

# CAROLINA DIESEL TRUCKS

Harnett County, Fuquay Varina, North Carolina



THIS DRAWING PREPARED AT THE  
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YOUR VISION ACHIEVED THROUGH OURS.	REVISION DESCRIPTION
DATE	HARNETT COUNTY COMMENT RESPONSES
07/31/2017	
DATE	
06/13/2017	
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TSG	
DESIGNED BY	
TSG	
CHECKED BY	
JFC	
SCALE	
PER PLAN	

## SITE DATA

PROJECT:	CAROLINA DIESEL TRUCKS
OWNER:	RP ONE, LLC PO BOX 1166 FUQUAY VARINA, NC 27526
DEVELOPER:	CAROLINA DIESEL TRUCKS THOMAS ANDREWS 7012 OAKVILLE LANE NEW HILL, NC 27562 PHONE: 919-698-7118 EMAIL: thomas@carolindieseltrucks.com
ENGINEER:	TIMMONS GROUP JIM CHANDLER, PE 5410 TRINITY ROAD, SUITE 102 RALEIGH, NC 27607 PHONE: 919-866-4951 FAX: 919-859-5663 EMAIL: jim.chandler@timmons.com
PROPERTY LOCATION:	PROGRESS DRIVE
PARCEL NUMBER:	0636-90-3252.000
REFERENCE:	MAP 2017-167
PROPOSED USE:	INDUSTRIAL
EXISTING TRACT AREA:	2.41 ACRES (DEED)
ZONING:	IND
COUNTY:	HARNETT
TOWNSHIP:	BUCKHORN
LAND USE CLASSIFICATION:	COMPACT MIXED USE



VICINITY MAP - NOT TO SCALE

## SHEET INDEX

C1.01 -	EXISTING CONDITIONS AND DEMOLITION PLAN
C2.01 -	SITE STAKING PLAN
C3.01 -	SITE GRADING AND DRAINAGE PLAN
C4.01 -	SEDIMENTATION AND EROSION CONTROL PLAN
C5.01 -	SITE UTILITY PLAN
C6.01 -	SITE PLANTING PLAN
C7.01 -	DETAILS SHEET
C7.02 -	DETAILS SHEET
C7.03 -	DETAILS SHEET
C7.04 -	DETAILS SHEET
C7.05 -	WET POND DETAILS

As the owner of record, I hereby formally consent to the proposed development shown on this site plan and all the regulations and requirements of the Harnett County ordinances.

.....  
Date

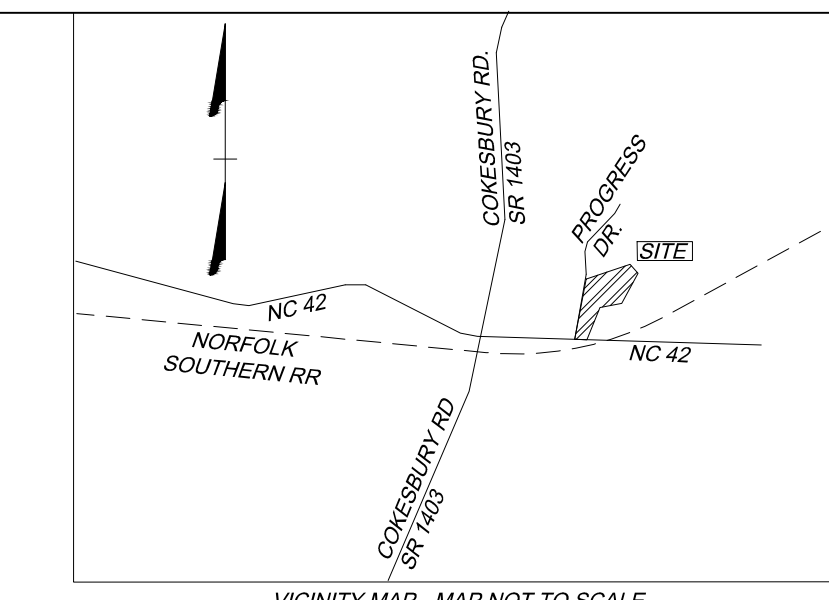
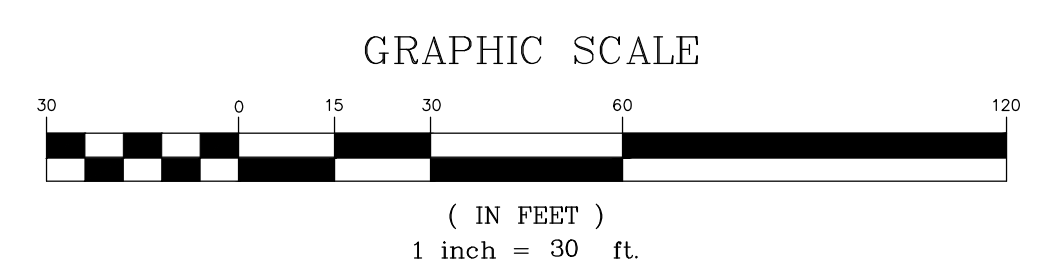
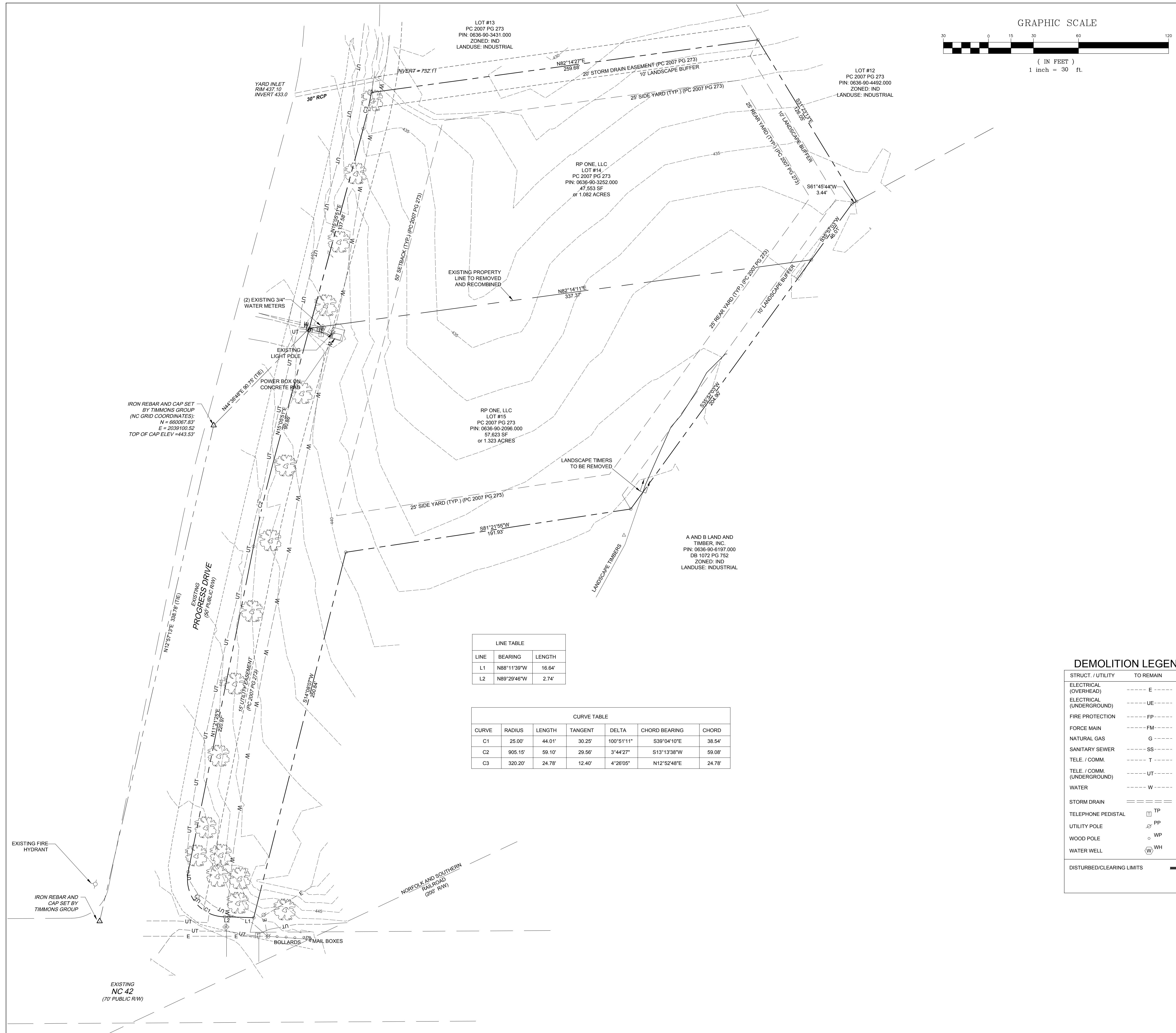
.....  
Owner Signature



**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FUQUAY VARINA, NC  
**COVER**

JOB NO.  
39642  
SHEET NO.  
C0.01

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SCALE  
 1" = 30'

**GENERAL NOTES**

1. ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
2. ALL WASTE MATERIAL GENERATED FROM CLEARING AND DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
3. REMOVE TOPSOIL AND STOCKPILE APPROPRIATELY ON-SITE. ON-SITE TEMP. STOCKPILES SHALL LOCATED WITHIN CONSTRUCTION LIMITS.
4. ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW CONSTRUCTION. ANY EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH EXISTING CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED). UTILITY INSTALLATIONS MAY UTILIZE OPEN CUT OF PAVEMENTS UNLESS INDICATED OTHERWISE. TRENCH IN EXISTING ASPHALT SHALL BE PATCHED PER PAVEMENT REPAIR DETAIL.
5. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, NOTIFY ARCHITECT IMMEDIATELY.
6. THE CONTRACTOR SHALL EMPLOY A QUALIFIED UTILITY LOCATOR SERVICE TO LOCATE ALL UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO ELECTRICAL, TELEPHONE, GAS, CABLE, FIBER OPTIC) WITHIN THE LIMITS OF CONSTRUCTION.
7. VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ARCHITECT IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
9. EXISTING MANHOLES, VALVE BOXES, VAULTS, CLEANOUTS, UTILITY POLES ETC. TO REMAIN WITHIN THE GRADING LIMITS SHALL BE ADJUSTED AS NEEDED TO FUNCTION PROPERLY WITH THE PROPOSED FINISHED GRADES (WHETHER OR NOT INDICATED TO BE MODIFIED).
10. GENERAL CONTRACTOR TO COORDINATE ALL PEDESTRIAN ACCESS PATHS, LOCATIONS, LIGHTING ETC. WITH OWNER.

**DEMOLITION LEGEND**

STRUCT. / UTILITY	TO REMAIN	TO BE REMOVED	STRUCT. / UTILITY	TO REMAIN	TO BE REMOVED
ELECTRICAL (OVERHEAD)	---	E	LIGHT POLE	☆ LP	☆ LP
ELECTRICAL (UNDERGROUND)	---	UE	UTILITY POLE	⊗ PP	⊗ PP
FIRE PROTECTION	---	FP	GUY WIRE	⊗ GW	⊗ GW
FORCE MAIN	---	FM	MANHOLE	⊙ MH	⊙ MH
NATURAL GAS	---	G	CLEAN OUT	⊙ CO	⊙ CO
SANITARY SEWER	---	SS	DROP INLET OR CATCH BASIN	□ DI, CB	□ DI, CB
TELE. / COMM. (UNDERGROUND)	---	T	FIRE HYDRANT	⊕ FH	⊕ FH
WATER	---	W	WATER VALVE	⊗ WV	⊗ WV
STORM DRAIN	---	S	INDIVIDUAL TREE	⊗	⊗
TELEPHONE PEDISTAL	□ TP	□ TP			
UTILITY POLE	⊗ PP	⊗ PP			
WOOD POLE	⊙ WP	⊙ WP			
WATER WELL	⊗ WH	⊗ WH			
DISTURBED/CLEARING LIMITS	---	---			

NOTE: DEMOLITION AND PATCHING OF PAVEMENT AND OTHER EXISTING IMPROVEMENTS IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS NECESSARY TO CONSTRUCT AND/OR INSTALL NEW WORK.

**LINE TABLE**

LINE	BEARING	LENGTH
L1	N88°11'39"W	16.64'
L2	N89°29'46"W	2.74'

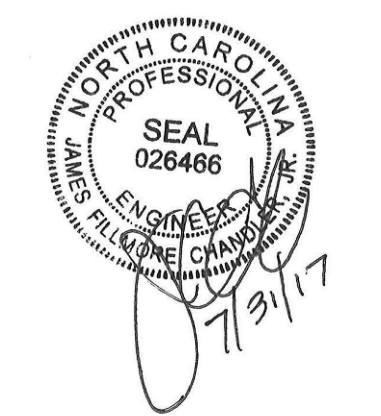
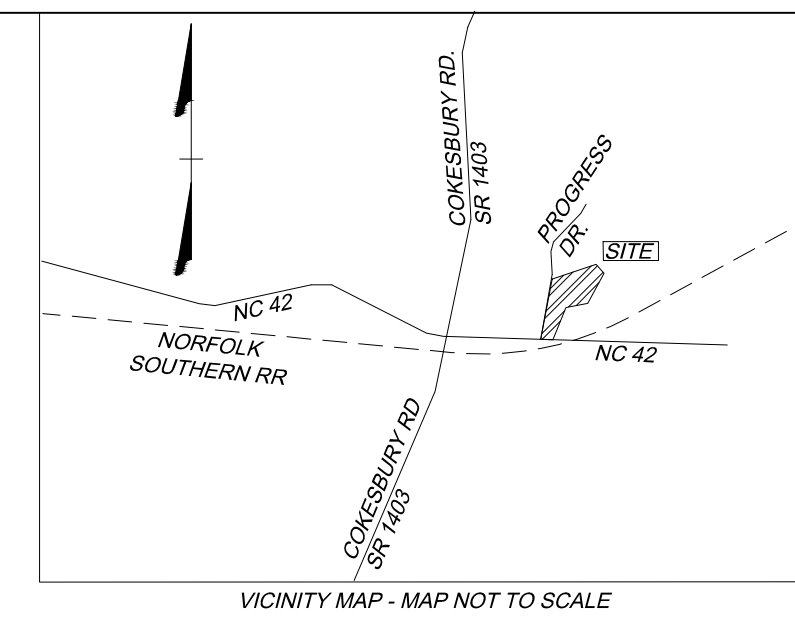
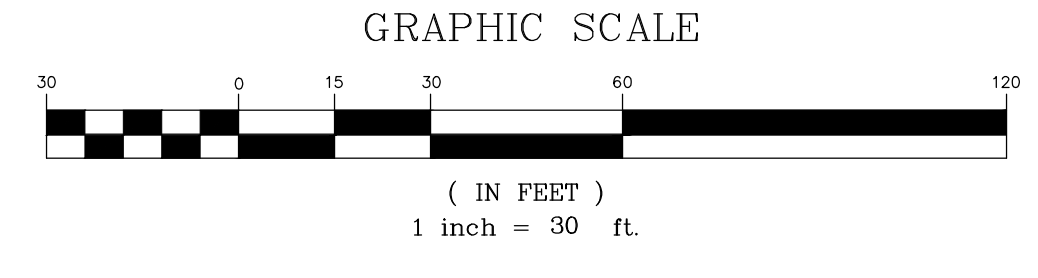
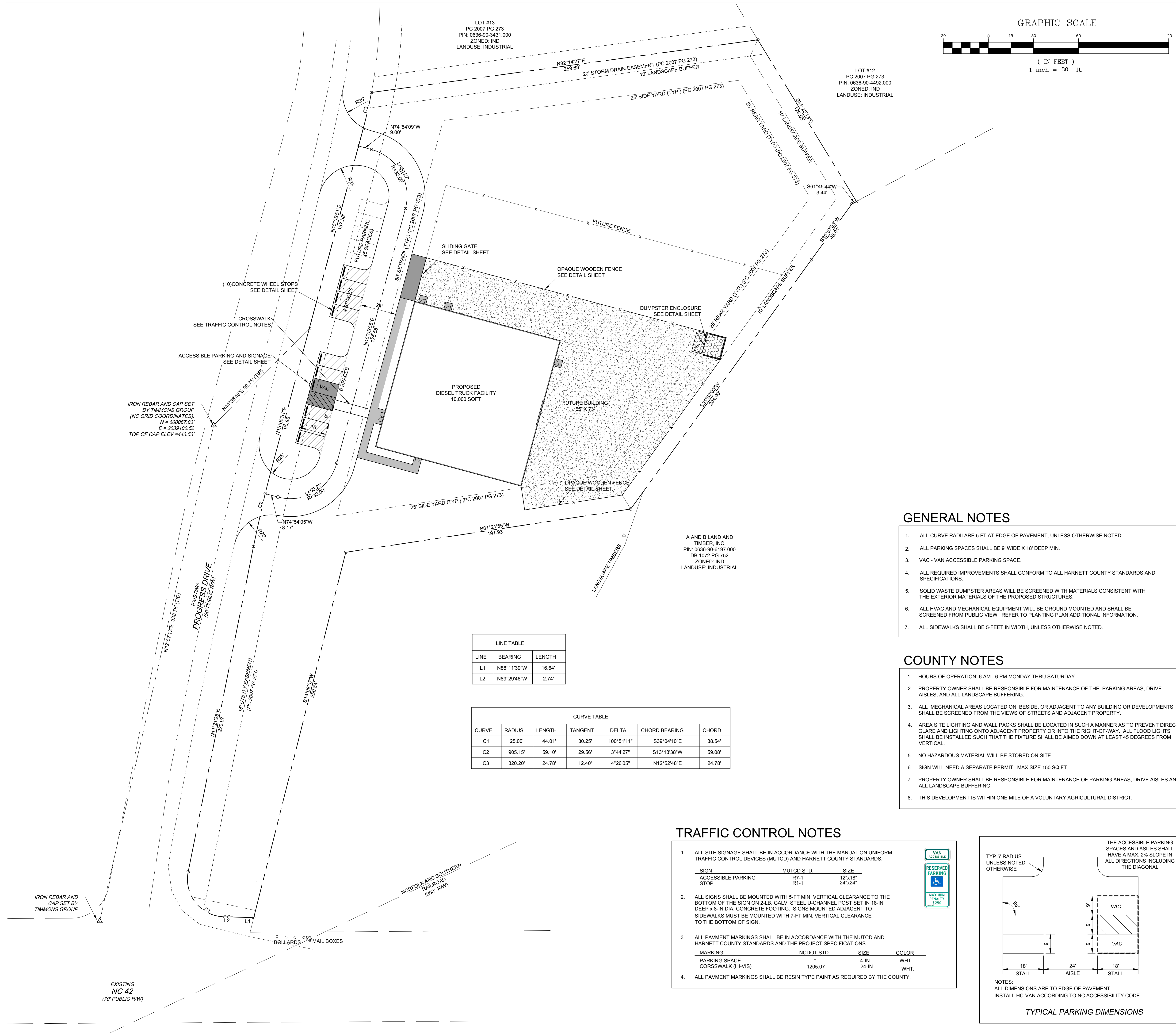
**CURVE TABLE**

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00'	44.01'	30.25'	100°51'11"	S39°04'10"E	38.54'
C2	905.15'	59.10'	29.56'	3°44'27"	S13°13'38"W	59.08'
C3	320.20'	24.78'	12.40'	4°26'05"	N12°52'48"E	24.78'

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1552  
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FUQUAY VARINA, NC  
**EXISTING CONDITIONS AND DEMOLITION PLAN**

JOB NO.  
 39642  
 SHEET NO.  
 C1.01

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### SITE DATA

PROJECT:	CAROLINA DIESEL TRUCKS
PLAN TYPE:	COMMERCIAL SITE PLAN
ENGINEER:	TIMMONS GROUP JIM CHANDLER, PE 5410 TRINITY ROAD, SUITE 102 RALEIGH, NC 27607 PHONE: 919-866-4951 FAX: 919-859-5663 EMAIL: jim.chandler@timmons.com
OWNER:	RP ONE, LLC PO BOX 1166 FUQUAY VARINA, NC 27526
DEVELOPER:	CAROLINA DIESEL TRUCKS THOMAS ANDREWS 7012 OAKVILLE LANE NEW HILL, NC 27562 PHONE: 919-698-7118 EMAIL: thomas@carolindieseltrucks.com
PROPERTY LOCATION:	PROGRESS DRIVE
PARCEL NUMBER:	0636-90-3252-000, 0636-90-2096-000
RED:	0067285
REFERENCE:	MAP 2017-167
ZONING:	IND
PROPOSED USE:	INDUSTRIAL
LAND USE CLASSIFICATION:	COMPACT MIXED USE
TRACT AREA:	2.43 ACRES (TOTAL) 2.41 ACRES (DEED)
PROPOSED BUILDING AREA:	10,000 SF
MINIMUM SETBACKS:	FRONT YARD: 50' REAR YARD: 25' SIDE YARD: 25'
WATERSHED:	NONE
DISTURBED AREA:	2.50 ACRES
IMPERVIOUS SURFACE AREAS:	EXISTING: 0.00 ACRES PROPOSED: 1.11 ACRES (46.1%)
PARKING REQUIREMENTS (1 PER EMPLOYEE + 3 PER BAY):	MINIMUM: 10 PROPOSED: 10
ACCESSIBLE PARKING REQUIRED:	1
ACCESSIBLE PARKING PROVIDED:	1

### GENERAL NOTES

- ALL CURVE RADII ARE 5 FT AT EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES SHALL BE 9' WIDE X 18' DEEP MIN.
- VAC - VAN ACCESSIBLE PARKING SPACE.
- ALL REQUIRED IMPROVEMENTS SHALL CONFORM TO ALL HARNETT COUNTY STANDARDS AND SPECIFICATIONS.
- SOLID WASTE DUMPSTER AREAS WILL BE SCREENED WITH MATERIALS CONSISTENT WITH THE EXTERIOR MATERIALS OF THE PROPOSED STRUCTURES.
- ALL HVAC AND MECHANICAL EQUIPMENT WILL BE GROUND MOUNTED AND SHALL BE SCREENED FROM PUBLIC VIEW. REFER TO PLANTING PLAN ADDITIONAL INFORMATION.
- ALL SIDEWALKS SHALL BE 5-FEET IN WIDTH, UNLESS OTHERWISE NOTED.

### COUNTY NOTES

- HOURS OF OPERATION: 6 AM - 6 PM MONDAY THRU SATURDAY.
- PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PARKING AREAS, DRIVE AISLES, AND ALL LANDSCAPE BUFFERING.
- ALL MECHANICAL AREAS LOCATED ON, BESIDE, OR ADJACENT TO ANY BUILDING OR DEVELOPMENTS SHALL BE SCREENED FROM THE VIEWS OF STREETS AND ADJACENT PROPERTY.
- AREA SITE LIGHTING AND WALL PACKS SHALL BE LOCATED IN SUCH A MANNER AS TO PREVENT DIRECT GLARE AND LIGHTING ONTO ADJACENT PROPERTY OR INTO THE RIGHT-OF-WAY. ALL FLOOD LIGHTS SHALL BE INSTALLED SUCH THAT THE FIXTURE SHALL BE AIMED DOWN AT LEAST 45 DEGREES FROM VERTICAL.
- NO HAZARDOUS MATERIAL WILL BE STORED ON SITE.
- SIGN WILL NEED A SEPARATE PERMIT. MAX SIZE 150 SQ.FT.
- PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF PARKING AREAS, DRIVE AISLES AND ALL LANDSCAPE BUFFERING.
- THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.

LINE	BEARING	LENGTH
L1	N88°11'39"W	16.64'
L2	N89°29'46"W	2.74'

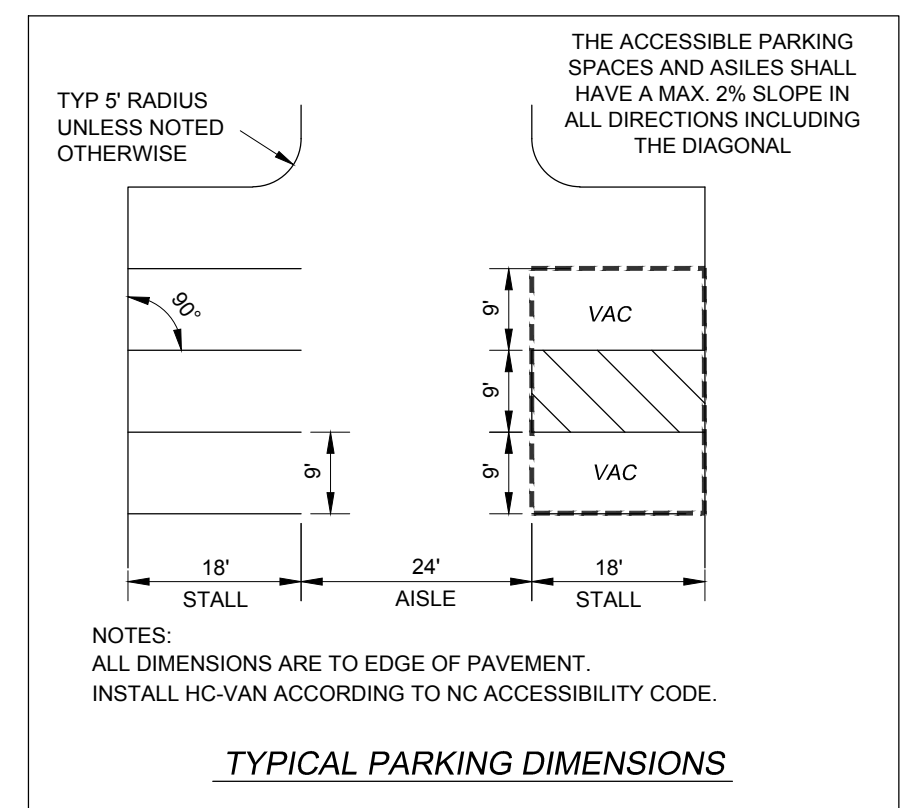
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C3	320.20'	24.78'	12.40'	4°26'05"	N12°52'48"E	24.78'

### TRAFFIC CONTROL NOTES

- ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND HARNETT COUNTY STANDARDS.
 

SIGN	MUTCD STD.	SIZE
ACCESSIBLE PARKING STOP	R7-1	12"x18" 24"x24"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2-LB. GALV. STEEL U-CHANNEL POST SET IN 18-IN DEEP x 8-IN DIA. CONCRETE FOOTING. SIGNS MOUNTED ADJACENT TO SIDEWALKS MUST BE MOUNTED WITH 7-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF SIGN.
 

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACE	1205.07	4-IN	WHT.
CROSSWALK (H-VIS)	1205.07	24-IN	WHT.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND HARNETT COUNTY STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PAVEMENT MARKINGS SHALL BE RESIN TYPE PAINT AS REQUIRED BY THE COUNTY.



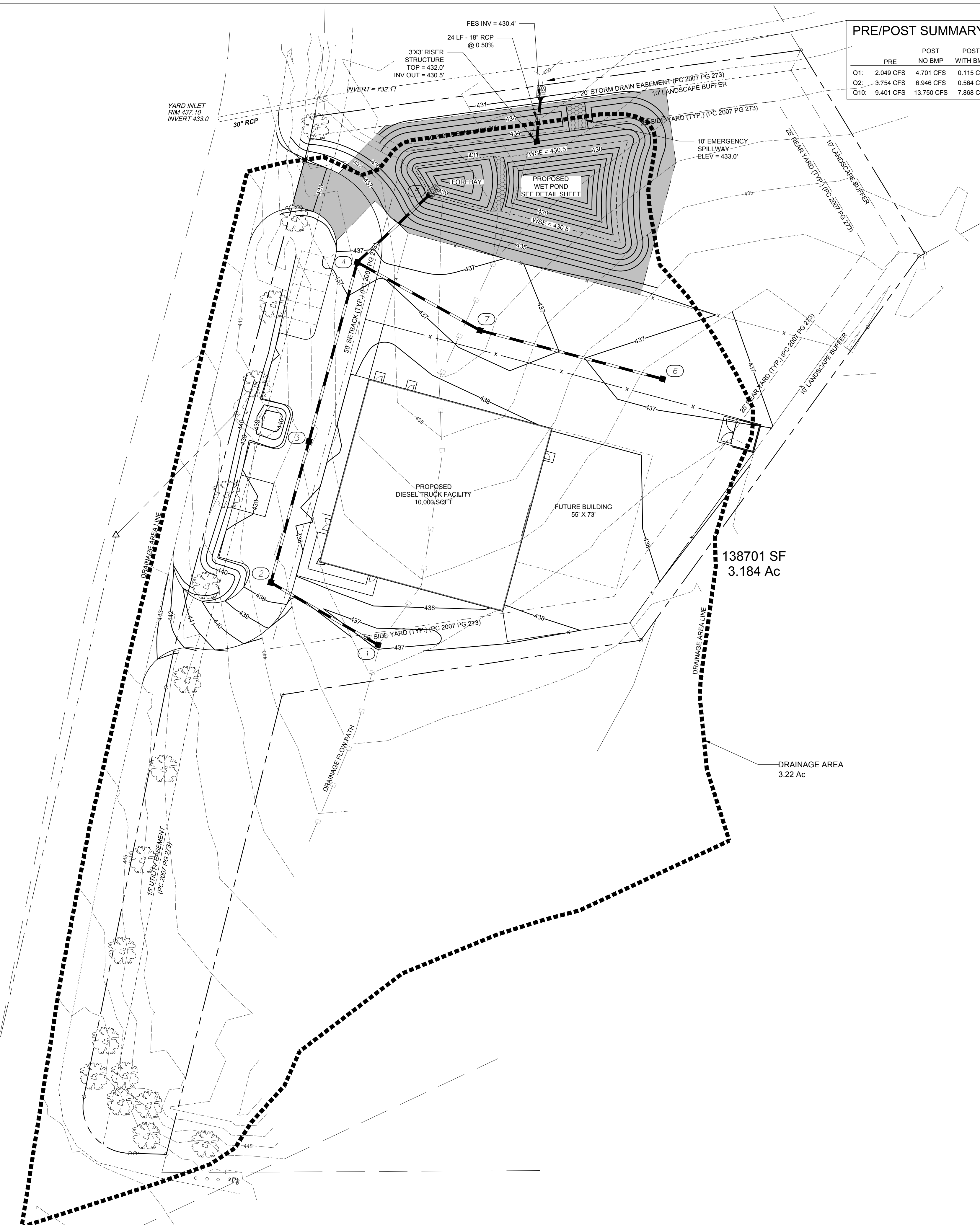
### KEY NOTES

- RAISED CONCRETE SIDEWALK, SEE DETAIL SHEET
- HEAVY-DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET
- LIGHT-DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET
- HEAVY-DUTY CONCRETE PAVEMENT, SEE DETAIL SHEET
- LIGHT-DUTY CONCRETE PAVEMENT, SEE DETAIL SHEET
- GRAVEL PAVEMENT, SEE DETAIL SHEET

# TIMMONS GROUP

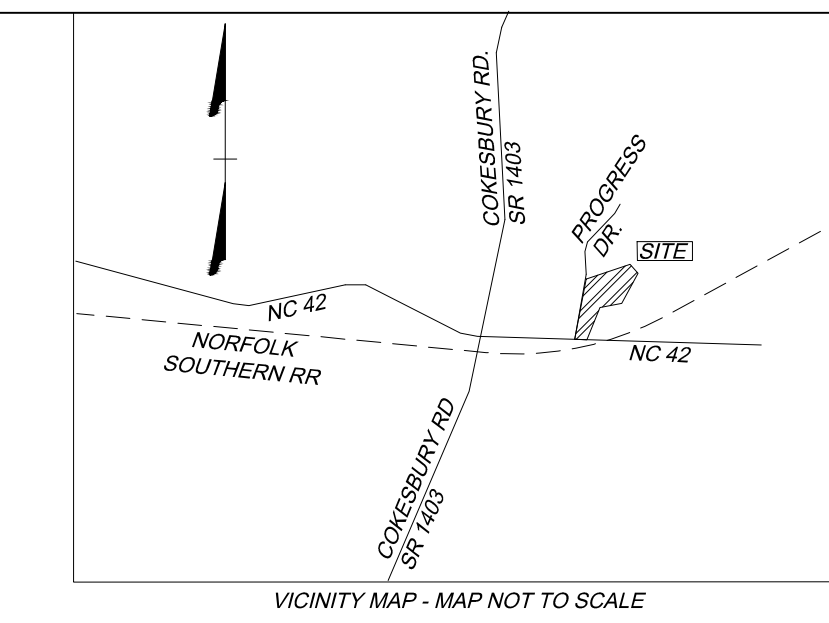
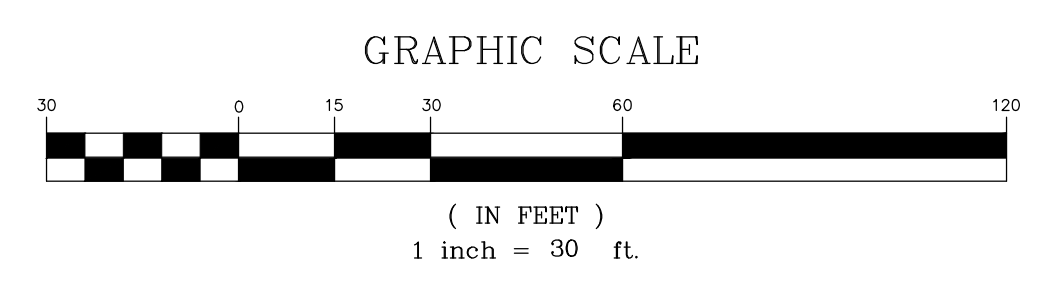
NORTH CAROLINA LICENSE NO. C-1652  
 CAROLINA DIESEL TRUCKS  
 HARNETT COUNTY, FUQUAY VARINA, NC  
 SITE STAKING PLAN

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**PRE/POST SUMMARY**

	PRE	POST NO BMP	POST WITH BMP
Q1:	2.049 CFS	4.701 CFS	0.115 CFS
Q2:	3.754 CFS	6.946 CFS	0.564 CFS
Q10:	9.401 CFS	13.750 CFS	7.868 CFS



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SCALE: 1" = 30'

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
CAROLINA DIESEL TRUCKS  
HARNETT COUNTY, FUQUAY VARINA, NC  
SITE GRADING AND DRAINAGE PLAN

- GENERAL NOTES**
- TOTAL DISTURBED AREA = 2.50 ACRES.
  - ALL EXISTING VALVES, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADES.
  - ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
  - ALL SPOT ELEVATIONS INDICATED ARE AT BACK OF CURB, UNLESS OTHERWISE INDICATED.
  - SITE IS NOT WITHIN 100 YEAR FLOOD PLAIN.
  - ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83).
  - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING AND INSTALLATION OF EROSION CONTROL.
  - UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
  - ALL HANDICAP PARKING SPACES AND STRIPED ACCESSIBILITY AISLES ARE TO HAVE NO MORE THAN A 1:50 SLOPE IN ALL DIRECTIONS.
  - ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 SLOPE FOR THE WIDTH OF THE SIDEWALK.
  - IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER PRIOR TO POURING ANY CONCRETE SO THAT A SOLUTION CAN BE FOUND.
  - SPOT ELEVATIONS ARE GIVEN AT A MAJORITY OF THE MAJOR BREAK POINTS, BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.

**IMPERVIOUS AREA**

EXISTING IMPERVIOUS AREA:	0.00 ACRES
PROPOSED IMPERVIOUS AREA:	1.11 ACRES (46.1%)

**LEGEND**

	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	DISTURBED/CLEARING LIMIT LINE
	DRAINAGE AREA LINE
	PROPOSED TOP OF CURB ELEVATION
	PROPOSED GROUND/PAVEMENT ELEVATION
	BMP MAINTENANCE AND ACCESS EASEMENT

**STORM DRAINAGE CHART**

**MAJOR DRAINAGE STRUCTURE SCHEDULE (DESIGN)**

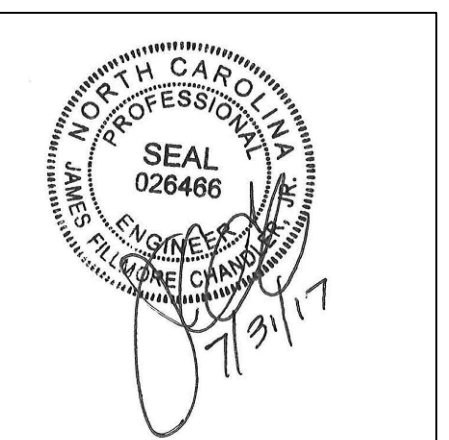
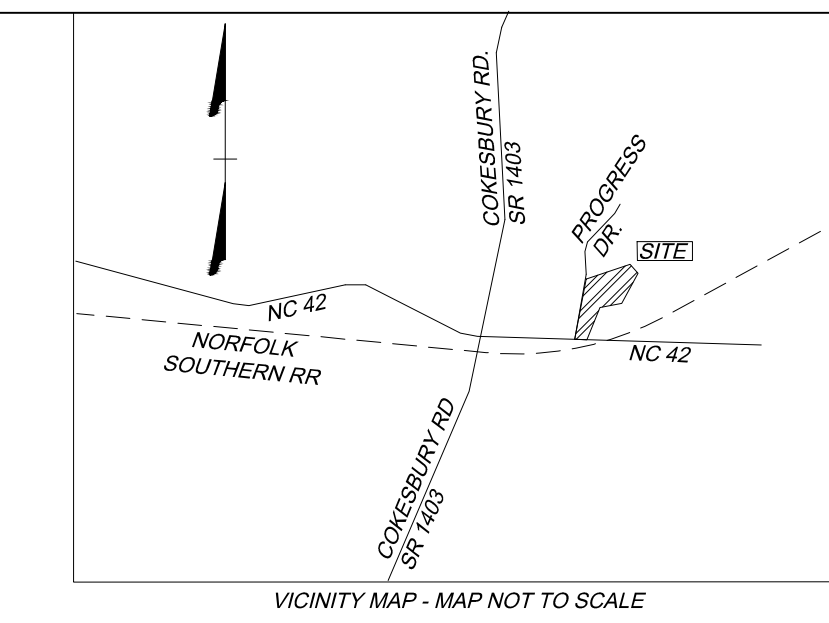
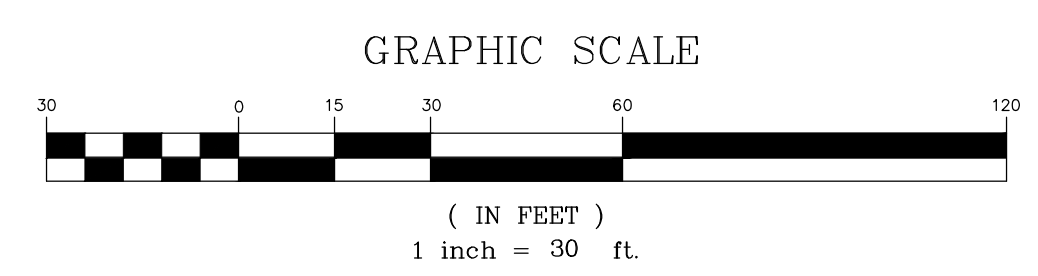
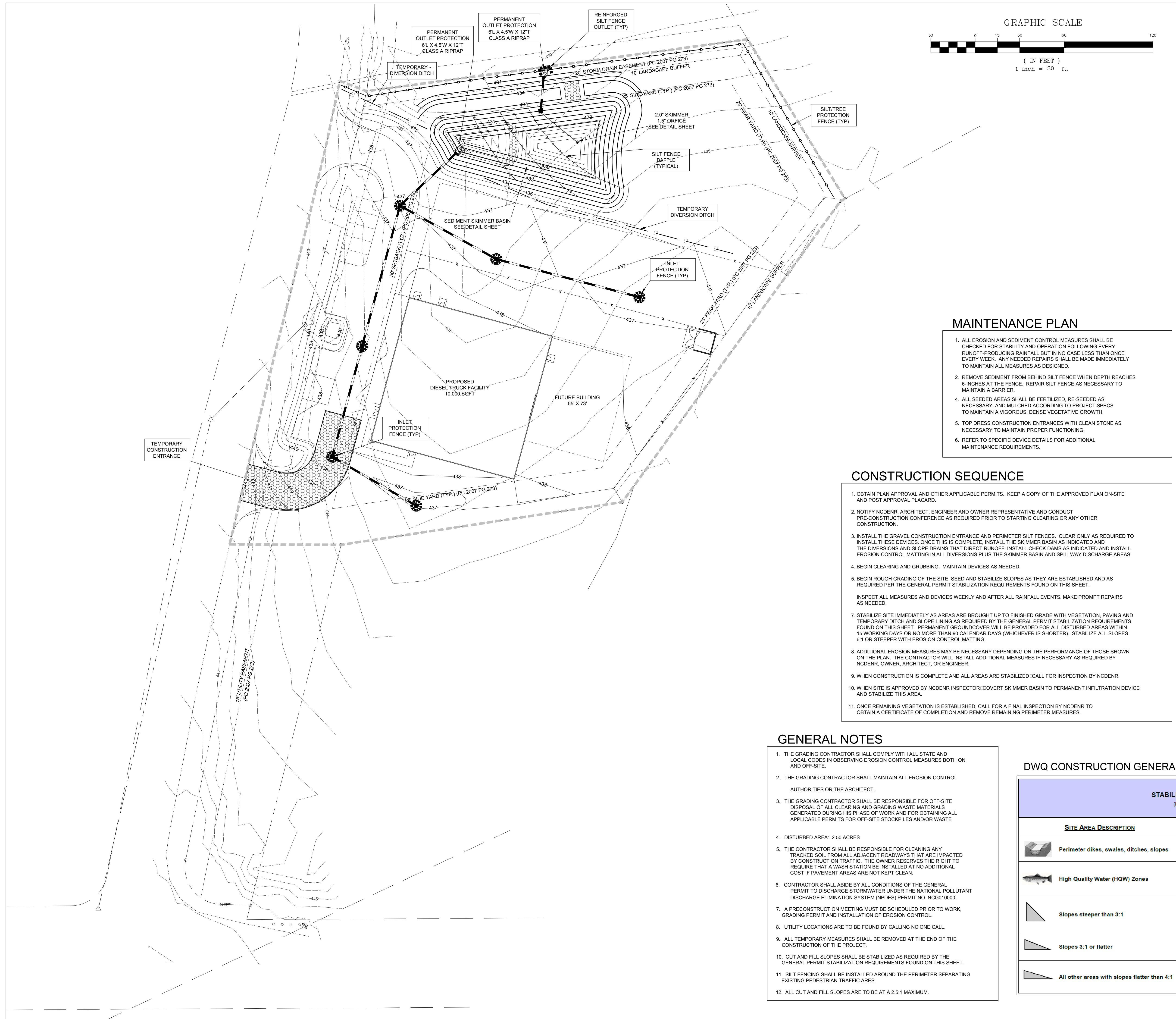
STRUCTURE NO.	PIPE SLOPE	PIPE DIA. (N)	PIPE LENGTH (FT)	PIPE MATRL	UPPER INV. (FT)	LOWER INV. (FT)	UPSTREAM STRUCTURE DATA
UP STRM	DN STRM						DEPTH (FT) TYPE
1	2	1.08%	15	65	433.75	433.05	436.25 2.50 DI
2	3	0.99%	15	77	433.05	432.29	437.25 4.20 DI
3	4	1.09%	18	98	432.29	431.22	437.19 4.90 DI
4	5	1.38%	18	52	431.22	430.50	436.72 5.50 DI
6	7	1.03%	15	68	432.85	432.15	436.35 3.50 DI
7	4	0.97%	15	96	432.15	431.22	436.35 4.20 DI

**NOTES**  
TOP ELEV. OF DROP INLET (DI) IS TOP OF GRADE

**LEGEND**  
DI DROP INLET, SEE DETAIL SHEET  
① STRUCTURE IDENTIFICATION

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### MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6-INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
4. ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
5. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
6. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

### NCDENR SELF-INSPECTION PROGRAM

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED.

RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TAKE EFFECT OCTOBER 1, 2010.

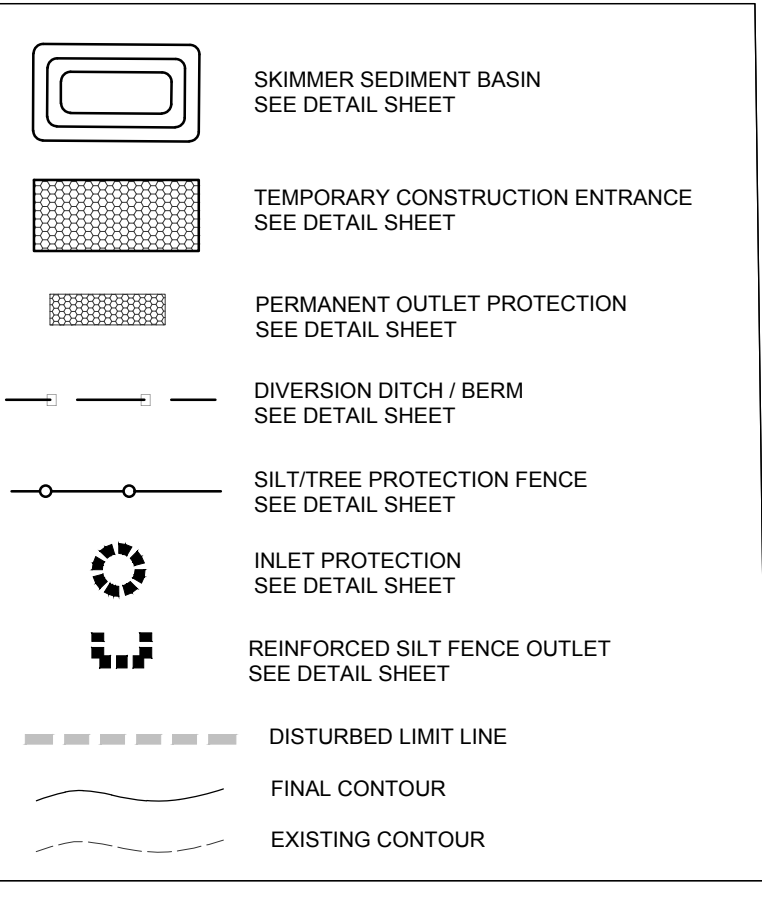
THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM THE LAND QUALITY WEB SITE.  
<http://portal.ncdenr.org/web/fr/erosion>

### CONSTRUCTION SEQUENCE

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS. KEEP A COPY OF THE APPROVED PLAN ON-SITE AND POST APPROVAL PLACARD.
2. NOTIFY NCDENR, ARCHITECT, ENGINEER AND OWNER REPRESENTATIVE AND CONDUCT PRE-CONSTRUCTION CONFERENCE AS REQUIRED PRIOR TO STARTING CLEARING OR ANY OTHER CONSTRUCTION.
3. INSTALL THE GRAVEL CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCES. CLEAR ONLY AS REQUIRED TO INSTALL THESE DEVICES. ONCE THIS IS COMPLETE, INSTALL THE SKIMMER BASIN AS INDICATED AND THE DIVERSIONS AND SLOPE DRAINS THAT DIRECT RUNOFF. INSTALL CHECK DAMS AS INDICATED AND INSTALL EROSION CONTROL MATTING IN ALL DIVERSIONS PLUS THE SKIMMER BASIN AND SPILLWAY DISCHARGE AREAS.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED.
5. BEGIN ROUGH GRADING OF THE SITE. SEED AND STABILIZE SLOPES AS THEY ARE ESTABLISHED AND AS REQUIRED PER THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
7. STABILIZE SITE IMMEDIATELY AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING AND TEMPORARY DITCH AND SLOPE LINING AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET. PERMANENT GROUND COVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER). STABILIZE ALL SLOPES 6:1 OR STEEPER WITH EROSION CONTROL MATTING.
8. ADDITIONAL EROSION MEASURES MAY BE NECESSARY DEPENDING ON THE PERFORMANCE OF THOSE SHOWN ON THE PLAN. THE CONTRACTOR WILL INSTALL ADDITIONAL MEASURES IF NECESSARY AS REQUIRED BY NCDENR, OWNER, ARCHITECT, OR ENGINEER.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED. CALL FOR INSPECTION BY NCDENR.
10. WHEN SITE IS APPROVED BY NCDENR INSPECTOR. COVERT SKIMMER BASIN TO PERMANENT INFILTRATION DEVICE AND STABILIZE THIS AREA.
11. ONCE REMAINING VEGETATION IS ESTABLISHED, CALL FOR A FINAL INSPECTION BY NCDENR TO OBTAIN A CERTIFICATE OF COMPLETION AND REMOVE REMAINING PERIMETER MEASURES.

### LEGEND



### GENERAL NOTES

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL AUTHORITIES OR THE ARCHITECT.
3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE.
4. DISTURBED AREA: 2.50 ACRES
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
6. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
7. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
8. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
9. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
10. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
11. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
12. ALL CUT AND FILL SLOPES ARE TO BE AT A 2.5:1 MAXIMUM.

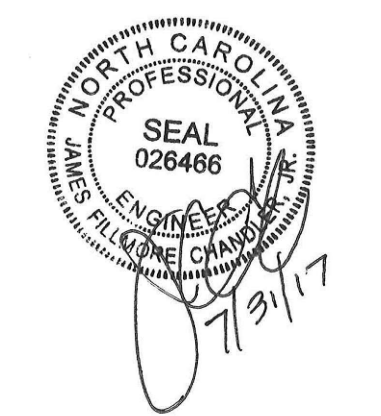
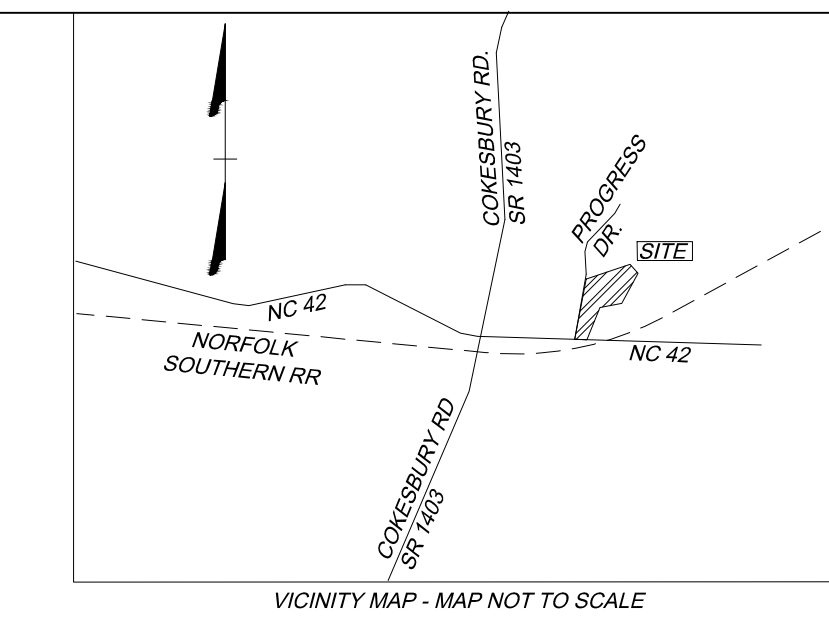
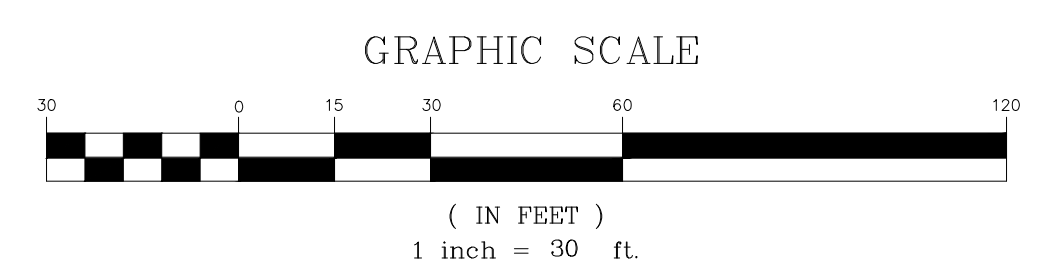
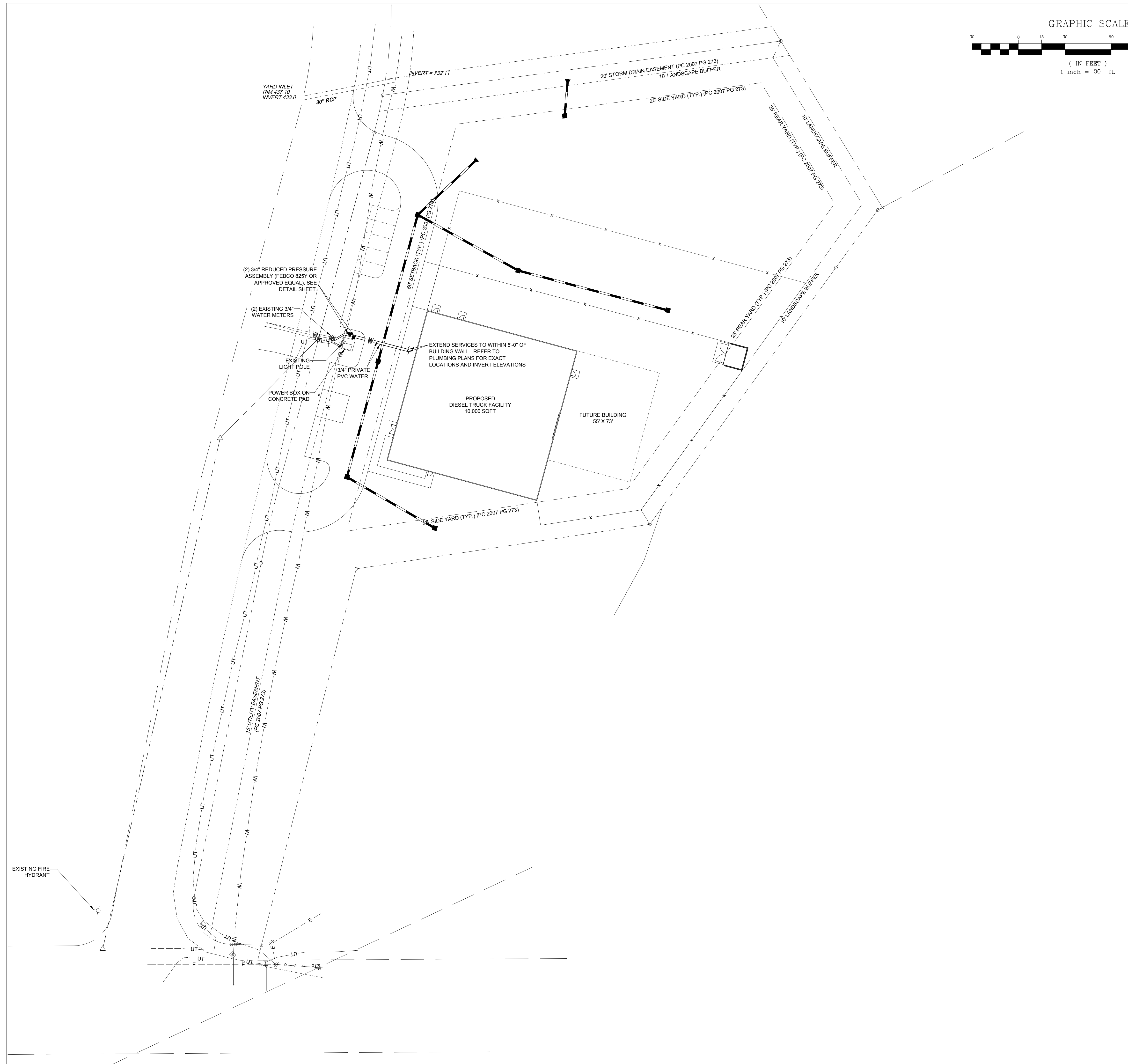
### DWQ CONSTRUCTION GENERAL PERMIT STABILIZATION REQUIREMENTS

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, 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' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1552  
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FLOUQUAY VARINA, NC  
**SEDIMENTATION AND EROSION CONTROL PLAN**

JOB NO.  
 39642  
 SHEET NO.  
 C4.01

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**WATER FLOW**

6 EMPLOYEES @ 25 GPD PER EMPLOYEE = 150 GPD

**SEWER FLOW**

ON-SITE SEPTIC PROPOSED

SEE SHEET C7.04 FOR UTILITY NOTES

**UTILITY LEGEND**

	EXISTING	PROPOSED
ELECTRICAL (OVERHEAD)	--- E ---	E
ELECTRICAL (UNDERGROUND)	--- UE ---	UE
FOUNDATION DRAIN	--- FD ---	FD
GAS	--- G ---	G
	--- SS ---	
TELEPHONE (OVERHEAD)	--- T ---	T
TELEPHONE (UNDERGROUND)	--- UT ---	UT
WATER	--- W ---	W
ROOF DRAIN	--- RD ---	RD
FORCE MAIN (SEWER)	--- FM ---	FM
FIRE PROTECTION	--- FP ---	FP
PLANTER DRAIN	--- PD ---	PD
CHILLED WATER	--- CW ---	CW
LIGHT POLE	LP	★
UTILITY POLE	PP	●
MANHOLE	MH	●
CLEAN OUT	CO	●
DROP INLET/CATCH BASIN	DI, CB	■
FIRE HYDRANT	FH	+
WATER VALVE	WV	+
POST INDICATOR VALVE		+
THRUST BLOCKING		+
STRUCTURE LABEL		□

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07/31/2017

DATE  
06/13/2017

DRAWN BY  
TSG

DESIGNED BY  
TSG

CHECKED BY  
JFC

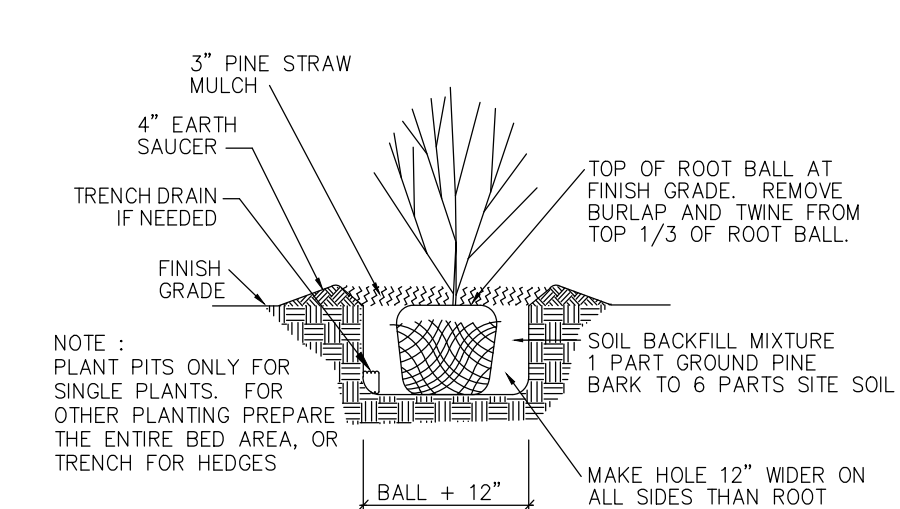
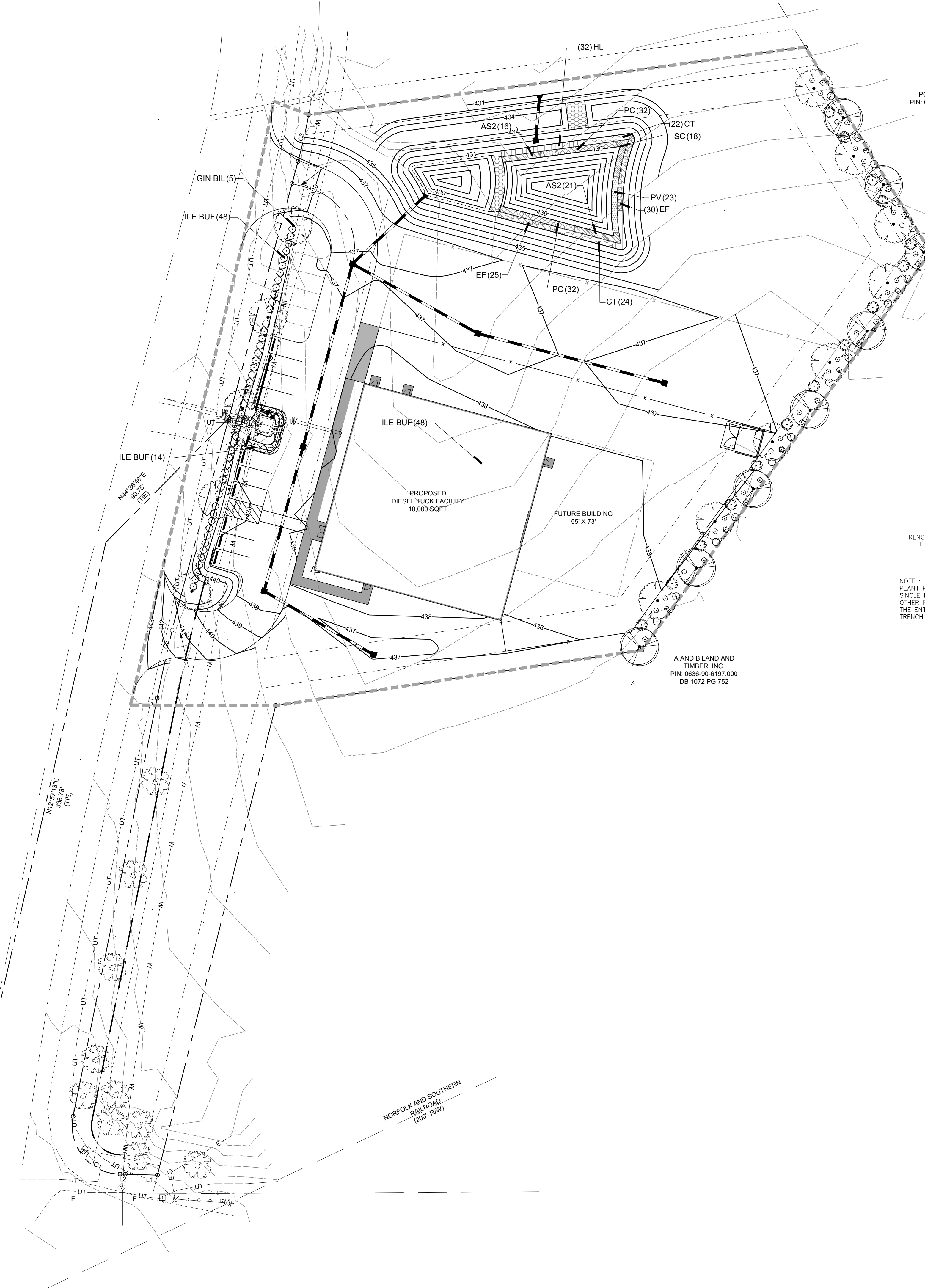
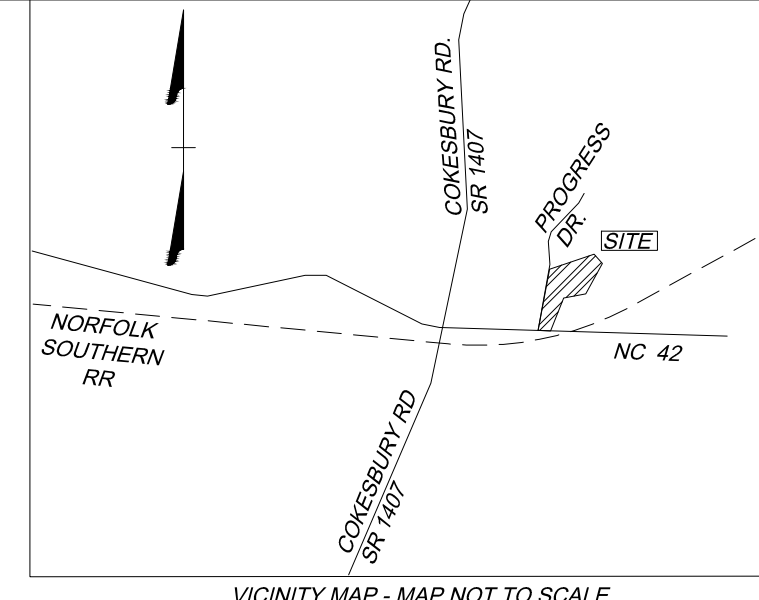
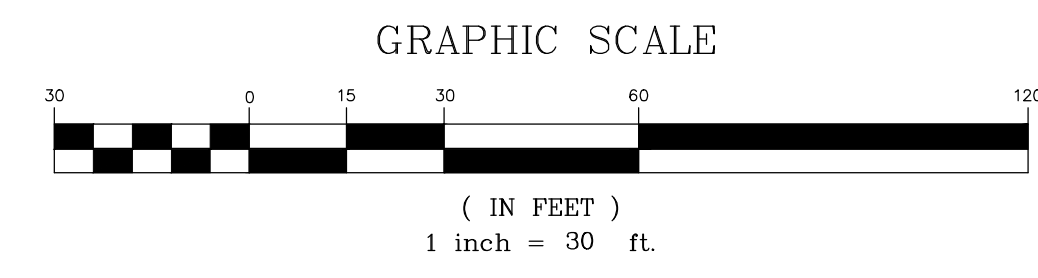
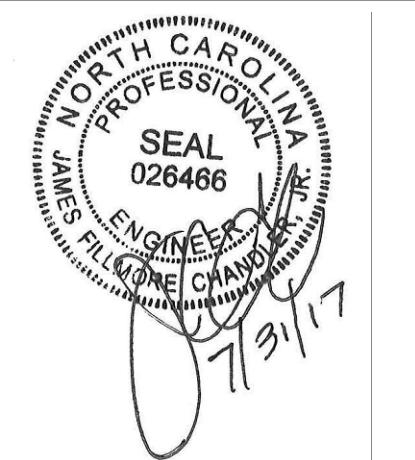
SCALE  
1" = 30'

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FUQUAY VARINA, NC  
**SITE UTILITY PLAN**

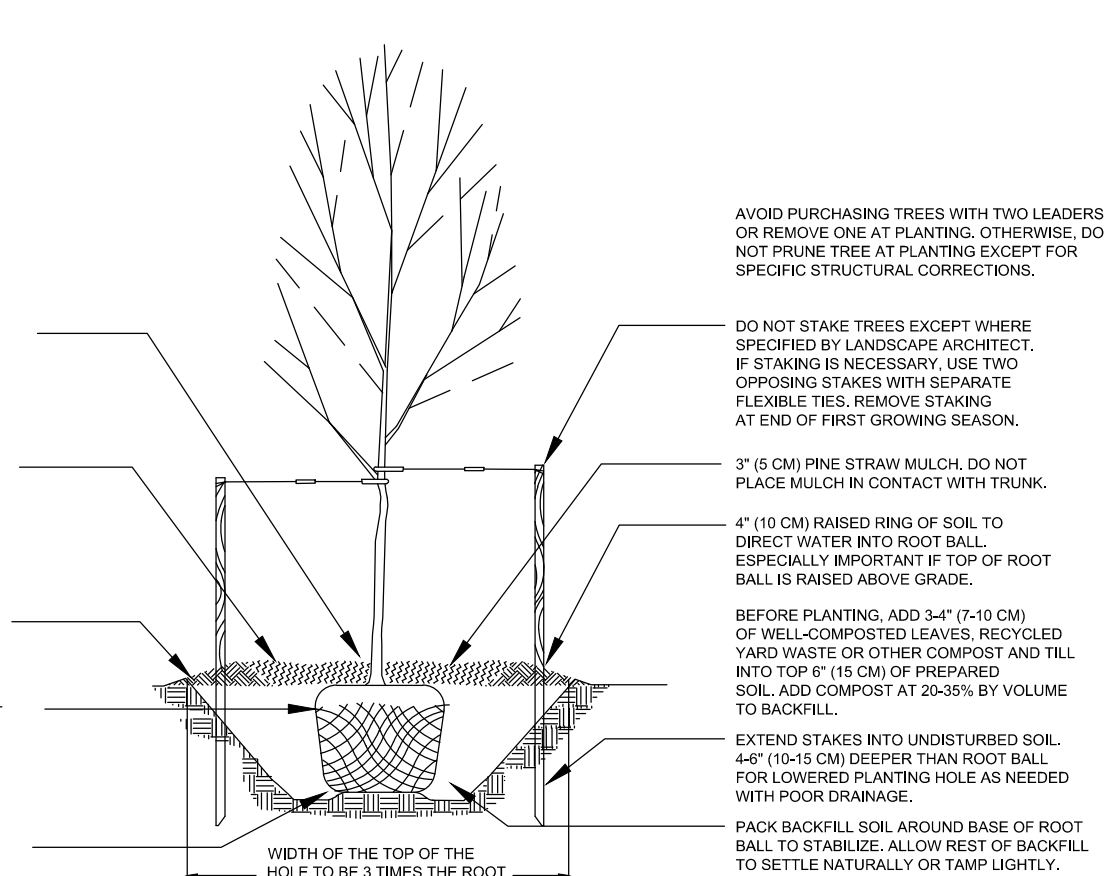
JOB NO.  
39642

SHEET NO.  
C5.01

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TYPICAL SHRUB PLANTING  
NO SCALE



TYPICAL TREE PLANTING  
NO SCALE

2017-06-15 11:43  
**PLANT SCHEDULE**

TREES	QTY	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT	REMARKS
ACE RE5	9	ACER RUBRUM	RED MAPLE	2.5" CAL.		
GIN BIL	14	GINKGO BILOBA	MAIDENHAIR TREE	2.5" CAL.		

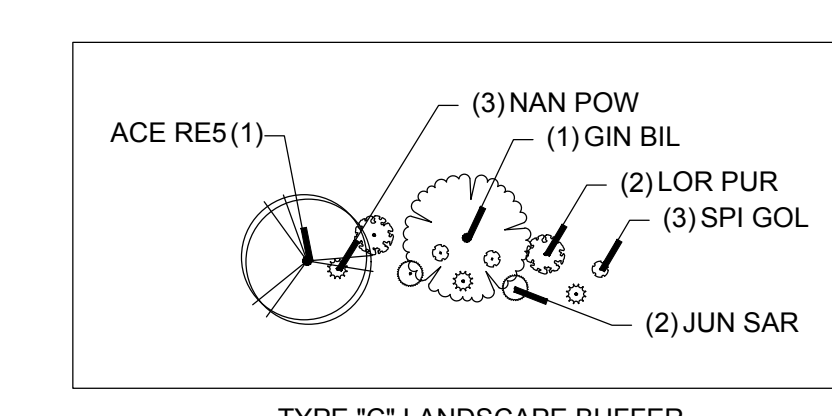
  

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
ILE BUF	62	ILEX CRENATA 'BUFFORDII'	BUFFORD HOLLY	18-24" HT/SPREAD		
JUN SAR	17	JUNIPERUS CHINENSIS 'SARGENT'	JUNIPER	24" SPRD	CONTAINER	
LOR PUR	17	LOROPETALUM CHINENSE 'PURPLE DIAMOND'	FRINGE FLOWER	2' HT	CONTAINER	
NAN POW	26	NANDINA DOMESTICA 'FIRE POWER'	FIREPOWER NANDINA	18" HT.		
SPI GOL	26	SPIRAEA JAPONICA 'GOLDMOUND'	SPIREA	18" HT/SPRD	CONTAINER	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT	SPACING
AS2	37	ACORUS SUBCORDATUM	SWEET FLAG	4" POT		24" O.C.
CT	46	CAREX TENERA	QUILL SEDGE	4" POT		24" O.C.
EF	55	EUPATORIADELPHUS FISTULOSUS	JOE PYE WEED	4" POT		24" OC
HL	52	HIBISCUS LAEVIS	MARSH HIBISCUS	4" POT		24" OC
PV	23	PELTANDRA VIRGINICA	ARROW ARUM	4" POT		24" OC
PC	64	PONTERDERIA CORDATA	PICKEREL WEED	4" POT		24" OC
SC	18	SCIRPUS CYPERINUS	WOOL GRASS	4" POT		24" OC

**LANDSCAPE CALCULATIONS**  
 STREET SCAPE BUFFER  
 REQUIRED: BROADLEAF EVERGREEN HEDGE 5' SPACING O.C.  
 LARGE TREE 50' O.C.  
 BUFFER REQUIRED: TYPE C  
 OFFSET ROW OF TREES 30' O.C.  
 SHRUB REQUIREMENT: 5/ PER TREE  
 ALL SPACES WITHIN 50' OF A SHADE TREE  
 SCREENED FROM RWS BY EVERGREEN HEDGING



TYPE "C" LANDSCAPE BUFFER

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REVISION DESCRIPTION	DATE
REVISED PER HARNETT COUNTY COMMENTS	07/31/2017
	06/13/2017

DRAWN BY  
**T.GRISSINGER**  
 DESIGNED BY  
**T.GRISSINGER**  
 CHECKED BY  
**J.CHANDLER**  
 SCALE  
 PER PLAN

**TIMMONS GROUP**

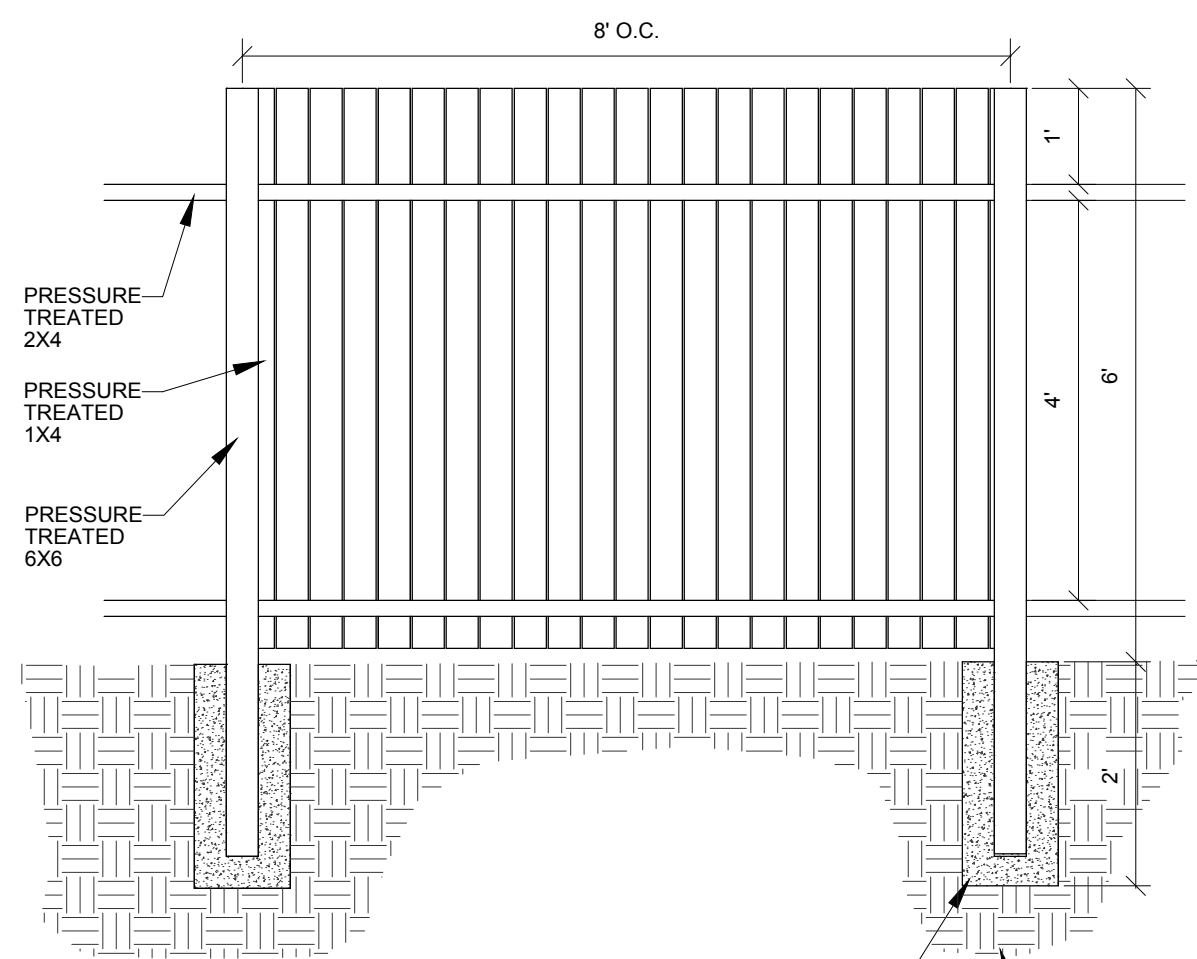
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FUQUAY-VARINA, NORTH CAROLINA

**SITE PLANTING PLAN**

JOB NO.  
**39642**

SHEET NO.  
**C6.01**

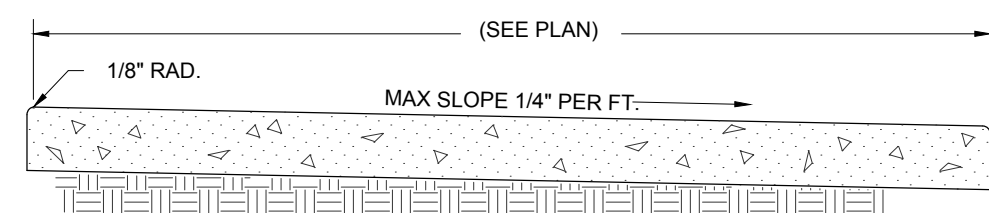
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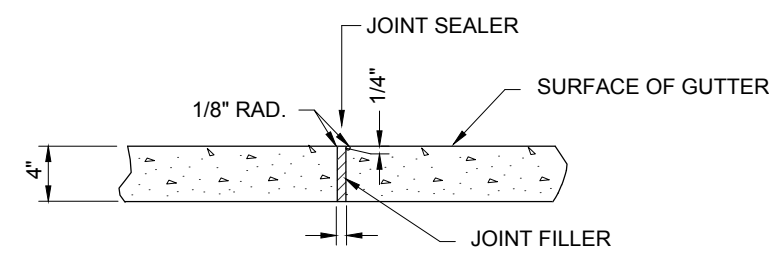
- NOTES**
- USE HOT DIPPED GALVANIZED RING SHANK NAILS TO FASTEN 1X4 VERTICALS TO HORIZONTAL RAILS.
  - PROVIDE 1/4" MAX. GAP BETWEEN 1/4" VERTICALS
  - PROVIDE 2" GAP BETWEEN BOTTOM OF 1X4 AND FINISH GRADE.
  - ALL MATERIALS TO BE PRESSURE-TREATED TO GROUND CONTACT QUALITY.

CONCRETE FOOTINGS  
2,800 PSI @ 28 DAYS  
UNDISTURBED OR COMPACTED SOIL

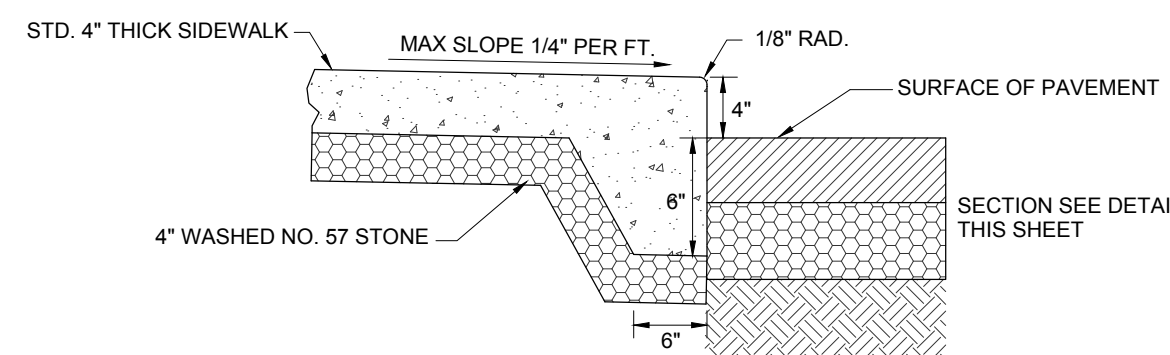
**OPAQUE WOODEN FENCE**  
NOT TO SCALE



**SECTION VIEW**

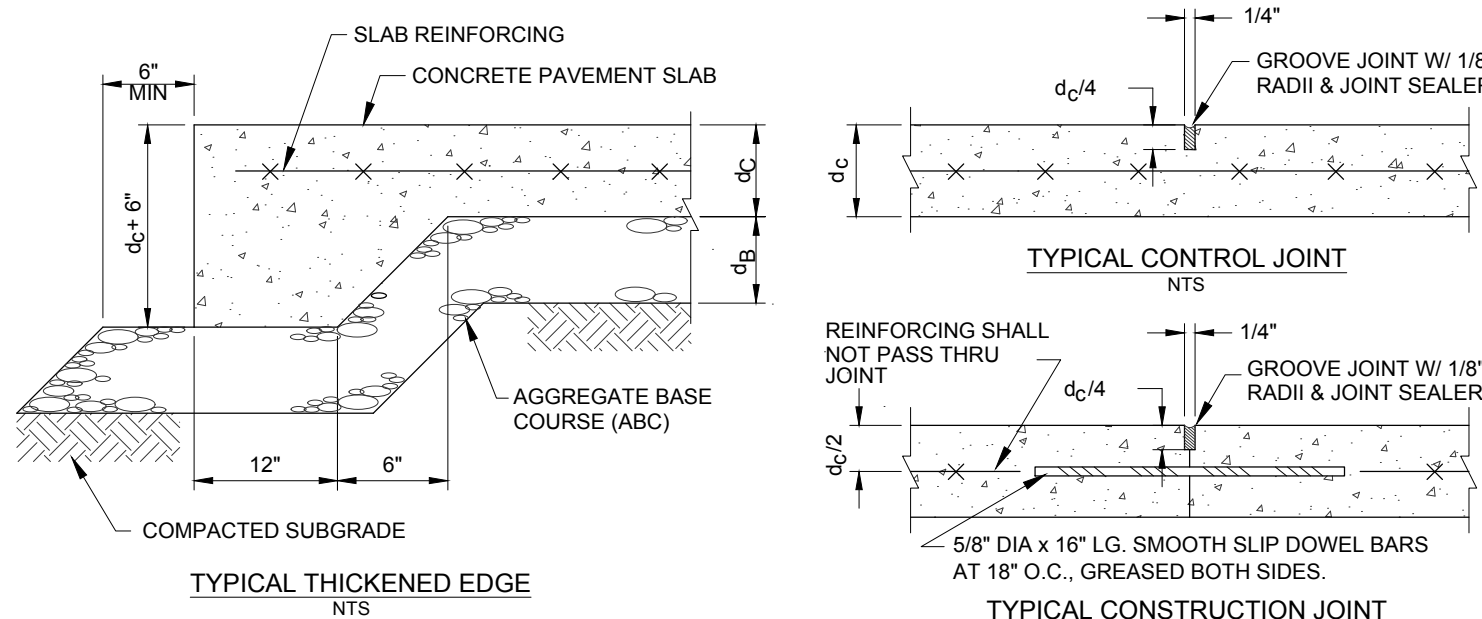


**TRANSVERSE EXPANSION JOINT**



**SECTION OF SIDEWALK ABUTTING PAVEMENT**

**TYPICAL CONCRETE SIDEWALK**  
NOT TO SCALE



**TYPICAL THICKENED EDGE**

**TYPICAL CONSTRUCTION JOINT**

CONCRETE PAVEMENT DIMENSIONS	LIGHT	HEAVY
CONC SLAB THICKNESS, $d_c$ "	4"	6"
ABC THICKNESS, $d_b$ "	4"	6"
REINFORCEMENT = 6x6-W2.9xW2.9		

**NOTES:**

- ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI (ASTM C39) WITH ENTRAINED AIR BETWEEN 4% AND 6%.
- CONTRACTION JOINTS SHALL BE SPACED AT 15 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN.
- EXPANSION JOINTS SHALL BE SPACED AT 50 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN AND WHERE CONCRETE PAVEMENT ABUTS ANY RIGID OBJECT.

**CONCRETE PAVEMENT**  
NOT TO SCALE

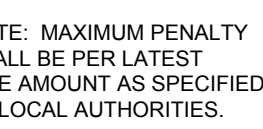
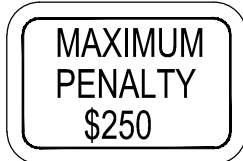
	HEAVY DUTY	LIGHT DUTY	GRAVEL
TYPE SF-9.5A SURFACE COURSE	2.5-IN	2-IN	-
AGGREGATE BASE COURSE	8-IN	6-IN	6-IN

**NOTES:**

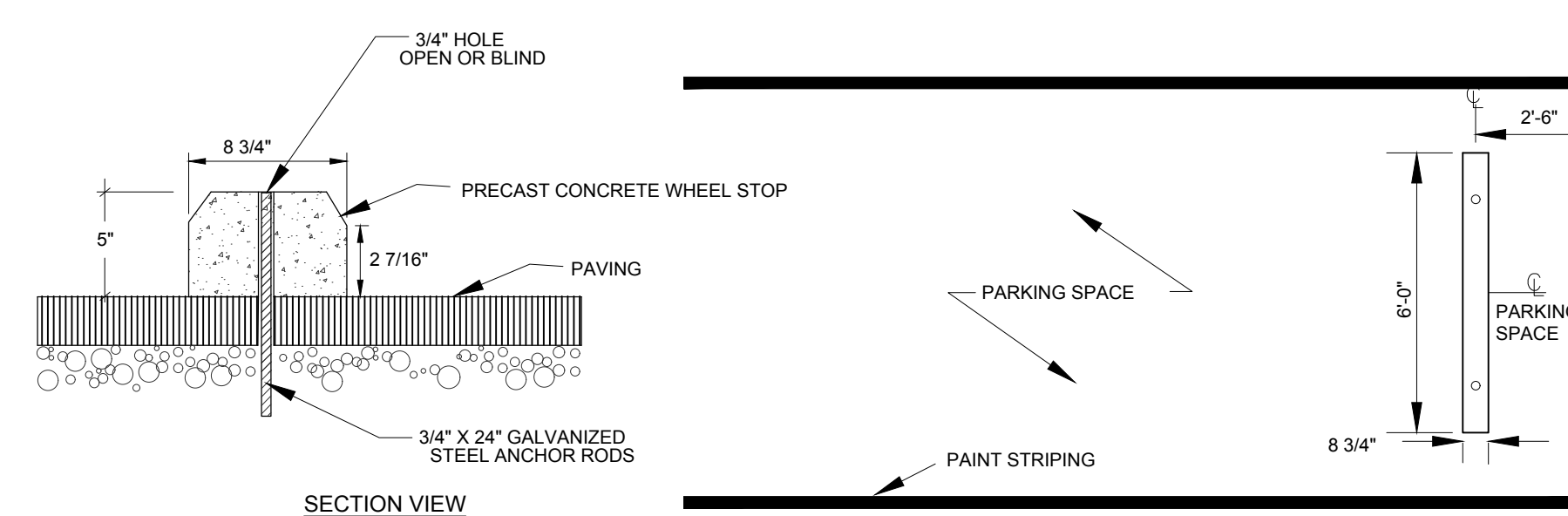
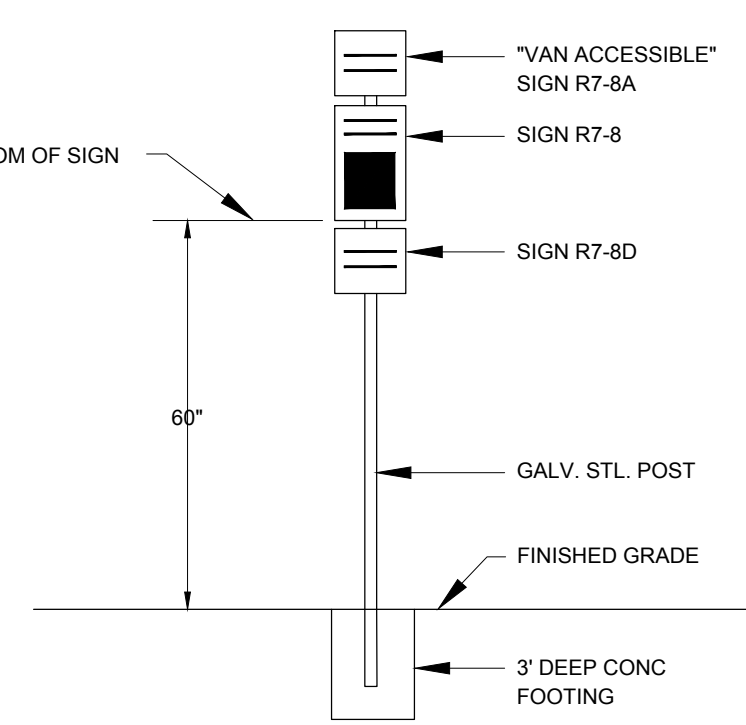
- PREPARING, GRADING, SHAPING, AND COMPACTION OF SUBGRADE SOILS SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 501 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PREPARING, GRADING, SHAPING, AND COMPACTION OF AGGREGATE BASE COURSE (ABC) STONE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 520 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PLACEMENT AND COMPACTION OF THE BITUMINOUS CONCRETE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 6, SECTION 600 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PROPER SUBGRADE COMPACTION, ADHERENCE TO THE NCDOT SPECIFICATIONS, AND COMPLIANCE WITH PROJECT PLANS AND SPECIFICATIONS ARE CRITICAL TO THE PERFORMANCE OF THE CONSTRUCTED PAVEMENT.
- THE CONTRACTOR MAY CHOOSE TO INSTALL INTERMEDIATE COURSES OF PAVEMENT TO STABILIZE THE SITE DURING CONSTRUCTION AT NO ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ADEQUATE THICKNESS REQUIRED FOR INTERMEDIATE PAVING. INCREASES IN THE DESIGN PAVEMENT SECTION TO FACILITATE INTERMEDIATE PAVING SHALL BE PROVIDED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGES TO SUBGRADE, INSTALLED BASE COURSE AND/OR INTERMEDIATE PAVING PRIOR TO PLACING SUBSEQUENT PAVEMENT LIFTS AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.

**ASPHALT PAVEMENT SECTION**  
NOT TO SCALE

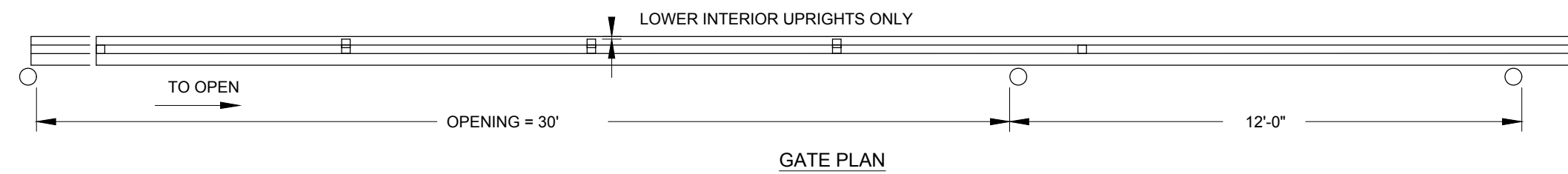
ALL SIGNS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, NCSCC AND ADA SPECIFICATIONS AND REQUIREMENTS.



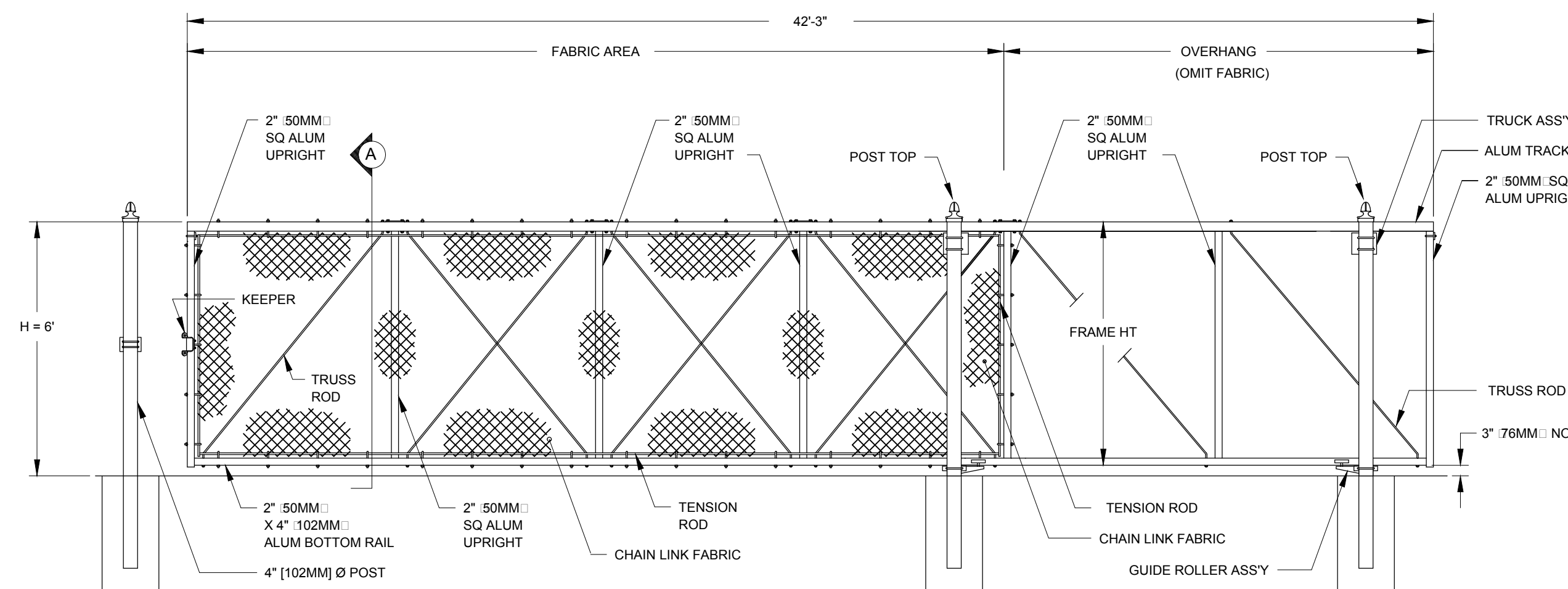
**ACCESSIBLE PARKING SIGNAGE**  
NOT TO SCALE



**PRE-CAST CONCRETE WHEELSTOP**  
NOT TO SCALE



**GATE PLAN**

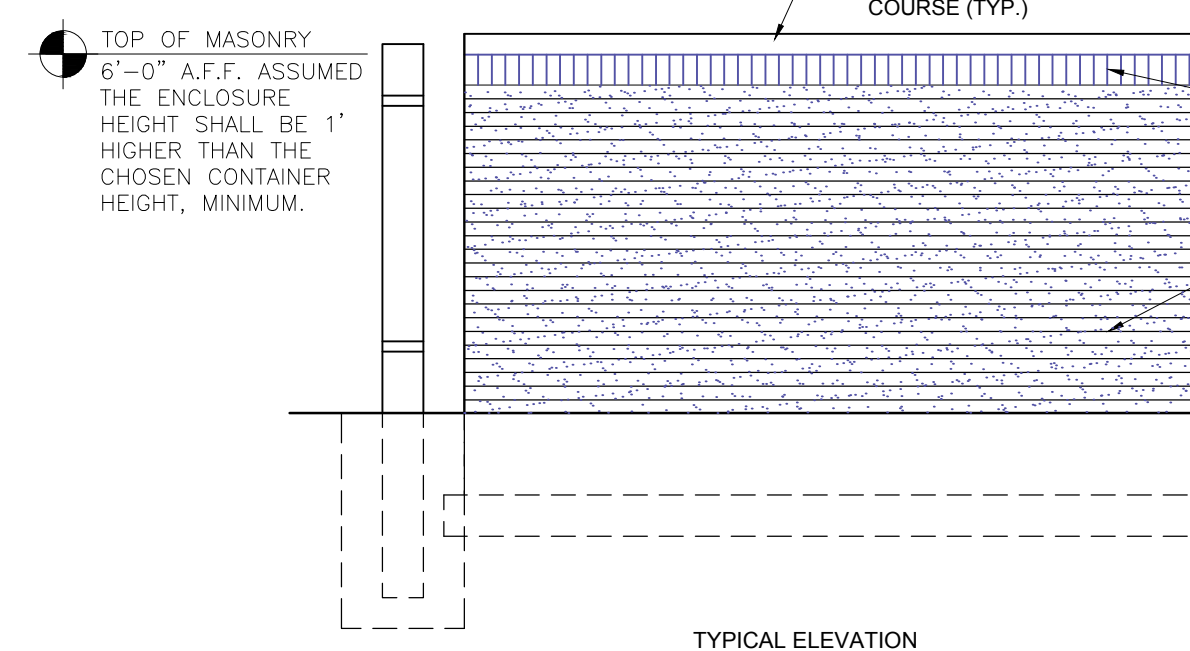


**GATE ELEVATION**

**SINGLE CANTILEVERED SLIDING GATE**  
NOT TO SCALE

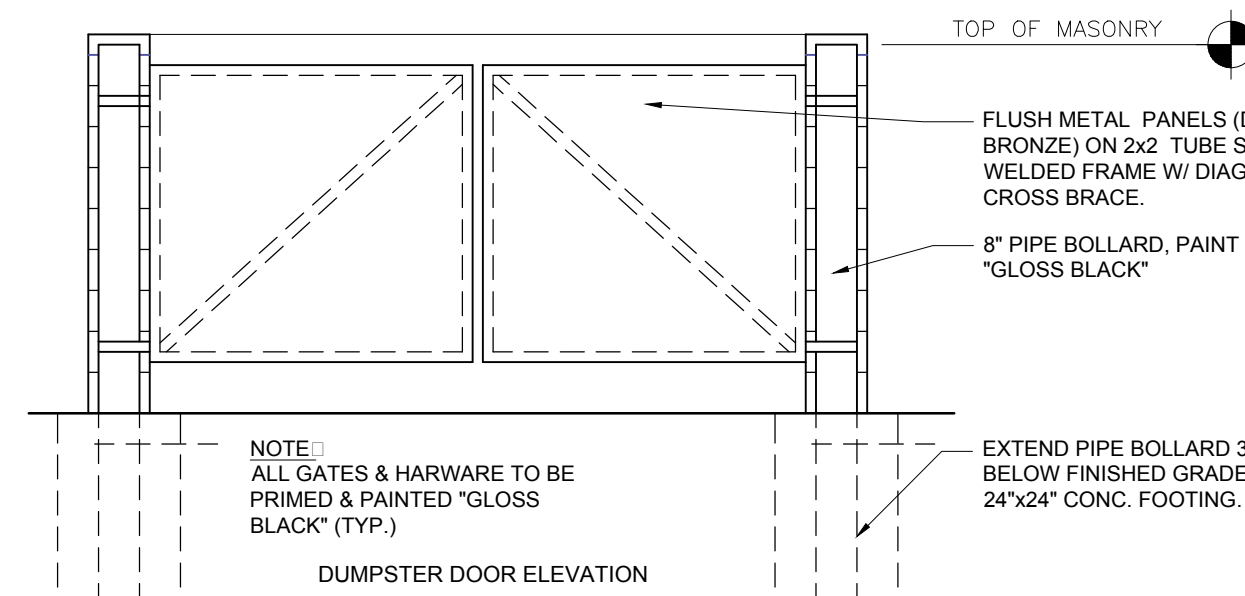
**NOTES:**

- METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
- SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
- FOOTING WIDTH TO BE (4)X POST WIDTH. MIN DEPTH TO BE 36" 914MM.
- GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES (PROVIDE HARDWARE FOR MANUALLY OPERATED GATES).
- DWGS FOR DOUBLE OPENING GATES AVAILABLE ON REQUEST.
- DETAIL INFORMATION PROVIDED BY ANCHOR FENCING, INC.



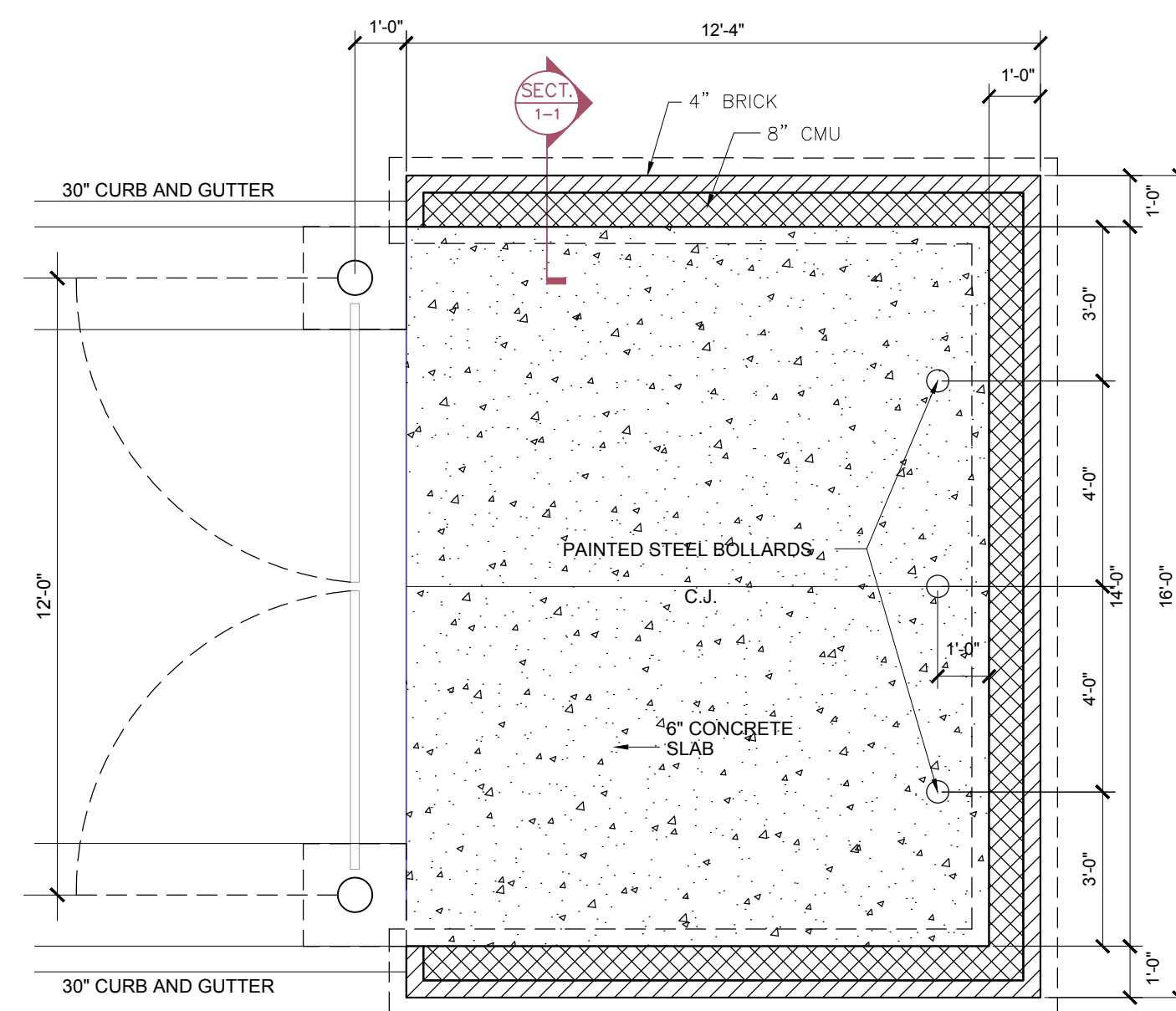
**TYPICAL ELEVATION**

**NOTE:**  
DUMPSTER SCREENING SHOWN IN THIS PLAN SUBMITTAL IS FOR APPROVAL OF SIZE & APPEARANCE ONLY. ALL CONSTRUCTION DETAILS SHALL BE APPROVED BY THE BUILDING DEPARTMENT AT TIME WHICH PROJECT IS SUBMITTED FOR PERMITTING.

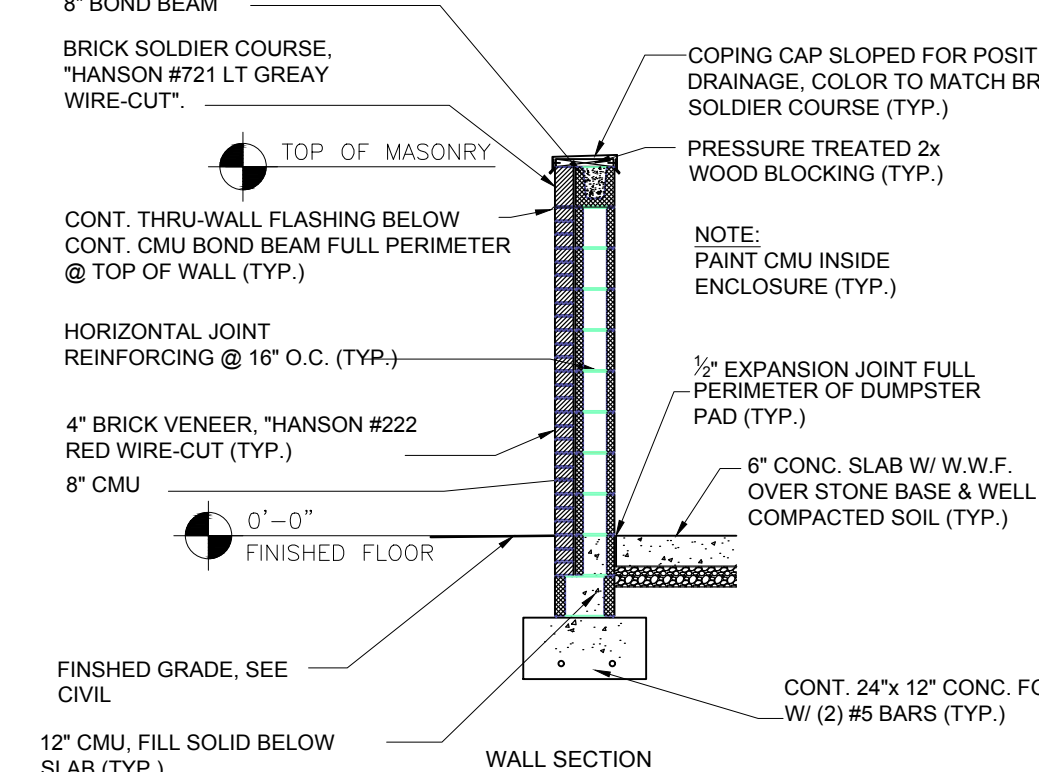


**NOTE:**  
ALL GATES & HARDWARE TO BE PRIMED & PAINTED "GLOSS BLACK" (TYP.)

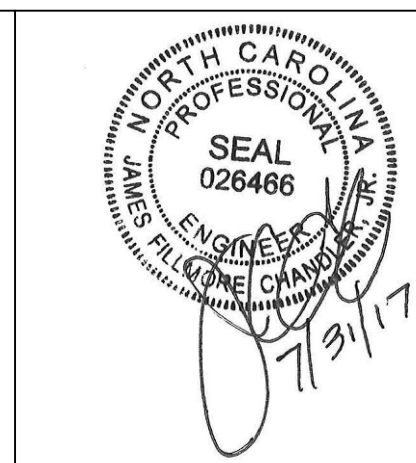
**DUMPSTER PLAN AND SECTION**  
NOT TO SCALE



**PLAN**



**WALL SECTION 1-1**



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**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
**CAROLINA DIESEL TRUCKS**  
HARNETT COUNTY, FLUQUAY VARINA, NC

JOB NO.  
39642  
SHEET NO.  
C7.01

REVISION DESCRIPTION  
REVISED PER HARNETT COUNTY COMMENTS

DETAILS SHEET

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Temporary Seeding Recommendations for Late Winter and Early Spring

Seeding mixture Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

**Seeding dates**  
Mountains—Above 2500 feet: Feb. 15 - May 15  
Below 2500 feet: Feb. 1 - May 1  
Piedmont—Jan. 1 - May 1  
Coastal Plain—Dec. 1 - Apr. 15

**Soil amendments**  
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch**  
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**Maintenance**  
Refer to growth if not fully adequate. Reseed, refer to growth and mulch immediately following erosion or other damage.

Temporary Seeding Recommendations for Summer

Seeding mixture Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

**Seeding dates**  
Mountains—May 15 - Aug. 15  
Piedmont—May 1 - Aug. 15  
Coastal Plain—Apr. 15 - Aug. 15

**Soil amendments**  
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch**  
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**Maintenance**  
Refer to growth if not fully adequate. Reseed, refer to growth and mulch immediately following erosion or other damage.

Temporary Seeding Recommendations for Fall

Seeding mixture Species	Rate (lb/acre)
Rye (grain)	120

**Seeding dates**  
Mountains—Aug. 15 - Dec. 15  
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

**Soil amendments**  
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

**Mulch**  
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**Maintenance**  
Repair and refer to growth immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

**Specifications**

Complete grading before preparing seedbeds, and install all necessary erosion control practices such as, dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion hazard. If soils become compacted during grading, loosen them to a depth of 6-8 inches using a ripper, harrow, or chisel plow.

**SEEDBED PREPARATION**

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well-pulverized, loose, and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

**Liming**—Apply lime according to soil recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 1/2 tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

**Fertilizer**—Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

**Surface roughening**—If recent tillage operations have resulted in a loose surface, additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Groove or furrow slopes steeper than 3:1 on the contour before seeding (Practice 6.03, Surface Roughening).

**PLANT SELECTION**

Select an appropriate species or species mixture from Table 6.10a for seeding in late winter and early spring, Table 6.10b for summer, and Table 6.10c for fall.

In the Mountains, December and January seedings have poor chances of success. When it is necessary to plant at these times, use recommendations for fall and a securely tacked mulch.

**SEEDING**

Evenly apply seed using a cyclone seeder (broadcast), drill, cultipacker seeder, or hydroseeder. Use seeding rates given in Tables 6.10a-6.10c. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot be driven. Hand distributing is not recommended because of the difficulty in achieving a uniform distribution.

Small grains should be planted no more than 1 inch deep, and grasses and legumes no more than 1/2 inch. Broadcast seed must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker. Hydroseeded mixtures should include a wood fiber (cellulose) mulch.

**MULCHING**

The use of an appropriate mulch will help ensure establishment under normal conditions, and is essential to seeding success under harsh site conditions (Practice 6.14, Mulching). Harsh site conditions include:

- seeding in fall for winter cover (wood fiber mulches are not considered adequate for this use),
- slopes steeper than 3:1,
- excessively hot or dry weather,
- adverse soils (shallow, rocky, or high in clay or sand), and
- areas receiving concentrated flow.

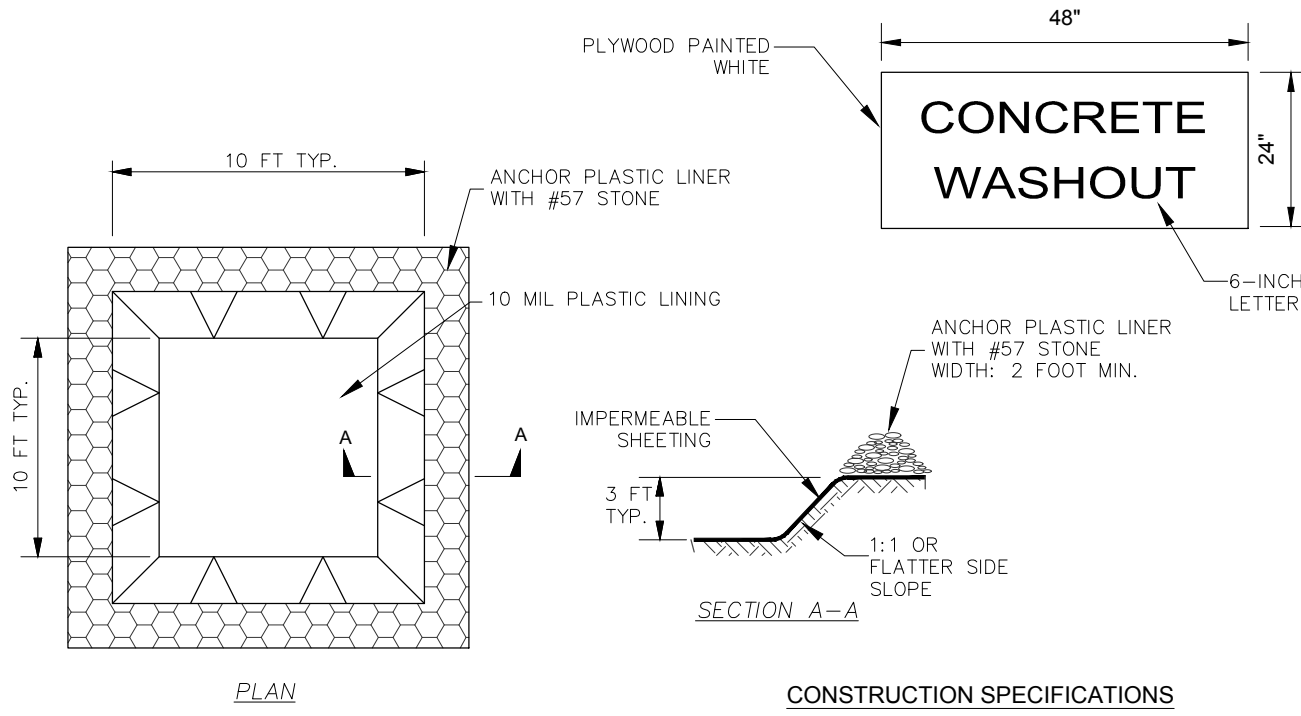
If the area to be mulched is subject to concentrated waterflow, as in channels, anchor mulch with netting (Practice 6.14, Mulching).

**Maintenance**

Reseed and mulch areas where seedling emergence is poor, or where erosion occurs, as soon as possible. Do not mow. Protect from traffic as much as possible.

TEMPORARY SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SEE MANUAL FOR ADDITIONAL INFORMATION.

**TEMPORARY SEEDING SCHEDULE**



**CONSTRUCTION SPECIFICATIONS**

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
  2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP. MINIMUM CAPACITY IS 6 CF PER 10 CY OF CONCRETE.
  3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
  4. PROVIDE AND MOUNT A SIGN FOR THE WASHOUT WITHIN 30 FEET OF THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

**CONCRETE WASHOUT PIT DETAIL**

NOT TO SCALE

Well-Drained Sandy Loams to Dry Sands, Coastal Plain and Eastern Edge of Piedmont; Low- to Medium-Care Lawns

Seeding mixture Species*	Rate
Centipedegrass	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 fertilizer.

**Sprigging**

Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.

Furrows should be 4-6 inches deep and 2 feet apart. Place sprigs about 2 feet apart in the row with one end at or above ground level (Figure 6.11d).

**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.

\*Refer to Appendix 8.02 for botanical names.

PERMANENT SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SEE MANUAL FOR ADDITIONAL INFORMATION.

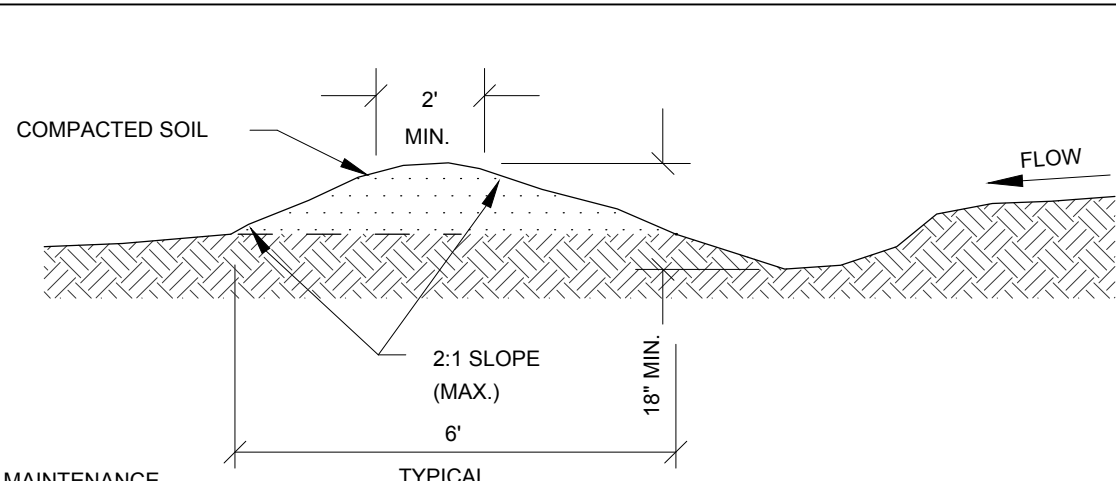
**SEEDBED PREPARATION**

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES 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 CULTIPACKER AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH IF SPECIFIED.
8. INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT SAEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
10. SEE SECTION 6.11 OF "NCDENR EROSION CONTROL PLANNING AND DESIGN MANUAL" FOR ADDITIONAL INFORMATION REGARDING MATERIALS, CONSTRUCTION AND SPECIFICATIONS.

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%  
IF SPECIFIED  
MULCH - 2 TONS/ACRE - SMALL GRASS STRAW  
ANCHOR - ASPHALT EMULSION @ 300 GALS/ACRE

**PERMANENT SEEDING SCHEDULE**

TEMPORARY SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SEE MANUAL FOR ADDITIONAL INFORMATION.



**CONSTRUCTION SPECIFICATIONS**

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIALS.

2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.

3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.

4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.

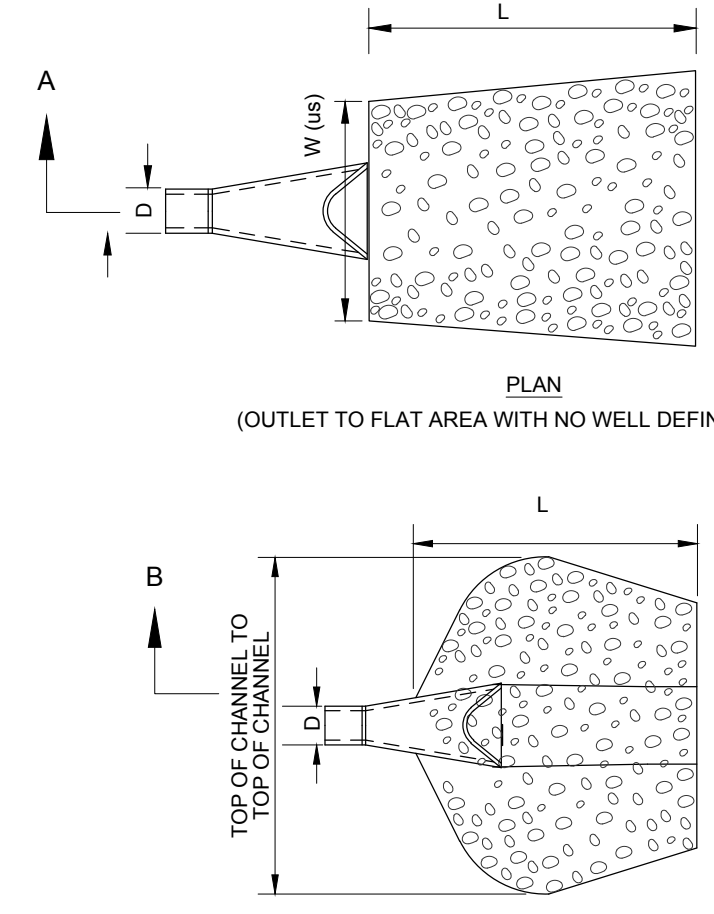
5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.

**TEMPORARY DIVERSION BERM/DITCH**

NOT TO SCALE

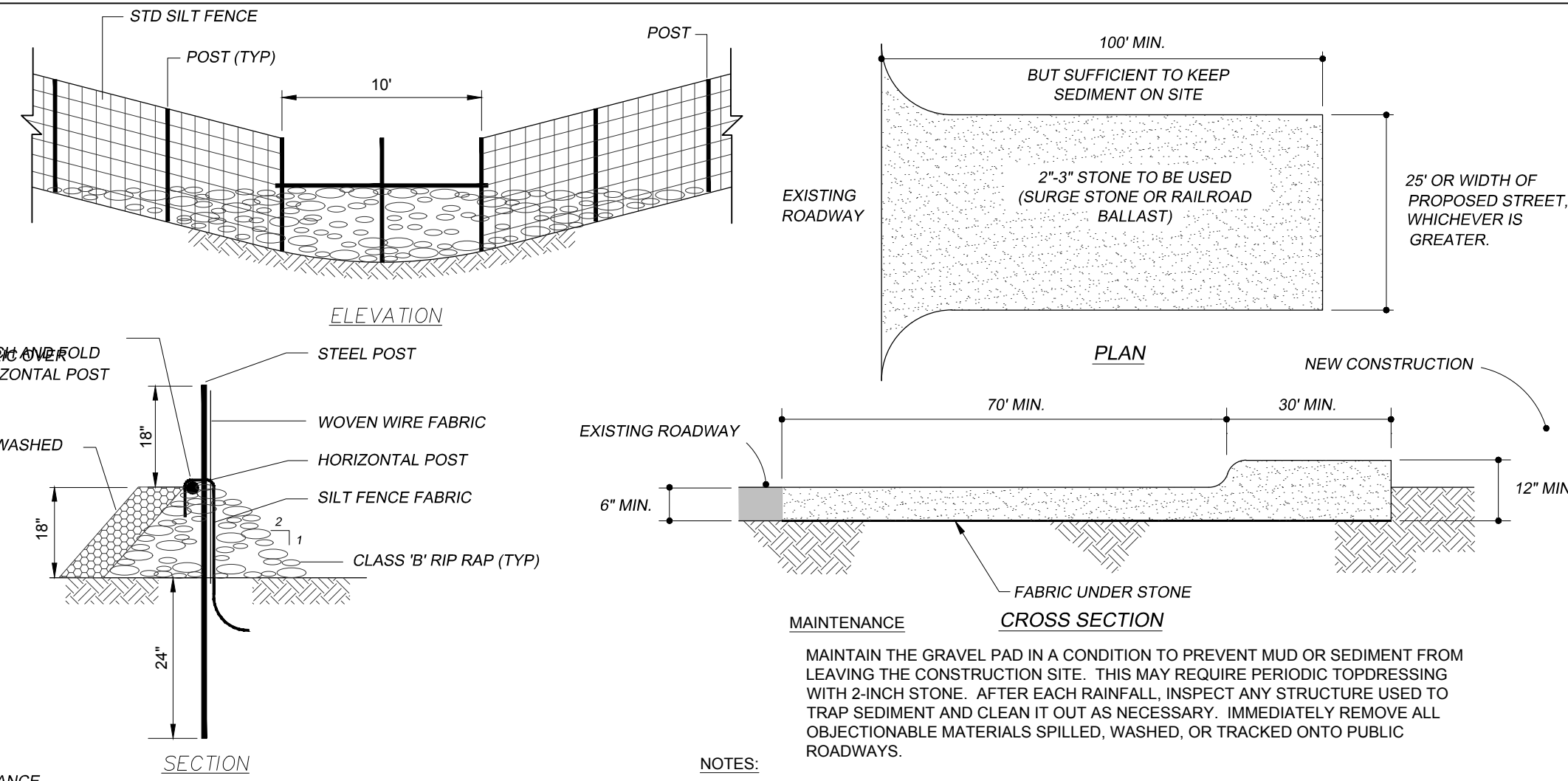
**REINFORCED SILT FENCE OUTLET**

NOT TO SCALE



**OUTLET PROTECTION**

NOT TO SCALE

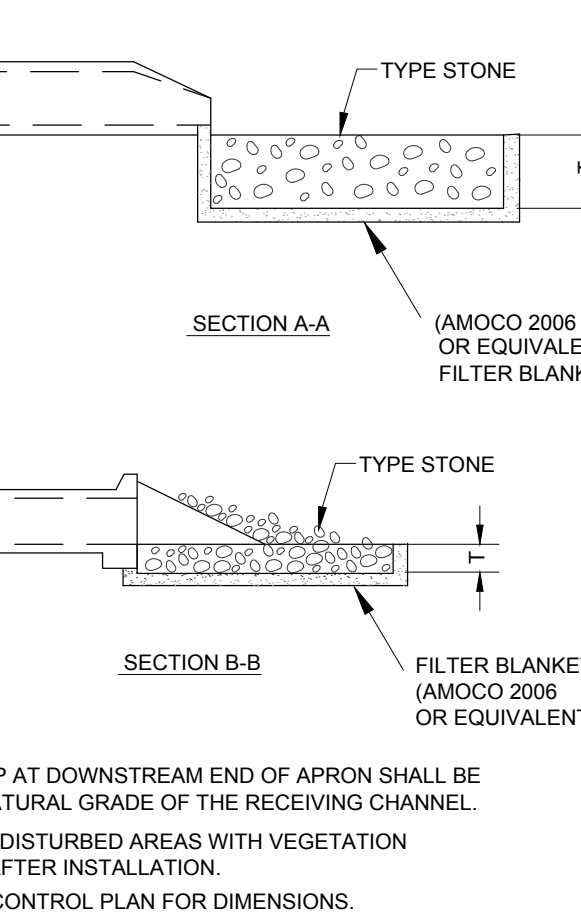


**TEMPORARY CONSTRUCTION ENTRANCE**

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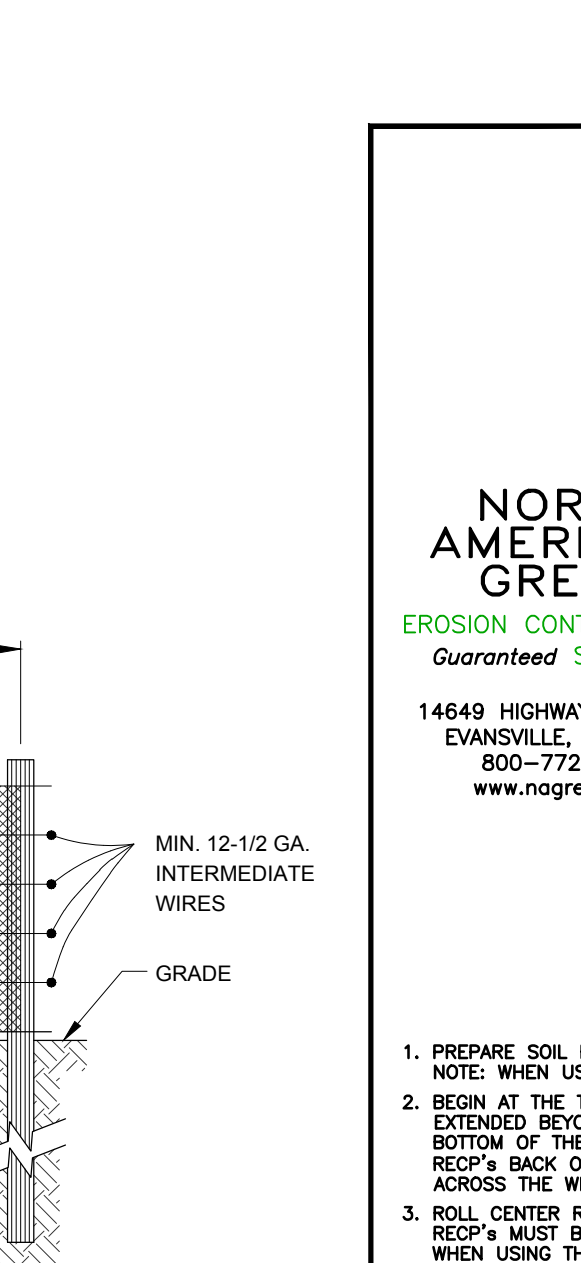
**TEMPORARY INLET PROTECTION**

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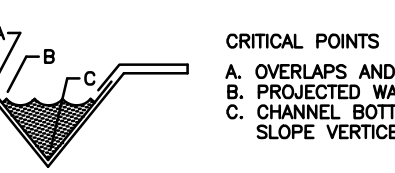
**CHANNEL INSTALLATION**

NOT TO SCALE



**STANDARD TEMPORARY SILT FENCE**

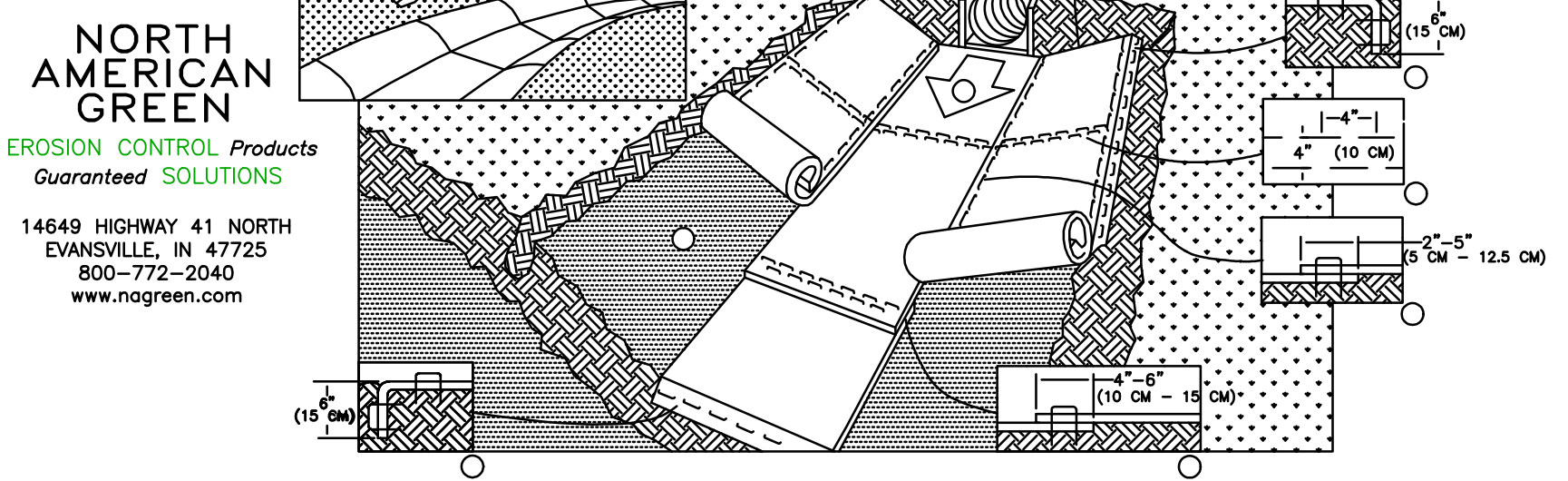
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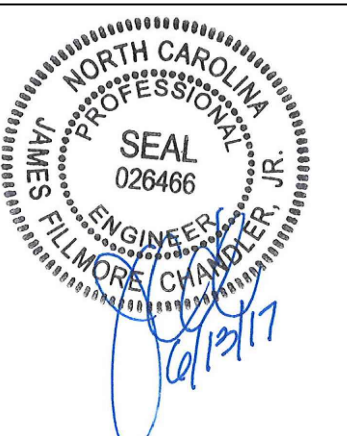
**CRITICAL POINTS**

- A. OVERLAPS AND SEAMS
- B. PROJECTED WATER LINE
- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

\* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.  
\*\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDING BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING; APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP'S.
  3. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP'S.
  5. FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH AN OVER END (SHINGLE STYLE) APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
  6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) (DEPENDS ON RECP'S TYPE) AND STAPLED.
  7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FEET (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
  8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- NOTE:  
\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.



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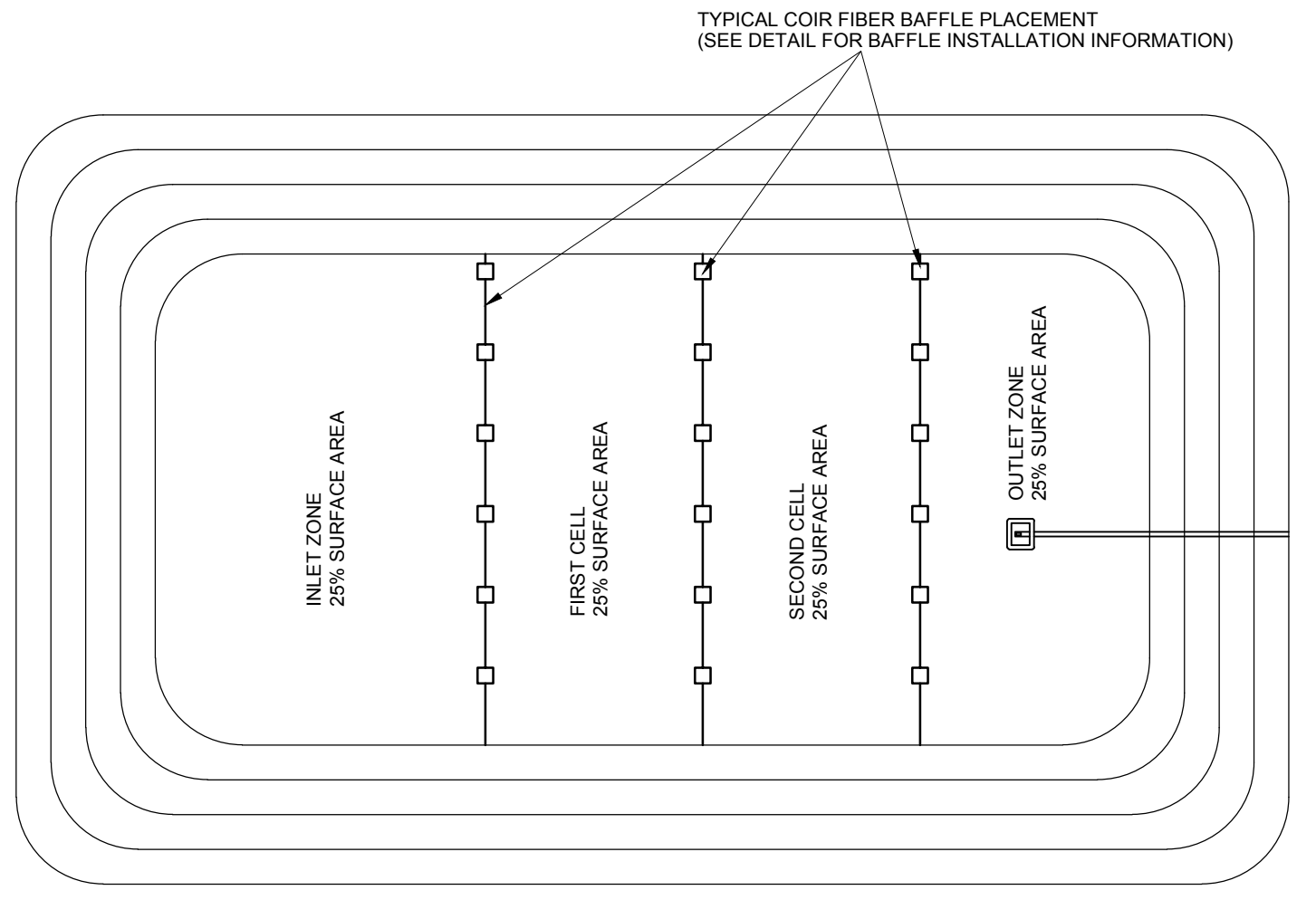
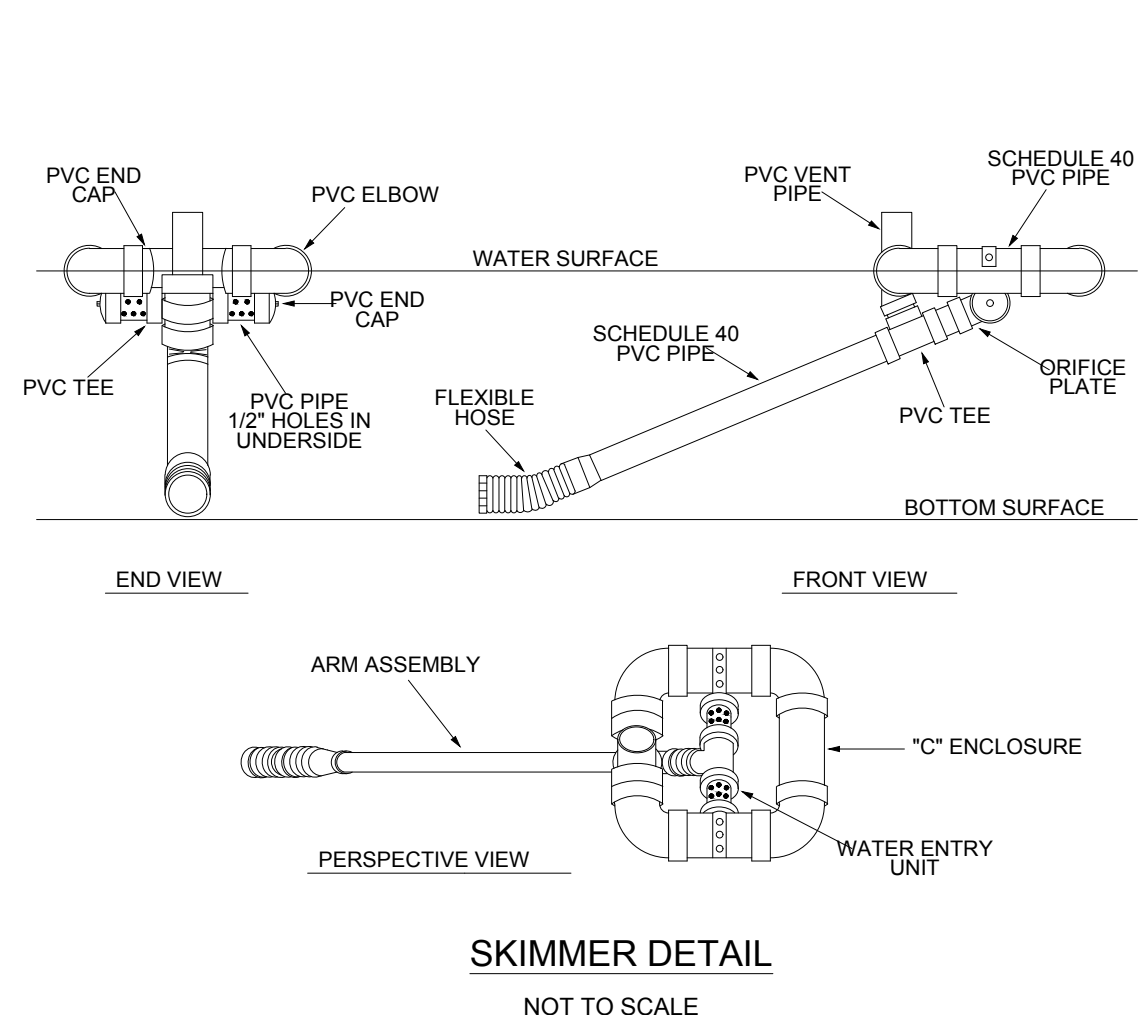
REVISION DESCRIPTION	DATE
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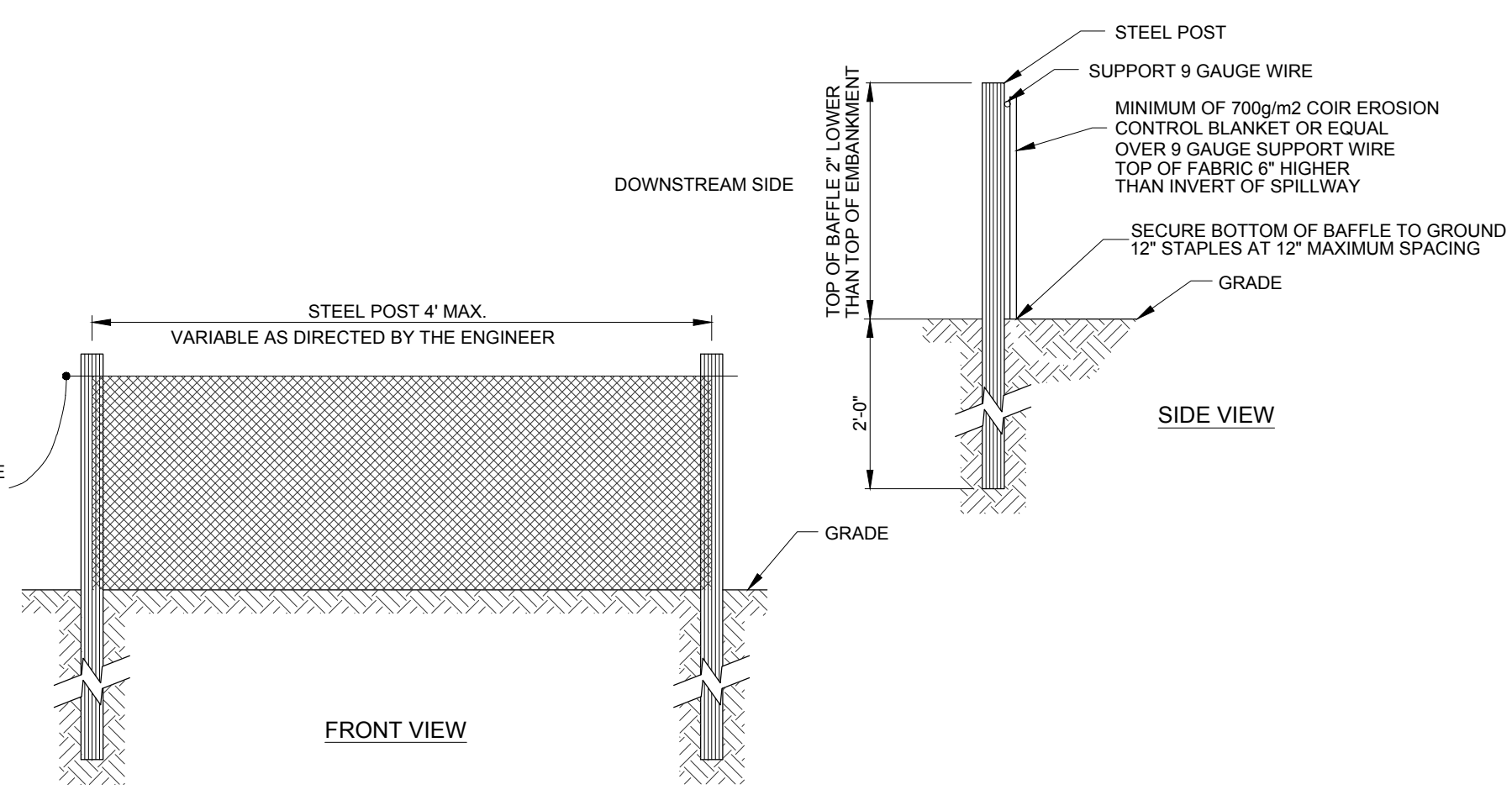
**TIMMONS GROUP**  
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CAROLINA DIESEL TRUCKS  
HARNETT COUNTY, FLUQUAY VARINA, NC  
DETAILS SHEET

JOB NO. 39642  
SHEET NO. C7.02

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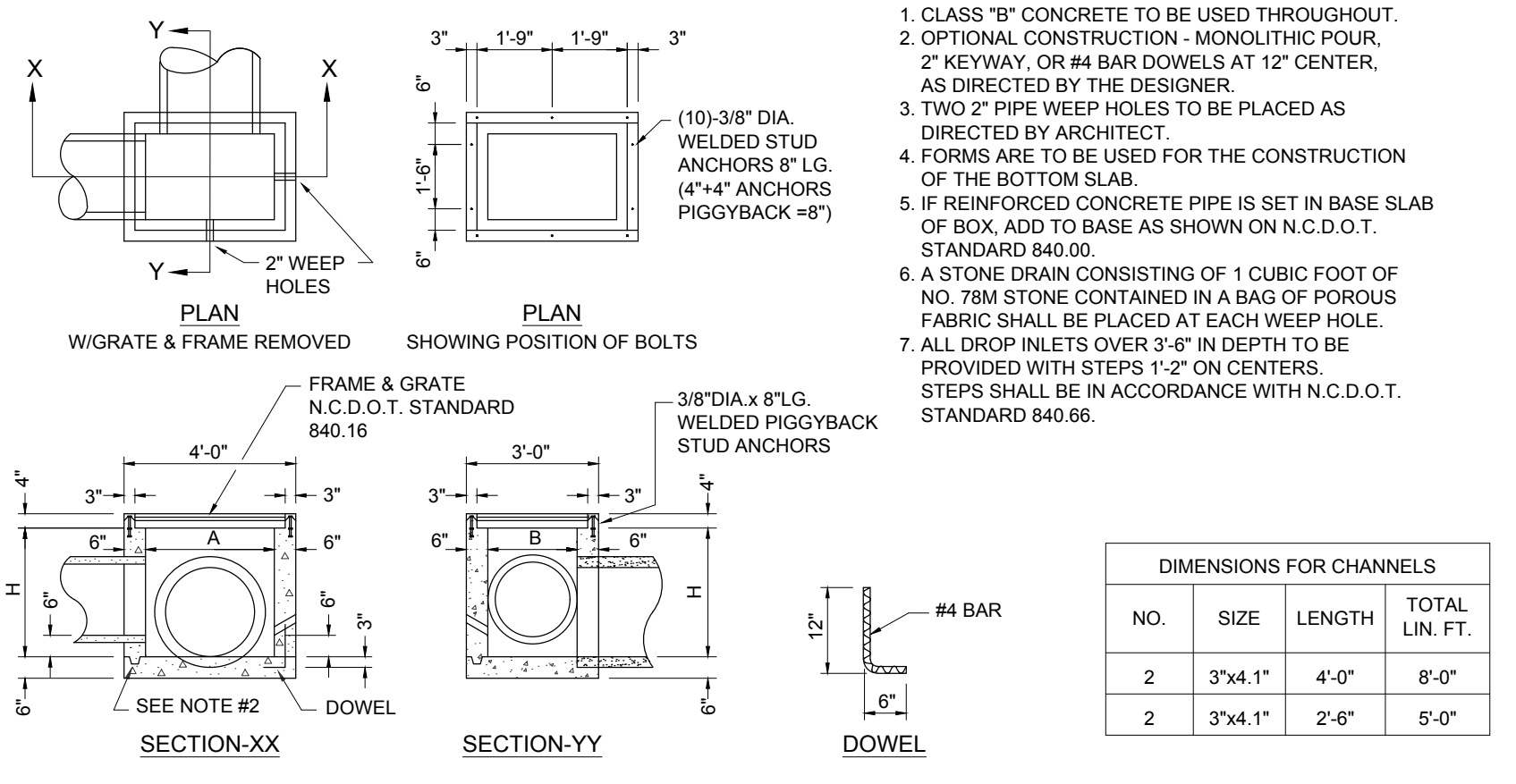


Basin #	Skimmer Size (IN)	Orifice Size (IN)	Number of Skimmers	Dam Elevation (FT)	Bottom Elevation (FT)	Minimum Volume (CF)	Minimum Surface Area (SF)	Spillway Elevation (FT)	Spillway Width (FT)
1	2.0	1.50	1	434.00	428.00	4,208	5,796	433.00	10.0



- CONSTRUCTION SPECIFICATIONS**
- GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
  - INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
  - INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP/BASIN.
  - STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL AS THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
  - INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
  - ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POST AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHTS SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
  - EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T-POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS AS SHOWN.
  - DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATIONS. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.
  - DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE TRAP/BASIN.
  - ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.
- MAINTENANCE**
- INSPECT THE BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
  - BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
  - REMOVE SEDIMENT DEPOSITS WHEN IT REACHES 1/3 FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUTS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
  - AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, REGRADE TO DEVELOP PERMANENT STORMWATER CONTROL MEASURES (SCM) AS SHOWN ON SHEET C3.01 AND STABILIZE.

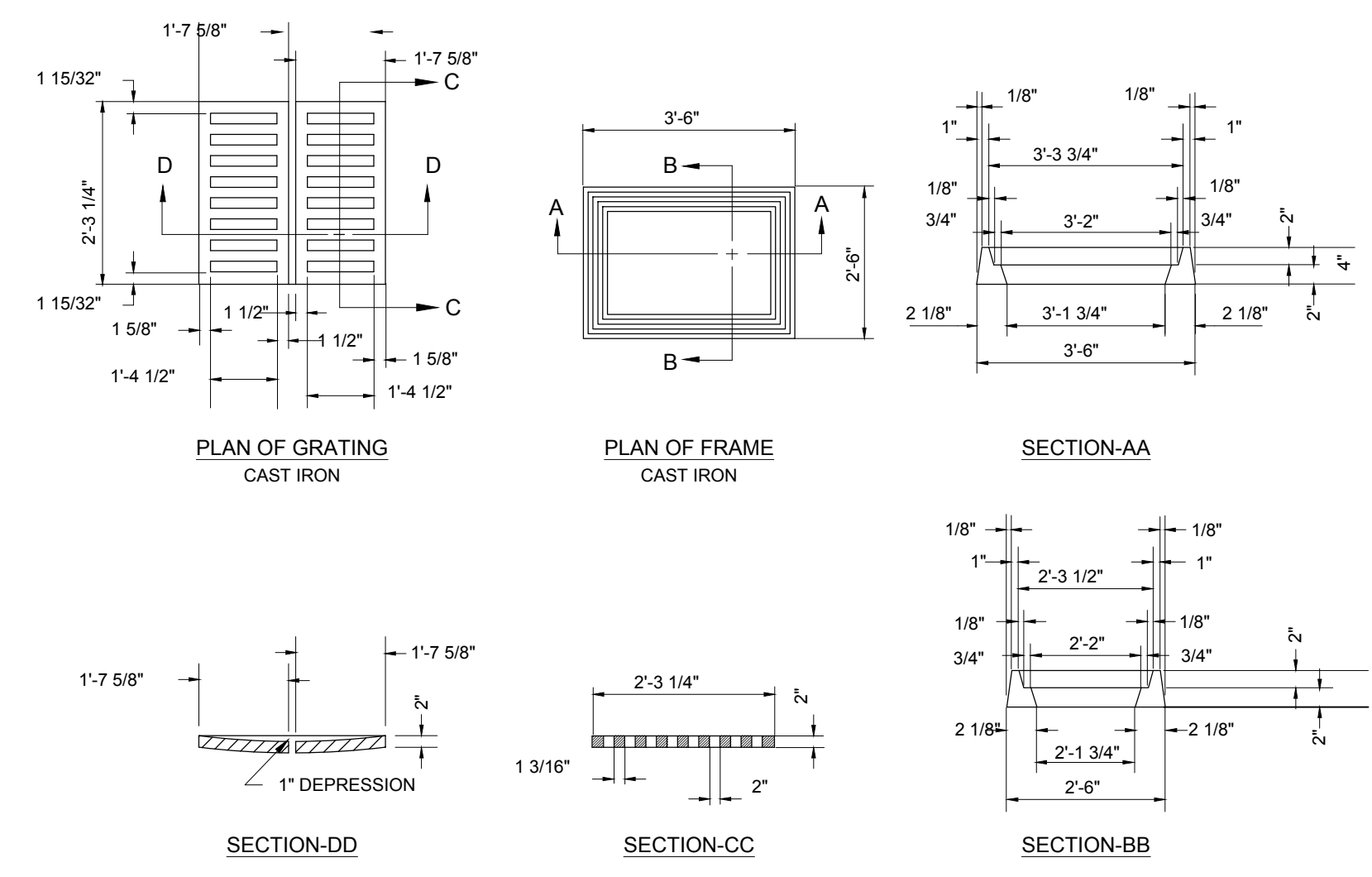
- CONSTRUCTION SPECIFICATIONS**
- CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURE BELOW BASIN AS NEEDED.
  - ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
  - SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
  - PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A SMOOTH, FIRM FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS A BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY OF THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FORM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
  - ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
  - LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
  - EARTHEN SPILLWAYS - INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERVIOUS GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS," FEBRUARY, 1999. J.W. FAIRCLOTH AND SON.)
  - INLETS - DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY. (REFERENCES: RUNOFF CONTROL MEASURES AND OUTLET PROTECTION.)
  - EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION. (REFERENCES: SURFACE STABILIZATION#)
  - INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, POROUS BAFFLES.
  - AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY. (REFERENCES: SURFACE STABILIZATION#)
- MAINTENANCE**
- INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
  - REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
  - IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
  - IF THE SKIMMER ARM OR ORIFICE PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBERS SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
  - CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR ALL PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND DEBRIS FROM THE SKIMMER AND POOL AREAS.
  - ICE WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



**DIMENSIONS AND QUANTITIES FOR DROP INLET**

DIMENSIONS OF BOX & PIPE				CUBIC YARDS IN BOX		TOTAL QUANTITIES BOX & COVER		DEDUCTIONS FOR ONE PIPE CU. YDS.	
PIPE	SPAN	WIDTH	HEIGHT	FLOOR & COPING	WALL / FT. H.	CU. YDS. MIN. H.	C.M.	R.C.	
12"	3'-0"	2'-0"	2'-8"	0.262	0.222	0.855	0.015	0.024	
15"	3'-0"	3'-0"	3'-0"	0.262	0.222	0.929	0.023	0.036	
18"	3'-0"	3'-5"	3'-5"	0.262	0.222	1.021	0.033	0.049	
24"	3'-0"	4'-0"	4'-0"	0.262	0.222	1.151	0.059	0.085	
30"	3'-0"	4'-3"	4'-3"	0.262	0.222	1.207	0.092	0.127	

**SKIMMER SEDIMENT BASIN**  
NOT TO SCALE



**STANDARD CONCRETE DROP INLET**  
NOT TO SCALE



THIS DRAWING PREPARED AT THE  
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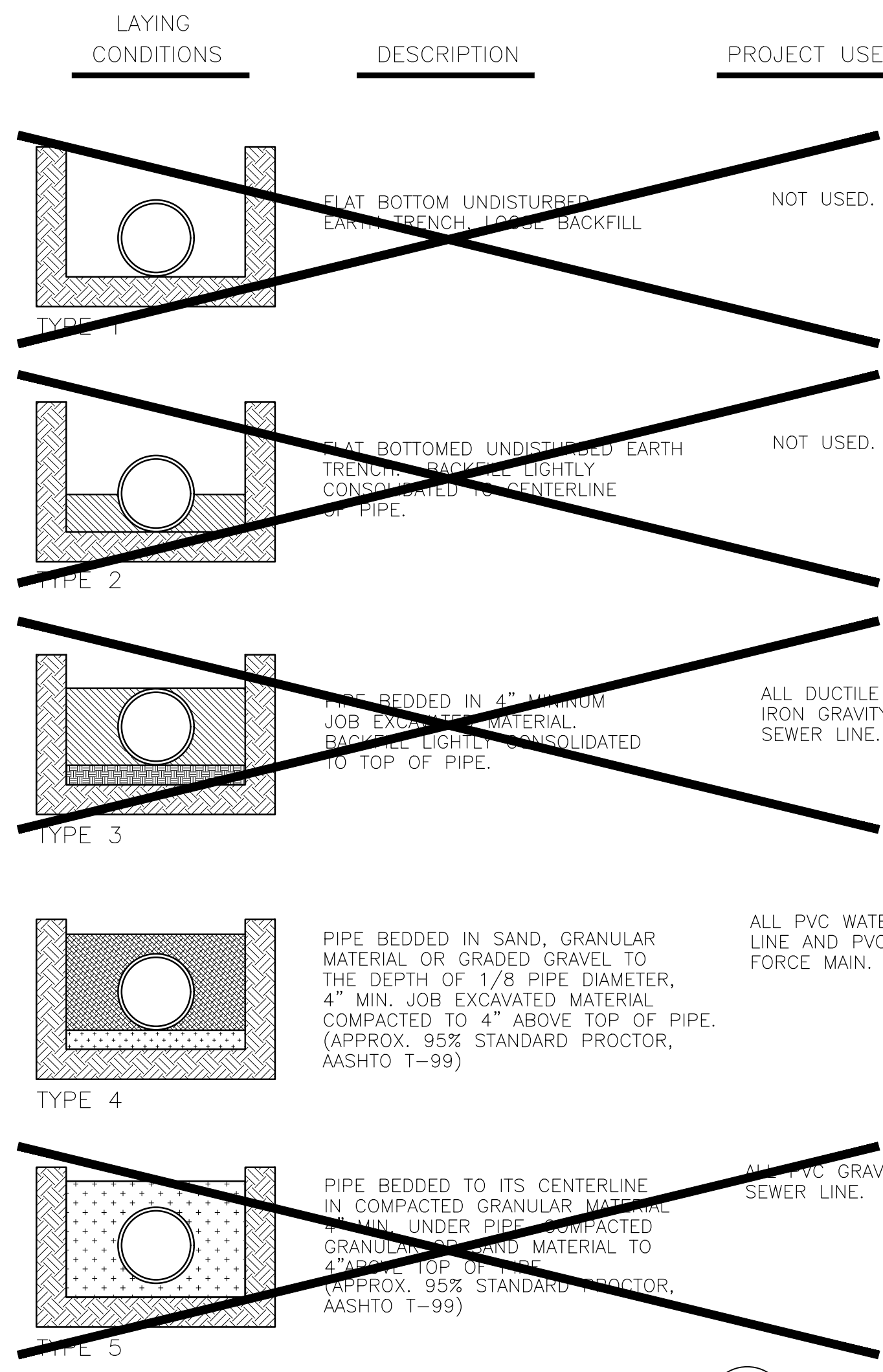
REVISION DESCRIPTION	DATE
	06/13/2017

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JFC	SCALE
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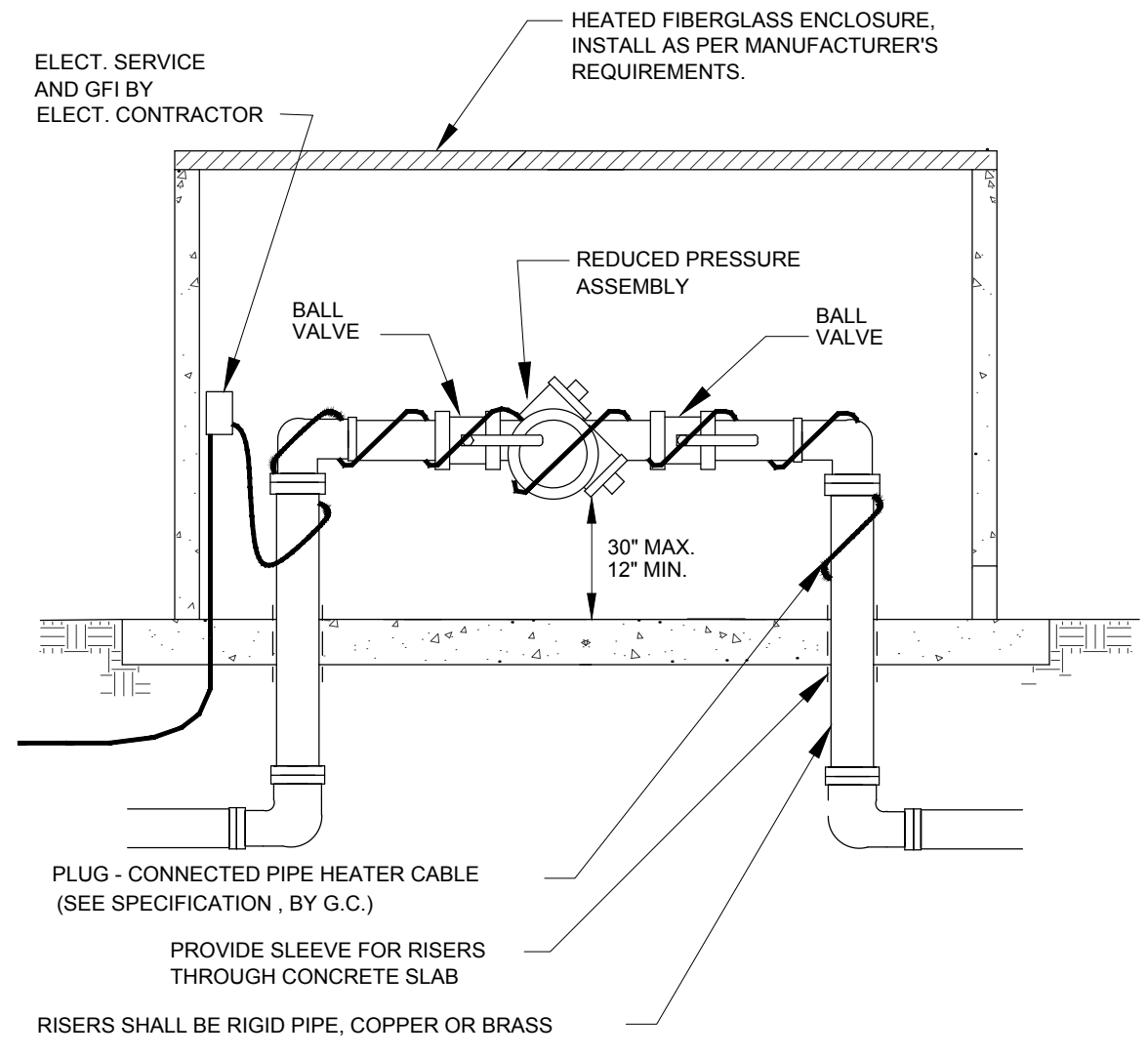
**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
**CAROLINA DIESEL TRUCKS**  
HARNETT COUNTY, FUQUAY VARINA, NC  
**DETAILS SHEET**

JOB NO.	39642
SHEET NO.	C7.03

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TYPICAL LAYING CONDITIONS DETAIL  
NO SCALE



- NOTES:
- REDUCED PRESSURE ASSEMBLY SHALL BE FEBCO MODEL 825Y OR APPROVED EQUAL. ALL BACKFLOW PREVENTERS SHALL BE AS APPROVED BY HCDPU.
  - SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF BACKFLOW PREVENTER, VALVES, ENCLOSURE, ETC.
  - HEATER AND POWER CORD BY G.C. - SEE SPECIFICATIONS INSTALL PER MANUFACTURERS INSTRUCTIONS.

3/4" REDUCED PRESSURE ASSEMBLY (ABOVE GROUND)  
NOT TO SCALE

**WATER**

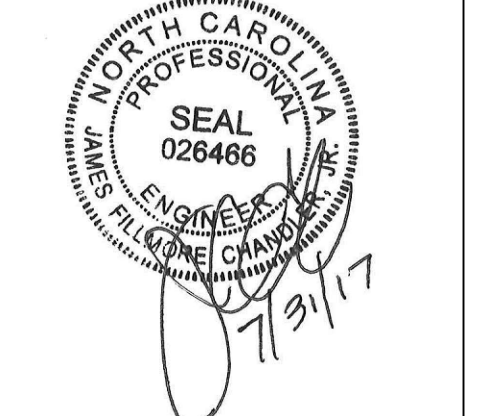
- A. The Fire Marshal's Office shall approve all hydrant types and locations in new subdivisions. However, Harnett County Department of Public Utilities (HCDPU) prefers the contractors to install one of the following fire hydrants:
- Mueller - Super Centurio™ is 250 A-423 model with a 5/8" main valve opening three way (two hose nozzles and one pumper nozzle);
  - Natural Resources - Mark B-84-B model with a 5/8" main valve opening three way (two hose nozzles and one pumper nozzle);
  - Waterous - Paer B-67-250 model with a 5/8" main valve opening three way (two hose nozzles and one pumper nozzle) or approved equal for standardization.
- B. Fire hydrants are installed at certain elevations. Any grade change in the vicinity of any fire hydrant which impedes its operation shall become the responsibility of the Utility Contractor for correction. Corrections will be monitored by the HCDPU Utility Construction Inspector and the Harnett County Fire Marshal.
- C. The Professional Engineer (PE) shall obtain and provide the NCDENR "Authorization to Construct" permit to the Utility Contractor before the construction of the water line shall begin. The Utility Contractor must submit a copy of the NCDENR "Authorization to Construct" permit issued by the North Carolina Department of Environment and Natural Resources - Division of Environmental Health, Public Water Supply Section (NCDENR-DEH,PWSS) on site prior to the start of construction. The permit must be maintained on site throughout the entire construction process of the proposed water lines that will serve this project.
- D. The Utility Contractor shall notify Harnett County Department of Public Utilities (HCDPU) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HCDPU Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HCDPU for regular inspection visitations and acceptance of the water system(s). Construction work shall be performed only during the normal working hours of HCDPU which is 8:00 am - 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HCDPU.
- E. The Professional Engineer (PE) shall provide HCDPU and the Utility Contractor with a set of NCDENR approved plans marked "Released For Construction" at least two days prior to construction commencing. The Registered Land Surveyor (RLS) should stake out all lot corners and the grade stakes for the proposed finish grade for each street before the Utility Contractor begins construction of the water line(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading and utility construction.
- F. The Utility Contractor shall provide the HCDPU Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any water line extension(s), and associated water services in Harnett County. The materials to be used on the project must meet the established specifications of HCDPU and be approved by the Engineer of Record prior to installation. All substandard materials or materials not approved for use in Harnett County found on the project site must be removed immediately when notified by the HCDPU Utility Construction Inspector.
- G. The water main(s), fire hydrants, service lines, meter setters and all associated appurtenances shall be constructed in strict accordance with the standard specifications of the Harnett County Department of Public Utilities (HCDPU). The Utility Contractor shall be responsible to locate the newly installed water main(s), water service lines and all associated meter setters and meter boxes for other utility companies and their contractors until the new water main(s) have been approved by the North Carolina Department of Environment and Natural Resources - Division of Environmental Health, Public Water Supply Section (NCDENR-DEH, PWSS) and accepted by HCDPU.
- H. Prior to acceptance, all services will be inspected to insure that they are installed at the proper depth. All meter boxes must be flush with the ground level at finish grade and the meter setters must be a minimum of 8" below the meter box lid. Meter setters shall be centered in the meter box and supported by brick, block or stone.
- I. The Utility Contractor shall provide the Professional Engineer (PE) and HCDPU Utility Construction Inspector with a set of red line drawings identifying the complete water system installed for each project. The red line drawings should identify the materials, pipe sizes and approximate depths of the water lines as well as the gate valves, fire hydrants, meter setters, blow off assemblies and all associated appurtenances for all water line(s) constructed in Harnett County. The red line drawings should clearly identify any deviations from the NCDENR approved plans. All change orders must be approved by HCDPU and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- J. Potable water mains crossing other utilities and non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a minimum vertical distance of twenty-four (24") inches between the potable water main and all other utilities. NCDOT requires the new water mains to be installed under the storm water lines. The potable water main shall be installed with the exception of the fire hydrant separation and with ductile iron pipe when designed to be placed under a non-potable water line such as sanitary sewer or storm sewer lines. If these separations cannot be maintained then the water main shall be installed with ductile iron pipe. Both the potable water main and the non-potable water line must be cast iron or ductile iron pipe (DIP) if the state minimum separations cannot be maintained. The ductile iron pipe must be laid so the mechanical joints are at least (10') feet from the point where the potable water main crosses the non-potable water line.
- K. Potable water mains installed parallel to non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a minimum horizontal distance of ten (10') feet between the potable water main and sanitary sewer mains, sewer laterals and services. The horizontal separation between the potable water main and any other utility or storm sewer shall not be less than five (5') feet. The potable water main must be ductile iron pipe if this horizontal separation of ten (10') feet cannot be maintained. The ductile iron pipe shall extend at least ten (10') feet beyond the point where the minimum required horizontal separation of ten (10') feet can be re-established.
- L. Meter setters shall be installed in pairs on every other lot line where possible to leave adequate space for other utilities to be installed at a later time. The meter setters shall be installed at least one (1') foot inside the right-of-way and at least three (3') to five (5') feet from the property line between the lots.
- M. HCDPU requires that meter boxes for 1/2" services shall be 12" wide x 17" long ABS plastic boxes at least 18" in height with cast iron lid covers. Meter boxes for 1" services shall be 17" wide x 21" long ABS plastic boxes at least 18" in height with plastic lids and cast iron flip covers in the center of the lids. Meter boxes for 2" services shall be 20" wide x 32" long ABS plastic boxes at least 20" in height with plastic lids and cast iron flip covers in the center of the lids.

- N. Master meters must be installed in concrete vaults sized for the meter assembly and associated appurtenances so as to provide at least eighteen (18") inches of clearance between the bottom of the concrete vault and the bottom of the meter setter. The master meter must be provided test ports if the meter is not equipped with test ports from the manufacturer in accordance with the HCDPU established standard specifications and details. Ductile iron pipe must be used for the master meter vault piping and valve vault piping. The Utility Contractor must provide shop drawings for the meter vaults to HCDPU prior to ordering the concrete vaults.
- O. The Utility Contractor will install polyethylene SDR-9 water service lines that cross under the pavement in a schedule 40 PVC conduit to allow for removal and replacement in the future. Two (2) independent 1/2" water service lines may be installed inside one (1) - two (2") inch schedule 40 PVC conduit or two (2) independent 1/2" water service lines may be installed inside one (1) - three (3") inch schedule 40 PVC conduit, but each water service shall be tapped directly to the water main. Split services are not allowed by HCDPU.
- P. The water main(s), fire hydrants, gate valves, service lines, meter setters and associated appurtenances must be rated for 200 psi and hydrostatically pressure tested to 200 psi. The hydrostatic pressure test(s) must be witnessed by the HCDPU Utility Construction Inspector. The Utility Contractor must notify HCDPU when they are ready to begin filling in lines and coordinate with Harnett County to witness all pressure testing.
- Q. The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other inert gas on the stainless steel tapping sleeve(s) prior to making the tap on the existing water main. This pneumatic pressure test must be witnessed by the HCDPU Utility Construction Inspector. The Utility Contractor shall use Romac brand stainless steel tapping sleeve(s) or approved equal for all taps made in Harnett County. All new water line extensions must begin with a resilient wedge type gate valve sized equal to the diameter of the new water line extension in order to provide a means of isolation between Harnett County's existing water mains and the new water line extensions under construction.
- R. All water mains will be constructed with SDR-21 PVC Pipe or Class 50 Ductile Iron Pipe rated for at least 200 psi or greater. All pipes must be protected during loading, transport, unloading, staging, and installation. PVC pipe must be protected from extended exposure to sunlight prior to installation.
- S. All water mains will be flushed and disinfected in strict accordance with the standard specifications of the Harnett County Department of Public Utilities. All water samples collected for bacteria testing will be collected by the HCDPU Utility Construction Inspector and tested in the HCDPU Laboratory.
- T. All fittings larger than two (2") inches diameter shall be ductile iron. HCDPU requires that mechanical joints be assembled with grip rings as "Megaling" fittings are not approved by Harnett County for pipe sizes smaller than twelve inches (12") diameter. PVC pipe used for water mains shall be connected by slip joint or mechanical joint with grip rings. Glued pipe joints are not allowed on PVC pipe used for water mains in Harnett County.
- U. HCDPU requires that the Utility Contractor install tracer wire in the trench with all water lines. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling.
- V. The Utility Contractor will provide Professional Engineer (PE) and the HCDPU Utility Construction Inspector with a set of red line field drawings to identify the installed locations of the water line(s) and all associated services. All change orders must be pre-approved by HCDPU and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- W. The Utility Contractor shall spot dig to expose each utility pipe or line which may conflict with construction of proposed water line extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to adjust the water line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner requirements during water line installation, grading and street construction.
- X. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to have a signed NCDOT encroachment agreement posted on site and notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities prior to the beginning of construction. Existing utilities shown in these plans are taken from maps furnished by various utility companies and have not been physically located or verified by the P.E. (i.e. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.). The Utility Contractor will be responsible to repair any and all damages to the satisfaction of the related utility company.
- Y. The Utility Contractor shall provide HCDPU with at least one (1) fire hydrant wrench and one (1) break-away flange kit for every subdivision with fire hydrants developed in Harnett County. These items must be provided to HCDPU before the final inspection will be scheduled by the HCDPU Utility Construction Inspector. In addition, the Utility Contractor shall install a 4" x 4" concrete valve marker at the edge of the right-of-way to identify the location of each gate valve installed in the new water system with the exception of the fire hydrant isolation valves. The contractor shall measure the distance from the center of the concrete marker to the center of the valve box. This distance (in linear feet) shall be stamped on the brass plate located on the top of the concrete valve marker. In lieu of installing the concrete valve markers, the Utility Contractor may provide at least two measurements from two independent permanent above ground structures to the Professional Engineer (PE) in the red line drawings to identify the valve locations. The Professional Engineer (PE) must include these measurements in the As-Built Record Drawings submitted to HCDPU.
- Z. The Utility Contractor will be responsible for any and all repairs due to leakage damage from poor workmanship during the one (1) year warranty period once the water system improvements have been accepted by Harnett County. Harnett County will provide maintenance and repairs when requested and bill the Developer and/or Utility Contractor if necessary due to lack of response within 48 hours of notification of warranty work. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new water lines and associated appurtenances for other utilities and their contractors until the water lines have been approved by NCDENR and accepted by HCDPU. The final inspection of water system improvements cannot be scheduled with HCDPU until the streets have been paved, the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.
- AA. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HCDPU. A copy of each engineer's field report is to be submitted to HCDPU as each such inspection is made on system improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HCDPU specifications and those all applicable regulatory agencies. These tests include, but are not limited to: air test, vacuum test, mandrel test, visual test, pressure test, bacteriological test, etc. A HCDPU Inspector must be present during testing and all test results shall be submitted to

**SANITARY SEWER**

- A. The Professional Engineer (PE) shall obtain and supply a copy of the sewer permit for the construction and operation of the wastewater collection system to the Utility Contractor before the construction of the sanitary sewer line, sewer lift station and associated force main shall begin. The Utility Contractor must submit a copy of the sewer permit issued by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) on site prior to the start of construction. The permit must be maintained on site during the construction of the sewer system improvements.
- B. The Utility Contractor shall notify Harnett County Department of Public Utilities (HCDPU) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HCDPU Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HCDPU for regular inspection visitations and acceptance of the wastewater system(s). Construction work shall be performed only during the normal working hours of HCDPU which is 8:00 am - 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HCDPU.
- C. The Professional Engineer (PE) shall provide HCDPU with a set of NCDENR approved plans marked "Released For Construction" at least two days prior to construction commencing. HCDPU will stamp the approved plans as "Released for Construction" and provide copies to the utility contractor. The Registered Land Surveyor (RLS) shall stake out all lot corners and establish grade stakes for the proposed finish grade for each street and sewer line before the Utility Contractor begins construction or installation of the manholes, sanitary sewer gravity line(s), sewer lift station(s) and/or sanitary sewer force main(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading or utility construction.
- D. The Utility Contractor shall provide the HCDPU Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any gravity sewer line(s), manhole(s), sewer lift station(s) and associated force main(s) in Harnett County. The materials to be used on the project must meet the established specifications of HCDPU and be approved by the Engineer of Record prior to construction. All substandard materials or materials not approved for use in Harnett County found on the project site must be removed immediately when notified by the HCDPU Utility Construction Inspector.
- E. The sanitary sewer lateral connections should be installed 90° (perpendicular) to the sanitary sewer gravity lines with schedule 40 extend under all existing water main and storm water lines with a least 24" of vertical clearance below the bottom of the existing water main and storm water lines.
- G. The sanitary sewer gravity line(s), manhole(s), sanitary sewer service lateral(s) and associated clean-out(s) shall be constructed in strict accordance with the standard specifications of the Harnett County Department of Public Utilities. The sanitary sewer gravity line(s) must pneumatically pressure tested with compressed air at 5 psi and the sanitary sewer force main(s) must hydrostatically pressure tested with water or air at 200 psi and witnessed by the HCDPU Utility Construction Inspector.
- H. Prior to acceptance, all sewer service laterals will be inspected to insure that they are installed at the proper depth. All sewer clean-outs must be installed so the 4" x 4" long sweep combination wye is at least three (3') feet but no more than four (4') feet below the finish grade unless otherwise approved in writing by HCDPU. The sewer cleanouts shall have a (4") schedule 40 PVC pipe stubbed up from both ends of the 4" x 4" long sweep combination wye to be at least two (2') feet above the finish grade and cover each end with a four (4") inch temporary cap to keep out dirt, sand, rocks, water and construction debris. The vertical stack on each clean-out must be provided with a concrete donut for protection.
- I. Once the sanitary sewer gravity line(s) have been installed, pneumatically pressure tested and inspected for at least 30 days, the Utility Contractor must contact the HCDPU Utility Construction Inspector to witness the mandrel test on each PVC sanitary sewer gravity line. The Utility Contractor will notify HCDPU to schedule the mandrel testing. The mandrel and proving ring must be supplied by the Utility Contractor. Closed circuit video camera inspections (at the Utility Contractor's expense) may be required by the HCDPU Utility Construction Inspector if the mandrel testing cannot be completed with satisfactory results. The sanitary sewer lines should be flushed clean using a sewer ball of the proper diameter before any mandrel testing can be performed. The Utility Contractor is responsible to remove all dirt, sand, silt, gravel, mud and debris from the newly constructed sewer lines exercising care to keep the Harnett County's existing sanitary sewer systems clean. Sanitary sewer force main(s) shall be pressure tested to 200 psi for at least 2 hours like water lines.
- J. The Utility Contractor shall be responsible to locate the newly installed sanitary sewer system(s) for other utility companies and their contractors until the new sanitary sewer system(s) have been approved by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU.
- K. HCDPU requires that the Utility Contractor install tracer wire in the trench with all sanitary sewer force mains. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling. The tracer wire is not required for the gravity sewer line(s) between manholes.
- L. The Utility Contractor shall provide the Professional Engineer (PE) and HCDPU Utility Construction Inspector with a set of red line drawings identifying the complete sewer system installed for each project. The red line drawings should identify the materials, pipe sizes and approximate depths of the sewer lines as well as the installed locations of the manhole(s), sanitary sewer gravity line(s), sanitary sewer service lateral(s), clean-outs, sewer lift station(s) and associated force main(s). The red line drawings should clearly identify any deviations from the NCDENR approved plans. All change orders must be approved by HCDPU and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- M. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities prior to the beginning of construction. Existing utilities shown in these plans are taken from maps furnished by various utility companies and have not been physically located by the P.E. (i.e. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.).
- N. The Utility Contractor shall spot dig to expose each existing utility pipe or line which may conflict with construction of proposed sanitary sewer line extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to adjust the sanitary sewer line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation of existing utilities and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner's requirements during sanitary sewer line installation, grading and street construction.
- O. When making a tap on an existing sewer force main, the Utility Contractor must have a permit from the North Carolina Department of Environment and Natural Resources - Division of Water Quality

- (NCDENR-DWQ) prior to begin the tap work. The Utility Contractor shall construct a pneumatic pressure test using compressed air or other inert gas on the stainless steel tapping sleeve and gate valve prior to making the tap on an existing sanitary sewer force main. This pneumatic pressure test must be witnessed by the HCDPU Utility Construction Inspector. The Utility Contractor shall use Romac brand stainless steel tapping sleeve(s) or approved equal for all taps made on sanitary sewer force mains in Harnett County. The Utility Contractor shall use Romac brand Style "CB" sewer saddles with stainless steel bands or approved equal for all taps made on existing sanitary sewer gravity lines in Harnett County.
- P. The Utility Contractor shall provide a grease trap for each sanitary sewer service lateral that will be connected to a restaurant, food processing facility and any other commercial or industrial facility as required by the Harnett County Ordinance. The Utility Contractor shall use Romac brand Style "CB" sewer saddles with stainless steel bands or approved equal for all taps made on existing sanitary sewer gravity lines in Harnett County.
- Q. Each sewer lift station must be provided with three phase power (at least 480 volts) and constructed to meet the minimum requirements of the latest version of the National Electrical Code (NEC) and Harnett County standard specifications and details. If three phase power is not available from the power company other arrangements must be approved by HCDPU Engineering prior to the start of construction. Where a new sanitary sewer force main is connected to an existing manhole in the Harnett County sewer collections system, the Utility Contractor must provide a grease trap for the manhole. The grease trap must be rated for a minimum capacity of at least 1,000 gallons unless otherwise approved in writing by the HCDPU Pre-Treatment Coordinator. Garbage disposals should not be installed in homes and businesses that discharge wastewater to the Harnett County Sanitary Sewer System as they are not approved by HCDPU.
- R. The sewer lift station design and associated equipment must meet or exceed the MINIMUM REQUIREMENTS FOR HARNETT COUNTY SEWER LIFT STATIONS 2009 edition. Each sanitary sewer lift station must be constructed with a minimum capacity of at least 1,000 gallons. The lift station site must be covered with weed blocking material and at least six (6") inches of #57 stone (crush and run).
- S. Once a sewer lift station has been installed, the Utility Contractor is responsible to schedule a draw down test with HCDPU Engineering and Collections staff, the Professional Engineer (PE), the Electrician, the original equipment manufacturer's (OEM) representatives (for pumps and North Carolina). This draw down test must be completed with power supplied from the electrical utility company and with power supplied by the emergency generator with satisfactory results before final inspections are conducted by the HCDPU Utility Construction Inspector.
- U. Once the Utility Contractor completes the installation of a sewer lift station, the Professional Engineer (PE) must submit the sewer permit certified As-Built drawings to the Harnett County Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and HCDPU for final approval. The Utility Contractor must supply HCDPU Engineering staff with three original Operation & Maintenance (O&M) Manuals along with the associated pump curves and electrical schematics for the associated sewer lift station equipment including all warranty information and documentation.
- V. Once the Utility Contractor completes the installation of a sewer lift station, the Developer must pay HCDPU the established System Control and Data Acquisition (SCADA) fees before the SCADA system will be installed at the new sewer lift station. The SCADA system must be installed and operational before the utilities may be accepted by HCDPU and placed into operation.
- W. HCDPU requires the Utility Contractor to provide all necessary equipment and devices for the testing and inspection of the sanitary sewer system. The equipment and devices may include but not limited to mirrors, mandrels, sewer balls, plugs, air compressors and associated compressed air lines. If the HCDPU Utility Construction Inspector deems that a closed circuit video camera inspection of the newly constructed sewer system is necessary, then all costs for the closed circuit camera inspection will be the responsibility of the Utility Contractor. All closed circuit video camera inspections must be recorded on VHS tapes that will be released to HCDPU for record keeping, review and approval of the sewer system.
- X. Any use of sewer plugs to temporarily block Harnett County's existing sanitary sewer lines must be coordinated with the HCDPU Collections Supervisor at least two (2) days in advance of installing the plugs. The sewer plugs must be removed as soon as possible once the new sanitary sewer lines have been inspected and pressure tested, mandrel tested, approved by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU to allow the sewer to flow as designed in Harnett County's existing sanitary sewer lines or when so ordered by the HCDPU Collections Supervisor to limit interruptions to the normal flow of the sanitary sewer collection system(s). The Utility Contractor must provide the pumps, hoses and necessary connectors for a temporary pump around setup if required by the HCDPU Collections Supervisor. Mr. Curtis Spears, HCDPU Collections Supervisor may be contacted between 8:00 am and 5:00 pm Monday through Friday at (910) 893-7575 extension 3243.
- Y. The Utility Contractor will be responsible for any and all repairs due to leakage or damage resulting from poor workmanship during the one (1) year warranty period once the sewer system improvements have been approved by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new sanitary sewer lines and associated appurtenances for other utilities and their contractors until the sanitary sewer lines have been approved by NCDENR and accepted by HCDPU. HCDPU will provide maintenance and warranty repairs if necessary due to lack of response within 48 hours of notification of warranty work. HCDPU will invoice the Developer and/or Utility Contractor for materials and labor in such cases.
- Z. In developments and projects that require utility easements to be established for future HCDPU right-of-way, the Registered Land Surveyor (RLS) must provide the HCDPU Right-of-Way Agent with an official copy of the recorded plat and legal description of the said easement as recorded with the Harnett County Register of Deeds. The recorded description shall be provided to the HCDPU Right-of-Way Agent before the utility improvements within the said easement can be placed into operation. Any and all easements that must be obtained from adjoining property owners must be provided to HCDPU by the Developer at no cost to Harnett County. The final inspection of all sanitary sewer system improvements cannot be scheduled with HCDPU until the streets have been paved, the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.
- AA. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HCDPU. A copy of each engineer's field report is to be submitted to HCDPU as each such inspection is made on system improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HCDPU specifications and those of all applicable regulatory agencies. These tests include, but are not limited to: air test, vacuum test, mandrel test, visual test, pressure test, bacteriological test, etc. A HCDPU Inspector must be present during testing and all test results shall be submitted to HCDPU. All tests must be satisfied before the final inspection will be



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DESIGNED BY  
TSG

CHECKED BY  
JFC

SCALE  
NTS

JOB NO.  
39642

SHEET NO.  
C7.04

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
CAROLINA DIESEL TRUCKS  
HARNETT COUNTY, FLUQUAY VARINA, NC  
DETAILS SHEET

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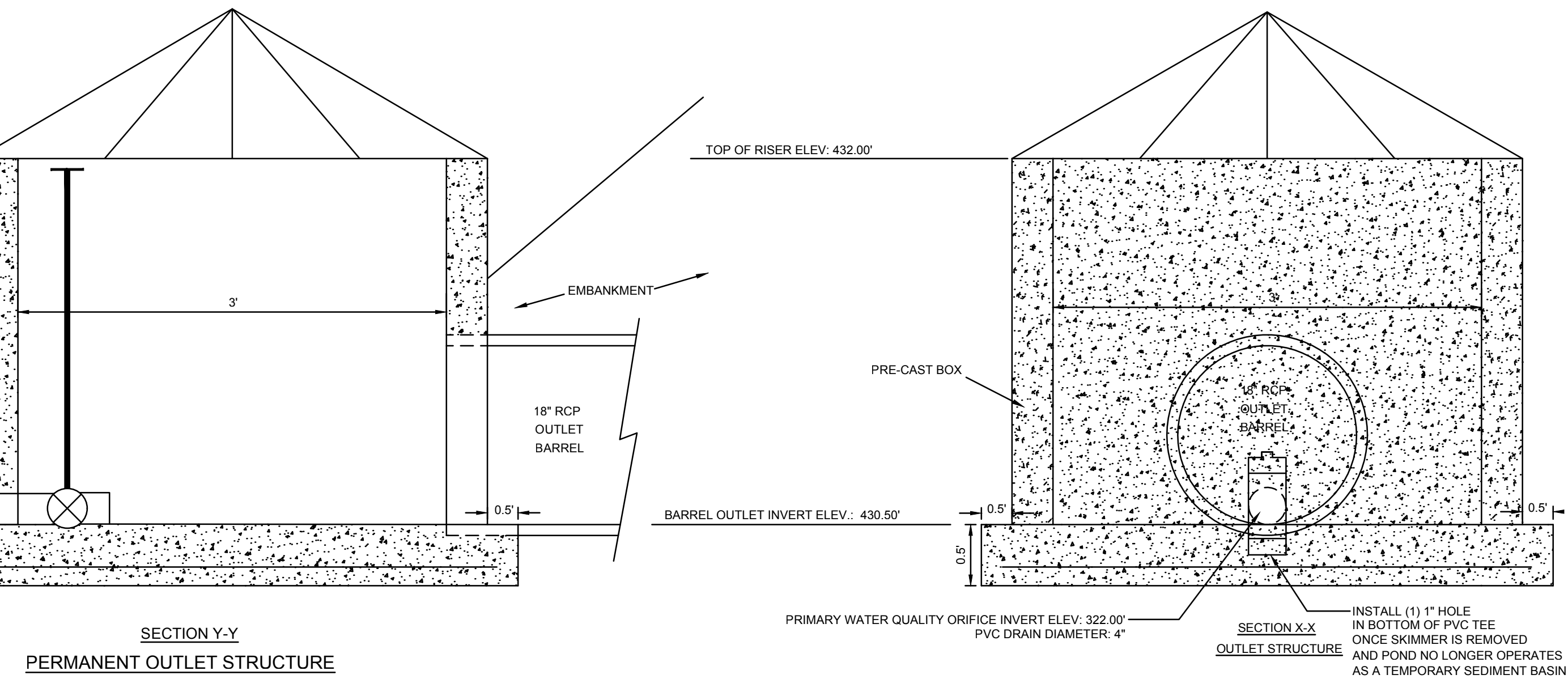
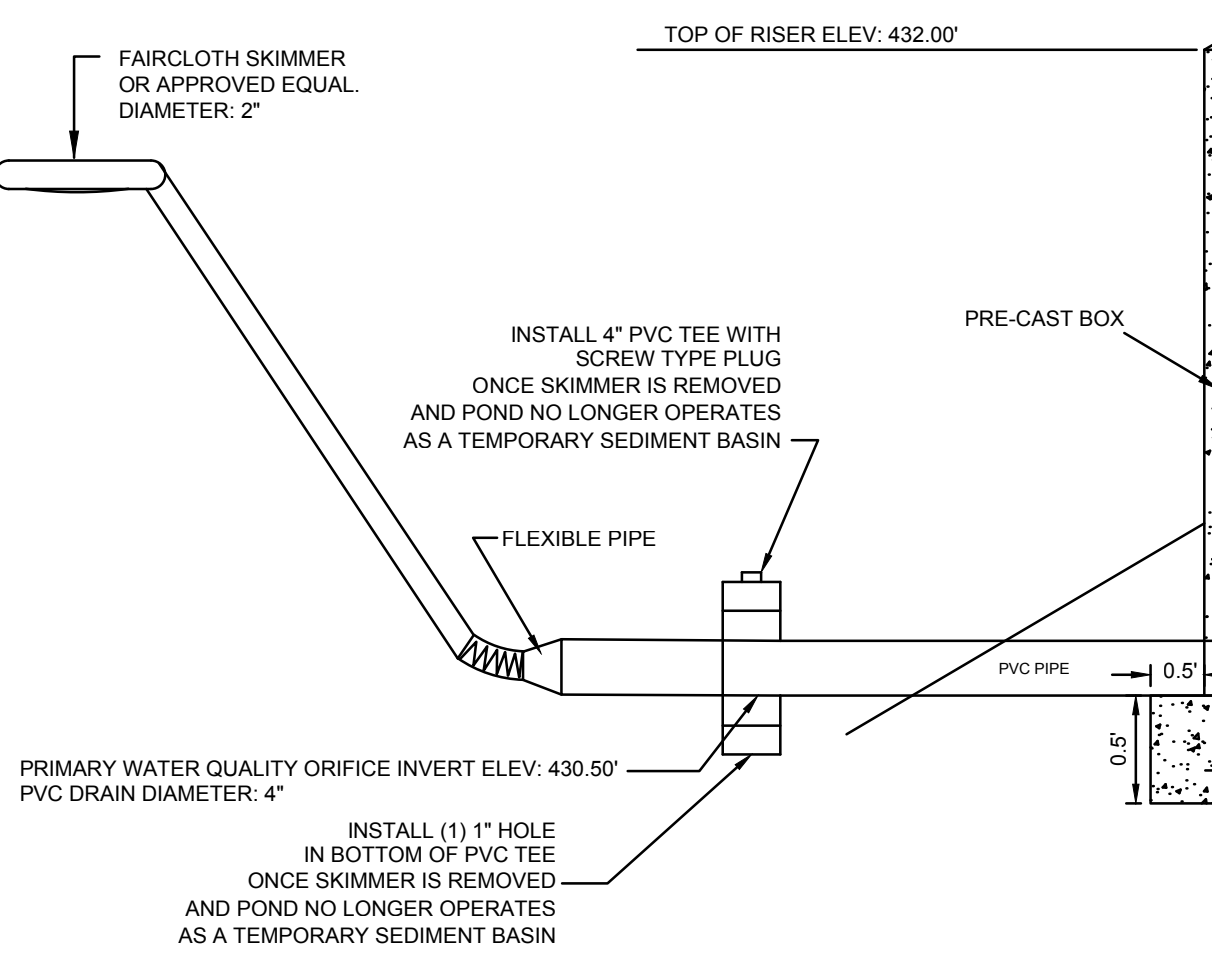
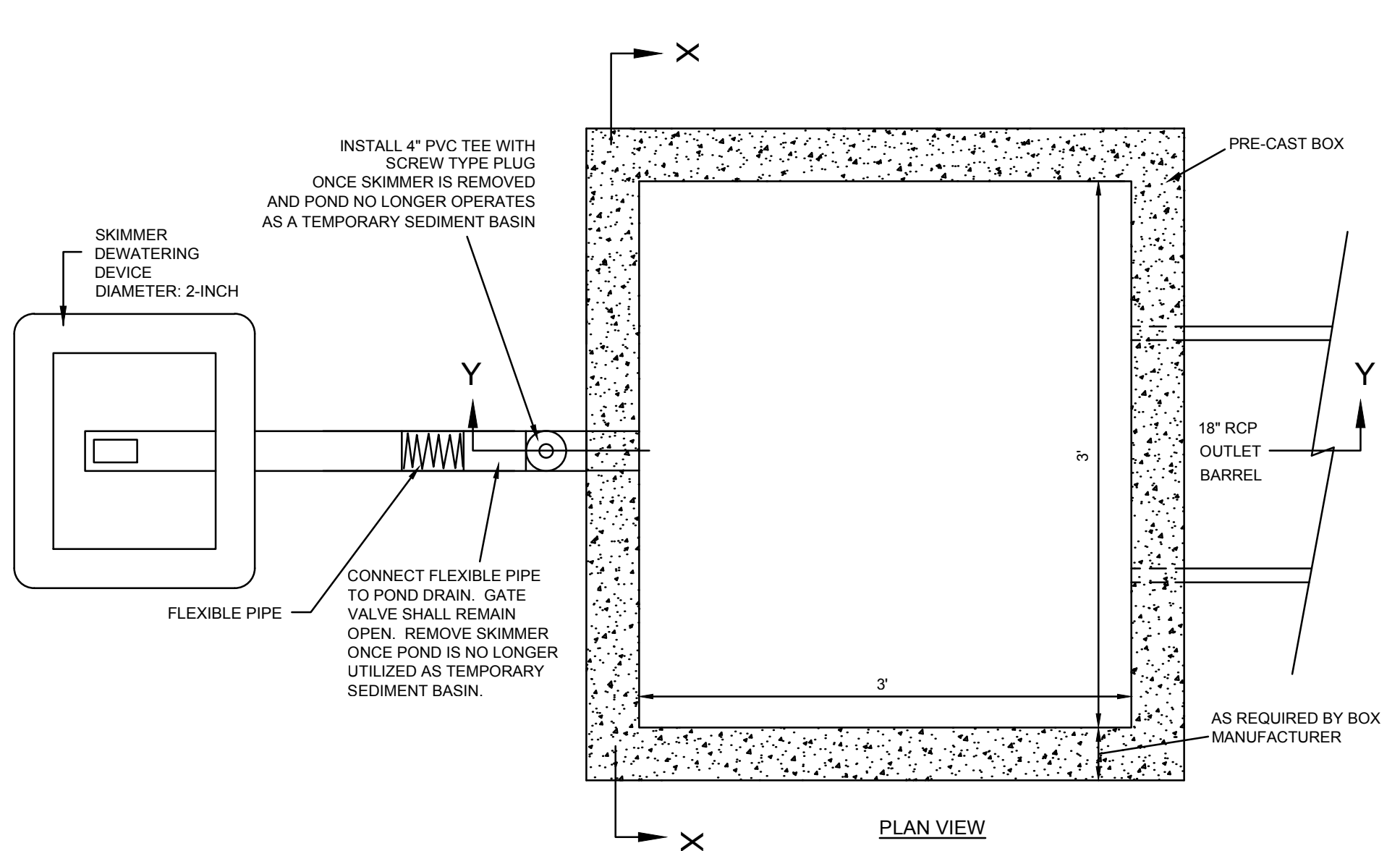
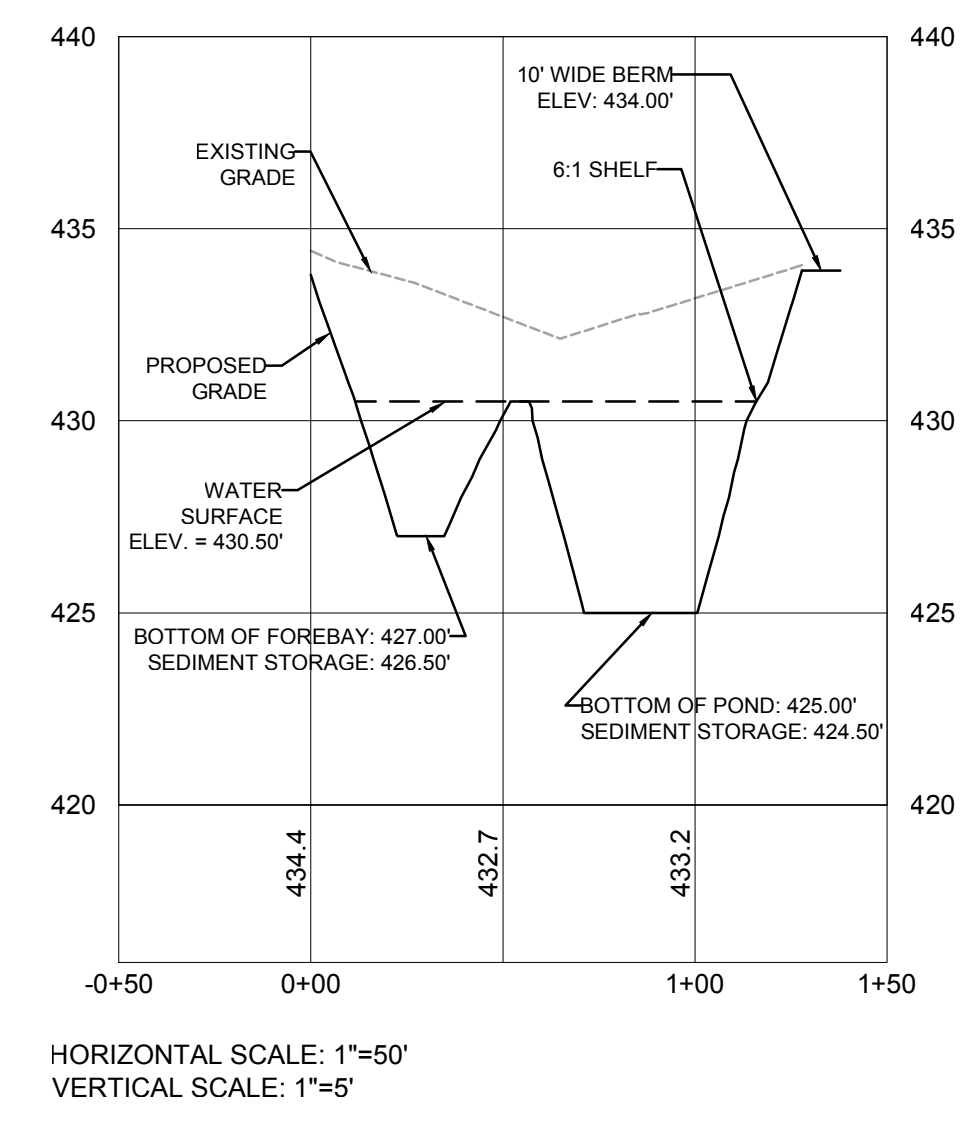
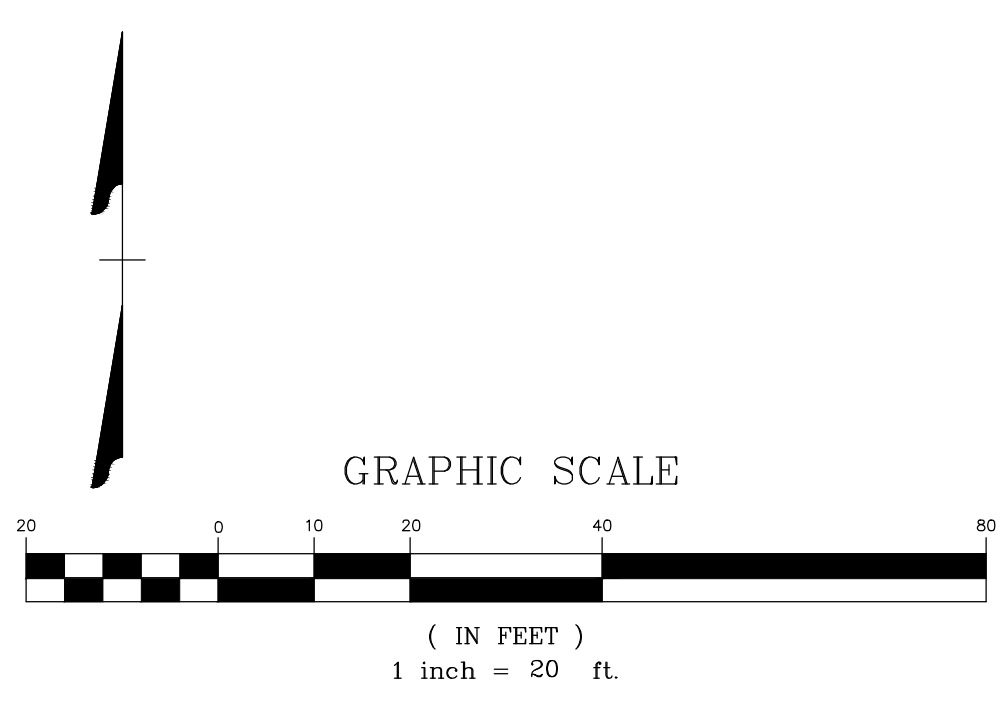
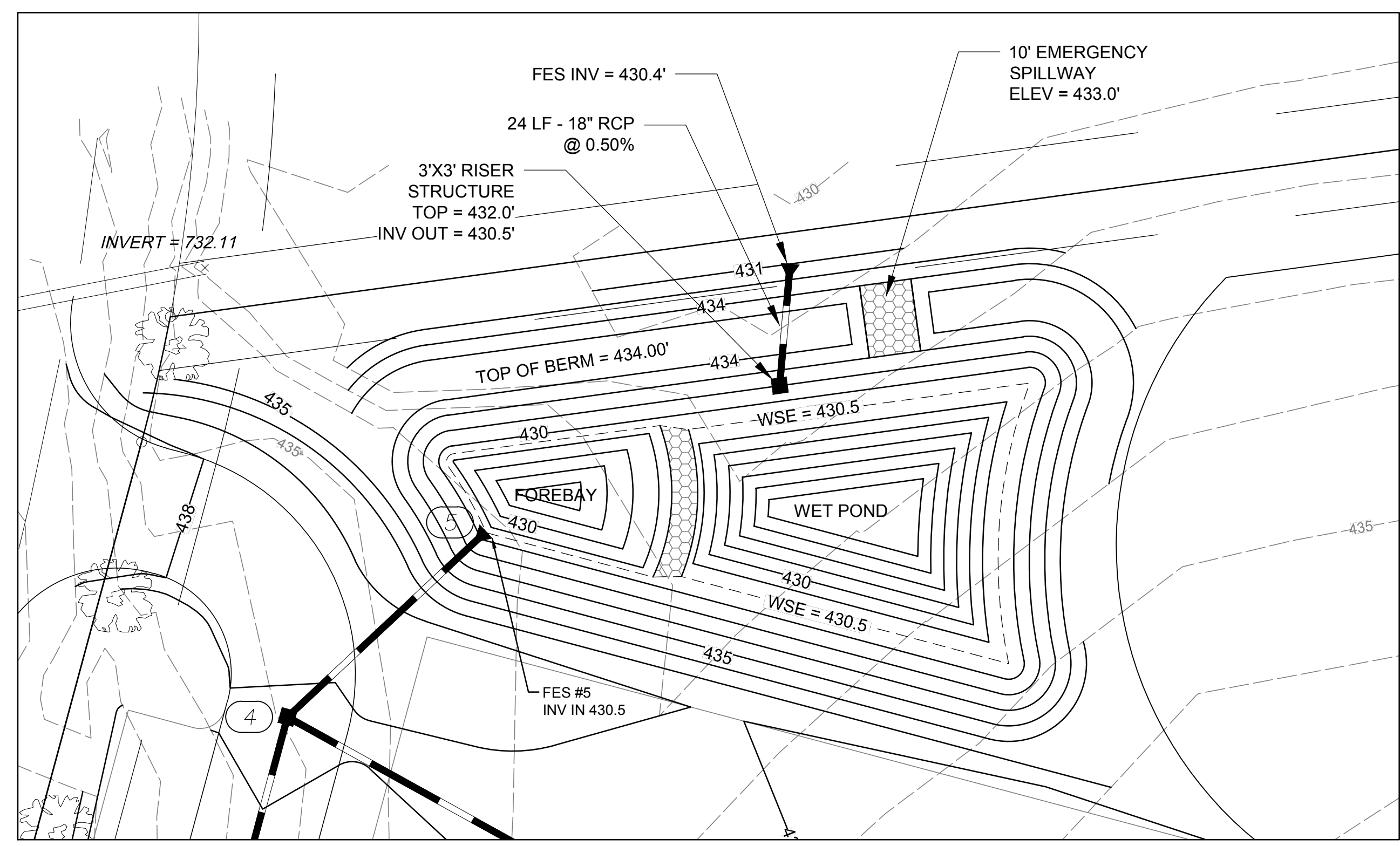
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 SCALE  
 1" = 30'

REVISION DESCRIPTION

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**CAROLINA DIESEL TRUCKS**  
 HARNETT COUNTY, FUQUAY VARINA, NORTH CAROLINA

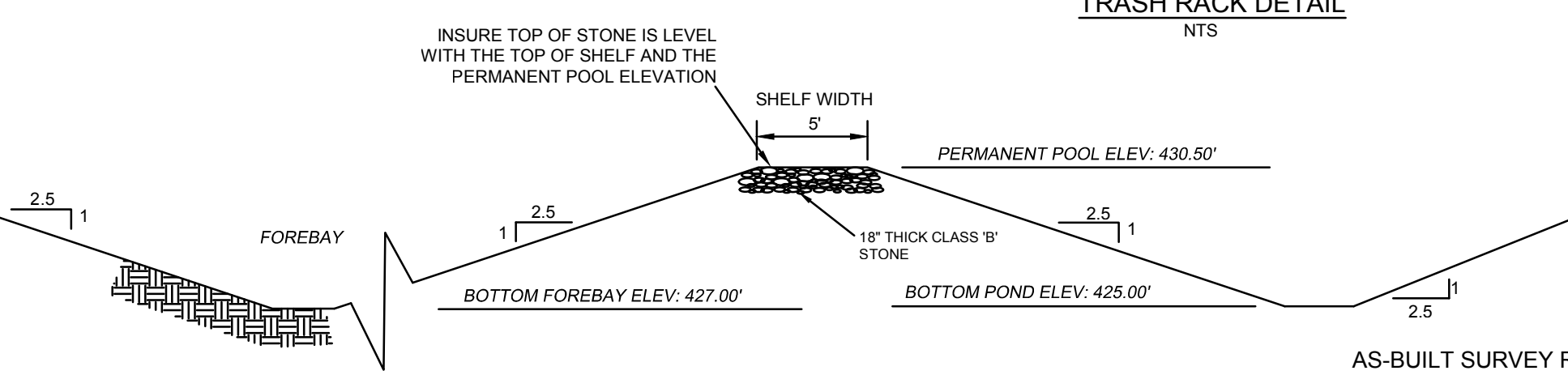
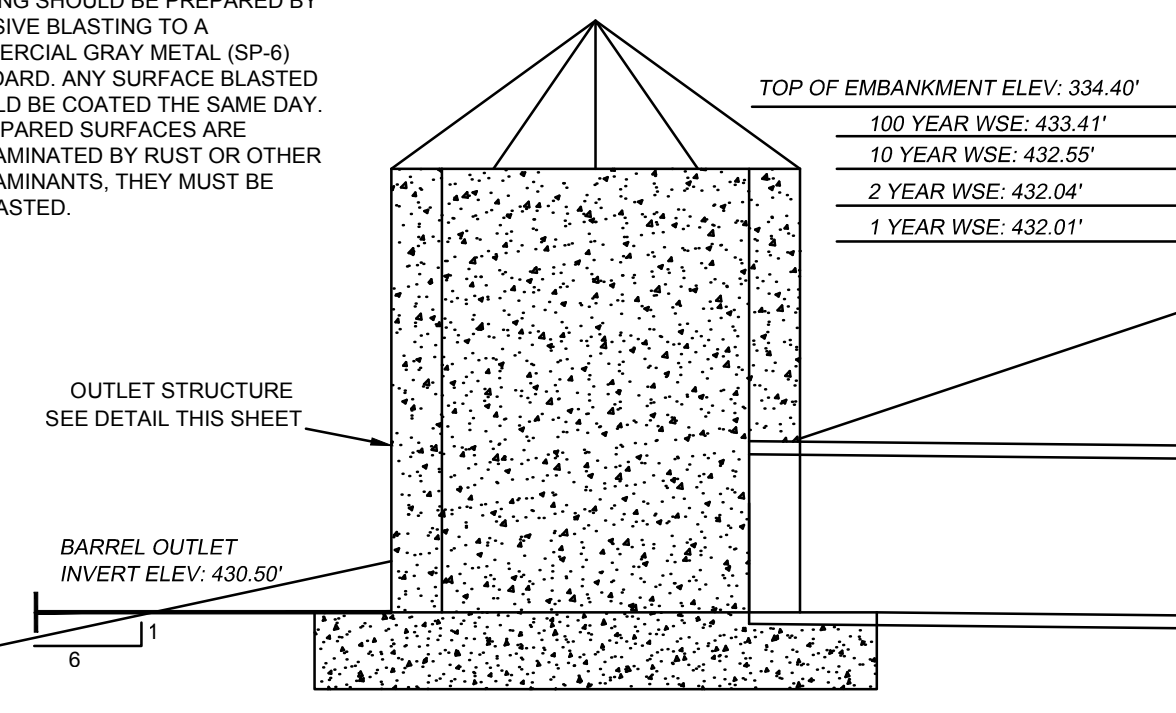
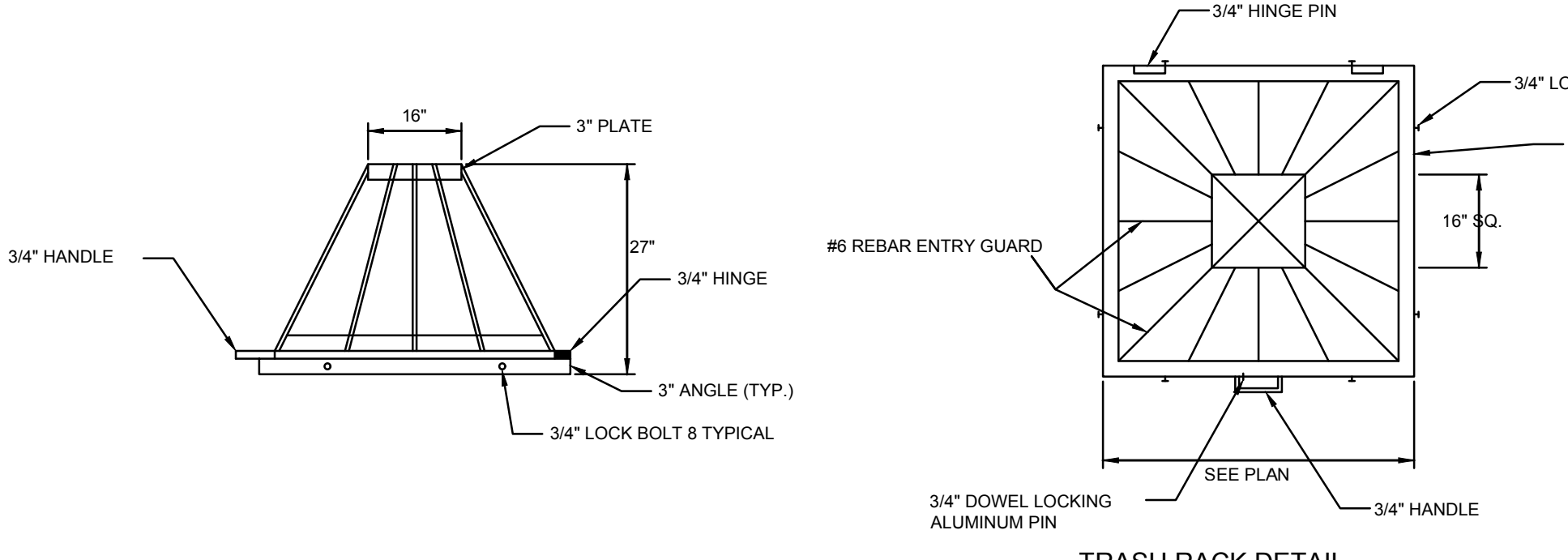
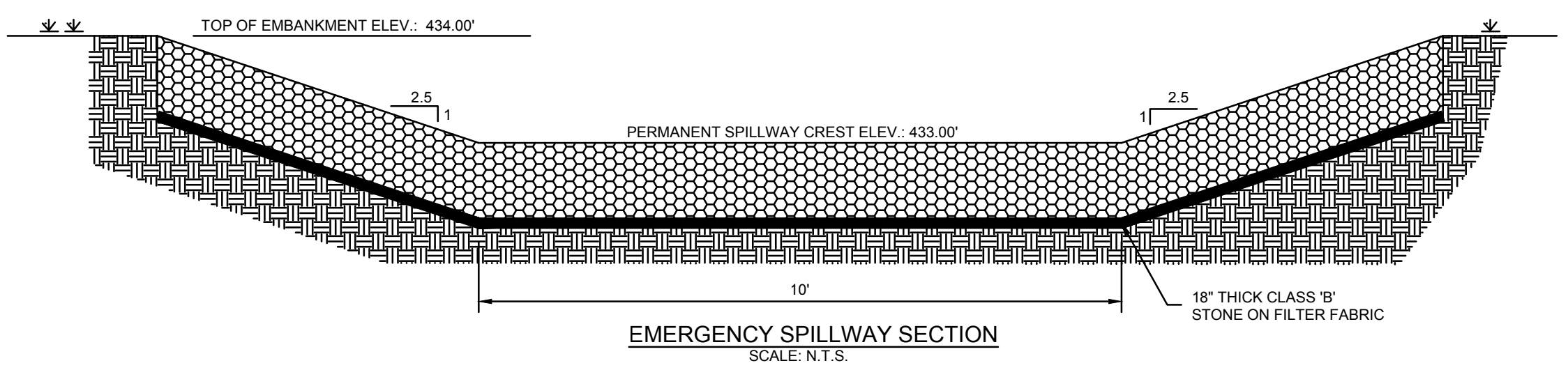
WET POND DETAIL  
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- TEMPORARY SEDIMENT BASIN NOTES:**
- INSPECT DEVICE AFTER EACH RAINFALL. REMOVE SEDIMENT WHEN SEDIMENT REACHES A DEPTH OF NO MORE THAN ONE-HALF THE HEIGHT OF THE RISER.
  - CLEAN OR REPLACE STONE FILTER WHEN DEVICE NO LONGER DRAINS PROPERLY.
  - PROVIDE PAINT MARK ON RISER AT 12" HEIGHT. CLEAN AND REPAIR ONCE SEDIMENT REACHES MARK.
  - INSTALL ALL COMPONENTS OF POND EMBANKMENT, OUTLET STRUCTURE, SKIMMER, EMERGENCY SPILLWAY, ETC. (UNLESS NOTED) PRIOR TO BEGINNING CLEARING OPERATIONS.

- OUTLET STRUCTURE NOTES:**
- ALL STRUCTURES OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 1'-2" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STANDARD 840.66.
  - CLASS "B" CONCRETE TO BE USED.
  - ALL MOTOR JOINTS ARE 1/2" ± 1/8"
  - FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.



**AS-BUILT SURVEY REQUIREMENTS**

NOTE: CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING STORMWATER POND AREA DIMENSIONS, ELEVATIONS, OUTLET STRUCTURE INVERTS, ORIFICE DIAMETER, PIPE SIZES AND CLEANOUT LOCATIONS. TOPOGRAPHY SHALL EXTEND 20 FEET OUTSIDE LIMITS OF POND.

**NOTE**

EMBANKMENT SHALL BE CONSTRUCTED OF CLEAN STRUCTURAL SOIL, FREE OF ROOTS, VEGETATION, ROCKS & OTHER OBJECTIONABLE MATERIAL. SCARIFY SURFACES BEFORE PLACING FILL. PLACE FILL IN 6-8 INCH LOOSE LIFTS. COMPACT TO AT LEAST 95% OF THE STANDARD PROCTOR DENSITY.

**EMBANKMENT SECTION**  
 SCALE: N.T.S.

**STORMWATER WET POND DETAIL**  
 NOT TO SCALE

**GEOTECHNICAL CERTIFICATION NOTE:**

AS-BUILT CERTIFICATION OF THE EMBANKMENT COMPACTION, ANTI-SEEP COLLARS, CUT OFF TRENCH, ETC. WILL BE REQUIRED PRIOR TO CERTIFICATE OF OCCUPANCY BY THE GEOTECHNICAL ENGINEER.