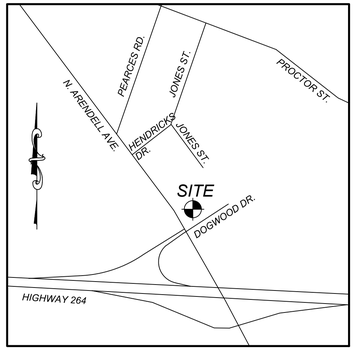


VICINITY MAP

NTS

COOK OUT
FRESH HAMBURGERS

COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NORTH CAROLINA 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

SITE ADDRESS:
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA
CSD PROJECT NUMBER: OUT-1502

CONTACT INFORMATION	
WATER:	CITY OF RALEIGH PUBLIC UTILITIES 222 W. HARGETT STREET RALEIGH, NC 27601 CONTACT: CESAR SANCHEZ PHONE: 919-996-2673
STORM DRAINAGE:	WAKE COUNTY STORMWATER DIVISION OF WATER QUALITY 336 FAYETTEVILLE STREET RALEIGH, NC 27602 CONTACT: DEBORAH L. RYALS PHONE: 919-856-7400
SANITARY SEWER:	CITY OF RALEIGH PUBLIC UTILITIES 222 W. HARGETT STREET RALEIGH, NC 27601 CONTACT: CESAR SANCHEZ PHONE: 919-996-2673
GAS:	PSNC ENERGY CONTACT: BUSINESS SERVICES PHONE: 919-452-2177
ELECTRIC:	DUKE ENERGY PROGRESS CONTACT: BUSINESS SERVICES PHONE: 800-452-2777
TELEPHONE:	AT&T CONTACT: BUSINESS SERVICES PHONE: 800-221-0000
PLANNING / ZONING:	TOWN OF ZEBULON PLANNING DEPT. 1003 N. ARENDELL AVENUE ZEBULON, NC 27597 CONTACT: AARON CHALKER PHONE: 919-823-1816 △1

24 HOUR CONTACT
JOHN ARMFIELD
CONSTRUCTION MANAGER
TELEPHONE: (336) 279-3242

Public
Water Distribution / Extension System
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # _____

Authorization to Construct _____

Date _____

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL ☐ S-_____

STORMWATER MGMT. ☐ S-_____

FLOOD STUDY ☐ S-_____

DATE_____

WAKE COUNTY NORTH CAROLINA EFFECTIVE: 05/02/06

ENVIRONMENTAL CONSULTANT SIGNATURE

ATTENTION CONTRACTORS:

*THE **CONSTRUCTION CONTRACTOR** RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE **PUBLIC UTILITIES DEPARTMENT** AT **(919) 996-4540** AT LEAST **TWENTY FOUR HOURS** PRIOR TO BEGINNING ANY OF THEIR CONSTRUCTION.*

***FAILURE** TO NOTIFY BOTH **CITY DEPARTMENTS** IN ADVANCE OF BEGINNING CONSTRUCTION, WILL RESULT IN THE ISSUANCE OF **MONETARY FINES**, AND REQUIRE REINSTALLATION OF ANY WATER OR SEWER FACILITIES NOT INSPECTED AS A RESULT OF THIS NOTIFICATION FAILURE.*

FAILURE** TO CALL FOR **INSEPCTION, INSTALL A DOWNSTREAM PLUG, HAVE PERMITTED PLANS** ON THE **JOBSITE**, OR ANY OTHER **VIOLATION** OF **CITY OF RALEIGH STANDARDS** WILL RESULT IN A **FINE AND POSSIBLE EXCLUSION** FROM FUTURE WORK IN THE **CITY OF RALEIGH.

REVISIONS:

NO.	DATE	DESCRIPTION	BY
△1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

SHEET INDEX

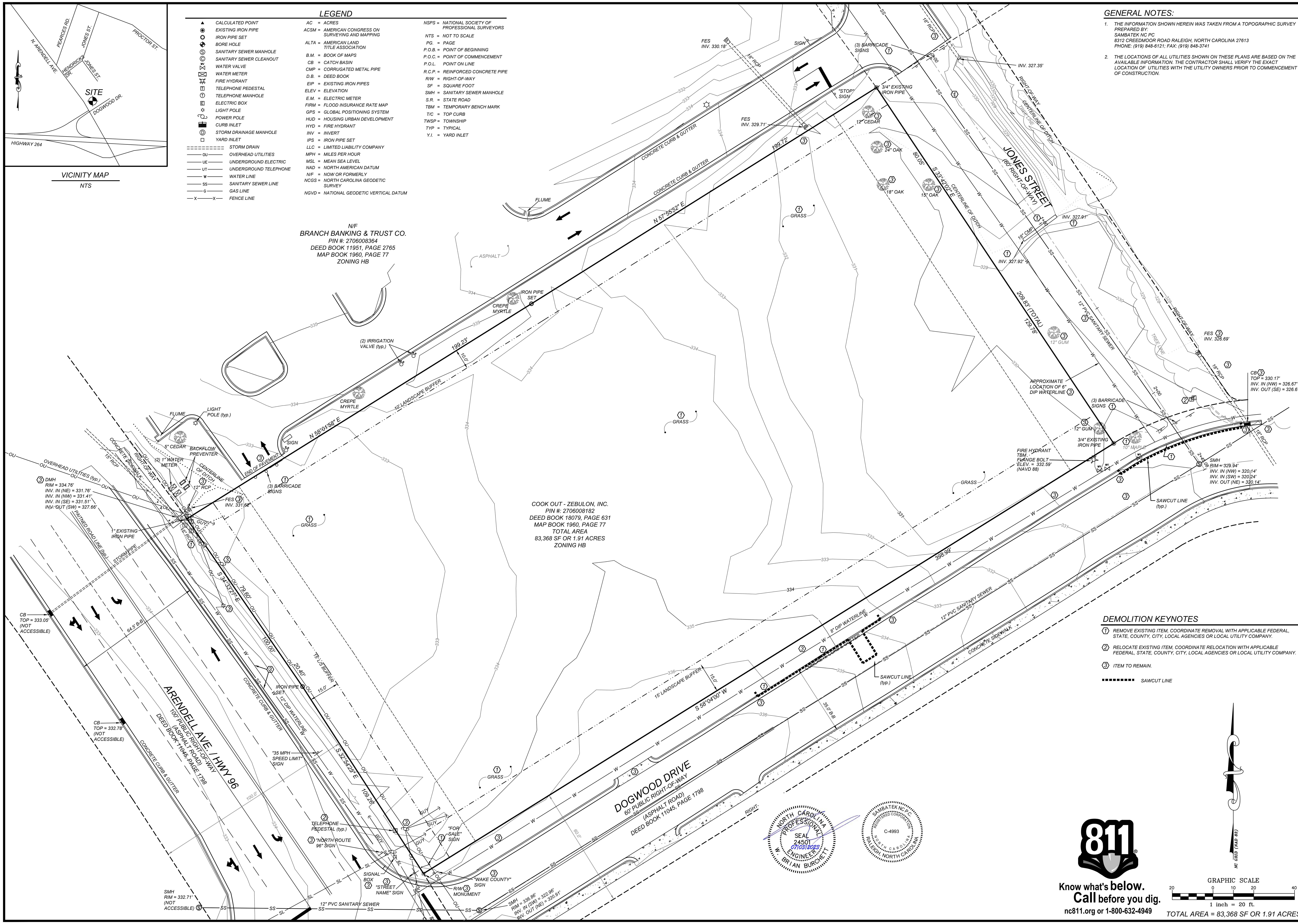
SITE INFORMATION	
SITE ADDRESS:	1200 NORTH ARENDELL AVENUE
PARCEL IDENTIFICATION NUMBER:	2706008182
OWNER / DEVELOPER:	COOK OUT 15 LAURA LANE, SUITE 300 THOMASVILLE, NORTH CAROLINA 27360 PHONE: (336) 215-7025 FAX: (336) 474-1849
DESIGNER:	COMMERCIAL SITE DESIGN, PLLC 8312 CREEDMOOR ROAD RALEIGH, NORTH CAROLINA 27613 PHONE: (919) 848-6121 FAX: (919) 848-3741
ZONING:	HC (HEAVY COMMERCIAL)
EXISTING USE:	VACANT LOT
PROPOSED USE:	RESTAURANT WITH DRIVE-THRU
BUILDING SETBACKS: RIGHT OF WAY ..... SIDE ..... REAR	 30 FEET 0 FEET 25 FEET
PARKING REQUIREMENTS:	1 SPACE PER 4 SEATS 60 / 4 = 15 SPACES
PARKING PROVIDED:	50 REGULAR SPACES 3 HANDICAP SPACES 53 TOTAL SPACES △1
SITE AREA: DISTURBED AREA: EXISTING IMPERVIOUS AREA: PROPOSED IMPERVIOUS AREA:	83,368 SF OR 1.91 ACRES 95,677 SF OR 2.20 ACRES 0 SF 49,062 SF OR 1.12 ACRES
BUILDING AREA:	4,625 SF
NUMBER OF RESTAURANT SEATS:	60
WATER:	CITY OF RALEIGH PUBLIC UTILITIES
SEWER:	CITY OF RALEIGH PUBLIC UTILITIES
OPEN SPACE:	REQUIRED: 3% OF LOT AREA =2,501 SF PROVIDED: 34,243 SF

SAMBATEK NC P.C. REGISTERED CORPORATION C-4993 RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER W. BRIAN BURCHETT 07/03/2023

811 Know what's **below.** **Call** before you dig. nc811.org or 1-800-632-4949

COMMERCIAL SITE DESIGN
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM



LEGEND

Symbol	Description
▲	CALCULATED POINT
◉	EXISTING IRON PIPE
○	IRON PIPE SET
	BORE HOLE
Ⓢ	SANITARY SEWER MANHOLE
Ⓒ	SANITARY SEWER CLEANOUT
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	TELEPHONE PEDESTAL
Ⓣ	TELEPHONE MANHOLE
	ELECTRIC BOX
	LIGHT POLE
	POWER POLE
	CURB INLET
Ⓓ	STORM DRAINAGE MANHOLE
□	YARD INLET
======	STORM DRAIN
—OU—	OVERHEAD UTILITIES
—UE—	UNDERGROUND ELECTRIC
—UT—	UNDERGROUND TELEPHONE
—W—	WATER LINE
—SS—	SANITARY SEWER LINE
—G—	GAS LINE
—X—	FENCE LINE

Abbreviation	Meaning
AC	ACRES
ACSM	AMERICAN CONGRESS ON SURVEYING AND MAPPING
ALTA	AMERICAN LAND TITLE ASSOCIATION
B.M.	BOOK OF MAPS
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
D.B.	DEED BOOK
EIP	EXISTING IRON PIPES
ELEV	ELEVATION
E.M.	ELECTRIC METER
FIRM	FLOOD INSURANCE RATE MAP
GPS	GLOBAL POSITIONING SYSTEM
HUD	HOUSING URBAN DEVELOPMENT
HYD	FIRE HYDRANT
INV	INVERT
IPS	IRON PIPE SET
LLC	LIMITED LIABILITY COMPANY
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
NAD	NORTH AMERICAN DATUM
N/F	NOW OR FORMERLY
NCGS	NORTH CAROLINA GEODETIC SURVEY
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NSPS	NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
NTS	NOT TO SCALE
PG.	PAGE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.O.L.	POINT ON LINE
R.C.P.	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
SF	SQUARE FOOT
SMH	SANITARY SEWER MANHOLE
S.R.	STATE ROAD
TBM	TEMPORARY BENCH MARK
T/C	TOP CURB
TWSP	TOWNSHIP
TYP	TYPICAL
Y.I.	YARD INLET

GENERAL NOTES:

1. THE INFORMATION SHOWN HEREIN WAS TAKEN FROM A TOPOGRAPHIC SURVEY PREPARED BY:
SAMBATEK NC PC
8312 CREEDMOOR ROAD RALEIGH, NORTH CAROLINA 27613
PHONE: (919) 848-6121; FAX: (919) 848-3741
2. THE LOCATIONS OF ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY OWNERS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DEMOLITION KEYNOTES

1. REMOVE EXISTING ITEM, COORDINATE REMOVAL WITH APPLICABLE FEDERAL, STATE, COUNTY, CITY, LOCAL AGENCIES OR LOCAL UTILITY COMPANY.
2. RELOCATE EXISTING ITEM, COORDINATE RELOCATION WITH APPLICABLE FEDERAL, STATE, COUNTY, CITY, LOCAL AGENCIES OR LOCAL UTILITY COMPANY.
3. ITEM TO REMAIN.

▪▪▪▪▪▪ SAWCUT LINE

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
A Sambatek Company
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613
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WWW.CSITEDESIGN.COM

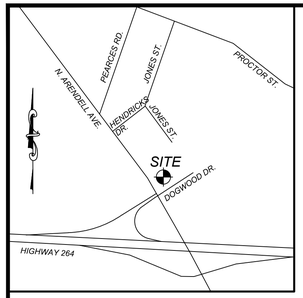
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

EXISTING CONDITIONS/DEMOLITION PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-EC
DRAWN BY:	STH
SCALE:	1" = 20'
DATE:	07-06-2022
SHEET NO.	C-1



VICINITY MAP

NTS

SITE LEGEND

- SPILL CURB
- HANDICAP RAMP
- HANDICAP STALL
- CONCRETE
- PROPERTY LINE
- SIGN
- BOLLARD
- EX. FIRE HYDRANT
- FENCE
- POLE MOUNTED AREA LIGHT
- PROPERTY CORNER
- F.F.E. = XXX.XX — FINISH FLOOR ELEVATION

TOWN OF ZEBULON ROADWAY CONSTRUCTION NOTES:

1. **ROADWAY CONSTRUCTION INSPECTION TO BE PROVIDED BY JASON BROWN, (919) 795-5640. ROADWAY AND UTILITY CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION MEETING BEFORE ANY WORK BEGINS ON THIS SITE.**
2. **JONES STREET ROADWAY (ASPHALT ROAD, CONCRETE CURB & GUTTER, 5' CONCRETE SIDEWALK AND STORM DRAINAGE SYSTEM) SHALL BE EXTENDED FROM BB&T PROPERTY LINE TO DOGWOOD LANE PER THESE CONSTRUCTION DRAWINGS.**
3. **TOWN OF ZEBULON DETAILS #1, 3, 33, 35 AND 36 SHALL BE USED IN THE CONSTRUCTION OF THE ROADWAY.**
4. **STORMWATER DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION OF THE PROJECT.**
5. **PROJECT MUST PROVIDE A THIRD PARTY GEOTECHNICAL ENGINEER FOR COMPACTION AND DENSITY TESTING FOR JONES STREET ROADWAY CONSTRUCTION. GEOTECHNICAL FIRM MUST BE A NCDOT CERTIFIED FIRM.**
6. **AT THE COMPLETION OF THE PROJECT, THE INFRASTRUCTURE WILL BE DEDICATED TO THE TOWN OF ZEBULON FOR MAINTENANCE WITH A ONE YEAR WARRANTY.**

FLOOD INFORMATION

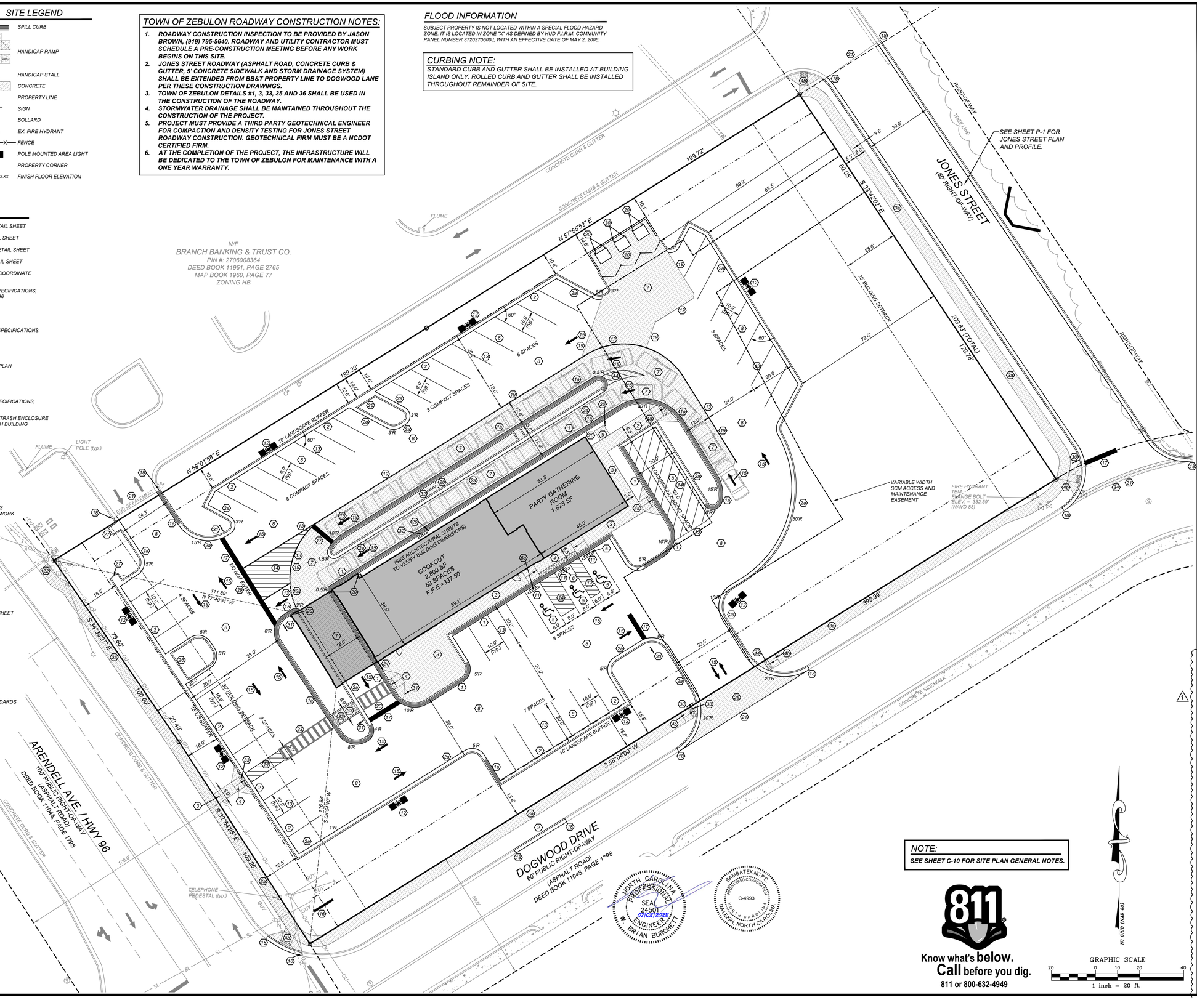
SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 3720270600J, WITH AN EFFECTIVE DATE OF MAY 2, 2006.

CURBING NOTE:

STANDARD CURB AND GUTTER SHALL BE INSTALLED AT BUILDING ISLAND ONLY. ROLLED CURB AND GUTTER SHALL BE INSTALLED THROUGHOUT REMAINDER OF SITE.

SITE KEYNOTES:

1. CONSTRUCT 2.0' STANDARD CONCRETE SPILLING CURB AND GUTTER PER DETAIL SHEET
1a. CONSTRUCT 2.0' ROLLED CONCRETE SPILLING CURB AND GUTTER PER DETAIL SHEET
2. CONSTRUCT 2.0' STANDARD CONCRETE CATCHING CURB AND GUTTER PER DETAIL SHEET
2a. CONSTRUCT 2.0' ROLLED CONCRETE CATCHING CURB AND GUTTER PER DETAIL SHEET
3. CONSTRUCT CONCRETE SIDEWALK PER DETAIL SHEET, CONTRACTOR SHALL COORDINATE STAMPING PATTERN AND COLOR OF BUILDING SIDEWALK WITH OWNER
3a. CONSTRUCT CONCRETE SIDEWALK PER CITY AND NCDOT STANDARDS AND SPECIFICATIONS, BACK OF WALK TO BE ON RIGHT-OF-WAY LINE FOR ARENDELL AVENUE / HWY 96
4. CONSTRUCT CONCRETE HANDICAP RAMP PER DETAIL SHEET
4a. LOADING RAMP, 8% MAXIMUM SLOPE
4b. CONSTRUCT CONCRETE HANDICAP RAMP TO MEET NCDOT STANDARDS AND SPECIFICATIONS.
5. HANDICAP PARKING STALL
6. INSTALL HANDICAP PARKING SIGN PER ADA ACCESSIBILITY PLAN
6a. INSTALL VAN ACCESSIBLE HANDICAP PARKING SIGN PER ADA ACCESSIBILITY PLAN
7. CONCRETE PAVEMENT PER DETAIL SHEET
8. ASPHALT PAVEMENT PER DETAIL SHEET
9. TRANSFORMER PAD BY GENERAL CONTRACTOR, PER ELECTRIC COMPANY SPECIFICATIONS, (COORDINATE SIZE & LOCATION WITH UTILITY COMPANY)
10. CONSTRUCT DUMPSTER PAD, MINIMUM 6" CONCRETE WITH 4" ABC BASE, AND TRASH ENCLOSURE WITH GATES, SEE ARCHITECTURAL SHEETS FOR DETAIL, MATERIALS TO MATCH BUILDING
11. CONCRETE WHEEL STOP PER DETAIL SHEET
12. POLE MOUNTED AREA LIGHT, SEE LIGHTING PLAN
13. PAINT 4" WIDE STRIPE, WHITE
13a. PAINT 4" WIDE MINI SKIP STRIPE, WHITE
14. PAINT 4" WIDE STRIPE @ 45°, 2 FEET APART
15. PAINT TRAFFIC ARROWS PER DETAIL SHEET
16. SITE IDENTIFICATION SIGN, COORDINATE WITH TOWN AND OWNER, SIGNAGE IS SEPERATE PERMIT, INSTALLATION CAN BE INCLUDED WITH BUILDING PERMIT WORK
17. PAINT 24" STOP BAR PER NCDOT STANDARDS
18. MATCH EXISTING CURB & GUTTER PER TOWN OF ZEBULON DETAIL #3, SEE SHEET C-10a
19. ASPHALT/CONCRETE TRANSITION PER DETAIL
20. INSTALL STEEL PIPE BOLLARD PER DETAIL SHEET
21. MATCH EXISTING ASPHALT PAVEMENT
22. MATCH EXISTING CONCRETE SIDEWALK
23. PAINT CROSSWALK PER DETAIL SHEET
24. INSTALL 42" HIGH SAFTEY RAILING, FINISH POWER COATED RED, SEE DETAIL SHEET
25. DRIVEWAY TO BE CONSTRUCTED PER TOWN OF ZEBULON DETAILS #7 AND #8, SEE SHEET C-10a.
26. CONCRETE FLUME - TYPE A, SEE DETAIL SHEET
27. CONCRETE FLUME - TYPE B, SEE DETAIL SHEET
28. NOSE DOWN CURB, SEE DETAIL SHEET
29. PAINT "DO NOT ENTER" PER MUTCD AND DOT STANDARDS
30. INSTALL "STOP" SIGN PER MUTCD AND DOT STANDARDS
31. INSTALL "STOP SIGN" AND "DO NOT ENTER" SIGNS PER MUTCD AND DOT STANDARDS
32. MENU BOARD, COORDINATE WITH OWNER
33. INSTALL TRUNCATED DOMES PER ACCESSIBLE RAMP DETAILS ON SHEET C-3
34. VALLEY GUTTER PER DETAIL SHEETS



NOTE:

SEE SHEET C-10 FOR SITE PLAN GENERAL NOTES.

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT 07/03/2023

SANBATEK NC P.C. C-4993 RALEIGH, NORTH CAROLINA

811 Know what's below. Call before you dig. 811 or 800-632-4949

NC GRID (NAD 83)

GRAPHIC SCALE

20 0 10 20 40

1 inch = 20 ft.

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6721, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613

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TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOKOUT FRESH HAMBURGERS

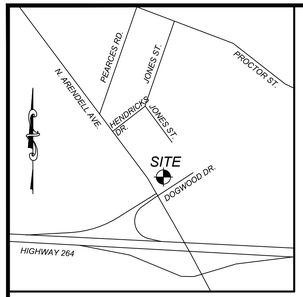
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

SITE PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-SP
DRAWN BY:	STH
SCALE:	1" = 20'
DATE:	07-06-2022
SHEET NO.	C-2

FLOOD INFORMATION

SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 3720270600J, WITH AN EFFECTIVE DATE OF MAY 2, 2006.



VICINITY MAP
NTS

CONSTRUCTION SEQUENCE:

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

1. *OBTAIN A LAND DISTURBING PERMIT. SCHEDULE A PRE-CONSTRUCTION MEETING.*
2. *INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION. SEE DETAIL ON SEEDING SCHEDULE. CONTRACTOR SHALL BEGIN WITH SEDIMENT FENCING AND ALL OTHER SEDIMENT CONTAINMENT DEVICES FOLLOWED BY ALL DIVERSION AND BY-PASS DITCHES/BERMS.*
3. *CONTACT DEBRA TANNER, WAKE COUNTY WATERSHED MANAGER, WAKE COUNTY ENVIRONMENTAL SERVICES @ 919-842-7142 FOR COMPLIANCE INSPECTION IMMEDIATELY FOLLOWING INSTALLATION OF THE TEMPORARY SEDIMENT CONTROL DEVICES AND PRIOR TO MASS GRADING OF THE SITE.*
4. *BEGIN CLEARING/GRUBBING AND GENERAL EXCAVATION ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHASE/STAGE EROSION CONTROL TO ALLOW FOR CONSTRUCTION. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION DEVICES AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES/SEDIMENT TRAPS UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.*
5. *BEGIN INSTALLING UPSTREAM STORM DRAINAGE SYSTEM. INSTALL APPROVED INLET PROTECTION. TERMINATE STORM DRAINAGE SYSTEM AT TEMPORARY SEDIMENT TRAP DEVICES UNTIL SUCH DEVICES HAVE BEEN APPROVED FOR REMOVAL. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DUE TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND ACTUAL FIELD CONDITIONS; SEDIMENT BASINS SHALL BE FUNCTIONAL THROUGHOUT GRADING AND EXCAVATING.*
6. *STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ASSOCIATED PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED AND APPROVED PER NPDES STABILIZATION TEMPORARY AND PERMANENT SEEDING WORK REQUIREMENTS SHOWN ON SHEET C-4b.*
7. *WHEN SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, ETC., AND SEED OUT OR PAVE ANY RESULTING BARE AREAS. CONNECT UPSTREAM STORM DRAINAGE.*

811 Know what's below. Call before you dig. 811 or 800-632-4949

GRADING LEGEND

- FLARED END SECTION
- DROP INLET
- CURB INLET
- JUNCTION BOX
- STORM PIPE
- XXX.XX TOP OF CURB / XXX.XX BOTTOM OF CURB
- HANDICAP AREA (2% MAX. SLOPE)
- SPILL CURB
- TW=XXX.XX TW IS GROUND AT TOP OF WALL / BW=XXX.XX BW IS GROUND AT BOTTOM OF WALL
- INLINE DRAIN
- RD — ROOF DRAIN — 6" CORRUGATED PLASTIC, 3' MIN. COVER, 1% MIN. SLOPE, PVC IN TRAFFIC AREAS, CLEANOUTS LOCATED @ ALL BENDS

PROPOSED STORM DRAINAGE TABLE

LABEL	TYPE	T/C	INVERT
FES - 7	FLARED END	N/A	328.00
CB - 8	CURB INLET	335.50	330.10
CB - 9	CURB INLET	335.50	330.55
CB - 10	CURB INLET	334.60	331.15
CB - 11	CURB INLET	334.50	330.25
CB - 12	CURB INLET	334.60	331.10
CB - 13	CURB INLET	334.75	331.50
WQ - 14	WATER QUALITY DEVICE	RIM = 335.50	328.70
OCS - 15	OUTLET CONTROL STRUCTURE	T/G = 335.50	328.60

PROPOSED STORM PIPE TABLE

LABEL	TYPE	SLOPE	SIZE	LENGTH
P- 7	HDPE	0.50%	15"	70 LF
P- 8	HDPE	1.00%	15"	10 LF
P- 9	HDPE	0.25%	48"	10 LF
P- 10	HDPE	2.00%	15"	25 LF
P- 11	HDPE	1.00%	15"	25 LF
P- 12	HDPE	1.00%	15"	70 LF
P- 13	HDPE	1.00%	15"	35 LF
P- 14	HDPE	0.50%	15"	170 LF
P- 15	HDPE	0.50	15"	80 LF

MAINTENANCE NOTES:

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED AND MAINTAINED DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES. ANY SEDIMENT THAT HAS BEEN TRANSPORTED BEYOND THE PROJECT LIMITS SHALL BE REMOVED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

CONSTRUCTION ENTRANCE:
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE TOPDRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.

SILT FENCE:
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABLIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE GRAVEL OUTLET:
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.

OUTLET STABILIZATION STRUCTURE:
INSPECT RIP RAP STRUCTURES WEEKLY AND AFTER SIGNIFICANT (0.5 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP-RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

BLOCK AND GRAVEL INLET PROTECTION:
INSTALL SILT FENCE GRAVEL OUTLETS AT ALL LOW POINTS IN FENCE. INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

SEDIMENT TRAP:
INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER RAINFALL EVENTS 0.5 INCHESOR MORE. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.

CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

DIVERSION DITCHES:
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

GRADING/EROSION CONTROL NOTES

1. *ALL GRADING, BACKFILLING, EXCAVATION, ETC., SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORTS. REFER TO THESE REPORTS FOR ADDITIONAL INFORMATION NOT TRANSFERRED TO THESE PLANS.*
2. *CONTRACTOR IS TO CONTACT NORTH CAROLINA "ONE CALL" AT 800-"632-4949 FOR UNDERGROUND UTILITY LOCATION 48 HOURS PRIOR TO ANY DIGGING.*
3. *THE EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO ANY EARTHWORK.*
4. *ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.*
5. *ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED AND REPAIRED AT A MINIMUM OF WEEKLY BASIS AND AFTER EVERY RAIN EVENT.* (1)
6. *ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.*
7. *CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.*
8. *ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.*
9. *THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING, AND CONSTRUCTION IS 1.80 ACRES.*
10. *PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS, FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.*
11. *ALL CUT AND FILL SLOPES AND CHANNEL SIDESLOPES WHICH ARE NOT TO BE PAVED, SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH:*
    - *A. 100 LBS PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.*
    - *B. 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.*
    - *C. VARIETIES TO BE SEEDED;*
      1. *SPRING SEEDING - MARCH 1 - APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE FOOT.*
      2. *SUMMER SEEDING - MAY 1 - AUGUST 1; WEEPING LOVE GRASS AT 2 OZ. PER SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING.*
      3. *ASPHALT MULCH 6 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE MULCHED.*
12. *SEE LANDSCAPE PLAN FOR PERMANENT SEEDING.*
13. *UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL STORM DRAINAGE PIPES ARE TO BE RCP CLASS III.*

GRAPHIC SCALE
20 0 10 20 40
1 inch = 20 ft.

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

SAMBATEK NC P.C. REGISTERED CORPORATION C-4993 NORTH CAROLINA RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT 07/28/2023

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6721, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27615

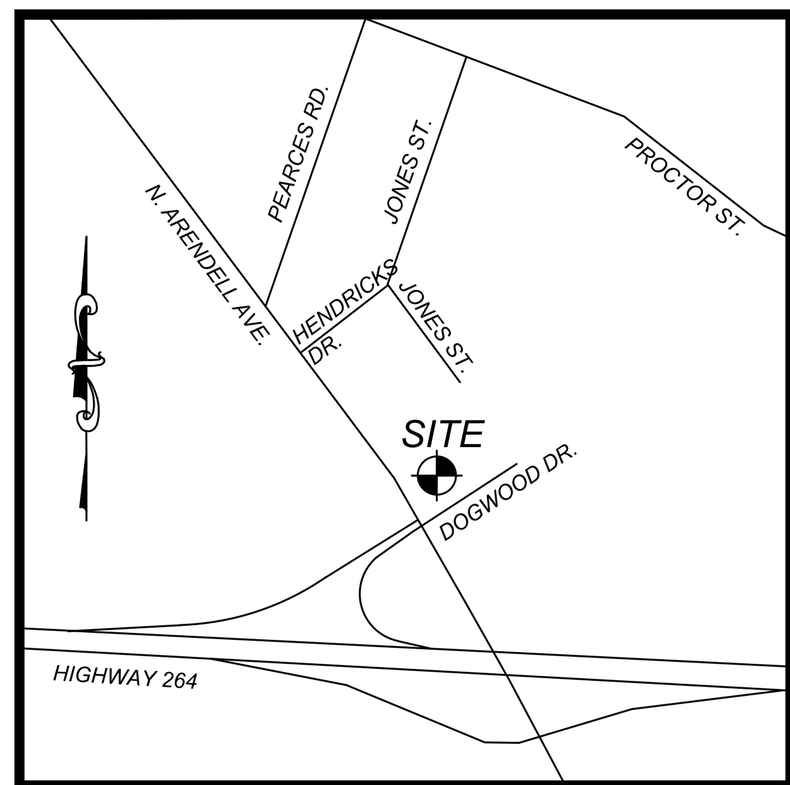
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

GRADING PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-GP
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-3

X:\OUT - Cookout\1500 Site\1502 - Zebulon, NC\CAD\OUT1502-GP DWG, 7/3/2023 1:15:47 PM, davidh



VICINITY MAP
NTS

TEMPORARY SEDIMENT BASIN WITH SKIMMER AND BAFFLES - 10 YEAR STORM EVENT

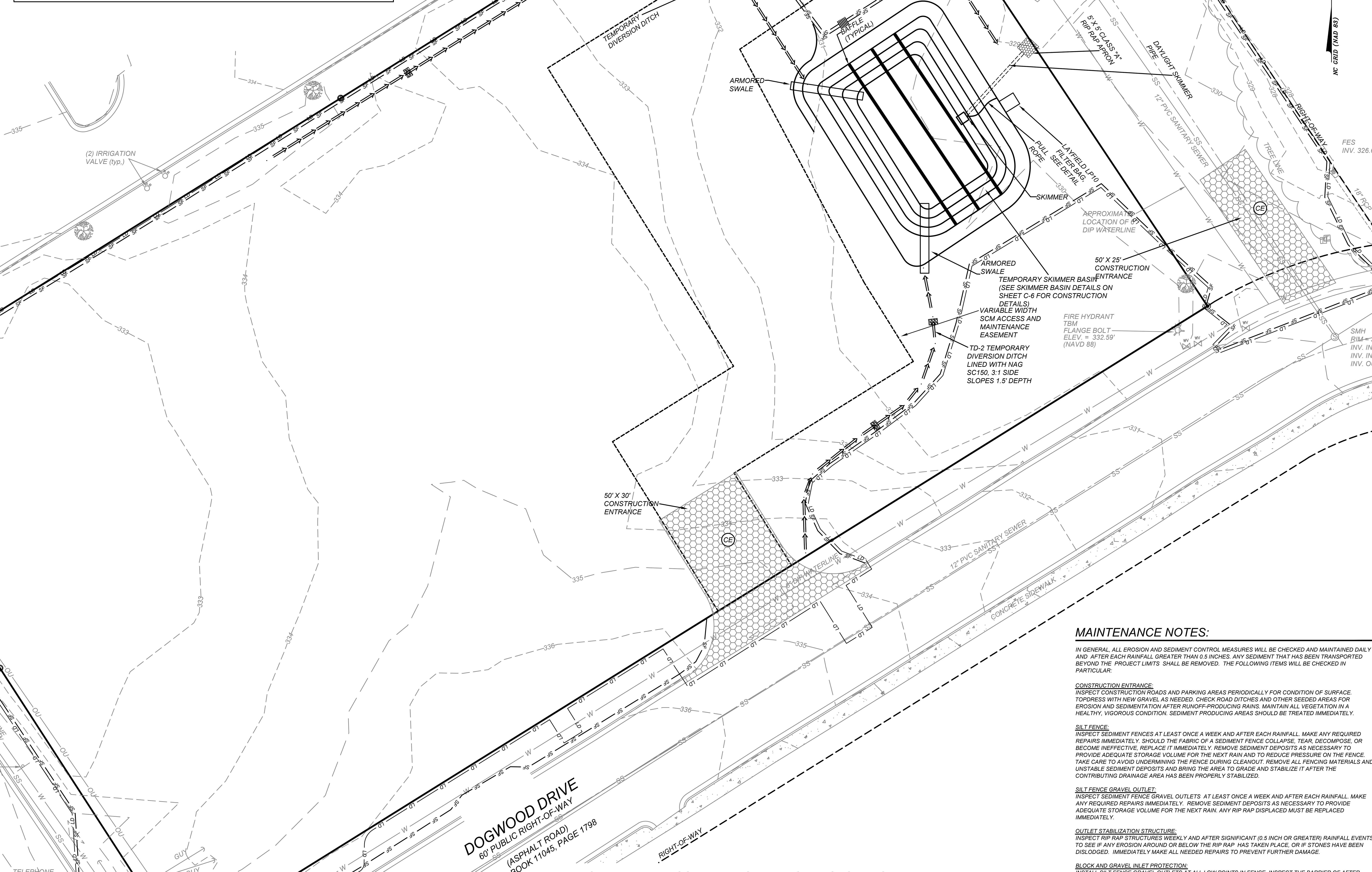
FLOW FROM 10 YEAR STORM:	Q = CIA
C (VALUE):	0.50
INTENSITY:	7.22
TOTAL DRAINAGE AREA:	1.80 ACRES
Q:	6.50 CFS
VOLUME REQUIRED (CF): (1.800CF / ACRE)	3,240 CF
VOLUME PROVIDED:	4,797 CF
DIMENSIONS (D' x W x L):	4.0' x 18 FT x 33 FT (BOTTOM DIMENSIONS)
*DEPTH SHOWN IS TO TOP OF BERM. THIS INCLUDES 1' FOR FREEBOARD.	
*TARP TO BE ARMORED WITH CLASS B RIP RAP.	
3:1 SIDES (MAX.)	
EMERGENCY SPILLWAY LENGTH:	10'
MINIMUM WEIR WIDTH:	5'
SURFACE AREA:	CIA x 435 SF
S.A. REQUIRED:	0.50 x 7.22 x 1.80 x 435 SF = 2,827 SF
S.A. PROVIDED:	3,000 SF
SKIMMER CALCULATION	
BASIN VOLUME IN CUBIC FEET:	4,797 CF
DAYS TO DRAIN:	3 DAYS
BOTTOM DIMENSIONS IN FEET:	18 FT x 33 FT
DEPTH IN FEET:	3 FT
SKIMMER SIZE:	1.5"
ORIFICE DIAMETER:	1.5"

PROVIDE 7-DAY GROUND STABILIZATION FOR TEMPORARY DIVERSION DITCHES AND INTERIOR SLOPES OF SKIMMER BASINS.

FLOOD INFORMATION

SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 3720270600J, WITH AN EFFECTIVE DATE OF MAY 2, 2006.

811
Know what's **below.**
Call before you dig.
811 or 800-632-4949



EROSION CONTROL LEGEND

- DROP INLET
- CURB INLET
- STORM PIPE
- FLARED END SECTION
- INLINE DRAIN
- RD — ROOF DRAIN: 8" CORRUGATED PLASTIC, 3' MIN. COVER, 1% MIN. SLOPE, PVC IN TRAFFIC AREAS, CLEANOUTS LOCATED @ ALL BENDS
- SILT FENCE OUTLET
- INLET PROTECTION
- SF — SILT FENCE
- TP — TREE PROTECTION FENCE
- DIVERSION DITCH
- LD — LIMITS OF DISTURBANCE
- CE — CONSTRUCTION ENTRANCE
- TEMPORARY ROCK CHECK DAM

REQUIRED WAKE COUNTY BASIN REMOVAL SEQUENCE

1. SCHEDULE A SITE MEETING WITH THE ENVIROMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
2. CONTACT NCDEQ - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT TO RECEIVE DEWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MEET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&SC JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN NUMBER, C) DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCD01. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON ≥ DAY 11, WHICHEVER IS SOONER. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
5. INSTALL VELOCITY DISSIPATERS AND / OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN
6. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE : A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES AY ALSO REQUIRE THIS.

MAINTENANCE NOTES:

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED AND MAINTAINED DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES. ANY SEDIMENT THAT HAS BEEN TRANSPORTED BEYOND THE PROJECT LIMITS SHALL BE REMOVED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

CONSTRUCTION ENTRANCE:
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOPDRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.

SILT FENCE:
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE GRAVEL OUTLET:
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.

OUTLET STABILIZATION STRUCTURE:
INSPECT RIP RAP STRUCTURES WEEKLY AND AFTER SIGNIFICANT (0.5 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

BLOCK AND GRAVEL INLET PROTECTION:
INSTALL SILT FENCE GRAVEL OUTLETS AT ALL LOW POINTS IN FENCE. INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

SEDIMENT TRAP:
INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER RAINFALL EVENTS 0.5 INCHESOR MORE. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.

CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

DIVERSION DITCHES:
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

CONSTRUCTION SEQUENCE:

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

1. OBTAIN A LAND DISTURBING PERMIT. SCHEDULE A PRE-CONSTRUCTION MEETING.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION. SEE DETAIL ON SEEDING SCHEDULE. CONTRACTOR SHALL BEGIN WITH SEDIMENT FENCING AND ALL OTHER SEDIMENT CONTAINMENT DEVICES FOLLOWED BY ALL DIVERSION AND BY-PASS DITCHES/BERMS.
3. CONTACT KARYN PAGEAU @ 919-796-8769 FOR COMPLIANCE INSPECTION IMMEDIATELY FOLLOWING INSTALLATION OF THE TEMPORARY SEDIMENT CONTROL DEVICES AND PRIOR TO MASS GRADING OF THE SITE.
4. BEGIN CLEARING/GRUBBING AND GENERAL EXCAVATION ON SITE INCLUDING JONES STREET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHASE/STAGE EROSION CONTROL TO ALLOW FOR CONSTRUCTION. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION DEVICES AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES/SEDIMENT TRAPS UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.
5. BEGIN INSTALLING UPSTREAM STORM DRAINAGE SYSTEM. INSTALL APPROVED INLET PROTECTION. TERMINATE STORM DRAINAGE SYSTEM AT TEMPORARY SEDIMENT TRAP DEVICE UNTIL SUCH DEVICES HAVE BEEN APPROVED FOR REMOVAL. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DUE TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND ACTUAL FIELD CONDITIONS; SEDIMENT BASIN SHALL BE FUNCTIONAL THROUGHOUT GRADING AND EXCAVATING.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. INSTALL UNDERGROUND STORMWATER DETENTION SYSTEM NOTE: THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ASSOCIATED PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED AND APPROVED PER NPDES STABILIZATION TEMPORARY AND PERMANENT SEEDING WORK REQUIREMENTS SHOWN ON SHEET C-4b.
7. WHEN SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, ETC., AND SEED OUT OR PAVE ANY RESULTING BARE AREAS. CONNECT UPSTREAM STORM DRAINAGE.

SAMBATEK NC, P.C. — C-4993 — RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24501 — W. BRIAN BURCHETT — 07/03/2023

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1. ALL GRADING, BACKFILLING, EXCAVATION, ETC., SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORTS. REFER TO THESE REPORTS FOR ADDITIONAL INFORMATION NOT TRANSFERRED TO THESE PLANS.
2. CONTRACTOR IS TO CONTACT NORTH CAROLINA "ONE CALL" AT 800-*632-4949 FOR UNDERGROUND UTILITY LOCATION 48 HOURS PRIOR TO ANY DIGGING.
3. THE EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO ANY EARTHWORK.
4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
5. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED AND REPAIRED AT A MINIMUM OF WEEKLY BASIS AND AFTER EVERY RAIN EVENT.
6. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.
7. CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
8. ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.
9. THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING, AND CONSTRUCTION IS 2.13 ACRES.
10. PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS, FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
11. ALL CUT AND FILL SLOPES AND CHANNEL SIDESLOPES WHICH ARE NOT TO BE PAVED, SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH:
    A. 100 LBS PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.
    B. 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.
    C. VARIETIES TO BE SEEDED:
        1. SPRING SEEDING - MARCH 1 - APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE FOOT.
        2. SUMMER SEEDING - MAY 1 - AUGUST 1; WEEPING LOVE GRASS AT 2 OZ. PER SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING.
        3. ASPHALT MULCH 6 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE MULCHED.
12. SEE LANDSCAPE PLAN FOR PERMANENT SEEDING.
13. UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL STORM DRAINAGE PIPES ARE TO BE RCP CLASS III.

GRAPHIC SCALE
20 0 10 20 40
1 inch = 20 ft.

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
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812 CREEDMOOR ROAD
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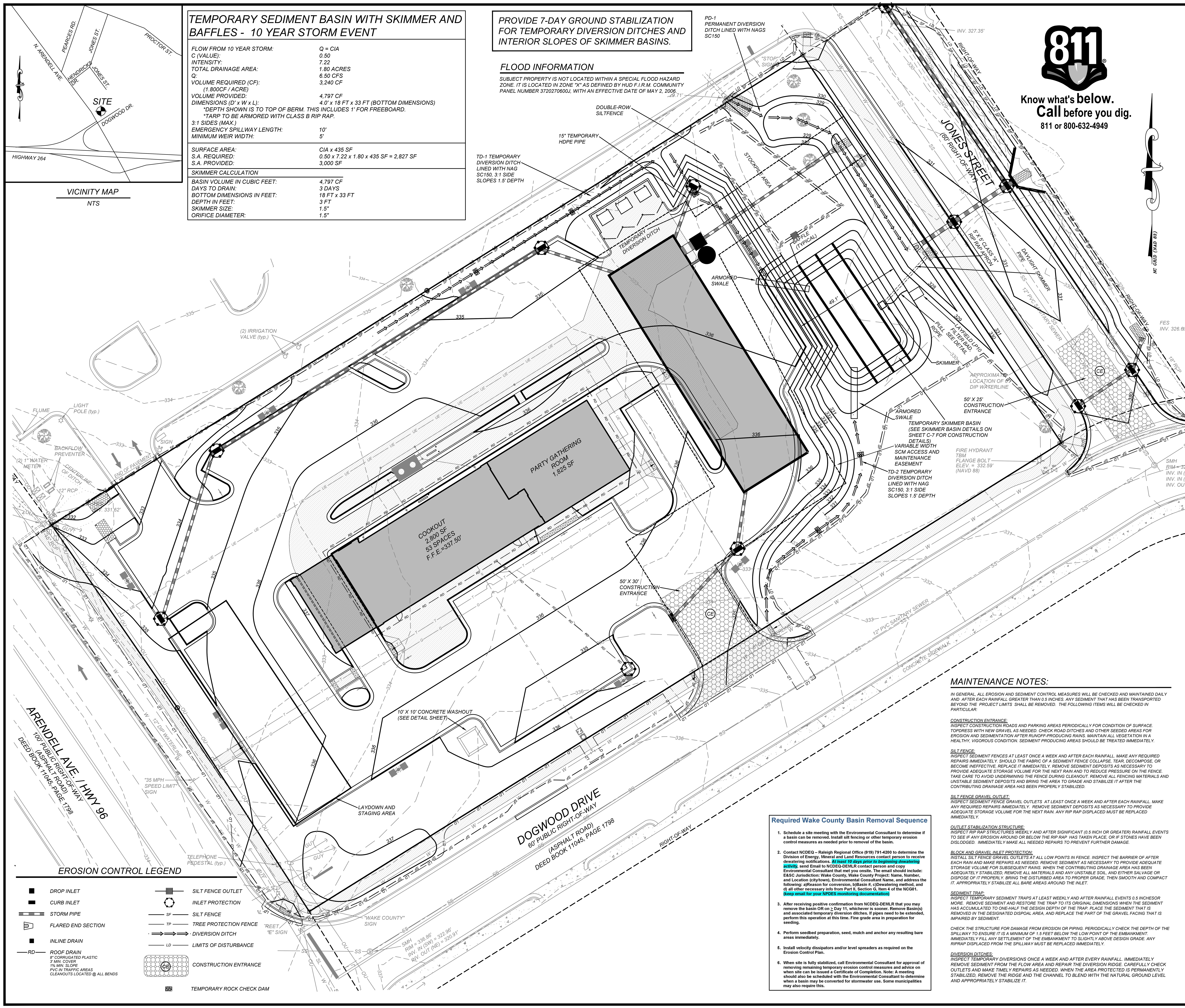
COOKOUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

EROSION CONTROL PLAN - PHASE I

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-ECP
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-3a



TEMPORARY SEDIMENT BASIN WITH SKIMMER AND BAFFLES - 10 YEAR STORM EVENT

FLOW FROM 10 YEAR STORM:	Q = CIA
C (VALUE):	0.50
INTENSITY:	7.22
TOTAL DRAINAGE AREA:	1.80 ACRES
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VOLUME REQUIRED (CF): (1.800CF / ACRE)	3,240 CF
VOLUME PROVIDED:	4,797 CF
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*TARP TO BE ARMORED WITH CLASS B RIP RAP.	
3:1 SIDES (MAX.)	
EMERGENCY SPILLWAY LENGTH:	10'
MINIMUM WEIR WIDTH:	5'
SURFACE AREA:	CIA x 435 SF
S.A. REQUIRED:	0.50 x 7.22 x 1.80 x 435 SF = 2,827 SF
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SKIMMER CALCULATION	
BASIN VOLUME IN CUBIC FEET:	4,797 CF
DAYS TO DRAIN:	3 DAYS
BOTTOM DIMENSIONS IN FEET:	18 FT x 33 FT
DEPTH IN FEET:	3 FT
SKIMMER SIZE:	1.5"
ORIFICE DIAMETER:	1.5"

PROVIDE 7-DAY GROUND STABILIZATION FOR TEMPORARY DIVERSION DITCHES AND INTERIOR SLOPES OF SKIMMER BASINS.

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2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION. SEE DETAIL ON SEEDING SCHEDULE. CONTRACTOR SHALL BEGIN WITH SEDIMENT FENCING AND ALL OTHER SEDIMENT CONTAINMENT DEVICES FOLLOWED BY ALL DIVERSION AND BY-PASS DITCHES/BERMS.
3. CONTACT KARYN PAGEAU @ 919-796-8769 FOR COMPLIANCE INSPECTION IMMEDIATELY FOLLOWING INSTALLATION OF THE TEMPORARY SEDIMENT CONTROL DEVICES AND PRIOR TO MASS GRADING OF THE SITE.
4. BEGIN CLEARING/GRUBBING AND GENERAL EXCAVATION ON SITE INCLUDING JONES STREET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHASE/STAGE EROSION CONTROL TO ALLOW FOR CONSTRUCTION. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION DEVICES AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES/SEDIMENT TRAPS UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.
5. BEGIN INSTALLING UPSTREAM STORM DRAINAGE SYSTEM. INSTALL APPROVED INLET PROTECTION. TERMINATE STORM DRAINAGE SYSTEM AT TEMPORARY SEDIMENT TRAP DEVICE UNTIL SUCH DEVICES HAVE BEEN APPROVED FOR REMOVAL. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DUE TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND ACTUAL FIELD CONDITIONS; SEDIMENT BASIN SHALL BE FUNCTIONAL THROUGHOUT GRADING AND EXCAVATING.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. INSTALL UNDERGROUND STORMWATER DETENTION SYSTEM NOTE: THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ASSOCIATED PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED AND APPROVED PER NPDES STABILIZATION TEMPORARY AND PERMANENT SEEDING WORK REQUIREMENTS SHOWN ON SHEET C-4b.
7. WHEN SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, ETC., AND SEED OUT OR PAVE ANY RESULTING BARE AREAS. CONNECT UPSTREAM STORM DRAINAGE.

49,062 SF OR 1.12 ACRES ON SITE IMPERVIOUS CALCULATIONS

GRADING/EROSION CONTROL NOTES

1. ALL GRADING, BACKFILLING, EXCAVATION, ETC., SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORTS. REFER TO THESE REPORTS FOR ADDITIONAL INFORMATION NOT TRANSFERRED TO THESE PLANS.
2. CONTRACTOR IS TO CONTACT NORTH CAROLINA "ONE CALL" AT 800-*632-4949 FOR UNDERGROUND UTILITY LOCATION 48 HOURS PRIOR TO ANY DIGGING.
3. THE EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO ANY EARTHWORK.
4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
5. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED AND REPAIRED AT A MINIMUM OF WEEKLY BASIS AND AFTER EVERY RAIN EVENT.
6. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.
7. CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
8. ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.
9. THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING, AND CONSTRUCTION IS 2.13 ACRES.
10. PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS, FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
11. ALL CUT AND FILL SLOPES AND CHANNEL SIDESLOPES WHICH ARE NOT TO BE PAVED, SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH:
    A. 100 LBS PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.
    B. 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.
    C. VARIETIES TO BE SEEDED:
        1. SPRING SEEDING - MARCH 1 - APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE FOOT.
        2. SUMMER SEEDING - MAY 1 - AUGUST 1; WEEPING LOVE GRASS AT 2 OZ. PER SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING.
        3. ASPHALT MULCH 6 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE MULCHED.
12. SEE LANDSCAPE PLAN FOR PERMANENT SEEDING.
13. UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL STORM DRAINAGE PIPES ARE TO BE RCP CLASS III.

MAINTENANCE NOTES:

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED AND MAINTAINED DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES. ANY SEDIMENT THAT HAS BEEN TRANSPORTED BEYOND THE PROJECT LIMITS SHALL BE REMOVED. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

CONSTRUCTION ENTRANCE:
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOPDRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.

SILT FENCE:
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE GRAVEL OUTLET:
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.

OUTLET STABILIZATION STRUCTURE:
INSPECT RIP RAP STRUCTURES WEEKLY AND AFTER SIGNIFICANT (0.5 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

BLOCK AND GRAVEL INLET PROTECTION:
INSTALL SILT FENCE GRAVEL OUTLETS AT ALL LOW POINTS IN FENCE. INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

SEDIMENT TRAP:
INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER RAINFALL EVENTS 0.5 INCHESOR MORE. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.

CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

DIVERSION DITCHES:
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

Required Wake County Basin Removal Sequence

1. **Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.**
2. **Contact NCDEQ – Raleigh Regional Office (919) 791-4200 to determine the Division of Energy, Mineral and Land Resources contact person to receive dewatering notifications. *At least 10 days prior to beginning dewatering activity*, send Email to NCDEQ-DEMLR contact person and copy Environmental Consultant that met you onsite. The email should include: E&SC Jurisdiction: Wake County, Wake County Project: Name, Number, and Location (city/town), Environmental Consultant Name, and address the following: a)Reason for conversion, b)Basin #, c)Dewatering method, and d) all other necessary info from Part II, Section G, Item 4 of the NCG01. (keep email for your NPDES monitoring documentation)**
3. **After receiving positive confirmation from NCDEQ-DEMLR that you may remove the basin OR on ≥ Day 11, whichever is sooner. Remove Basin(s) and associated temporary diversion ditches. If pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.**
4. **Perform seedbed preparation, seed, mulch and anchor any resulting bare areas immediately.**
5. **Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.**
6. **When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.**

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
A Sambatek Company
8312 CREEDMOOR ROAD
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24501 W. BRIAN BURCHETT
SAMBATEK N.C. P.C. C-4993 RALEIGH, NORTH CAROLINA

CLIENT/OWNER:
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TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS

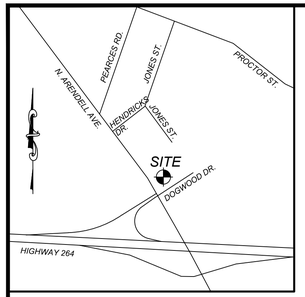
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

EROSION CONTROL PLAN PHASE II

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-ECP2
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-3b

FLOOD INFORMATION

SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 3720270600J, WITH AN EFFECTIVE DATE OF MAY 2, 2006.



VICINITY MAP
NTS

LABEL	1) GROUND STABILIZATION		
	SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
	• PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
	• HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
	• SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
	• SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
	• ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

2) BUILDING WASTES HANDLING

- NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- EARTHEN-MATERIALS STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

3) INSPECTIONS

- SAME WEEKLY INSPECTION REQUIREMENTS.
- SAME RAIN GUAGE & INSPECTIONS AFTER 0.5" RAIN EVENT.
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS".
- INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY-AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.

4) SEDIMENT BASINS

- OUTLET STRUCTURES MUST WITHDRAW FROM BASIN SURFACE UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWQ-APPROVED FLOCCULANTS.

NPDES - SPECIFIC PLAN SHEETS NOTES

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

GRADING/EROSION CONTROL LEGEND

- SPILL CURB
- DROP INLET
- CURB INLET
- FLARED END SECTION
- STORM PIPE
- INLINE DRAIN
- RD — ROOF DRAIN — 6" CORRUGATED PLASTIC 3' MIN. COVER 1% MIN. SLOPE PVC IN TRAFFIC AREAS CLEANOUTS LOCATED @ ALL BENDS
- INLET PROTECTION
- SILT FENCE OUTLET
- LD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- TP — TREE PROTECTION FENCE
- DIVERSION DITCH
- CONSTRUCTION ENTRANCE
- SEDIMENT TRAP

GRAPHIC SCALE
20 0 10 20 40
1 inch = 20 ft.

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER W. BRIAN BURCHETT 07/31/2023

SAMBATEK, INC. P.C. C-4993 NORTH CAROLINA

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6721, FAX: (919) 848-3741
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COOKOUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

NPDES STABILIZATION PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-NPDES
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-3c

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	**Stabilize within this many calendar days after ceasing land disturbance**	**Timeframe variations**
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

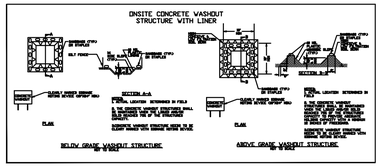
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

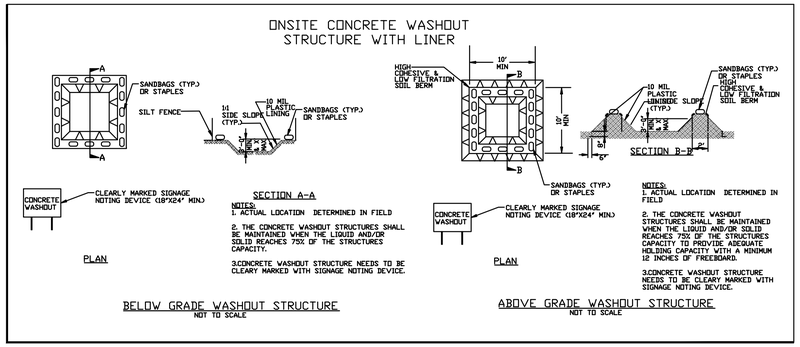
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19



NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT 07/03/2023

SAMBATEK NC P.C. C-4993 NORTH CAROLINA

Know what's below. Call before you dig.
nc811.org or 1-800-632-4949

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM

8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

NPDES DETAILS

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-NPDES2
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-3d

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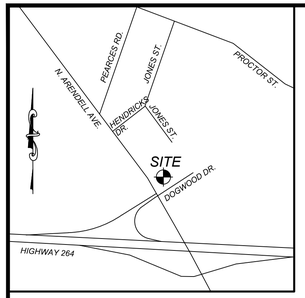


VICINITY MAP

NTS

UTILITY KEYNOTES:

1. 2" DOMESTIC WATER METER, CONTRACTOR SHALL COORDINATE WITH THE CITY OF RALEIGH.
2. 2" DOMESTIC REDUCE PRESSURE BACKFLOW PREVENTER (WATTS MODEL 909QT OR APPROVED EQUIVALENT) IN ABOVE-GROUND HEATED ENCLOSURE, CONTRACTOR TO COORDINATE WITH CITY OF RALEIGH.
3. 2" DOMESTIC WATER SERVICE, CONTRACTOR SHALL COORDINATE WITH CITY OF RALEIGH AND PLUMBING PLANS.
4. 4" PVC SANITARY SEWER LINE, @ 1/4" PER LF SLOPE (MINIMUM), CONTRACTOR SHALL COORDINATE WITH CITY OF RALEIGH AND PLUMBING PLANS.
5. 8" SADDLE WITH 2" CORPOARTION, CONTRACTOR SHALL FIELD VERIFY SIZE AND LOCATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION AND COORDINATE ALL WORK WITH CITY OF RALEIGH.
6. SANITARY SEWER CLEANOUT, SEE DETAIL SHEET.
7. TRAFFIC RATED SANITARY SEWER CLEANOUT, SEE DETAIL SHEET.
8. EXISTING FIRE HYDRANT
9. TRANSFORMER PAD, CONTRACTOR SHALL COORDINATE LOCATION AND SIZE WITH ELECTRIC UTILITY.
10. 1500 GALLON TRAFFIC RATED GREASE TRAP, CONTRACTOR SHALL COORDINATE MAKE AND MODEL WITH OWNER AND CITY.
11. POLE MOUNTED AREA LIGHT, SEE LIGHTING PLAN.
12. CONNECT TO EXISTING 12" SANITARY SEWER LINE WITH WYE CONNECTION, CONTRACTOR SHALL FIELD VERIFY SIZE , LOCATION AND ELEVATION OF EXISTING SEWER MAIN PRIOR TO ANY CONSTRUCTION TO ENSURE MINIMUM PIPE SLOPE, COVER AND CLEARANCES CAN BE ACHIEVED AND COORDINATE ALL WORK WITH THE CITY OF RALEIGH. ROADWAY REPAIR PER TOWN OF ZEBULON DETAILS,SEE C-10.
13. UNDERGROUND ELECTRIC SERVICE, CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY.
14. UNDERGROUND TELEPHONE SERVICE, CONTRACTOR SHALL COORDINATE WITH TELEPHONE COMPANY.
15. GAS SERVICE, CONTRACTOR SHALL COORDINATE WITH GAS COMPANY.
16. 2" PVC SLEEVE FOR ELECTRIC SERVICE, CONTRACTOR TO COORDINATE WITH OWNER AND ELECTRICIAN.
17. OPEN CUT AND REPAIR ASPHALT PAVEMENT PER TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS, COORDINATE UTILITY CONNECTION AND INSTALLATION WITH CITY OF RALEIGH.
18. RELOCATED AND/OR ADJUST EXISTING UTILITY STRUCTURE AS NECESSARY, COORDINATE WITH RESPECTIVE UTILITY COMPANY.
19. TELEPHONE PEDESTAL TO BE RELOCATED FOR SIDEWALK, COORDINATE WITH UTILITY COMPANY.
20. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING 6" WATER MAIN AND RELOCATE AS NECESSARY TO AVOID PROPOSED STORM PIPE AND STRUCTURES, CONTRACTOR SHALL COORDINATE ALL WORK WITH CITY OF RALEIGH FIELD INSPECTOR AND PUBLIC UTILITIES REVIEWER.

FLOOD INFORMATION

SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 3720270600J, WITH AN EFFECTIVE DATE OF MAY 2, 2006.

TOWN OF ZEBULON NOTE:

IRRIGATION, IF PROVIDED IN THE FUTURE, WILL BE TIED INTO RECLAIM WATER, SHOULD RECLAIM WATER BECOME AVAILABLE.

NOTE TO CONTRACTOR:

ALL SANITARY SEWER AND WATER CONNECTIONS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

STANDARD UTILITY NOTES (as applicable):

1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)

2. Utility separation requirements:
   a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well
   b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter
   c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications
   d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
   e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 24" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49)
   f) All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required

3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction

4. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department

5. 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse mains

6. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure

7. Install 2" copper* water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure

8. Install 4" PVC* sewer services @ 1/4 inch per foot minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum

9. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole

10. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.

11. NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction

12. Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Tim Beasley at (919) 996-2334 or timothy.beasley@raleighnc.gov for more information

13. Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Hartley at (919) 996-5923 or joanie.hartley@raleighnc.gov for more information

ATTENTION CONTRACTORS:

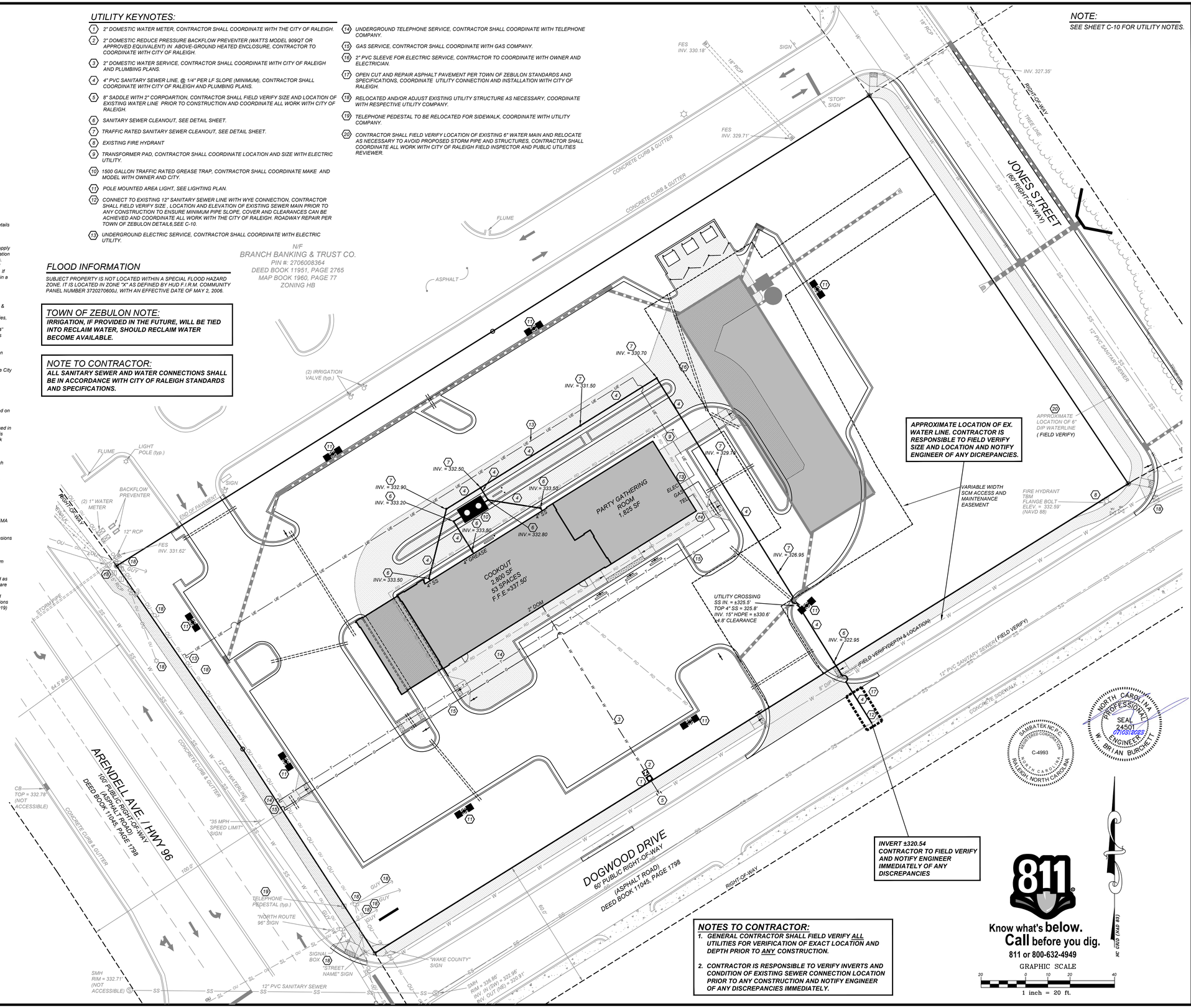
*THE **CONSTRUCTION CONTRACTOR** RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE **PUBLIC UTILITIES DEPARTMENT** AT **(919) 996-4540** AT LEAST **TWENTY FOUR HOURS** PRIOR TO BEGINNING ANY OF THEIR CONSTRUCTION.*

***FAILURE** TO NOTIFY BOTH **CITY DEPARTMENTS** IN ADVANCE OF BEGINNING CONSTRUCTION, WILL RESULT IN THE ISSUANCE OF **MONETARY FINES**, AND REQUIRE REINSTALLATION OF ANY WATER OR SEWER FACILITIES NOT INSPECTED AS A RESULT OF THIS NOTIFICATION FAILURE.*

FAILURE** TO CALL FOR **INSEPCTION, INSTALL A DOWNSTREAM PLUG, HAVE PERMITTED PLANS** ON THE **JOBSITE**, OR ANY OTHER **VIOLATION** OF **CITY OF RALEIGH STANDARDS** WILL RESULT IN A **FINE AND POSSIBLE EXCLUSION** FROM FUTURE WORK IN THE **CITY OF RALEIGH.

UTILITY LEGEND

OU — OVERHEAD UTILITIES	SEWER CLEAN OUT
SANITARY SEWER	FIRE HYDRANT ASSEMBLY
UE — UNDERGROUND ELECTRIC	SANITARY SEWER MANHOLE
T — TELEPHONE LINE	POLE MOUNTED AREA LIGHT
G — GAS LINE	WATER METER
W — WATER LINE	BACKFLOW PREVENTER
ELECTRIC SERVICE SLEEVE 2" PVC, COORDINATE WITH ELECTRICAL CONTRACTOR	SIAMESE CONNECTION
UTILITY POLE	WATER VALVE
	GREASE TRAP



NOTE:

SEE SHEET C-10 FOR UTILITY NOTES.

NOTES TO CONTRACTOR:

1. ***GENERAL CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES FOR VERIFICATION OF EXACT LOCATION AND DEPTH PRIOR TO ANY CONSTRUCTION.***
2. ***CONTRACTOR IS RESPONSIBLE TO VERIFY INVERTS AND CONDITION OF EXISTING SEWER CONNECTION LOCATION PRIOR TO ANY CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.***

Know what's below. Call before you dig. 811 or 800-632-4949

GRAPHIC SCALE

20 0 10 20 40

1 inch = 20 ft.

NC GRID (NAD 83)

SAMBATEK NC P.L.L.C. LICENSED CORPORATE ENGINEERING COMPANY C-4993 RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT 07/03/2023

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6721, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27615

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOKOUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

UTILITY PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-UP
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-4

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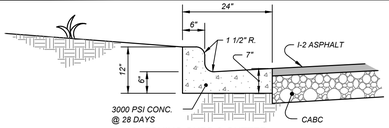
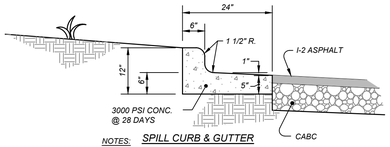


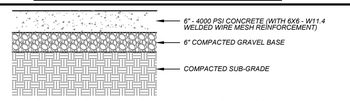
CATCHING CURB & GUTTER



SPILL CURB & GUTTER

NOTES:
1. SCORE CURB / VALLEY GUTTER AT 15' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS. (A 15' SPACING WILL BE ALLOWED WHEN A MACHINE IS USED.)
4. FINISH ALL CONCRETE WITH CURING COMPOUND.

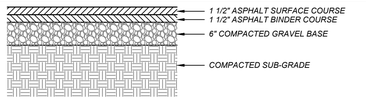
2'-0" STANDARD CURB AND GUTTER



SUBGRADE AND GRAVEL BASE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) REFER TO SOILS REPORT IF AVAILABLE.

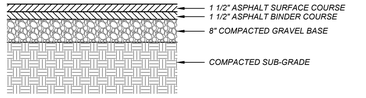
NOTES:
1. CONTRACTOR SHALL OBTAIN SOILS REPORT IF AVAILABLE, AND ADJUST PAVEMENT SECTIONS ACCORDINGLY.

CONCRETE PAVEMENT DETAIL



SUBGRADE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) REFER TO SOILS REPORT IF AVAILABLE.

PARKING STALL ASPHALT PAVEMENT

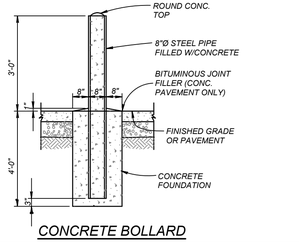


SUBGRADE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) REFER TO SOILS REPORT IF AVAILABLE.

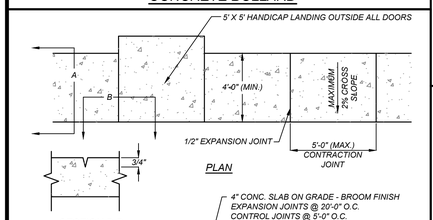
TRAFFIC AISLE ASPHALT PAVEMENT

NOTES:
1. CONTRACTOR SHALL OBTAIN SOILS REPORT IF AVAILABLE, AND ADJUST PAVEMENT SECTIONS ACCORDINGLY.
2. CONTRACTOR SHALL PLACE BINDER COURSE DURING CONSTRUCTION, THEN PLACE SURFACE COURSE AFTER BUILDING AND SITE CONSTRUCTION.

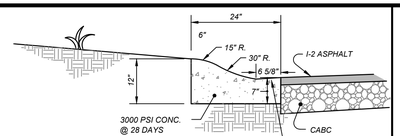
ASPHALT PAVEMENT DETAIL



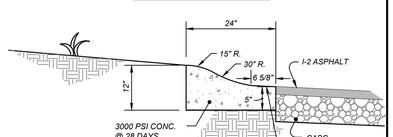
CONCRETE BOLLARD



CONCRETE SIDEWALK



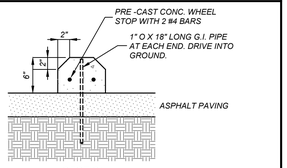
CATCHING CURB & GUTTER



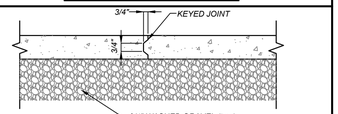
SPILL CURB & GUTTER

NOTES:
1. SCORE CURB / VALLEY GUTTER AT 15' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS. (A 15' SPACING WILL BE ALLOWED WHEN A MACHINE IS USED.)
4. FINISH ALL CONCRETE WITH CURING COMPOUND.

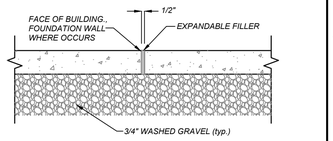
2'-0" ROLLED CURB AND GUTTER



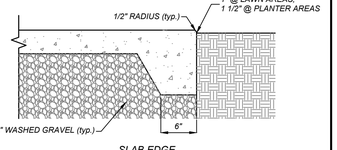
CONCRETE WHEEL STOP



CONSTRUCTION JOINT

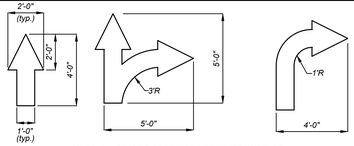


EXPANSION JOINT



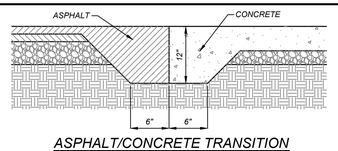
SLAB EDGE

CONCRETE SLAB DETAIL

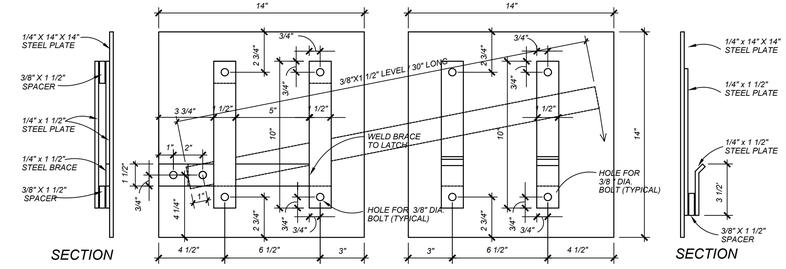


NOTE: ALL TRAFFIC ARROWS TO BE WHITE IN COLOR

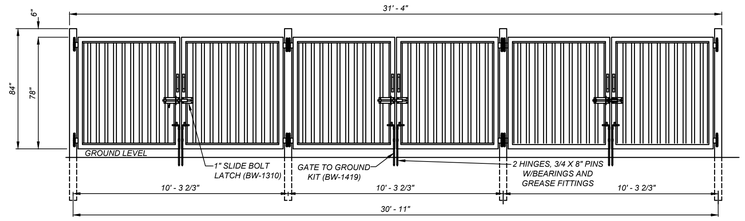
TRAFFIC ARROWS



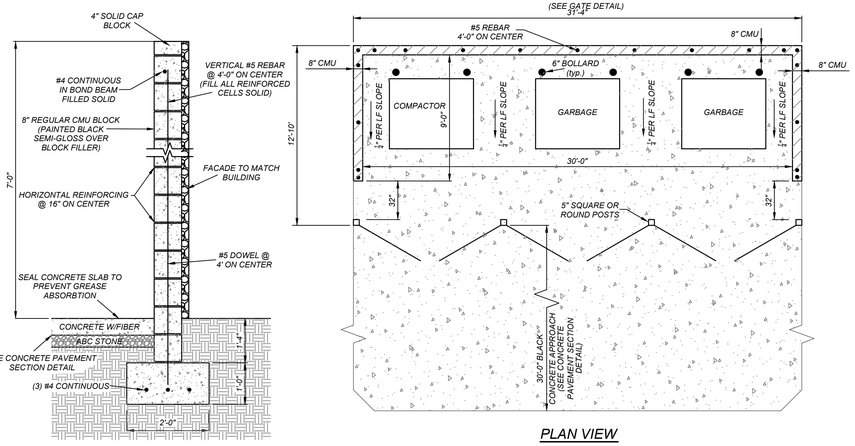
ASPHALT/CONCRETE TRANSITION



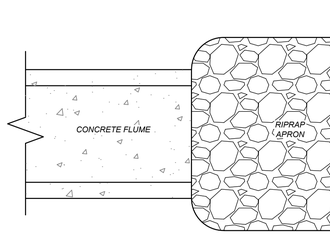
GATE LATCH DETAILS



TYPICAL FRONT ELEVATION

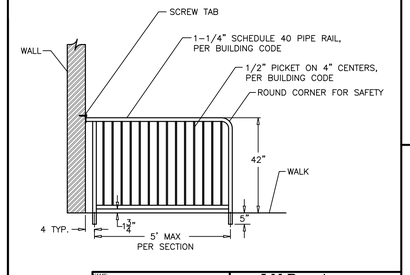


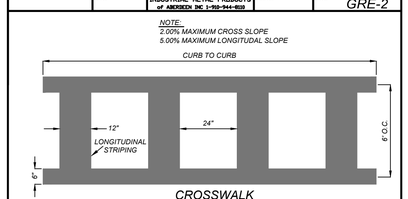
DUMPSTER ENCLOSURE DETAIL SEE ARCHITECTURAL PLANS



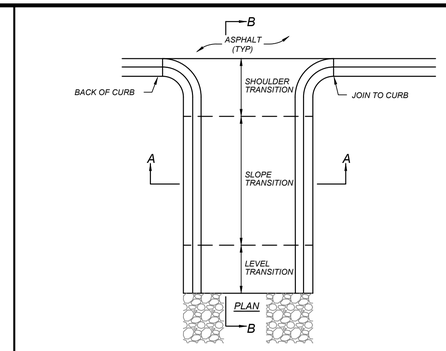
MAINTENANCE:
1. INSPECT RIPRAP APRON AT END OF PROJECT.
2. REPLACE ANY MISSING STONE.
3. VERIFY FILTER FABRIC IS UNDER RIP RAP.

RIPRAP APRON FOR TYPE 'B' FLUME OUTLET

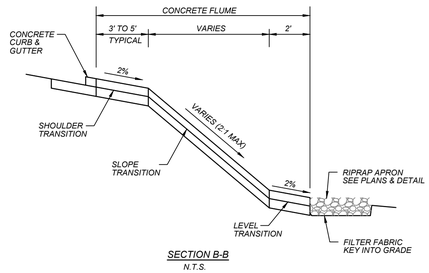




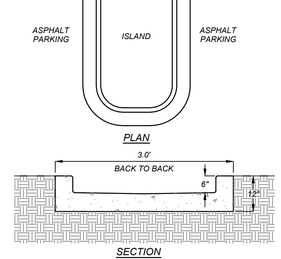
CROSSWALK



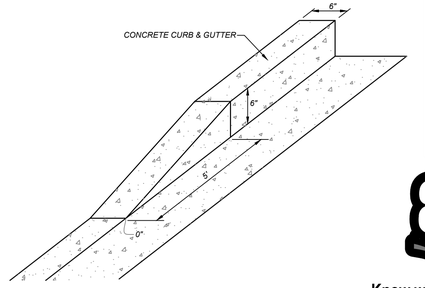
NOTES:
1. DRAINAGE FLUME SHALL EXTEND DOWN TO THE BOTTOM OF THE POND OR SWALE



TYPICAL CONCRETE FLUME - TYPE 'B'



CONCRETE FLUME - TYPE 'A'



NOSE DOWN CURB DETAIL

Know what's below. Call before you dig.
nc811.org or 1-800-632-4949

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT 2/10/2023

SAMBATEK NO. C-4993 NORTH CAROLINA ENGINEERING CORPORATION RALEIGH, NORTH CAROLINA

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613

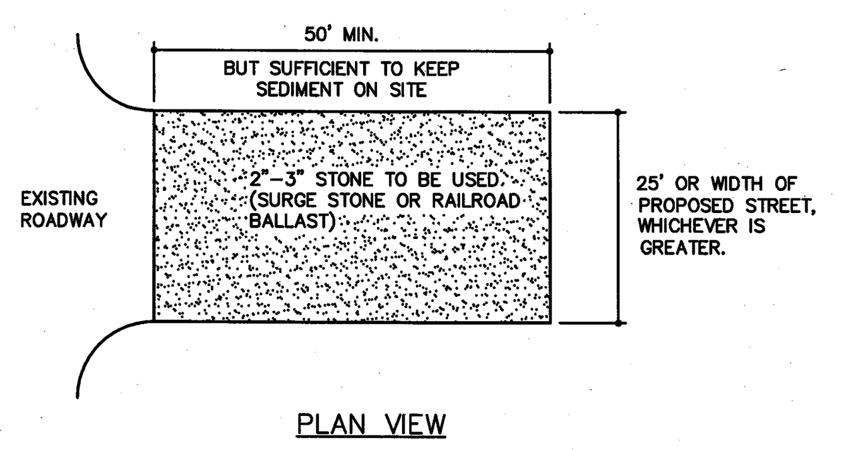
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

DETAILS

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL1
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-5

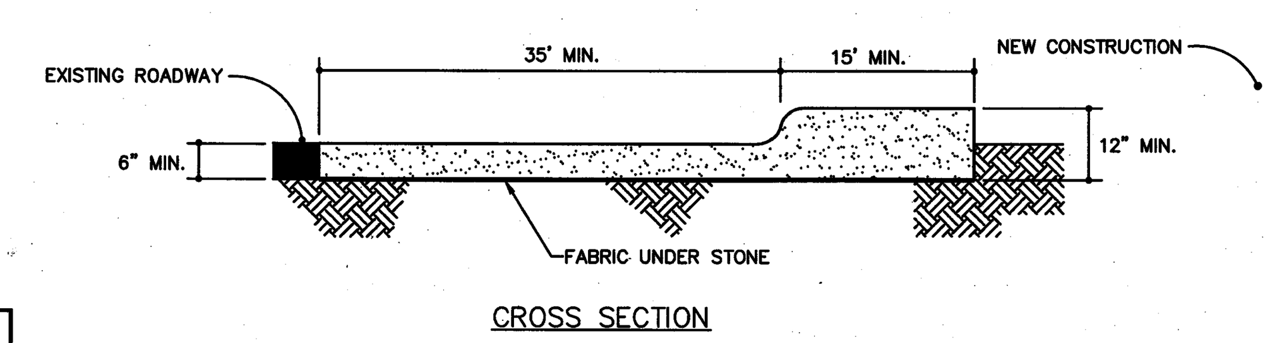
X:\OUT - Cookout\1500 Sites\1502 - Zebulon, NC\CAD\OUT1502-DTL1.dwg, 6/30/2023 5:46:25 PM, darrdh



PLAN VIEW

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.

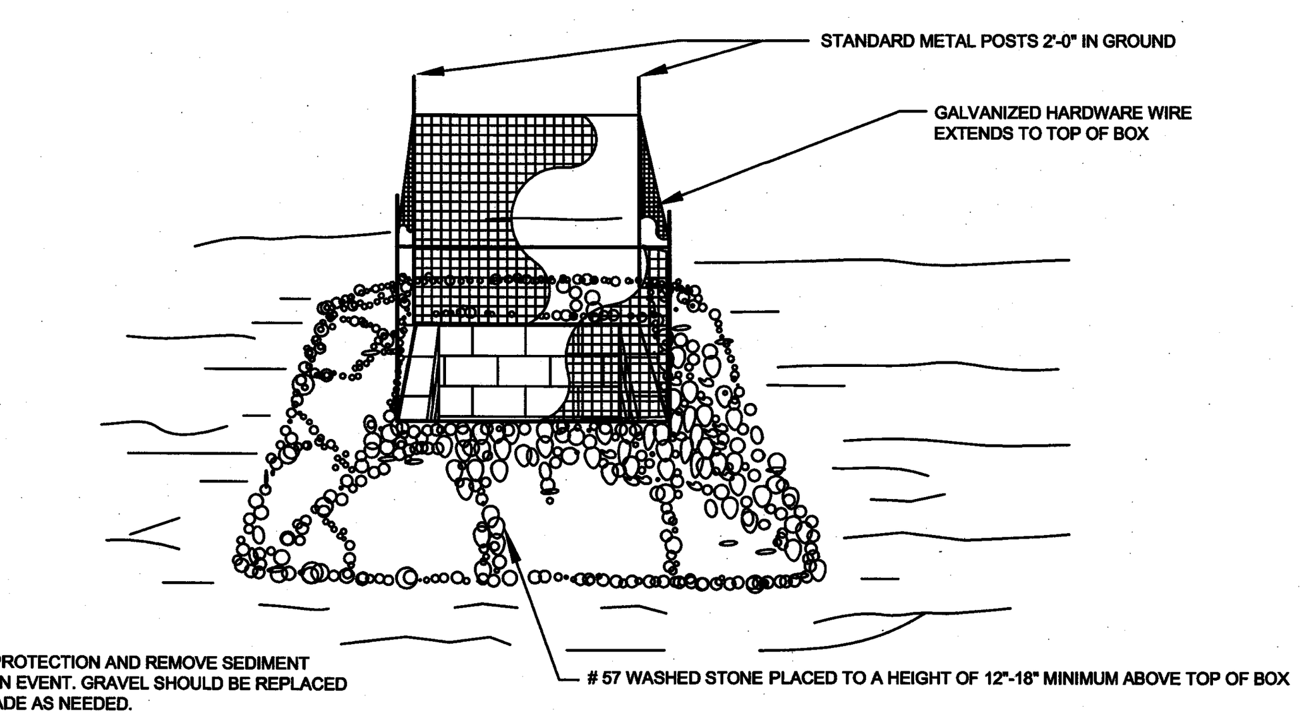


CROSS SECTION

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD CONSTRUCTION ENTRANCE



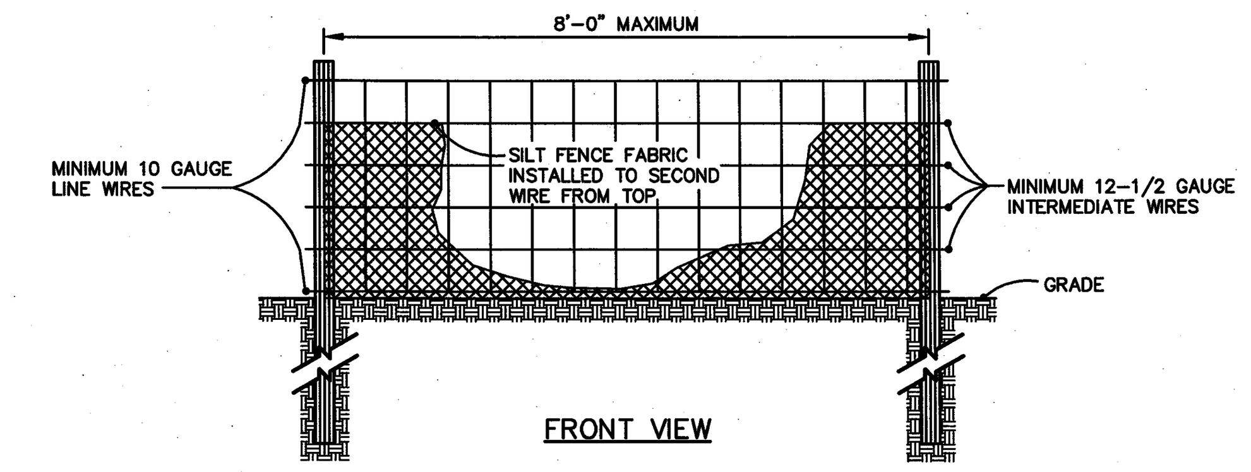
NOTE:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

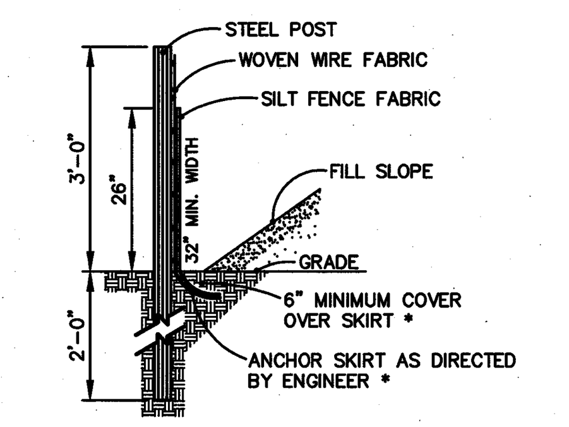
STANDARD GRAVEL YARD INLET PROTECTION



FRONT VIEW

NOTE:

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.

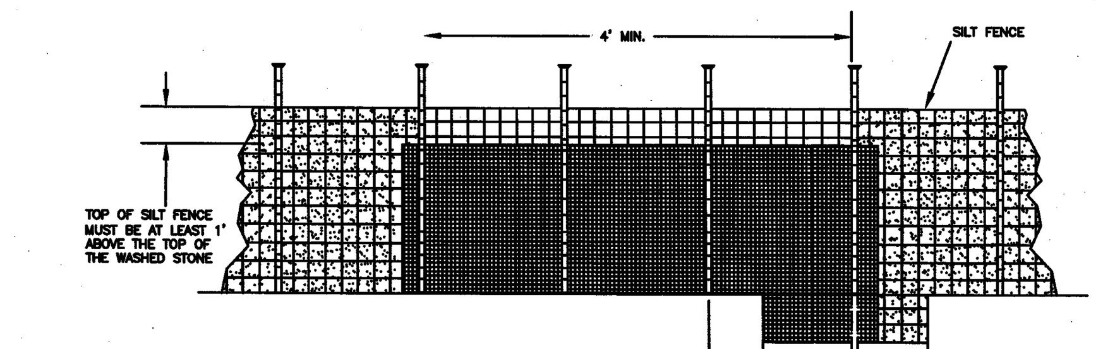


SIDE VIEW

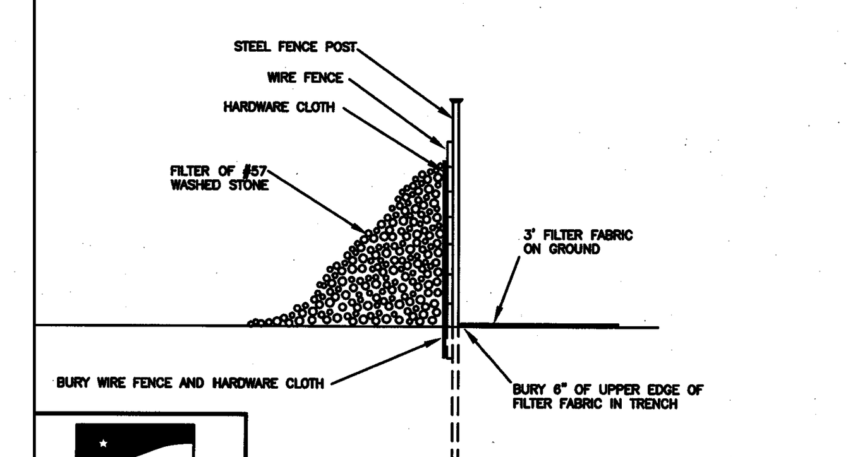
WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD TEMPORARY SILT FENCE



FRONT VIEW



SECTION VIEW

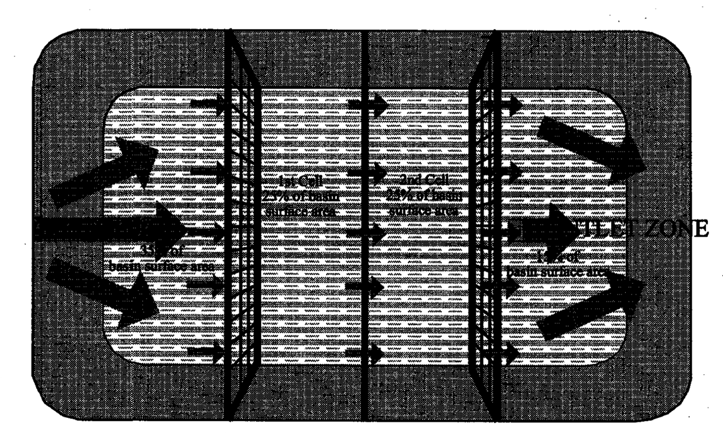
NOTES:

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD SILT FENCE OUTLET

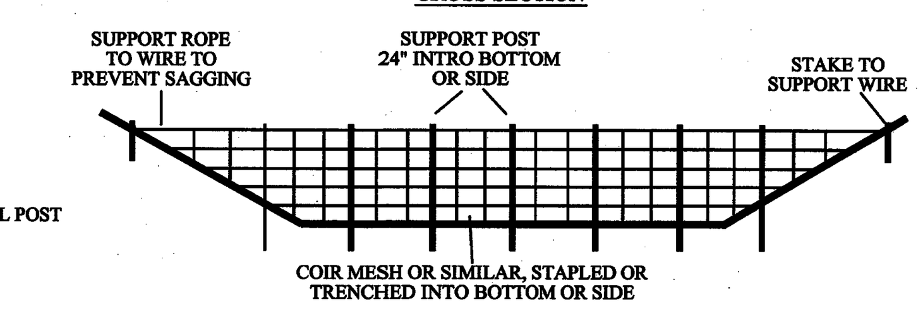


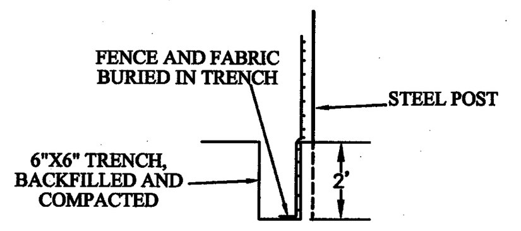
PLAN VIEW

NOTES:

1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

CROSS SECTION



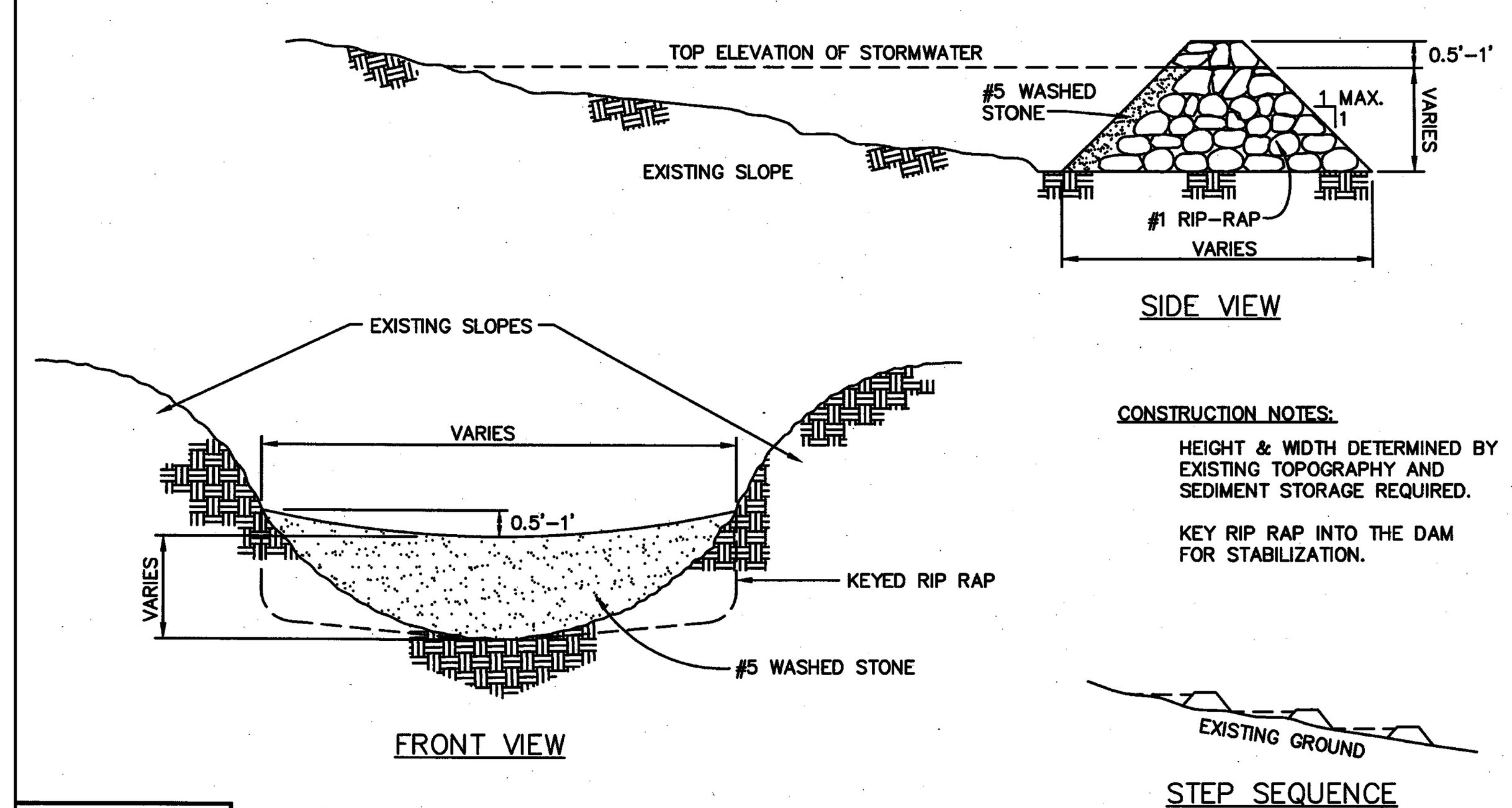


SECTION VIEW AT OPENING

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL



CONSTRUCTION NOTES:

HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.

KEY RIP RAP INTO THE DAM FOR STABILIZATION.

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

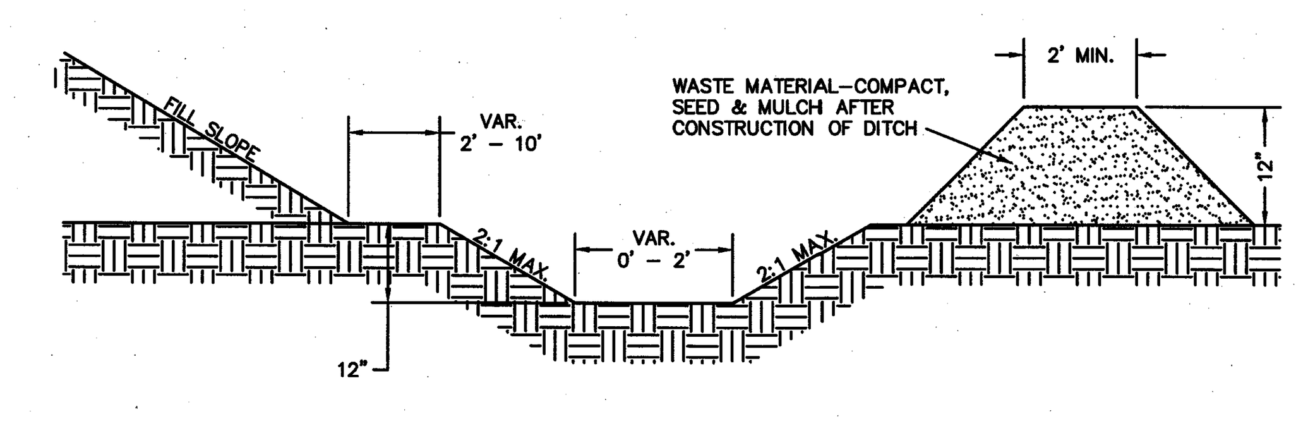
WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD CHECK DAM

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

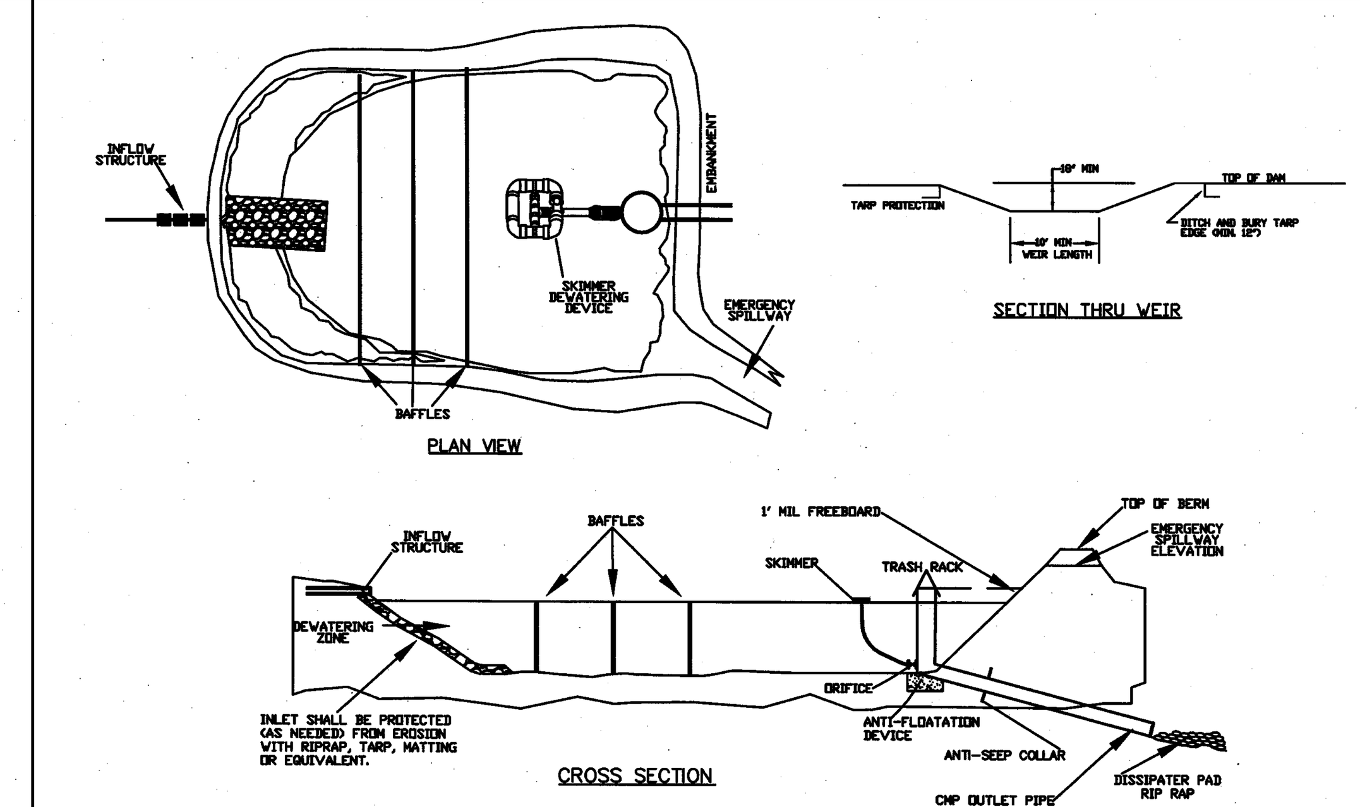


CROSS SECTIONAL VIEW

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD TEMPORARY DIVERSION DITCH



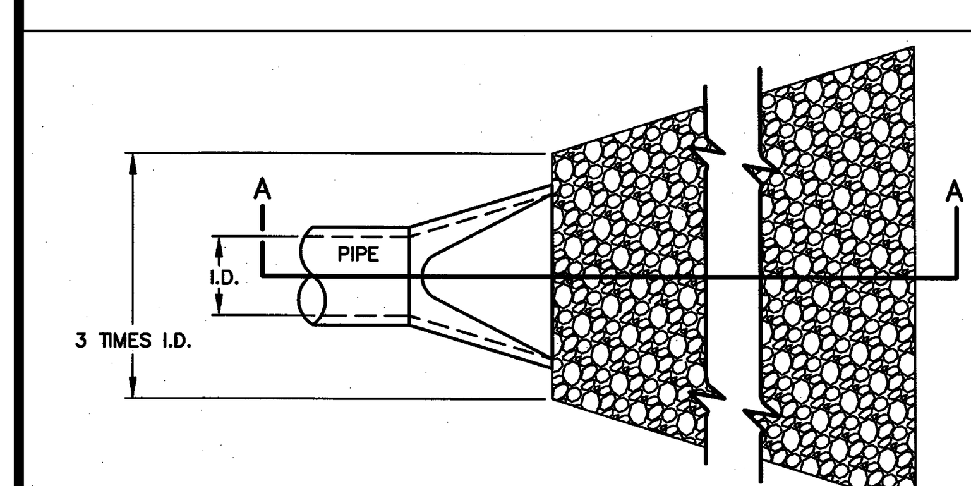
NOTES:

1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

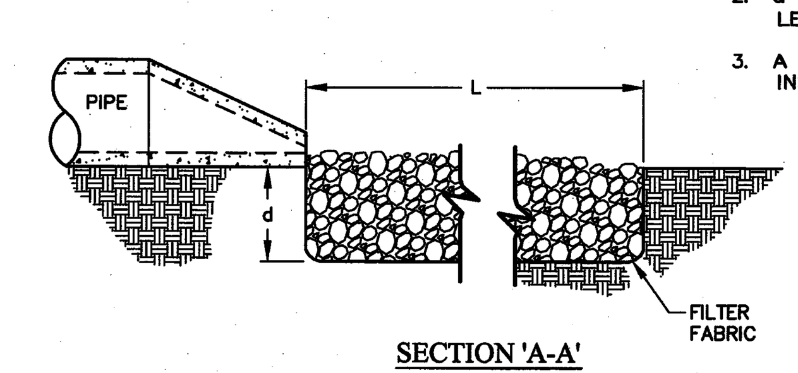
STANDARD SKIMMER ATTACHED TO PERMANENT RISER



PLAN VIEW

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

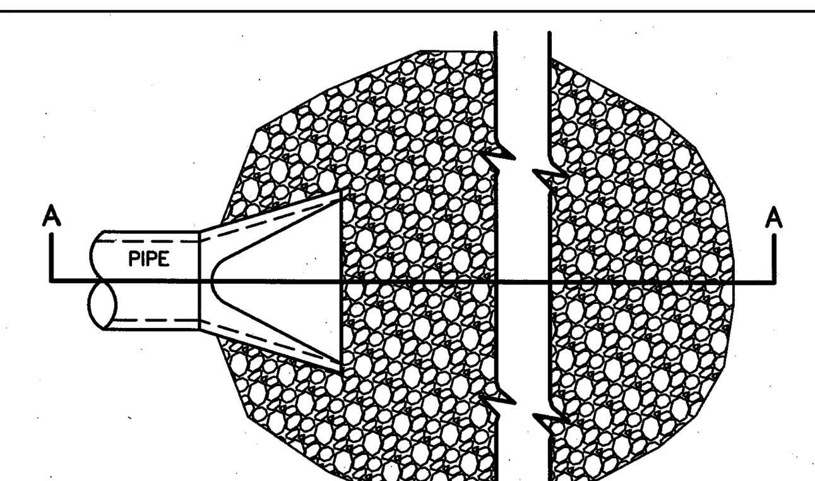


SECTION 'A-A'

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

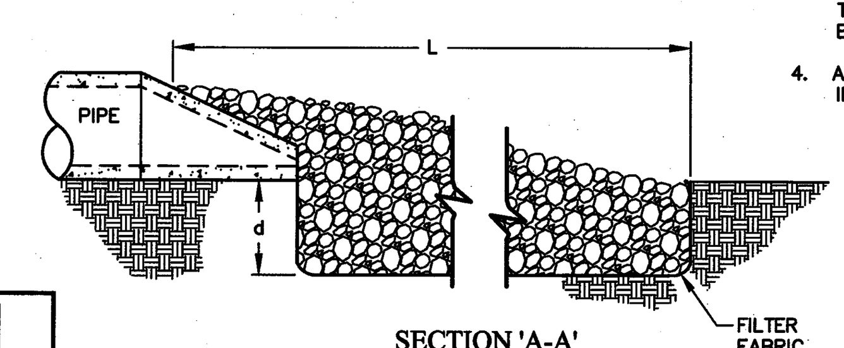
STANDARD PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL



PLAN VIEW

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

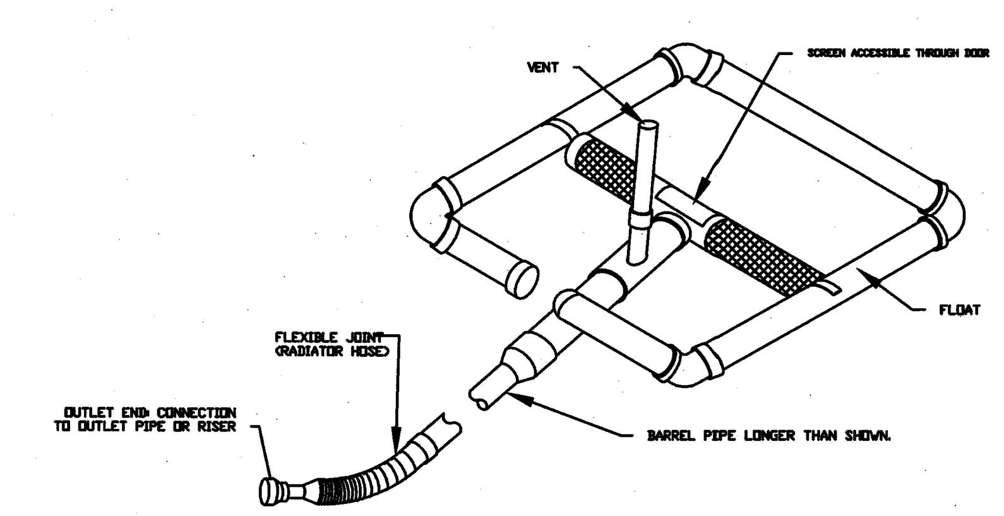


SECTION 'A-A'

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

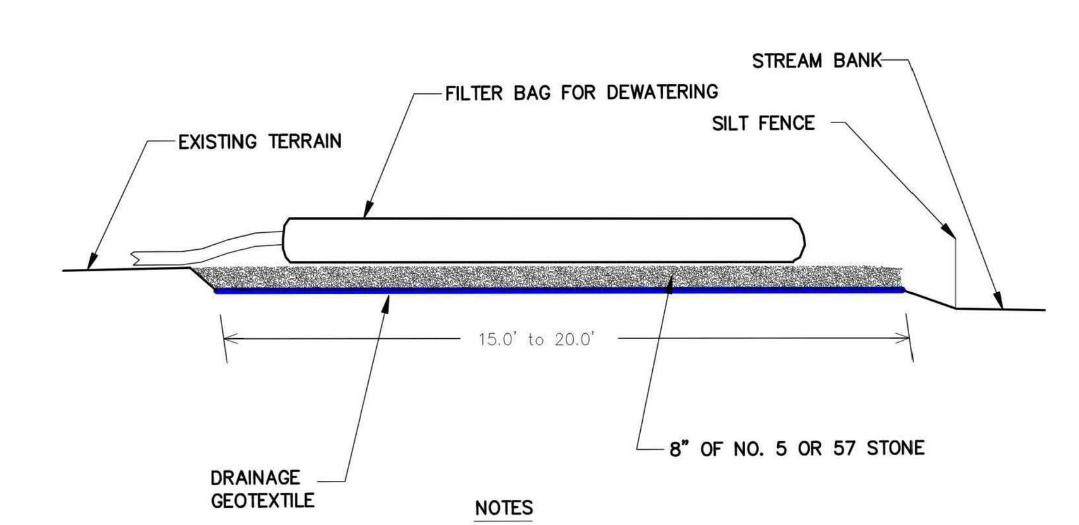
STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL



WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD SKIMMER DETAIL



NOTES

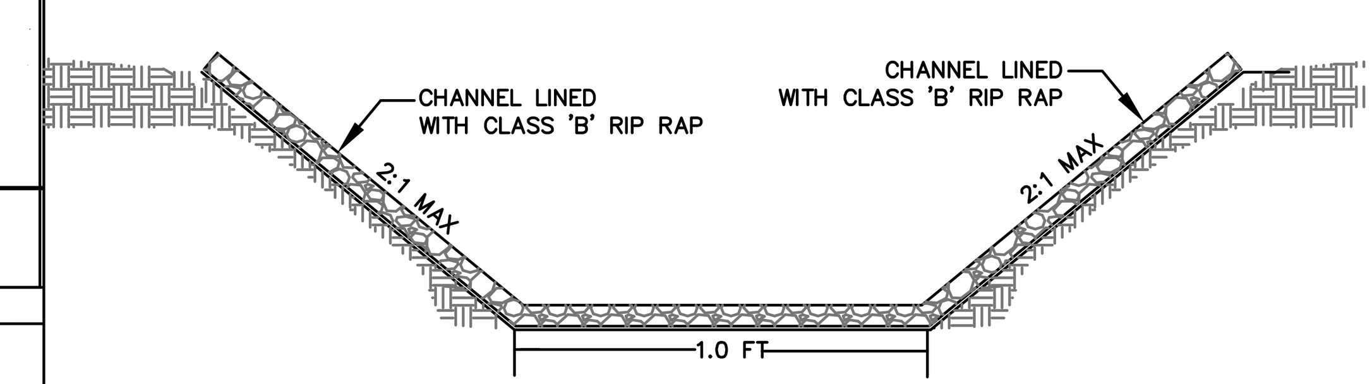
PROVIDE STABILIZED OUTLET TO STREAM BANK. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

NOT TO SCALE

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES



CROSS SECTION

NOTE: ALL TEMPORARY DIVERSION DITCHES SHALL BE TRANSITION INTO AN ARMORED SWALE PER THE CHANNEL SECTION ABOVE PRIOR TO BEING RELEASED INTO THE TEMPORARY SEDIMENT BASINS. THE SWALE SHALL EXTEND TO THE FLOOR OF THE BASIN AND DISCHARGE ONTO A 36"x60" CLASS 'B' RIP RAP DISSIPATOR.

ARMORED SWALE DETAIL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24501 W. BRIAN BURCHETT 07/03/2023

SAMBATEK N.C. REGISTERED CORPORATION C-4993 RALEIGH, NORTH CAROLINA

811 Know what's below. Call before you dig. nc811.org or 1-800-632-4949

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
A Sambatek Company
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM

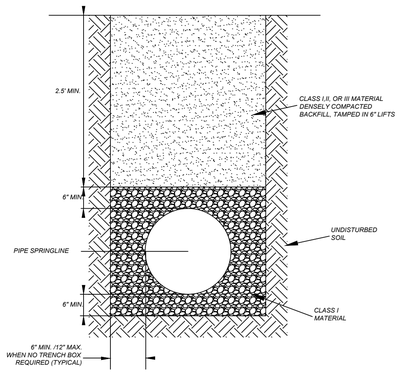
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOKOUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA
DETAILS

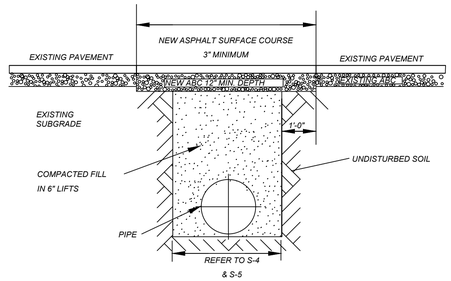
PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL2
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-6

X:\OUT - Cookout\1500 Sites\1502 - Zebulon, NC\CAD\OUT1502-DTL2.dwg, 6/30/2023 3:46:59 PM, dsmith



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD BEDDING DETAILS FOR CCFRPM PIPES

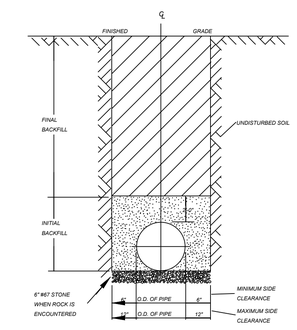
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-1	J.P.S.	10-8-10		



NOTES:
1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
4. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
8. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL DETAILS.
9. NO HAND PATCHING ALLOWED.
10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

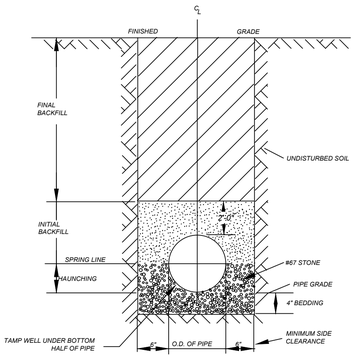
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-3	D.W.C.	11-1-99	A.B.B.	4-19-04
	RRH	3-30-00	J.P.S.	10-8-10



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
5. ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
6. IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-4	D.W.C.	9-3-99		
	RRH	3-30-00		



TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

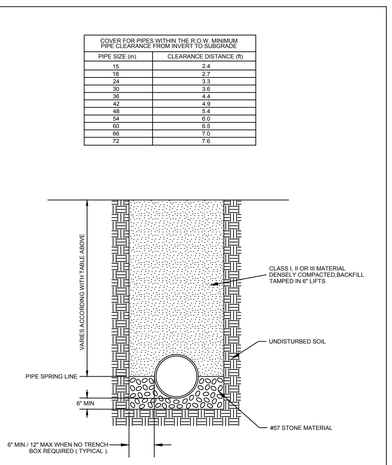
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-5	TO NOTES	3-1-87	D.W.C.	9-3-99
		7-2-82	RRH	3-30-00

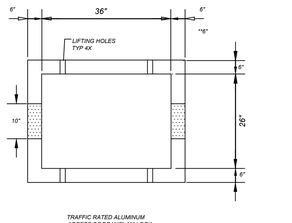
REVISIONS				
NO.	DATE	DESCRIPTION		BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC		KL

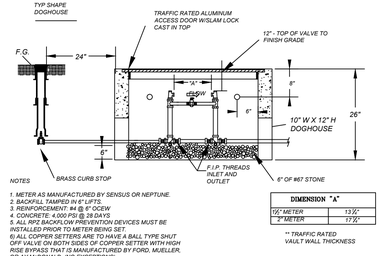
COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6721, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27615

COVER FOR PIPES WITHIN THE R.O.W. MINIMUM PIPE CLEARANCE FROM INVERT TO SUBGRADE	
PIPE SIZE (in)	CLEARANCE DISTANCE (ft)
15	2.4
18	2.7
24	3.3
30	3.6
36	4.4
42	4.9
48	5.4
54	6.0
60	6.5
66	7.0
72	7.6



CITY OF RALEIGH		
STANDARD DETAIL		
REVISIONS	DATE ADDED	NOT TO SCALE
		BEDDING FOR STORMWATER RCP PIPES
		SW-10.14





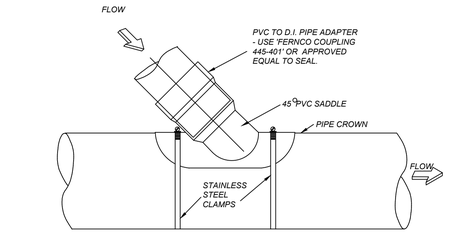
NOTES
1. METER AS MANUFACTURED BY SENSUS OR NEPTUNE.
2. BACKFILL TAMPED IN 6" LIFTS.
3. REINFORCEMENT: #4 @ 6" OCEW
4. CONCRETE: 4,000 PSI @ 28 DAYS.
5. ALL RPZ BACKFLOW PREVENTION DEVICES MUST BE INSTALLED PRIOR TO METER BEING SET.
6) ALL COPPER SETTERS ARE TO HAVE A BALL TYPE SHUT OFF VALVE ON BOTH SIDES OF COPPER SETTER WITH HIGH RISE BYPASS THAT IS MANUFACTURED BY FORD, McELLER, OR AY McDONALD. (NO EXCEPTIONS)

DIMENSION "A"	
5/8" METER	13½"
2" METER	17½"

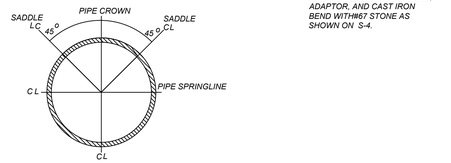
** TRAFFIC RATED VAULT WALL THICKNESS

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL 1 1/2"- 2" WATER METER BOX INSTALLATION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-31	A.B.B.	8-17-04	J.P.S.	11-4-10
	D.H.L.	6-18-08		



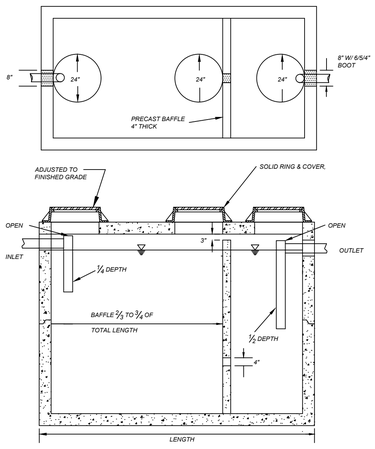
BACKFILL UNDER PVC SADDLE, ADAPTOR, AND CAST IRON BEND WITH#57 STONE AS SHOWN ON S-4.



SADDLE INSTALLATION LIMITS

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
LATERAL SADDLE INSTALLATION DETAIL FOR PVC PIPE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-31		3-1-87		
	RRH	3-30-00		



NOTES:
1. REINFORCEMENT: H-20 BRIDGE LOADING (TRAFFIC RATED)
2. CONCRETE: 4000 PSI @28 DAYS
3. EARTHCOVER: 0' TO 5' MAX.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
1000 GALLON GREASE INTERCEPTOR

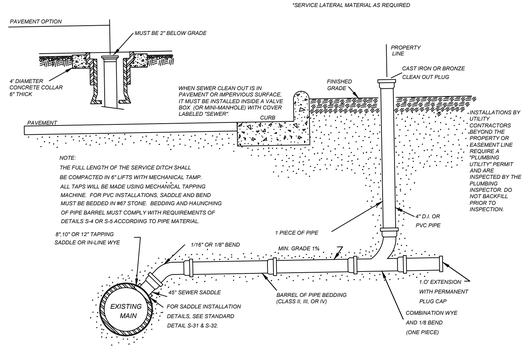
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-40	RRH	3/9/00	D.H.L.	6/18/08
	ABB	3/19/04		

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

CITY OF RALEIGH DETAILS

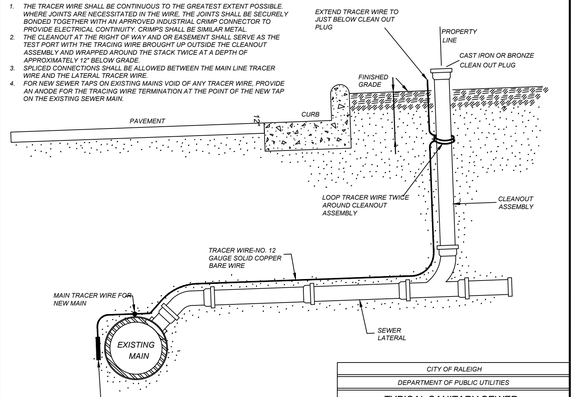
*SERVICE LATERAL MATERIAL AS REQUIRED



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SANITARY SEWER LATERAL CONNECTION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	Y.C.A.	6-92	A.B.B.	4-8-04
	RRH	3-30-00	D.H.L.	6-18-08

NOTES:
1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE, WHERE JOINTS ARE NECESSITATED IN THE WIRE, THE JOINTS SHALL BE SECURELY BONDED TOGETHER WITH AN APPROVED INDUSTRIAL CRIMP CONNECTOR TO PROVIDE ELECTRICAL CONTINUITY. CRIMPS SHALL BE SIMILAR METAL.
2. THE CLEANOUT AT THE RIGHT OF WAY AND OR EASEMENT SHALL SERVE AS THE TEST PORT WITH THE TRACING WIRE BROUGHT UP OUTSIDE THE CLEANOUT ASSEMBLY AND WRAPPED AROUND THE STACK TWICE AT A DEPTH OF APPROXIMATELY 12" BELOW GRADE.
3. SPLICED CONNECTIONS SHALL BE ALLOWED BETWEEN THE MAIN LINE TRACER WIRE AND THE LATERAL TRACER WIRE.
4. FOR NEW SEWER TAPS ON EXISTING MAINS VOID OF ANY TRACER WIRE, PROVIDE AN ANODE FOR THE TRACING WIRE TERMINATION AT THE POINT OF THE NEW TAP ON THE EXISTING SEWER MAIN.



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SANITARY SEWER LATERAL TRACER WIRE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30A	WKD	9-14		

1. BAFFLE WALL LOCATED AT A DISTANCE FROM INLET WALL 2/3 TO 3/4 OF THE TOTAL LENGTH OF THE INTERCEPTOR OR SEPARATOR AS SHOWN ON DETAIL S-40.
BAFFLE WALLS LOCATED AT A DISTANCE APPROXIMATELY OF 1/3 OF THE TOTAL LENGTH OF THE SEPARATOR AS SHOWN ON DETAIL S-40.01.
2. EACH INTERCEPTOR OR SEPARATOR SHALL HAVE INLET AND OUTLET TEES. THE OUTLET TEE SHALL EXTEND 50% INTO THE LIQUID DEPTH. THE INLET TEE SHALL EXTEND 25% INTO THE LIQUID DEPTH. INLET AND OUTLET TEES MUST BE OPEN TO ALLOW THE COLLECTION OF F.O.G. SAMPLE.
3. ACESS OPENINGS OVER EACH COMPARTMENT WITHIN THE INTERCEPTOR OR SEPARATOR SHALL BE 24 INCHES IN DIAMETER AND CONTAIN PICK HOLES. ALL COVERS SHALL BE CONSTRUCTED OF CAST IRON OR EQUIVALENT TRAFFIC BEARING MATERIAL. MANHOLE COVERS MUST EXTEND TO FINISH GRADE AND BE INSTALLED TO EXCLUDE THE ENTRANCE OF STORMWATER INTO THE INTERCEPTOR OR SEPARATOR.
4. FULL SIZE DUAL SWEEP CLEANOUTS SHALL BE INSTALLED ON THE INLET AND OUTLET SIDES OF THE INTERCEPTOR OR SEPARATOR.
5. INTERCEPTORS AND SEPARATORS MUST BE VENTED IN ACCORDANCE WITH THE NC STATE PLUMBING CODE.
6. CONCRETE: 4000 PSI @ 28 DAYS.
7. DESIGN: ACI 318 BUILDING CODE
ASTM C1613-06 FOR GREASE INTERCEPTORS
ASTM C913-02 FOR WATER AND WASTEWATER STRUCTURES
ASTM C890-06 FOR MINIMAL STRUCTURAL DESIGN LOADING
8. INTERCEPTORS AND SEPARATORS SHALL BE DESIGNED TO WITHSTAND AN H-20 WHEEL LOAD.
9. INTERCEPTORS OR SEPARATORS MADE OF POLYETHYLENE OR FIBERGLASS SHALL INCLUDE A MINIMUM 12,000 PSI TENSILE STRENGTH, 19,000 PSI FLEXURAL STRENGTH, AND 800,000 PSI FEXURAL MODULUS.
10. ALL INTERCEPTORS AND SEPARATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

LOCALLY AVAILABLE SIZES	
INTERCEPTORS CAPACITY (GAL.)	SEPARATORS CAPACITY (GAL.)
300	1000
550	1200
750	1600
1000	
1200	
1500	
2000	
2500	
3000	
4000	
5000	
6000	
8000	

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
DIMENSIONS: GREASE INTERCEPTORS OIL-WATER-SAND SEPARATORS

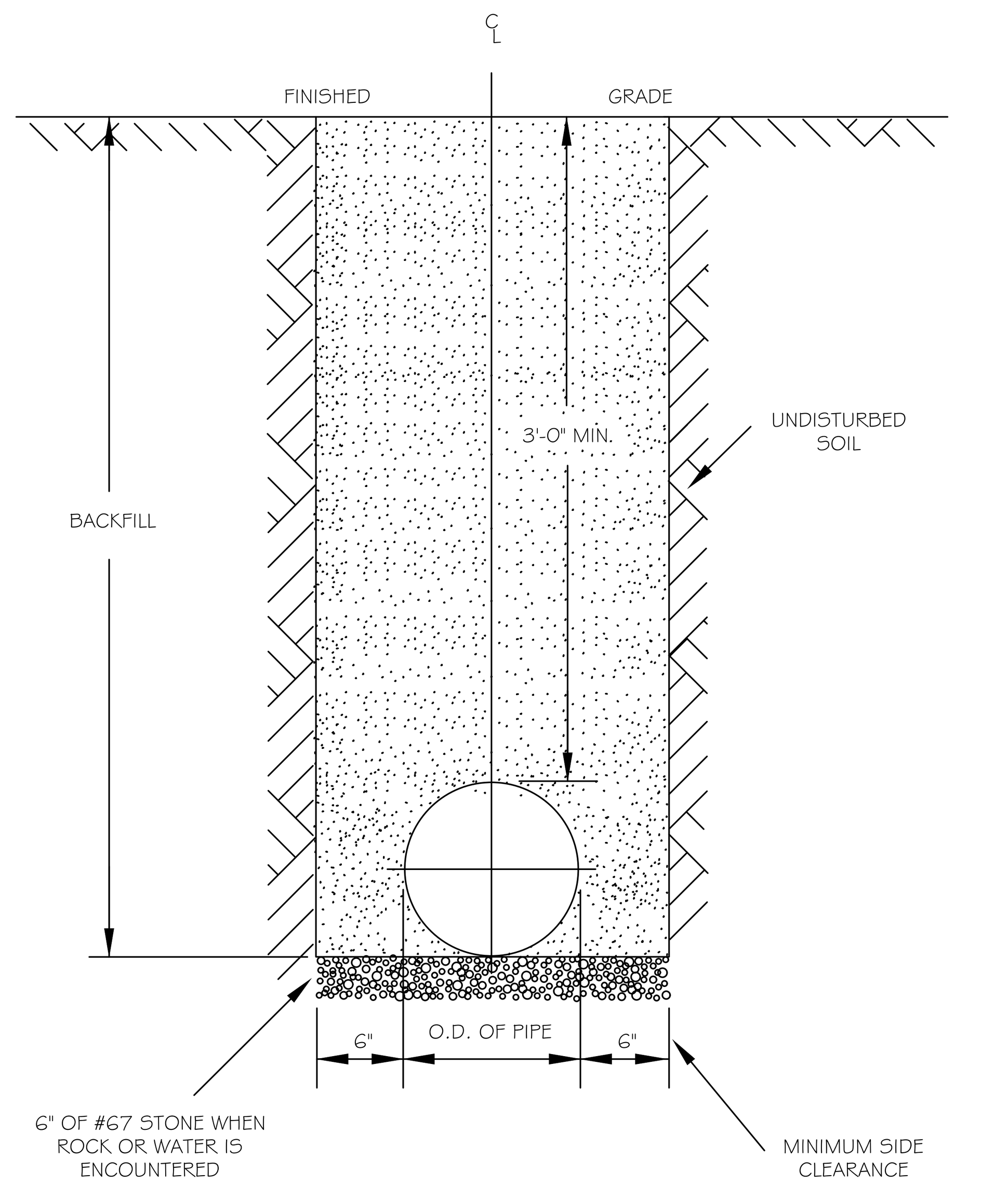
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-41	RRH	3/9/00	D.H.L.	6/18/08
	ABB	3/19/04		

SAMBATEK INC P.C. REGISTERED ENGINEERING FIRM C-4993 NORTH CAROLINA RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 24837 07/03/2023 ENGINEER BRIAN BURCHETT

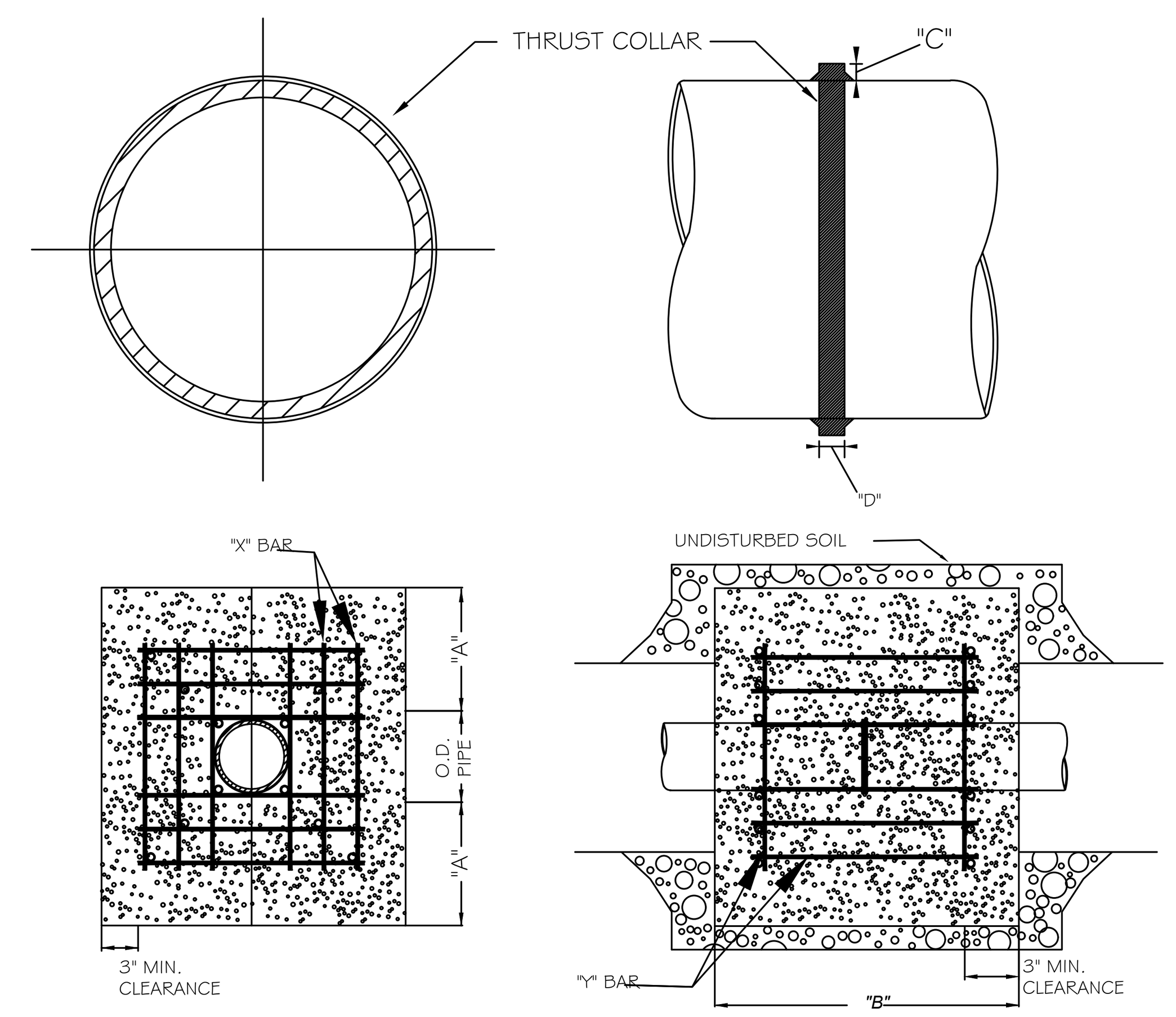
811 Know what's below. Call before you dig. nc811.org or 1-800-632-4949

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL3
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-7



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	D.W.C.	9-3-99	ABB	2-15-05
	RRH	3-31-00	J.P.S.	10-29-10



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12

THRUST COLLAR, AND THRUST SCHEDULE

I.D. PIPE	"A"	"B"	"C"	"D"
6" - 16"	1'-4"	1'-7"	2"	3/8"
20" - 24"	1'-4"	1'-7"	3"	1/2"
30" - 36"	1'-4"	1'-7"	4"	5/8"
48" & greater	1'-8"	1'-9"	6"	7/8"

NOTES:
1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
THRUST BLOCKING DESIGN DATA FOR WATER MAINS				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-7	RRH	1-21-00	J.P.S.	11-1-10
	D.H.L.	6-18-08		

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

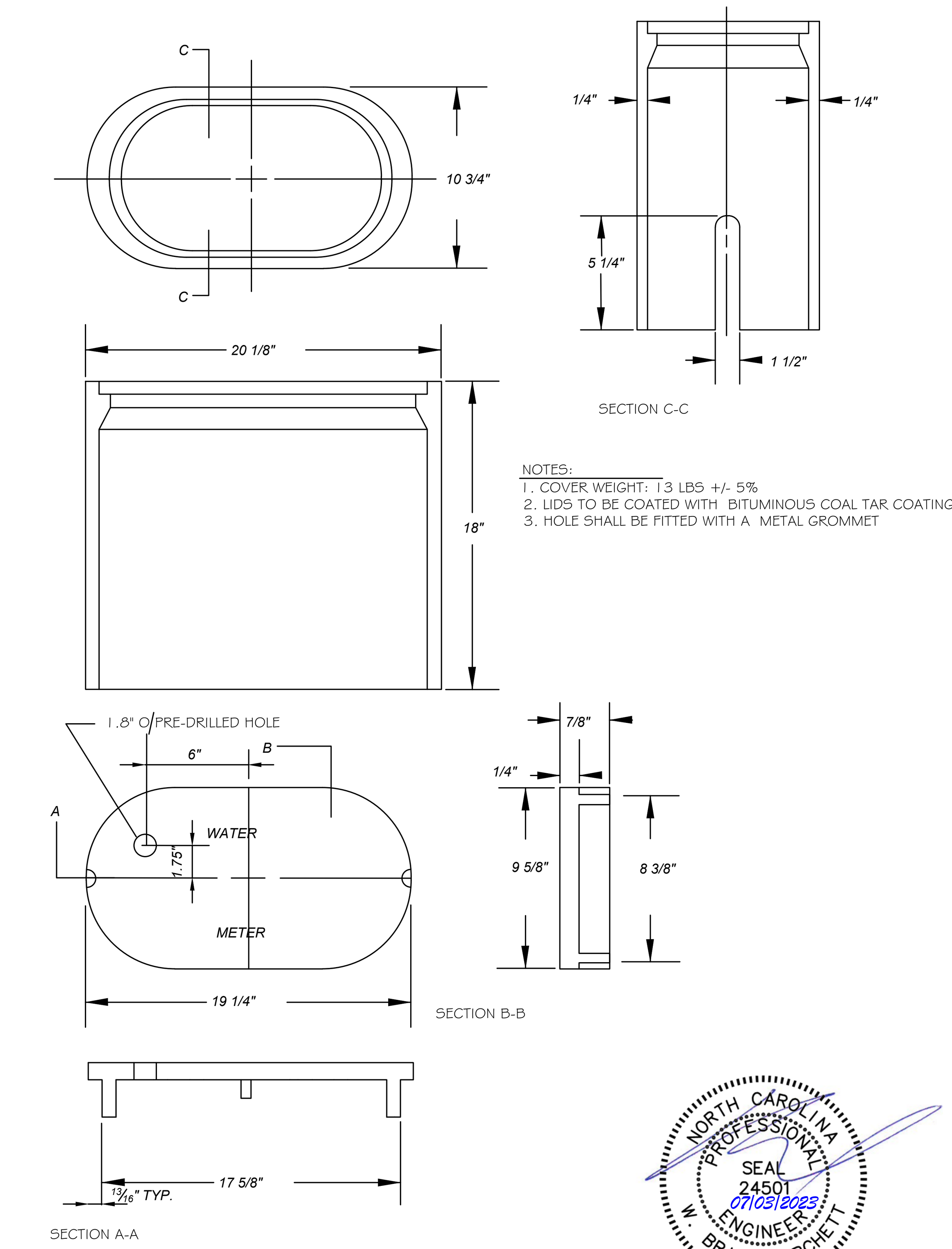
ALL AREAS GIVEN IN SQUARE FEET.

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4000 LBS/FT²	SOFT CLAY 2000 LBS/FT²	1600 LBS/FT² GRAVEL / COARSE SAND	8000 LBS/FT² DRY CLAY - ALWAYS DRY	SAND, COMPACT FIRM 8000 LBS/FT²	SAND -CLEAN DRY 4000 LBS/FT²	SOIL 1000 LBS/FT² QUICKSAND - VERY POOR	ROCK - POOR 10,000 LBS/FT²
6"									
11 1/4°	1,108	1	1	1	1	1	1	2	1
22 1/2°	2,207	1	2	2	1	1	1	3	1
45°	4,328	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4°	1,970	1	1	2	1	1	1	2	1
22 1/2°	3,922	1	2	3	1	1	1	4	1
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4°	4,433	2	3	3	1	1	2	5	1
22 1/2°	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	18	2
90°	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4°	7,881	2	4	5	1	1	2	8	1
22 1/2°	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

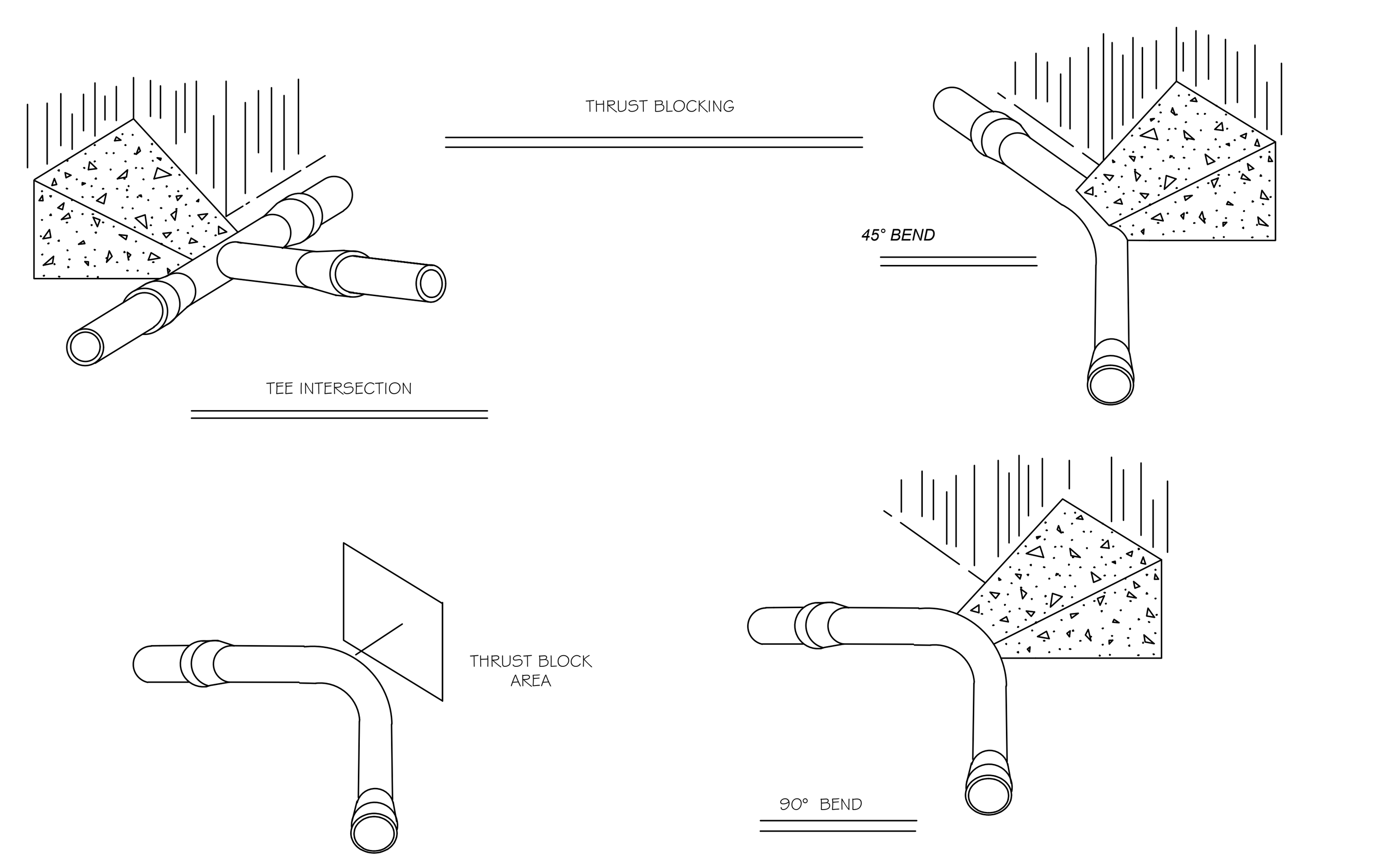
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
THRUST BLOCKING DESIGN QUANTITY TABLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	D.W.C.	6-23-99	J.P.S.	11-1-10



NOTES:
1. COVER WEIGHT: 13 LBS +/- 5%
2. LIDS TO BE COATED WITH BITUMINOUS COAL TAR COATING
3. HOLE SHALL BE FITTED WITH A METAL GROMMET

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER W. BRIAN BURCHETT 07/03/2023

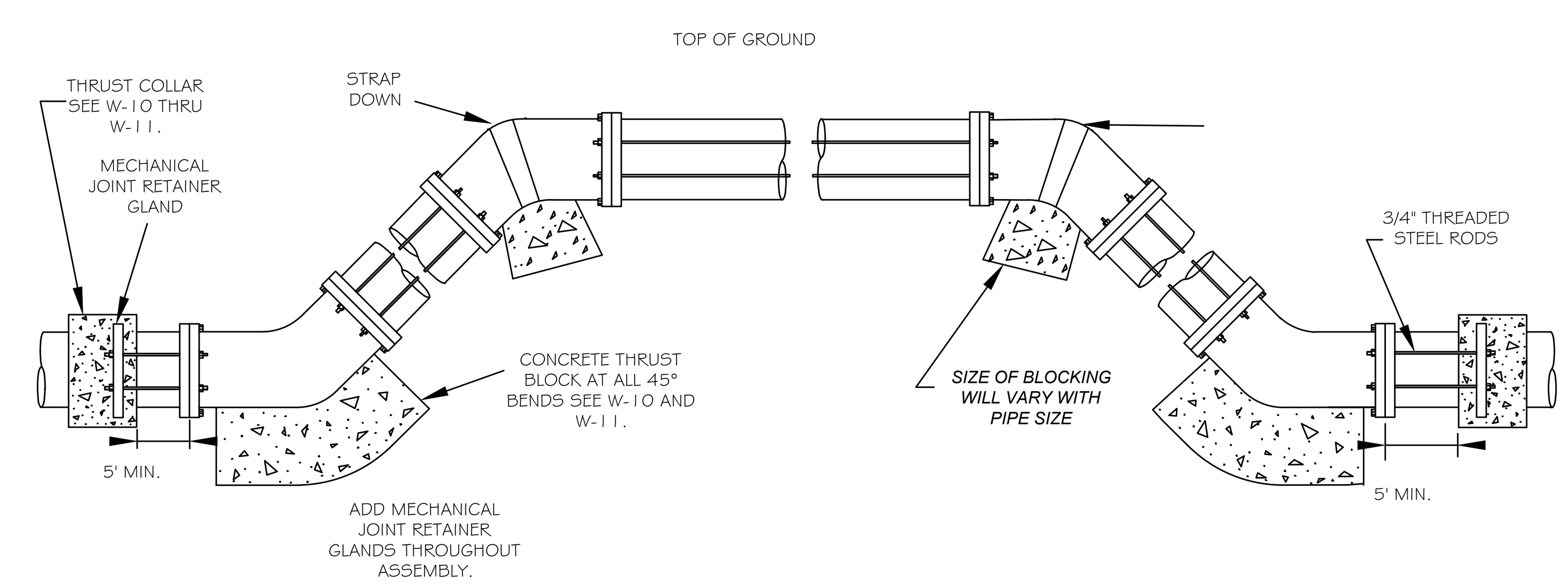
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
WATER METER BOX DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-25	D.W.C.	11-3-99	ABB	1-20-05
	RRH	3-31-00	J.P.S.	11-4-10



NOTES:

1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3.
4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11, FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD THRUST BLOCKING VIEWS				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9	D.W.C.	3-1-87	RRH	3-31-00
		9-7-99	D.H.L.	6-18-08

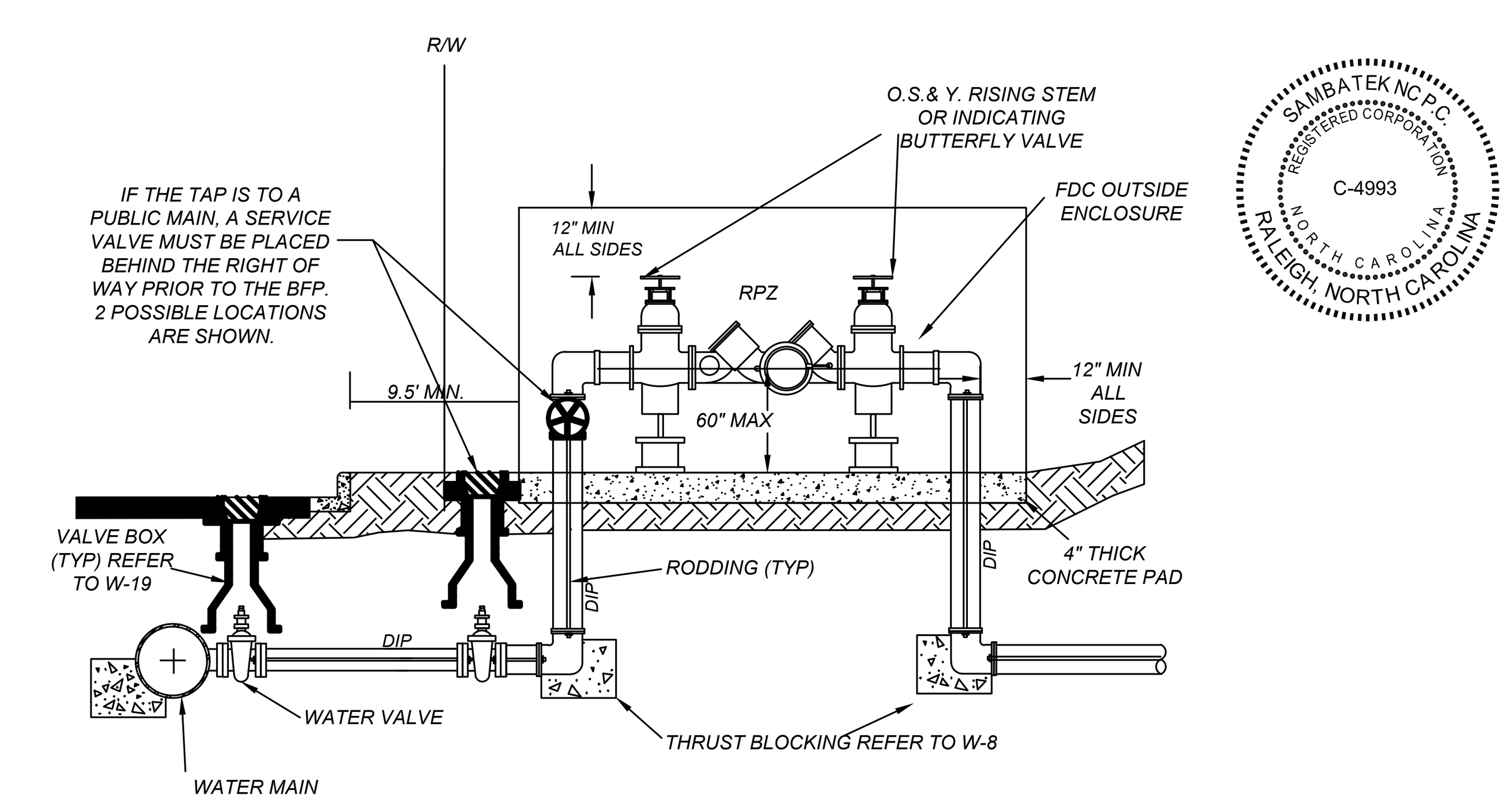


ROD REQUIREMENTS

SIZE OF 45 BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	8
24"	69,252	8

GENERAL NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
5. 3' MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD VERTICAL BEND				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-12	ABB	4-6-04	J.P.S.	11-1-10
	D.H.L.	6-18-08		



SAMBATEK N.C. P.C. REGISTERED CORPORATION C-4993 RALEIGH NORTH CAROLINA

1. ALL ABOVE GROUND ENCLOSURES MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE SUPPLY PIPE) TO DAYLIGHT ABOVE GRADE.
2. REDUCED PRESSURE BACKFLOW PRESENTERS MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING. DRAINAGE IN A BUILDING MUST BE TWICE THE DIAMETER OF THE SUPPY PIPE.
3. ABOVE GROUND INSULATED VAULTS MUST BE ASSE 1060 APPROVED ABOVE GROUND ENCLOSURES. SEE CROSS CONNECTION MANUAL FOR ENCLOSURE FREEZE PROTECTION AND CERTIFICATION REQUIREMENTS.
4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
6. FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.
7. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
8. ALL ASSEMBLIES MUST BE ON THE CURRENT APPROVAL LIST.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-36	Y.C.A.	12-31-91	A.B.B.	7-10-04
	D.W.C.	11-8-99	D.H.L.	6/18/08

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

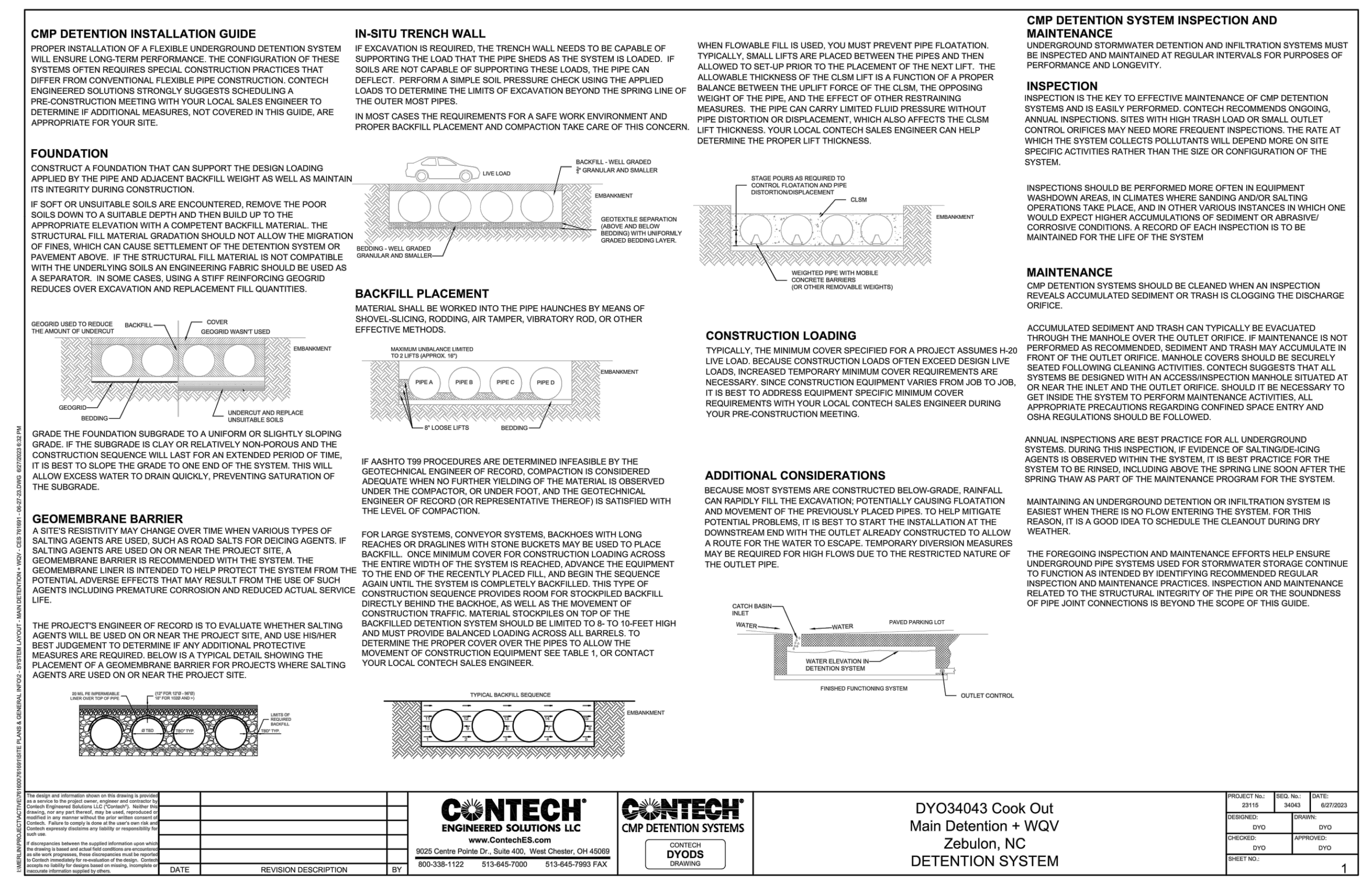
COMMERCIAL SITE DESIGN
A Sambatek Company
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM

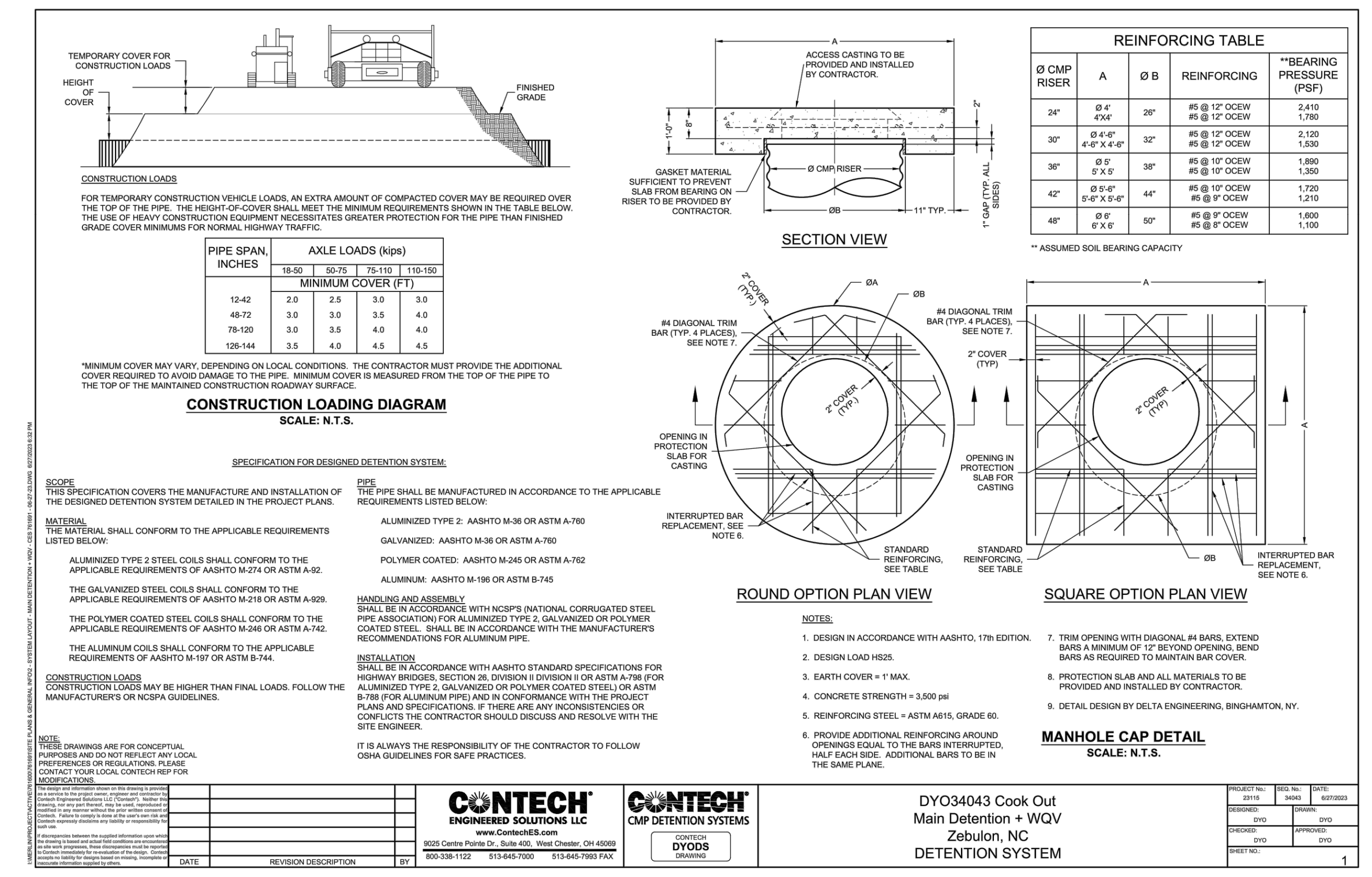
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

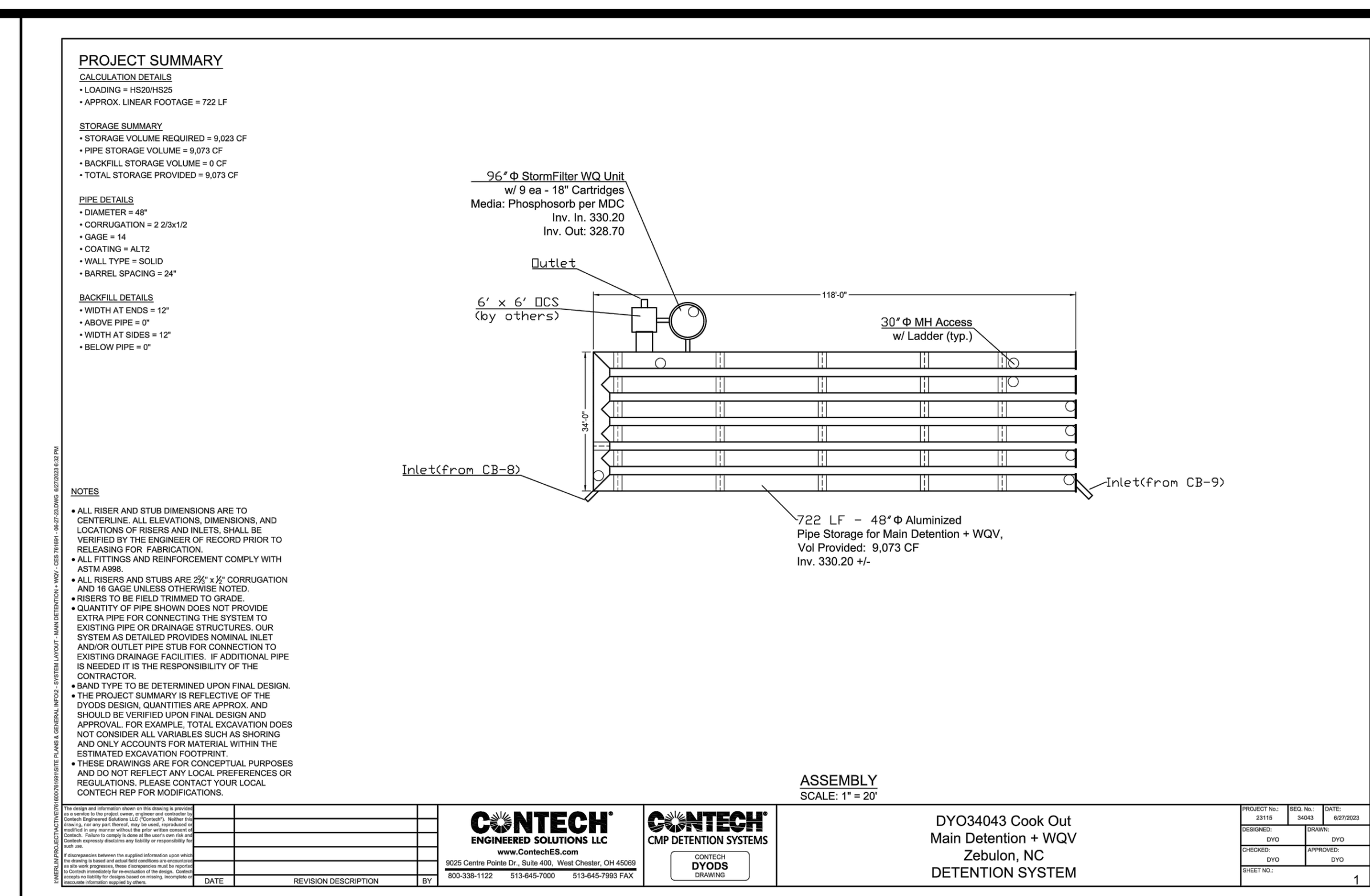
COOK OUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

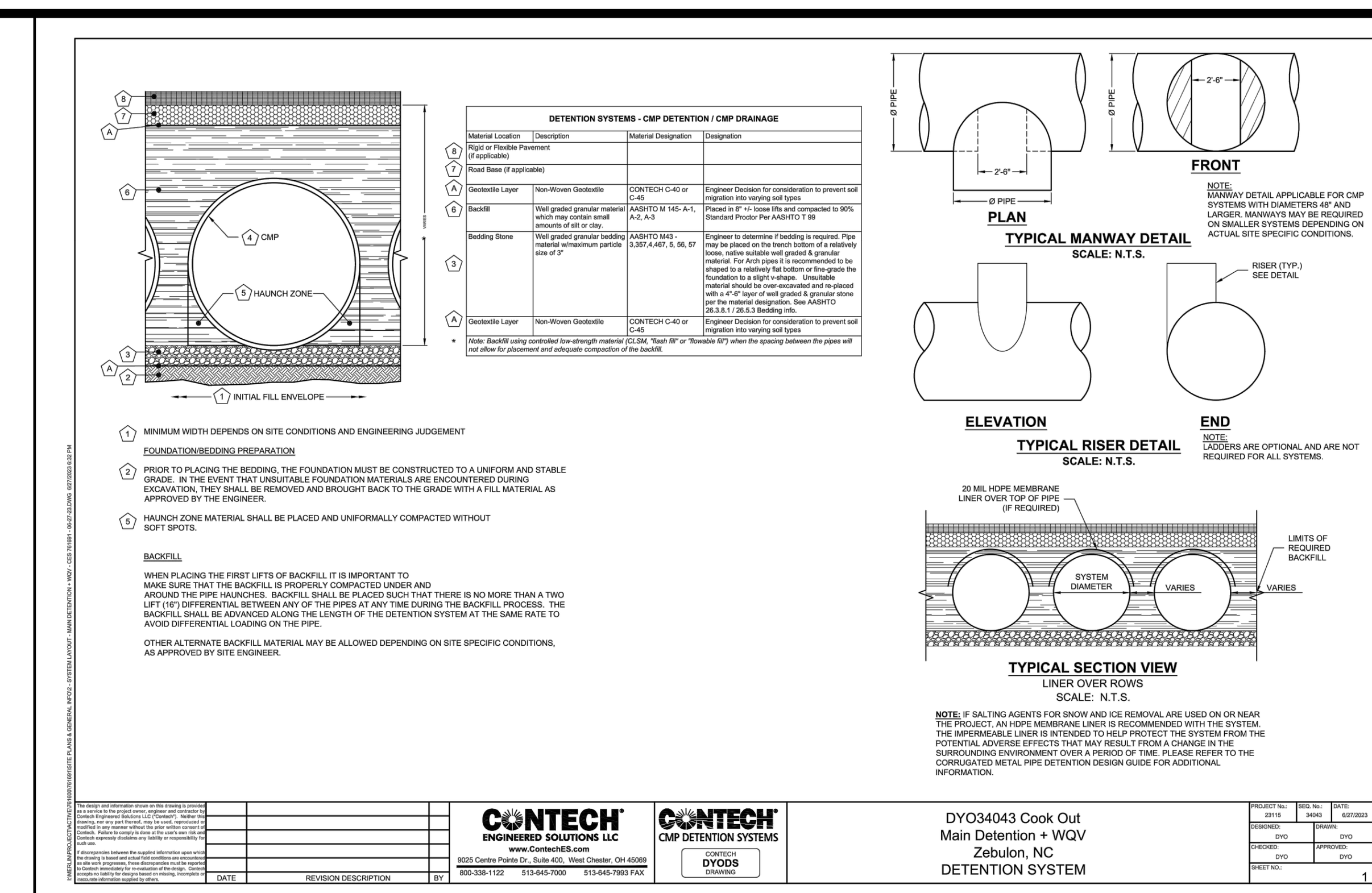
CITY OF RALEIGH DETAILS

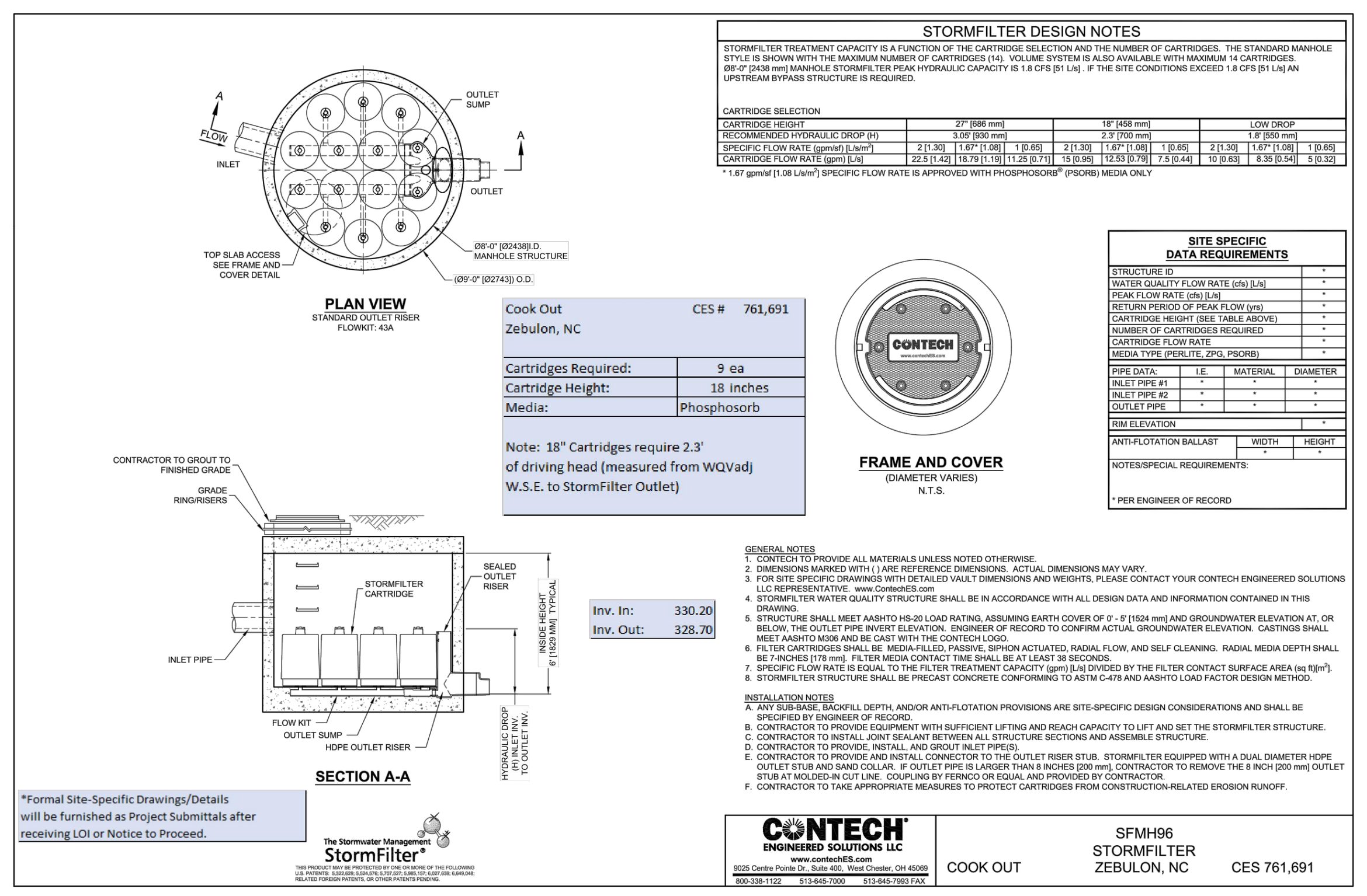
PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL3a
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-8











CONTECH ENGINEERED SOLUTIONS

The Stormwater Management StormFilter

Volume StormFilter Outflow & Orifice Calculation

Zebulon, NC

Input	Calculated

Project Name: Cook Out - Zebulon		Date:	6/27/23
Contech No: 761,691		By:	lrs

Discharge flow rate from StormFilter:

Restrictor Disc Diameter (in)	0.443
Restrictor Disc Diameter (ft)	0.037

Restrictor Disk Calibration:

The Volume StormFilter restrictor disc is calibrated to flow at 7.5 gpm at 10 feet of head, or 1 gpm/sf or less for all cartridge sizes

Orifice Coefficient	0.61
Area of Restrictor Disc (sf)	0.0011
Head, h (ft)	10
Flow, Q (cfs)	0.017
Flow, Q (gpm)	7.5

$$Q = cA\sqrt{2Gh}$$

$$Q = (0.61)\left(\frac{0.037^2}{4}\pi\right)\sqrt{2(32.2)(10)}$$

$$Q = 0.017cfs = 7.5GPM$$

Cook Out - Zebulon Specific Data:

Max. Head, h, on Cartridges (ft)	5.5
Number of cartridges	9

During the worst-case scenario, there is 5.5 feet of head available on the orifice.

Flow Rate per Cartridge:

Flow, Q (cfs)	0.0123
Flow, Q (gpm)	5.52

$$Q = cA\sqrt{2Gh}$$

With 5.5 of head available, each cartridge will discharge 5.52 gpm, or 0.0123 cfs. Since 5.52 gpm is less than the 1 GPM/sf flow rate of 7.5 GPM for the 18-inch cartridge, the mass loading calculations are preserved and 9 cartridges are suitable for this site.

Total Unit Outflow:

Flow, Q (cfs) per cartridge	0.0123	
Flow, Q (cfs) total	0.1107	(Q = No. Cartridges x Flow per Cartridge)

With 9 cartridges, the total StormFilter discharge outflow rate is 0.1107 cfs during the worst-case scenario.

CONTECH ENGINEERED SOLUTIONS

Determining Number of Cartridges for Volume-Based Design in NC

Design Engineer:	lrs		Blue Cells = Input
Date	6/27/2023		Black Cells = Calculation
Site Information			
Project Name	Cook Out		
Project State	NC		
Project Location	Zebulon		
Drainage Area, Ad	1.17	ac	
Impervious Area, Ai	0.92	ac	
Pervious Area, Ap	0.25		
% Impervious	79%		
Runoff Coefficient, Rv	0.76		=0.05+0.9*(Ai/Ad)
Water Quality Volume Calculations			
Design storm rainfall depth, Rd	1.0	in	
Water quality volume, WQV	3218.0	ft^3	=Ad*Rv*Rd*(43560/12)
Storage Component Calculations			
Capture 75% of WQV	2413.5	ft^3	=0.75*WQV
Pretreatment credit (estimated or calculated), %pre	30%		
Mass loading calculations			
Mean Annual Rainfall, P	45	in	
Agency required % removal	85%		
Percent Runoff Capture (% capture)	90%		
Mean Annual Runoff, V_t	131,256	ft^3	=P*Ad*Rv*(43560/12)*%capture
Event Mean Concentration of Pollutant, EMC	70.0	mg/l	(Suggestion: Use 60 for residential, 70 for Commercial, 100 for Industrial)
Annual Mass Load, M_{total}	573.23	lbs	=EMC*Vt*(28.3)*(0.000001)*(2.2046)
Filter System			
Filtration brand	StormFilter		
Cartridge height	18	in	
Cartridge Quantity Calculation			
Mass removed by pretreatment system, M_{pre}	172	lbs	=Mtotal * %removal
Mass load to filters after pretreatment, M_{pass1}	401	lbs	=Mtotal - Mpre
Estimate the required filter efficiency, E_{filter}	79%		=1+(%removal - 1)/(1 - %pre)
Mass to be captured by filters, M_{filter}	315	lbs	=Mpass1 * Efilter
Maximum Cartridge Flow rate, Q_{cart}	7.5	gpm	=q * (7.5 ft2/cartridge)
Mass load per cartridge, M_{cart} (lbs)	36	lbs	=lookup mass load per cartridge
Number of Cartridges required, N_{mass}	9		=ROUNDUP(Mfilter/Mcart,0)
Maximum Treatment Capacity	0.15		=Nmass*(Qcart/449)

SUMMARY

Maximum Treatment Flow Rate, cfs	0.15
Cartridge Flow Rate, gpm	7.5
Number of Cartridges	9
Stormfilter Size	96" MH

Target Pollutant(s):	TSS, N&P
Media:	Phosphosorb

CONTECH ENGINEERED SOLUTIONS

The Stormwater Management StormFilter

Equivalent Orifice Diameter:

The following equations back-calculate from the total worst-case StormFilter flow rate and head to determine an equivalent orifice diameter that can be used to represent the StormFilter when designed on a volume/mass basis.

Total Outflow (cfs)	0.1107
Orifice Coefficent	0.61
Max. Head on cartridges (ft)	5.5
Equivalent Diameter, D (ft)	0.111
Equivalent Diamter, D (in)	1.330

$$Q = cA\sqrt{2Gh}$$

$$Q = (0.61)\left(\frac{D^2}{4}\pi\right)\sqrt{2(32.2)h}$$

$$D = \left(\frac{4Q}{(0.61)(\pi)\sqrt{2(32.2)h}}\right)^{1/2}$$

This equivalent orifice, however, it not a physical orifice. It is simply a method for accounting for the flow through the Volume StormFilter in routing calculations when required.

CONTECH ENGINEERED SOLUTIONS

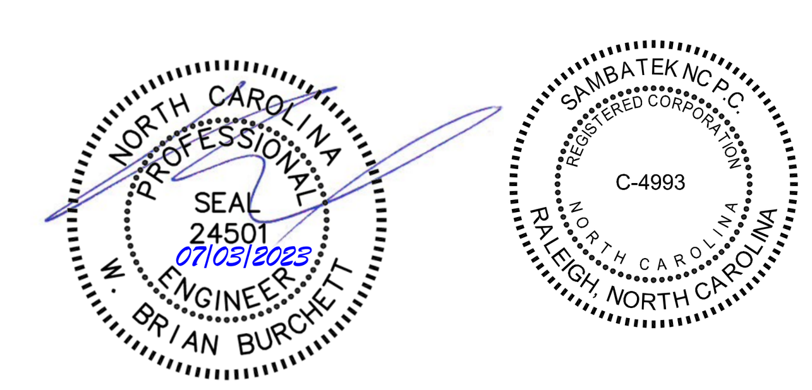
Round Pipe Stage Storage Table

Contech Engineered Solutions, LLC Engineer:	lrs
Date	6/27/2023
Site Information	
Project Name	Cook Out - Zebulon
Project State	NC
Project Location	Zebulon

Enter Pipe I.D.= 48 in. Enter Desired Increment = 1 in. Total Volume/LF 12.57 Total CMP Length= 722 ft. System Invert= 330.20 ft.

Inc Num	Water Level (in.)	Inc Area (sq. ft.)	Hyd Rad (ft.)	Top Width (ft.)	Volume (cf)	WS Elevation (ft.)	
1	1	0.06	0.06	1.14	46	330.28	
2	2	0.18	0.11	1.60	129	330.37	
3	3	0.33	0.16	1.94	236	330.45	
4	4	0.50	0.21	2.21	361	330.53	
5	5	0.69	0.26	2.44	501	330.62	
6	6	0.91	0.31	2.65	655	330.70	
7	7	1.13	0.36	2.82	819	330.78	
8	8	1.38	0.41	2.98	994	330.87	
9	9	1.63	0.46	3.12	1178	330.95	
10	10	1.90	0.50	3.25	1369	331.03	
11	11	2.17	0.54	3.36	1568	331.12	
12	12	2.46	0.59	3.46	1774	331.20	
13	13	2.75	0.63	3.56	1985	331.28	
14	14	3.05	0.67	3.64	2201	331.37	
15	15	3.36	0.71	3.71	2422	331.45	WQVadj WSE
16	16	3.67	0.74	3.77	2647	331.53	
17	17	3.98	0.78	3.83	2876	331.62	
18	18	4.30	0.82	3.87	3108	331.70	
19	19	4.63	0.85	3.91	3342	331.78	
20	20	4.96	0.88	3.94	3578	331.87	
21	21	5.29	0.91	3.97	3816	331.95	
22	22	5.62	0.94	3.99	4056	332.03	
23	23	5.95	0.97	4.00	4296	332.12	
24	24	6.28	1.00	4.00	4536	332.20	
25	25	6.62	1.03	4.00	4777	332.28	
26	26	6.95	1.05	3.99	5017	332.37	
27	27	7.28	1.07	3.97	5257	332.45	
28	28	7.61	1.09	3.94	5495	332.53	
29	29	7.94	1.11	3.91	5731	332.62	
30	30	8.26	1.13	3.87	5965	332.70	
31	31	8.58	1.15	3.83	6197	332.78	
32	32	8.90	1.16	3.77	6426	332.87	
33	33	9.21	1.18	3.71	6651	332.95	
34	34	9.52	1.19	3.64	6872	333.03	
35	35	9.82	1.20	3.56	7088	333.12	
36	36	10.11	1.21	3.46	7299	333.20	
37	37	10.39	1.21	3.36	7505	333.28	
38	38	10.67	1.22	3.25	7704	333.37	
39	39	10.94	1.22	3.12	7895	333.45	
40	40	11.19	1.22	2.98	8079	333.53	
41	41	11.43	1.21	2.82	8254	333.62	
42	42	11.66	1.21	2.65	8418	333.70	
43	43	11.87	1.19	2.44	8572	333.78	
44	44	12.07	1.18	2.21	8712	333.87	
45	45	12.24	1.16	1.94	8837	333.95	
46	46	12.39	1.13	1.60	8944	334.03	
47	47	12.50	1.10	1.14	9027	334.12	
48	48	12.57	1.00	0.00	9073	334.20	

These results are submitted to you as a guideline only, without liability on the part of CONTECH Construction Products Inc. for accuracy or suitability to any particular application, and are subject to your verification.



NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

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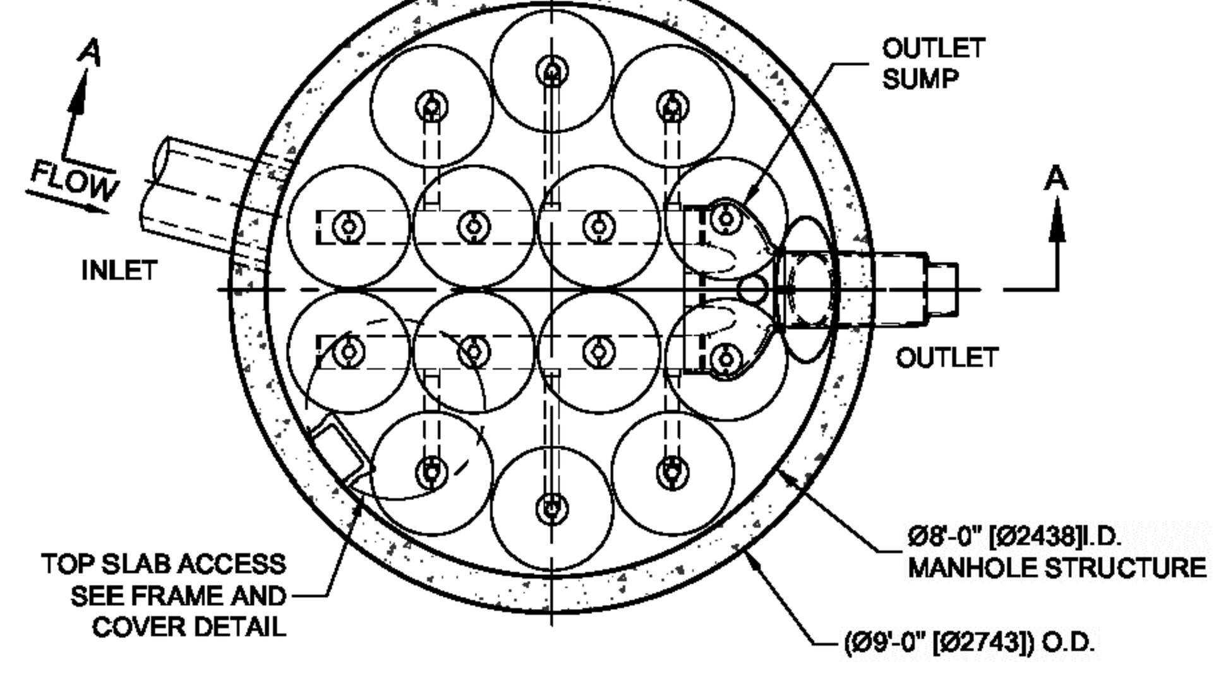
COOK OUT FRESH HAMBURGERS

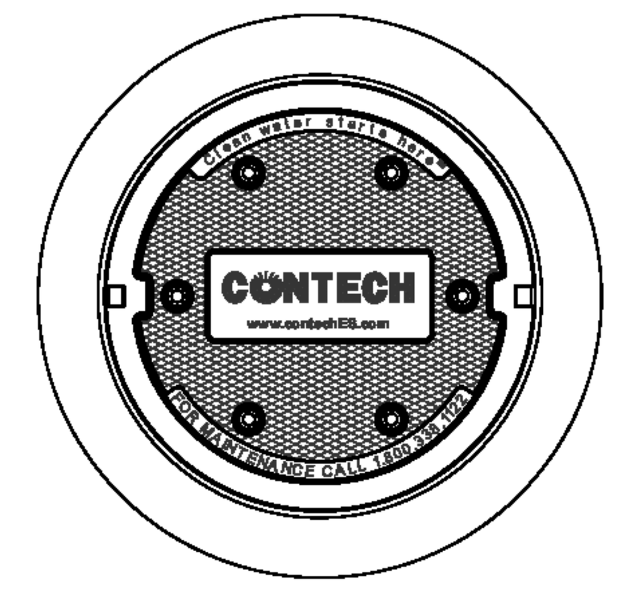
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

SCM DETAILS

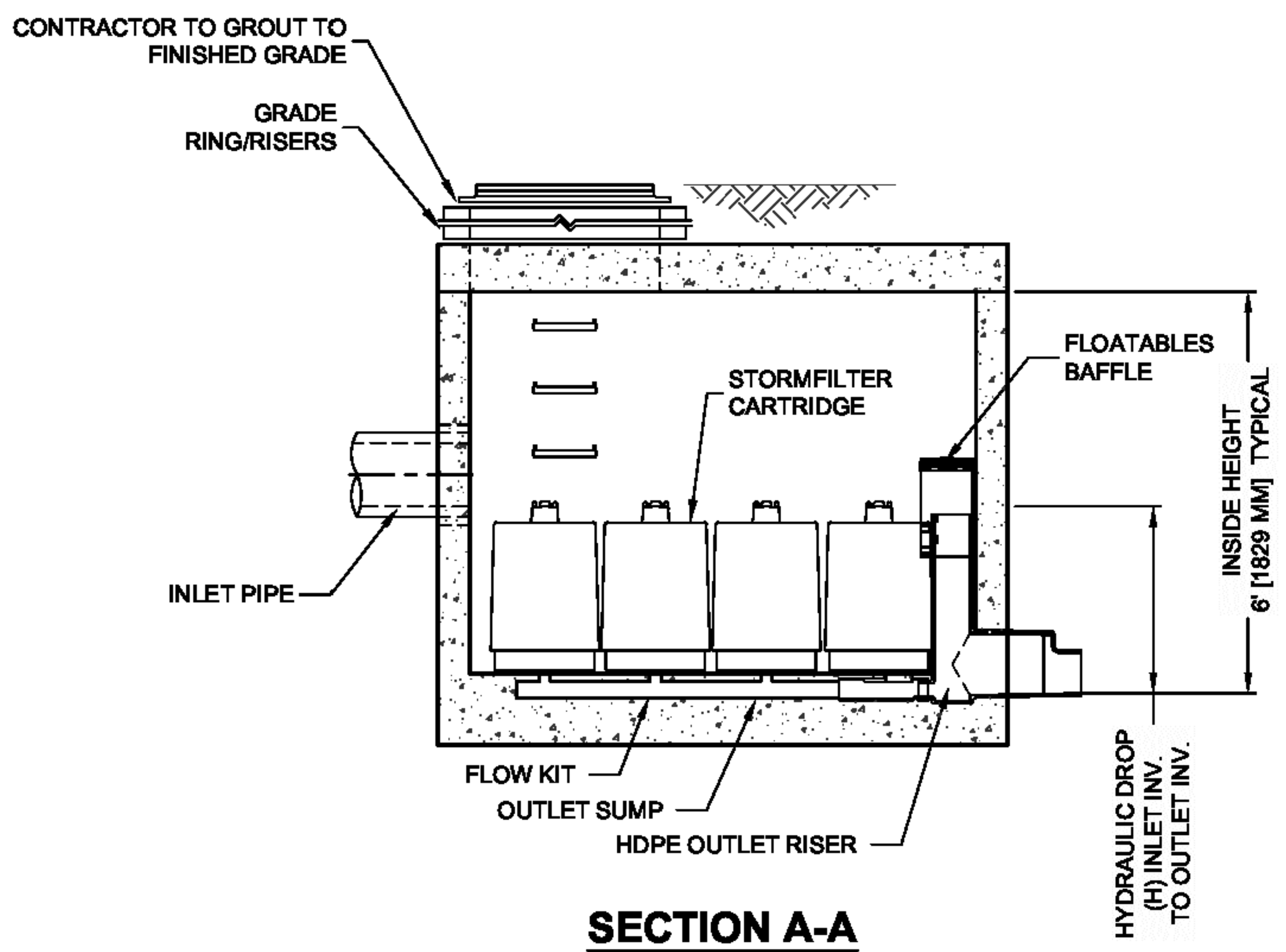
PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL4
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-9



PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT: 43A



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



SECTION A-A

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (14). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 14 CARTRIDGES. Ø8'-0" [2438 mm] MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.8 CFS [51 L/s] . IF THE SITE CONDITIONS EXCEED 1.8 CFS [51 L/s] AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H)	3.05' [930 mm]			2.3' [700 mm]			1.8' [550 mm]		
SPECIFIC FLOW RATE (gpm/sf) [L/s/m²]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.44]	10 [0.63]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m²] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs) [L/s]	*
PEAK FLOW RATE (cfs) [L/s]	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	*
NUMBER OF CARTRIDGES REQUIRED	*
CARTRIDGE FLOW RATE	*
MEDIA TYPE (PERLITE, ZPG, PSORB)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

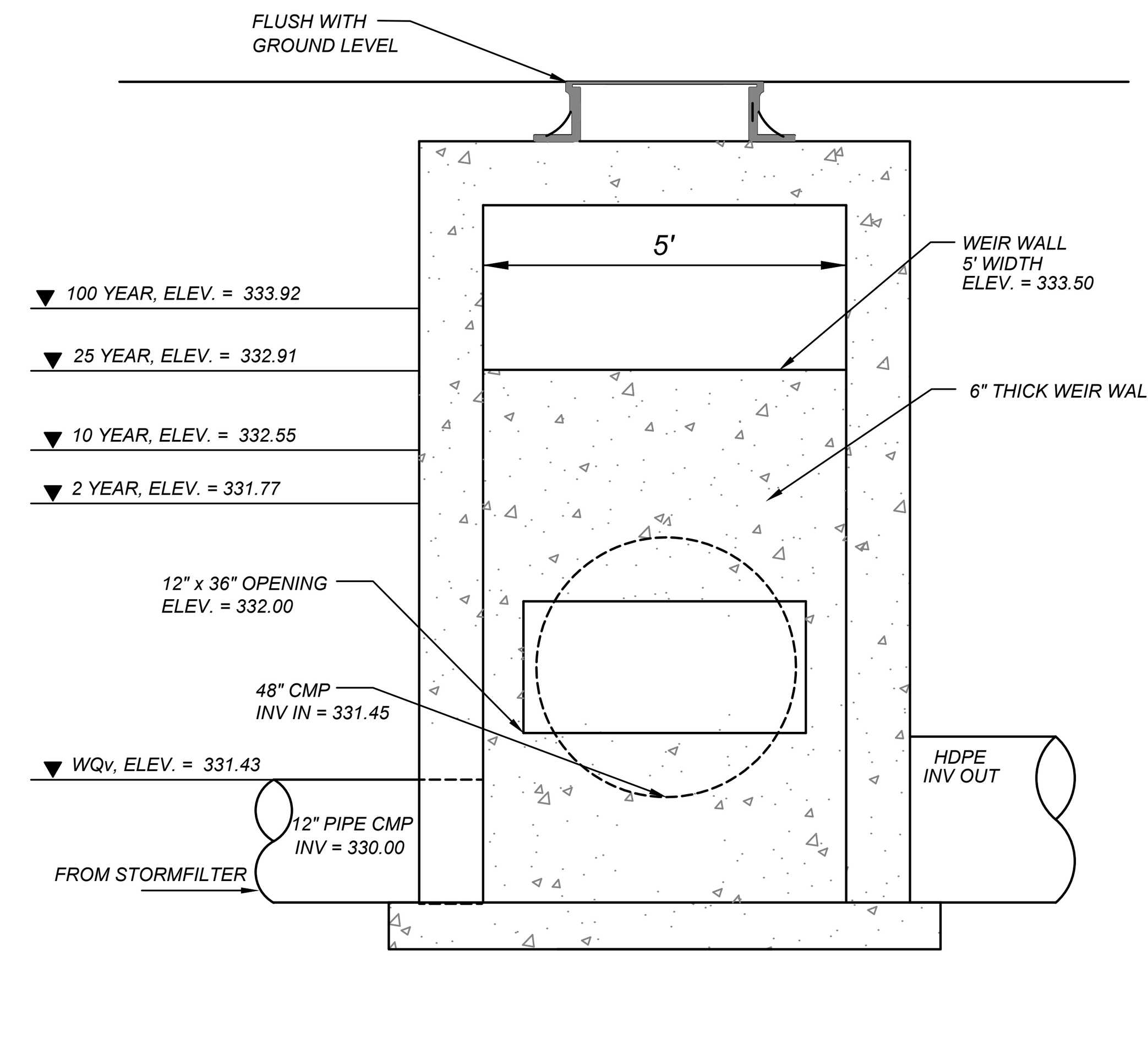
GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m²].
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

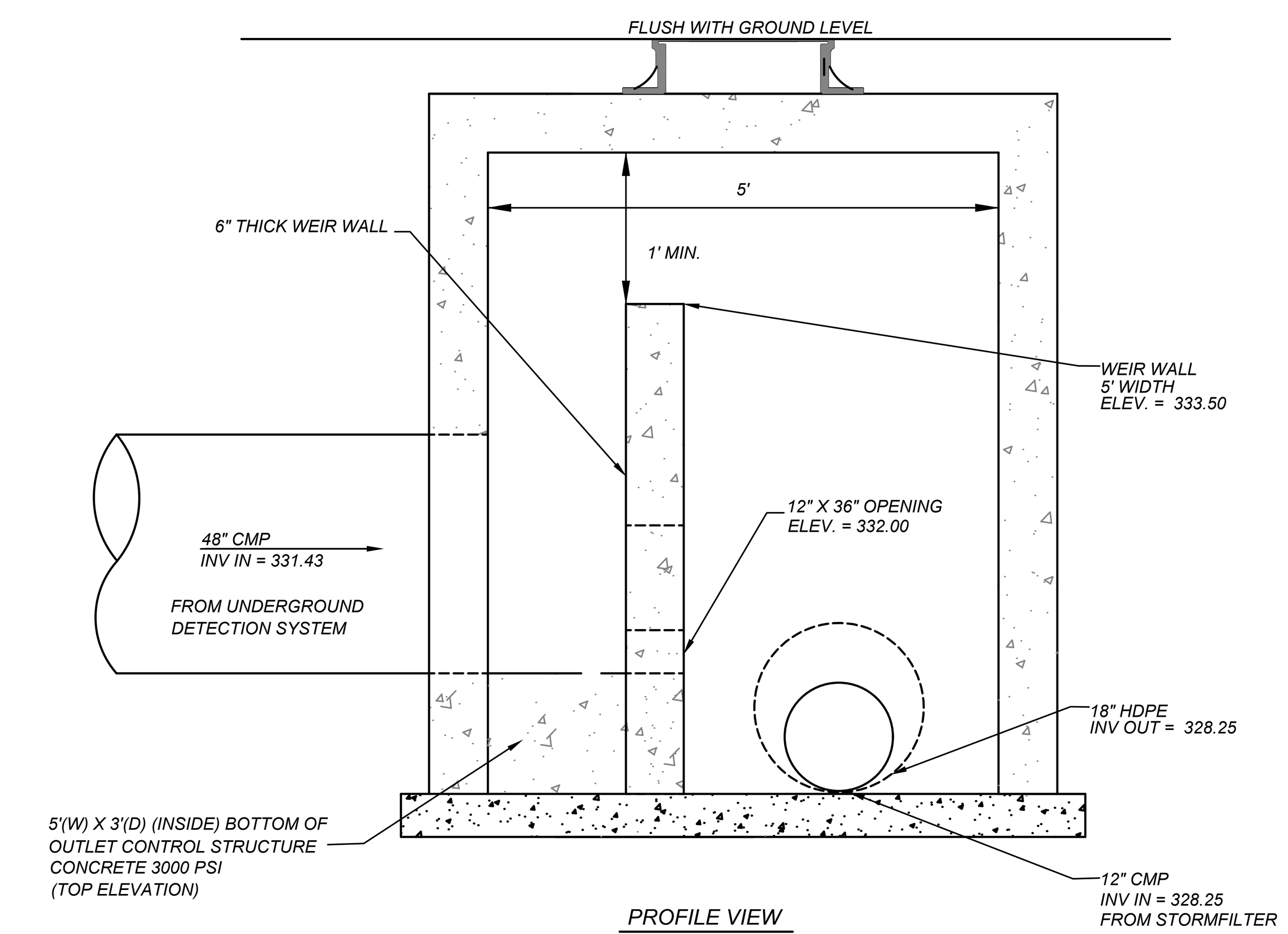
The Stormwater Management StormFilter®
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,624,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

CONTECH® ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

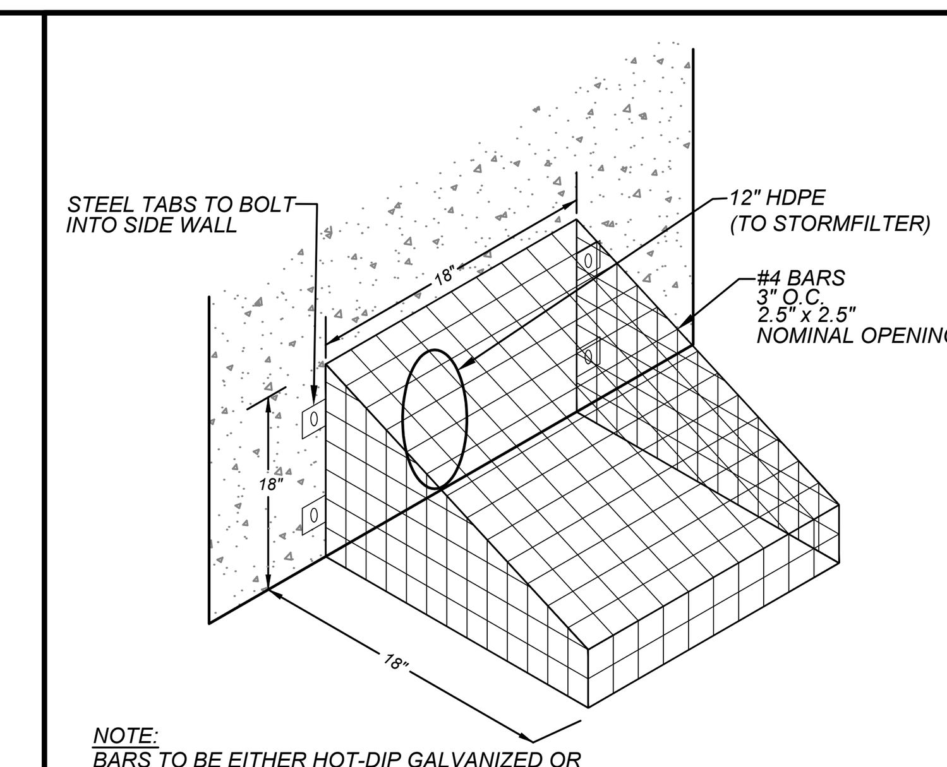
SFMH96
STORMFILTER
STANDARD DETAIL



SECTION VIEW
(n.t.s.)

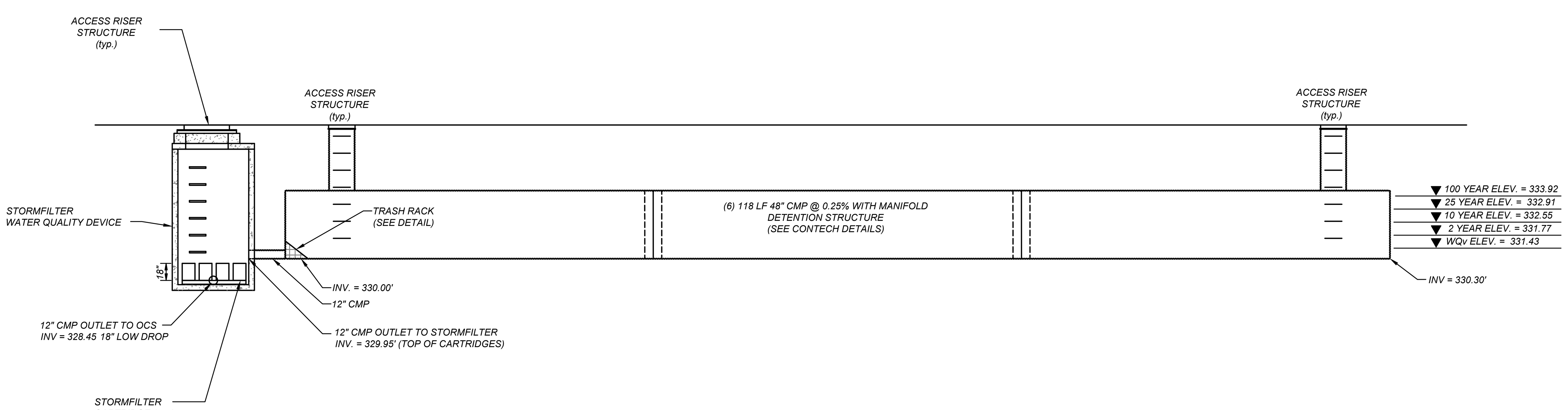


PROFILE VIEW
(n.t.s.)



NOTE:
BARS TO BE EITHER HOT-DIP GALVANIZED OR PROVIDED WITH A WATERTIGHT EPOXY COATING.

TRASH RACK
N.T.S.



NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER W. BRIAN BURCHETT 07/03/2023

SAMBATEK N.C. P.C. C-4993 RALEIGH, NORTH CAROLINA

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
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1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA
SCM DETAILS

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL4a
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-9A

X:\OUT - Cookout\1500 Sites\1502 - Zebulon, NC\CAD\OUT1502-DTL4a.dwg, 6/30/2023 5:54:13 PM, davidh

SITE PLAN GENERAL NOTES

1. THE INFORMATION SHOWN HEREIN WAS TAKEN FROM A TOPOGRAPHIC SURVEY PREPARED BY:
   COMMERCIAL SITE DESIGN
   8312 CREEDMOOR ROAD
   RALEIGH, NORTH CAROLINA
   PHONE 919-848-6121; FAX 919-848-3745
2. THE LOCATIONS OF ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY OWNERS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. ALL HANDICAP SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODES.
4. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
5. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. FAILURE OF THE CONTRACTOR TO FOLLOW THIS PROCEDURE SHALL CAUSE THE CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATION OF THE WORK MANDATED BY ANY REGULATORY AUTHORITY. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
6. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHT-OF-WAYS, PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
7. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
8. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH RESPECTIVE UTILITY.
9. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATIONS.
10. ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
11. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
12. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
13. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
14. GENERAL CONTRACTOR WILL ERECT AND ILLUMINATE A SITE IDENTIFICATION SIGN, PER OWNER'S SPECIFICATION. COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE
15. FINISH CURB AND WALK ELEVATIONS SHALL BE 6" ABOVE FINISH PAVEMENT GRADE UNLESS NOTED DIFFERENT ON PLAN.
16. CONTRACTOR SHALL ENSURE THAT ADEQUATE SITE LIGHTING IS PROVIDED PER OWNER'S SPECIFICATIONS.
17. ALL RADII DIMENSIONS ARE TO FACE OF CURB.
18. ALL UTILITIES TO SERVICE BUILDING SHALL BE UNDERGROUND ON SITE, UNLESS OTHERWISE INDICATED.
19. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
20. ALL DISTURBED AREAS SHALL HAVE TEMPORARY SEEDING AND MULCHING. ALL AREAS THAT ARE PLANNED TO BE BARE FOR MORE THAN 45 DAYS SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) DAYS.
21. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COSTS HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NON-SUBSCRIBING UTILITIES. THE CONTRACTOR(S) SHALL CONTACT NORTH CAROLINA "ONE CALL" AT 800-632-4949 FOR ASSISTANCE IN LOCATING EXISTING UTILITIES. CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
22. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE WHITE REFLECTIVE MARKINGS AND SHALL CONFORM TO LOCAL REGULATIONS.
23. COMPACTION AND MAINTENANCE OF PROPER MOISTURE CONTENT OF THE SOIL UNDER BUILDINGS AND PAVED AREAS SHALL BE ACCOMPLISHED TO ACHIEVE 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY OR AS RECOMMENDED IN THE SOIL REPORT.
24. THE CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
25. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.
26. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
27. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.
28. ALL PARKING LOT DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
29. CONTRACTOR SHALL COORDINATE EXACT SIZE OF HVAC CONCRETE PADS WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL PLANS FOR DETAILS.
30. ALL SEEDING, TEMPORARY AND PERMANENT, TO BE INSTALLED TO LOCAL REGULATIONS AND STANDARD PRACTICES.
31. ALL ROAD WORK SHALL BE PERFORMED IN ACCORDANCE WITH "THE CURRENT EDITION OF THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS".
32. ANY AND ALL QUANTITIES SHOWN OR IMPLIED ON THESE PLANS ARE FOR ESTIMATION PURPOSES ONLY.
33. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE IRRIGATION CONTRACTOR, FOR IRRIGATION SLEEVE SIZE FOR IRRIGATION SYSTEM.
34. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, ACCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR DESIGN PROFESSIONAL.

UTILITY NOTES:

1. UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATIONS OF EXISTING UTILITIES AND IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES, EITHER PUBLIC OR PRIVATE, SHOWN HEREON OR NOT SHOWN HEREON. ANY REPAIRS SHALL BE DONE TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY.
2. THE GENERAL CONTRACTOR SHALL CONFIRM ALL NEW UTILITY TAP LOCATIONS WITH THE UTILITY OWNERS. ALL FEES SHALL BE THE RESPONSIBILITY OF DEVELOPER.
3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
4. NEW LOT LIGHT FOUNDATION BASES, CONDUIT AND WIRING ARE BY THE GENERAL CONTRACTOR. POLES, FIXTURES, ANCHOR BOLTS & HARDWARE SHALL BE COORDINATED WITH THE OWNER AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. ALL NEW LOT LIGHTS AND THE MAIN IDENTIFICATION SIGN SHALL HAVE A MINIMUM 10 FEET CLEARANCE FROM ALL OVERHEAD UTILITIES.
6. GENERAL CONTRACTOR IS RESPONSIBLE FOR PERMITS AND/OR APPROVALS NECESSARY FOR ANY WORK IN ROADWAY OR RIGHT-OF-WAY.
7. ALL TRENCH EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH TRENCH BACKFILL DETAIL SHOWN ON THESE PLANS.
8. MINIMUM COVER FOR CONDUITS SHALL BE 36" UNLESS OTHERWISE SHOWN OR NOTED ON THESE PLANS.
9. ALL MANHOLES, VALVES, AND MONUMENT FRAMES SHALL BE SET TO FINISH GRADE AFTER PAVING.
10. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS. TRENCHES SHALL BE SHORED IN ACCORDANCE WITH OSHA.
11. THE MINIMUM SLOPE FOR SANITARY SEWER LINES SHALL BE AS FOLLOWS: 1) 1/4"/FT FOR 4" LINES AND 2) 1/8"/FT FOR 6" LINES. CLEANOUTS SHALL BE PLACED AT 75' INTERVALS.
12. ALL WATER LINES SHALL HAVE A FINAL COVER DEPTH OF 3'-0" IN NON-TRAFFIC AREAS AND 4'-0" MINIMUM IN TRAFFIC AREAS UNLESS SPECIFICALLY NOTED OTHERWISE.
13. ALL SEWER LINES SHALL HAVE A FINAL COVER DEPTH 4'-0" IN NON-TRAFFIC AREAS AND 5'-0" MINIMUM IN TRAFFIC AREAS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
14. SANITARY SEWER SERVICES SHALL BE PVC SDR 35 TO R/W, THEN PVC SCH. 40 TO BUILDING. WATER SERVICE SHALL BE TYPE "K" COPPER.
15. CABLE TV SERVICE ROUTING IS NOT PART OF THIS PLAN, CONTRACTOR TO COORDINATE WITH CABLE COMPANY .
16. EXISTING MANHOLES SHOULD BE FIELD VERIFIED FOR RIMS AND INVERTS.
17. ALL WORK SHALL BE GOVERNED BY THE LATEST EDITIONS OF THE STATE MECHANICAL, PLUMBING, ELECTRICAL, FIRE PROTECTION, BUILDING CODE, ENERGY CONSERVATION, HANDICAP ACCESSIBILITY, NATIONAL ELECTRICAL CODES AND NATIONAL FIRE PROTECTION ASSOCIATION CODES AND AS ADOPTED BY THE AUTHORITIES HAVING JURISDICTION.
18. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
19. CONTRACTOR SHALL GUARANTEE, FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF SYSTEMS BY OWNER, EACH AND EVERY PIECE OF APPARATUS WHICH HAS BEEN INSTALLED UNDER THIS CONTRACT.
20. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS/METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
21. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING 5 FEET IN DEPTH.
22. EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRES THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
23. EQUIPMENT AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED PROVIDED PRIOR APPROVAL HAS BEEN OBTAINED FROM THE OWNER IN WRITING PRIOR TO ORDERING OR INSTALLATION. THE CONSTRUCTION SHALL WAIVE ANY CLAIM FOR ADDITIONAL COST RELATED TO THE SUBSTITUTION OF ALTERNATE EQUIPMENT.
24. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
25. ONLY SEWAGE NOT CONTAINING GREASE IS ALLOWED TO BYPASS THE GREASE TRAP.
26. ALL SANITARY SEWER SERVICES AND STORM DRAIN PIPING 8" IN DIAMETER OR SMALLER SHALL BE SCH. 40 PVC WITH ADHESIVE "WELDED JOINTS, UNLESS SPECIFIED OTHERWISE OR REQUIRED BY LOCAL GOVERNING MUNICIPALITY. MINIMUM SLOPES ON SANITARY SEWER SERVICES: 4" - 1/4"/FT, 6" - 1/8"/FT.
27. BELOW GRADE WATER SERVICE PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING WITH SILVER SOLDER JOINTS. SOLDERS CONTAINING LEAD SHALL NOT BE USED FOR ANY PURPOSE ON THIS PROJECT, WHERE PIPING IS REQUIRED TO RUN BELOW BUILDING SLAB, IT SHALL BE INSTALLED WITHOUT JOINTS BELOW SLAB.
28. WATER PIPING SHALL BE CONNECTED TO BUILDING STUBS, VERIFY LOCATIONS PRIOR TO BEGINNING WATER PIPE INSTALLATION.
29. WASTE PIPING SHALL BE CONNECTED TO BUILDING STUBS, VERIFY LOCATIONS AND INVERTS PRIOR TO BEGINNING ANY WASTE PIPE INSTALLATION.
30. CONTRACTOR SHALL NOTIFY NORTH CAROLINA 811 OR CALL 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENTLY.
31. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH WATER AND SEWER REGULATIONS AND STANDARDS.
32. SITE UTILITY CONTRACTOR TO PROVIDE WATER, SANITARY SEWER, AND ROOF DRAIN LEADERS TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
33. SANITARY CLEANOUTS SHALL BE PLACED NO MORE THAN 75 FEET APART. CLEAN OUTS LOCATED IN PAVEMENT AREAS SHALL HAVE HEAVY DUTY TRAFFIC RATED CONSTRUCTION.
34. CONNECTION OF SANITARY SEWER SERVICE TO AN EXISTING MANHOLE SHALL COMPLY WITH CITY OF RALEIGH STANDARDS, INCLUDING: CORE DRILL FOR OPENING INTO MANHOLE AND INSTALL WITH FLEXIBLE BOOT. IF PAVEMENT CUT IS REQUIRED, CONTRACTOR SHALL PATCH PAVEMENT WITH A SECTION TO MATCH EXISTING PAVEMENT: 3" I-2, 8" ABC OR BETTER.
35. RELATION OF WATER MAINS TO SEWERS:
    A. LATERAL SEPARATION OF SEWER AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
       1. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
       2. THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER LINE WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
    B. CROSSING A WATER MAIN OVER A SEWER MAIN:
       WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
    C. CROSSING A WATER MAIN UNDER A SEWER MAIN:
       WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
    D. CROSSING A SEWER LINE OVER OR UNDER A STORM DRAIN:
       WHENEVER IT IS NECESSARY FOR A SEWER LINE TO CROSS A STORM DRAIN PIPE, THE SEWER LINES SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER LINE NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCES, OR OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.
36. UNDERGROUND CONDUITS TO SIGNS, LOT LIGHTS, ETC., SHALL BE PLACED IN GRASS OR LANDSCAPE AREAS WHENEVER POSSIBLE. THE LOCATION OF THE CONDUIT AS SHOWN ON THESE PLANS SHALL BE CONSIDERED TO BE SCHEMATIC WITH ACTUAL LOCATION TO BE VERIFIED BY THE GENERAL CONTRACTOR, PVC SCH. 40 SLEEVES SHALL BE INSTALLED FOR ALL CONDUIT CROSSING UNDER PAVED AREAS.
37. SEE ELECTRICAL SHEETS FOR SIZE OF CONDUIT AND WIRE ON ALL ELECTRICAL SERVICE.
38. TRANSFORMER BY ELECTRIC COMPANY, GENERAL CONTRACTOR TO PROVIDE PAD. REFER TO ELECTRIC COMPANY SPECIFICATIONS FOR PAD CONSTRUCTION.

DRAINAGE STRUCTURE NOTES

1. BOXES SHALL COMPLY WITH LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS.
2. ANY NONSTANDARD BOX IS TO BE DESIGNED BY A PROFESSIONAL ENGINEER.
3. THE MAXIMUM HEIGHT OF AN UN-REINFORCED MASONRY DRAINAGE STRUCTURE WITH 8" WALLS SHALL BE LIMITED TO 8'-0" FROM INVERT OF THE OUTLET PIPE TO THE TOP OF THE CASTING. DEPTHS GREATER THAN 8'-0" SHALL HAVE WALLS 12" THICK. BASINS OVER 12' IN TOTAL DEPTH SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER. FOUR INCH WALLS ARE NOT ALLOWED ON DRAINAGE STRUCTURES. BOTTOM SLAB ON STRUCTURES SHALL BE REINFORCED WHEN BOX DEPTHS EXCEEDS 8 FT.
4. STEPS ARE TO BE PROVIDED ON ALL BASINS DEEPER THAN 42".
5. STEPS ARE TO BE PS1-PF AS MANUFACTURED BY M.A. INDUSTRIES OR AN APPROVED EQUAL. LOCATE ON NON-PIPE WALLS.
6. MORTAR IN MASONRY BOXES IS TO BE TYPE M.
7. CLAY BRICK STRUCTURES ARE NOT ALLOWED.
8. CONCRETE PIPE IS TO BE MINIMUM CLASS III.
9. CONCRETE BUILDING BRICK IS TO MEET ASTM C-55, GRADE N, TYPE 1.
10. BASINS LOCATED IN WET AREAS, OR AS OTHERWISE REQUIRED BY THE TOWN ENGINEER, SHALL HAVE WEEP HOLES AS SHOWN ON DETAILS.
11. ALL CAST-IN-PLACE PRECAST CONCRETE DRAINAGE STRUCTURES LOCATED IN PAVED AREAS ACCESSIBLE TO TRUCK LOADINGS TO BE DESIGNED TO MEET AASHTO HS 20-44 LOADING. SEE MANUFACTURERS DETAILS FOR WALL, TOP AND BOTTOM THICKNESS.

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURDETT 07/03/2023

SANBATEK N.C.P.E. C-4993 BRIAN CARLTON BURDETT RALEIGH, NORTH CAROLINA

811 Know what's below. Call before you dig. nc811.org or 1-800-632-4949

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

REVISIONS

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27613

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

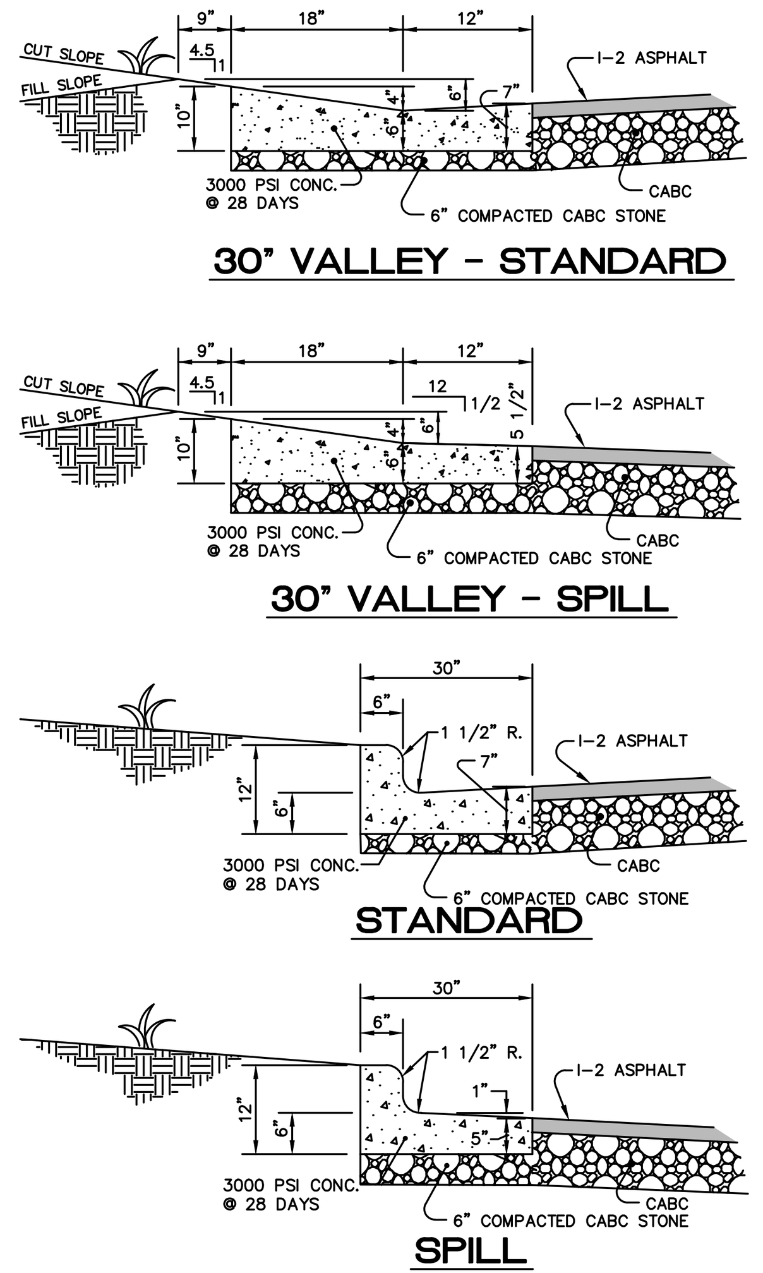
COOK OUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

DETAILS

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL5
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-10

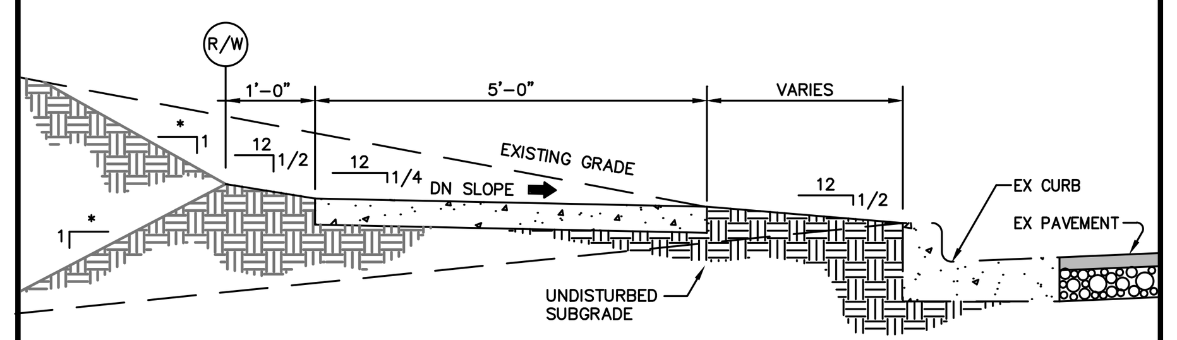
X:\OUT - Cookout\1502 Sites\1502 - Zebulon, NC\CAD\OUT1502-DTL5.dwg, 6/30/2023 5:54:40 PM, dan/sh



NOTES:
1. SCORE CURB / VALLEY GUTTER AT 15' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. FOR TRANSITION OF CURB TO CURB OPENING INLET, SEE STANDARD DETAIL 33.

TOWN OF ZEBULON

STD. CURB & GUTTER & VALLEY GUTTER DETAIL	SCALE: NOT TO SCALE	DETAIL # 3
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1



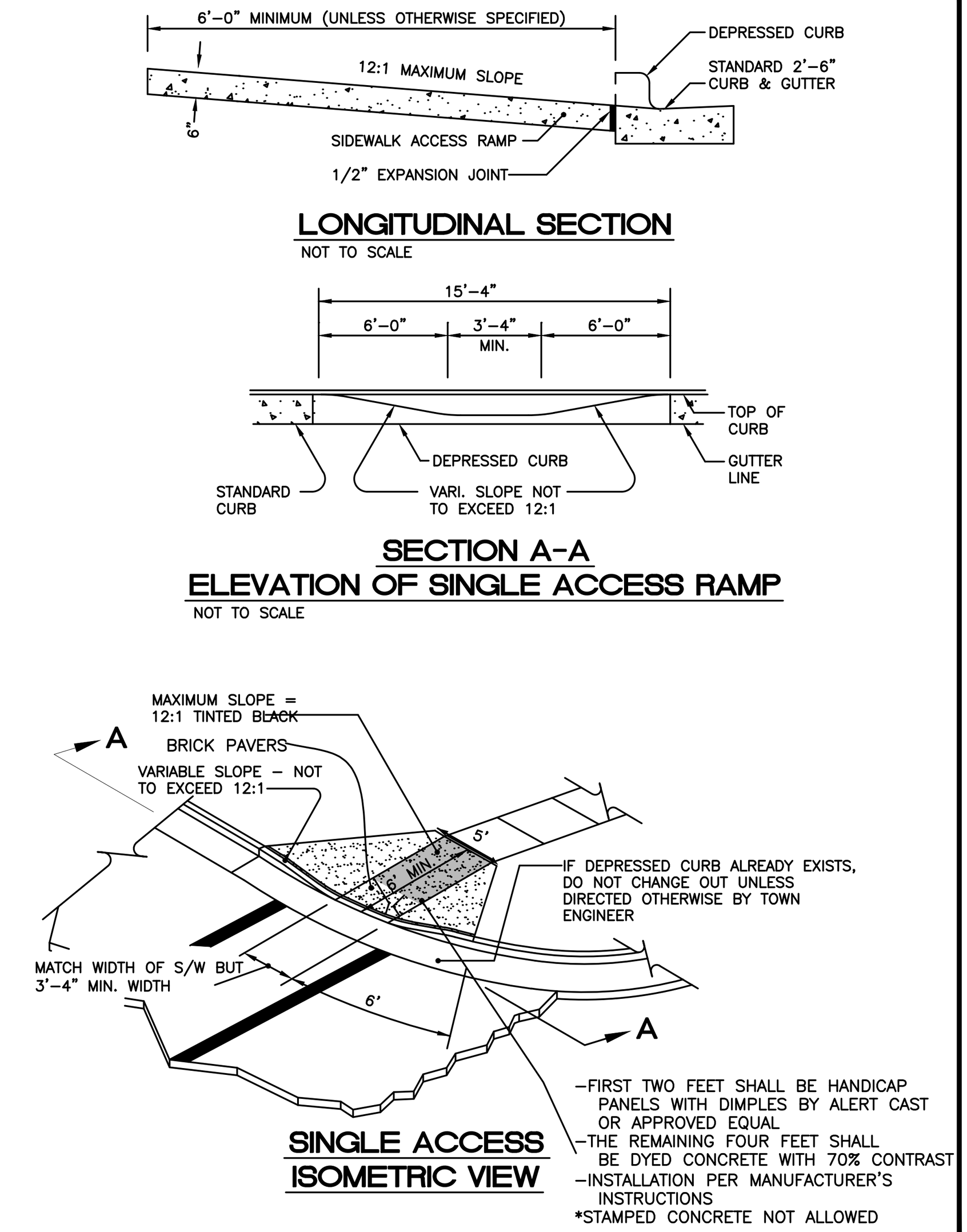
* VARIES, MAXIMUM SLOPE 2:1 UNLESS SHOWN OTHERWISE

SECTIONAL VIEW

1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.
3. CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, AIR-ENTRAINED.
4. SUBGRADE SHOULD NOT CONTAIN ORGANIC MATTER OR PLASTIC CLAYS. WHEN FOUND, REFER TO SPECS OR CONTACT ENGINEER FOR DIRECTIONS.
5. AREAS OF FILL ARE TO BE COMPACTED TO 95% STANDARD PROCTOR USING NCDOT CLASS III BORROW OR BETTER. REMOVE TOPSOIL BEFORE PLACING BORROW.
6. SIDEWALK TRANSVERSE SLOPE MAY INCREASE TO 1/2 IN 12 WITH TOWN'S ENGINEER APPROVAL.

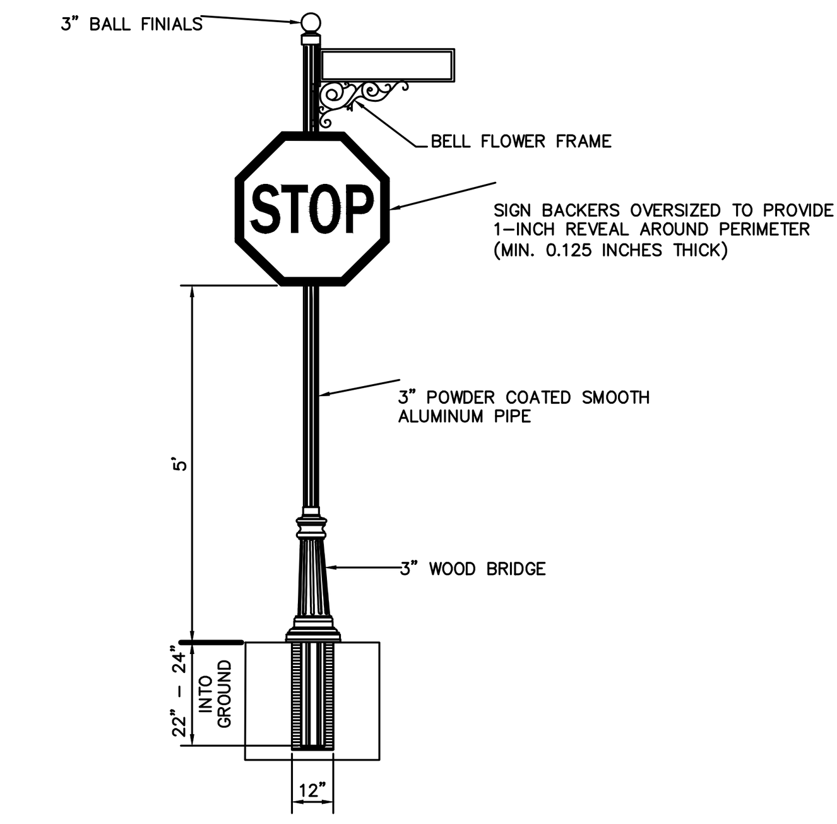
TOWN OF ZEBULON

TYP SIDEWALK in CUT or FILL SECTIONS	SCALE: NOT TO SCALE	DETAIL # 13
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1



TOWN OF ZEBULON

SINGLE HANDICAP RAMP DETAIL	SCALE: NOT TO SCALE	DETAIL # 20
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1



ELEVATIONAL VIEW

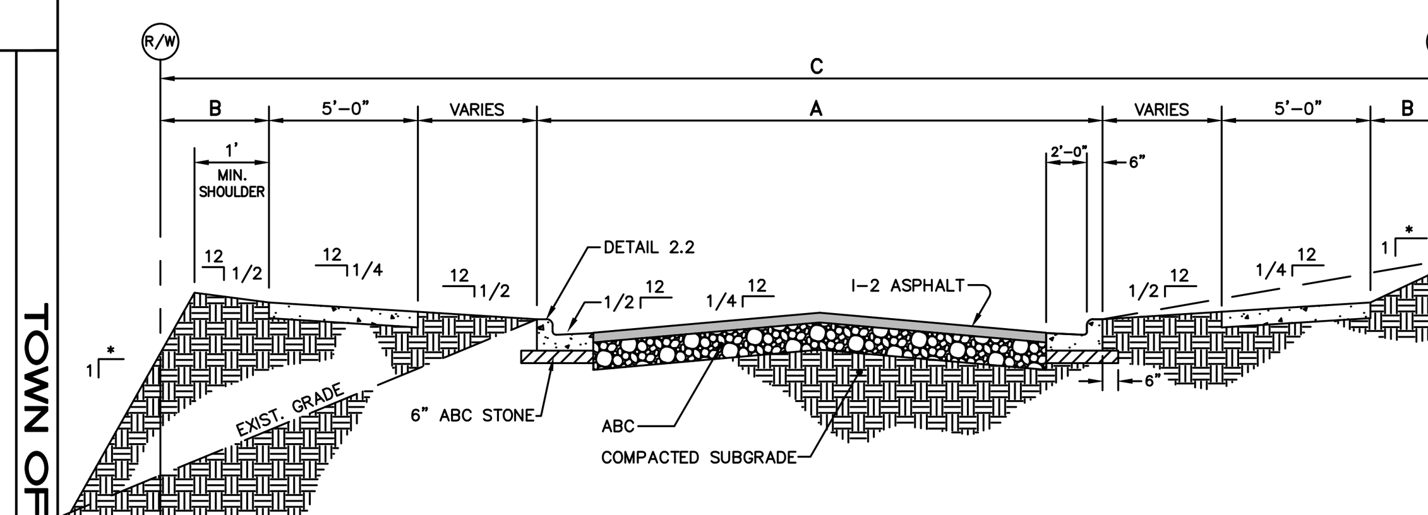
NOTES:
1. SIGNS WILL BE CONSTRUCTED FROM QUALITY ALUMINUM AND POWDER COATED WITH GLOSS BLACK POLYESTER TWO COAT PROCESS.
2. ALL FASTENERS WILL BE STAINLESS STEEL.
3. STOP SIGNS WILL HAVE A ⅛" BLACK ALUMINUM BACKER.
4. ALL STREET BLADES WILL BE FRAMED IN WITH ALUMINUM CASING.
5. ALL REFLECTIVE SIGNS SHALL BE MADE OF HIGH INTENSITY GRADE REFLECTIVE SHEETING.
6. DEVELOPER SHALL BE RESPONSIBLE FOR FURNISHING AND ERECTING ALL STREET NAME AND REGULATORY SIGNS.

TOWN OF ZEBULON

PREMIUM SIGN INSTALLATION DETAIL	SCALE: NOT TO SCALE	DETAIL # 31
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

TOWN OF ZEBULON

TYPICAL CURB & GUTTER STREET STANDARDS	SCALE: NOT TO SCALE	DETAIL # 1
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1



SECTIONAL VIEW

* 2:1 MAX., 3:1 RECOMMENDED

GEOMETRIC PROPERTIES					
CLASSIFICATION	A BACK TO BACK (FT)	B BACK TO BACK (FT)	PAVEMENT SECTION		C (ft)
			SF9.5	CABC	
CUL-DE-SAC	26'	N/A	3"	8"	50'
LOCAL STREET	26'	1' FROM R/W	3"	8"	50'
RESIDENTIAL COLLECTOR	35'	1' FROM R/W	4"	8"	60'
THOROUGHFARE	PER THOROUGHFARE PLAN	VARIES	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
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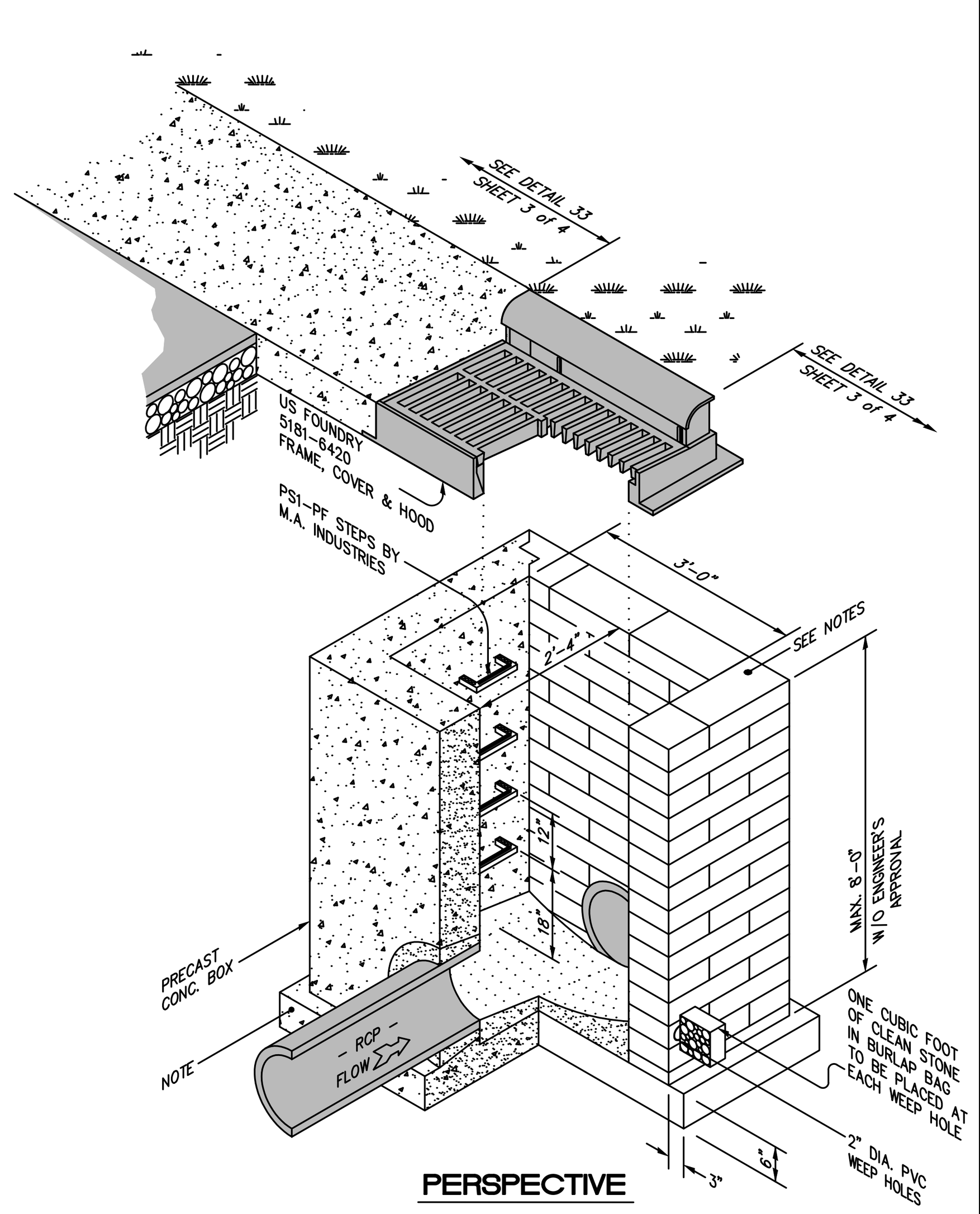
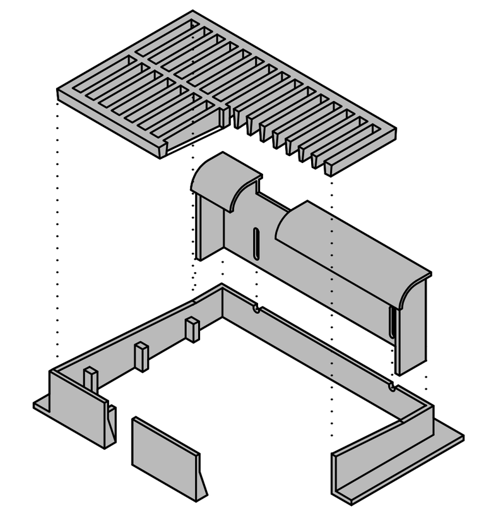


PERSPECTIVE

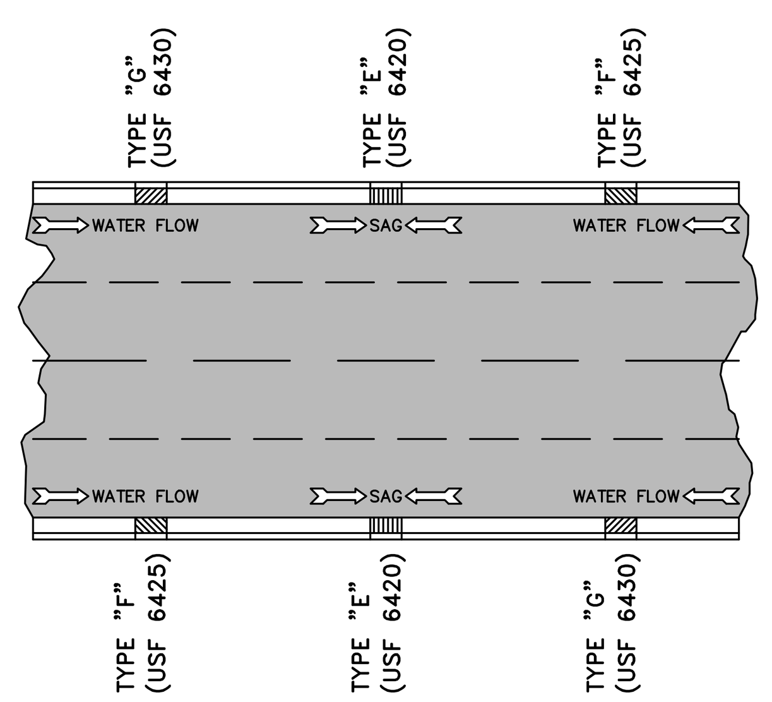
TOWN OF ZEBULON

STD. C&G INLET W/HOOD DETAIL	SCALE: NOT TO SCALE	DETAIL # 33
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 4

U.S. FOUNDRY 5181 CURB & GUTTER INLET FRAME (SHOWN WITH 6420 GRATE)
HEAVY DUTY FRAME, COVER & HOOD
FRAME, COVER & HOOD WEIGHT = 550 LBS.
WEIGHT MAY NOT DEVIATE BY MORE THAN -5.0%



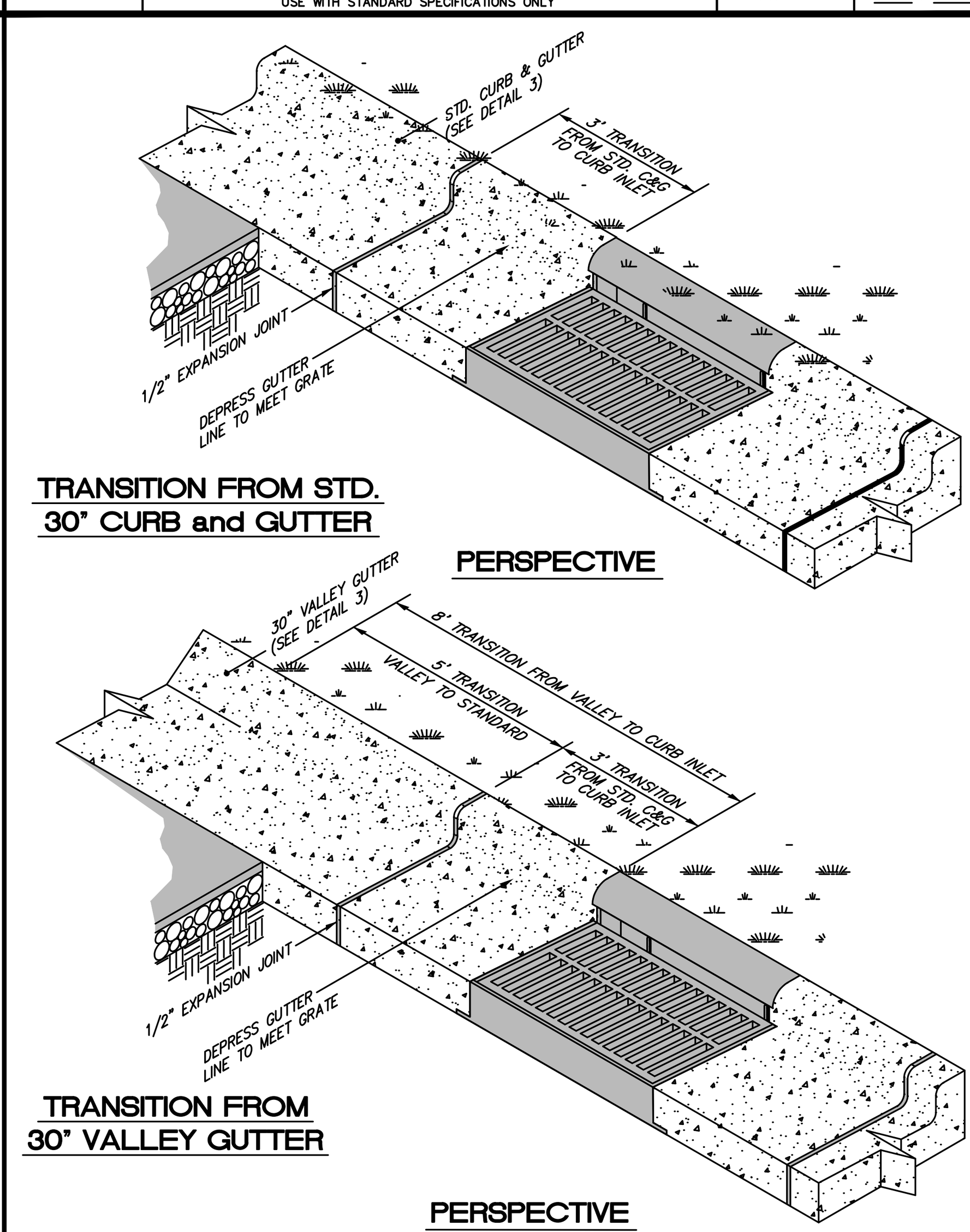
PERSPECTIVE



DETAIL SHOWING TYPES OF GRATES TO BE USED ACCORDING TO WATER FLOW

TOWN OF ZEBULON

STD. C&G INLET W/HOOD DETAIL	SCALE: NOT TO SCALE	DETAIL # 33
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 2 OF 4



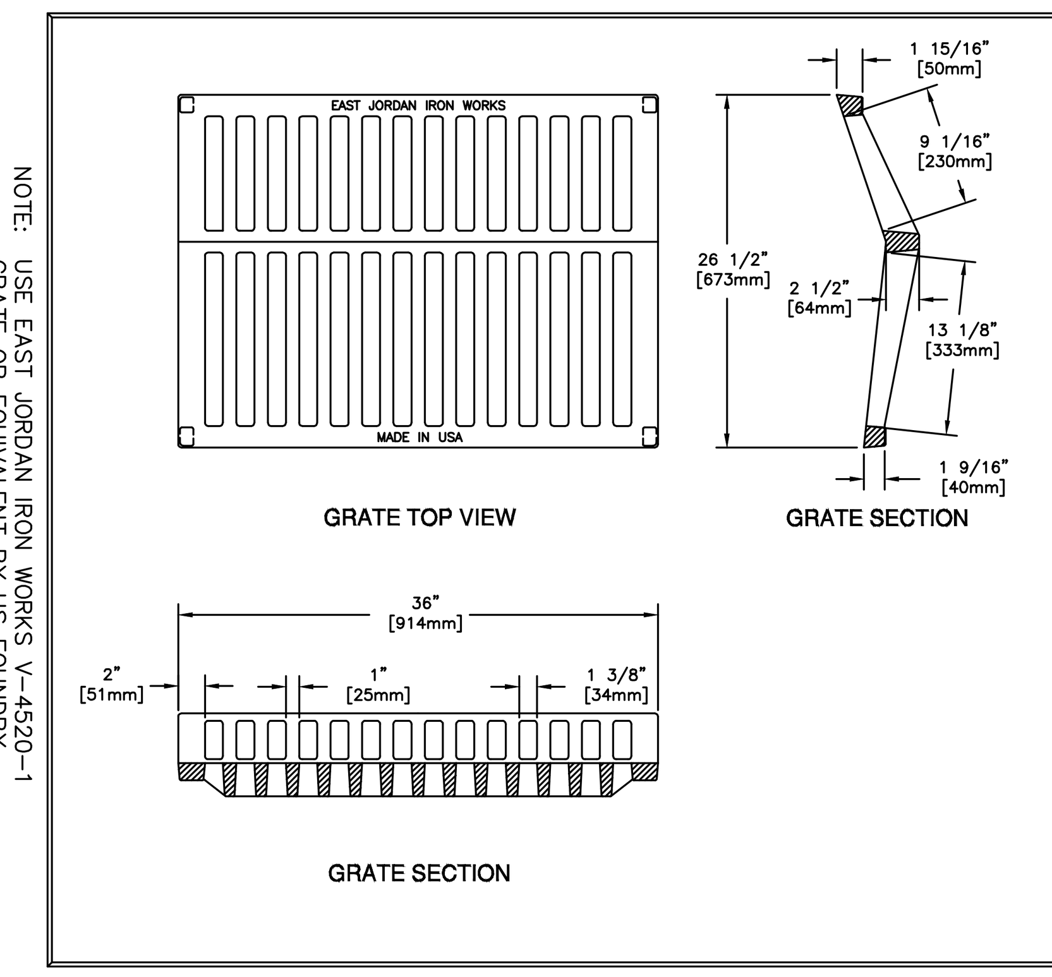
TOWN OF ZEBULON

STD. TRANSITION FROM INLET TO STD. C&G / VALLEY GUTTER	SCALE: NOT TO SCALE	DETAIL # 33
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 3 OF 4

TOWN OF ZEBULON

DETAIL FOR STORM DRAIN WITH DRIVEWAY CONFLICT	SCALE: NOT TO SCALE	DETAIL # 33
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 4 OF 4

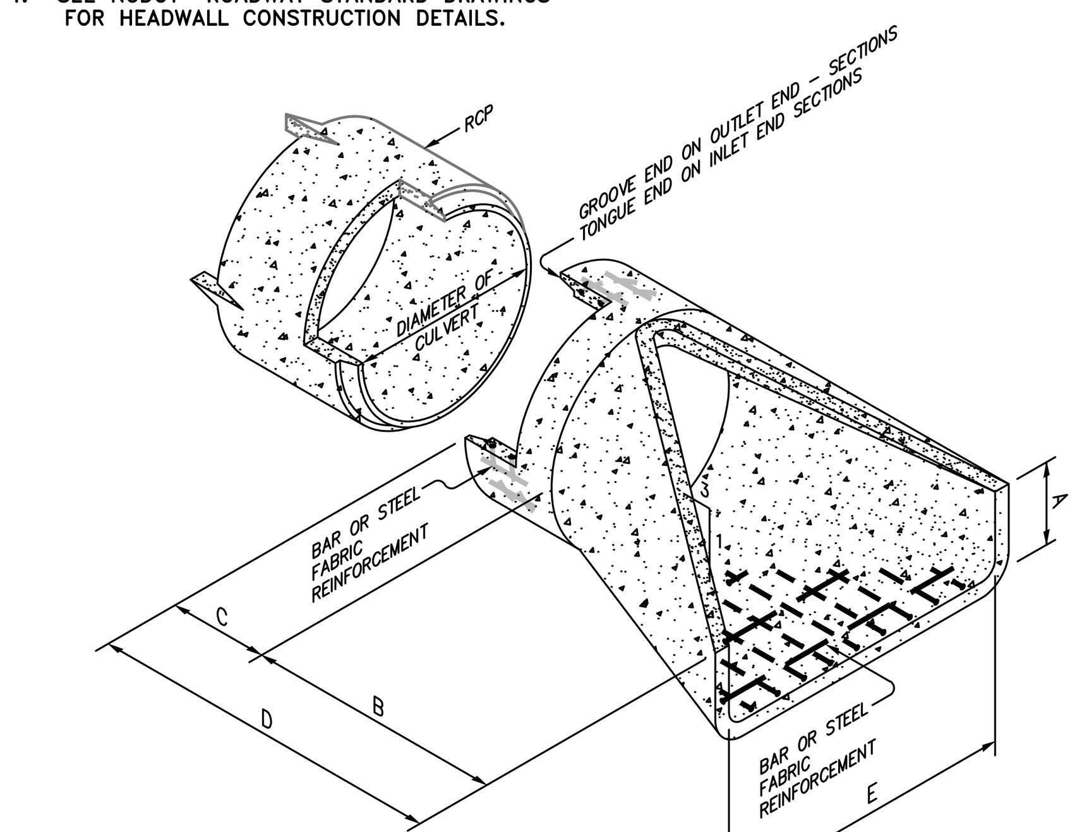
NOTE: USE EAST JORDAN IRON WORKS V-4520-1 GRATE OR EQUIVALENT BY US FOUNDRY.



EAST JORDAN IRON WORKS, INC. P.O. BOX 439 EAST JORDAN, MI. 49727 1-800-874-4100 FAX 231-536-4458	
DRAWN SMH	DATE 12/09/00
APPROVED	DATE
V-4520-1 GRATE	
PRODUCT NO. 44520130	
CATALOG NO. V-4520-1	
REF. PRODUCT DRAWING 44520130	
EST. WT. GRATE: 235 LBS 107kg	
OPEN AREA 458 SQ IN 2955 sq cm	
MAT'L SPEC. GRATE - GRAY IRON ASTM A48 CL35	
LOAD RATING HEAVY DUTY	

END SECTION DIMENSIONS					
DIA.	A	B	C	D	E
15"	7"	2'-3 1/4"	3'-11 1/2"	6'-2 3/4"	2'-6"
18"	9"	2'-3"	3'-11 3/4"	6'-2 3/4"	3'-0"
24"	9"	3'-7"	3'-1"	6'-8"	3'-11 3/4"
30"	1'-0"	4'-6 1/2"	1'-10 1/2"	6'-5"	5'-0"
36"	1'-4"	5'-0"	3'-1 1/2"	8'-1 1/2"	5'-11"
42"	1'-10 1/4"	5'-1 3/8"	3'-1"	8'-2 3/8"	6'-5 1/4"

NOTES:
1. DESIGN OF END-SECTION SHALL CONFORM TO STANDARD REINFORCED SECTIONAL CONCRETE CULVERT PIPE.
2. ANY TWIN BARREL SYSTEM GREATER THAN 42" RCP REQUIRES A HEADWALL.
3. ANY SYSTEM OF MORE THAN 2 PIPES REQUIRES A HEADWALL.
4. SEE NCDOT "ROADWAY STANDARD DRAWINGS" FOR HEADWALL CONSTRUCTION DETAILS.



PERSPECTIVE

TOWN OF ZEBULON

STD. FLARED END SECTIONS DESIGN AID DETAIL	SCALE: NOT TO SCALE	DETAIL # 35
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOKOUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

TOWN OF ZEBULON DETAILS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24501 W. BRIAN BURCHETT 07/03/2023

SAMBATEK N.C. P.C. C-4993 RALEIGH, NORTH CAROLINA

Know what's **below.** **Call** before you dig.
nc811.org or 1-800-632-4949

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL6
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-11

D_I = INSIDE DIAMETER OF PIPE

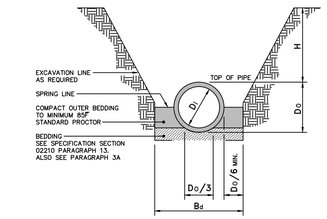
D_O = OUTSIDE DIAMETER OF PIPE

B_d = TRENCH WIDTH

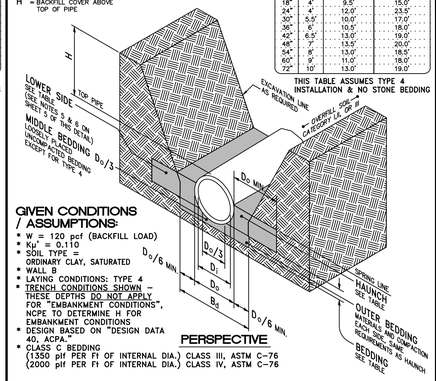
H = BACKFILL COVER ABOVE TOP OF PIPE

PIPE D_I	MAX. B_d	MAX. BURY H CLASS III (0.01 CRACK)	MAX. BURY H CLASS IV (0.01 CRACK)
15"	4'	9.5'	14.5'
18"	4'	9.5'	15.0'
24"	4'	12.0'	23.5'
30"	5.5'	10.0'	17.0'
36"	6'	10.5'	18.0'
42"	6.5'	13.0'	19.0'
48"	7'	13.5'	20.0'
54"	8'	13.0'	18.5'
60"	9'	11.0'	18.0'
72"	10'	13.0'	19.0'

THIS TABLE ASSUMES TYPE 4 INSTALLATION & NO STONE BEDDING



SECTIONAL VIEW



PERSPECTIVE

GIVEN CONDITIONS / ASSUMPTIONS:

- W = 120 pcf (BACKFILL LOAD)
- $K\mu'$ = 0.110
- SOIL TYPE = ORDINARY CLAY, SATURATED
- WALL B
- LAYING CONDITIONS: TYPE 4
- TRENCH CONDITIONS SHOWN – THESE DEPTHS DO NOT APPLY FOR "EMBANKMENT CONDITIONS", NCPE TO DETERMINE H FOR EMBANKMENT CONDITIONS
- DESIGN BASED ON "DESIGN DATA 40, ACPA."
- CLASS C BEDDING (1350 plf PER Ft OF INTERNAL DIA.) CLASS III, ASTM C-76 (2000 plf PER Ft OF INTERNAL DIA.) CLASS IV, ASTM C-76

NOTES:

1. GREATER DEPTHS ARE ACHIEVABLE BY EITHER CONTROLLING BACKFILL TYPE, NARROWING TRENCH WIDTH BUT SUPPLY SUFFICIENT ROOM FOR COMPACTION, IMPROVING BEDDING OR LOADING TO ULTIMATE LOAD (Du). FOR OTHER BURY DEPTHS THAN SHOWN (H), NORTH CAROLINA PE TO PROVIDE CALCS ON PIPE BURY THAT EXCEED THOSE GIVEN IN THIS CHART FOR THE CONDITIONS IN WHICH IT IS PROPOSED TO BE USED.
2. THIS TABLE OF BURY DEPTHS (H) APPLIES EQUALLY TO A CLASS C STONE BEDDING, TYPE 4. LAYING CONDITIONS
3. MINIMUM COVER NOT SHOWN
4. MAXIMUM BURY TABLE FOR "TRENCH CONDITIONS" PER THE DETAIL SHOWN THIS SHEET

TOWN OF ZEBULON
STD. TRENCH INSTALLATION FOR CONCRETE PIPE (FOR CONTRACTOR'S USE)
USE WITH STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 36
DATE: JULY 2010 | SHEET # 1 OF 5

D_I = INSIDE DIAMETER OF PIPE

D_O = OUTSIDE DIAMETER OF PIPE

B_d = TRENCH WIDTH

H = BACKFILL COVER ABOVE TOP OF PIPE

PIPE D_I	MAX. B_d	MAX. BURY H CLASS III (0.01 CRACK)	MAX. BURY H CLASS IV (0.01 CRACK)
15"	4'	9.5'	14.5'
18"	4'	9.5'	15.0'
24"	4'	12.0'	23.5'
30"	5.5'	10.0'	17.0'
36"	6'	10.5'	18.0'
42"	6.5'	13.0'	19.0'
48"	7'	13.5'	20.0'
54"	8'	13.0'	18.5'
60"	9'	11.0'	18.0'
72"	10'	13.0'	19.0'

THIS TABLE ASSUMES TYPE 4 INSTALLATION & NO STONE BEDDING

TOWN OF ZEBULON
STD. TRENCH INSTALLATION FOR CONCRETE PIPE (FOR ENGINEER'S USE)
USE WITH STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 36
DATE: JULY 2010 | SHEET # 2 OF 5

Table 1 Equivalent USCS and AASHTO Soil Classification for SIDD Soil Designations

SIDD Soil	Representative Soil Types USCS,	AASHTO	Percent Compaction Standard Proctor	Modified Proctor
Gravelly Sand (Category I)	SW, SP, GW, GP	A1,A3	100 95 90 85 80	95 90 85 80 75
Sandy Silt (Category II)	GM, SM, ML Also GC, SC with less than 20% passing #200 sieve	A2,A4	100 95 90 85 80	95 90 85 80 75
Silty Clay (Category III)	CL, MH GC, SC CH	A5,A6	100 95 90 85 80 45 100 95 90 45	90 85 80 75 70 40 90 85 80 40

TOWN OF ZEBULON
STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN)
USE WITH STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 36
DATE: JULY 2010 | SHEET # 3 OF 5

Table 2 Standard EMBANKMENT Installation Soils and Minimum Compaction Requirements

Installation Type [4]	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	98% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum,not less than 150 mm (6").	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Notes:

1. Compaction and soils symbols – i.e. "98% Category I" refers to Category I soil material with a minimum standard Proctor compaction of 98%. See Table 1 for equivalent modified Proctor values.
2. Soil in the outer bedding, haunch, and lower side zones, except within $D_O/3$ from the pipe springline, shall be compacted to at least the same compaction as the majority of the soil in the overfill zone.
3. Subtrenches
   3.1 A subtrench is defined as a trench with its top below finished grade by more than 0.1 H or, for roadways, its top is at an elevation lower than 0.3 m (1') below the bottom of the pavement base material.
   3.2 The minimum width of a subtrench shall be 1.33 D_O or wider if required for adequate space to attain the specified compaction in the haunch and bedding zones.
   3.3 For subtrenches with wall of natural soil, any portion of the lower side zone in the subtrench wall shall be at least as firm as an equivalent soil placed to the compaction requirements specified for the lower side zone and as firm as the majority of soil in the overfill zone, or shall be removed and replaced with soil compacted to the specified level.
4. Type 1 installation = relatively high quality material & high compaction effort. Type 4 installation = little or no control over material and compaction.

TOWN OF ZEBULON
STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN)
USE WITH STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 36
DATE: JULY 2010 | SHEET # 4 OF 5

Table 3 Standard TRENCH Installations Soils and Minimum Compaction Requirements

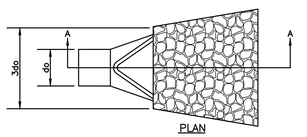
Installation [4] Type	Bedding Thickness	Haunch Outer Bedding	Lower Side
Type 1	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	98% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	$D_O/24$ minimum, not less than 75 mm (3"). If rock foundation, use $D_O/12$ minimum, not less than 150 mm (6").	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Notes:

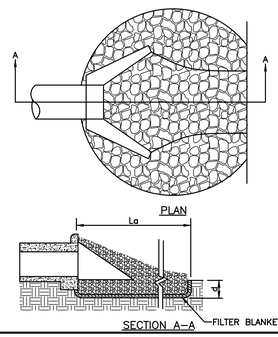
1. Compaction and soils symbols – i.e. "98% Category I" refers to Category I soil materials with minimum standard Proctor compaction of 98%. See Table 1 for equivalent modified Proctor values.
2. The trench top elevation shall be no lower than 0.1 H below finished grade or, for roadways, its top shall be no lower than an elevation of 0.3 m (1') below the bottom of the pavement base material.
3. Soil in bedding and haunch zones shall be compacted to at least the same compaction as specified for the majority of soil in the backfill zone.
4. The trench width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zone.
5. For trench walls that are within 10 degrees of vertical, the compaction or firmness of the soil in the trench walls and lower side zone need not be considered.
6. For trench walls with greater than 10 degrees slopes that consist of embankment, the lower side shall be compacted to at least the same compaction as specified for the soil in the backfill zone.
7. Type 1 installation = relatively high quality material & high compaction effort. Type 4 installation = little or no control over material and compaction.

TOWN OF ZEBULON
STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN)
USE WITH STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 36
DATE: JULY 2010 | SHEET # 5 OF 5

PIPE OUTLET TO FLAT AREA
NO WELL–DEFINED CHANNEL



PIPE OUTLET TO WELL DEFINED CHANNEL



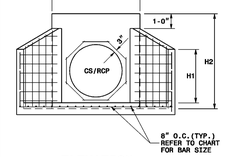
NOTES:

1. La IS THE LENGTH OF THE RIPRAP APRON.
2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL–DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOPO OF THE BANK WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
5. SEE SCHEDULE FOR RIPRAP SIZE, WIDTH, & LENGTH.

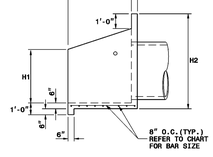
RIPRAP APRON
NTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
Z-06

ENGLISH STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW



ELEVATION

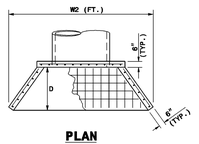


SIDE

NOTES:

- THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.21, 838.27, 838.33 AND 838.39.
- INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
- USE 4000 PSI CONCRETE.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- PIPE TO BE GROUTED INTO HEADWALL AT JOB SITE BY CONTRACTOR
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS. THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.



PLAN

ENDWALL DIMENSIONS

FT.	MINIMUM	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.
PIPE DIA.	BAR SIZE	H1(FT.)	H2(FT.)	D (FT.)	W1	W2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75

SHEET 1 OF 1
838.80

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
Z-06

ENGLISH STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 1
838.80

TOWN OF ZEBULON GENERAL CONSTRUCTION NOTES

1. THE ENCROACHER/CONTRACTOR ON TO DOGWOOD AND JONES SHALL PROVIDE TRAFFIC CONTROL DEVICES, LANE CLOSURES, ROAD AND JONES SHALL PROVIDE TRAFFIC CONTROL DEVICES, LANE CLOSURES, ROAD CLOSURES, POSITIVE PROTECTION AND/OR ANY OTHER WARNING OR CLOSURES, POSITIVE PROTECTION AND/OR ANY OTHER WARNING OR POSITIVE PROTECTION DEVICES NECESSARY FOR THE SAFETY OF POSITIVE PROTECTION DEVICES NECESSARY FOR THE SAFETY OF ROAD USERS DURING CONSTRUCTION AND ANY SUBSEQUENT ROAD USERS DURING CONSTRUCTION AND ANY SUBSEQUENT MAINTENANCE. THIS SHALL BE PERFORMED IN CONFORMANCE WITH THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND AMENDMENTS OR SUPPLEMENTS THERETO. NO WORK SHALL BE PERFORMED IN THE RIGHT OF WAY UNLESS THIS REQUIREMENT IS SATISFIED. TOWN OF ZEBULON RESERVES THE RIGHT TO REQUIRE A WRITTEN TRAFFIC CONTROL PLAN FOR ENCROACHMENT OPERATIONS.
2. ALL FLAGGING OPERATIONS WITHIN TOWN OF ZEBULON RIGHT OF WAY REQUIRE QUALIFIED AND TRAINED WORK ZONE FLAGGER.
3. WHEN THE PROJECT HAS BEEN COMPLETED FOR A PERIOD OF ONE YEAR, UPON WRITTEN REQUEST BY THE ENCROACHER/CONTACTOR TO THE DIRECTOR OF PUBLIC WORKS OR CONSTRUCTION INSPECTOR, A FINAL INSPECTION AND REVIEW WILL BE CONDUCTED BY TOWN OF ZEBULON PUBLIC WORKS
4. ANY PERSONNEL OR EQUIPMENT WORKING WITHIN FIVE FEET OF A TRAVEL LANE SHALL REQUIRE A FULL LANE CLOSURE. NO ROADWAY OF TRAFFIC SHALL BE CLOSED OR RESTRICTED BETWEEN THE HOURS OF 6:00 AM TO 8:30 AM AND 4:00 PM TO 6:00 PM MONDAY THROUGH FRIDAY. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. ALL MATERIALS AND CONSTRUCTION ON DOGWOOD LANE AND JONES STREET SHALL BE IN ACCORDANCE TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.
6. ANY EXISTING DRIVEWAYS, PAVEMENT, SIDEWALK, CURB AND GUTTER OR DRAINAGE STRUCTURES THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION.
7. CONTRACTOR SHALL NOT PLACE EXCAVATED MATERIAL ON THE ROADWAY AT ANY TIME.
8. TOWN OF ZEBULON RESERVES THE RIGHT TO REVISE, RESTRICT, SUSPEND AND/OR VOID RIGHT TO COMPLETE WORK ON TOWN ROW IF THE EXECUTION AND/OR OPERATION OF SAID PERMIT IS FOUND TO BE A HAZARD TO THE TRAVELING PUBLIC.

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER BRIAN BURCHETT
07/03/2023

SAMBATEK NC PE C-4993

Know what's below. Call before you dig.
nc811.org or 1-800-632-4949

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
A Sambatek Company
(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27615

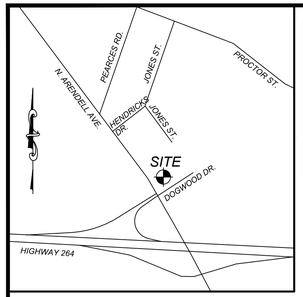
CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

COOK OUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

TOWN OF ZEBULON DETAILS

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-DTL6a
DRAWN BY:	STH
SCALE:	N.T.S.
DATE:	07-06-2022
SHEET NO.	C-12



VICINITY MAP
NTS

24 HOUR CONTACT
JOHN ARMFIELD
CONSTRUCTION MANAGER
TELEPHONE: (336) 279-3242

LANDSCAPE ISLAND NOTE:

CONTRACTOR TO ENSURE THAT THE GROUND SURFACE AROUND TREE AND SHRUB LOCATIONS SLOPES DOWNWARD AWAY FROM TREE/SHRUB INSTALLATION LOCATIONS TO ALLOW FOR POSITIVE DRAINAGE. CONTRACTOR SHOULD ALSO ENSURE THAT THE GROUND SURFACE AT THE BACK OF CURB BE GRADED TO BE EVEN WITH THE CURB ELEVATION SUCH THAT PONDING OF WATER DOES NOT OCCUR BEHIND THE CURB.

CONTRACTOR TO INSTALL 2 TO 3 INCH TENNESSEE RIVER ROCK WITH WEED FABRIC/BARRIER IN ALL SHRUB AND TREE PLANTING AREAS.

ALL STREET TREES AND PARKING LOT TREES WILL REQUIRE THE USE OF STRUCTURED SOILS PER UDO SECTION 5.6.9.B.7.

TURF NOTES:

1. *CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.*
2. *RIP ENTIRE AREA TO 6 INCHES IN DEPTH.*
3. *REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.*
4. *APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).*
5. *CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.*
6. *SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.*
7. *MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.*
8. *INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.*
9. *CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.*

**APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)*
FERTILIZER - 1,000 LBS/ACRE - 10-10-10
SUPERPHOSPHATE - 500 LBS/ACRE 20% ANALYSIS
MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW
ANCHOR - ASPHALT EMULSION @ 300 GALS/ACRE

SOD PREPARATION:
FOLLOW PREPARATION AS DIRECTED FOR STEPS 1-5 ABOVE. IMMEDIATELY WATER SOD UPON INSTALLATION AND CONTINUE UNTIL ROOTS ARE ESTABLISHED.

10. *CONTRACTOR SHALL WATER AND MAINTAIN ALL LAWN AREAS UNTIL AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED.*
11. *ONCE AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED, THE CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS AND MONITOR THE LAWN AREAS UNTIL THE GRASS REACHES A HEIGHT OF 4 INCHES TALL.*
12. *AT THE TIME THE GRASS REACHES A HEIGHT OF 4 INCHES TALL, THE CONTRACTOR SHALL MOW THE GRASS TO THE HEIGHT OF 3 INCHES AND TURN OVER THE LAWN MAINTENANCE TO THE OWNER.*
13. *AN ACCEPTABLE STAND OF GRASS SHALL BE 92% COVERAGE OR BETTER.*

STREET TREES ARE REQUIRED TO BE LOCATED BETWEEN THE SIDEWALK AND THE CURB ON ALL TOWN ROADS PER SECTION 5.6.13.A. AND A SMALL TYPE STREET TREE SPECIES WILL BE REQUIRED BETWEEN THE CURB AND SIDEWALK ON NCDOT ROADS PER SECTION 5.6.13.F.

TREE PLANTING SCHEDULE (SEE LANDSCAPING NOTE #12)

SYMBOL	KEY	NO.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	ROOT	COMMENTS
	AR	16	ACER RUBRUM	RED MAPLE	2 1/2"	8' MIN.	B & B	-
	ZS	12	ZELKOVA SERRATA	JAPANESE ZELKOVA	2 1/2"	8' MIN.	B & B	-
	CK	16	CORNUS KOUSA	KOUSA DOGWOOD	1.5" MIN.	4'-6'MIN.	B & B	-
	LI	18	LAGERSTROEMIA INDICA	CRAPE MYRTLE	1.5" MIN.	4'-6'MIN.	B & B	-
	ICH	116	ILEX CRENATI HELLERI	HELLERI HOLLY	-	18" - 24"	3 GAL.	-
	LC	20	LOROPETALUM CHINENSE 'RUBY RED'	RUBY RED LOROPETALUM	-	24" - 36"	3-5 GAL.	-
	RI	142	RHAPHIOLEPIS INDICA	INDIAN HAWTHORNE	-	18" - 24"	3 GAL.	-
	AG	76	ABELIA GRANDIFLORA 'EDWARD GOUCHER'	EDAWRD GOUCHER ABELIA	-	18"-24"	3 GAL.	-
			RIVER ROCK - TO BE INSTALLED AROUND ALL TREE AND SHRUB AREAS.					

LANDSCAPE CALCULATIONS:

STREETYARD - ARENDELL AVENUE:
LENGTH = 208 LF
REQUIRED: 4 UNDERSTORY TREES (DUE TO OVERHEAD LINES) AND 20 SHRUBS PER 100 LF
= 9 UNDERSTORY TREES AND 42 SHRUBS.
PROVIDED: 5 CRAPE MYRTLES, 4 KOUSA DOGWOODS, 21 INDIAN HAWTHORNES, AND 21 HELLERI HOLLYS.

STREETYARD - DOGWOOD DRIVE:
LENGTH = 399 LF- 32 LF (DRIVEWAY)= 367 LF
REQUIRED: 2 CANOPY TREES AND 20 SHRUBS PER 100 LF
= 8 CANOPY TREES AND 74 SHURBS
PROVIDED: 4 RED MAPLES, 4 ZELKOVAS.
37 HELLERI HOLLYS, AND 37 INDIAN HAWTHORNES.

STREETYARD - JONES STREET
LENGTH = 201 LF
REQUIRED: 2 CANOPY TREES AND 20 SHRUBS PER 100 LF
= 5 CANOPY TREES AND 42 SHRUBS
PROVIDED: 1 EXISTING 12" GUM, 1 EXISTING 15" OAK, 1 EXISTING 24" OAK, 1 12" CEDAR, 2 ZELKOUAS, AND 42 INDIAN HAWTHORWES

TYPE A BUFFER (NORTHERN PROPERTY LINE):
LENGTH = 399 LF - 24 LF (DRIVEWAY) = 375 LF
REQUIRED: 4 UNDERSTORY TREES AND 15 SHURBS PER 100 LF
= 15 UNDERSTORY TREES AND 57 SHURBS
PROVIDED: 7 CRAPE MYRTLES, 8 KOUSA DOGWOODS, 42 INDIAN HAWTHORNES, AND 15 HELLERI HOLLYS

PARKING LOT:
REQUIRED:1 CANOPY TREE PER 12 SPACES = 5 CANOPY TREES
PROVIDED: 3 RED MAPLES AND 2 ZELOVAS

STREET TREES:
REQUIRED: 1 CANOPY OR 2 UNDERSTORY TREES PER 50LF OF ROAD FRONTAGE= 11 OVER STORY, 10 UNDERSTORY
PROVIDED: 6 CRAPE MYRTLES, 4 KOUSA DOGWOODS, 6 RED MAPLES, 5 ZELKOVAS

LANDSCAPE NOTES:

1. *THE GENERAL CONTRACTOR SHALL LEAVE THIS SITE AT FINISHED GRADE. THE LANDSCAPE CONTRACTOR SHALL REVISE GRADES AT A MINIMUM TO ENSURE SMOOTH TRANSITIONS BETWEEN PLANTING BEDS AND LAWN AREAS.*
2. *PLANT GUARANTEE: ALL PLANTS SHALL BE GUARANTEED TO LIVE FOR TWELVE MONTHS. THE GUARANTEE SHALL COMMENCE UPON FINAL ACCEPTANCE OF THE PROJECT. IF ANY PLANTS ARE DEAD OR IN AN UNHEALTHY CONDITION BEFORE FINAL ACCEPTANCE, THE LANDSCAPE CONTRACTOR SHALL REPLACE THEM AT HIS EXPENSE. THIS REPLACEMENT SHALL NOT BE CONSIDERED A GUARANTEED REPLACEMENT.*
3. *ALL PLANTING SHALL BE PLACED WITHIN A MULCHED PLANTING BED. ALL STRAPPING AND THE TOP 2/3 OF WIRE BASKETS MUST BE CUT AWAY AND REMOVED FROM ROOT BALLS PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL.*
4. *ALL LANDSCAPE WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY STANDARD DETAILS AND SPECIFICATIONS.*
5. *ALL AREAS NOT MULCHED SHALL BE SEEDED OR SODDED IN ACCORDANCE WITH THE AREA SPECIFIED ON PLANS WITH "REBEL II" HYBRID TALL FESCUE OR EQUIVALENT AS PRESCRIBED IN THE SEEDING SCHEDULE AS SHOWN ON THIS SHEET.*
6. *SITE LIGHTING SHALL NOT BE PLACED IN CONFLICT WITH PLANTED TREES.*
7. *TREE PROTECTION FENCING TO BE PROVIDED AROUND TREE PRESERVATION AREAS IN ACCORDANCE WITH CITY STANDARDS.*
8. *COORDINATE ALL WORK WITH SITE LAYOUT AND SITE GRADING, DRAINAGE & UTILITIES PLAN.*
9. *VERIFY LOCATION OF UTILITIES BEFORE PLANTING.*
10. *MULCH ALL AREAS, THAT ARE NOT SEEDED OR SODDED, WITH SHREDDED HARDWOOD MULCH TO A DEPTH OF 3"-4".*
11. *THE SELECTION AND INSTALLATION OF PLANTS AND PLANTING METHODS SHALL CONFORM WITH THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE CITY STANDARD DETAILS AND SPECIFICATIONS, WHICHEVER IS STRICTER.*
12. *CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES. DRAWINGS SHALL RULE OVER PLANT LISTS.*
13. *SUBSTITUTIONS SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. SUBSTITUTIONS MAY REQUIRE ADDITIONAL APPROVAL BY THE GOVERNING JURISDICTION.*
14. *ALL LANDSCAPING SOIL AND FILL SHALL BE FREE FROM WEEDS, REFUSE, AND DEBRIS AT ALL TIMES.*
15. *TREES AND LARGE SHRUBS SHALL BE ADEQUATELY SUPPORTED, AS NECESSARY, USING STAKES AND GUYS. SUCH SUPPORTS SHALL BE DESIGNED SO AS TO PROTECT TREES AND SHRUBS FROM INJURY. TREES AND SHRUBS SHALL BE FASTENED TO THE SUPPORT WITH AN ACCEPTABLE COMMERCIAL TREE TIE OF PLASTIC OR HOSE COVERED WIRE.*
16. *THE MAXIMUM GROWTH HEIGHT OF ANY LANDSCAPING WITHIN THE SIGHT TRIANGLE SHALL BE THREE (3) FEET IN HEIGHT.*

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GRAPHIC SCALE
20 0 10 20 40
1 inch = 20 ft.

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

COMMERCIAL SITE DESIGN
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WWW.CSITEDESIGN.COM
8312 CREEDMOOR ROAD
RALEIGH, NORTH CAROLINA 27615

CLIENT/OWNER:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1849

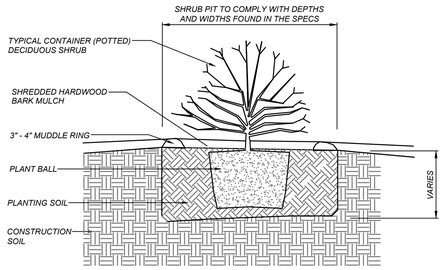
COOKOUT FRESH HAMBURGERS
1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA
LANDSCAPE PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-LS
DRAWN BY:	STR
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-13

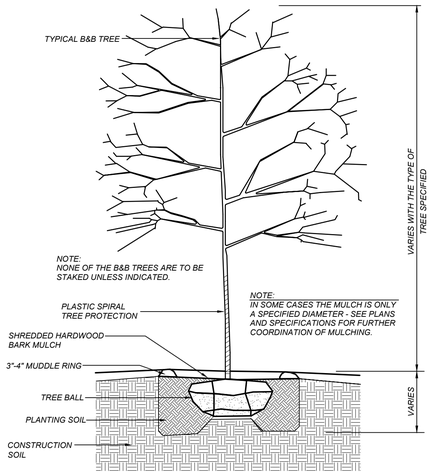
X:\OUT - Cookout\1500 Sites\1502 - Zebulon, NC\CAD\OUT1502-LS.dwg, 7/3/2023 1:14:22 PM, davidh

NOTE:
IN SOME CASES THE MULCH IS ONLY A SPECIFIED DIAMETER. SEE PLANS AND SPECIFICATIONS FOR FURTHER COORDINATION OF MULCHING.

NOTE:
PRUNE SHRUB AS RECOMMENDED BY GROWER ONLY AFTER THE PLANT HAS BEEN WATERED INTO THE PLANTING SOIL



SHRUB PLANTING DETAIL



NOTE:

1. ALL TREES SHOULD BE PRUNED ONLY AFTER INSTALLATION AND WATERING IN THE TREE. PRUNE TO GROWERS SPECIFICATIONS.
2. ALL TREES SHALL COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK - INCLUDING TREE PIT DEPTH AND WIDTH.

TREE PLANTING DETAIL

PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11s)

SEEDING MIXTURE

SPECIES	RATE (lb/acre)
CENTIPEDE GRASS	10-20 LB/ACRE (SEED) OR 33 BU/ACRE (SPRIGS)

SEEDING DATES:
MAR. - JUNE
(SPRIGGING CAN BE DONE THROUGH JULY WHERE WATER IS AVAILABLE FOR IRRIGATION.)

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10.

SPRIGGING
PLANT SPRIGS IN FURROWS WITH A TRACTOR-DRAWN TRANSPLANTER OR BROADCAST BY HAND.

FURROWS SHOULD BE 4-6 INCHES DEEP AND 2 FT APART. PLACE SPRIGS ABOUT 2 FT APART IN THE ROW WITH ONE END AT OR ABOVE GROUND LEVEL.

BROADCAST AT RATES SHOWN ABOVE, AND PRESS SPRIGS INTO THE TOP 1/2 - 2 INCHES OF SOIL WITH A DISK SET STRAIGHT SO THAT SPRIGS ARE NOT BROUGHT BACK TOWARD THE SURFACE.

MULCH
DO NOT MULCH.

MAINTENANCE
FERTILIZE VERY SPARINGLY - 20 LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDEGRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

ALL STREET TREES AND PARKING LOT TREES WILL REQUIRE THE USE OF STRUCTURED SOILS PER UDO SECTION 5.6.9.B.7.

TURF NOTES:

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP ENTIRE AREA TO 6 INCHES IN DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

   *APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) FERTILIZER - 1,000 LBS/ACRE - 10-10-10 SUPERPHOSPHATE - 500 LBS/ACRE 20% ANALYSIS MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW ANCHOR - ASPHALT EMULSION @ 300 GALS/ACRE

   SOD PREPARATION:
   FOLLOW PREPARATION AS DIRECTED FOR STEPS 1-5 ABOVE. IMMEDIATELY WATER SOD UPON INSTALLATION AND CONTINUE UNTIL ROOTS ARE ESTABLISHED.
10. CONTRACTOR SHALL WATER AND MAINTAIN ALL LAWN AREAS UNTIL AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED.
11. ONCE AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED, THE CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS AND MONITOR THE LAWN AREAS UNTIL THE GRASS REACHES A HEIGHT OF 4 INCHES TALL.
12. AT THE TIME THE GRASS REACHES A HEIGHT OF 4 INCHES TALL, THE CONTRACTOR SHALL MOW THE GRASS TO THE HEIGHT OF 3 INCHES AND TURN OVER THE LAWN MAINTENANCE TO THE OWNER.
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16. THE MAXIMUM GROWTH HEIGHT OF ANY LANDSCAPING WITHIN THE SIGHT TRIANGLE SHALL BE THREE (3) FEET IN HEIGHT.
17. PLANTING SOIL TO BE USED SHALL HAVE THE FOLLOWING CHARACTERISTICS: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, OBTAINED FROM WELL-DRAINED ARABLE SITE, REASONABLY FREE FROM CLAY, LUMPS, COARSE SANDS, STONES 1 INCH AND LARGER, PLANTS, GRASS, WEEDS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS, TOPSOIL SHALL CONFORM TO ASTM D5268 WITH A PH RANGE OF 5.5 TO 7, AND A MIN. 4 PERCENT ORGANIC MATERIAL.

NORTH CAROLINA PROFESSIONAL SEAL 24501 ENGINEER W. BRIAN BURCHETT 07/07/2023

SAMBATEK, INC. P.C. REGISTERED CORPORATION C-4993 NORTH CAROLINA RALEIGH, NORTH CAROLINA

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REVISIONS

NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

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(919) 848-6721, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM
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RALEIGH, NORTH CAROLINA 27615

CLIENT/OWNER:
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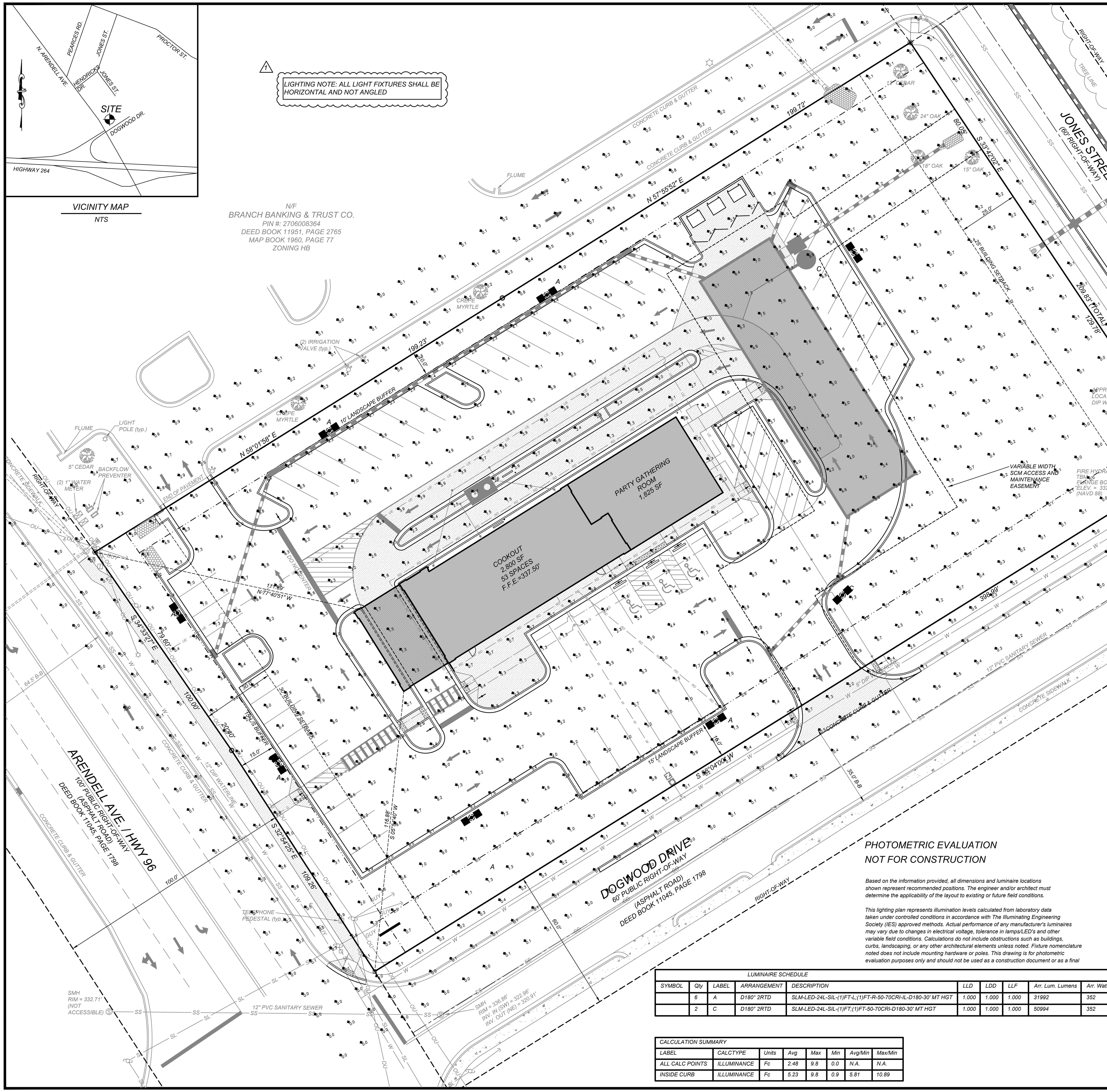
15 LAURA LANE, SUITE 300
THOMASVILLE, NC 27360
TELEPHONE: (336) 215-7025
FAX: (336) 474-1949

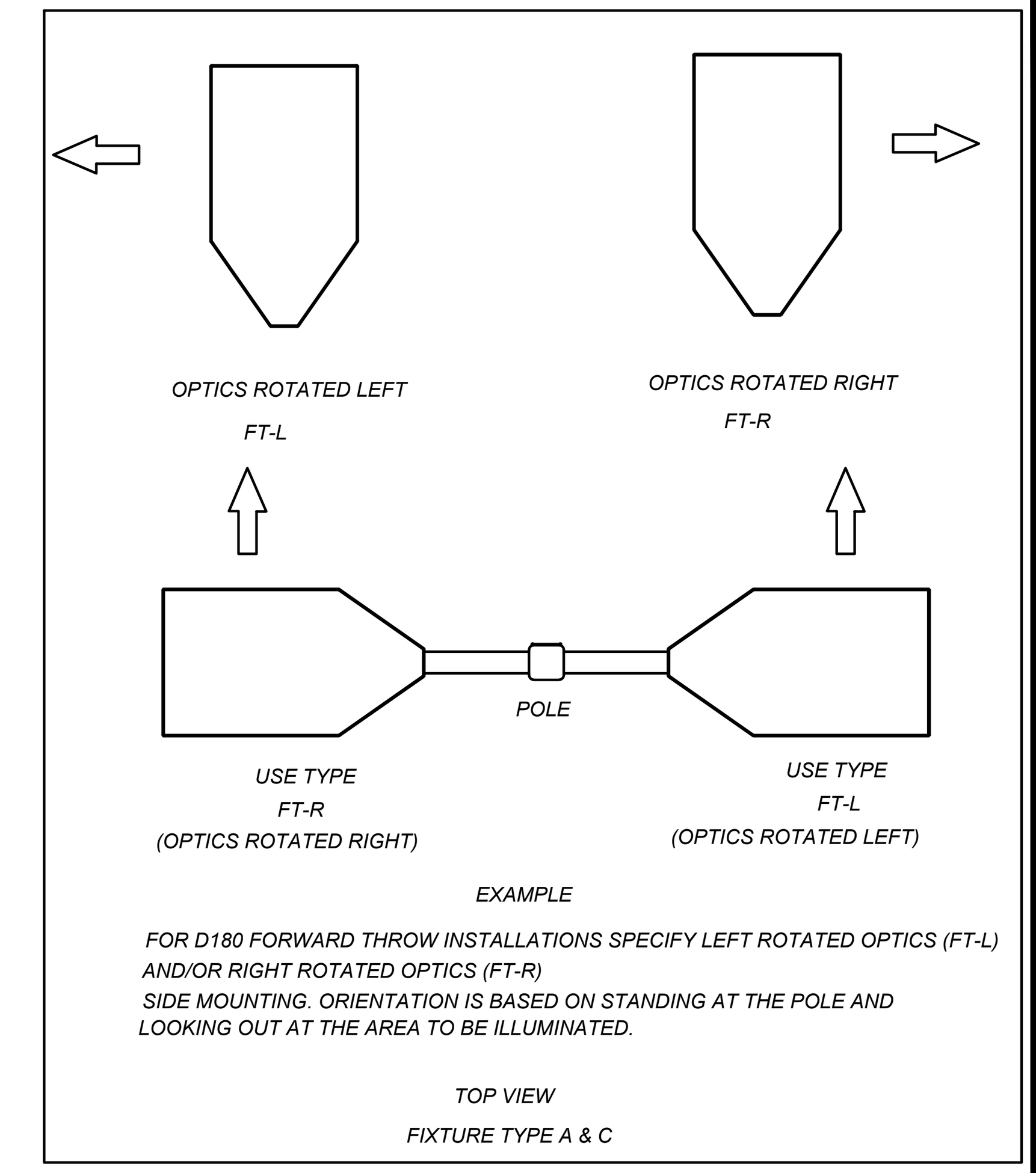
COOK OUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

LANDSCAPE DETAILS AND NOTES

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-LS2
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-14





GRAPHIC SCALE

1 inch = 20 ft.

Know what's **below.** **Call** before you dig.

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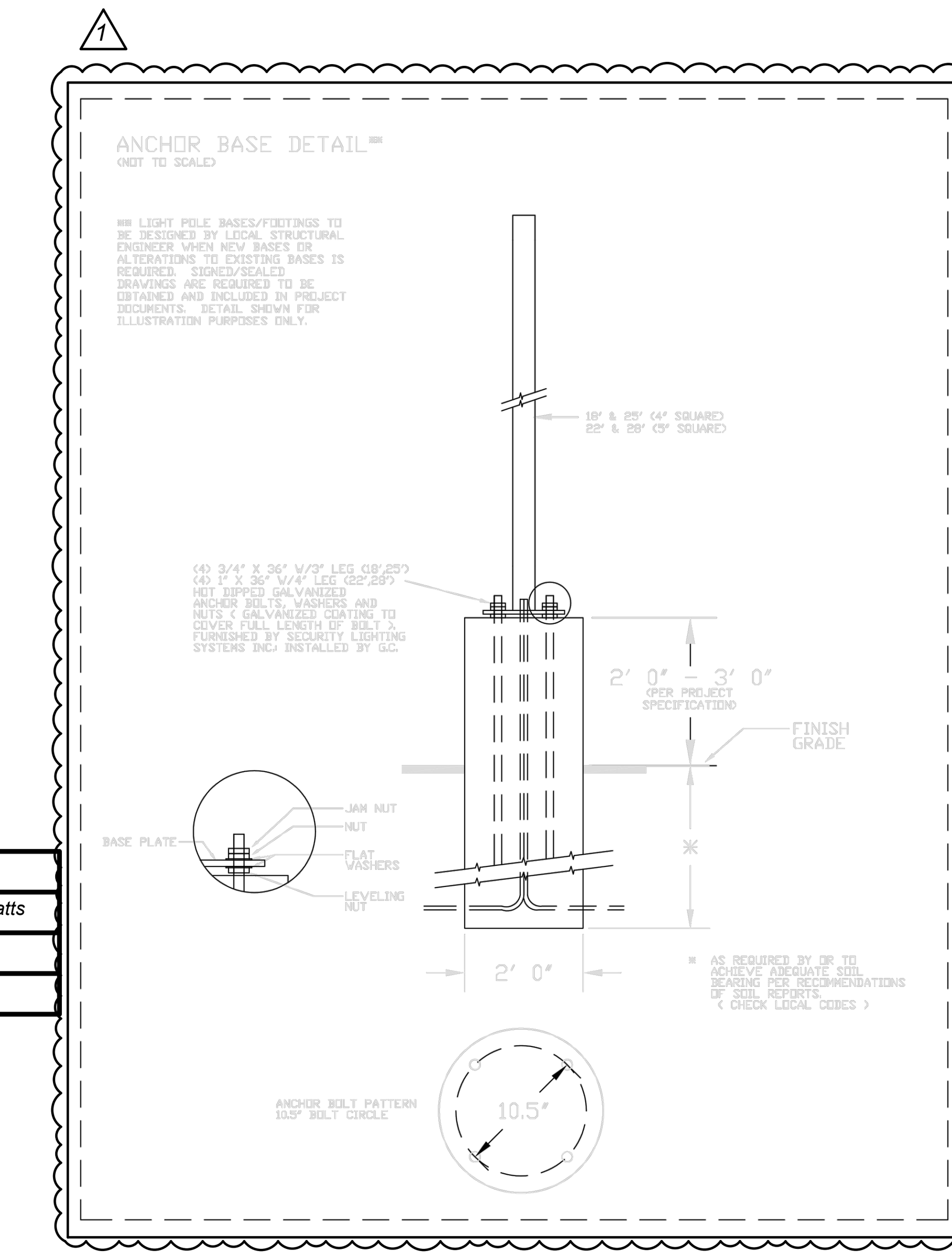

PHOTOMETRIC EVALUATION
NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final

LUMINAIRE SCHEDULE

SYMBOL	Qty	LABEL	ARRANGEMENT	DESCRIPTION	LLD	LDD	LLF	Arr. Lum. Lumens	Arr. Watts
	6	A	D180° 2RTD	SLM-LED-24L-SIL-(1)FT-L;(1)FT-R-50-70CRI-IL-D180-30' MT HGT	1.000	1.000	1.000	31992	352
	2	C	D180° 2RTD	SLM-LED-24L-SIL-(1)FT;(1)FT-50-70CRI-D180-30' MT HGT	1.000	1.000	1.000	50994	352

CALCULATION SUMMARY

LABEL	CALCTYPE	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALC POINTS	ILLUMINANCE	Fc	2.48	9.8	0.0	N.A.	N.A.
INSIDE CURB	ILLUMINANCE	Fc	5.23	9.8	0.9	5.81	10.89

10000 ALLIANCE RD. CINCINNATI, OHIO 45242 USA
(513) 793-3200 * FAX (513) 793-6023

LIGHTING PROPOSAL LO-153704-1

COOKOUT RESTAURANT
DOGWOOD DRIVE
ZEBULON,NC

BY:MWE | DATE:04-30-21 | REV:07-19-22 | SHEET 1 OF 1

SCALE: 1"=20'

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	2023-06-08	REVISED PER TOWN AND WAKE EC	KL

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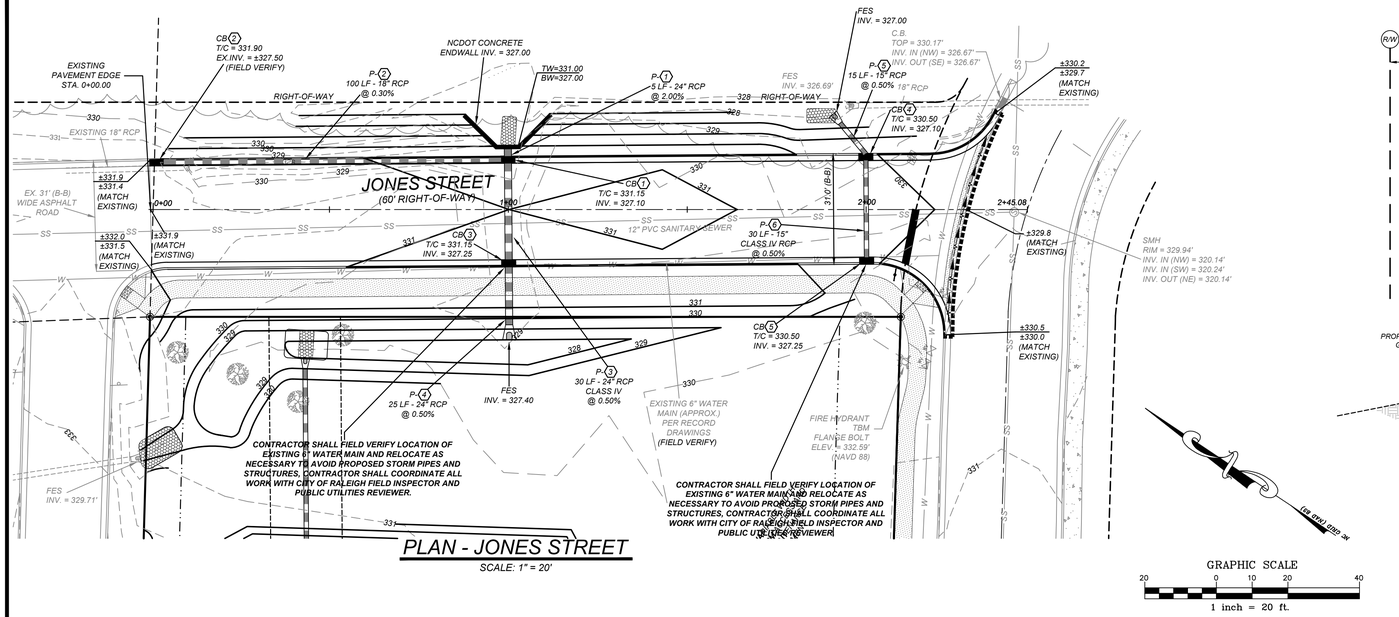
COOKOUT FRESH HAMBURGERS

1200 NORTH ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

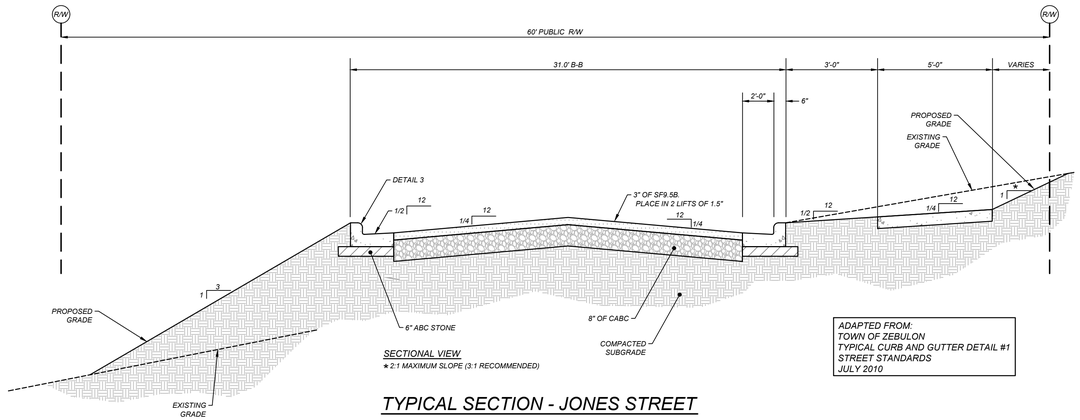
LIGHTING PLAN

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-LI
DRAWN BY:	STH
SCALE:	1"= 20'
DATE:	07-06-2022
SHEET NO.	C-15



PLAN - JONES STREET

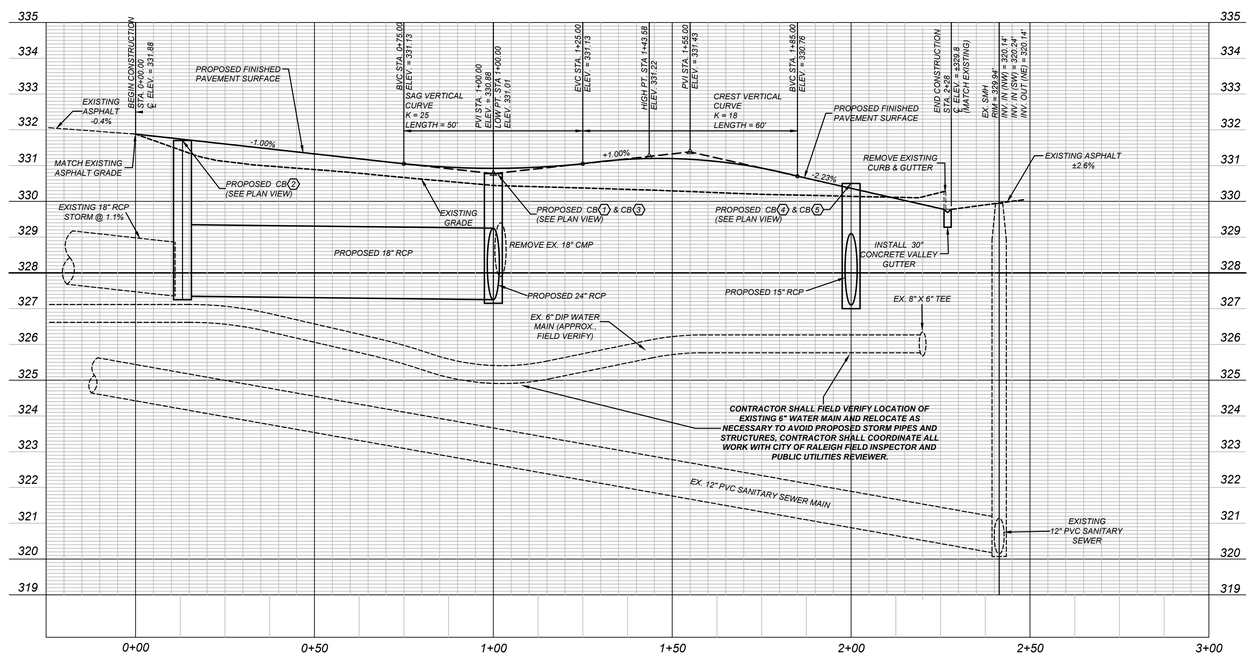
SCALE: 1" = 20'



ADAPTED FROM:
TOWN OF ZEBULON
TYPICAL CURB AND GUTTER DETAIL #1
STREET STANDARDS
JULY 2010

TYPICAL SECTION - JONES STREET

(N.T.S.)



PROFILE - JONES STREET

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

ALL STREET AND STORM CONSTRUCTION SHALL COMPLY WITH TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.

ALL WATER CONSTRUCTION SHALL COMPLY WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL SIDEWALKS SHALL BE ADA COMPLIANT.

SAMPATEK, INC P.C. REGISTERED COMPANY C-4993 RALEIGH, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 24201 ENGINEER BRIAN BURCHETT 07/31/2025

REVISIONS			
1	08-13-15	TRC COMMENTS	TEK
2	10-08-15	CITY COMMENTS	RCN
3	11-18-15	TOWN COMMENTS	STH
NO.	DATE	DESCRIPTION	BY

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(919) 848-6121, FAX: (919) 848-3741
WWW.CSITEDESIGN.COM

COOK OUT
1200 ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

PLAN AND PROFILE - JONES STREET
STATION 0+00.00 THRU 2+45.08

CLIENT:
COOK OUT
15 LAURA LANE, SUITE 300
THOMASVILLE, N.C. 27360
PHONE: (336) 215-7025
FAX: (336) 474-1849

PROJECT NO.	OUT-1502
FILENAME:	OUT1502-PP1
DRAWN BY:	RCN
DESIGNED BY:	WBB
HORIZONTAL SCALE:	1" = 20'
VERTICAL SCALE:	1" = 2'
DATE:	10-07-15

SHEET NO.
P-1

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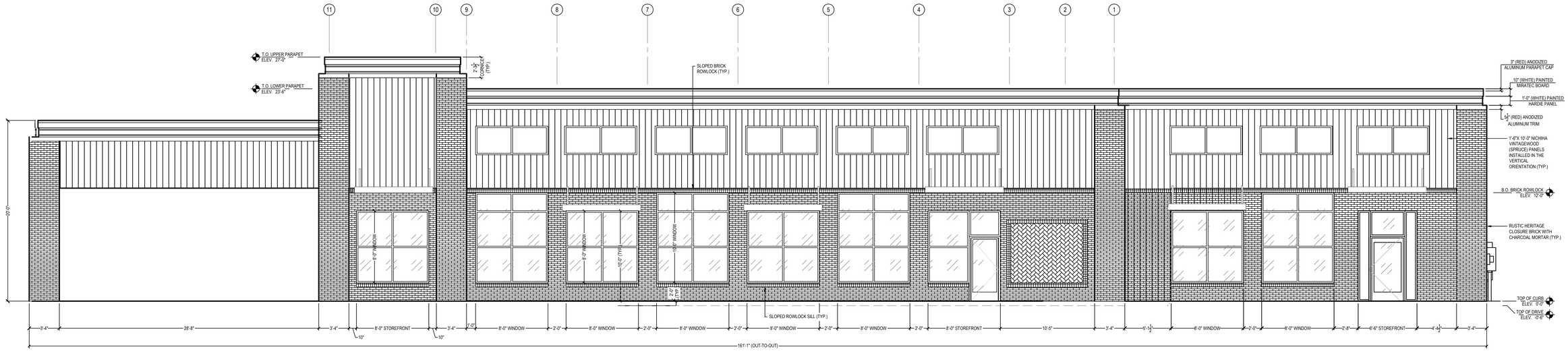
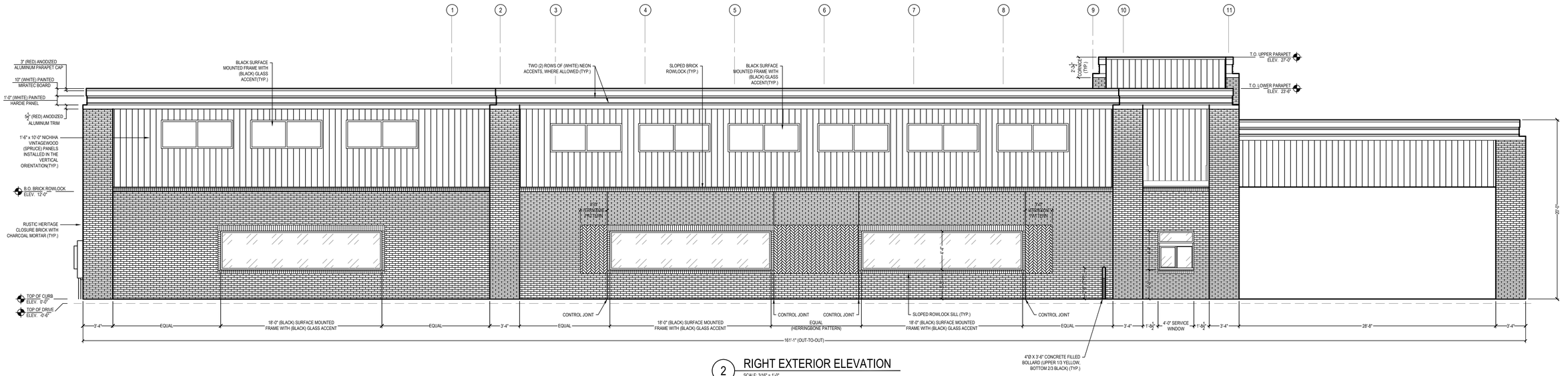


1 LEFT EXTERIOR ELEVATION

SCALE: 3/16" = 1'-0"



2 RIGHT EXTERIOR ELEVATION

SCALE: 3/16" = 1'-0"

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I AGREE TO THE PROPOSED LAYOUT BEING USED AS BASIS FOR FINAL DESIGN. I AGREE THAT REQUESTED CHANGES OR ADDITIONS TO THIS PROPOSED LAYOUT AFTER CLIENT APPROVAL MAY BE SUBJECT TO CHANGE ORDER.

OWNER / CONTRACTOR: _____ DATE: _____
(SIGNATURE)

☐ LAYOUT APPROVED AS SHOWN ☐ LAYOUT APPROVED AS NOTED (PLEASE MARK PLAN FOR REQUESTED CHANGES)

Summey Engineering Associates, PLLC
Engineering - Land Planning - Consulting
PO Box 968, Asheboro, NC 27204
Ph. 336-328-0902 Fx. 336-328-0922
www.summeyengineering.com
NC ENGINEERING FIRM CERTIFICATE OF AUTHORIZATION: P-0336

ZEBULON, NORTH CAROLINA

No.:	Date:	Description:	By:

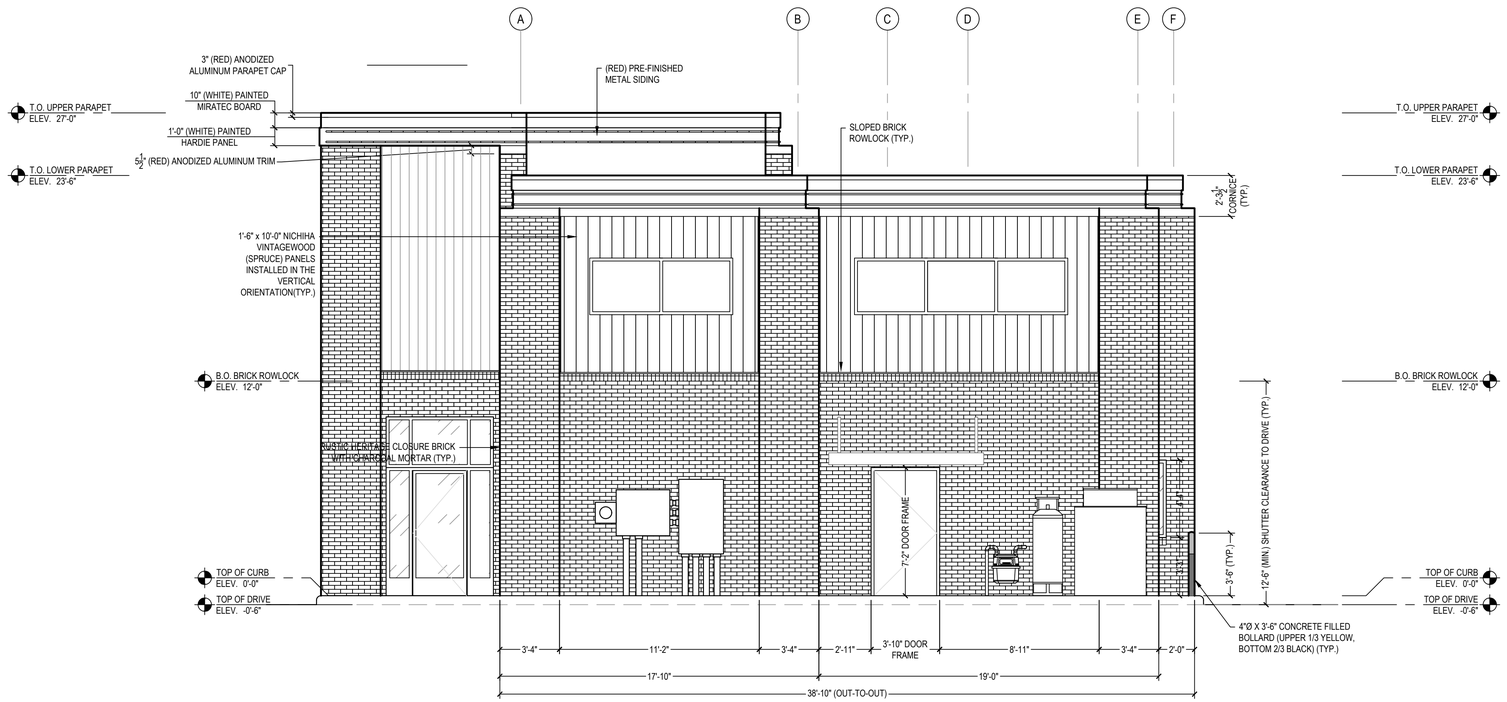
ELEVATION PLAN
COOK OUT RESTAURANT
1200 NORTH ARENDEL AVE.
WAKE COUNTY - ZEBULON - NORTH CAROLINA

Scale:	
Date:	MMMM YYYY
Drawn By:	SEA
Checked By:	WBA
Job No.:	E-7105
Sheet No.	

of ?

1 FRONT EXTERIOR ELEVATION

SCALE: 1/4" = 1'-0"



2 REAR EXTERIOR ELEVATION

SCALE: 1/4" = 1'-0"

EXTERIOR FINISH DESIGNATIONS

BRICK VENEER SPECIFICATION:

MANUFACTURER:	STATESVILLE BRICK CO.
BRICK SERIES:	RUSTIC HERITAGE CLOSURE BRICK AUTHENTIC TUMBLED SERIES
MORTAR COLOR:	CHARCOAL (TYPE S)

NICHIHA ARCHITECTURAL WALL PANEL SPECIFICATION:

PANEL SERIES:	VINTAGEWOOD
FINISH / COLOR:	MATTE / SPRUCE
PANEL ORIENTATION:	VERTICAL
MATERIAL TYPE:	FIBER CEMENT

PAINT COLOR DESIGNATIONS

PLAN COLOR:	BLACK
MANUFACTURER:	SHERWIN-WILLIAMS
PRODUCT NUMBER:	SW 6990
PRODUCT NAME:	CAVIAR
PAINT FINISH:	FLAT

PLAN COLOR:	WHITE
MANUFACTURER:	SHERWIN-WILLIAMS
PRODUCT NUMBER:	SW 7070
PRODUCT NAME:	SITE WHITE
PAINT FINISH:	FLAT

PLAN COLOR:	RED
MANUFACTURER:	SHERWIN-WILLIAMS
PRODUCT NUMBER:	SW 6868
PRODUCT NAME:	REAL RED
PAINT FINISH:	FLAT

PRODUCT CONTACT INFORMATION

NICHIHA:

CONTACT NAME:	MATT STEPHENSON
EMAIL ADDRESS:	MSTEPHENSON@NICHIHA.COM
PHONE NUMBER:	770.789.8228
WEBSITE:	WWW.NICHIHA.COM

SCOTT STONE, INC.:

CONTACT NAME:	RANDY CLAYTON
EMAIL ADDRESS:	RANDY.CLAYTON@SCOTTSTONE.COM
PHONE NUMBER:	919.563.3469
WEBSITE:	WWW.SCOTTSTONE.COM

STATESVILLE BRICK CO.:

CONTACT NAME:	SCOTT RANKIN
EMAIL ADDRESS:	BRICKSALES@STATESVILLEBRICK.COM
PHONE NUMBER:	704.872.4123
WEBSITE:	WWW.STATESVILLEBRICK.COM

GENERAL NOTES

1. ALL WORK SHALL BE INSTALLED TO MEET CURRENT STATE AND LOCAL BUILDING CODE REQUIREMENTS, LATEST REVISION.
2. GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS AND EQUIPMENT DAILY DURING PROJECT DURATION.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO INITIATING CONSTRUCTION.
4. CONTRACTOR SHALL COORDINATE WITH PLUMBING, MECHANICAL, ELECTRICAL, STRUCTURAL, AND CIVIL PLANS FOR ADDITIONAL WORK THAT MAY OR MAY NOT BE SHOWN ON THIS DRAWING.
5. VERIFY ALL FINISHES, PAINT COLORS, ETC. WITH OWNER PRIOR TO INSTALLATION OR APPLICATION.
6. CONTRACTOR SHALL BE RESPONSIBLE TO INFORM OWNER OF ALL SPECIFIED MATERIALS THAT ARE UNAVAILABLE DUE TO SHORTAGES OR OTHER LACK OF MATERIAL ACCESSIBILITY.
7. ALL WINDOW AND STOREFRONT FRAMES SHALL BE CLEAR ANODIZED (BLACK) ALUMINUM.

PROJECT LOCATION IS IN A WIND-BORNE DEBRIS REGION. CONTRACTOR IS TO ENSURE WINDOWS AND DOORS ARE RATED AND INSTALLED ACCORDINGLY.

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