.

3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.

4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

5. EXCAVATED MATERIAL SHALL BE LITTLED IN DEPLIMETED BERNA

THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED

FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.

3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA

SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL AUTHORITIES.

4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

CONCRETE WASHOUT DETAIL

2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED

5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM

SCALE: N/A

Sheet No. C13.1

FN: 162-D-041

LSV: DETAILS4

CN:170067DT2

To protect the soil surface from erosion; to reduce damage from sediment and runoff to downstream areas: to improve wildlife habitat and visual resources; to improve aesthetics.

REQUIREMENT FOR REGULATORY COMPLIANCE This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. FINAL STABILIZATION means that all soil disturbing activities at the site have been completed, and that for unpoved areas and areas not covered by permanent structures, at least 70% of the soil surface is uniformly covered in permanent vegetation or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been employed. Permanent vegetation consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or sivicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or sivicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation

CONDITIONS Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas. PLANNING CONSIDERATIONS

control measures shall not be removed.

. Use conventional planting methods where possible. . When mixed plantings are done during marginal planting periods, 3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands f rye is an excellent procedure.

. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures.

Refer to Specification Ds4-Disturbed Area Stabilization (With Sodding). Irrigation should be used when the soil is dry or when summer olantings are done. 6. Low maintenance plants, as well as natives, should be used to ensure long—lasting erosion control. Mowing should not be performed during the quail nesting season (May September).

Wildlife plantings should be included in critical area plantings.

rcially available plants beneficial to wildlife species include the

Mast Bearing Trees Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum. All trees that produce nuts or fruits are favored by many game species. lickory provides nuts used mainly by squirrels and bear Shrubs and Small Trees
Bayberry, Bicolor lespedeza, Crabapple, Dogwood, Huckleberry or Native
Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum, and Blackberry.
Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza which produces seeds used by quall and songbirds. Grasses, Legumes, Vines and Temporary Cover Bahiagrass, Bermudagrass, Grass—Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardarass (for mountains), Browntop Millet (for temporary over), and Native grapes. Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches vers, and lespedezas may be mixed with grass, but they may die out

### CONSTRUCTION SPECIFICATIONS

GRADING AND SHAPING forading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment. When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation. Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications. LIME AND FERTILIZER RATES and ANALYSIS

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture. Lime spread y conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve. Agricultural lime spread by hydraulic seeding equipment shall be "finely

ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a -mesh sieve and not less than 70 percent will pass through a 00-mesh sieve. It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. Agricultural lime is generally not required where only trees are planted. Initial fertilization

nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in the tables that follow this LIME AND FERTILIZER APPLICATION When "hydraulic seeding" equipment is used, the initial fertilizer shall be

mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder. inely around limestone will be mixed with water and applied immediately onventional planting" is to be done. Ilme and fertilizer shall be applied niformly in one of the following ways:

Apply before land preparation so that it will be mixed with the soil during seedbed preparation. Mix with the soil used to fill the holes, distribute in furrows. Broadcast after steep surfaces are scarified, pitted or trenched . A fertilizer pellet shall be placed at root depth in the closing hole

beside each pine tree seedling. PLANT SELECTION Approved species are listed in the tables following this section. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used. Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year planting, method of planting; and the needs and desires of the land user. Some perennial species are easily stablished and can be planted alone. Examples of these are Commor Bermuda, Tall Fescue and Weeping Lovegrass. Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 10 Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified). Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are no planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid—summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

RYEGRASS SHALL NOT BE USED IN ANY SEEDING MIXTURE CONTAINING PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER. SEED QUALITY The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e. PLS= % GERMINATION X % PURITY)

XAMPIF.

CAMPLE:
Common bermuda seed 70% germination, 80% purity
PLS= 70% germination x 80% purity
PLS= 56% ne percent of PLS helps you determine the amount of seed you need. If the

10 lbs. PLS/acre = 17.9 lbs/acre You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live

SEEDBED PREPARATION Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seedbed

preparation will be done as follows: Broadcast plantings
1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used. Tillage may be done with any suitable equipment.

 Tillage should be done on the contour where feasible.
 On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.

2. For nursery stock plants, holes shall be large enough to accommodate roots 3 Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Il legume seed shall be inoculated with appropriate nitrogen—fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container. A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculate recommended by the manufacturer shall be used. All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than

Hydraulic Seeding

Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within on hour after the mixture is made. Conventional Seeding Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker—seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover

the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment. No—Till Seeding
No—till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No—till seeding shall be done with appropriate no—till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants
Shrubs, vines and sprigs may be planted with appropriate planters or hand tools Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated: 1. DRY STRAW or DRY HAY of good quality and free of weed seeds can be used Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at the rate of 2 1/2 tons per acre. 2. WOOD CELLULOSE MULCH or WOOD PULP FIBER shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic 3. One thousand pounds of WOOD CELLULOSE or WOOD PULP FIBER, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or 4. SERICEA LESPEDEZA hay containing mature seed shall be applied at a rate of three tons per acre.
5. PINE STRAW or PINE BARK shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.

6. When using temporary erosion control blankets or blocks sod, mulch is not 7. BITUMINOUS TREATED ROVING may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications. Wood cellulose and wood pulp fibers shall no contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The

APPLYING MULCH STRAW or HAY MULCH will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% or the soil surface. WOOD CELLULOSE or WOOD FIBER MULCH shall be applied uniformly with hydraulic seeding equipment. ANCHORING MULCH
Anchor straw or hay mulch immediately after application by one of the

fibers shall contain a dye to allow visual metering and aid in uniform application

1 FMULSIFIED ASPHALT can be (a) sprayed uniformly onto the mulch as it is ejected from the blower machine or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The misture shall consist of 100 gallons of grade SS-1h or CSS-1h emulsified asphalt and 100 gallons of water per ton of mulch. Care shall be taken at all times to protect state waters, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration. 2.HAY and STRAW mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it conjunction with or immediately after the mulch is spread. Synthetic tackifier shall be mixed and applied according to manufacturer's specifications. Refer to Tb 4. RYE or WHEAT can be included with Fall and Winter plantings to stabilize the nulch. They shall be applied at a rate of one—quarter to one—half bushel per 5. PLASTIC MESH or NETTING with mesh no longer than one inch by one inch may be

areas. These materials shall be installed and anchored according to manufacturer's specifications. Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns. <u>Material</u>

needed to anchor straw or hay mulch on unstable soils and concentrated flow

Grain straw 4" to 6"
Grass Hay 4" to 6"
Pine needles 3" to 5"
Wood waste 4" to 6" IRRIGATION
Irrigation will be applied at a rate that will not cause runoff. TOPDRESSING Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application

are listed in the tables following this section. SECOND YEAR AND MAINTENANCE FERTILIZATION Second year fertilizer rate and maintenance fertilizer rate are listed in the tables following this section. LIME MAINTENANCE APPLICATION

Apply on ton of agricultural lime every 4 to 6 years or as indicated by soils tests. Soil tests can be conducted to determine more accurate requirements if desired. USE AND MANAGEMENT Mow Sericea lespedeza only after frost to ensure that the seeds are mature. Mow between November and March. Bermudagrass, Bahiagrass, and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment. Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should no take place between may and September.

DURABLE SHRUBS AND GROUND COVERS FOR PERMANENT COVER Ground covers include a wide range of low-growing plants planted together in considerable numbers to cover large greas of the landscape. Ground covers grow slower than grasses. Weeds are likely to compete, especially the first year. Maintenance is needed to insure survival. These ground covers will not be used unless proper maintenance is planned. Maintain mulch at three-inch theckness until plants provide adequate

Fall planting is encouraged because the need for constant watering is reduced and plants have time to establish new roots before ho

eather.				
COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT	PLANT SPACING	COMMENTS
Abelia	Abelia grandiflora	3–4 ft.	5 ft.	Also a prostrate form 2 feet high. Sun, semi-shade. Semi- evergreen.
Carolina Yellow Jasmine	Gelsemium sempervirens	low	3 ft.	Vine. Yellow, trumpet— like flowers. Hardy, one of the best vines. Evergreen. Native to Georgia.
Carpet Bugle	Ajuga reptans	2-4 in.	3 ft.	Needs good drainage, partial shade. Blue or white flowers. Evergreen.
Bearberry Cotoneaster	Cotoneaster dammeri	2-4 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen
Ground Cover Cotoneaster	Cotoneaster salicifoluis 'Repens'	1-2 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen
Rock Cotoneaster	Cotoneaster horizontalis	1-2 ft.	5 ft.	Semi-evergreen. Sun.
Virginia Creeper	Parthenocissue quinquefolia	low	3 ft.	Red in fall. Vine. Deciduous. Native to Georgia.
Daylily	Hemerocallis spp. quinquefolia	2-3 ft.	2 ft.	Many flower colors. Full sun. Very hardy.
English Ivy	Hedera helix	low 3_4 ft	3 ft. 5 ft.	Shade only. Climbs. Sun, semi-shade.
Compacta Holly	llex crenata "Compacta"	3-4 ft.		, , , , , , , , , , , , , , , , , , ,
Chinese Holly	llex cornuța Rotunda	3–4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	llex burfordii Nana	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	llex vomitoria Nana	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Repandens Holly	llex crenata Repandens	2-3 ft.	5 ft.	Sun, semi-shade.
Andorra Juniper	Juniperus horizontalis 'Plumosa'	2-3 ft.	5 ft.	Excellent for slopes. Sun.
Andorra Compacta Juniper	Juniperus horizontalis 'Plumosa, compacta'	1-2 ft.	5 ft.	More compact than andorra.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8–10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis "Wiltonii"	4–6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus davurica Expansa (Squamata Parsoni)	18-24 in.	5 ft.	One of the best, good winter cover.
Pfitzer Juniper	Juniperus chinensis Pfitzerana	6-8 ft.	6 ft.	Needs room,
Prince of Wales Juniper	Juniperus horizontalis 'Prince of Wales'	8–10 in.	4 ft.	Feathery appearance.
Sorgent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacicfic cultivars are good.
Liriope	Liriope muscari	8–10 in.	3 ft.	
Creeping Liriope	Liriope spicata	10-12 in.	1 ft.	Spreads by runners.
Big Leaf Periwinkle	Vinca major	12-15 in.	4 ft.	Lilac flowers in spring. Semi-shade.
Common Periwinkle	Vinca minor	5–6 in.	4 ft.	Lavender-blue flowers in spring. Semi-shade.
Cherokee Rose	Rose laevigata	2 ft.	5 ft.	Rampant grower. Not for restricted spaces. State flower.
Memoria Rose	Rose weuchuriana	2 ft.	5 ft.	Rampant grower.
St. Johnswort	Hypericum calycenur	8-12 in.	3 ft.	Semi-shade.
Anthony Water Spirea	Spirea bumalda	3–4 ft.	5 ft.	Sun.
Thunberg Spirea	Spirea thinbergii	3-4 ft.	5 ft.	Sun.

	ROSION CONTRO				·
SITE	SOIL MATERIAL	COMMON SOILS	PLANTING TREE SPECIES 1/	SPACING	PLANTING DATES 3/
Borrow areas, graded areas, and spoil material	Sandy	Lakeland Troup	Loblolly pine (Pinus taeda) Longleaf pine (Pinus palustris)	2/	M-L, P12/1-3/15 C 12/1-3/1
	Loamy	Orangeburg, Tifton	Loblolly pine Slash pine	2/	M-L, P12/1-3/15 C 12/1-3/1
	Clay	Cecil, Faceville	Loblolly pine Slash pine	2/	M-L, P12/1-3/15 C 12/1-3/1
			Virginia pine (Pinus virginiana)		
Streambanks			Willows 4/ (Salex species)	2 ft.x2ft.	ALL 11/15-3/15

1/ Other trees and shrubs listed in the previous tables may be interplanted with the pines for improved wildlife benefits. 2/ Type of Planting Tree Spacing No. of Trees per Acre
4 ft.x4 ft. 2722 Trees alone Trees in combination 6 ft.x6 ft. with grasses and/or other plants

3/ M-L represents the Mountains; Blue Ridge; and Ridges and Valleys MLRAs 4/ Fertilization of companion crop is ample for this species.

PER IILZEK KEUL	AKEMEN 12			
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/ 2/ 30
Cool season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ - -
3. Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	- - -
Pine seedlings	First	20-10-5	one 21-gram pelle per seedling placed in the closing hole	
5. Shrub Lespedeza	First Maintenance	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac.	_
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasse	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50 -100 bs./ac. 2/ 6/ 50 -100 bs./ac. 2/ 6/ 30 lbs./ac. 5/
8. Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 6/ -

1/ Apply in spring flollowing seeding. 4/ Apply when plants are pruned. Apply in split applications when high rates are used. 5/ Apply to grass species only.

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

	<u>Acre</u>	1000 sq.ft.			ted li mar			ite pe s.)	rmis	sible	-						
				J	F	М	A	М	J	J	A	S	0	N	D	1	
BAHIA, PENSACOLA (Paspalum notatum)			P C		11111		F		1111	11111	11111		11111	11111			166,000 seed per pound. Low growing. Sod formin Slow to establish. Plant
alone or with temporary cover	60 lbs.	1.4 lb.															with a companion crop. Will spread into bermuda pastures and lawns. Mix
with other perennials	30 lbs.	0.7 lb.		J	F	м	A	м	J	J	A	s	0	N.	D	L	with Sericea lespedeza or weeping lovegrass.
BAHIA, WILMINGTON (Paspalum notatum)			M-L P		11111	-	F	F	1111	11111	11111						
alone or with temporary cover	60 lbs.	1.4 lb.					-			-							Same as above.
with other perennials	30 lbs.	0.7 lb.		J	F	м	A	м	J	J	A	S	0	N	D		
BERMUDA, COMMON (Cynodon dactylon) Hulled seed alone	10 lbs.	0.2 lb.	P		111	1111			\$111 1711								1,787,000 seed per pound Quick cover. Low growin and sod forming. Full si Good for athletic fields.
with other perennials	6 lbs.	0.1 lb.						-									-
BERMUDA, COMMON (Cynodon dactylon)		.,	P	4	F.	M	Α.	М	j	-	Α_	S	0	N	D	H	
(Cynodon dactylon) Unhulled seed with temporary cover	10 lbs.	0.2 lb.	·														Plant with winter annuals
with other perennials	6 lbs.	0,1 lb.			F	м	A	M	J	J	A	s	0	N	D		Plant with Tall fescue.
BERMUDA SPRIGS (Cynodon dactylon)			M-L	T		111	11		- "	111						Γ	A cubic foot contains approximately 650 sprigs.
Coastal, Common, Midland, or Tift 44	10 lbs.	0.2 lb.															A bushel contains 1.25 cubic feet or approximate 800 sprigs.
Coastal, Common, or Tift 44	6 lbs.	0.1 lb.	P C	l	ļ,	11				11111				l	l		Same as above.
Tift 78	6 lbs.	0.1 lb.	. C	11111		1311			1111			11111		11111	1111		Southern Coastal Plain or
CENTIPEDE	Divi		P	-	F	М	A	М	J	-	Α_	S	0	N	D	H	Drought tolerant. Full su
(Eremochloa ophiuroides)	Block sod	only	С								-						or partial shade. Effecti adjacent to concrete and concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winterhardy as far north as Athens and Atlanta.
CROWNVETCH				1.	F	М	A	М	J	J	Α	s	0	N_	D.	L	
(Cornilla varia) with winter annuals or cool season grasses	15 lbs.	0.3 lb.	M-L P								-		=;				100,000 seed per pound. Dense growth. Drought tolerant and fire resistan: Attractive rose, pink and white blossoms sring to late fall. Mix with 30
		-		J	F	м	A	¥	J	J	Á	S	0	N	D		pounds of Tall fescue or pounds of rye. Inoculate seed with M inoculant. L from North Atlanta and northward.
FESCUE, TALL (Festuca arundinacea)				1													227,000 seed per pound. Use alone only on better
alone with other perennials	50 lbs. 30 lbs.	1.1 lb. 0.7 lb.	M-L P						-		11		=:				sites. Not for droughty soils. Mix with perennial lespedezas or Crownvetch Apply topdressing in spri following fall plantings. I for heavy use areas or athletic fields.
LESPEDEZA, SERICEA (Lespedeza cuneata)				T	Γ		T								Г	П	
scarified	60 lbs.	1.4 lb.	M-L P C		# 1	11			2 3 2 8 1 2 8 1		-				es advanta en esta esta esta esta esta esta esta esta		350,000 seed per pound. Widely adapted. Low maintenance. Mix with Weeping lovegrass, Comm bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
unscarified	75 lbs.	1.7 lb.	M-L P C	E		11111	11111	: : : : : : : : : : ! ! ! ! !	11111	111111	1111						Mix with Tall fescue or winter annuals.
seed-bearing hay	3 tons	138 lb.	M-L P C		1111 F	м		M	J		Α.	S	0	N	D		Cut when seed is mature but before it shatters. Add Tall fescue or winter annuals.
LESPEDEZA Ambro virgata (Lespedeza virgata DC) or Appalow (Lespedeza cuneata [Dumont] G. Don)	60 lha	1415	W.I.	J	<b>P</b>	М	A	M	-	J		-	0	N	D		300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreadin type growth. New growth has bronze coloration. Whith weeping lovegrass, common bermuda, bahat all fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands.
scarified	60 lbs.	1.4 lb.	M-L P C					-			-						Inoculate seed with EL inoculant.
unscarified	75 lbs.	1.7 lb.	M-L P C	E		5   2   1 1   5   5   1   5   5		11111	11111	1   3   6   1   1   1   2   1   1	1111						
	-	I	l	J	l F	М	A	М	J	J	A	s	0	N	D	ı	i

AAIDENCANE Panicum hemitomon x3' spacing

P represents the Southern Piedmont MLRA C represents the Southern Coastal Plain; Sand Hills; Black lands; and Atlantic Coast Flatwoods MLRAs

FERTILZER REQU		imple for this species.		
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/ 2/ 30
Cool season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ - -
3. Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	- - -
Pine seedlings	First	20-10-5	one 21-gram pelle per seedling placed in the closing hole	1
5. Shrub Lespedeza	First Maintenance	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac.	-
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasse	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50 -100 bs./ac. 2/ 6/ 50 -100 bs./ac. 2/ 6/ 30 lbs./ac. 5/
8. Warm season grasses and leaumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 6/

6/ Apply when plants grow to a height of 2 to 4 inches.

temporary cover							1				-						pastures and lawns. Mix
with other perennials	30 lbs.	0.7 lb.		J	F	м	A	М	J	J	Α.	s	0	N	D		with Sericea lespedeza or weeping lovegrass.
BAHIA, WLMINGTON (Paspalum notatum)			M-L P		11111	-	F		1111	11111	11111	8 8 8 8 8 8 8 8 8 8	1111	11111	1111		
alone or with temporary cover	60 lbs.	1.4 lb.								-	-						Same as above.
with other perennials	30 lbs.	0.7 lb.		J	F	M	A	м	J	j	A	S	0	N	D		
BERMUDA, COMMON (Cynodon dactylon)			P		111	1111			1111								1,787,000 seed per pound Quick cover. Low growing and sod forming. Full su
Hulled seed alone	10 lbs.	0.2 lb.															Good for athletic fields.
with other perennials	6 lbs.	0.1 lb.			F	м	A	м	j	J	A	s	0	N	D		-
BERMUDA, COMMON (Cynodon dactylon)			P					-								1	
Unhulled seed with temporary cover	10 lbs.	0.2 lb.					-										Plant with winter annuals.
with other perennials	6 lbs.	0,1 lb.		J	F	м		м	J	J	А	s	0	N	D		Plant with Tall fescue.
BERMUDA SPRIGS (Cynodon dactylon)			M-L	Γ		111	-		- "	111							A cubic foot contains approximately 650 sprigs.
Coastal, Common, Midland, or Tift 44	10 lbs.	0.2 lb.															A bushel contains 1.25 cubic feet or approximate 800 sprigs.
Coastal, Common, or Tift 44	6 lbs.	0.1 lb.	P C	11111	ļ	111			1111	1111	21111	11111	,,,,,,		,		Same as above.
Tift 78	6 lbs.	0.1 lb.	С	11111 J	F	M	Ā	м	1111 J	) : : : : : J		11111 S	0	N.	D		Southern Coastal Plain on
CENTIPEDE (Eremochloa ophiuroides)	Block sod (	only	P C	E												1	Drought tolerant. Full su or partial shade. Effectiv adjacent to concrete and
																	concentrated flow areas. Irrigation is needed until
										-							fully established. Do not plant near pastures. Winterhardy as far north
				J	F	м	A	М	J	J	Α	s	0	N.	D		as Athens and Atlanta.
CROWNVETCH (Cornilla varia)			-								-		-				100,000 seed per pound. Dense growth, Drought
with winter annuals or cool season	15 lbs.	0.3 lb.	M-L P									_	=:				tolerant and fire resistant Attractive rose, pink and white blossoms sring to
grasses		-															late fall. Mix with 30 pounds of Tall fescue or pounds of rye. Inoculate
				J	F	м	A	м	J	J	A	s	0	N	D		pounds of rye. Inoculate seed with M inoculant. U from North Atlanta and northward.
FESCUE, TALL (Festuca arundinacea)				Ť	Ė	-	Ë	-	-	Ť	-	Ť	Ť	Ť	۲	H	227,000 seed per pound. Use alone only on better
alone	50 lbs.	1.1 lb.	M-L			_	_				,		Ŀ				sites. Not for droughty soils. Mix with perennial
with other perennials	30 lbs.	0.7 lb.	"								11		ľ				lespedezas or Crownvetch. Apply topdressing in sprin following fall plantings. N for heavy use areas or
																	for heavy use areas or athletic fields.
LESPEDEZA, SERICEA (Lespedeza cuneata)																П	
scarified	60 lbs.	1.4 lb.	M-L P			1 1			11								350,000 seed per pound. Widely adapted. Low
			С		11			. 11	111								maintenance. Mix with Weeping lovegrass, Commo bermuda, bahia, or tall
											-						bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent
																	on roadbanks. Inoculate seed with EL inoculant.
unscarified	75 lbs.	1.7 lb.	M-L P			11111	11111	1111	11111	111111	11111						Mix with Tall fescue or winter annuals.
	_		С			1111	11711	1 8 3 8 8	13111	11111	11111					1	
seed-bearing hay	3 tons	138 lb.	M-L P C		1111				-				=				Cut when seed is mature, but before it shatters. Add Tall fescue or winter
				[]	F	м	A	м	j	J	Α	s	0	N	D		annuals.
LESPEDEZA Ambro virgata (Lespedeza virgata DC)																П	300,000 seed per pound. Height of growth is 18 to
or Appalow (Lespedeza cuneata									-			-					24 inches. Advantageous in urban areas. Spreading type growth. New growth
[Dumont] G. Don)									-	-	-						has bronze coloration. Mi with weeping lovegrass, common bermuda, bahia,
			l				1										tall fescue or winter

PLANTS, PLANTING RATES AND PLANTING DATES FOR PERMANENT COVER

Reduce seeding rates by 50% when drilled.

50 lbs. 1.1

30 lbs. 0.7 lb.

with other perennials

with other perennials

PLS is an abbreviation for Pure Live Seed. Refer to section V.E of 3/ M-L represents to Mountain; Blue Ridge; and Ridges and Valleys MLRAs.
P represents the Southern Piedmont MLRA
C represents Southern Coastal Plain; Sand Hills; Black Lands and Atlantic Coastal Flatwoods MLRA

DISTURBED AREA STABILIZATION (WITH SODDING)

Remarks

A permanent vegetative cover using sods on highly erodible or critically eroded lands.

-Establish immediate ground cover.

-Reduce runoff and erosion. -Improve aesthetics and land value.

-Reduce dust and sediments.

-Stabilize waterways, critical areas. -Filter sediments, nutrients and bugs. -Reduce downstream complaints.

-Reduce likelihood of legal action. -Reduce likelihood of work stoppage due to legal action.

-Increase "good neighbor" benefits.

This application is appropriate for areas which require immediate vegetative covers, drop inlets, grass swales, and vaterways with intermittent flow

PLANNING CONSIDERATIONS

Sodding can initially be more costly than seeding, but the advantages justify the increased initial costs.

Immediate erosion control, green surface, and quick use.

2. Reduced failure as compared to seed as well as the lack of weeds. 3. Can be established nearly year-round.

Sodding is preferable to seed in waterways and swales because of the immediate protection of the channel after application. Sodding must be staked in concentrated flow areas (See Figure 6-6.1). Consider using sod framed around drop inlets to reduce sediments and maintaining the grade.

CONSTRUCTION SPECIFICATIONS INSTALLATION

Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils. Topsoil properly applied will help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1. Table 6-6.1

tilizer Requii I Surface App			
Fertilizer Type	Fertilizer Rate (lbs./acre)	Fertilizer Rate (lbs./sq.ft.)	Season
10-10-10	1000	0.025	Fall

Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod (See Figure On slopes steeper than 3:1, sod should be anchored with pins or other approved methods. Installed sod should be rolled or tamped to provide good contact between sod and soil.

Irrigate sod and soil to a depth of 4" immediately after installation. Sod should not be cut or spread in extremely wet or dry weather. Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks

MATERIALS

Area.

Provide wildlife food and

Grows well on coastal sa

dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.

Grows similar to tall fescue.

227,000 seed per pound. Mix with Weeping lovegrass or other low-growing grasses or legumes.

Sod selected should be certified. Sod grown in the general area of the project is desirable.

1. Sod should be machine cut and contain 3/4" (+ or - 1/4") of soil, not including shoots or thatch.

2. Sod should be cut to the desired size within + or - 5%. Torn or uneven pads should be rejected. 3. Sod should be cut and installed within 36 hours of digging.

4. Avoid planting when subject to frost heave or hot weather if irrigation is not available. 5. The sod type should be shown on the plans or installed according to Table 6-6.2. Se Figure 6-4.1 for your Resource

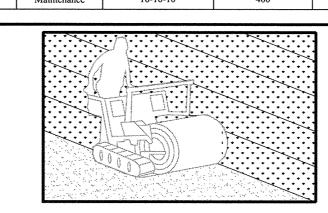
Table 6-6.2 <b>Sod Planting Re</b> o	quirements		
Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tiflawn	M-L, P,C P,C P,C P,C	Warm Weather
Bahiagrass	Pensacola	P,C	Warm Weather
Centipede	-	P,C	Warm Weather
St. Augustine	Common Bitterblue Raleigh	С	Warm Weather
Zoysia	Emerald Myer	P,C	Warm Weather
Tall Fescue	Kentucky	M-L,P	Cool Weather

MAINTENANCE

Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified (See Figure 6-6.2). Apply one ton of agricultural lime as indicated by soil test or every 4-6 years. Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.3

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)	
Cool	First	6-12-12	1500	50-100	
season	Second	6-12-12	1000	-	
grasses	Maintenance	10-10-10	400	30	
Warm	First	6-12-12	1500	50-100	
season	Second	6-12-12	800	50-100	
grasses	Maintenance	10-10-10	400	30	



DISTURBED AREA STABILIZATION (NTS)

D84

DEFINITION

Applying plant residues or other suitable materials, produced on the site if possible, to the soil

PURPOSE
To reduce runoff and erosion; to conserve moisture, to prevent surface compaction or crusting; to control undesirable vegetation; to modify soil temperature; to increase biological activity i

REQUIREMENT FOR REGULATORY COMPLIANCE

Permanent Seeding), and Ds4-Disturbed Area Stabilization (With Sodding).

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be muich can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to Ds2—Disturbed Area Stabilization (With Temporary Seeding), Ds3—Disturbed Area Stabilization (With

**SPECIFICATIONS** 

Mulching without Seeding

This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

 Grade to permit the use of equipment for applying and anchoring mulch.
 Install needed erosion control measures as required such as dikes, diversions, berms, terraces . Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. ne advantage of this material is easy application. 2. Wood waste (chips,sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs. 3. Cutback asphalt (slow curing) shall be applied at 1200 gallons per acre (or 1/4 gallon per sq. 4. Polyethylene film shall be secured over banks or stockpiled soil material for temporary

Applying Mulch

When mulch is used without seeding, mulch shall be applied to provide full coverage of the Dry straw or Hay mulch and wood chips shall be applied uniformly by hand or by mechanical a If the grea will eventual be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.

3. Cutback asphalt shall be applied uniformly. Care should be taken in areas of pedestrian traffic due to problems of "tracking in" or damage to shoes, clothing, etc.

4. Apply polyethylene film on exposed areas.

Anchoring Mulch

1. Straw or hay mulch can be pressed into the soil with a disk arrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough no to cut the mulch but to press it into the soil leaving much of it in an erect position. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.

Straw or hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion shall be sprayed onto mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifers and binders can be substituted for emulsified asphalt. Pleas refer to specification Tb—Tackifers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Da1

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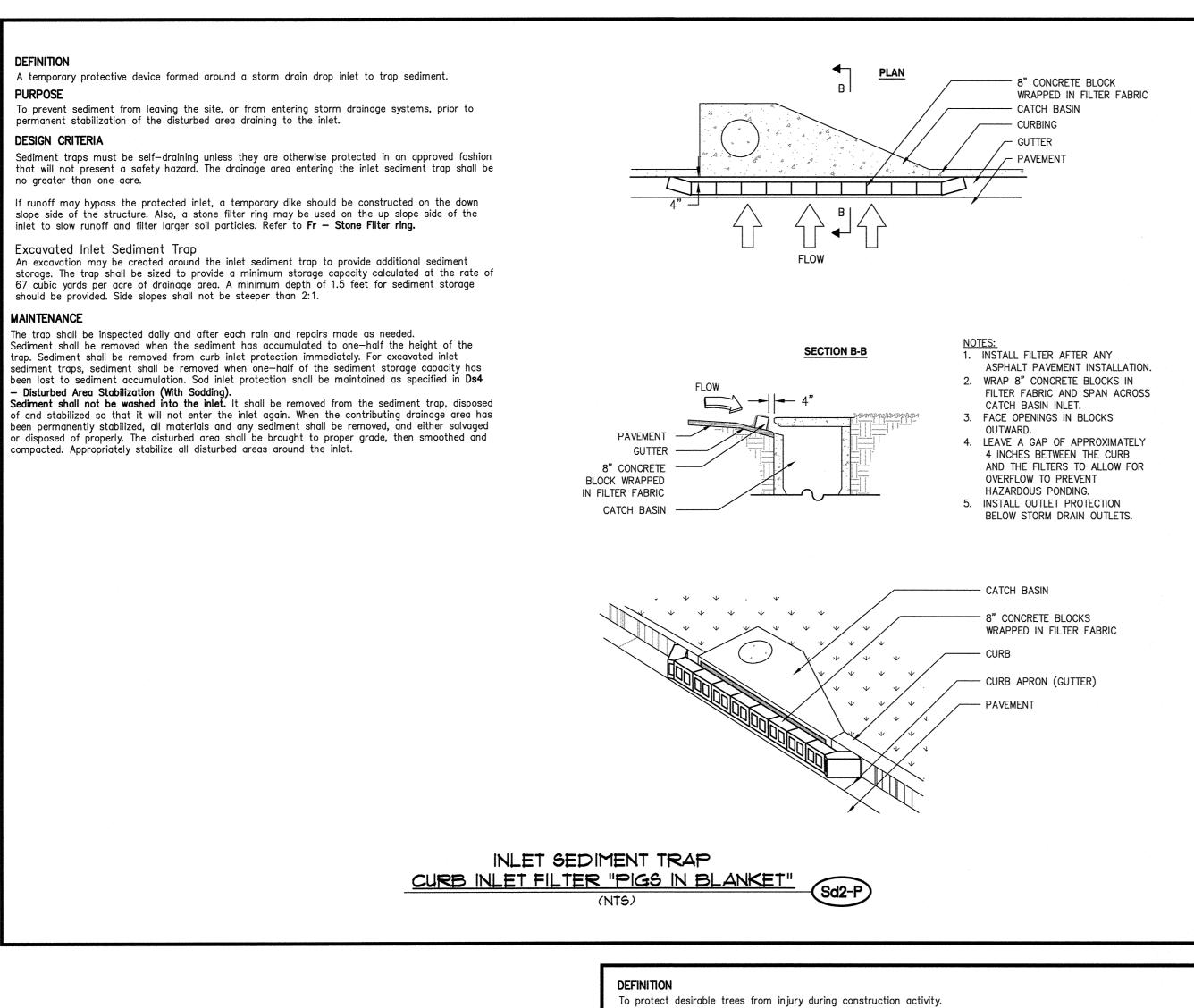
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hydraulic lift and shear forces when embedded in the soil within stormwater channels.

A protective covering (blanket) or soil stabilization mat used to establish permanent getation on steep slopes, channels, or shorelines.

—To provide a microclimate which protects young vegetation and promotes its establishment. —to reinforce the turf to resist forces of erosion during storm events. CONDITIONS

tting and blankets can be applied on steep slopes where erosion hazard is high and planting is likely to be too slow in providing adequate protective cover. CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS. Maintenance of final vegetative cover must be considered when choosing blankets verses matting. On streambanks or tidal shorelines where moving water is present, matting can prevent new plantings from being PLANNING CONSIDERATIONS

Care must be taken to choose the type of blanket or matting which is most appropriate for the specific needs of a project. Two general types of blankets and mats are discussed within this specification. Due to the abundance or erosion control matting and blanket products available, all of the advantages, disadvantages, and specifications of all manufactured products will not be discussed in this manual. Manufacturer's instructions and recommendations, as well as a site visit by designer and plan reviewer is highly

Temporary Erosion Control Blankets
This includes TEMPORARY "combination" blankets (rolled erosion control blankets—RECB) consisting of a plastic netting which covers and is intertwined with a natural organic or manmade mulch: or, a jute mesh which is typically homogeneous in design and can act stabilize concentrated flow areas with a velocity less than 5ft/sec and slopes 2.5:1 or steeper with a height of 10 feet or greater. Because temporary blankets will deteriorate in a short period of time, they provide no enduring reduction in erosion protection.

Benefits of using erosion control blankets include the following: . Protection of the seed and soil from raindrop impact and subsequent displacement. Thermal consistency and moisture retention for seedbed area. Stronger and faster germination of grasses and legumes.

4. Planing off excess stormwater runoff. 5. Prevention of sloughing of topsoil added to steeper slopes.

Permanent Erosion Control Matting
Consists of a PERMANENT non-degradable, three-dimensional plastic structure which can
be filled with soil prior to planting. These mats are also known as PERMANENT SOIL REINFORCING MATS (turf reinforcement matting). Roots penetrate and become entangled in the matrix, forming a continuous anchorage for surface growth and promoting enhanced energy dissipation. Matting shall be used when a vegetative lining is desired in stormwater onveyance channels where the velocity is between five and ten feet per second.

Benefits of using erosion control matting include the following: 1. All benefits gained from using erosion control blankets. Causes soil to drop out of stormwater and fill matrix with fine soils which become the growth medium for the development of roots. Acts with the vegetative root system to form an erosion resistant cover which resists

All blanket and matting materials shall be on the Georgia Department of Transportation Qualified Products List (QPL #62 for blankets, QPL #49 for matting). All blankets shall be ontoxic to vegetation and to the germination of seed and shall not be injurious to the unprotected skin of humans. At a minimum, the plastic netting shall be intertwined with the mulching material/fiber to maximize strength and provide for ease of handling.

Machine produced TEMPORARY combination blankets shall have a consistent thickness with the organic material evenly distributed over the entire blanket area. All combination plankets shall have a minimum width of 48 inches. Machine produced combination blankets include the following:

STRAW BLANKETS are combination blankets that consist of weed-free straw from agricultural crops formed into a blanket. Blankets with a top side of photodegradable plastic mesh with a maximum mesh size of 5/16 x 5/16 inch and sewn to the straw with biodegradable thread is appropriate for slopes. The blanket shall have a minimum thickness of 3/8 inch and minimum dry weight of 0.5 pounds per square yard. EXCELSIOR BLANKETS are combination blankets that consist of curled wood excelsior (80% of fibers are six inches or longer) formed into a blanket. The blanket shall have clear markings indicating the top side of the blanket and be smolder resistant. Blankets shall have photodegradable plastic mesh having a maximum mesh size of  $1 \frac{1}{2} \times 3$  inches. The blanket shall have a minimum thickness of 1/4 of an inch and a dry weight of 0.8 pounds per square yard. Slopes require excelsior matting with the top side of the blanket

covered in the plastic mesh, and for waterways, both sides of the blankets require plastic mesh. COCONUT FIBER BLANKETS are combination blankets that consist of 100% coconut fiber (into a blanket. The minimum thickness of the blanket shall be 1/4 of an inch with a minimum dry weight of 0.5 pounds per square yard. Blankets shall have photodegradable plastic mesh, with a  $\,$  maximum mesh size of 5/8 x 5/8 inch and sewn to the fiber with a breakdown synthetic yarn. Plastic mesh is required on both sides of the blanket if used in waterways. A maximum of two inches is allowable for the stitch pattern and row

WOOD FIBER BLANKETS are combination blankets that consist of reprocessed wood fibers that do not possess or contain any growth or germination inhibiting factors. The blankets shall have a photodegradable lastic mesh, with a maximum mesh size of  $5/8 \times 3/4$  inch, securely bonded to the top of the mat. The blankets shall have a minimum dry weight of 0.35 pounds per square yard. A maximum of two inches is allowable for the stitch pattern and row spacing. This practice shall be applied only to slopes. e. JUTE MESH can be applied to slopes. Jute mesh with a 48 inch width shall show between 76 and 80 warpings and a one yard length shall show between 39 to 43 weftings. The woven mesh shall be at least 45 inches wide. Yarn shall have a unit weight of at least 0.9 pounds per square yard, but not more than 1.5 pounds

TABLE 6-27.4

175

TYPE FENCE

Elongation (% Max.)
(ASTM D-4632)

Elongation (% Max.) (ASTM D-4632)

Flow Rate (Gal/Min/Sq. Ft.)

(ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)

linimum Fabric Width (Inches)

(1) Minimum roll average of five specimens.
(2) Percent of required initial minimum tensile strength

SIDE VIEW

Tensile Strength (Lbs. Min.) (1)

**—Permanent Matting**Permanent matting shall consist of a lofty web of mechanically or melt bonded polymer nettings, monofilaments or fibers which are entangled to form a strong and dimensionally stabile matrix. Polymer welding, thermal or polymer fusion, or the placement o fibers between two high strength, biaxially oriented nets bound securely together by parallel lock stitching with polyolefin, nylon or polyester threads are all appropriate bonding methods. Mats shall maintain their shape before, during, and after installation under dry or water saturated conditions. Mats must be stabilized against ultraviolet degradation and shall be inert to chemicals

normally encountered in a natural soil environment. The mat shall conform to the following physical properties: MINIMUM VALUE 0.5 inch Thickness Weight Roll Width Tensile Strength Length (50% elongation) Length (ultimate) Width 15 lbs./in.

(50% elongation) Width

(ASTM D 1682 - 6" strip) 10 lbs./in. Ultraviolet Stability 80% (1000 hrs. in an Atlas ARC Weatherometer, ASTM G 23, Type D in accordance with ASTM D 822)

Site Preparation After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks more than one inch in diameter, and any foreign material that will prevent contact of the soil stabilization mat with the soil surface. Surface must be smooth to ensure proper contact of blankets or matting to the soil surface. If necessary, redirect any runoff from the ditch or slope during installation.

20 lbs./in.

Staples
The following are considered appropriate stapling and staking

-Temporary Blankets
This includes straw, excelsior, coconut fiber, and wood fiber blankets. Staples shall be used to anchor temporary blankets. U-shaped wire (11 gauge or greater) staples with legs at least 6 inches in length and a crown of one inch or appropriate biodegradable staples can be used. Staples shall be of sufficient hickness for soil penetration without undue distortion.

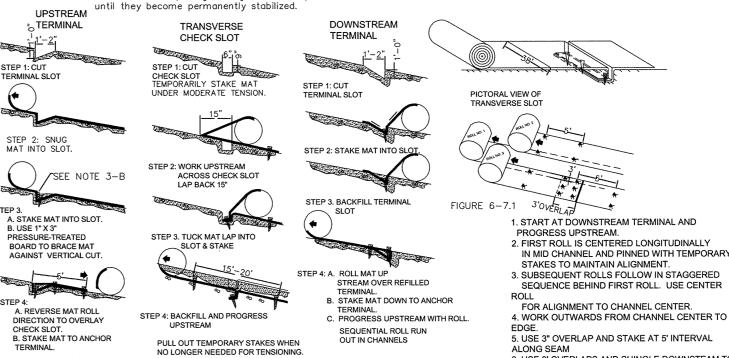
—Permanent Matting
Sound wood stakes, 1 x 3 inches stock sawn in a triangular shape, shall be used.

Depending on the compaction of the soil, select stakes with a length from 12 to 18 inches. U-shaped staples shall be 11 gauge steel or greater, with legs at a minimum of 8 inches length with a 2 inch crown.

Planting
Lime, fertilizer and seed shall be applied in accordance with seeding or other type of planting plan completed prior to installation of temporary combination blankets or jute mesh. For permanent mats, the area must be brought to final grade, plowed, limed, and fertilized. After the permanent mat has been installed and backfilled, the entire area shall be grassed. Refer to specification Ds3-Disturbed Area Stabilization (with Permanent Vegetation).

See Figure 6-7.1 for typical installation guidelines. Follow manufacturer's

All erosion control blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas



EROSION CONTROL AND MATTING BLANKETS

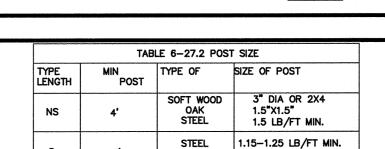
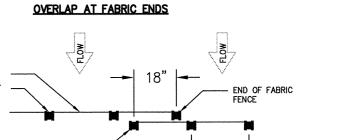


	TABLE 6-27.3 F	FASTENERS FOR	WOOD POST	
	GAUGE	CROWN	LEGS	STAPLES/ POST
WIRE STAPLES	17 MIN.	3/4" WIDE	1/2" LONG	5 MIN.
	GAUGE	LENGTH	BUTTON HEADS	NAIL/ POST
NAILS	14 MIN.	1"	3/4"	4 MIN.

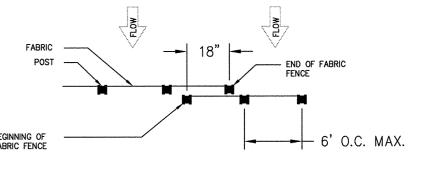
NOTE: FILTER FABRIC MAY ALSO BE ATTACHED TO THE POST BY WIRE CORDS, AND POCKETS.

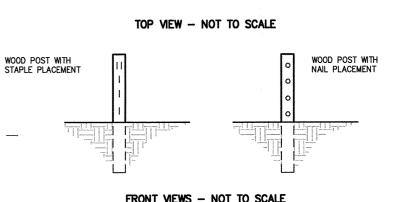


ALONG SEAM

6. USE 3' OVERLAPS AND SHINGLE DOWNSTEAM TO

CONNECT LINING AT ROLL ENDS.





1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST

FASTENERS FOR SILT FENCE

TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

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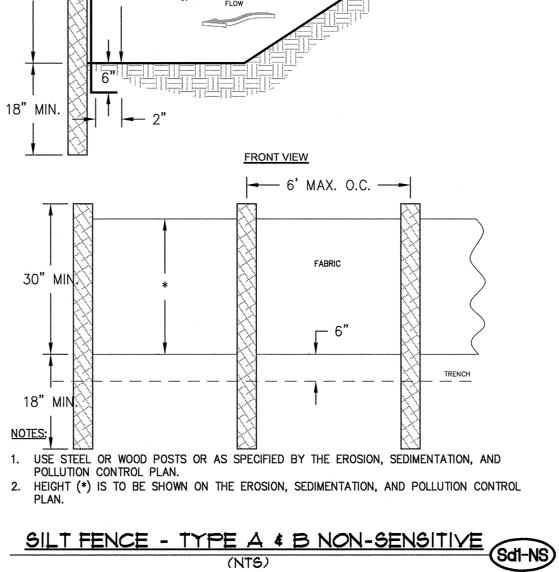
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shade and other environmental benefits while the land is being converted from forest to CHAIN LINK FENCE DETAIL NO EXCAVATION, TRENCHING, TILLING, GRUBBING, VEHICLE OR EQUIPMENT STORAGE WITHIN LIMITS OF TREE PROTECTION GALVANIZED METAL POST SUNK A MINIMUM OF 1'-0" BELOW GRADE. SET 6' HT TEMPORARY CHAIN 10' ON CENTER. LINK FENCE BARRIER CONSTRUCTED TO PROTECT 6' HT TEMPORARY CHAIN -LINK FENCE FOR TREE TREE TRUNK, CROWN, AND ROOT SYSTEM FROM INJURY. BARRIERS SHALL BE PROTECTION BARRIER LOCATED AT THE LIMITS OF THE TREE'S (TYP). CRITICAL ROOT ZONE (A RADIUS OF ONE AND A HALF FEET PER INCH OF THE TREE'S DIAMETER AT BREAST HEIGHT). BARRIER SHALL BE KEPT IN GOOD CONDITION FOR THE DURATION OF THE PROJECT AND IS TO REMAIN IN PLACE UNTIL THE NOTICE OF TERMINATION. FOR ADDED PROTECTION -PROVIDE 4" DEEP ORGANIC MULCH OVER ANY UNPROTECTED ROOT ZONE. -PROVIDE TEMPORARY IRRIGATION WHERE PRACTICAL AND FEASIBLE.

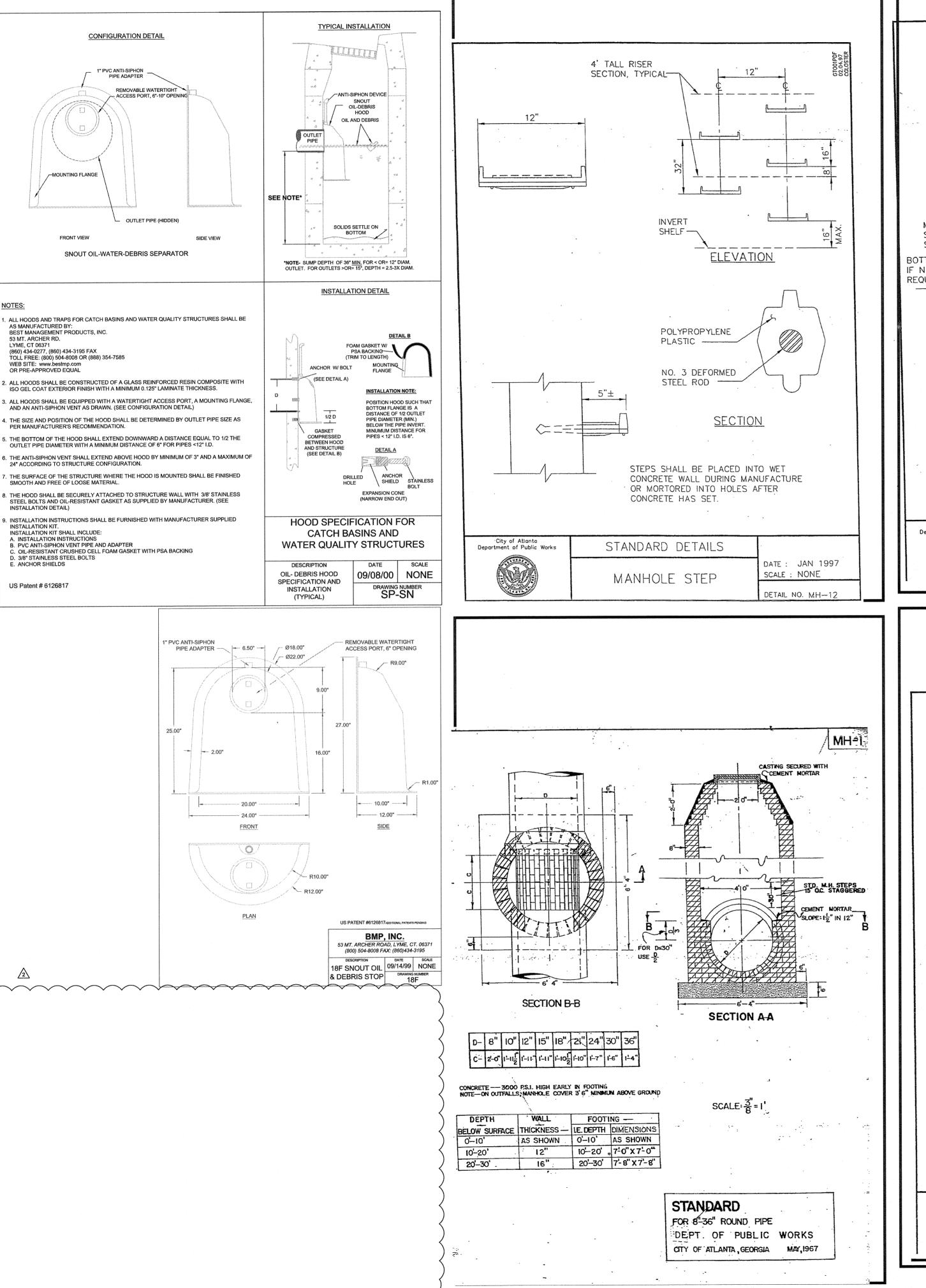
To insure the survival of desirable trees where they will be effective for erosion and sediment

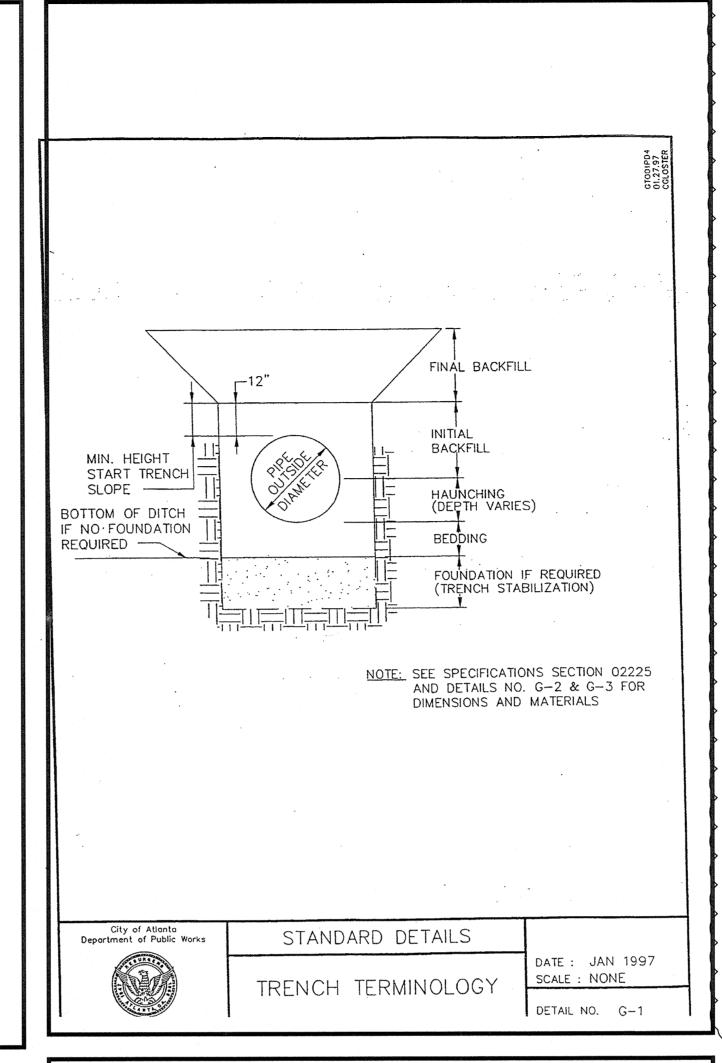
control, watershed protection, landscape beautification, dust and pollution control, noise reduction,



2. HEIGHT (\*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL

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NOTE: TOP OF CONCRETE PAD SHALL BE FLUSH

1'-6" SQ.

SIDEWALKS AND PAVED AREAS

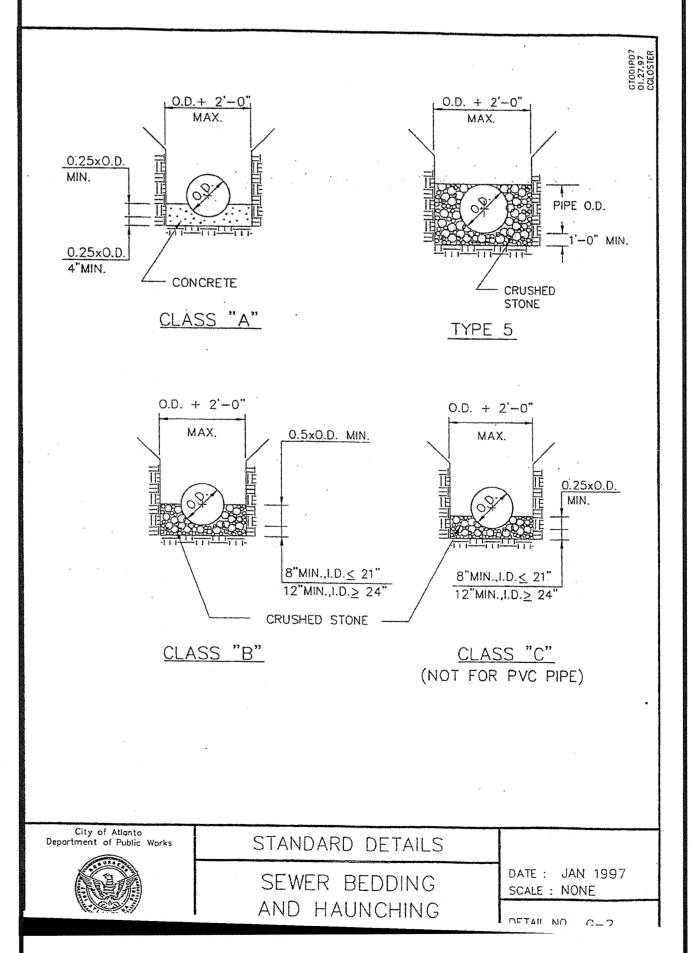
WITH FINAL SURFACE IN

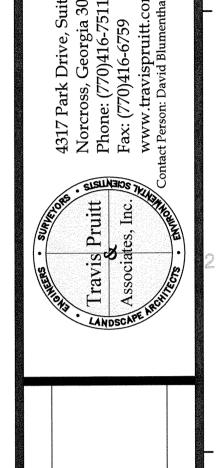
COUNTERSUNK BRASS

CLEANOUT PLUG -

CONC. ENCASEMENT -

CONC. PAD -





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STANDARD DETAILS

- 6" Ø DI OR PVC PIPE

FITTING (1/8 BEND)

PLUG OR EXTEND

-NO CONCRETE ON

THESE JOINTS

AS REQUIRED

SCALE : NONE

DATE: JAN 1997

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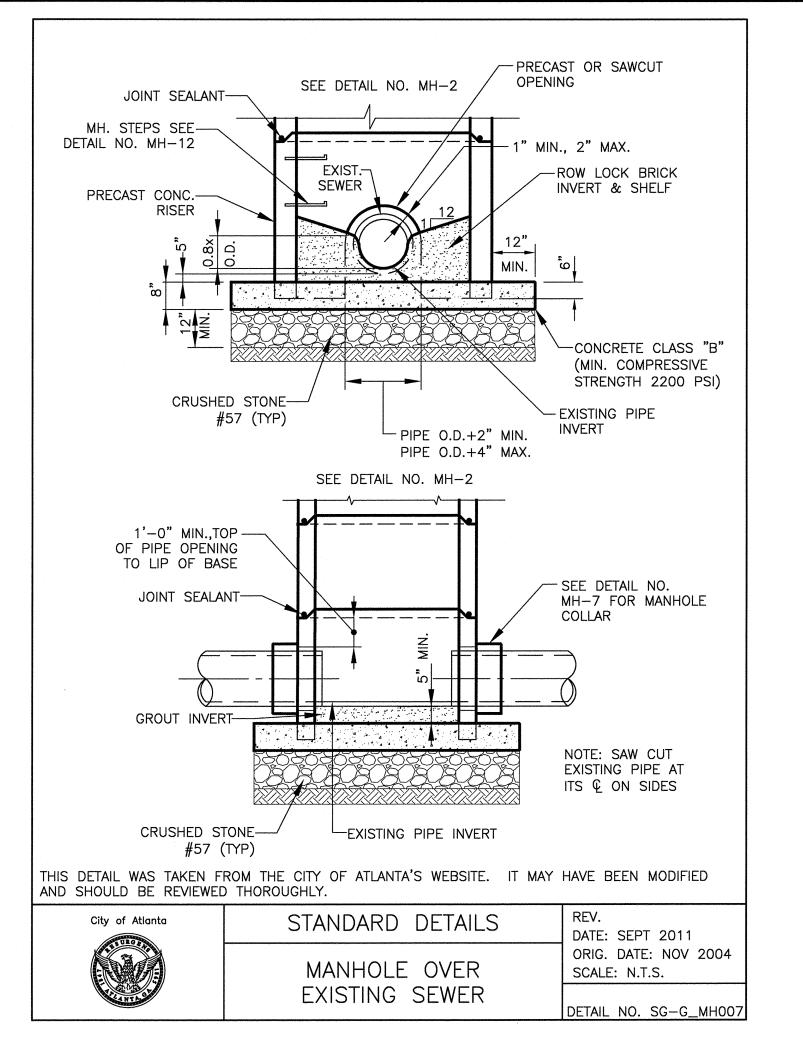
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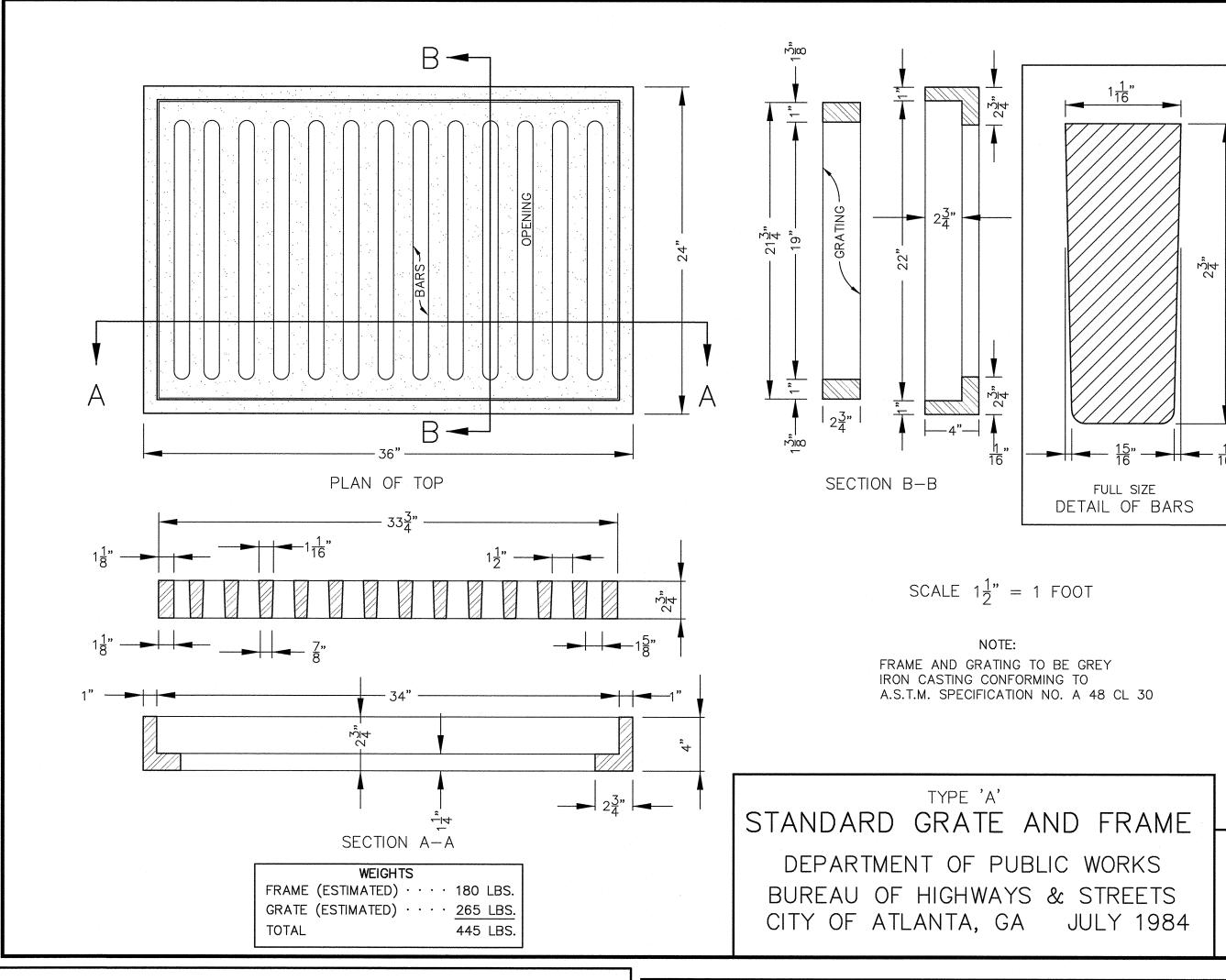
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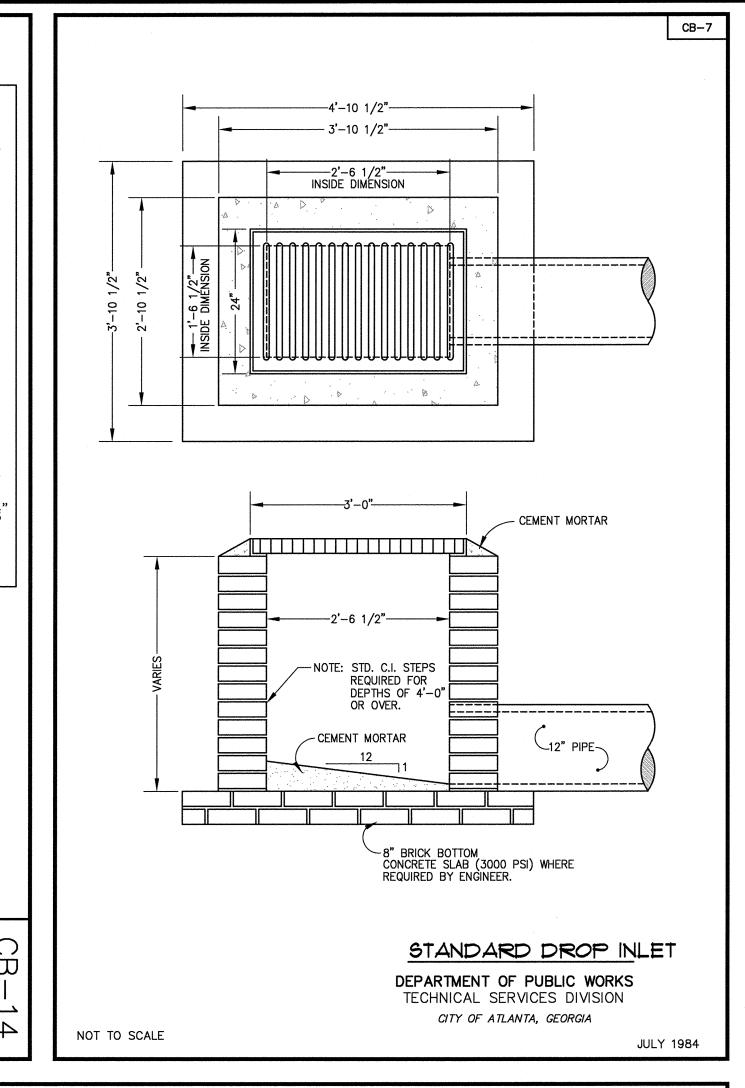
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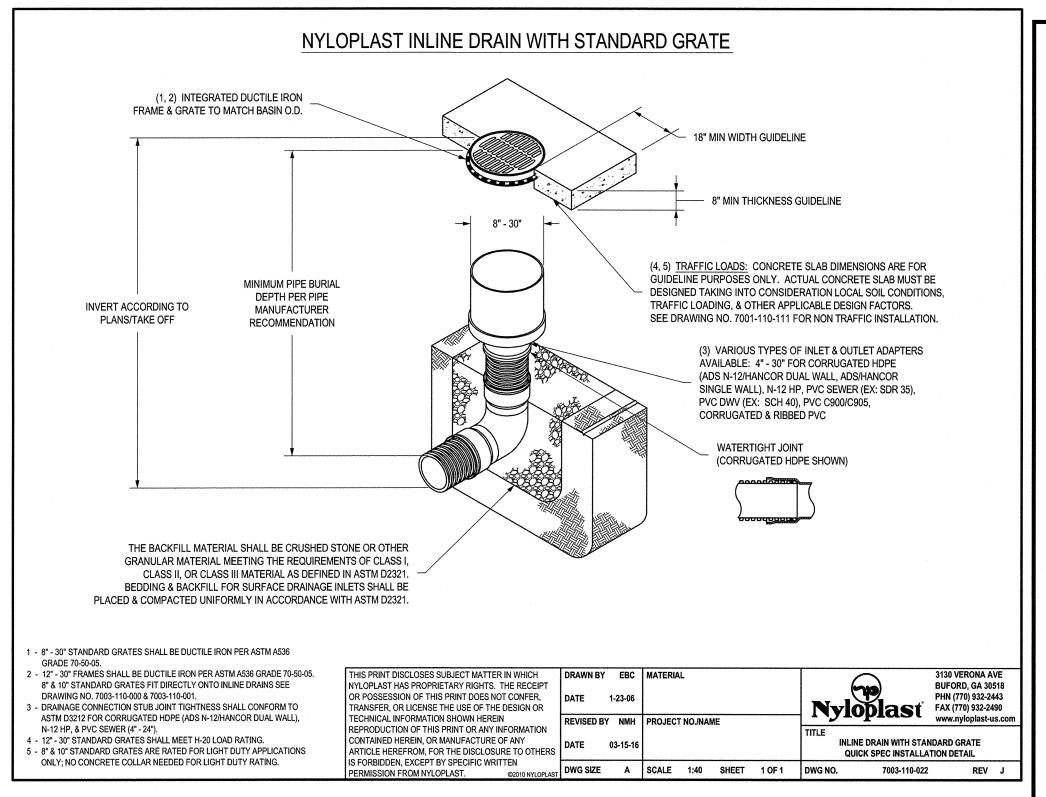
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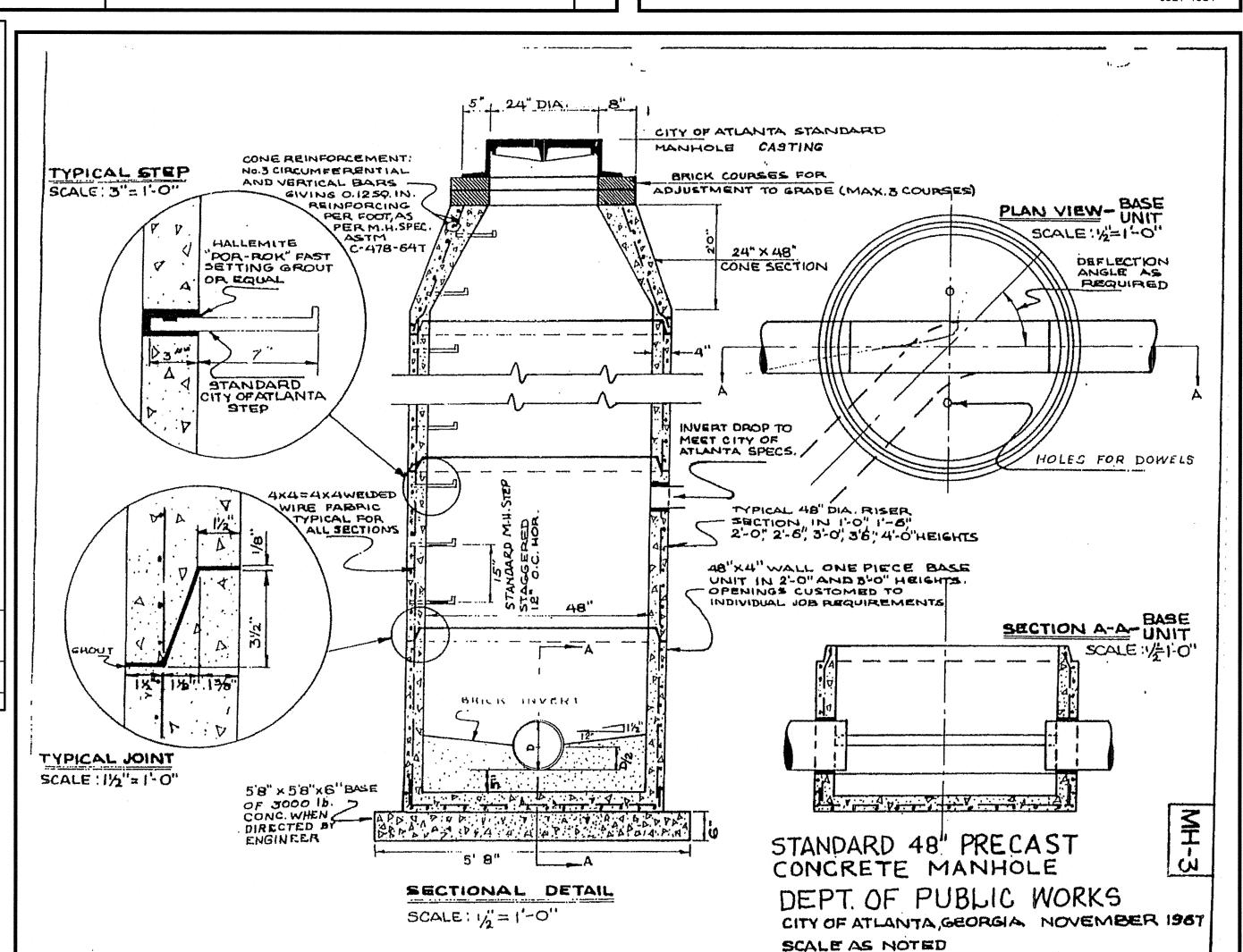
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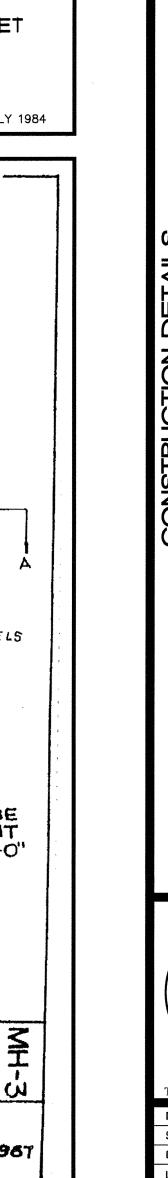












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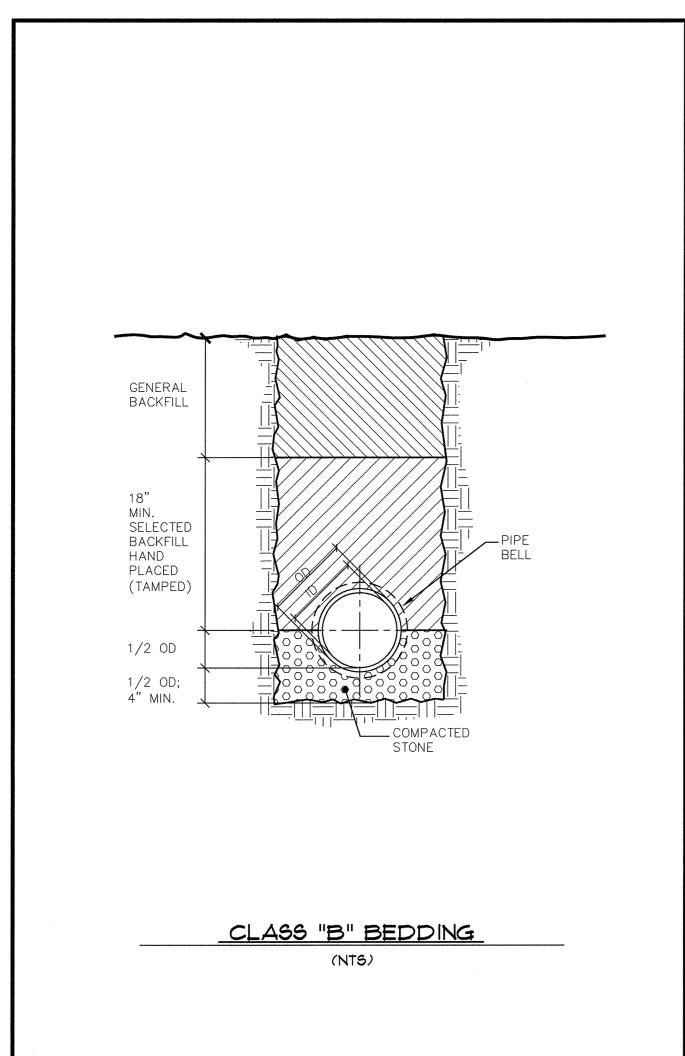
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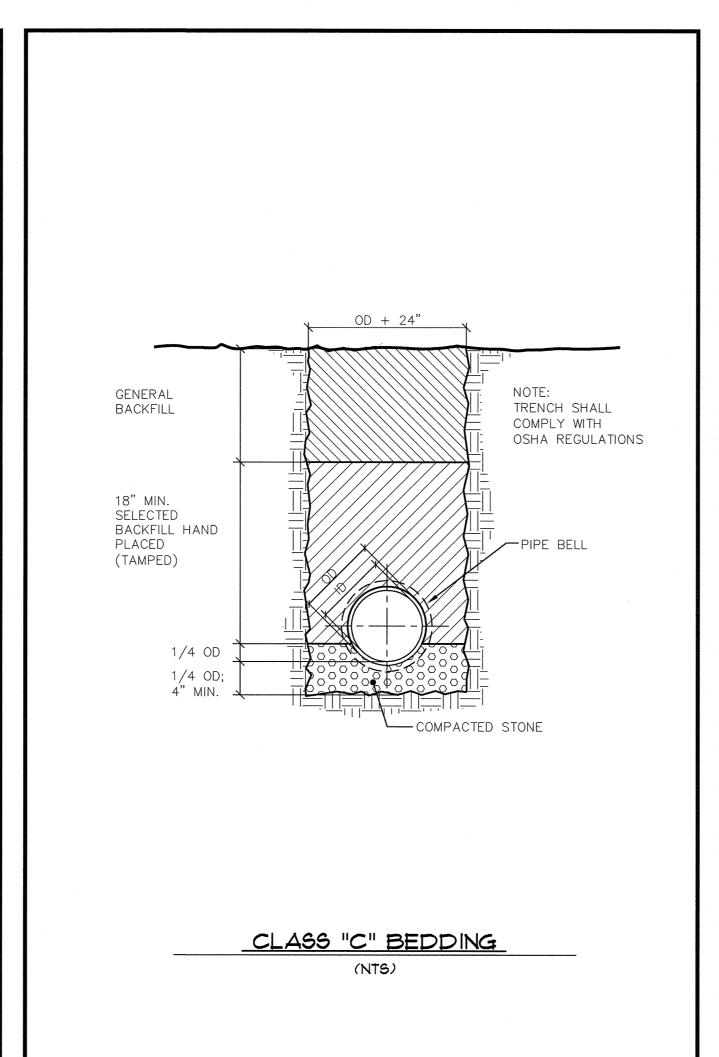
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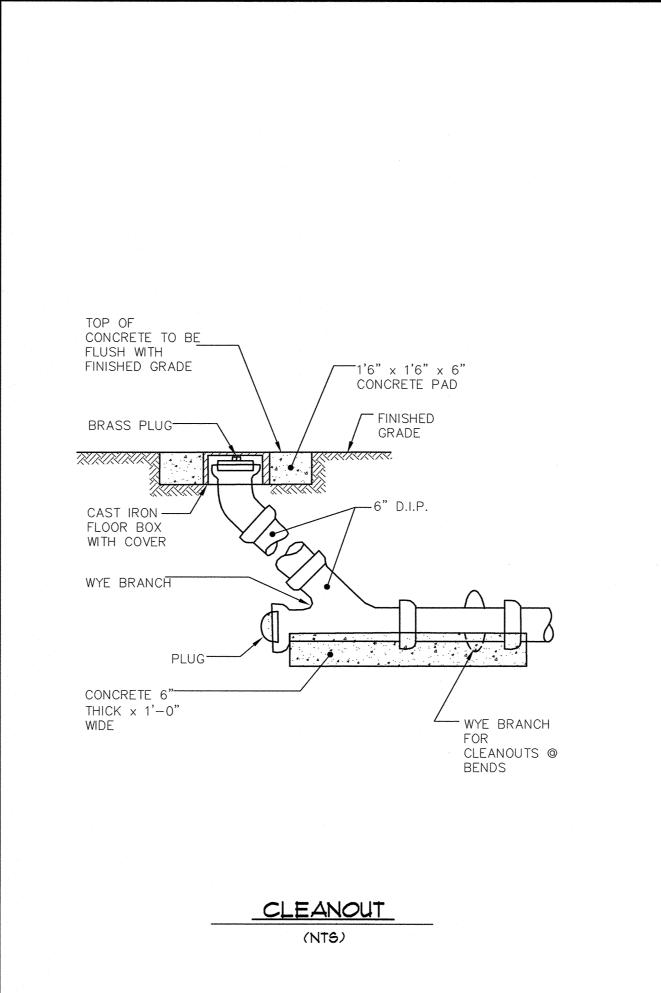
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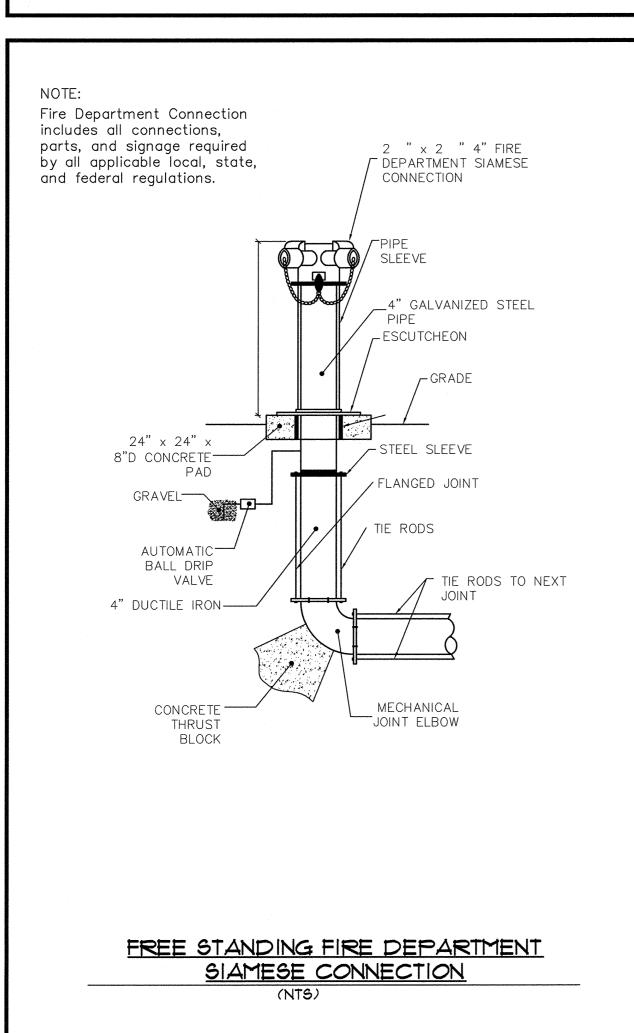
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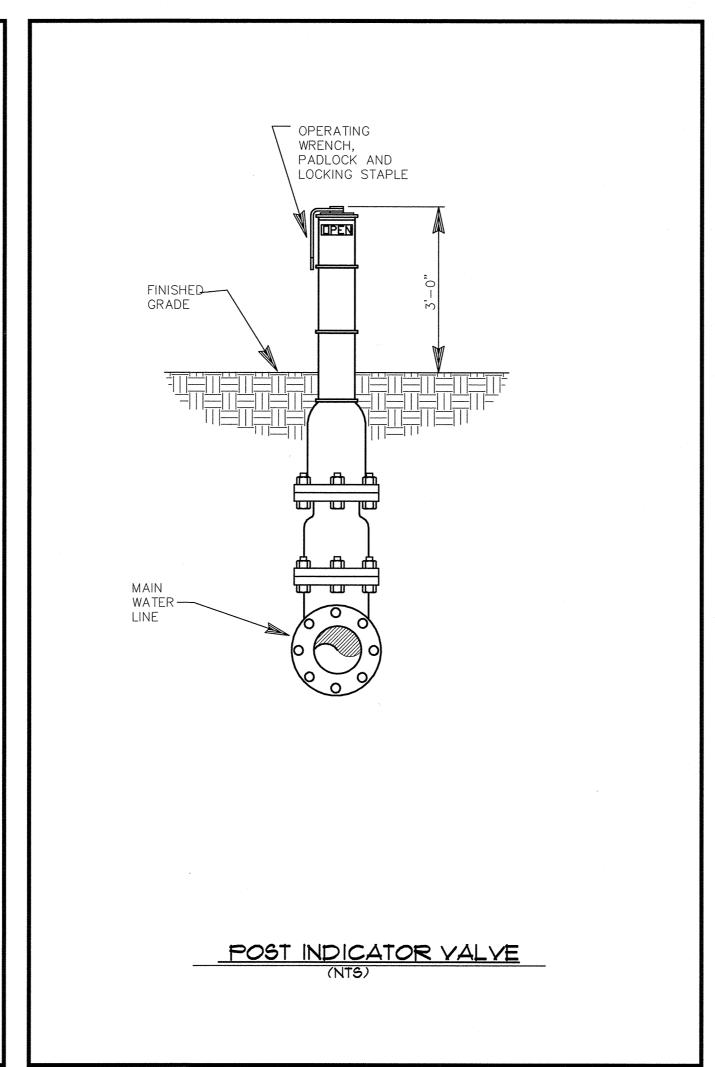
JN: 17-0067 FN: 162-D-041

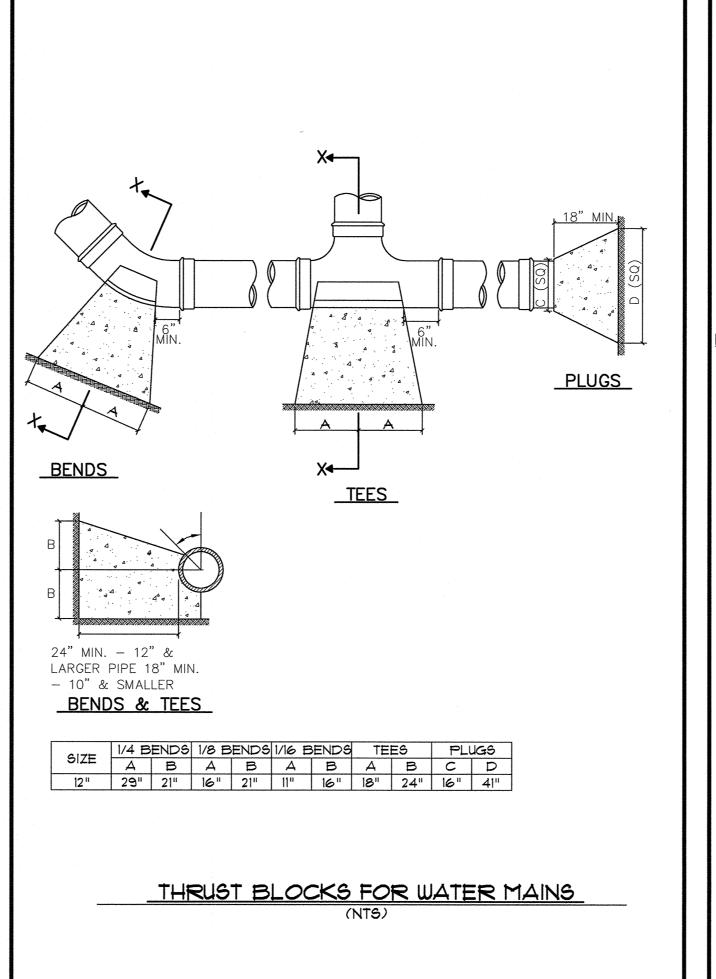


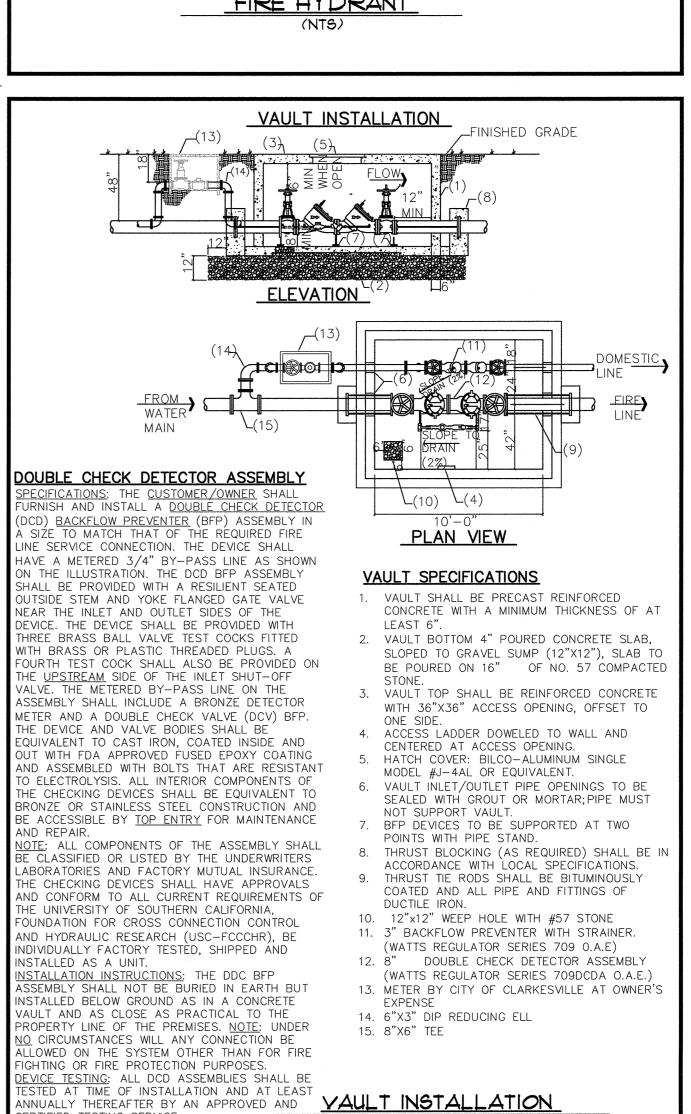




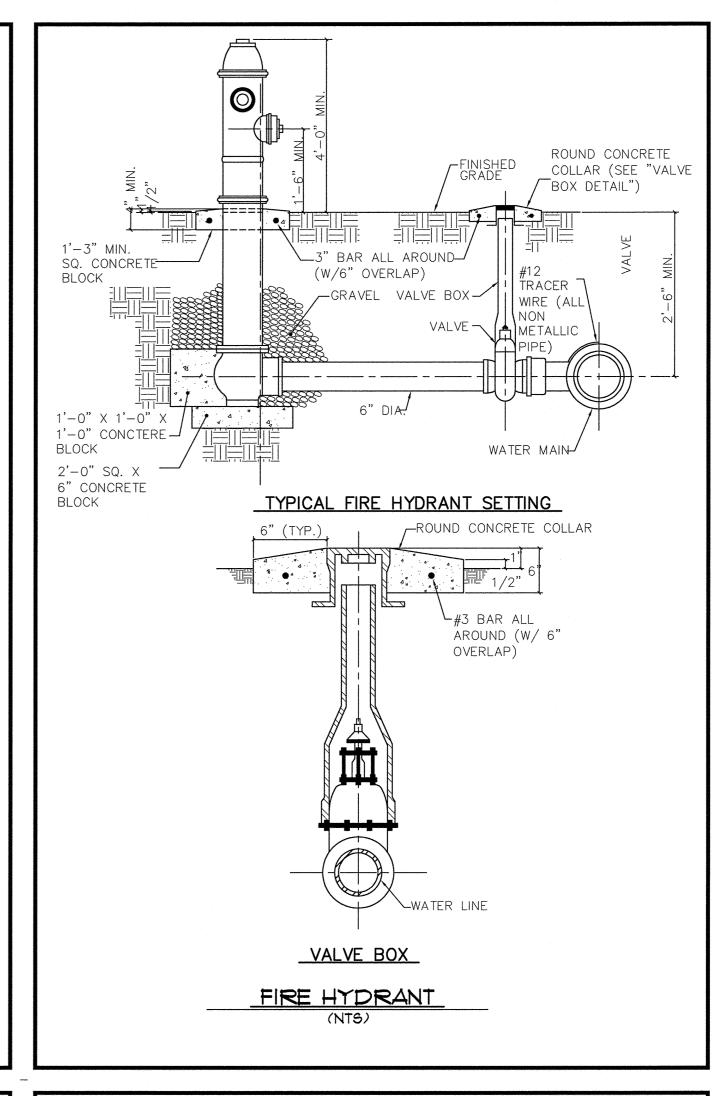


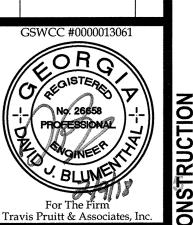






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For The Firm
Travis Pruitt & Associates, Inc.

DATE: 08/17/2017

SCALE: N/A

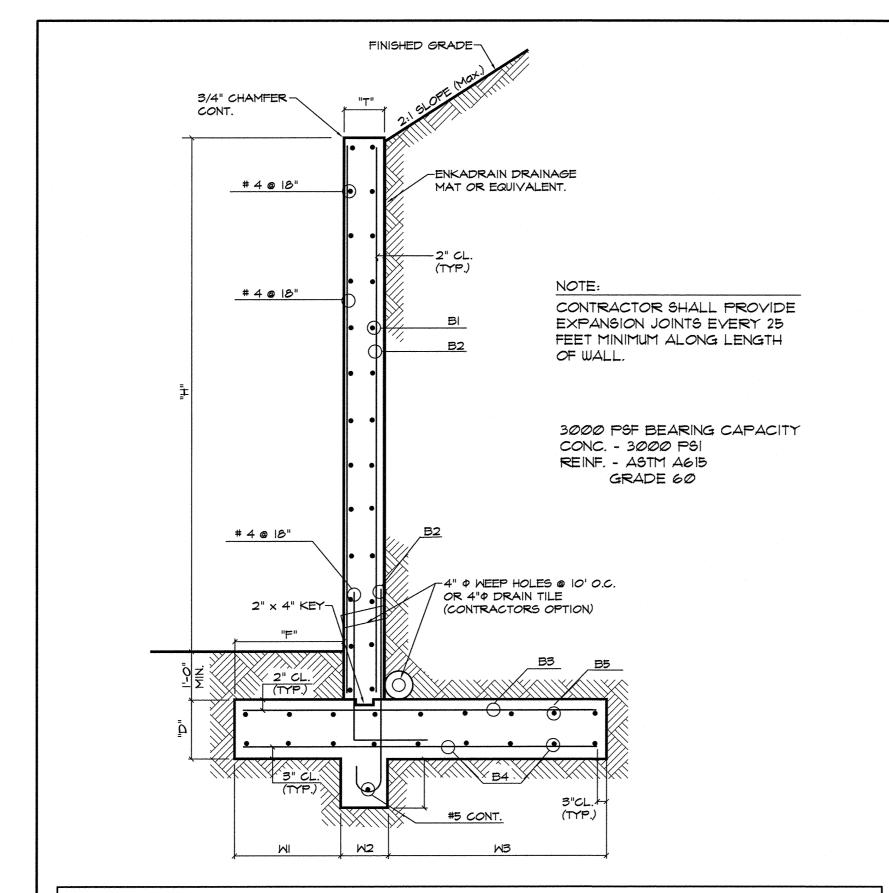
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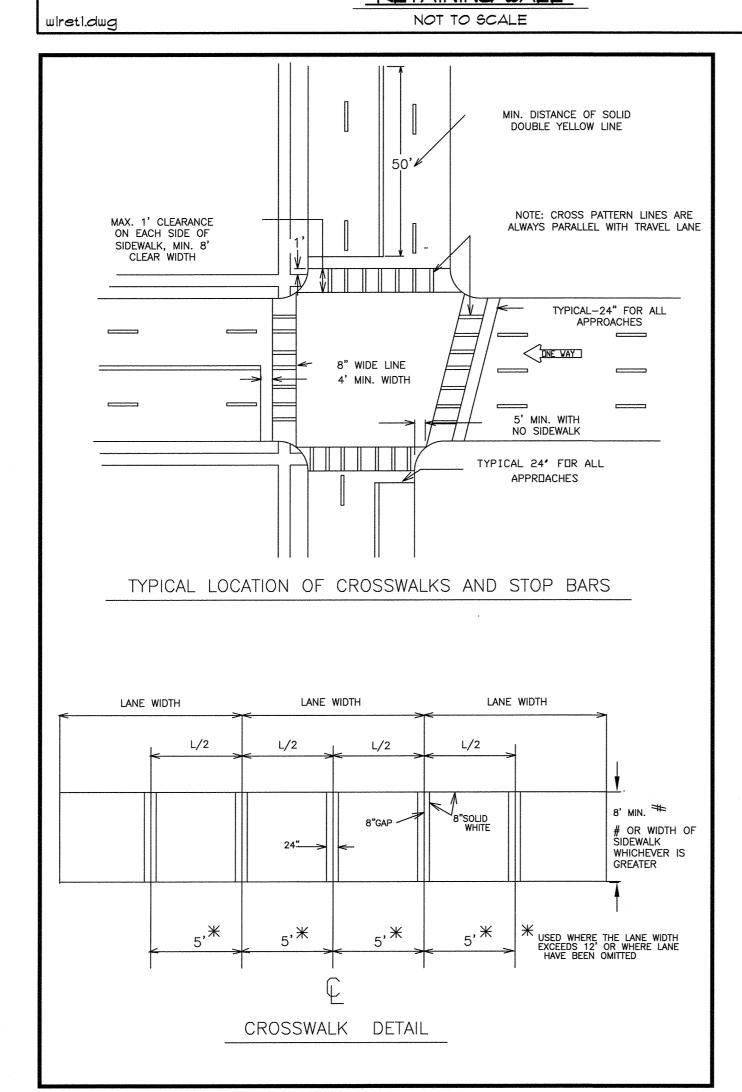
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FN: 162-D-041

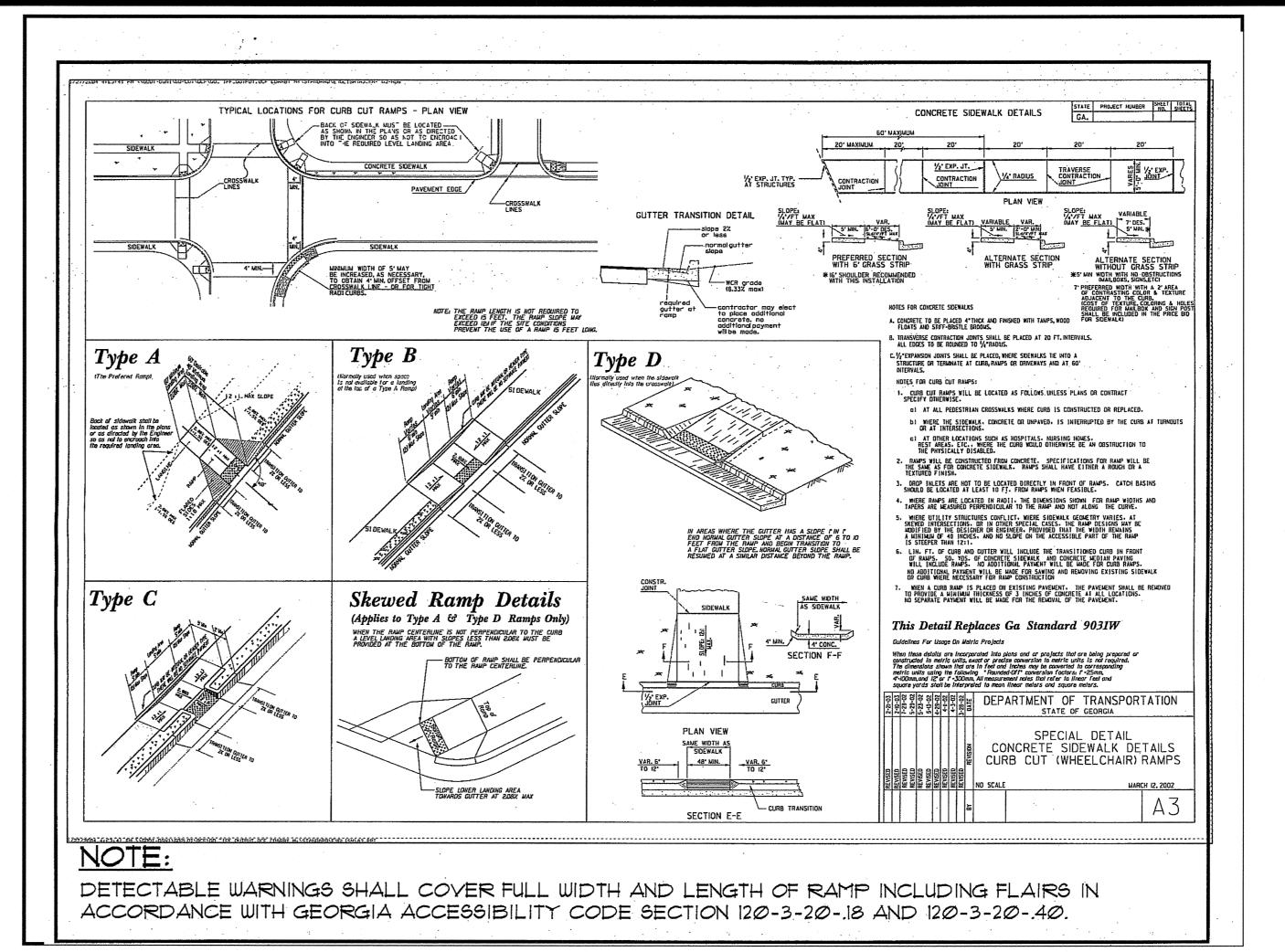
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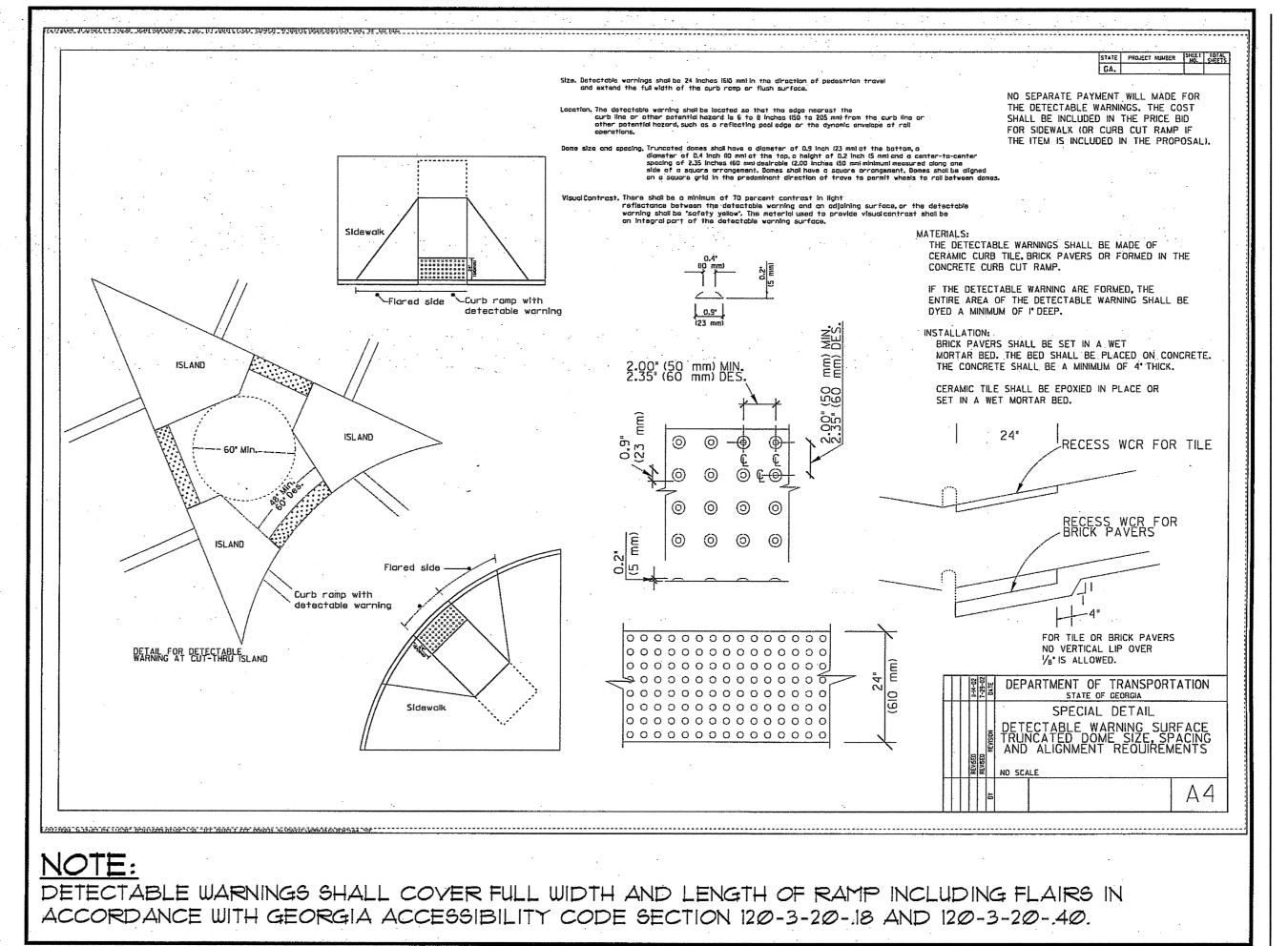


Н	MI	W2	W3	F	Т	D	BI	B2	B3	B4	B5	B6
2-3	0'-9"	1'-0"	2'-6"	1-0"	1'-0"	1'-0"	# 4 @ 12	#4@12	#5@12	#6012	#4@12	#4@1
3-4	0'-9"	1'-2"	3'-0"	1'-6"	1'-0"	1'-6"	# 4 @ 12	#4@12	#5@12	#6@12	# 4 @ 12	#401



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Travis Pruitt & Associates, Inc.

DATE: 08/17/2017

SCALE: N/A

CN:170067DT2

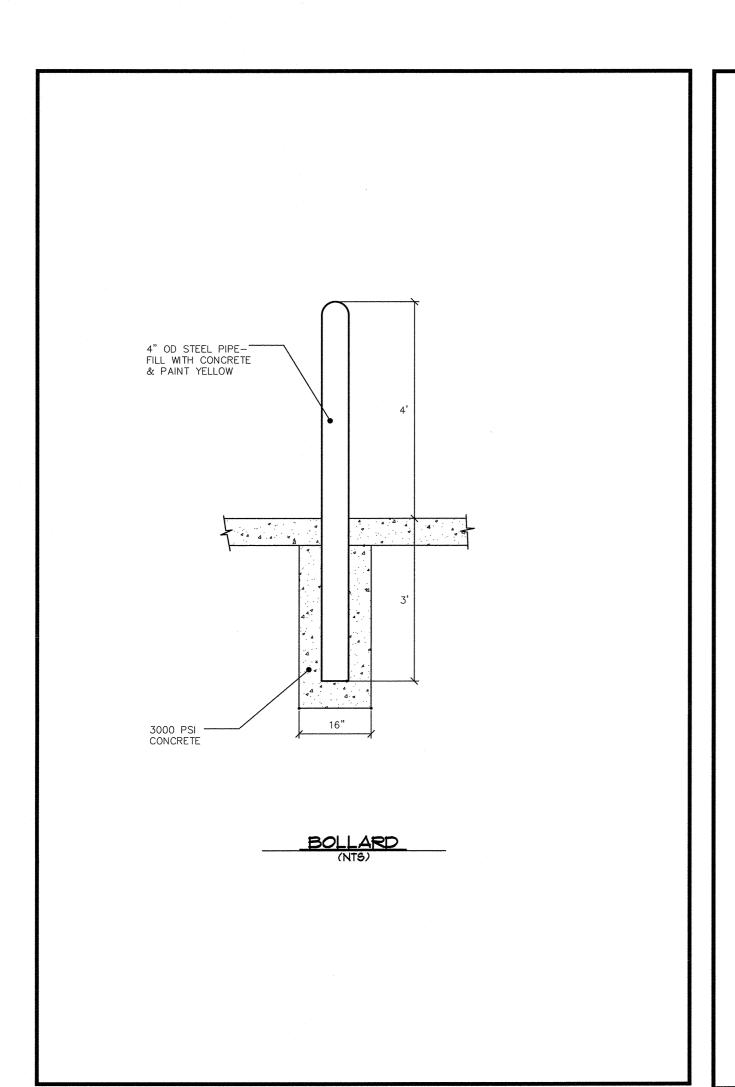
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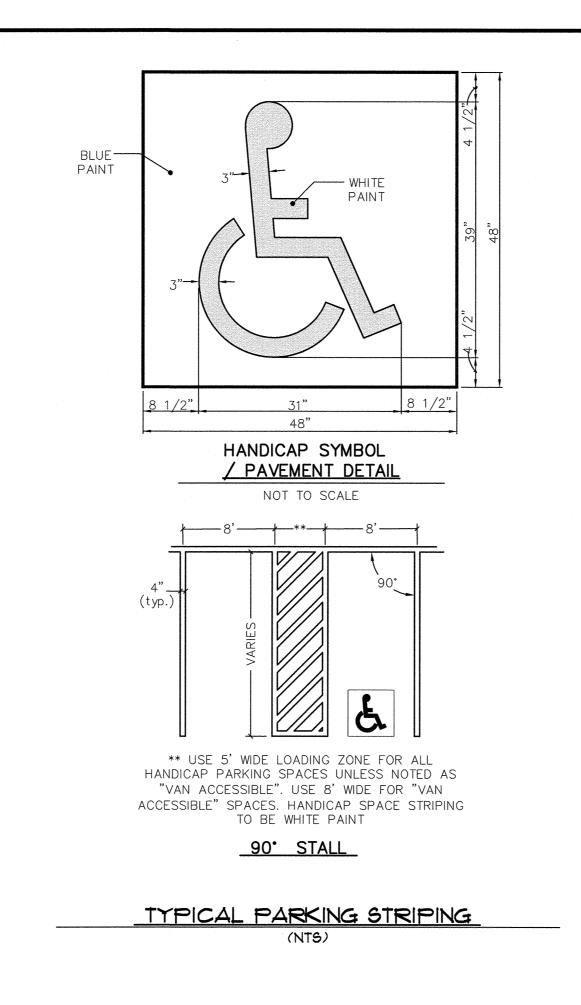
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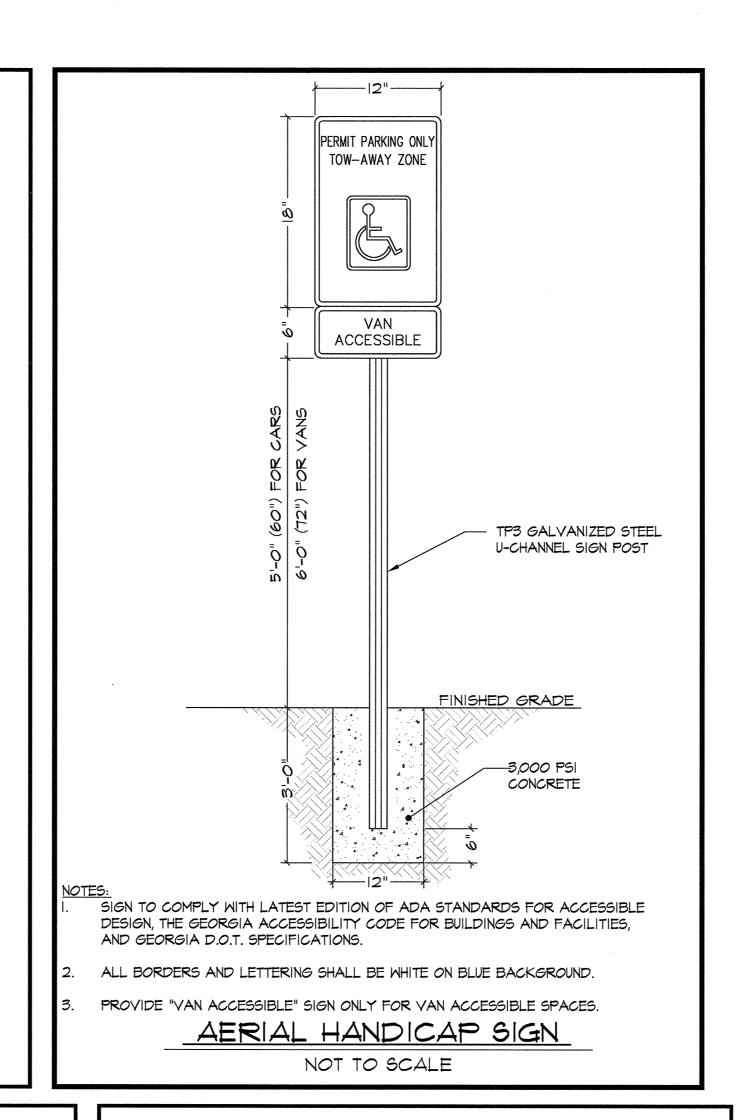
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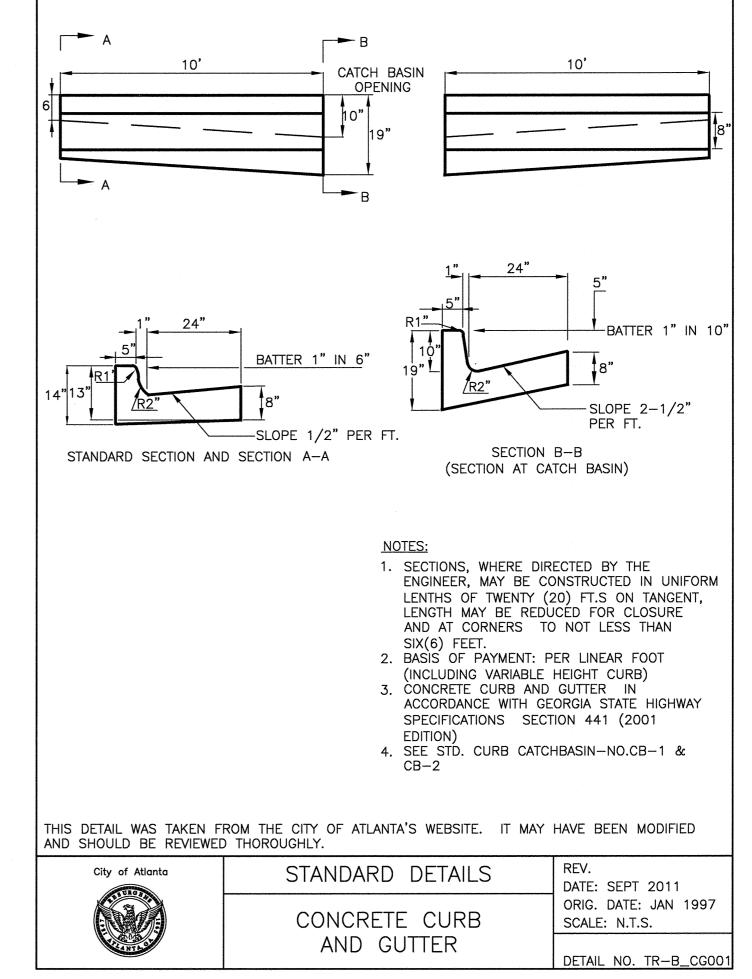
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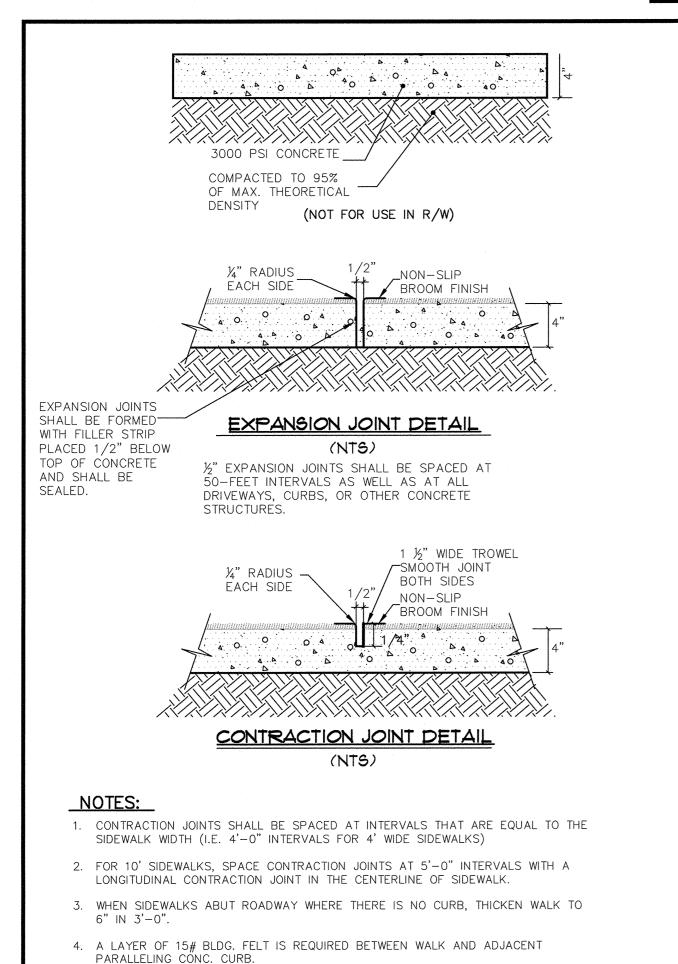
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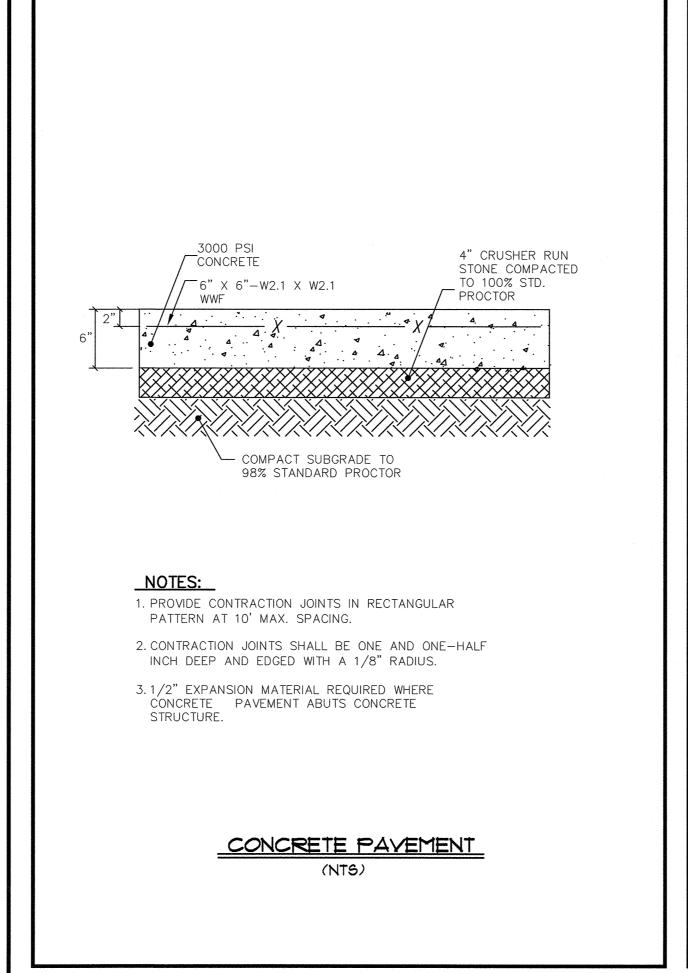


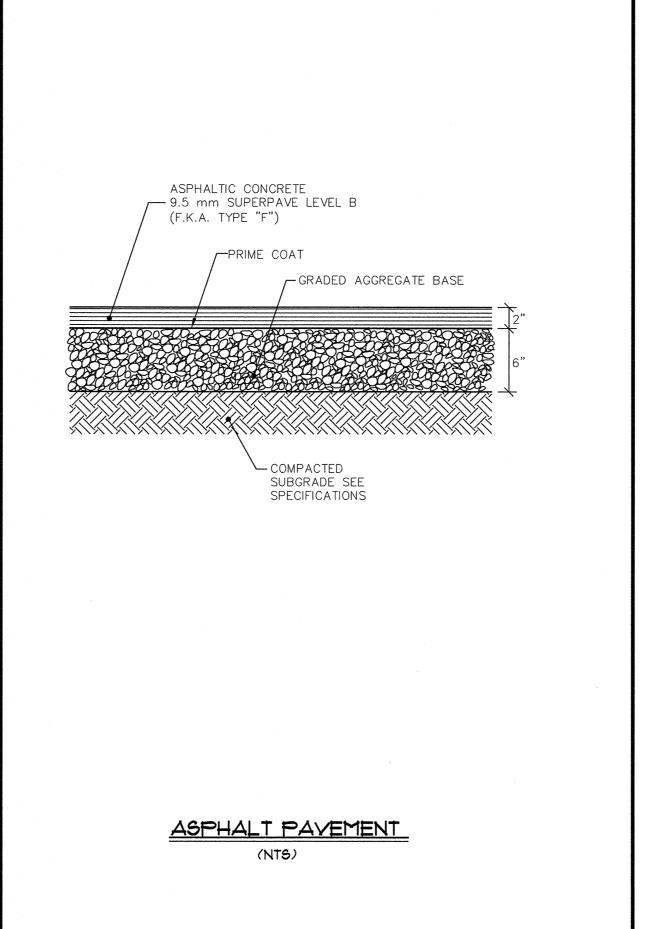


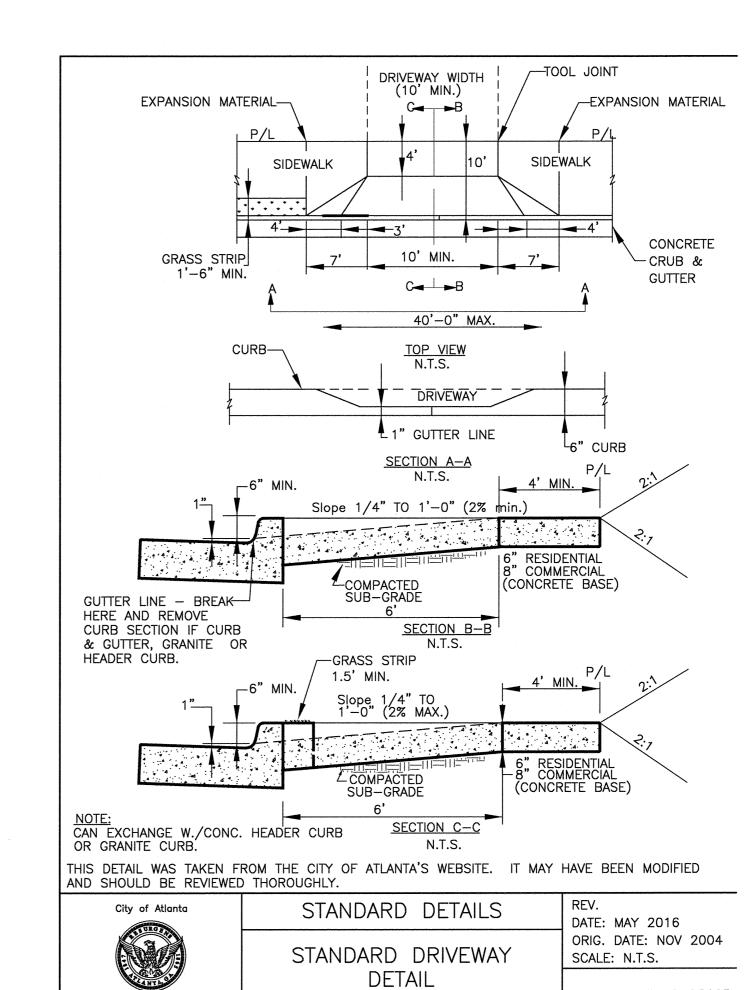


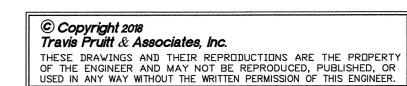
CONCRETE SIDEWALK DETAIL

(NTS)









DETAIL NO. TR-B\_DR005 Sheet No. C13.8

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5. SIDEWALK CROSS SLOPE SHALL BE 1/4" PER FOOT.

LORG

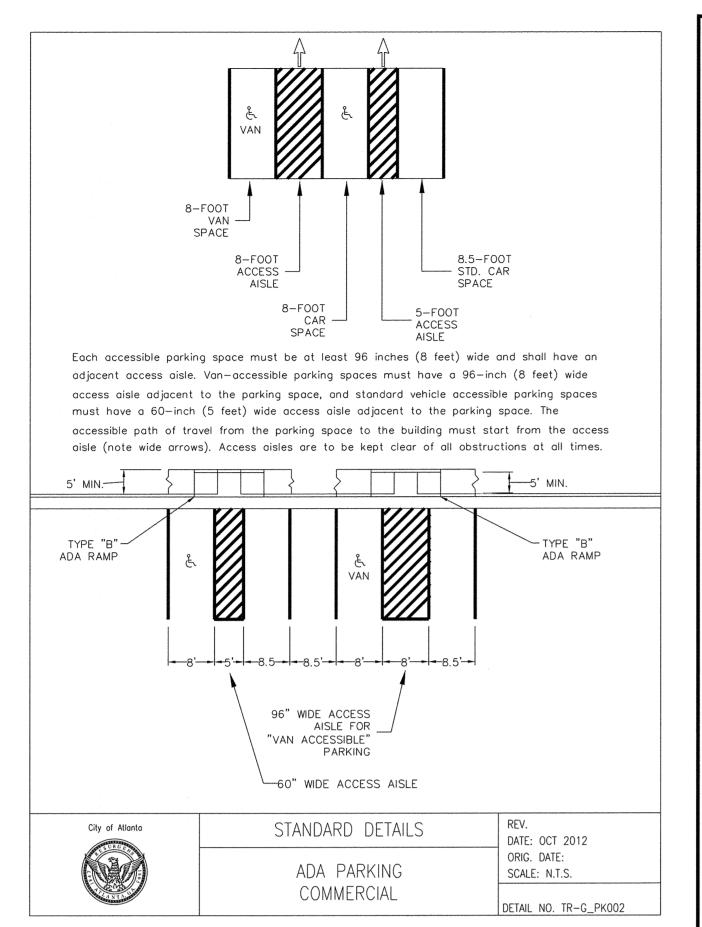
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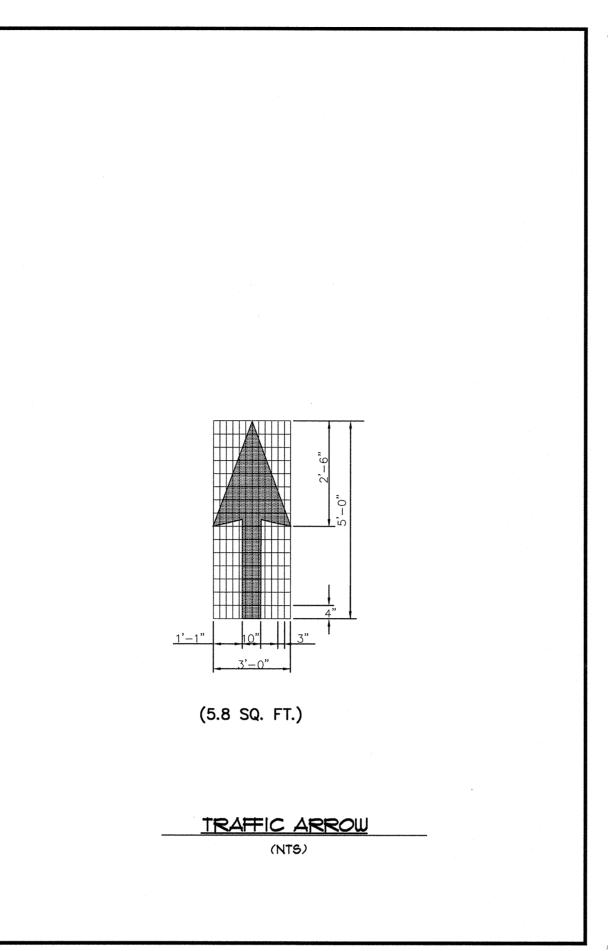
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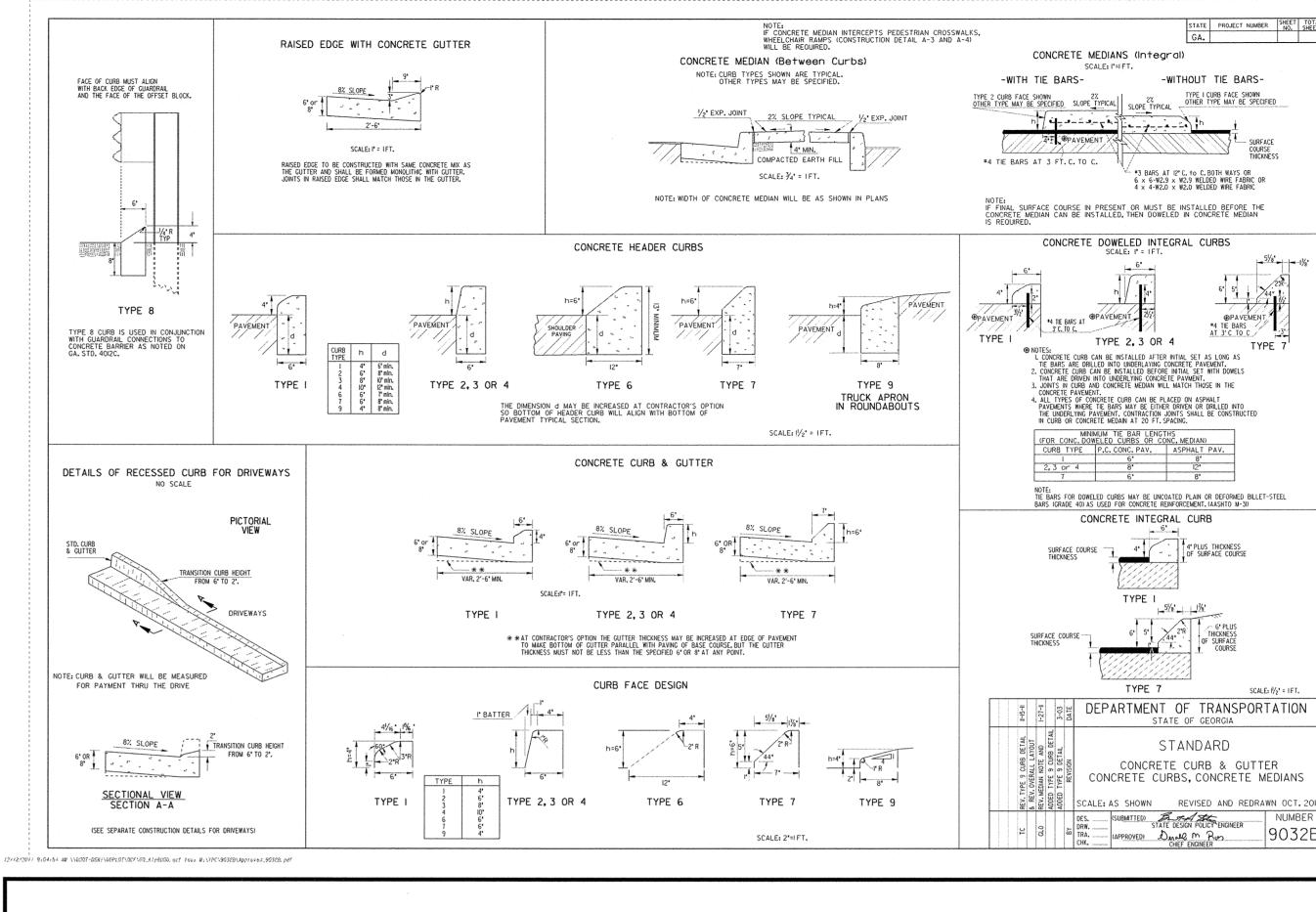
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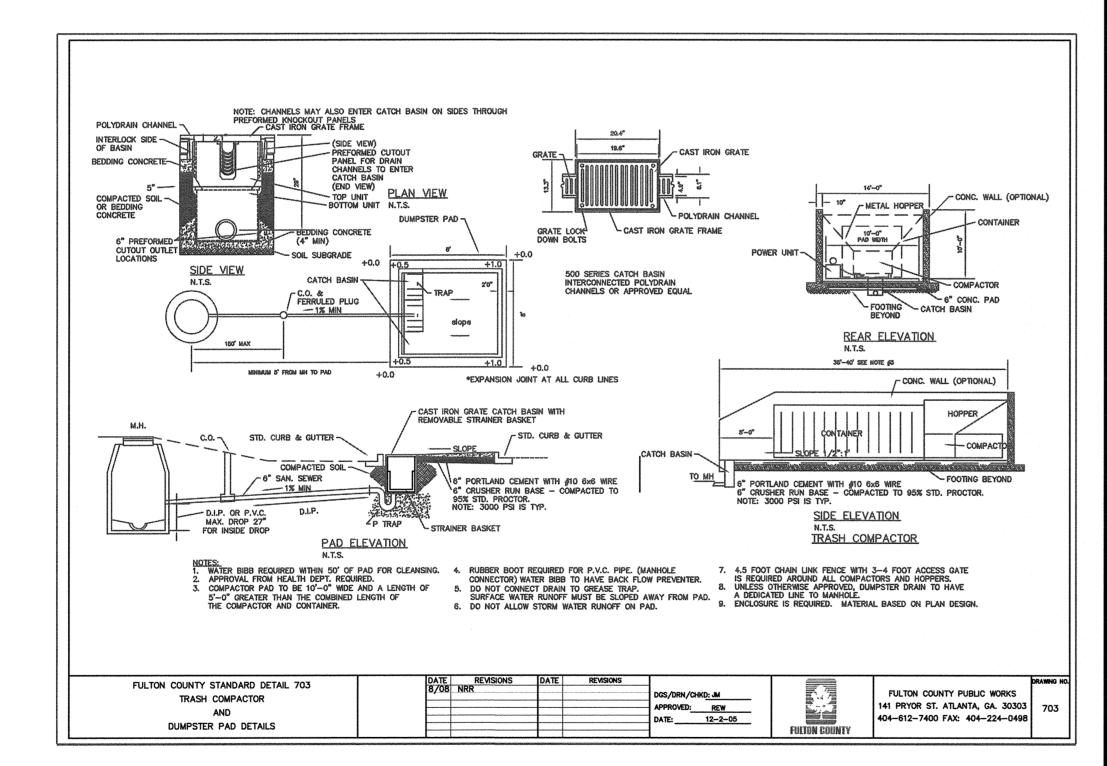


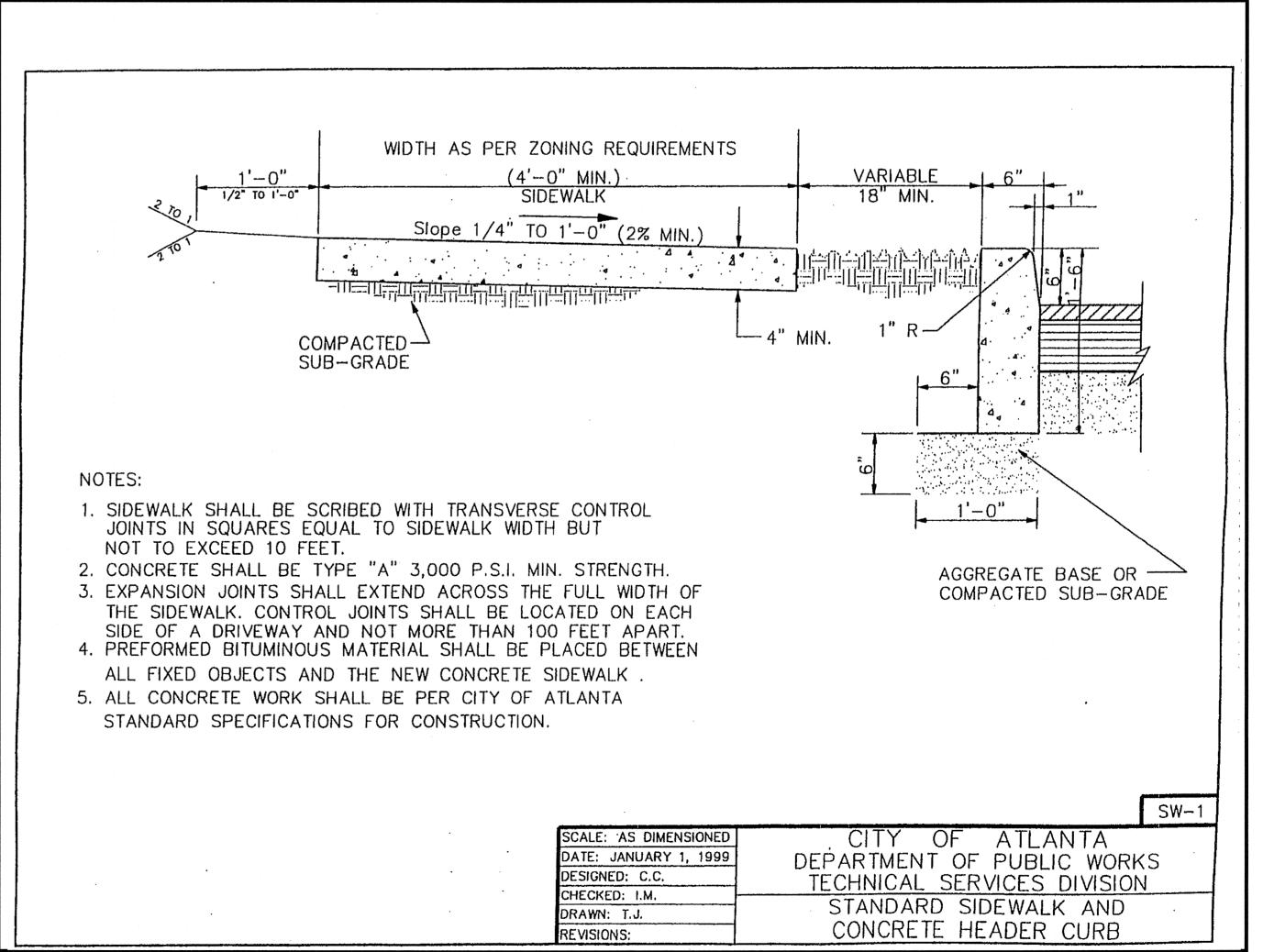


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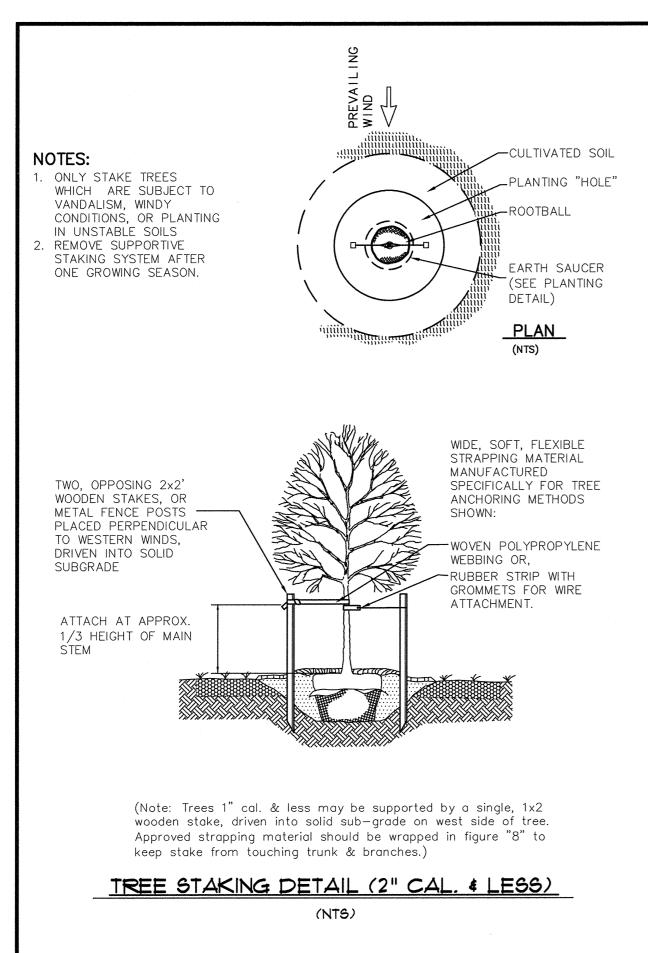
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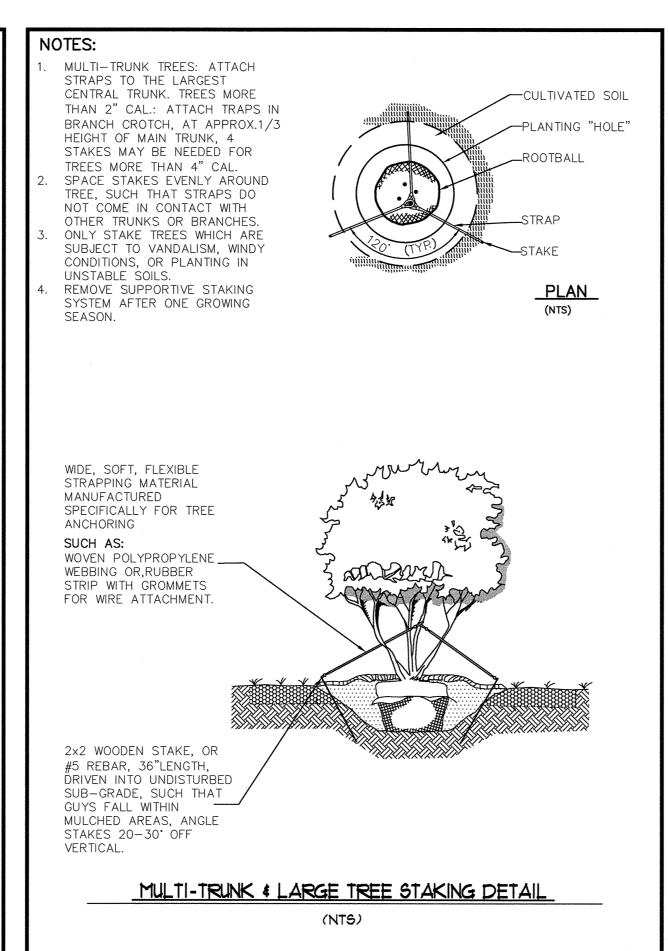
For The Firm

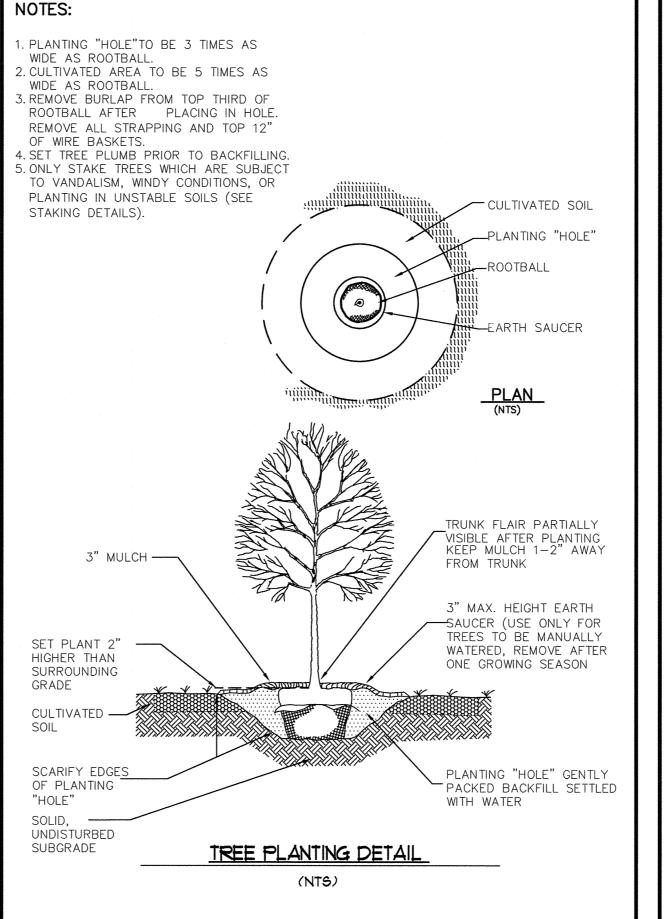
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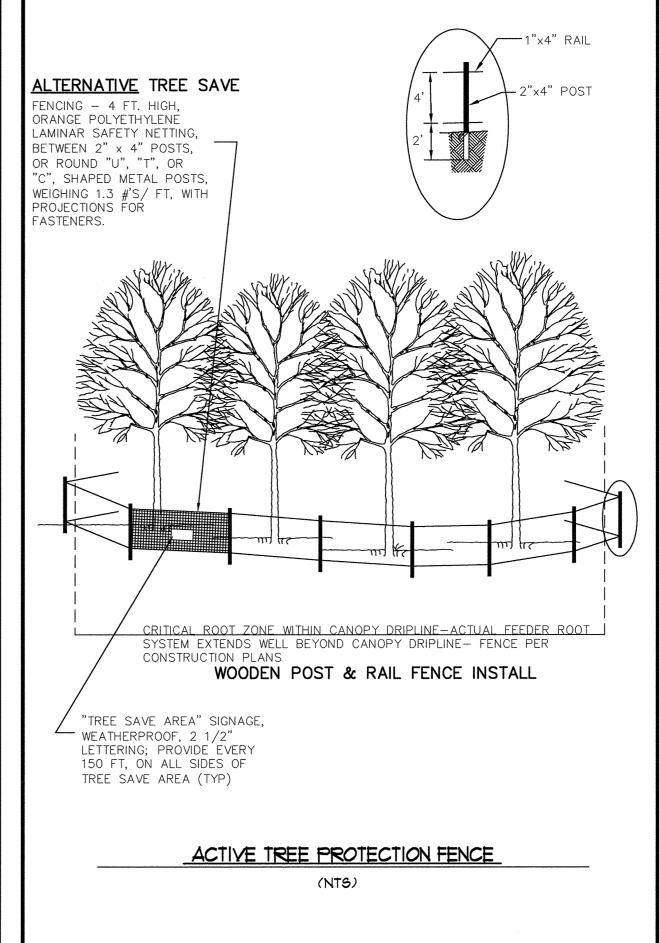
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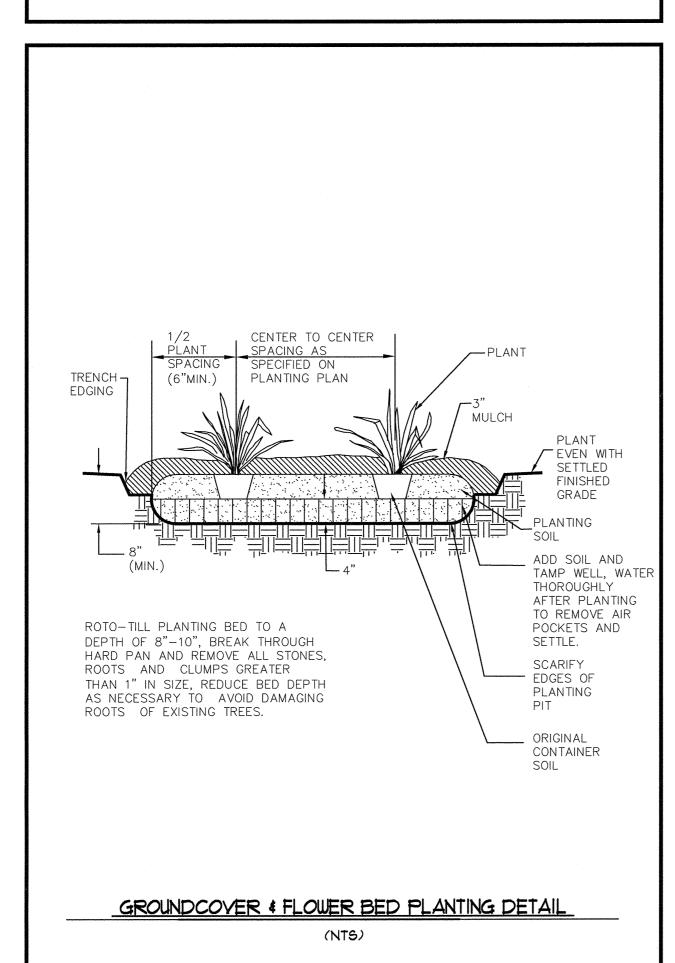
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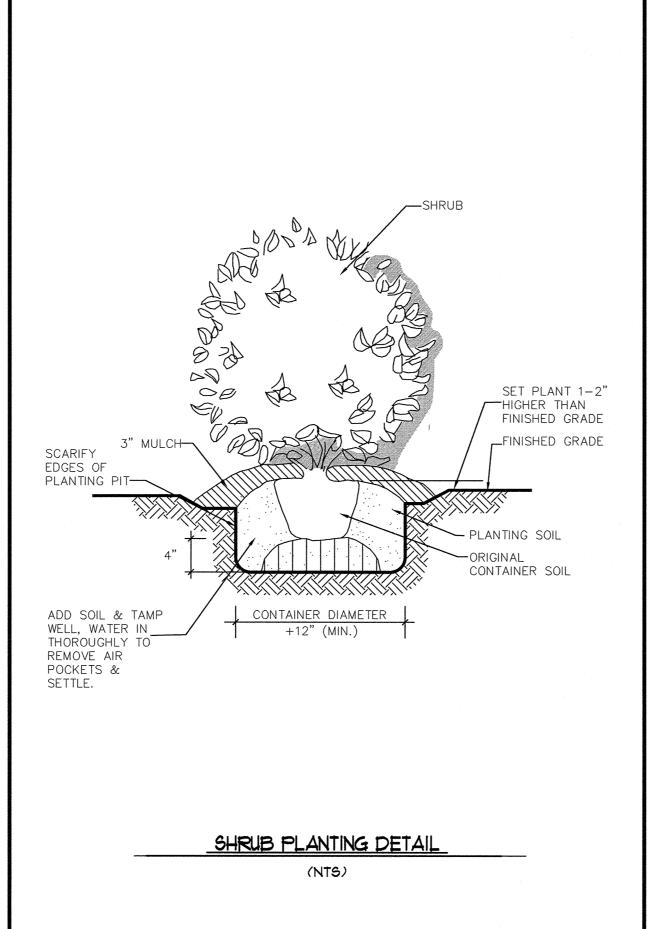


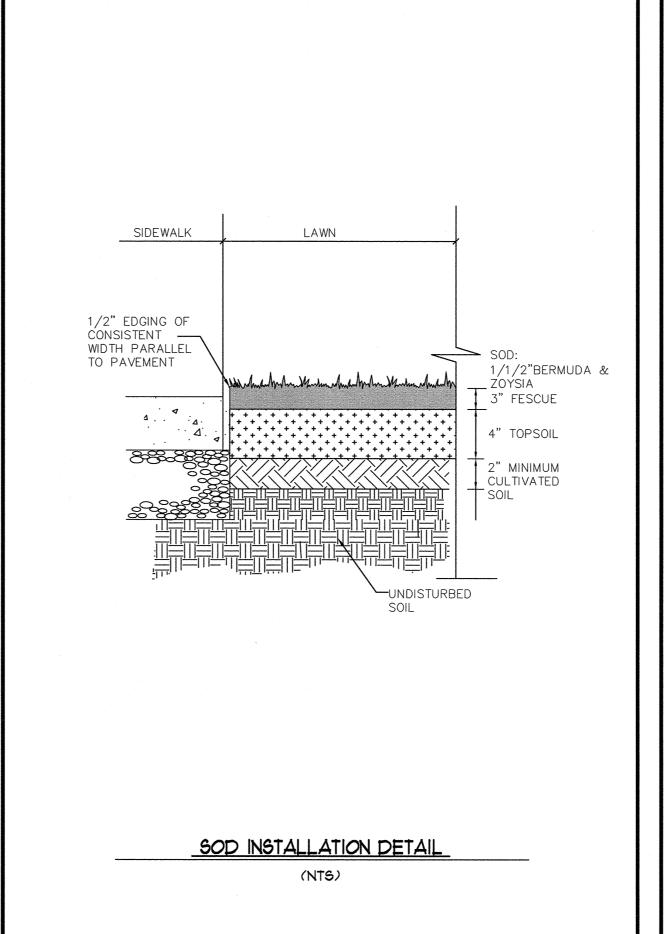


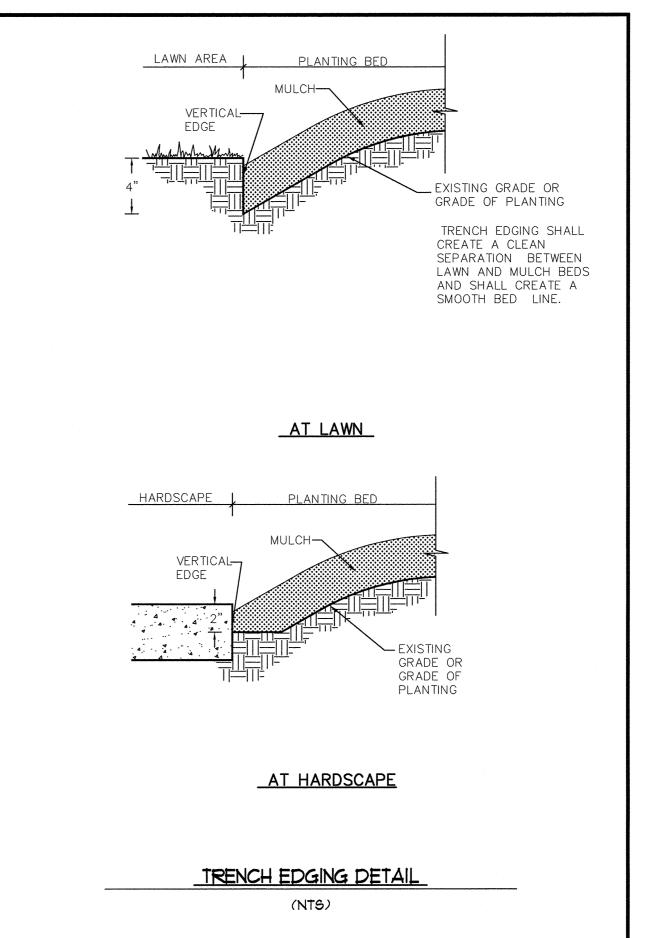










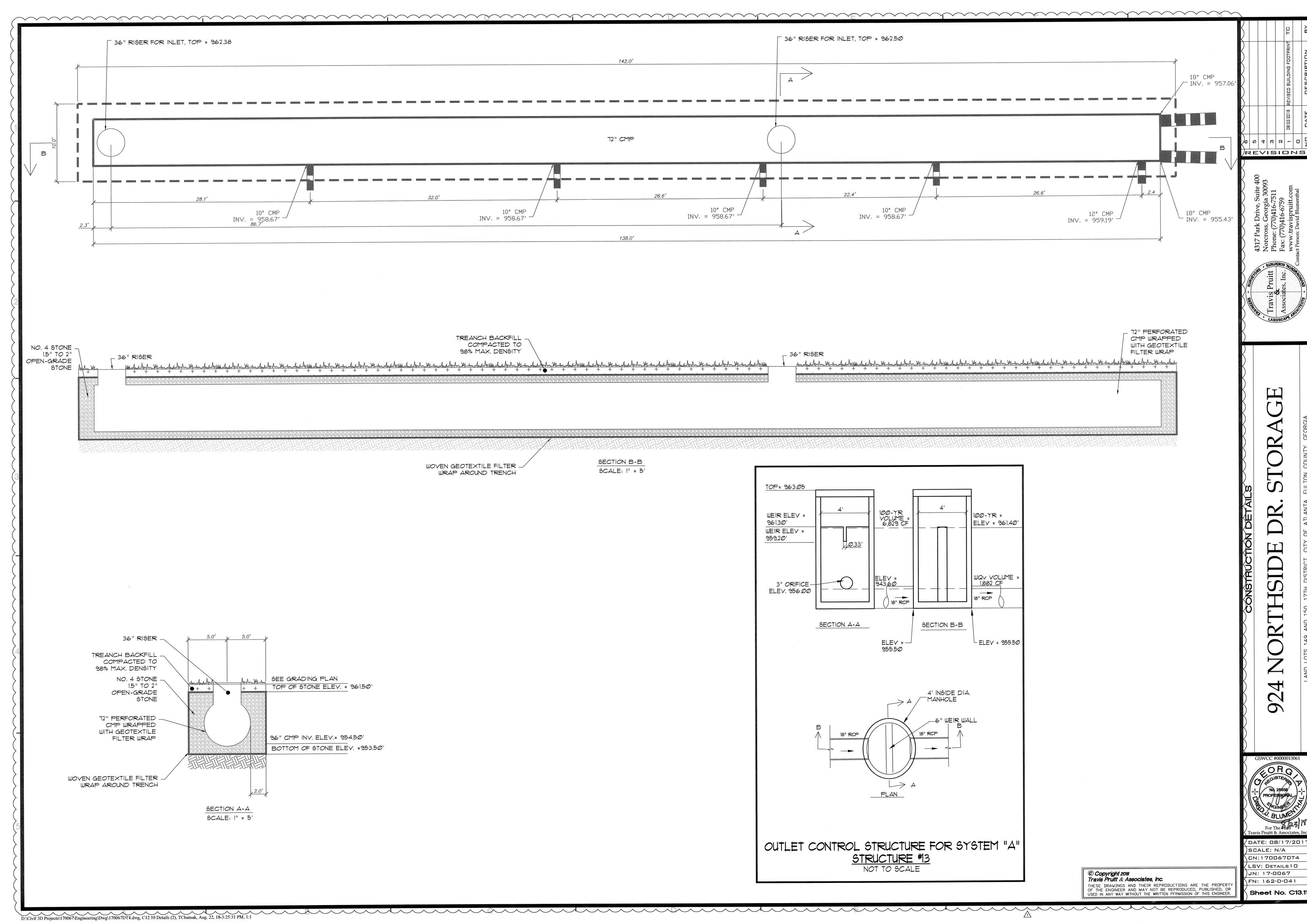


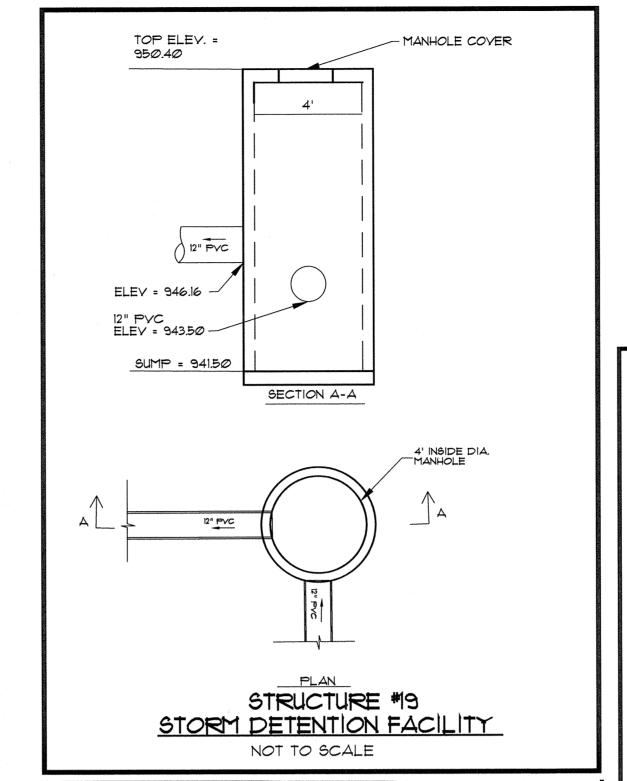
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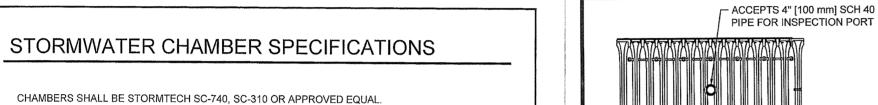
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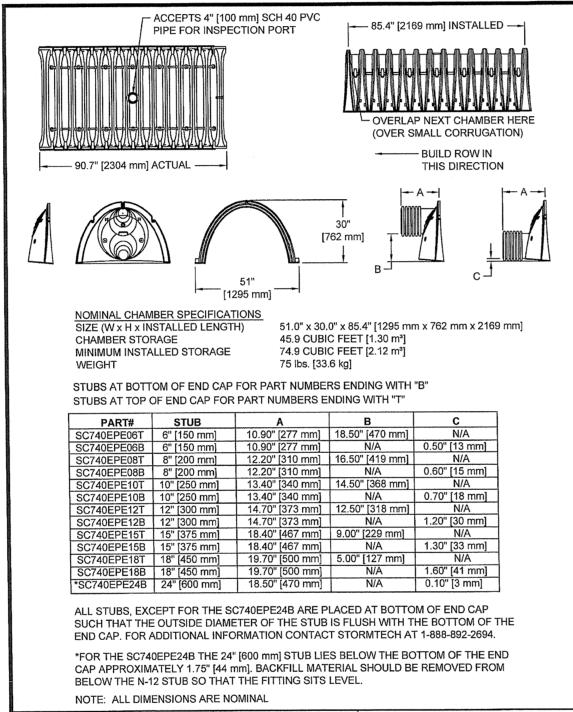






- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS TESTED USING ASTM STANDARDS. CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR
- STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION
- 4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
- STORMTECH SC-740 & SC-310 CHAMBERS COMPLY WITH AASHTO HS-20 LOAD REQUIREMENTS. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
- ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
  - a. A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DATA SPECIFIED IN ASTM F2418-05 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
- 7. CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- 8. ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE
- MANUFACTURER'S LATEST DESIGN MANUAL
- THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.





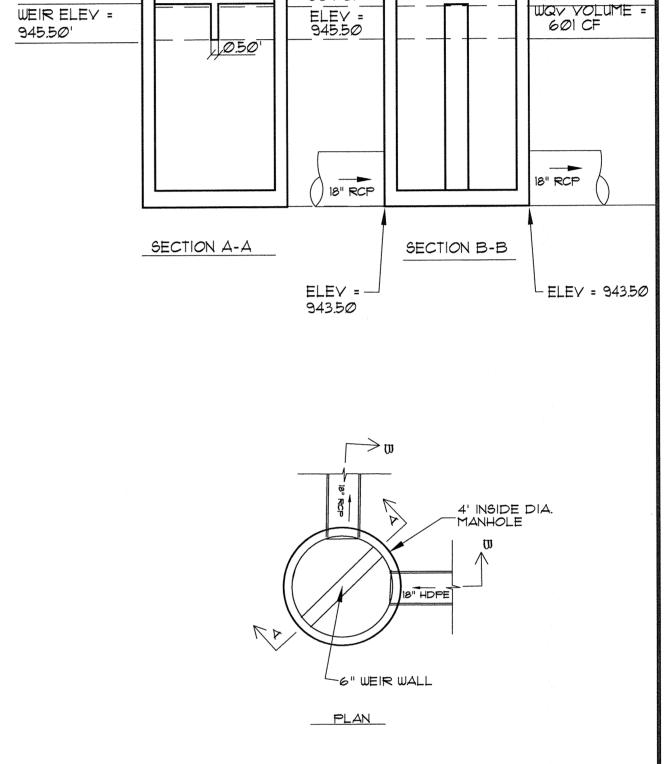
SC-740 TECHNICAL SPECIFICATIONS



- STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT WWW STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.):MINIMUM COVER IS 18" [457 mm] NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96" [2438 mm] INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24" [610 mm], MAXIMUM COVER IS 96" [2.438 m].
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

- 6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- 7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- 9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- 10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM

STORMTECH GENERAL NOTES



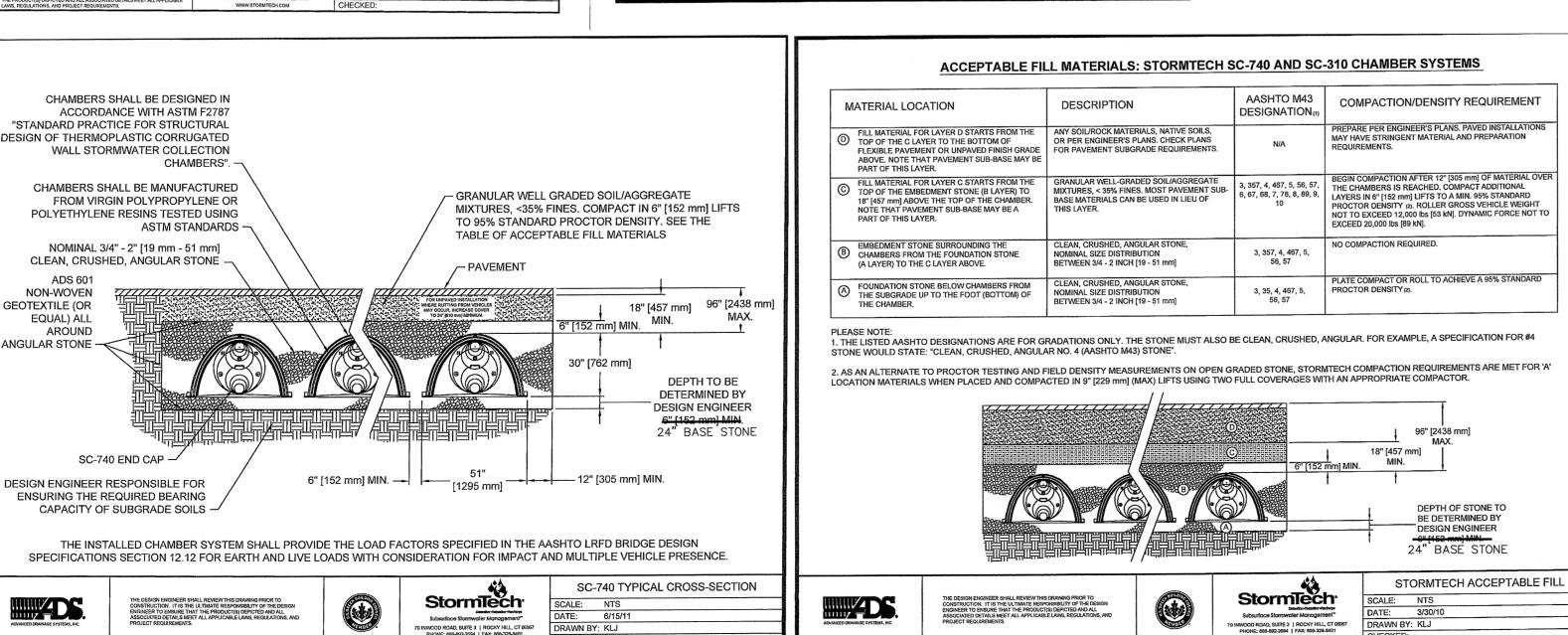
OUTLET CONTROL STRUCTURE FOR SYSTEM "B"

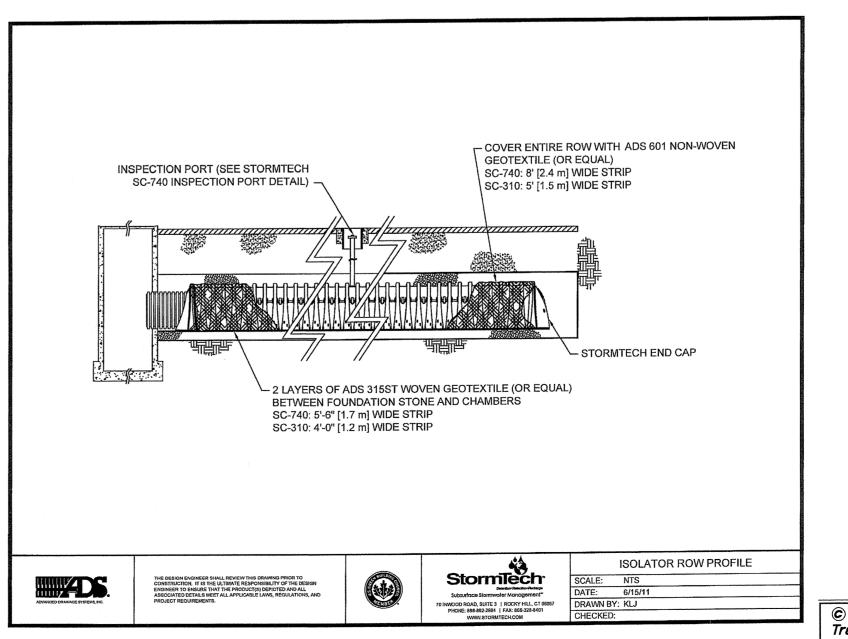
STRUCTURE #16

NOT TO SCALE

100-YR =

ELEV = 946.18





TOP = 948.62

WEIR ELEV =

946.40'

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DATE: 08/17/2017 SCALE: N/A CN:170067DT4 LSV: DETAILS 10 JN: 17-0067 FN: 162-D-041

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