



CAROLINA ENGINEERING
CONSULTANTS, INC.

P.O. Box 294
Beaufort, SC 29901

(843) 322-0553
(843) 322-0556 Fax

July 19, 2024

Mr. Dan Frazier
Town of Bluffton
PO Box 386
Bluffton SC 29910

RE: Tommy's Express Carwash
Lot 1B Bluffton Park
Preliminary DRC Response
Job No. 2524

Dear Dan:

On behalf of our client, Tommy's Express Carwash, we are responding to the Development Review Plan Comments for DP-06-24-019163 dated July 12, 2024. The responses are in the same order that the comments were presented:

BJWSA

1. *Pending submittal of the project by the Engineer of Record to BJWSA's Design Review Team in accordance with the Development Policy and Procedure Manual.*

The project will be submitted to BJWSA once the site plan is approved, however we have attended a Huddle Meeting with BJWSA for this project and continue to have correspondence about lateral sizes, locations and meter sizes.

Planning Review

1. *An SCDOT Encroachment Permit will be required prior to final development plan approval. The Right-In Right-Out Driveway Design does not appear to meet the SCDOT Typical Right-In Right-Out Driveway Design standard.*

The Right-In Right-Out access has been redesigned as noted. The channeling island has been widened to match the throat width of the access. An SCDOT encroachment permit will be provided at Final.

2. *This property is within Tract C of the Bluffton Park Master Plan. At time of final development plan submittal provide a site plan approval letter from the Bluffton Park Commercial POA.*

Mr. Dan Frazier
 July 19, 2024
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Acknowledged. An approval letter from the Bluffton Park Commercial POA will be provided at Final. We are currently in communications with Mr. Rogers Clifford and he has reviewed the preliminary site plan and architectural elevations.

3. *All interior lighting shall be designed to prevent light source or high levels of light from being visible from adjacent properties. (UDO Section 5.12.3.A.5)*

Acknowledged. All interior lighting shall be designed to prevent light source or high levels of light from being visible from adjacent properties.

4. *Provide a note on the development plan set that the Lot 1A access easement and temporary construction easement are recorded in Plat Book 162 Page 88.*

A note stating the above with leaders to the easement has been added to Sheet 3 of 12. A note has also been added to the General Notes on Sheet 2 of 12.

Watershed Management Review

1. *Relocate CB #1 to not be directly in front of the dumpster pad.*

Per our discussion at the Preliminary DRC Review, a solid baffle wall has been added to CB #1 so it will function as an oil/water separator. The baffle will extend 6" above the top of the discharge pipe and 6" below the invert of the discharge pipe. In addition, all runoff from the site will discharge to a Stormtech Infiltration system consisting of 71 Stormtech SC-740 infiltration chambers, prior to discharging to the master planned stormwater treatment system of the Bluffton Park. The infiltration system was designed to retain 100% of the 95th percentile storm. Another added benefit of the infiltration system is its Isolator Row. It consists of a series of the chambers that are completely wrapped in a permeable geotextile fabric. The Isolator Row will retain all the sediment and trash that discharges to it and it's able to be cleaned.

2. *Label proposed grading contours.*

The elevations have been labeled on the finished grade contours as requested.

3. *Show LOD on the E&SC sheet and grading plan.*

The Limits of Disturbance have been added to the plan sheets as requested.

Mr. Dan Frazier
July 19, 2024
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4. *At the time of stormwater submittal, provide an exhibit showing on-site treatment of the 10-yr storm that ensures prevention of environmental impacts, to include those caused by drainage and sedimentation, on adjacent properties. Additionally, this exhibit shall provide the locations of all life safety structures (hydrants, emergency access, street signs (can be temporary), etc.). This exhibit is to be included in the OS-SWPPP book for review at the time of the pre-construction meeting. Site features and improvements identified in this exhibit are to be installed prior to the issuance of a building permit. Town staff will conduct an inspection of the site prior to building permit issuance to ensure such features and improvements have been installed.*

The requested information will be provided at the time of Stormwater Submittal as noted.

In support of our Preliminary DRC Resubmittal for the referenced project, please find enclosed the following:

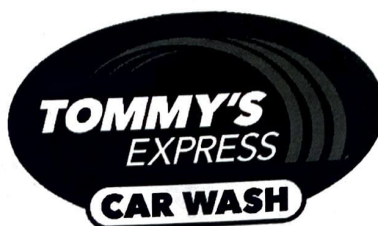
1. Revised Preliminary Site Development Plans
2. A letter from our client discussing the stacking of vehicles on site, wash times and how there should not be any stacking of vehicles onto Simmonsville Road at the Right In/Right Out access.

We are requesting preliminary approval of this project and for it to be placed on the next Planning Commission agenda. Please let me know if you have any questions.

Sincerely,



David R. Karlyk, PE
Carolina Engineering Consultants, Inc.



Tommy's Express Car Wash – Bluffton SC
4355 Bluffton Parkway and Simmonsville Road

Tommy's Express Car Wash anticipates the busiest hours volume at 25-30 cars. We will have enough stacking in two lanes for 14-17 vehicles and can have 4 - 5 cars on the belt going through the wash at the same time. The approximate wash time for a vehicle to go through the wash is 2 minutes after the gate is raised. Tommy's Express Car Wash uses a License Plate Reader (LPR) system to recognize our members for faster processing. Our hours of operation will be 7:30 am – 8:00 pm Monday- Saturday and 8:00 am – 7:00 pm Sunday.

We do not anticipate any issues with vehicles backing up onto Simmonsville with the amount of stacking room we will have.

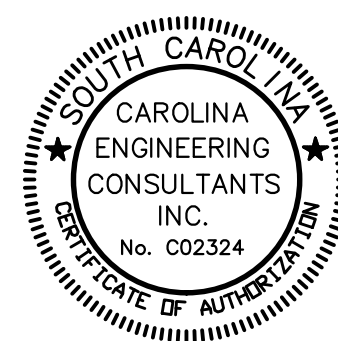
Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Buseick Sr.".

Jeff Buseick, Sr.
TEW of NC, LLC

VICINITY MAP

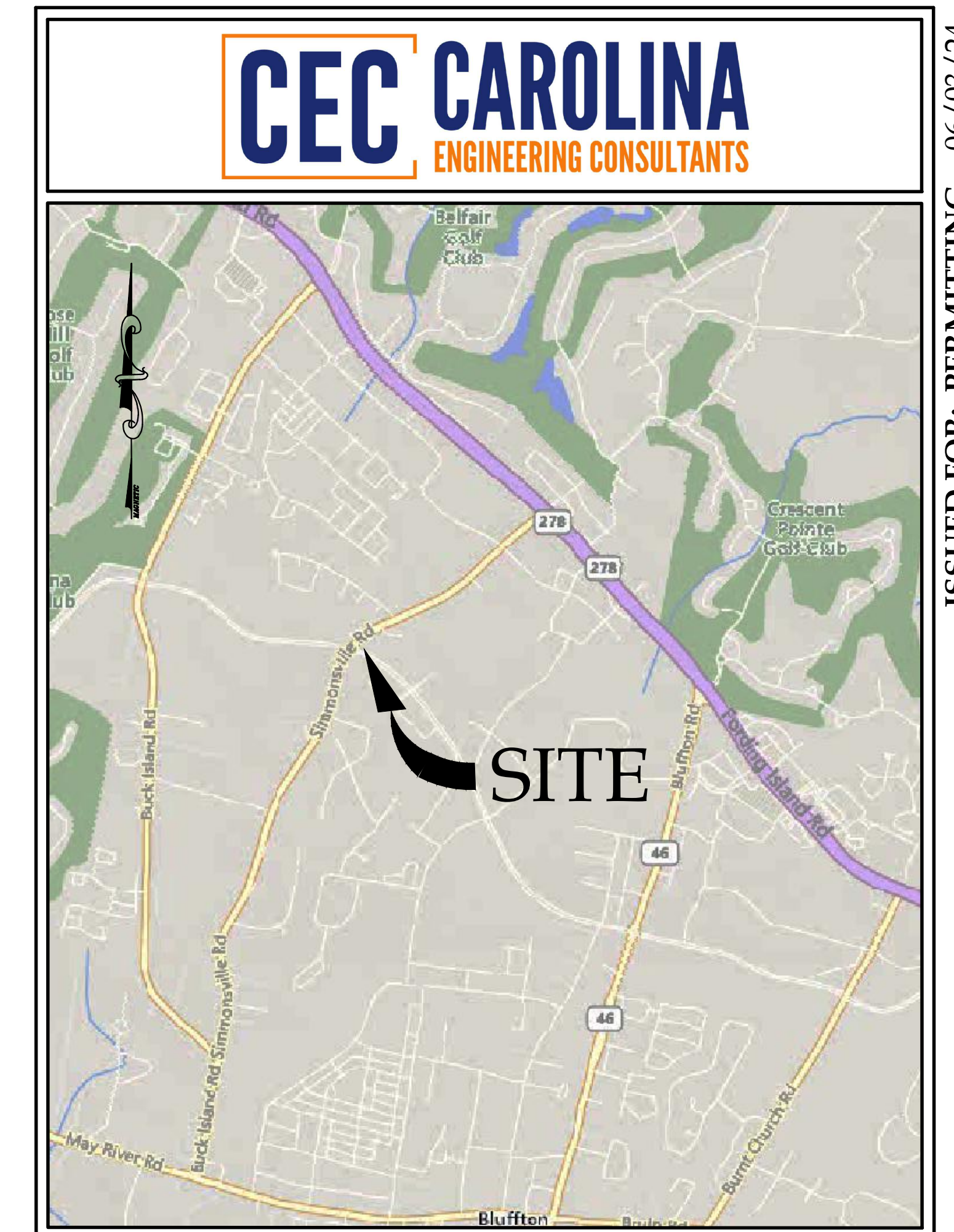
NTS



I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000.

CAROLINA ENGINEERING CONSULTANTS, INC.

PHONE
(843)322-0553



APPROXIMATE LOCATION OF SITE
SCALE: 1"=3000'

[illegible]

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 1-888-721-7877
PALMETTO UTILITY PROTECTION SERVICE

SEDIMENT & EROSION CONTROL NOTES:

IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

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 FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.

WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
—WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE CALENDAR EVERY WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.

PROVIDE SILT FENCE AND/ OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72–300 ET SEQ. AND SCRI00000.

TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/ OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

ALL WATERS OF THE STATE (WoS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WoS.

LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H: 1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE;

MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
—WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
—WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
—FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
—SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/ OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

GENERAL SCDOT NOTES:

WHERE NEW CONSTRUCTION IS NEAR THE EDGE OF AN EXISTING PAVED ROADWAY, A TRAFFIC LANE WILL BE TEMPORARILY CLOSED TO PROVIDE SAFETY TO THE PUBLIC AND TO THE WORKMEN. NO LANE CLOSURES DURING 7:00 AM TO 9:00 AM OR FROM 3:30 PM TO 6:00 PM ARE ALLOWED.

APPLICANT WILL REPAIR ALL DAMAGE DONE TO ROADSIDE AND RESEED WITH PERMANENT GRASS.

TRAFFIC CONTROLS FOR THIS INSTALLATION SHALL BE IN ACCORDANCE WITH S.C.M.U.T.C.D.

PAVEMENT MARKING LINES TO BE THERMOPLASTIC.

RAISED REFLECTIVE PAVEMENT MARKER RRPMS' TO BE INSTALLED IN ACCORDANCE WITH SCDOT'S STANDARD DRAWINGS NO. 603–1 THRU 603–8 JULY, 1997.

ALL PROPOSED SIGNAGE AND PAVEMENT MARKINGS SHOULD BE IN ACCORDANCE WITH THE 2009 EDITION OF THE MUTCD.

**GENERAL:
PAVING, GRADING, & DRAINAGE NOTES:**

CAROLINA ENGINEERING CONSULTANTS, INC.'S WRITTEN CONSTRUCTION SPECIFICATIONS WILL BE FOLLOWED ON THIS JOB. IF CONTRACTOR NEEDS COPY OF THESE SPECIFICATIONS, PLEASE CONTACT CAROLINA ENGINEERING.

TOPOGRAPHY, BOUNDARY, WETLAND AND BASE INFORMATION PROVIDED BY T SQUARE SURVEYING.

BENCHMARKS ARE TO BE VERIFIED BY CONTRACTOR.

CONTRACTOR SHALL VERIFY ALL MANHOLE AND INVERT ELEVATIONS BEFORE STARTING WORK.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES.

SILT FENCE AND TREE FENCES TO BE IN PLACE PRIOR TO COMMENCING WORK.

MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS. WHERE THIS SEPARATION CANNOT BE MAINTAINED OR THE LINES CROSS THE BOTTOM OF THE LINES CROSS, THE BOTTOM OF THE WATER MAIN SHALL BE 18" ABOVE THE TOP OF THE SEWER MAIN LAID IN SEPARATE TRENCHES.

WHERE NEW CONSTRUCTION IS NEAR THE EDGE OF AN EXISTING PAVED ROADWAY, A TRAFFIC LANE WILL BE TEMPORARILY CLOSED TO PROVIDE SAFETY TO THE PUBLIC AND TO THE WORKMEN. NO LANE CLOSURES DURING 7:00 AM TO 9:00 AM OR FROM 3:30 PM TO 6:00 PM ARE ALLOWED.

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ALL PROPOSED SIGNAGE AND PAVEMENT MARKINGS SHOULD BE IN ACCORDANCE WITH THE 2009 EDITION OF THE MUTCD.

ACCESS & TEMPORARY CONSTRUCTION EASEMENT RECORDED IN PLAT BOOK 162 PAGE 88.

**GENERAL:
WATER, & SANITARY SEWER NOTES:**

BJWSA CONSTRUCTION SPECIFICATIONS WILL BE FOLLOWED ON THIS JOB. IF CONTRACTOR NEEDS COPY OF THESE SPECIFICATIONS, PLEASE CONTACT CAROLINA ENGINEERING.

BENCHMARKS ARE TO BE VERIFIED BY CONTRACTOR.

MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS.

WHERE THIS SEPARATION CANNOT BE MAINTAINED OR THE LINES CROSS THE BOTTOM OF THE WATER MAIN, THERE SHALL BE 18" ABOVE THE TOP OF THE SEWER MAIN LAID IN SEPARATE TRENCHES.

4"Ø SEWER LATERALS SHALL BE LAID WITH A MINIMUM SLOPE OF 2.08%

6"Ø SEWER LATERALS SHALL BE LAID WITH A MINIMUM SLOPE OF 1.0%

METER(S) TO BE PURCHASED FROM, SIZED & INSTALLED BY BJWSA .

MAINTAIN A 5' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND STORM DRAINAGE LINES.

SURVEYOR:

TOPOGRAPHY, BOUNDARY, WETLAND AND BASE INFORMATION PROVIDED BY T SQUARE SURVEYING. P.O. DRAWER 330 139 BURNT CHURCH ROAD BLUFFTON, SC 29910
(843)–757–2650
PLS#26960

ELECTRICITY PROVIDER:

DOMINION ENERGY
PARKS MOSS
843–540–1315
HENRY.MOSS@DOMINIONENERGY.COM

SYMBOL LEGEND:

AIR RELEASE VALVE



BENCHMARK



CATCH BASIN



CLEAN OUT



CURB INLET



DRAINAGE ARROW



DUAL SWEEP CLEANOUT



EXISTING MANHOLE



EXISTING FIRE HYDRANT



EXISTING WATER METER



EXISTING WATER VALVE



GUY WIRE



JUNCTION BOX



LIGHT POLE



MAILBOX



MATCHLINE TARGET



OUTFALL CONTROLL STRUCTURE



PIPELINE MARKER



PIPELINE VENT



PLUG



POST INDICATOR VALVE



POWER POLE



PROPOSED FIRE HYDRANT



PROPOSED MANHOLE



PROPOSED RPZ BACKFLOW PREVENTER



PROPOSED WATER METER



PROPOSED WATER VALVE



REDUCER



SEWER LATERAL



SEWER VALVE



SEWER VALVE MARKER



TRAFFIC RATED CLEAN OUT



TRANSFORMER



UTILITY POLE



WATER LATERAL



WATER MARKER



WATER VALVE MARKER



WELL



YARD INLET



TREE LEGEND

REMAIN REMOVE

0 10 15 10 15

TREE IDENTIFICATION

ABBREVIATION	DESCRIPTION
CH	CHERRY
CR	CREPE MYRTLE
DW	DOGWOOD
HOL	HOLLY
LA	LAUREL OAK
LO	LIVE OAK
MAG	MAGNOLIA
MP	MAPLE
PE	PECAN
PLM	PALM
PN	PINE
RO	RED OAK
UNK	UNKNOWN
WHO	WHITE OAK
WIL	WILLOW TREE
WO	WATER OAK

TREE PROTECTION & REMOVAL NOTES:

INSTALL ALL TREE PROTECTION FENCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
MH	MANHOLE
FM	FORCEMAIN
CI	CURB INLET
GI	GRATE INLET
YI	YARD INLET
LF	LINEAR FEET
FOPT	FIBER OPTIC
IRR	IRRIGATION
CL	CENTER LINE
EOP	EDGE OF PAVEMENT
BOC	BACK OF CURB
R/W	RIGHT OF WAY
GP	GUTTER PAN
TC	TOP OF CURB
TP	TOP OF PAVEMENT
TS	TOP OF SIDEWALK
FG	FINISH GRADE
FFE	FINISHED FLOOR ELEVATION

LINE LEGEND:

EXISTING WATER LINE	— W — W — W — W —
EXISTING STORM DRAIN	— SD — SD — SD — SD —
EXISTING SANITARY SEWER	— SS — SS — SS — SS —
OVERHEAD POWER LINE	— DHP — DHP — DHP — DHP —
EXISTING GAS LINE	— GAS — GAS — GAS — GAS —
EXISTING FORCE MAIN	— FM — FM — FM —
CHAINLINK FENCE	— X — X — X —
TREE CANOPY	— — — — —

HATCH LEGEND

HATCH	DESCRIPTION
	EXISTING ASPHALT
	CONCRETE
	STANDARD ASPHALT
	HEAVY DUTY ASPHALT

TOMMY'S EXPRESS CARWASH
87 SIMMONSVILLE ROAD
TOWN OF BLUFFTON, SC

CAROLINA ENGINEERING CONSULTANTS, INC.
843/322-0553
WWW.CAROLINAEENGINEERING.COM
PO BOX 294
BEAUFORT, SC 29901

PROJECT: 2524
DATE: 04/23/24
REVISED: 07/22/24
DRAWN BY: BJS
ENGINEER: DRK
H-DATUM: NAD 83
V-DATUM: NAVD 88
SCALE: NTS

GENERAL NOTES & LEGEND

PLAN REVISIONS		
NO.	DESCRIPTION	DATE
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

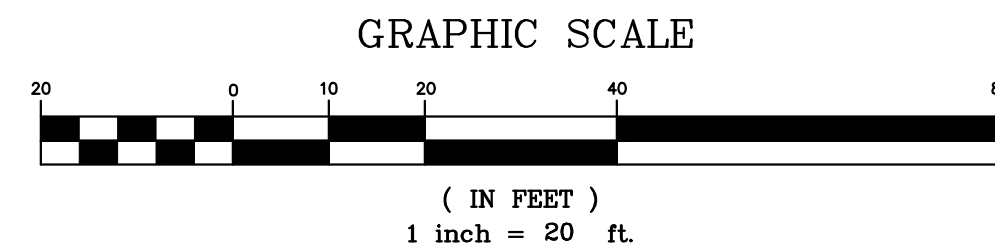
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TOWN OF BLUFFTON, SC

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PO BOX 294
BEAUFORT, SC 29901
WWW.CAROLINAENGINEERING.COM
843/322-0553
843/322-0556 (FAX)

PROJECT:	2524
DATE:	04/23/24
REVISED:	07/22/24
DRAWN BY:	BJS
ENGINEER:	DRK
H-DATUM:	NAD 83
V-DATUM:	NAVD 88
SCALE:	1"=20'

EXISTING CONDITIONS & DEMOLITION PLAN

3
OF 12



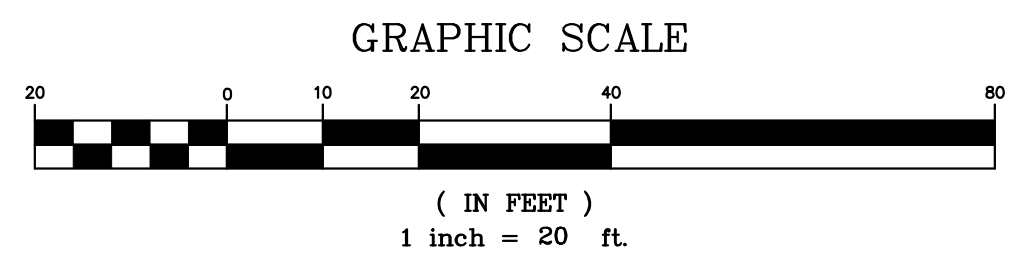
PLAN REVISIONS		
NO.	DESCRIPTION	DATE
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

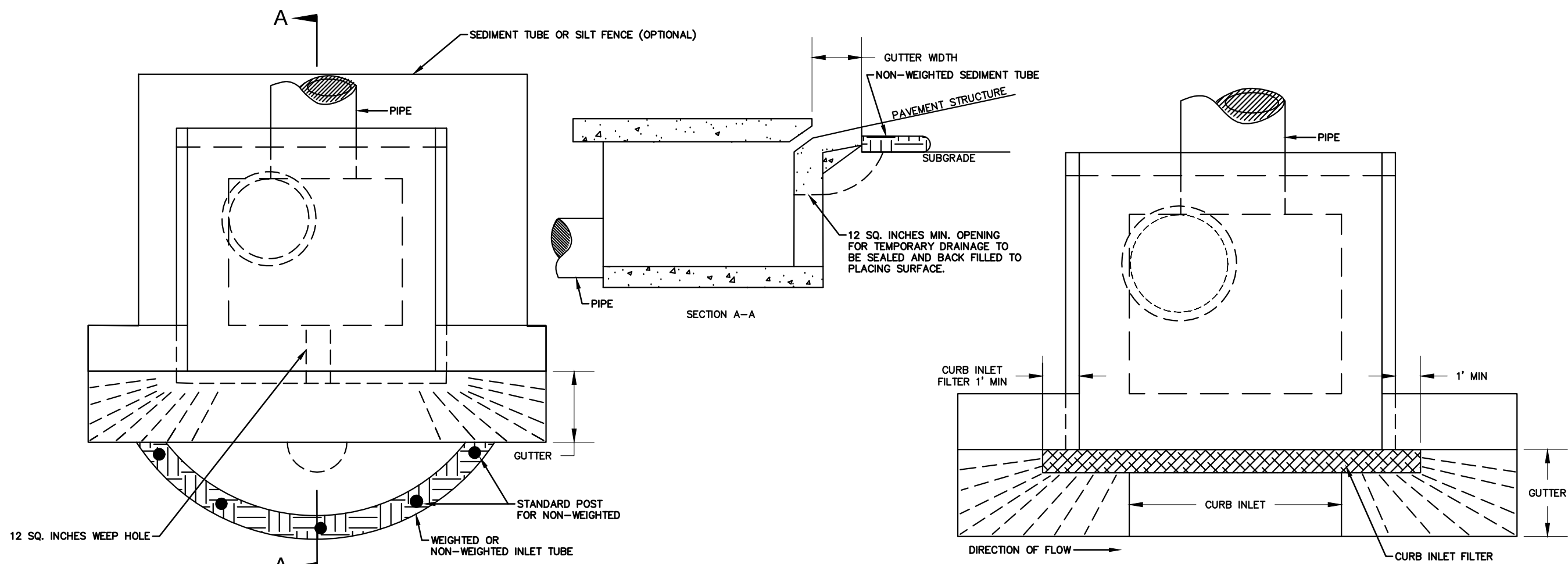
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**TREE REMOVAL &
PROTECTION AND
SEDIMENT & EROSION
CONTROL PLAN**

4
OF 12

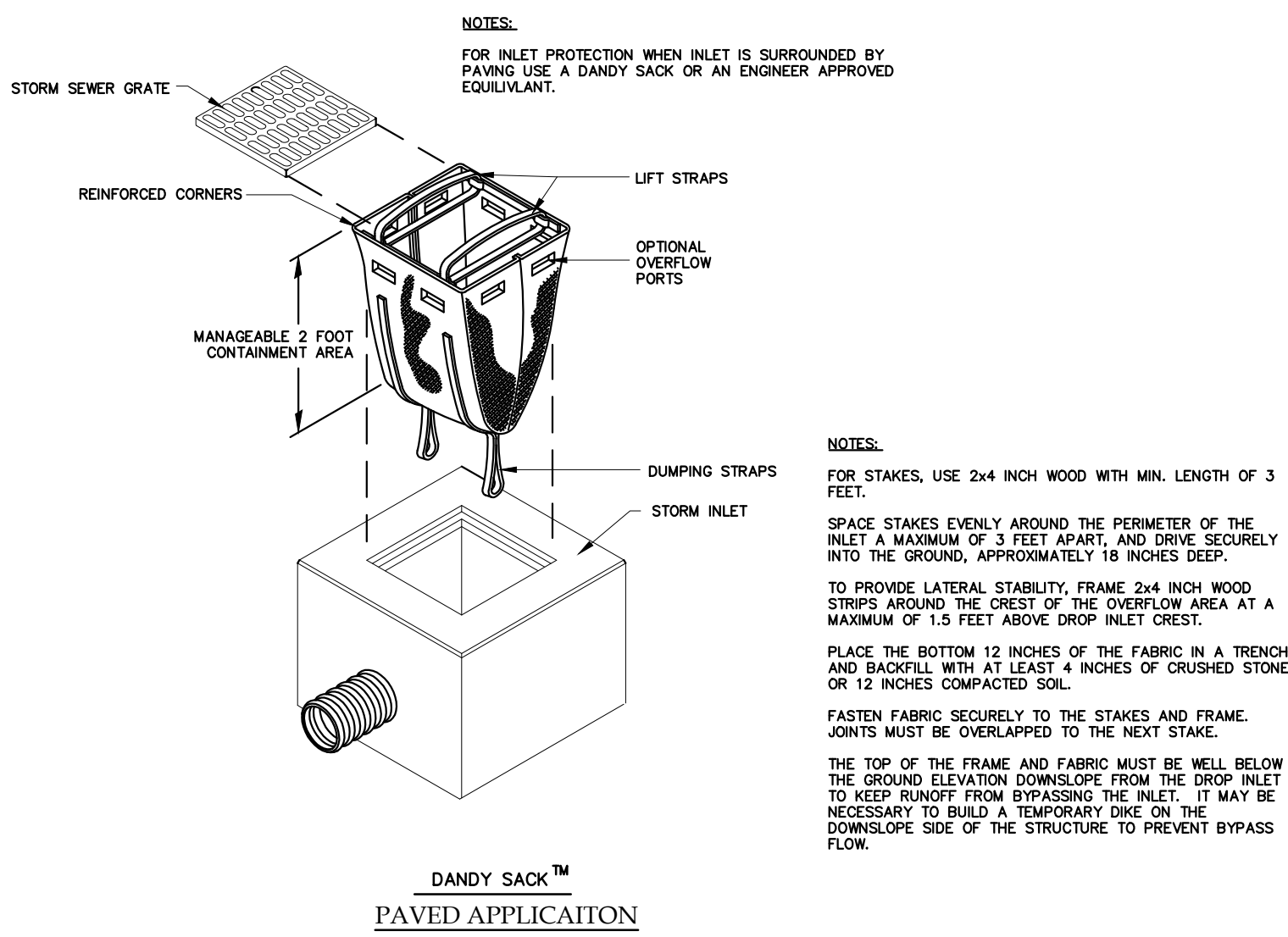


CURB INLET SEDIMENT BARRIER GRADING PHASE

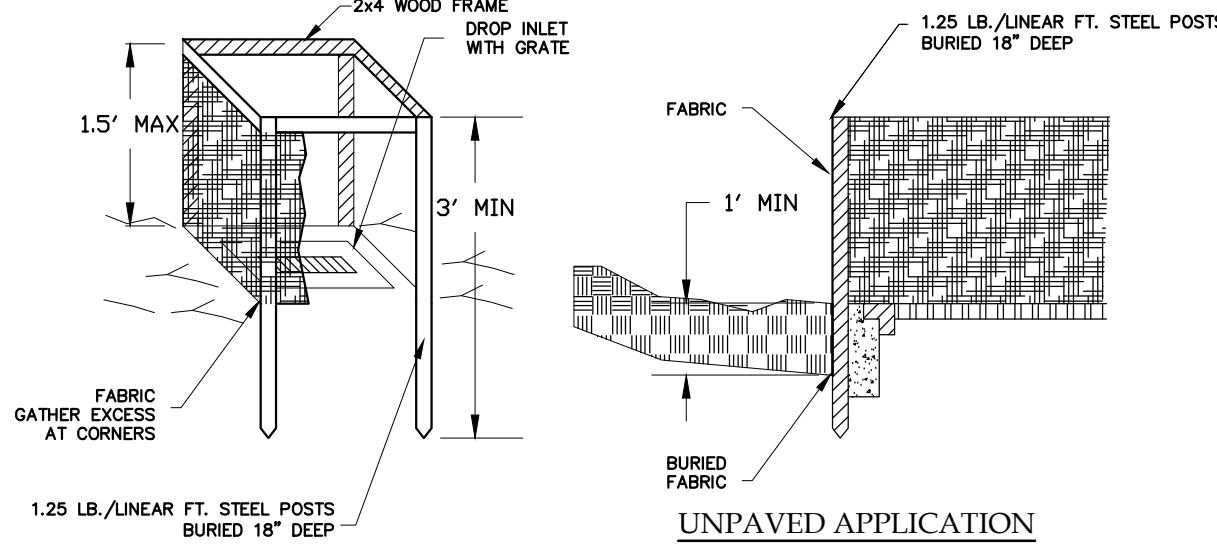
CURB INLET SEDIMENT BARRIER CONSTRUCTION PHASE

Sd2a CURB INLET SEDIMENT BARRIER

NOT TO SCALE PLAN VIEW SYMBOL



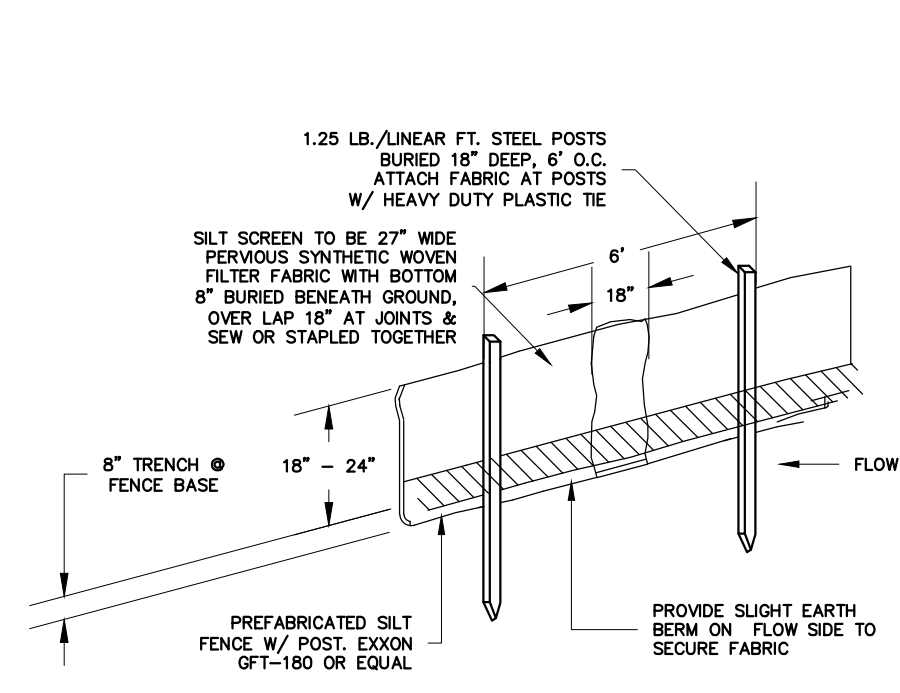
DANDY SACK™ PAVED APPLICATION



UNPAVED APPLICATION

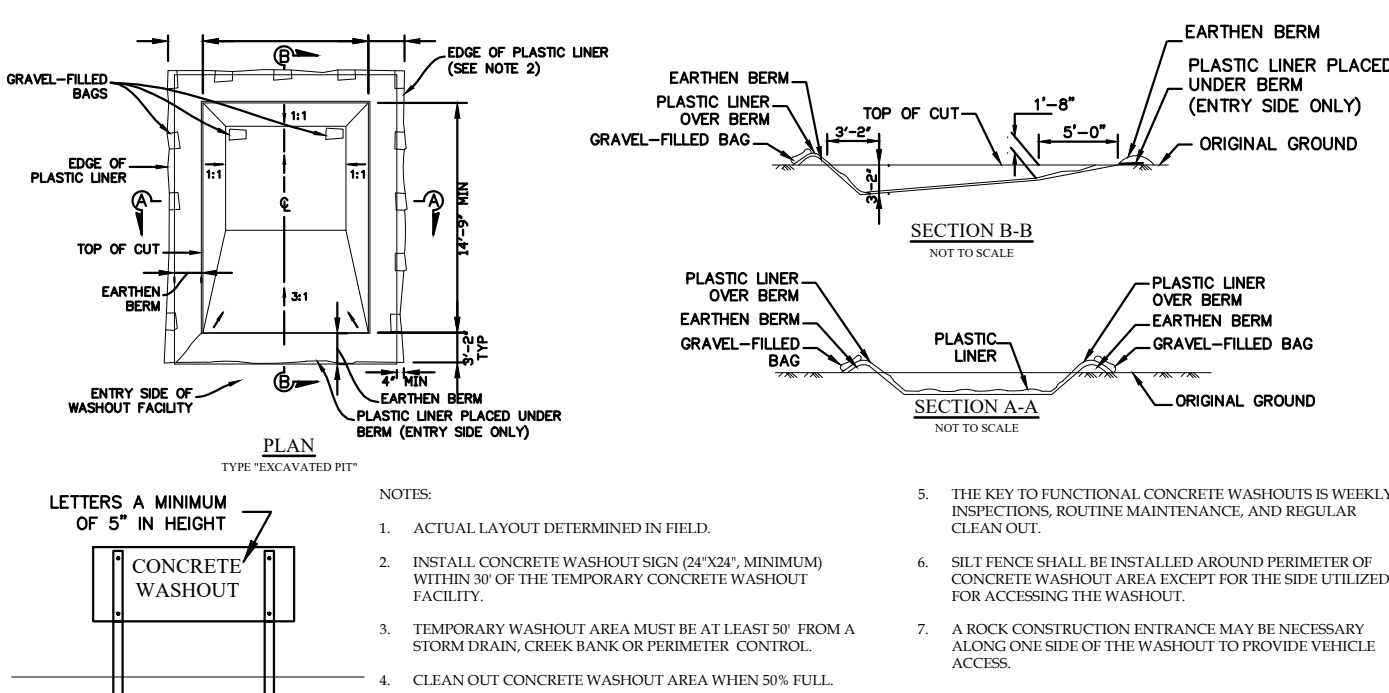
Sd2 CATCH BASIN SEDIMENT BARRIER

NOT TO SCALE PLAN VIEW SYMBOL



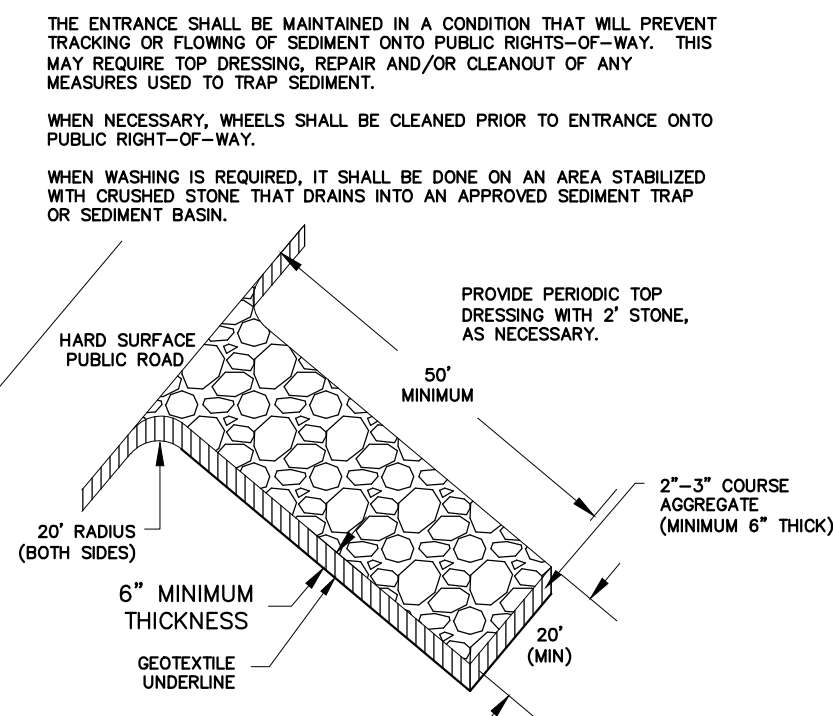
Sd1 SEDIMENT BARRIERS

NOT TO SCALE PLAN VIEW LINE TYPE



Cw CONCRETE WASHOUT

NOT TO SCALE PLAN VIEW SYMBOL



Co STONE PAD CONSTRUCTION EXIT

NOT TO SCALE PLAN VIEW SYMBOL

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			An undisturbed natural "green belt" separating the land-disturbed area from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or vision pollution barrier.
Cs	COASTAL DUNE STABILIZATION W/VEGETATION			Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION W/MULCHING ONLY			Establishing temporary protection for disturbed areas where seeding may not have a suitable growing season to produce an erosion retarding cover. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for further details.
Ds2	DISTURBED AREA STABILIZATION W/TEMPORARY SEEDING			Establishing temporary vegetative cover with fast growing seedlings on disturbed areas. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for further details.
Ds3	DISTURBED AREA STABILIZATION W/PERMANENT VEGETATION			Establishing permanent vegetative cover such as trees, shrubs, vines, grasses, sod, or legumes on disturbed areas. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for further details.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction sites, roadways and similar sites.

Ds1 MULCHING NOTES

MULCHING:

USE MULCH ON ALL SLOPES STEEPER THAN 3% WHEN SEEDINGS ARE MADE SO LATE IN THE FALL AND WINTER THAT GERMINATION CANNOT BE EXPECTED UNTIL SPRING, IN THE BOTTOM OF SPILLWAYS, AND ON ROADBANKS. TEMPORARY VEGETATION SEEDS ALONE MAY BE ESTABLISHED ON GOOD SITES WITHOUT THE USE OF MULCH. MULCHING MATERIAL WILL CONSIST OF:

A. USE DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS. DRY STRAW WILL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY WILL BE USED AT A RATE OF 2.5 TONS PER ACRE; OR,

B. FOR HYDRAULIC SEEDING, USE WOOD CELLULOSE MULCH OR WOOD PULP FIBER AT THE RATE OF 500 POUNDS PER ACRE AND DRY STRAW OR DRY HAY AT THE RATE LISTED IN "A" ABOVE; OR,

C. FOR HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER, 1,000 POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER WHICH INCLUDES A TACKIFIER MAY BE SUBSTITUTED FOR THE TREATMENT IN "C" ABOVE; OR,

D. USE THREE TONS PER ACRE OF SERICEA LESPEDEZA HAY CONTAINING MATURE SEED; OR,

E. APPLY FINE STRAW OR FINE BARK AT A THICKNESS OF 3 INCHES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED; OR,

F. SOIL RETENTION BLANKETS, EROSION CONTROL NETTING, OTHER MANUFACTURED MATERIALS, OR BLOCK SOO MAY BE REQUIRED IN ADDITION TO MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY WILL HAVE THE PROPERTY TO BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL HAVE A CONTRASTING COLOR TO THE SOIL TO ALLOW VISUAL METING AND AD IN UNIFORM APPLICATION DURING SEEDING.

APPLYING MULCH:

A. 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. ABOUT 75% OF THE SOIL SURFACE WILL BE COVERED.

B. WOOD CELLULOSE OR WOOD FIBER MULCH WILL BE APPLIED WITH HYDRAULIC SEEDING EQUIPMENT.

ANCHORING MULCH:

A. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:

1. BY EMULSIFIED ASPHALT, (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 MIXTURE 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 THE PUBLIC, ADJACENT PROPERTY, PAVEDWAYS, CURBS, SIDEWALKS, AND ALL OTHER STRUCTURES FROM ASPHALT DISCOLORATION.

2. PRESS THE MULCH INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACER 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 IN AN ERECT POSITION.

3. APPLY SYNTHETIC TACKIFIERS OR BINDERS APPLIED IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS WILL BE MIXED AND APPLIED TO MANUFACTURER'S SPECIFICATIONS.

4. FALL AND WINTER PLANTINGS MAY INCLUDE 1/2 BUSHEL OF RYE OR WHEAT TO STABILIZE THE MULCH.

5. PLASTIC MESH OR NETTING WITH NO LARGER THAN ONE INCH BY ONE INCH MESH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS.

B. WHERE WOOD CELLULOSE OR WOOD PULP FIBER MULCH IS APPLIED ALONE, A TACKIFIER WILL BE USED.

LIME AND MAINTENANCE APPLICATION:

APPLY ONE TON OF AGRICULTURAL LIME EVERY 4 TO 6 YEARS.

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY SEEDING (COASTAL) WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET	40LBS/AC												
RYE, GRAN	56LBS/AC												
RYEGRASS	50LBS/AC												
TEMPORARY SEEDING (COASTAL) WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40LBS/AC												
RYE, GRAN OR OATS	56LBS/AC												
RYEGRASS	50LBS/AC												
PERMANENT SEEDING (COASTAL) SANDY, DOUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10LBS/AC												
BROWNTOP MILLET BAHIAGRASS	10LBS/AC												
SERICEA LESPEDEZA	40LBS/AC												
BROWNTOP MILLET ATLANTIC COASTAL PANICGRASS	10LBS/AC												
BROWNTOP MILLET SWITCHGRASS	10LBS/AC												
(ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	4LBS/AC												
BROWNTOP MILLET WEEPING LOVEGRASS	10LBS/AC												
PERMANENT SEEDING (COASTAL) WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10LBS/AC												
BROWNTOP MILLET BAHIAGRASS	10LBS/AC												
BROWNTOP MILLET BAHIAGRASS	10LBS/AC												
SERICEA LESPEDEZA	40LBS/AC												
BROWNTOP MILLET BERMUDA, COMMON	10LBS/AC												
BROWNTOP MILLET LITTLE BLUESTEM INDIANGRASS	10LBS/AC												

ACTIVITY SCHEDULE

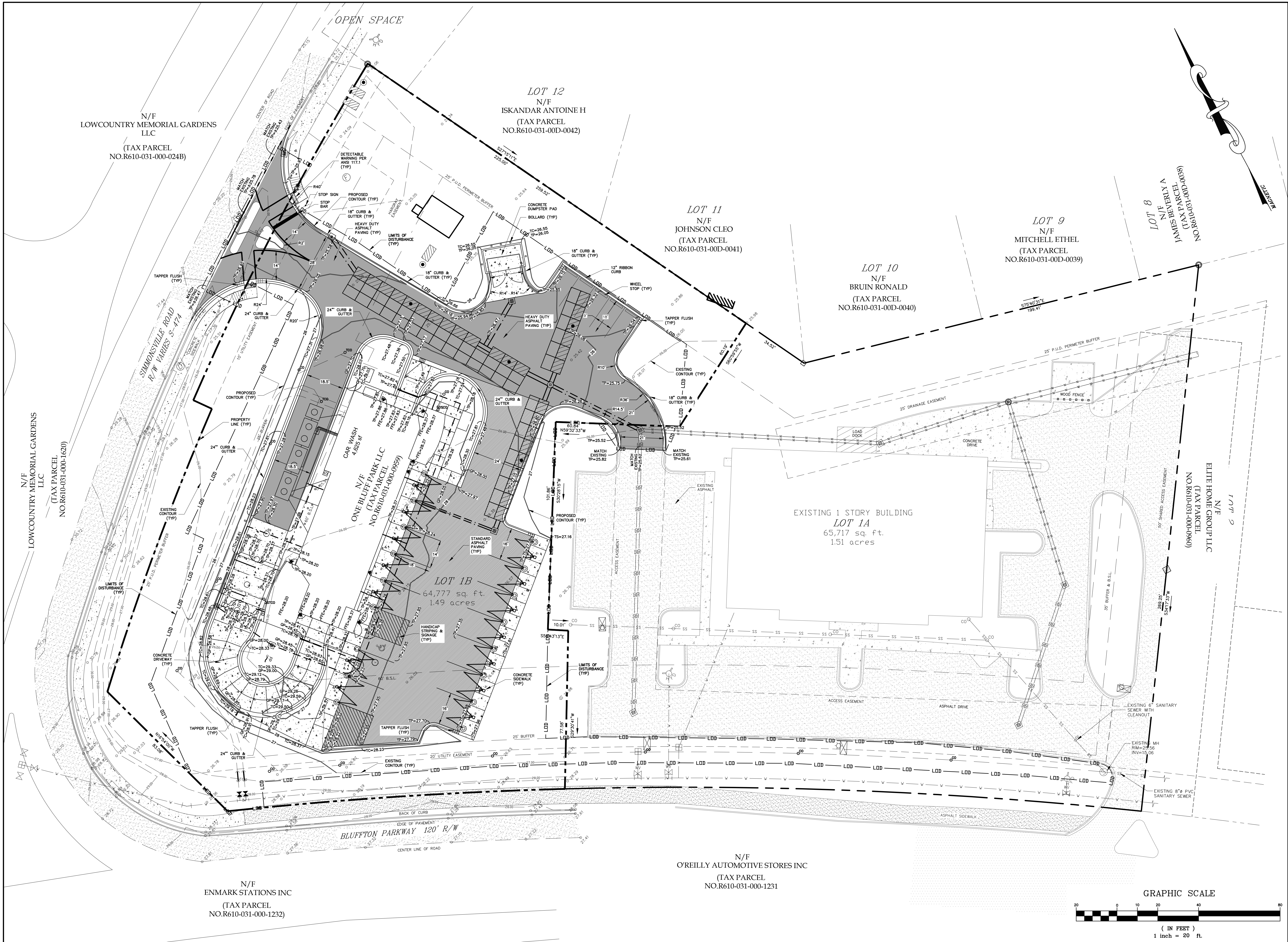
ACTIVITY	SCHEDULE	
EROSION CONTROL IMPLEMENTATION ALL INITIAL PHASE ITEMS		EROSION CONTROL PHASE 1
MINIMAL CLEARING AND GRUBBING		EROSION CONTROL PHASE 1
CLEARING AND GRUBBING		CONSTRUCTION PHASE 2
CUT AND FILL		CONSTRUCTION PHASE 2
GRASSING (LIMIT EXPOSURE TO 7 DAYS)		CONSTRUCTION PHASE 2
UTILITY INSTALLATION		CONSTRUCTION PHASE 2
INSTALL INLET PROTECTION		CONSTRUCTION PHASE 2
INSTALL CONCRETE WASHOUT		CONSTRUCTION PHASE 2
ROADWAY CONSTRUCTION		CONSTRUCTION PHASE 2
FINISH GRADING		CONSTRUCTION PHASE 2
REMOVE SEDIMENT FROM PIPES		STABILIZATION PHASE 3
FINAL STABILIZATION		STABILIZATION PHASE 3
REMOVE SILT FENCE & INLET PROTECTION		STABILIZATION PHASE 3
MAINT. EROSION CONTROL MEASURES	THROUGHOUT LIFE OF PROJECT	ALL PHASES
SUBMIT NOT AND AS BUILTS TO SDCDC	UPON COMPLETION OF PROJECT	COMPLETION

TOMMY'S EXPRESS CARWASH
87 SIMMONSVILLE ROAD
TOWN OF BLUFFTON, SC

CAROLINA ENGINEERING CONSULTANTS, INC.
843/322-0553
843/322-0556 (FAX)
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PO BOX 294
BEAUFORT, SC 29901

PROJECT: 2524
DATE: 04/23/24
REVISED: 07/22/24
DRAWN BY: BJS
ENGINEER: DRK
H-DATUM: NAD 83
V-DATUM: NAVD 88
SCALE: NTS

SEDIMENT & EROSION CONTROL DETAILS



PLAN REVISIONS		DATE
NO.	DESCRIPTION	
1		
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PAVING & GRADING PLAN

6 OF 12

PLAN REVISIONS		
NO.	DESCRIPTION	DATE
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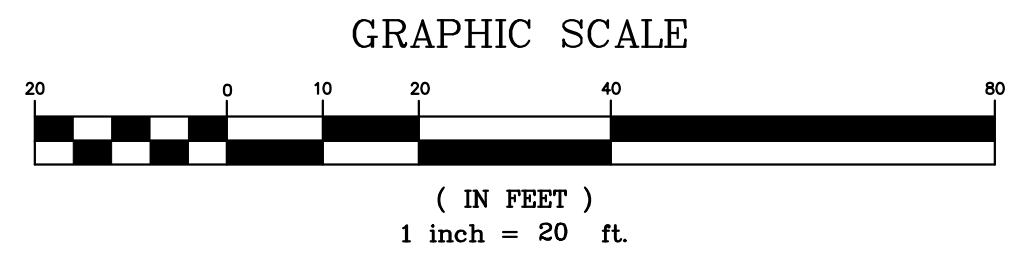
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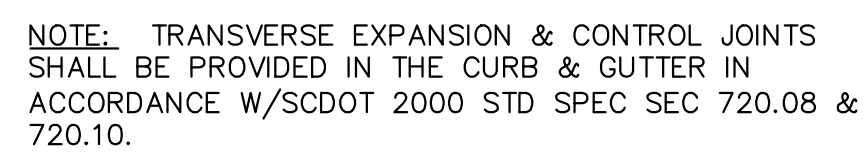
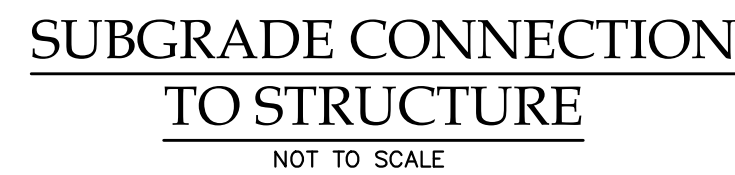
DRAINAGE PLAN

7
OF 12

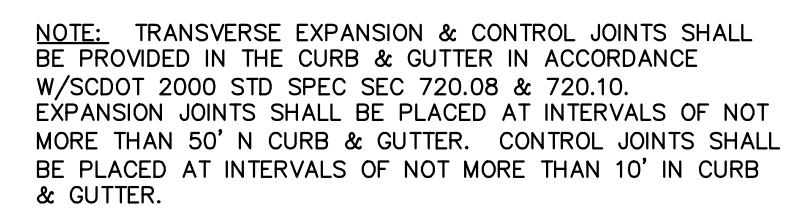




REFER TO SCDOT STANDARD
DRAWING #625-305-00
NOTE: MARKINGS TO BE THERMOPLASTIC.
ALL ARROWS, LINES & WORD MESSAGES
SHALL BE AS REQUIRED BY SCDOT IN THE
MANUAL ON UNIFORM TRAFFIC CONTROL
DEVICES AND THE SCDOT STANDARD
DRAWINGS FOR ROAD CONSTRUCTION



EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF
NOT MORE THAN 50' IN CURB & GUTTER.
CONTROL JOINTS SHALL BE PLACED AT INTERVALS OF
NOT MORE THAN 10' IN CURB & GUTTER.



18" STANDARD CONCRETE
CURB & GUTTER DETAIL

NOT TO SCALE

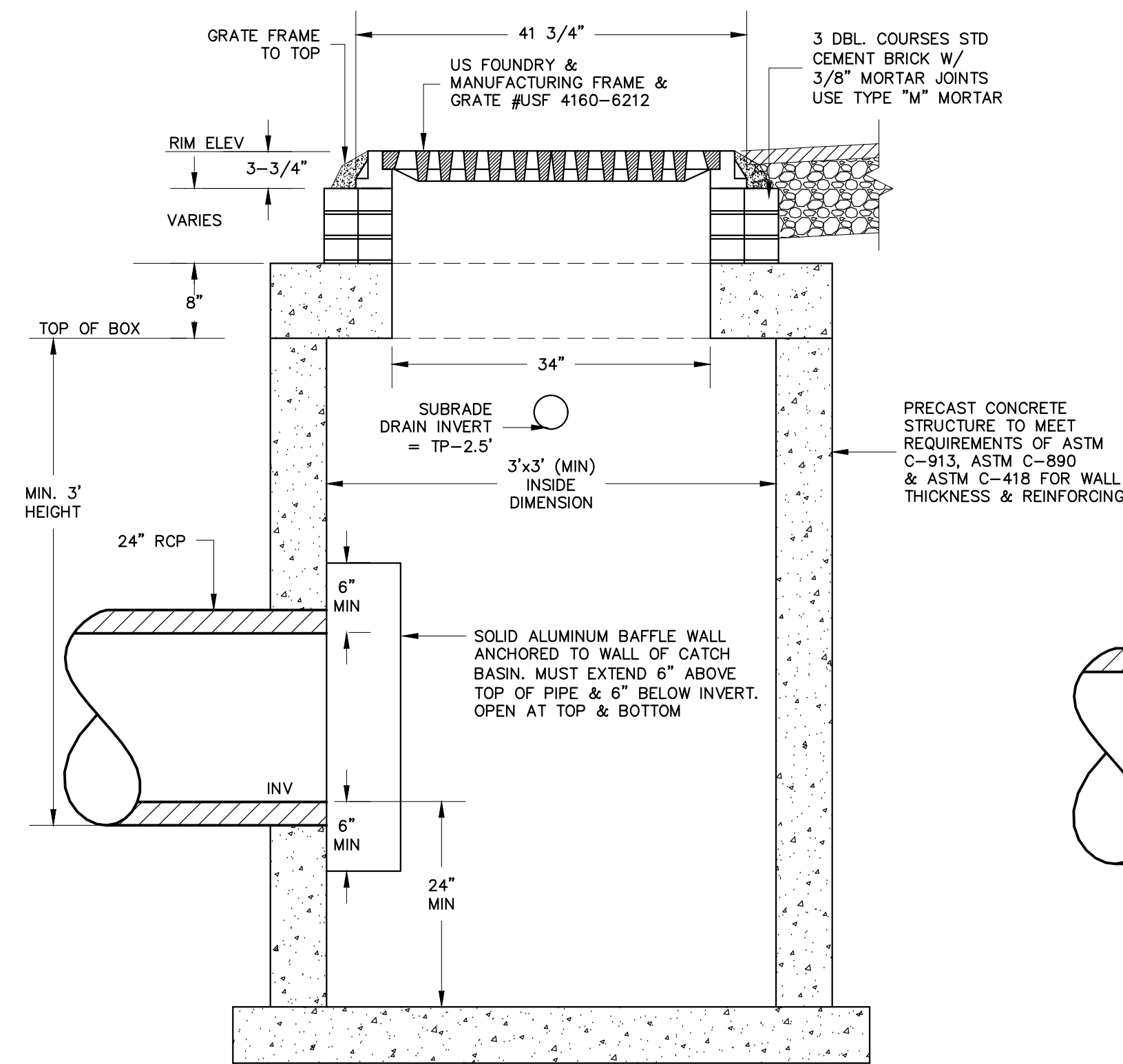
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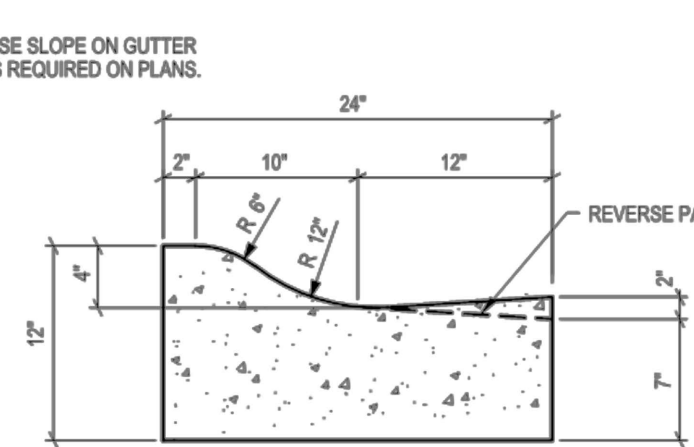
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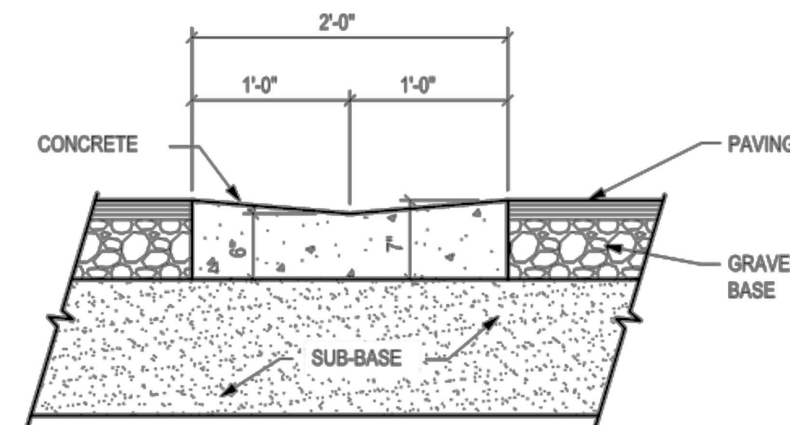
PAVING, GRADING, & DRAINAGE DETAILS



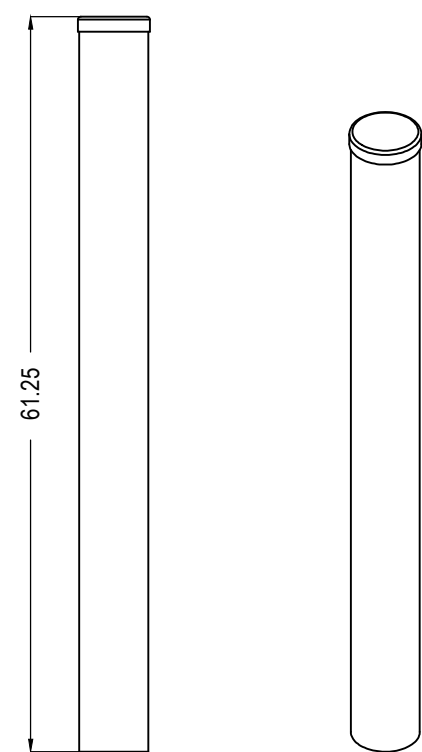
CATCH BASIN DETAIL #1
NOT TO SCALE



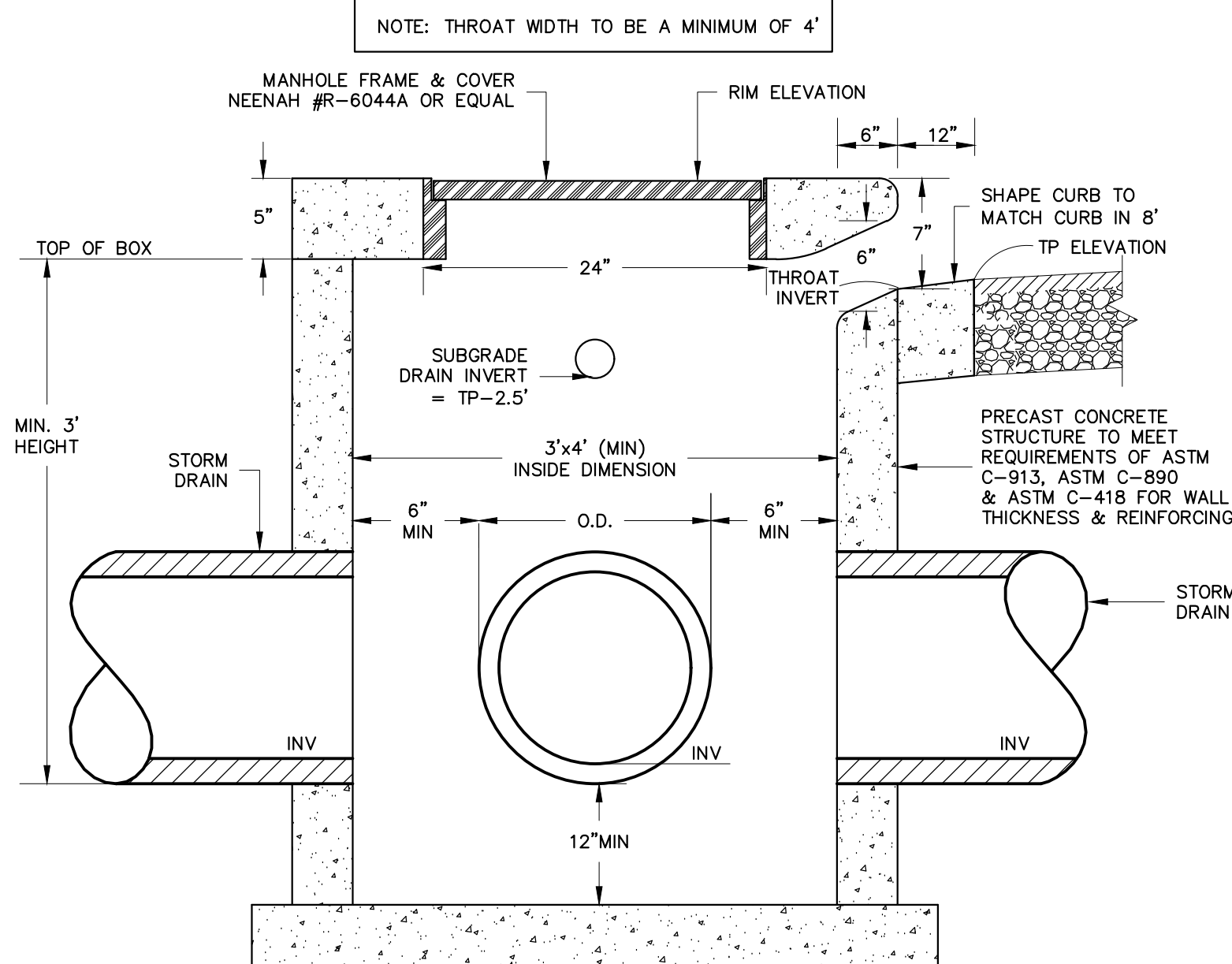
D6 STANDARD ROLL CURB DETAIL
NOT TO SCALE



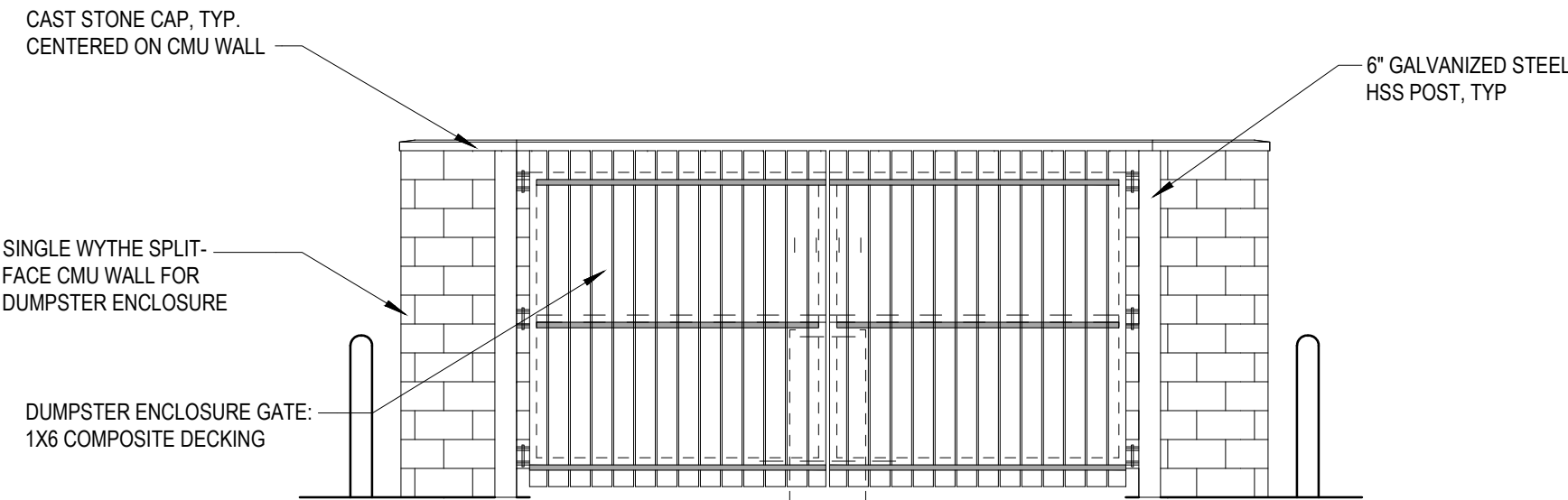
D5 TYPICAL GUTTER PAN DETAIL
NOT TO SCALE



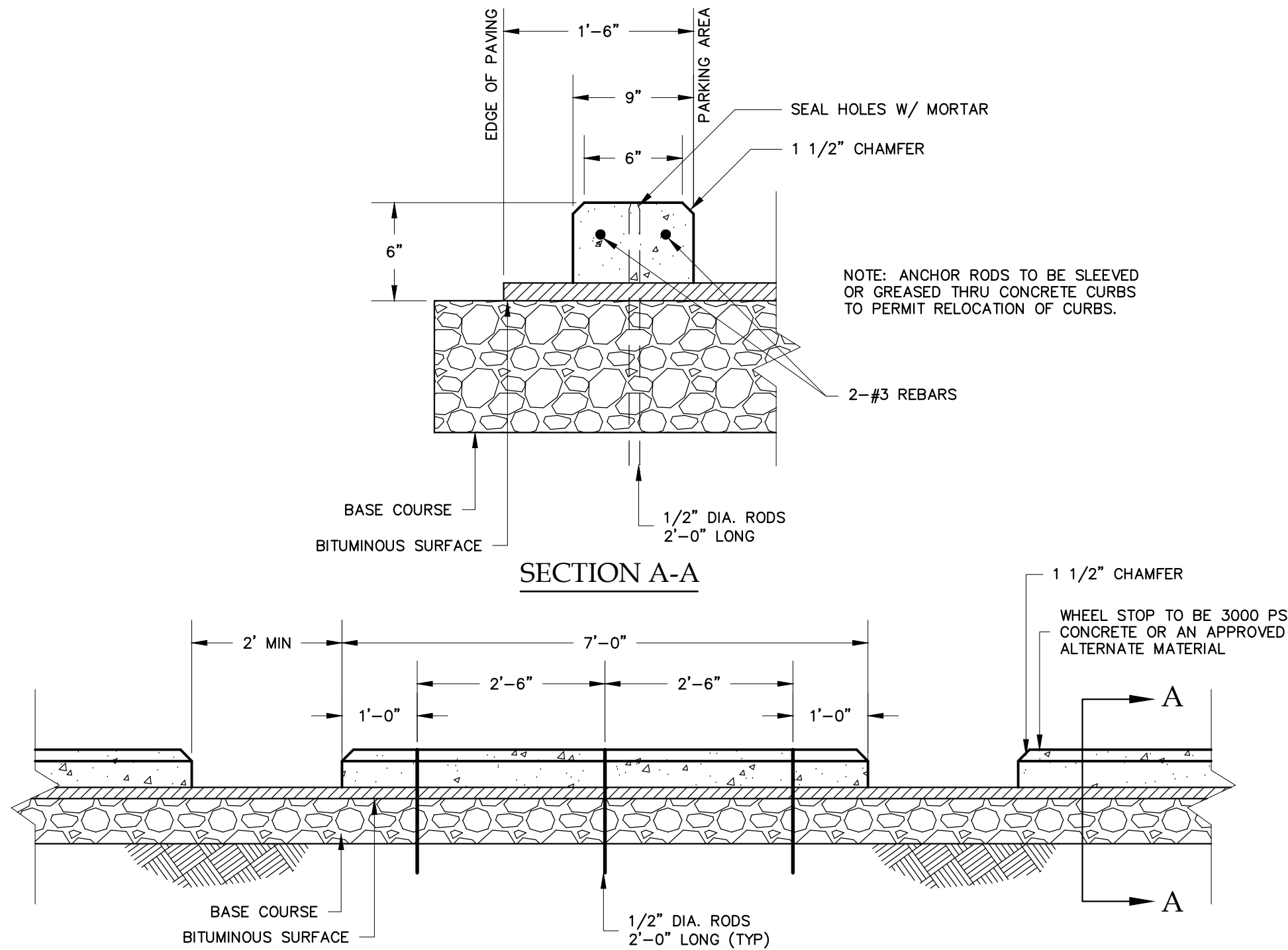
BOLARD DETAIL
NOT TO SCALE



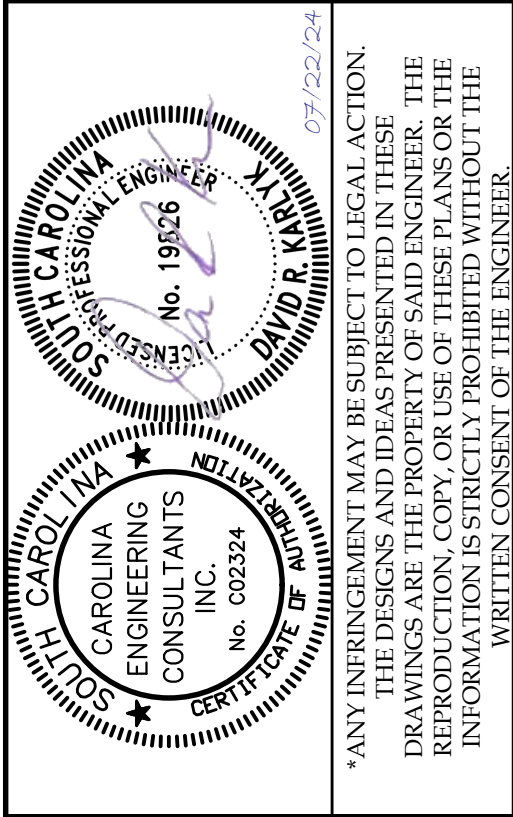
CURB INLET DETAIL
NOT TO SCALE



DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



ELEVATION
WHEELSTOP - CONCRETE
NOT TO SCALE



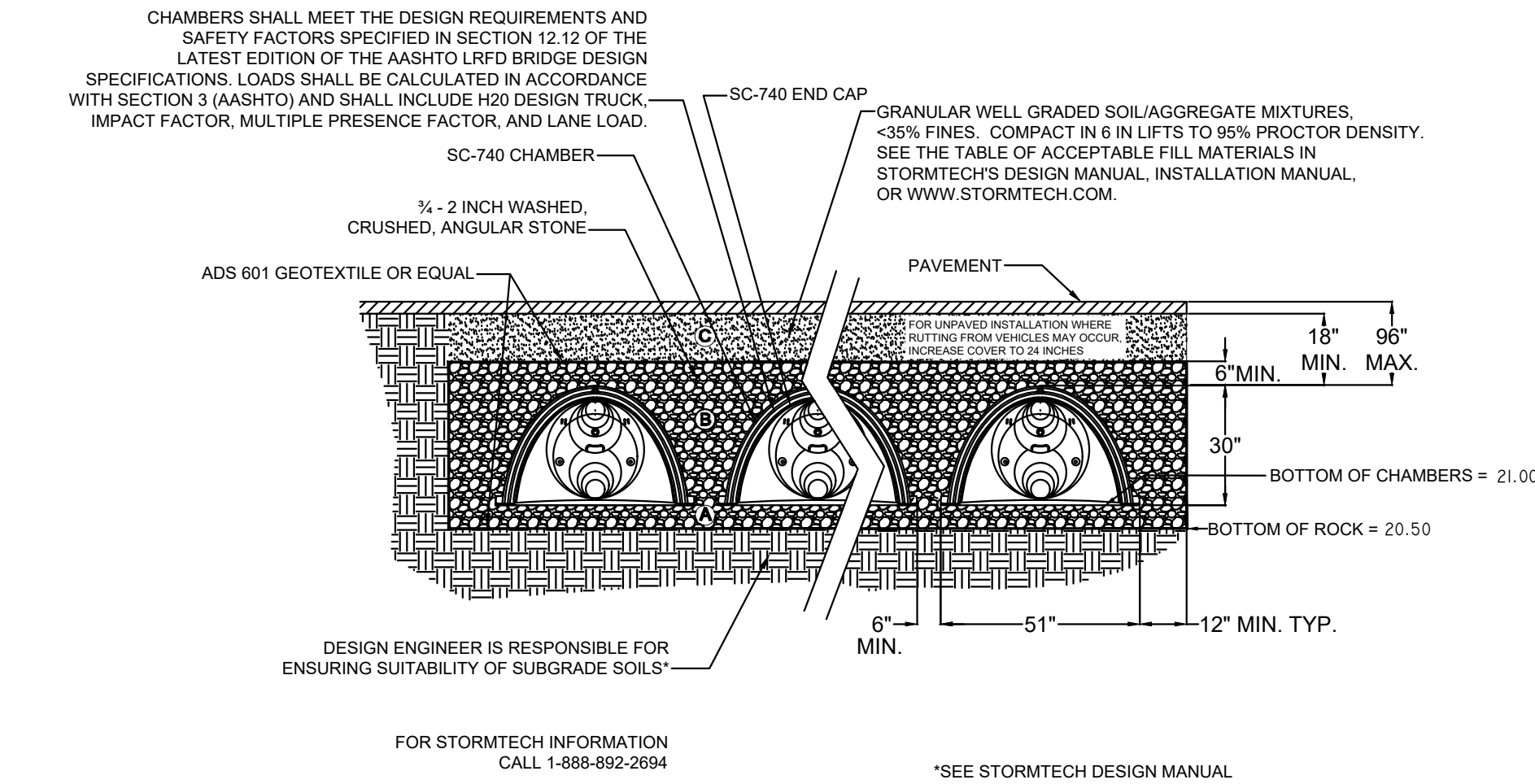
PLAN REVISIONS		DATE
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TOMMY'S EXPRESS CARWASH
87 SIMMONSVILLE ROAD
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PAVING, GRADING, &
DRAINAGE DETAILS



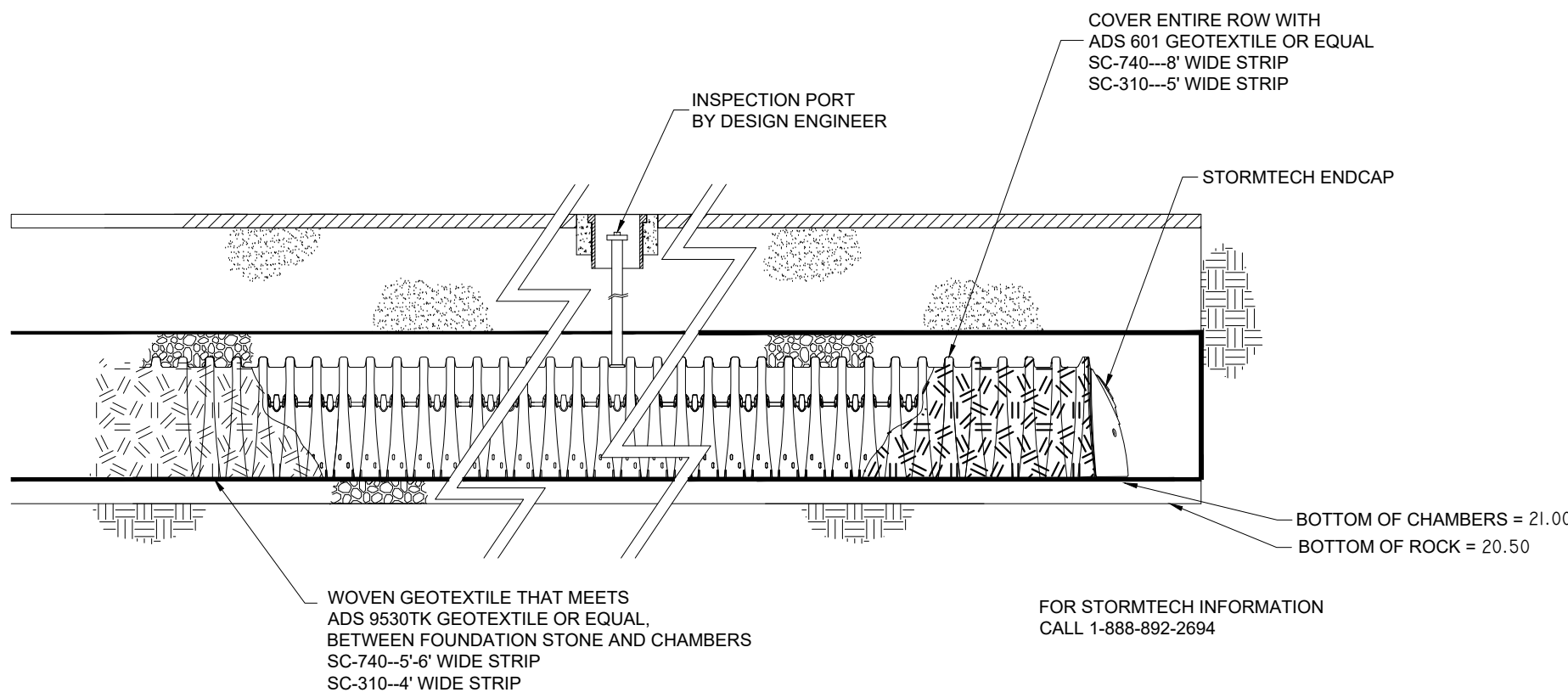
SC-740 TYPICAL CROSS SECTION

ACCEPTABLE FILL MATERIALS
STORMTECH SC-740 CHAMBER SYSTEMS

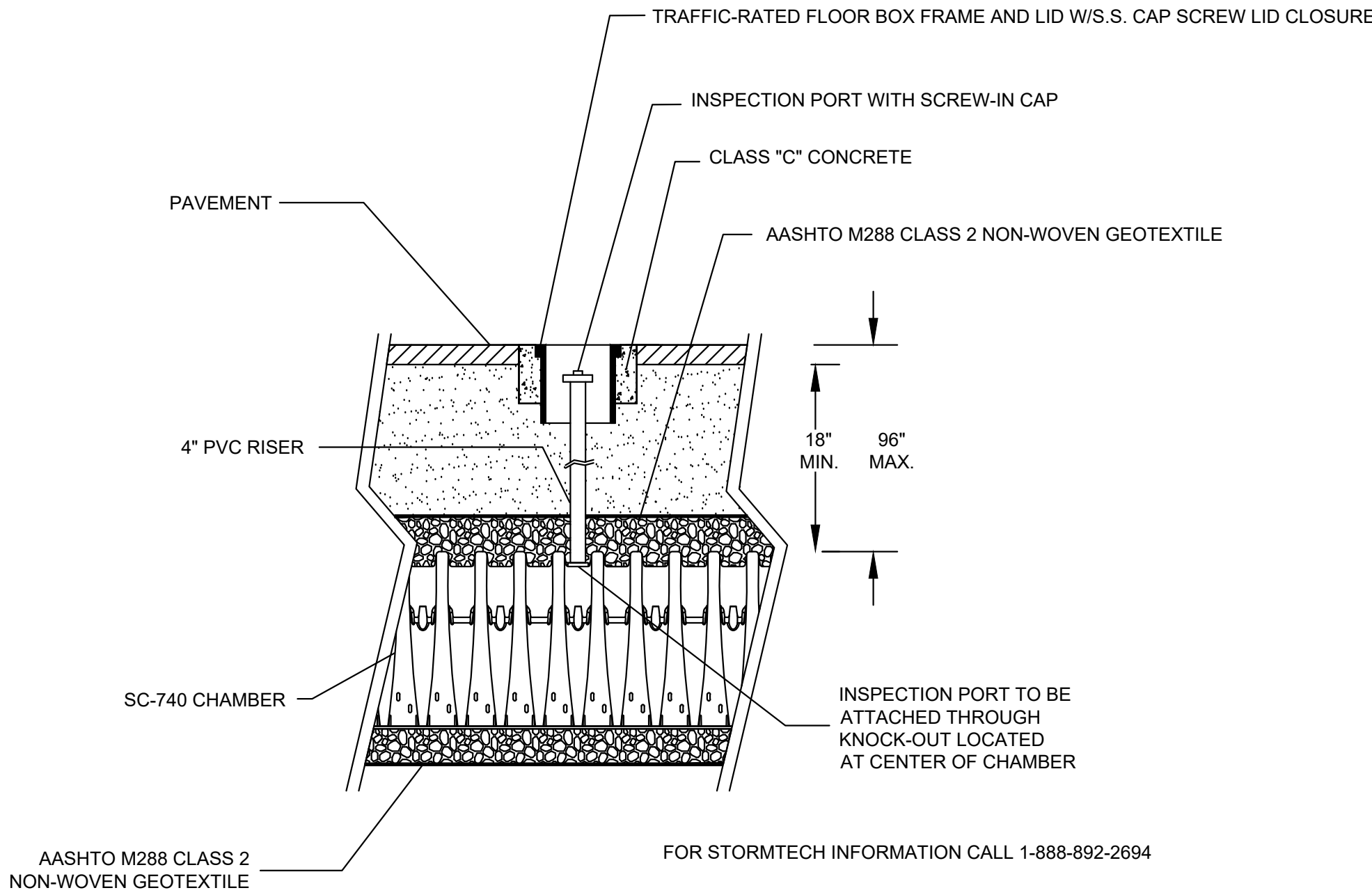
	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
	ANY SOIL/ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (24" FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
EMBEDMENT STONE SURROUNDING AND TO A 6" ELEVATION ABOVE CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1/4" - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED
	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1/4" - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE WASHED CRUSHED ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS WASHED, CRUSHED, ANGULAR NO. 4 STONE.

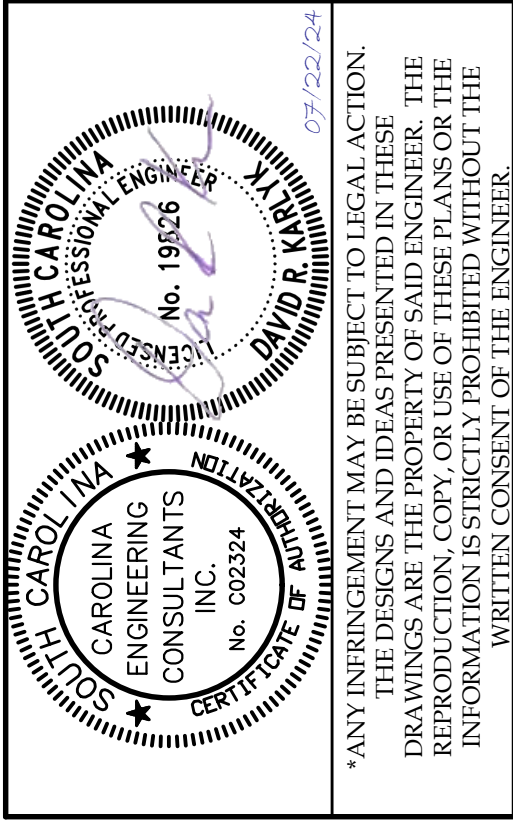
STORMTECH ACCEPTABLE FILL MATERIALS



STORMTECH ISOLATOR ROW DETAIL



STORMTECH SC-740 CHAMBER SYSTEM
OPTIONAL INSPECTION PORT DETAIL
NOT TO SCALE



PLAN REVISIONS		DATE
NO.	DESCRIPTION	
1	-	-
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STORM TECH
DETAILS

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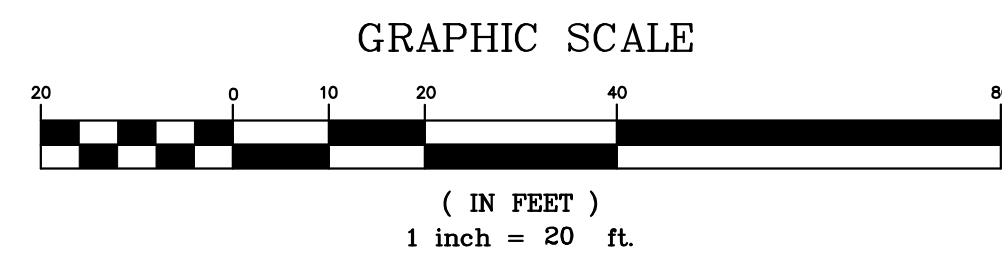
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ENGINEER:	DRK
H-DATUM:	NAD 83
V-DATUM:	NAVD 88
SCALE:	1"=20'

WATER & SANITARY SEWER PLAN

11
OF 12



SEAL

CAROLINA ENGINEERING CONSULTANTS, INC.

REGISTERED PROFESSIONAL ENGINEER

NO. 003234

CERTIFICATE

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PLAN REVISIONS		DATE
NO.	DESCRIPTION	
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2		-
3		-
4		-
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TOMMY'S EXPRESS CARWASH

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WATER & SANITARY SEWER DETAILS

12 OF 12

24" ROUND X 4" THICK REINFORCED PRECAST CONCRETE COLLAR

2 PC #3 REBAR

24"

GROUT AFTER FINAL SETTLING

LABEL WATER OR SEWER

3/4" CHAMFER AT EACH CORNER

2" ROUND CAST BRASS SURVEY MARKER PLATE W/ ANCHOR

1"

STAMP DIRECTIONAL ARROW & DISTANCE TO NEAREST FOOT IN PLATE. USE 1/4" DIE SET

4"x4" SQUARE

1-#4 REBAR

30"

6"x6" 4000 PSI WITH 4-#4 VERTICAL BARS

24"

3/4" CHAMFER ALL SIDES

6"

PRECAST CONCRETE POST (4,000 PSI)

BRASS MARKER PLATE

CONCRETE FOOTING

5" MIN

4"

URBAN CONCRETE MARKER

RURAL CONCRETE MARKER

24" ROUND X 4" THICK REINFORCED PRECAST CONCRETE COLLAR

2 PC #3 REBAR

24"

GROUT AFTER FINAL SETTLING

LABEL WATER OR SEWER

TRACER WIRE TO PROTRUDE 6" (MIN) FROM VALVE TOP

2"

COMPLETE STANDARD VALVE BOX TOP

6" C900 PVC

TRACER WIRE

6" MIN

BOTTOM SHOT ONLY OF VALVE BOX

6" MIN

#57 STONE

12"

VALVE AND VALVE BOX

NOTES:

1. MARKERS

A. VALVE MARKERS ARE REQUIRED FOR EACH VALVE (EXCEPT HYDRANT VALVES). PIPE LINE MARKERS ARE REQUIRED AT FITTINGS AND EACH 700' WHERE LINES RUN THROUGH AN UNDEVELOPED AREA. AIR MANHOLE REQUIRES MANHOLE.

B. MARKER PAINTING

WATER - PAINTING NOT REQUIRED

SEWER INFLUENT - TOP 4" GREEN

SEWER EFFLUENT - TOP 4" PURPLE

C. MARK MARKERS AS FOLLOWS

PVC - MAIN VALVE

AV - AIR RELEASE VALVE

PIPELINE - PIPELINE MARKER

D. VALVE AND PIPELINE MARKERS IN MOWED AREAS TO BE SET TO AN EXPOSURE OF NOT MORE THAN 18" OR LESS THAN 6" ABOVE FINAL GRADE

E. IF SOILS ARE NOT STABLE ENOUGH TO MAINTAIN THE URBAN MARKERS VERTICAL, CONCRETE FOOTINGS ARE TO BE INSTALLED.

2. VALVE BOX LID SHALL BE WITHIN 4" OF COLLAR TOP. COLLAR TOP IS TO BE NO MORE THAN 1" ABOVE FINAL GRADE AND NO LOWER THAN 1" BELOW FINAL GRADE.

3. CONCRETE COLLAR NOT REQUIRED IN PAVEMENT. VALVE BOX TOP IS TO BE TRAFFIC RATED.

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

STANDARD VALVE DETAIL

DATE: 07/01/09

DESIGN BY: BMC

REVISION #

SCALE: N.T.S.

APPROVED BY: ERS

G-12

FINISH GRADE

SEE NOTE 4

TRACER WIRE

VALVE BOX

SEE NOTE 3

TAPPING SLEEVE

HJ TAPPING GATE VALVE

SUPPORT VALVE ASSEMBLY WITH #57 STONE (STONE TO EXTEND MINIMUM OF 6" UNDER INVERT)

PIPE O.D.

FLANGE X HJ TAPPING GATE VALVE

NOTES:

1. ALL TAPPING SLEEVES GREATER THAN 2" SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 80 PSI FOR 20 MINUTES.

2. ALL WET TAPS 12" AND UNDER SHALL BE PERFORMED BY B.J.W.S.A.

3. TAP DIAMETER SHALL BE WITHIN 1/8" OF LINE DIAMETER.

4. NOTCH TOP OF PVC PIPE TO AVOID PINCHING TRACER WIRE.

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

TAPPING SLEEVE & VALVE DETAIL

DATE: 07/01/09

DESIGN BY: BMC

REVISION #

SCALE: N.T.S.

APPROVED BY: ERS

G-13

2" BRASS NIPPLE

GATE VALVE

2" BRASS THREADED ADAPTER

2" TAPPING SADDLE OR 2" TAPPED PLUG

HJ TAPPING GATE VALVE

SUPPORT VALVE ASSEMBLY WITH #57 STONE (STONE TO EXTEND A MINIMUM OF 6" UNDER MAIN)

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

2" CONNECTION

DATE: 07/01/09

DESIGN BY: BMC

REVISION #

SCALE: N.T.S.

APPROVED BY: ERS

G-14

EXISTING ROAD SURFACE

TOP LAYER TO BE REPLACED W/ APPROVED BACKFILL

BACKFILL & TAMP IN 6" LIFTS INCLUDE NO MATERIAL GREATER THAN 2" DIA. (98% COMPACTION PER STD. PROCTOR ASTM D 698)

#57 STONE ABOVE PIPE

PIPE IN STONE 4" OVER BARREL MIN. FOR BELOW BARREL BEDDING SEE TYPICAL BEDDING FOR GRAVITY SEWER

PIPE ZONE

COMPACTED BACKFILL

36" MIN

SPRING LINE

1/2 BC MIN

1/8 BC

4" MINIMUM UNDER BARREL

TRENCH TO BE 18" WIDER THAN PIPE DIAMETER (MIN)

#57 STONE BEDDING (STONE ABOVE PIPE IN ROADWAY AND PAVED AREA DETAILS)

TYPICAL BEDDING FOR GRAVITY SEWER PIPE

NOTES:

1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH INSTALLATION CUT. FINAL CUT TO BE MADE AFTER FINAL COMPACTION.

2. MATCH EXISTING PAVEMENT TYP. THICKNESS IS TO BE 2" UNLESS EXISTING IS THICKER.

3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT, IF MORE STRINGENT.

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

BEDDING DETAIL, GRAVITY PIPE

DATE: 07/01/09

DESIGN BY: BMC

REVISION #

SCALE: N.T.S.

APPROVED BY: ERS

S-01

EXISTING PAVEMENT

1 1/2" TAPER ZONE

3 1/2"

1 1/2" OVERLAY

NEW PAVEMENT

PAVEMENT SHALL BE CUT TO TRUE LINE AFTER FINAL COMPACTION

2" MIN

FLOWABLE FILL

36" MIN COVER

6" MAX

TRACER WIRE

12" MIN

SELECT BACKFILL TAPPED IN 6" LAYERS TO 98% STD PROCTOR ASTM D 698

HOLE DUG FOR PIPE BELL

PAVED AREA DETAIL

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

PAVED AREA DETAIL

DATE: 07/01/09

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S-01

FINISH GRADE

LESS THAN 2"

18" - 1/2" GREENE PVC SLEEVE

36" - 1/2" REBAR

12"

48" MIN

4" - 45° ELL

18" MIN

1% SLOPE

45° MAX

STONE BEDDING

SEWER MAIN

SERVICE LATERAL (SEE NOTES)

PROPERTY LINE

PLUG (TYP.)

VALVE BOX (SEE NOTES)

HOUSE

FLOW

CAP (REFER TO NOTES)

PROFILE VIEW

CLEAN OUT INSTALLATION - PROFILE VIEW

PLAN VIEW

CLEAN OUT - PLAN VIEW

CONCRETE COLLAR

NOTES:

1. SERVICE LATERAL SHALL BE INSTALLED 12" BELOW FINISHED GRADE AND CAPPED IN A MANNER SUITABLE FOR PRESSURE TESTING.

2. CLEAN OUTS INSIDE GRASSSED AREA SHALL CONSIST OF PVC PLUG IN SEWER LOADED VALVE BOX SURROUNDED BY A CONCRETE COLLAR. COLLAR SHALL BE FLUSH WITH FINISHED GRADE. VALVE BOX LID SHALL NOT PROTRUDE ABOVE COLLAR TOP.

3. ALL CLEAN OUTS ARE TO BE 4", INCLUDING CLEAN OUTS ON 6" SEWER LATERALS.

BEAUFORT - JASPER

WATER & SEWER AUTHORITY

SEWER SERVICE, SINGLE

DATE: 07/01/09

DESIGN BY: BMC

REVISION #

SCALE: N.T.S.

APPROVED BY: ERS

S-11

PLAN REVISIONS		
NO.	DESCRIPTION	DATE
1	-	-
2	-	-
3	-	-
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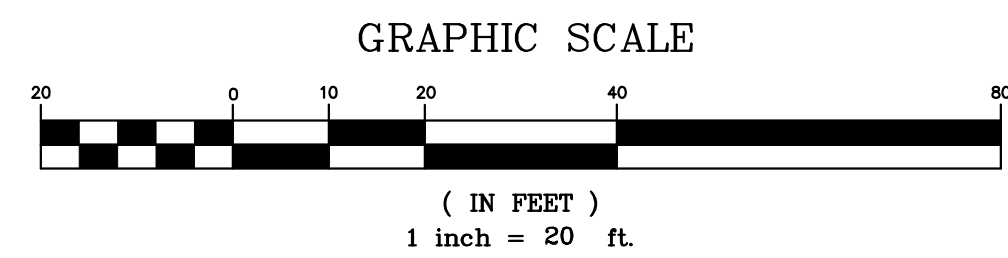
TOMMY'S EXPRESS CARWASH
87 SIMMONSVILLE ROAD
TOWN OF BLUFFTON, SC

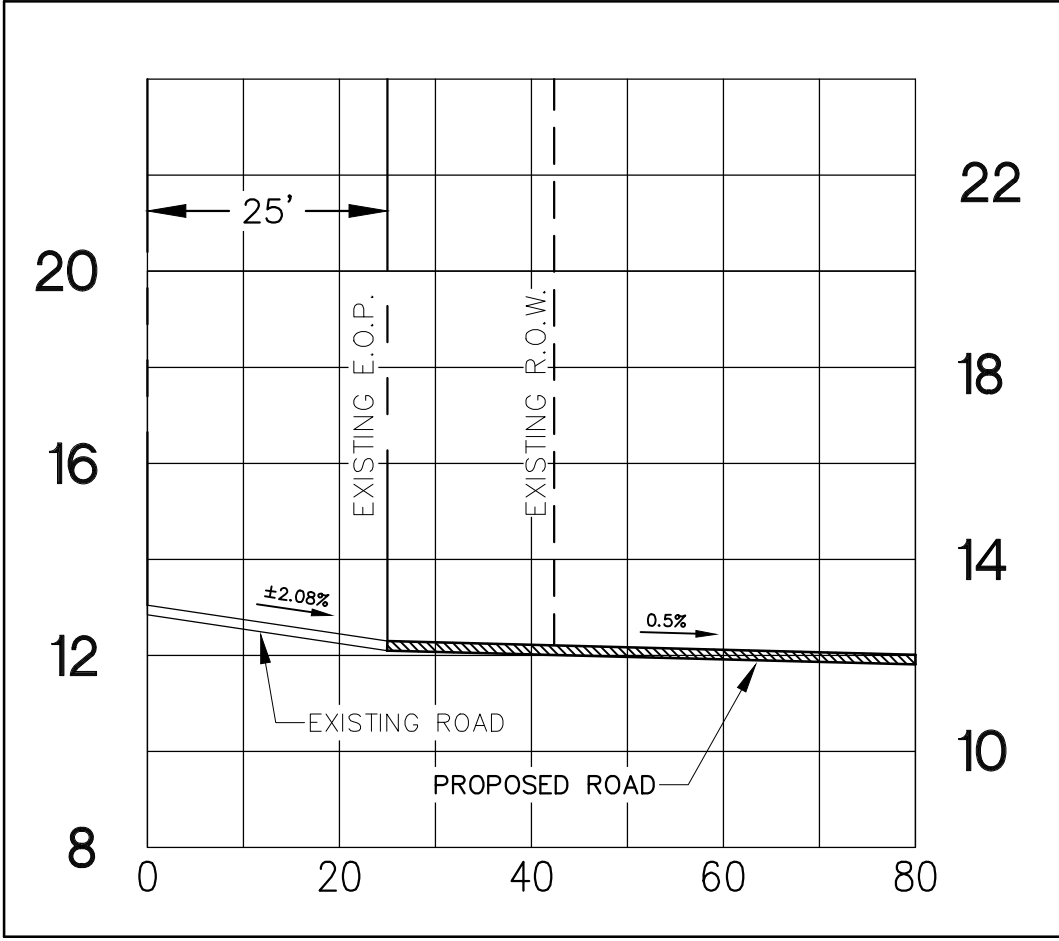
CAROLINA ENGINEERING CONSULTANTS, INC.
PO BOX 294
BEAUFORT, SC 29901
WWW.CAROLINAENGINEERING.COM
843/322-0553
843/322-0556 (FAX)

PROJECT:	2524
DATE:	04/23/24
REVISED:	07/22/24
DRAWN BY:	BJS
ENGINEER:	DRK
H-DATUM:	NAD 83
V-DATUM:	NAVD 88
SCALE:	1"=20'

LIMITS OF DISTURBANCE PLAN

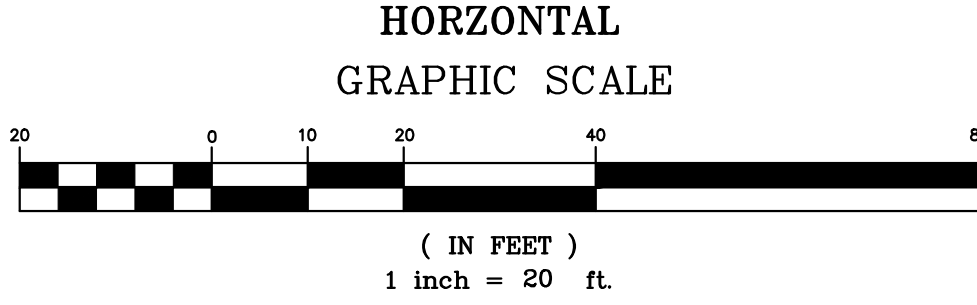
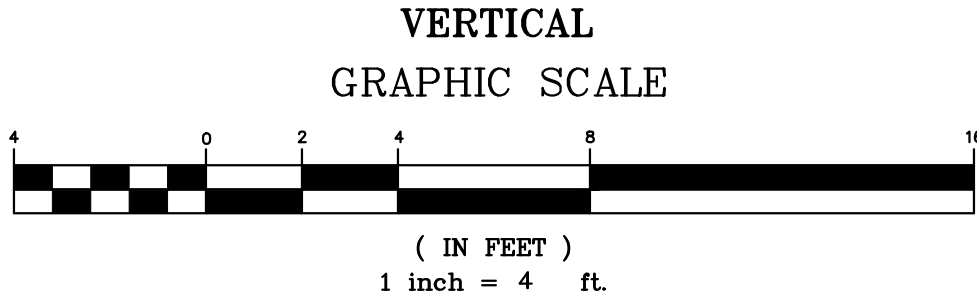
1
OF 1





DRIVEWAY PROFILE

SCALE: HORZ. 1"=20' VERT. 1"=4'



GENERAL NOTES,

WHERE NEW CONSTRUCTION IS NEAR THE EDGE OF AN EXISTING PAVED ROADWAY, A TRAFFIC LANE WILL BE TEMPORARILY CLOSED TO PROVIDE SAFETY TO THE PUBLIC AND TO THE WORKMEN. NO LANE CLOSURES DURING 7:00 AM TO 9:00 AM OR FROM 3:30 PM TO 6:00 PM ARE ALLOWED.

APPLICANT WILL REPAIR ALL DAMAGE DONE TO ROADSIDE AND RESEED WITH PERMANENT GRASS.

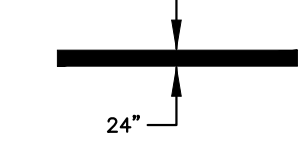
TRAFFIC CONTROLS FOR THIS INSTALLATION SHALL BE IN ACCORDANCE WITH S.C.M.U.T.C.D.

PAVEMENT MARKING LINES TO BE THERMOPLASTIC.

RAISED REFLECTIVE PAVEMENT MARKER RRPW'S TO BE INSTALLED IN ACCORDANCE WITH SCDOT'S STANDARD DRAWINGS NO. 603-1 THRU 603-8 JULY, 1997.

ALL PROPOSED SIGNAGE AND PAVEMENT MARKINGS SHOULD BE IN ACCORDANCE WITH THE 2003 EDITION OF THE MUTCD.

NOTE: MARKINGS TO BE THERMOPLASTIC. ALL ARROWS, LINES & WORD MESSAGES SHALL BE AS REQUIRED BY SCDOT IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE SCDOT STANDARD DRAWINGS FOR ROAD CONSTRUCTION



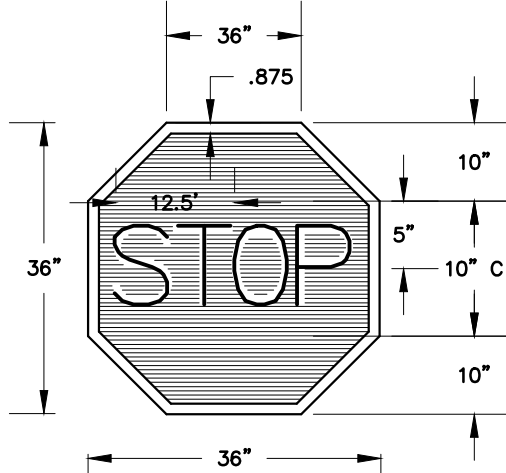
STOP BAR

NOT TO SCALE

NOTE:

CONTRACTOR TO REFER TO THE MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS.

NOTE:
COLORS: LEGEND -- WHITE (RETROREFLECTIVE)
BACKGROUND -- RED (RETROREFLECTIVE)



R-1 STOP SIGN

NOT TO SCALE

2" TYPE B ASPHALT SURFACE COURSE
(175#/SY) PER SCDOT 2000 STD. SPEC SEC. 403

3.0" TYPE II ASPHALT BINDER COURSE
PER SCDOT 2000 STD. SPEC. SEC. 402

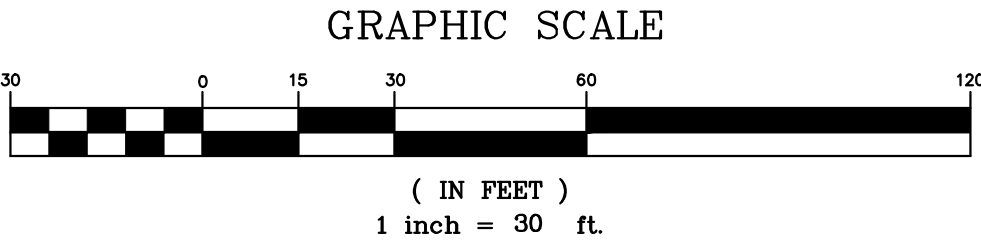
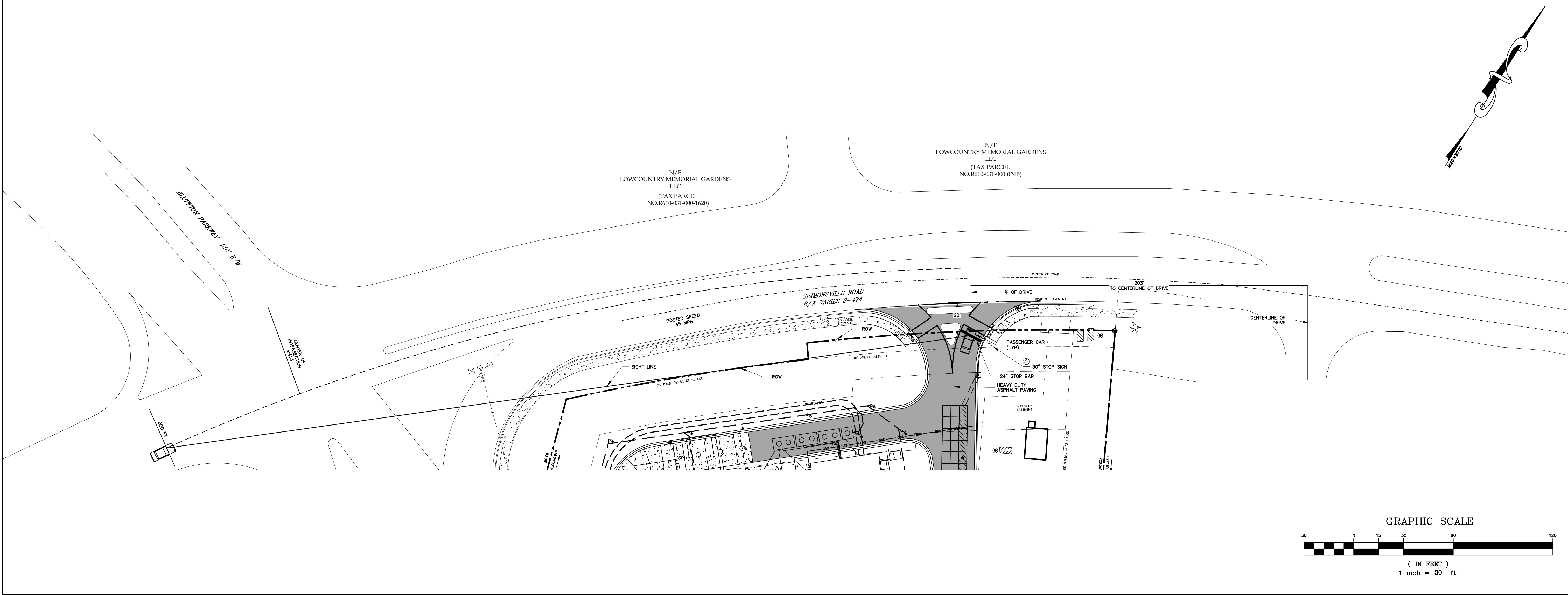
6" STABILIZED AGGREGATE BASE
IN ACCORDANCE W/SCDOT 1986
STD. SPEC. SEC. 306 COMPACTED
TO 98% DENSITY AS DETERMINED
BY ASTM D1557. (PRIME COAT
REQUIRED)

COMPACTED SUBGRADE (TO A DEPTH OF 12") TO 95% MAX
DENSITY AS DETERMINED BY ASTM D1557. ONCE SUBGRADE IS
GRADED & COMPACTED, NO RUBBER TIRED EQUIPMENT SHOULD
BE ALLOWED TO TRAVEL OVER THE SUBGRADE. THE AGGREGATE
BASE SHOULD BE PLACED BY BACKING THE TRUCKS INTO
POSITION SUCH THAT THE TRUCKS ARE ALWAYS ON EXISTING
PAVEMENT OR PREVIOUSLY PLACED AGGREGATE BASE.

HEAVY DUTY ASPHALT PAVING DETAIL

(IN SCDOT R/W ONLY)

NOT TO SCALE



Professional Engineer
No. 19036
07/22/24

Professional Engineer
No. 002324
07/22/24

Carolina Engineering Consultants, Inc.

Carolina Engineering Consultants, Inc.

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NO.	DESCRIPTION	
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ENCROACHMENT
PLAN

1
OF 1