

# HARNETT CENTRAL CROSSING

## 4585 N.C. HWY 210 N

**OWNER/DEVELOPER:**  
 ECLS GLOBAL, INC.  
 1058 KENNICOTT AVENUE  
 CARY, NC 27513  
 PHONE: (910) 346-8443

**SURVEYOR/ENGINEER:**  
 ECLS GLOBAL, INC.  
 19 N. MCKINLEY STREET  
 CARY, NC 27513  
 PHONE: (910) 897-3257

**LEGEND: (EXISTING FEATURES)**

- IS = EXISTING IRON STAKE
- EPK = EXISTING P.K. NAIL
- EMN = EXISTING MAG NAIL
- MNS = MAG NAIL SET
- SSS = SURVEY SPIKE SET
- AS = TOP ABOVE GROUND SURFACE
- BS = TOP BELOW GROUND SURFACE
- HW = RIGHT-OF-WAY
- CL = CENTERLINE
- PL = PROPERTY LINE
- NCGS = NORTH CAROLINA GEODETIC SURVEY
- E—E— = OVERHEAD UTILITY LINE
- U—U— = UTILITY POLE
- W—W— = WATER METER
- WELL
- FH—FH— = FIRE HYDRANT
- SL—SL— = SECURITY LIGHT
- CB—CB— = CABLE BOX
- CO—CO— = CLEAN OUT
- CI—CI— = CURB INLET
- EB—EB— = ELECTRIC BOX
- MW—MW— = MONITORING WELL
- MH—MH— = MANHOLE
- FO—FO— = FIBER OPTIC PADDLE
- S—S— = SIGN
- TB—TB— = TELEPHONE BOX
- WV—WV— = WATER VALVE
- SD—SD— = STORM DRAIN LINE
- SS—SS— = SANITARY SEWER LINE
- W—W— = WATER LINE
- C—C— = AT&T FIBER OPTIC LINE
- P—P— = PHONE LINES
- RCP—RCP— = REINFORCED CONCRETE PIPE
- CM—CM— = CORRUGATED METAL PIPE
- E—E— = EXISTING CONTOUR LINE

**LEGEND: (PROPOSED FEATURES)**

- 13— = PROPOSED CONTOUR
- 16.30— = PROPOSED FINISH GRADE SPOT ELEVATION
- 16.88— = PROPOSED TOP OF CURB
- 16.36— = PROPOSED ASPHALT FINISH GRADE
- 16.88— = PROPOSED CONCRETE WALK
- 24" CONCRETE CURB & GUTTER
- PROPOSED SPILLED CURB
- PROPOSED CONCRETE VALLEY GUTTER
- PROPOSED STORMWATER CURB INLET
- PROPOSED STORMWATER JUNCTION BOX
- PROPOSED STORMWATER DRAIN INLET
- PROPOSED STORMWATER DRAIN LINE
- PROPOSED SANITARY SEWER MAIN
- PROPOSED STOP SIGN
- PROPOSED CURB STOP
- PROPOSED CROSS WALK
- PROPOSED ACCESSIBLE PATH (UNLESS NOTED OTHERWISE)
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CLEANOUT
- PROPOSED DOMESTIC WATER MAIN
- PROPOSED WATER VALVE
- PROPOSED WATER METER
- PROPOSED FIRE HYDRANT
- PROPOSED RPZ
- PROPOSED WATER BLOW OFF
- PROPOSED CORRUGATED PLASTIC PIPE
- PROPOSED 8" HIGH OPAQUE WOOD FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED TEMPORARY SEDIMENT STORAGE ZONE
- PROPOSED TEMPORARY CONSTRUCTION ENTRANCE
- PROPOSED TEMPORARY SPOIL PILE
- ACTIVE SEWER DRAINAGE EASEMENT AREA
- FUTURE SEWER DRAINAGE EASEMENT AREA
- NOTE: ALL RADIAL DIMENSIONS ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
- TD— = TEMPORARY DIVERSION BERM
- TREE PROTECTION FENCE



VICINITY MAP

**SITE DATA**

**PARCEL ADDRESS:** 4585 N.C. HWY 210 NORTH LILLINGTON, HARNETT COUNTY, NC 27546  
**PARCEL PIN:** 0662-12-9308.000  
**EXISTING ZONING:** GB (GENERAL BUSINESS - TOWN OF LILLINGTON)  
**SQUARE FOOTAGE OF PROPOSED BUILDINGS:** 4,998 SQ. FT. (51'x98')  
**TOTAL ACREAGE OF TRACT:** 2.5 ACRES  
**TOTAL IMPERVIOUS AREA:** 64,384.18 SQ. FT. (1.48 AC.)  
**TOTAL SITE IMPERVIOUS PERCENTAGE:** 59.2% IMPERVIOUS (1.48 AC./2.5 AC.)  
**TOTAL AREA OF DISTURBANCE:** 187,581.43 SQ. FT. (4.31 AC.)  
**ON SITE SOILS - DOA (DOTHAN LOAMY SAND)**  
**NUMBER OF PARKING SPACES REQUIRED:**  
**NUMBER OF PARKING SPACES REQUIRED = 4,998 SQ. FT. + 400 SQ. FT. / SPACE = 13 SPACES**  
**NUMBER OF PARKING SPACES PROVIDED = 34 SPACES**  
**NUMBER OF HANDICAPPED SPACES REQUIRED = 2 SPACES**  
**NUMBER OF HANDICAPPED SPACES PROVIDED = 2 SPACES**  
**NUMBER OF VAN ACCESSIBLE HANDICAP SPACES REQUIRED = 1 SPACE**  
**NUMBER OF VAN ACCESSIBLE HANDICAP SPACES PROVIDED = 1 SPACE**

THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA FLOOD MAP 3720066200J EFFECTIVE DATE 06/19/2018.

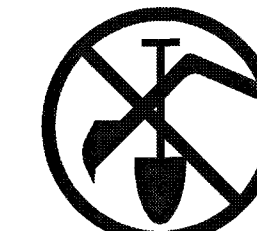
**2016 HCDPU REQUIRED UTILITY NOTES**  
 (Revision 6 - June 2016)

The following utility notes should be added to the coversheet of utility plans for projects located in Harnett County:

- 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:
    1. Mueller - Super Centurion 250 A-423 model with a 5 1/4" main valve opening three way (two hose nozzles and one pumper nozzle);
    2. American Darling - Mark B-84-B model with a 5 1/4" main valve opening three way (two hose nozzles and one pumper nozzle) or approved equal for standardization.
    3. Waterous - Pacer B-67-250 model with a 5 1/4" 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 post 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 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.
  - 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 9" 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 lines(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 twenty-four (24") inches of vertical 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 ten (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 3/4" services shall be 12" wide x 17" long ABS plastic boxes at least 18" in height with cast iron lids/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 inside a schedule 40 PVC conduit to allow for removal and replacement in the future. Two (2) independent 1" water service lines may be installed inside one (1) - two (2) inch schedule 40 PVC conduit or two (2) independent 1" 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. All pipes must be protected from extended exposure to sunlight prior to installation. 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. 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.
- S. 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.
- T. The Utility Contractor shall spot dig to expose each utility pipe or line which may conflict with construction of proposed water lines in advance of utility 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 requirements, 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 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 scheduled with the HCDPU Inspector. The Engineer of Record must request in writing to schedule the final inspection once all construction is complete. The Developer's Engineer of Record and the HCDPU Utility Construction Inspector shall prepare a written punch list of any defects or deficiencies noted during the final inspection, should any exist. Upon completion of the punch list, the Developer's Engineer of Record will schedule another inspection. In the event the number of inspections performed by the HCDPU exceeds two, additional fees may be accessed to the Developer.

See detail sheets for Water Utility Details.



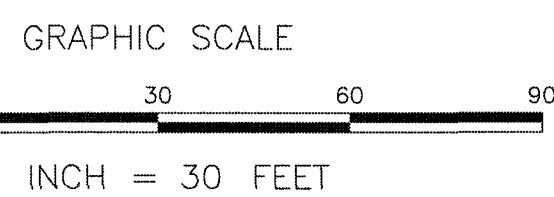
BEFORE YOU DIG !  
 CALL 1-800-632-4949  
 N.C. ONE-CALL CENTER  
 IT'S THE LAW !

**SHEET INDEX:**

- SHEET 1 - COVER SHEET
- SHEET 2 - EXISTING CONDITIONS / DEMOLITION PLAN
- SHEET 3 - SITE PLAN
- SHEET 4 - GRADING, DRAINAGE, & EROSION CONTROL PLAN
- SHEET 5 - UTILITY PLAN
- SHEET 6 - LANE WIDENING / LANE STRIPING PLAN
- SHEET 7 - DETAILS SHEET
- SHEET 8 - DETAILS SHEET
- SHEET 9 - DETAILS SHEET
- SHEET 10 - DETAILS SHEET
- L - LANDSCAPE PLAN
- L - 2 - POND PLANTING PLAN

**2** SHEET 1 OF 10

Drawing name: Y:\vests\docs\2018 Projects\Land Group\18-116 PROPOSED CONVENIENCE STORE.dwg GRADING PLAN Nov 05, 2018 2:24pm By: Edis, Global, William



ECLS GLOBAL

U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 CARY, NC 27513  
 910.897.3259 (FAX) 910.897.4175

REVISIONS:  
 7/5/18 AD JOINERS  
 11/3/2018 TOWN OF LILLINGTON REVIEW  
 COMMENTS: -JTP

SURVEY BY: 11/3/2018

COVER SHEET

HARNETT CENTRAL CROSSING

4585 N.C. 210 N.  
 LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-9308.000  
 DEED BOOK: 93E, PAGE: 0102

PROD. NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: LLL  
 SCALE: 1" = 30'  
 DATE: 06-19-2018

ECLS



I, Shawn T. Rumberger, certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 93E, page 0102); that the ratio of precision as calculated is 1:15,000; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, registration number and seal this 21st day of June, A.D., 2018.

I certify that this plat is the following type: G.S. 47-30 (f)(1)(c)(1). This survey is of an existing parcel or parcels of land and does not create a new street or change an existing street.

Surveyor

Reg. No. L-4909

**LEGEND**

- 100 — EXISTING CONTOUR
- CO = CLEANOUT
- CP = CALCULATED POINT
- EIR = EXISTING IRON ROD
- EOP = EDGE OF PAVEMENT
- GW = GUY WIRE
- IRS = IRON ROD SET
- LP = LIGHT POLE
- MH = MANHOLE
- R/W = RIGHT OF WAY
- TP = TELEPHONE PEDESTAL
- WEP = WOOD ELECTRIC POLE

**SETBACKS:**

FRONT	50'
SIDE	30' (ONLY 1 SIDE REQUIRED)
REAR	30'

**NOTES:**

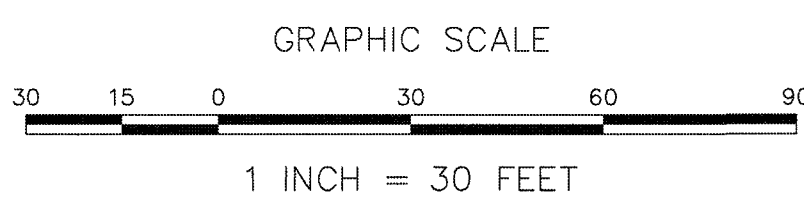
- I CERTIFY THAT THIS PLAT IS THE FOLLOWING TYPE: G.S. 47-30 (f)(1)(c)(1). THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.
- COORDINATES AT CONTROL CORNER WERE ESTABLISHED USING RTK GPS WITH A TRIMBLE SP-80 UNIT REFERENCING VRS NETWORK.

**AREA SUMMARY:**

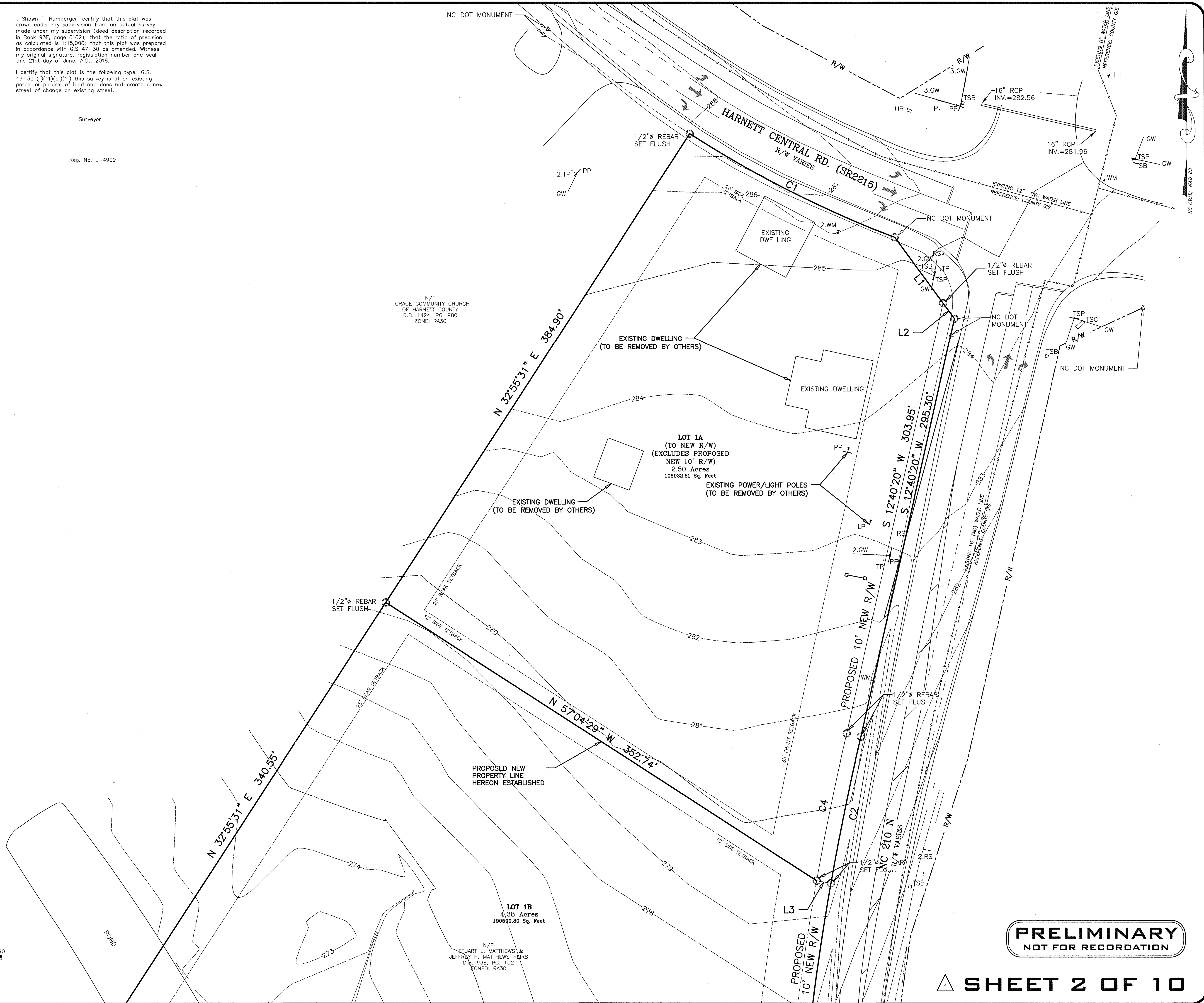
PARCEL	0.43 ACRES
R/W	+ 0.09 ACRES
TOTAL	= 0.52 ACRES

CURVE TABLE			
CURVE	RADIUS	CHORD LENGTH	CHORD BEARING
C1	779.30'	158.12'	S 63°09'18" E
C2	1792.92'	103.14'	S 11°35'17" W
C4	1802.92'	103.67'	S 11°35'15" W

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 36°18'25" E	56.22'
L2	S 36°18'25" E	13.25'
L3	N 80°03'36" W	10.00'



Drawing name: Y:\ecls\docs\2018 Projects\Land Group\18-116 PROPOSED CONVENIENCE STORE\18-116 PROPOSED CONVENIENCE STORE.dwg EXISTING CONDITIONS DEMOLITION PLAN Nov 06, 2018 9:16am by: Ecls\_Globel\_William



**ECLS GLOBAL**  
 U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 COATS, NC 27521  
 910.897.3257 ECLSGLOBAL.COM  
 910.897.2329 (FAX) C-4175

**REVISIONS:**

11/13/2018	TOWN OF LILLINGTON REVIEW	
	COMMENTS: -JTP	

SURVEY BY:

**EXISTING CONDITION/  
DEMOLITION PLAN**

**HARNETT CENTRAL CROSSING**  
 4585 NC 210 N,  
 LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-99308.000  
 DEED BOOK: 93E, PAGE: 0102

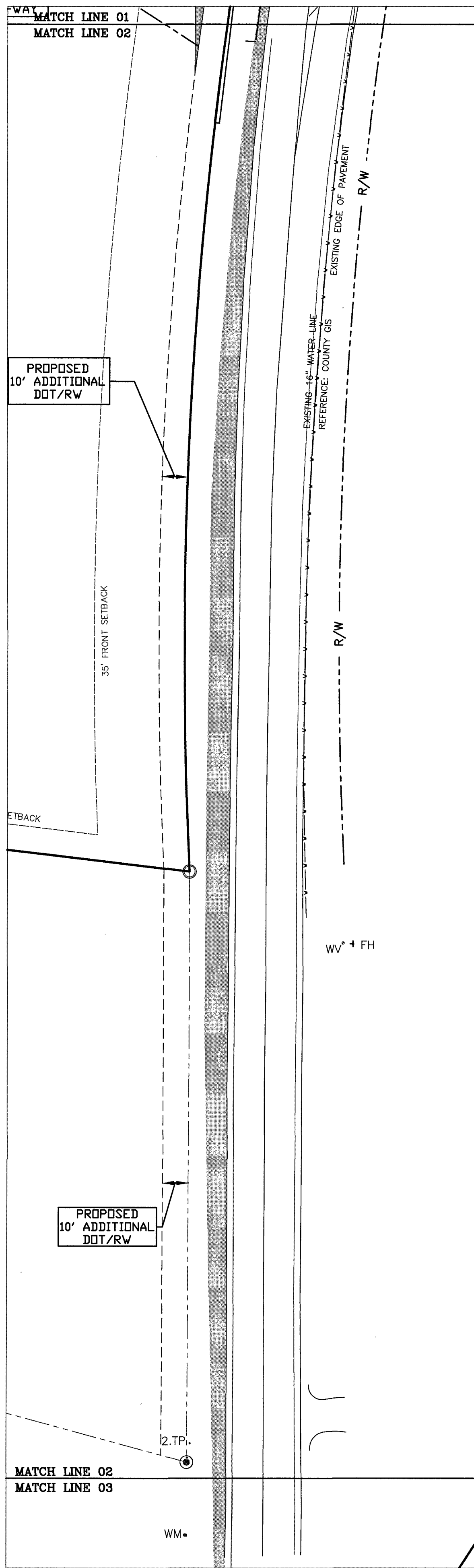
PROJ. NO:	18-116
FILENAME:	18-116
DRAWN BY:	JTP
SCALE:	1"=30'
DATE:	06-19-2018

**ECLS**

**PRELIMINARY  
NOT FOR RECORDATION**



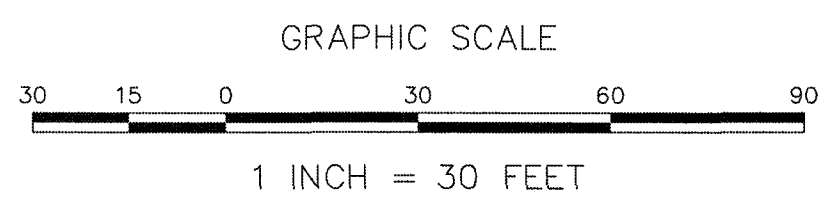
VICINITY MAP



- PROJECT NOTES:**
1. DRIVE THROUGH WINDOW WILL NOT HAVE A SPEAKER BOX OR A MENU BOARD (SEE SITE PLAN FOR 6 STACKING SPACES).
  2. GAS PUMPS WILL HAVE CANOPY (SEE SITE PLAN FOR LOCATION).
  3. SEE SITE PLAN FOR GASOLINE STORAGE TANK AND FILL LINES LOCATIONS.
  4. SEE SITE PLAN FOR PROJECT SIGN LOCATION.
  5. PROJECT IMPERVIOUS AREA = 64,384.18 SF  
 IMPERVIOUS % = 59.2% (1.48 AC./2.5 AC.)
  6. CALCULATED WATER USAGE IS AS FOLLOWS:  
 2,488 SF x 120 GAL/1000 SF (RETAIL SPACE) = 299 GALLONS/DAY  
 4 EMPLOYEES x 25 GALLONS/EMPLOYEE = 100 GALLONS/DAY  
 24 SEATS x 40 GALLONS PER RESTAURANT SEAT = 960 GALLONS/DAY  
 TOTAL WATER USAGE = 1,359 GALLONS/DAY
  7. 2" BACKFLOW PREVENTER SHALL BE WATTS MODEL 909 RPZ WITHIN HOT BOX.
  8. A LICENSED UTILITY CONTRACTOR SHALL INSTALL THE DOMESTIC WATER SERVICE AND THE NEW FIRE HYDRANT.
  9. SEE PROJECT COVER SHEET FOR 2016 HARNETT COUNTY REQUIRED UTILITY NOTES.
  10. SEE SHEET #10 OF 10 FOR HARNETT COUNTY UTILITY DETAILS.

SEE LANE WIDENING PLAN SHEET #6 OF 9 FOR "COMPLETE" EXTENT, DIMENSIONS, SPECIFICATIONS, AND NEW STRIPING PLAN FOR PROPOSED NEW LANE WIDENING AND ALL IMPROVEMENTS WITHIN NCDOT/ROW.

Drawing name: Y:\ecls\des\2018 Projects\Land Group\18-116 PROPOSED CONVENIENCE STORE\18-116 PROPOSED CONVENIENCE STORE.dwg SITE PLAN Nov 05, 2018 2:06pm by: Ecls\_Global\_William



**ECLS GLOBAL**  
 U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 COATS, NC 27521  
 910.897.3257 ECLSGLOBAL.COM  
 910.897.2329 (FAX) CD#1: 0-4175

REVISIONS:  
 11/13/2018 TOWN OF LILLINGTON REVIEW  
 COMMENTS: -JTP  
  
 SURVEYED: 11/15/2018

**SITE PLAN**

**HARNETT CENTRAL CROSSING**  
 4585 NC 210 N.  
 LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-9308.000  
 DEED BOOK: 93E, PAGE: 0102

PROJ. NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: JTP/LLL/RC  
 SCALE: 1"=30'  
 DATE: 05-19-2018  
**ECLS**

N/F  
 STUART L. MATTHEWS &  
 JEFFREY H. MATTHEWS HEIRS  
 D.B. 93E, PG. 102  
 ZONED: RASO



MATCH LINE 01  
MATCH LINE 02

NEW 18" RCP  
INV.=276.75

RIPRAP APRON #2  
USE RIPRAP  $d_{50} = 6'$   
MIN. DEPTH = 18"  
 $W_s = 4'$   
 $W_e = 8'$   
INSTALL FILTER CLOTH  
BENEATH RIPRAP

NOTE  
LIMITS OF DISTURBANCE ARE SHOWN WITHIN THE  
FOLLOWING SYMBOL  
TOTAL AREA OF DISTURBANCE = 187,581.43 SF 4.31 AC.

SEE LANE WIDENING PLAN SHEET  
#6 OF 9 FOR "COMPLETE"  
EXTENT, DIMENSIONS,  
SPECIFICATIONS, AND NEW  
STRIPING PLAN FOR PROPOSED  
NEW LANE WIDENING AND ALL  
IMPROVEMENTS WITHIN  
NCDOT/ROW.

PROPOSED  
10' ADDITIONAL  
DOT/RW

PROPOSED  
10' ADDITIONAL  
DOT/RW

N/F  
GRACE COMMUNITY CHURCH  
OF HARNETT COUNTY  
D.B. 1424, PG. 980  
ZONE: RA30

PERMANENT STORMWATER POND #1  
INSTALL AS PER GRADES AS SHOWN ON GRADE PLAN FOR  
USE AS TEMPORARY SKIMMER BASIN #1 DURING  
CONSTRUCTION. INSTALL PRINCIPAL SPILLWAY STRUCTURE TO  
ELEVATION 275.21 WITH 1-1/2" FAIRCLOTH SKIMMER & 1-1/2"  
ORIFICE FOR USE AS AN OUTLET STRUCTURE FOR TEMPORARY  
SKIMMER BASIN #1. WHEN PERMISSION HAS BEEN OBTAINED  
FROM NCDENR AND PROJECT ENGINEER TEMPORARY SKIMMER  
BASIN #1 IS TO BE CONVERTED TO PERMANENT STORMWATER  
WET POND #1. SEDIMENT BASIN IS TO BE CLEANED OF  
SEDIMENT AND ALL GRADES FOR PERMANENT WET POND #1  
ARE TO BE INSTALLED. ALL PERMANENT STRUCTURES AS  
SHOWN ON THE STORMWATER PLAN ARE TO BE INSTALLED AS  
PER STORMWATER DETAILS PROVIDED.

TEMPORARY SKIMMER BASIN #1 (WITHIN PERMANENT STORMWATER WET POND #1)  
SURFACE AREA REQUIRED FOR TEMP SKIMMER BASIN #1 = 0.01 Q10  
WHERE Q10 = CA = (0.87)(7.63 IN/HR)(2.5 AC) = 12.78 CFS  
0.01 Q10 = 0.01(12.78 CFS)(43.560) = 5.567 SF  
SURFACE AREA PROVIDED (AT ELEVATION 275.21) = 7,034.25 SF  
SURFACE STORAGE VOLUME REQUIRED = (1,800 CF/AC)(2.5 AC) = 4,500 CF  
SEDIMENT STORAGE VOLUME AVAILABLE (BETWEEN ELEV. 287.50 & 275.21) = 27, 841 CF  
WHEN SITE HAS BEEN STABILIZED AGAINST EROSION AND  
PERMISSION HAS BEEN OBTAINED FROM NCDENR & PROJECT  
ENGINEER, REMOVE ALL TEMPORARY MEASURES AND INSTALL  
PERMANENT GRADES, PERMANENT STRUCTURES AND PERMANENT  
PLANTINGS AS SHOWN ON DETAIL SHEETS AND LANDSCAPING.

DUMPSTER ENCLOSURE/  
CONCRETE APRON-SEE  
DETAIL

TEMPORARY SILT FENCE  
AS SHOWN (SEE DETAIL)

PROVIDE TREE PROTECTION FENCE AROUND  
ACTIVE AND FUTURE SEPTIC FIELD AREAS  
WITHIN PERMANENT EASEMENT AREAS  
THESE AREAS ARE TO BE USED FOR  
ANY TYPE OF STORAGE. DO NOT USE FOR  
STORAGE OF CONSTRUCTION MATERIAL  
DURING CONSTRUCTION AND ARE TO  
REMAIN PERMANENTLY UNDISTURBED  
UNLESS AND UNTIL THESE REPAIR AREAS  
NO LONGER NEEDED FOR USE AS  
SEPTIC DRAIN FIELD.

SEPTIC FIELD  
EASEMENT AREA  
(DO NOT DISTURB)

DRAINAGE EASEMENT  
(WIDTH VARIES)

TEMPORARY DIVERSION BERM, AS  
SHOWN -SEE DETAIL

TEMPORARY  
SEDIMENT TRAP #1

TEMPORARY STONE  
CHECK DAM -SEE  
DETAIL

NEW 18" RCP  
INV.=278.92

SEPTIC FIELD  
EASEMENT AREA  
(DO NOT  
DISTURB)

NEW 85"-18"  
RCP @ 1.44%

NEW NC DOT/CATCH BASIN  
TOP FL=280.42  
INV.=277.70

NEW 77" - 18" RCP @  
1.23%

TEMPORARY SILT FENCE  
AS SHOWN (SEE DETAIL)

TEMPORARY GRADING  
EASEMENT

TEMPORARY CONCRETE  
WASHOUT AREA -  
SEE DETAIL

TEMPORARY SILT FENCE  
AS SHOWN (SEE DETAIL)

ACCESS, DRAINAGE,  
AND POND EASEMENT  
(WIDTH VARIES)

RIPRAP APRON #1  
USE RIPRAP  $d_{50} = 6'$   
MIN. DEPTH = 18"  
 $W_s = 4'$   
 $W_e = 14'$   
 $L = 20'$

INSTALL FILTER CLOTH  
BENEATH RIPRAP

6" DIP  
INV.=272.00

TEMPORARY SILT FENCE  
AS SHOWN (SEE DETAIL)

TEMPORARY SILT FENCE  
AS SHOWN (SEE DETAIL)

N/F  
STUART L. MATTHEWS &  
JEFFREY H. MATTHEWS HEIRS  
D.B. 93E, PG. 102  
ZONED: RA30

B-1  
GROUND  
ELEV.=275.61

3 EACH TEMPORARY  
BAFFLES INSTALLED  
AT LOCATIONS AS  
SHOWN (SEE DETAIL)

OUTLET  
STRUCTURE FOR  
RETENTION  
POND-SEE  
DETAIL

RIPRAP SWALE  
"C"-SEE DETAIL

RIPRAP SWALE  
"B"-SEE DETAIL

CONC. ANTI-  
SEEP COLLAR  
(SEE DETAIL)

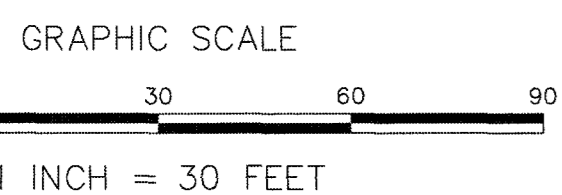
40" 6" DIP  
@ 0.67%

JUNCTION BOX  
TOP=274.00  
INV.=272.23

35" 6" DIP  
@ 0.67%

B-2  
GROUND  
ELEV.=273.76

B-3  
GROUND  
ELEV.=272.66

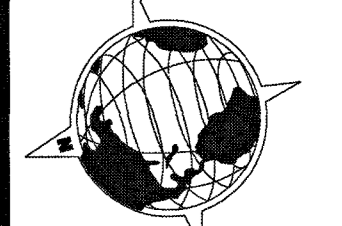


MATCH LINE 01  
MATCH LINE 02

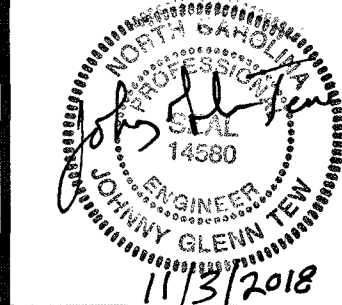
SHEET 4 OF 10

MATCH LINE 01  
MATCH LINE 02

ECLS  
GLOBAL  
U.S. VETERAN-OWNED  
19 N. MCKINLEY ST.  
COATS, NC 27521  
910.897.3257 ECLS@GLOBAL.COM  
910.897.3259 (FAX) DR: 6-4175



REVISIONS:  
7/10/18 ADDED  
CONSTRUCTION ENTRANCES  
11/3/2018 TOWN OF  
LILLINGTON REVIEW  
COMMENTS: -JTP



SURVEY BY: 11/3/2018

GRADING, DRAINAGE AND  
EROSION CONTROL PLAN

HARNETT CENTRAL CROSSING

4585 NC 210 N,  
LILLINGTON, HARNETT CO., N.C.  
PROJECT NO. 18-116  
DEED BOOK: 93E, PAGE: 0102

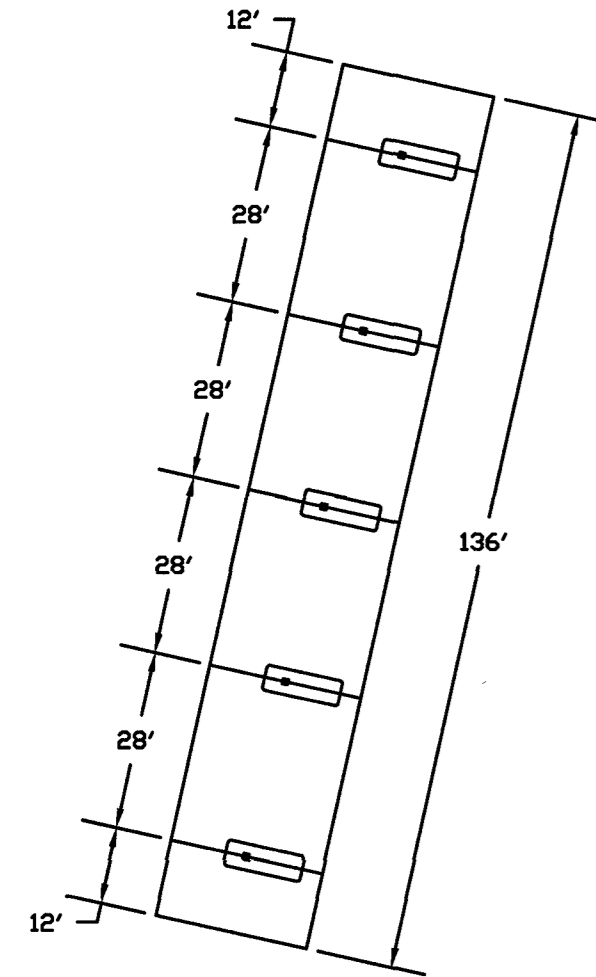
PROJ. NO.: 18-116  
FILENAME: 18-116  
DRAWN BY: JTP/LL/RC  
SCALE: 1"=30'  
DATE: 06-19-2018

ECLS

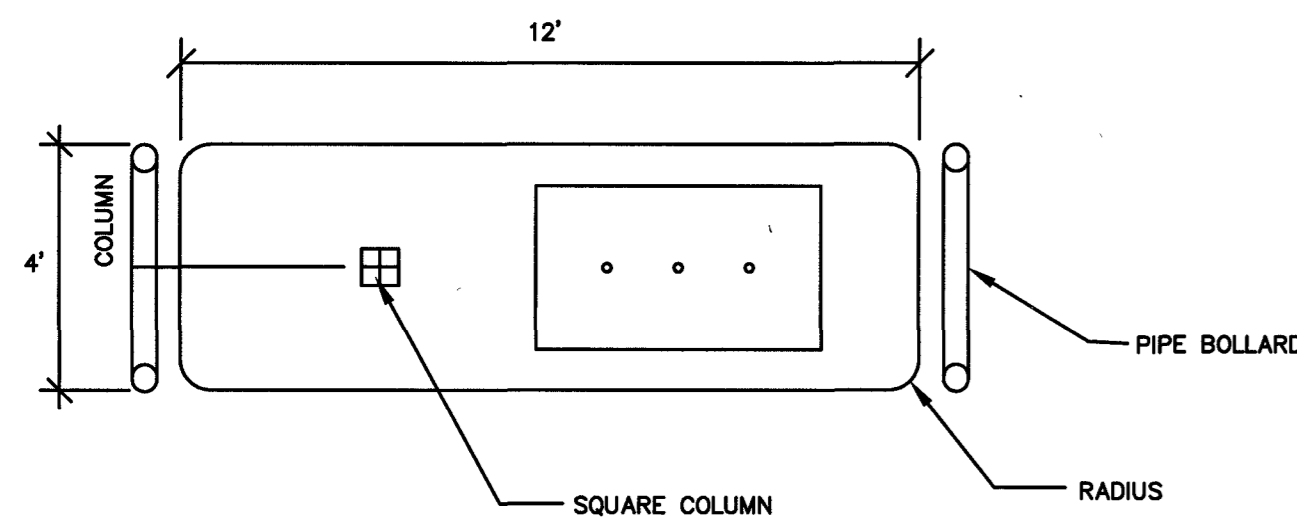
Drawing name: X:\vestis\_dcsa\2018 Projects\Lead Group\18-116 PROPOSED CONVENIENCE STORE.dwg GRADING PLAN Nov 05, 2018 2:23pm by Ecls\_Central\_William



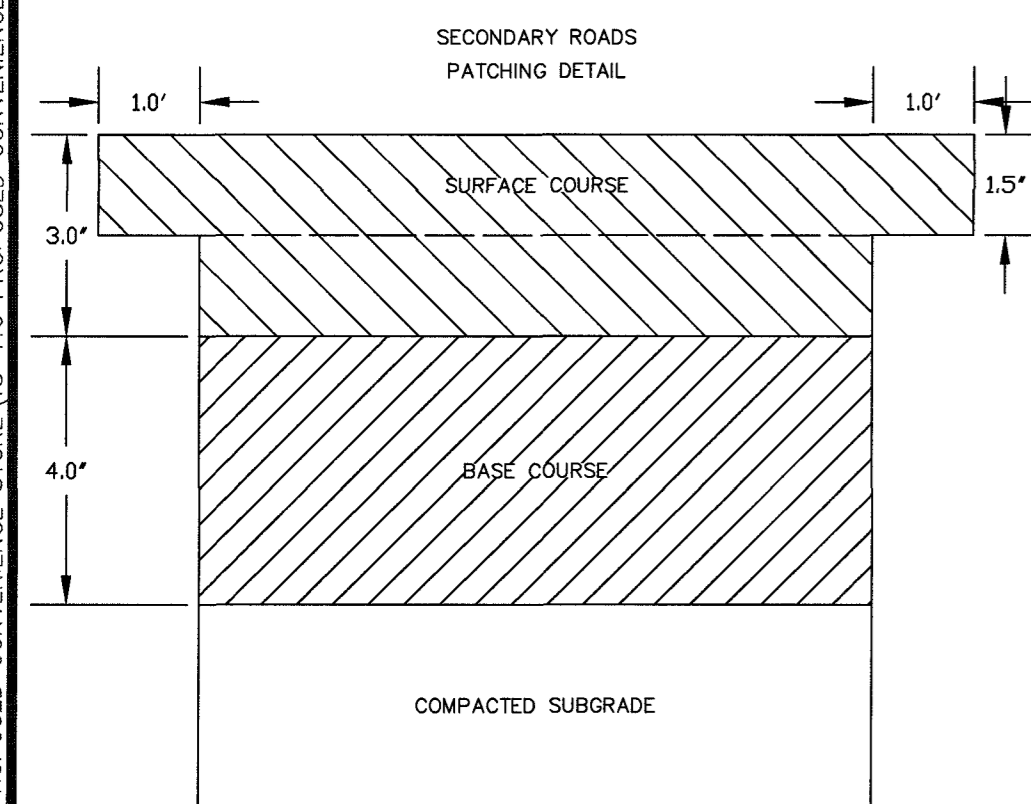
VICINITY MAP



FUEL ISLAND LAYOUT PLAN (NTS)



FUEL ISLAND PLAN VIEW (NTS)



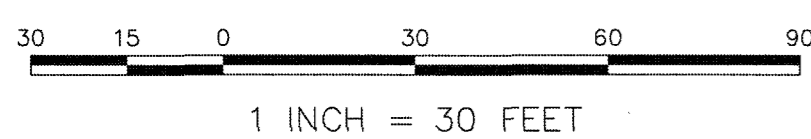
PAVEMENT SCHEDULE

(MILLING REQUIRED ONE FOOT AT DEPTH OF 1.5" ON EACH SIDE OF PAVEMENT CUT)  
 3.0" S 9.5 C  
 4.0" B 25.0 C

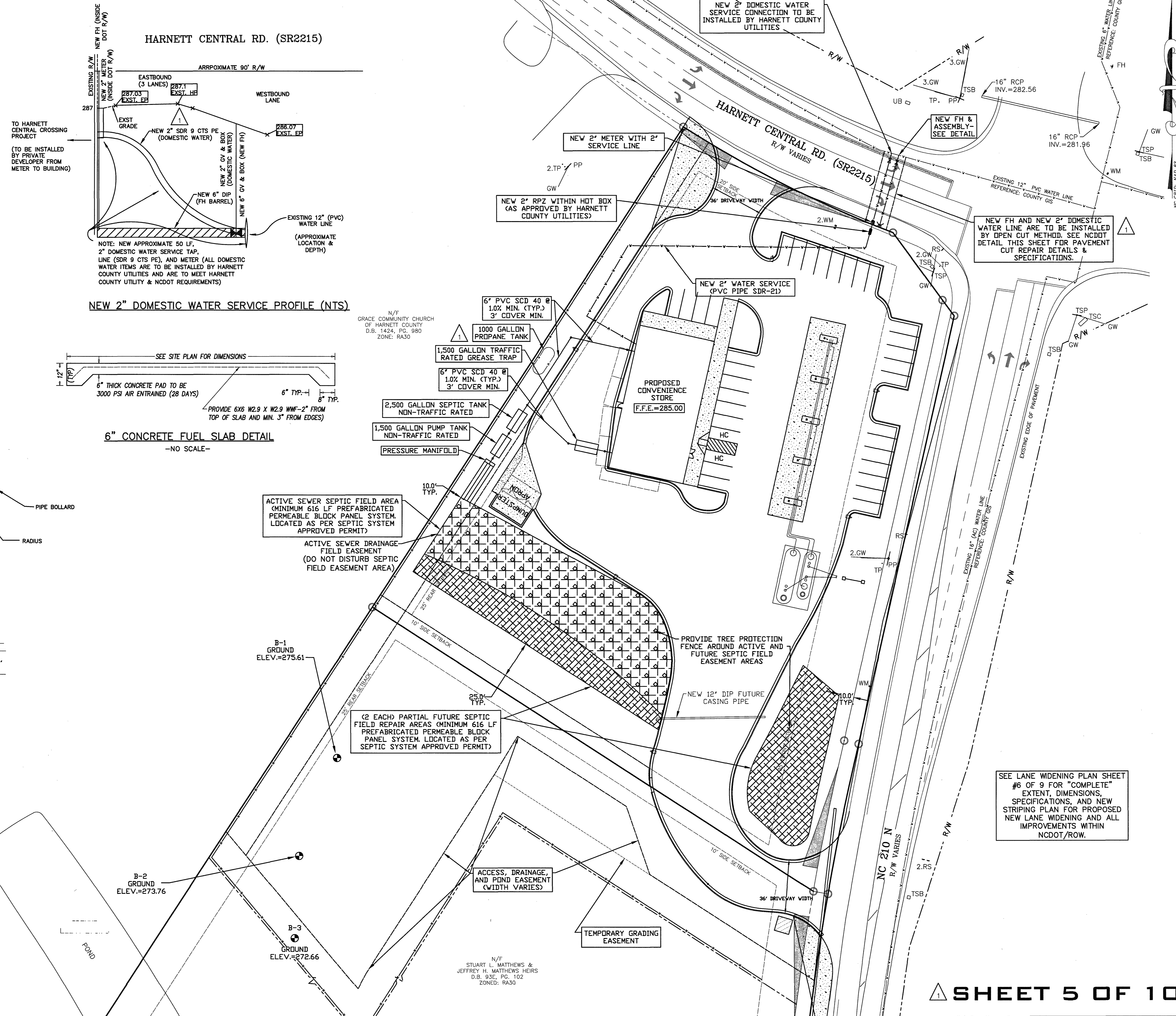
DRAWING IS NOT TO SCALE

NCDOT PAVEMENT CUT REPAIR DETAIL

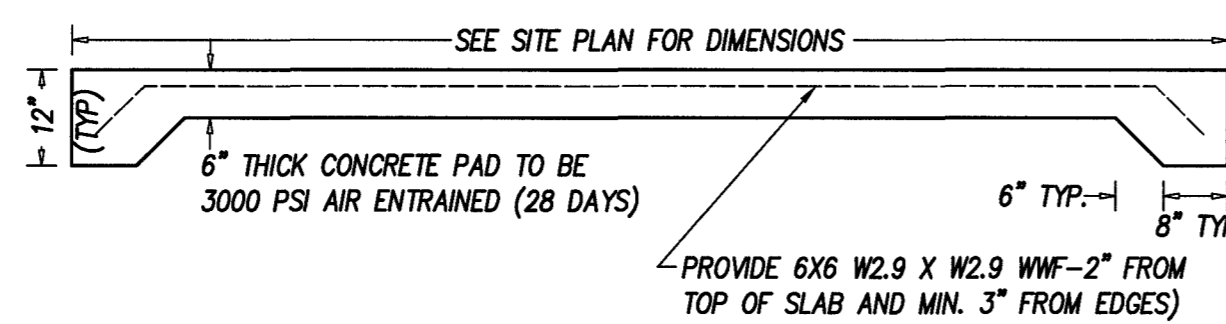
GRAPHIC SCALE



HARNETT CENTRAL RD. (SR2215)



NEW 2" DOMESTIC WATER SERVICE PROFILE (NTS)



6" CONCRETE FUEL SLAB DETAIL  
 -NO SCALE-

ACTIVE SEWER SEPTIC FIELD AREA (MINIMUM 616 LF PREFABRICATED PERMEABLE BLOCK PANEL SYSTEM, LOCATED AS PER SEPTIC SYSTEM APPROVED PERMIT)

ACTIVE SEWER DRAINAGE FIELD EASEMENT (DO NOT DISTURB SEPTIC FIELD EASEMENT AREA)

(2 EACH) PARTIAL FUTURE SEPTIC FIELD REPAIR AREAS (MINIMUM 616 LF PREFABRICATED PERMEABLE BLOCK PANEL SYSTEM, LOCATED AS PER SEPTIC SYSTEM APPROVED PERMIT)

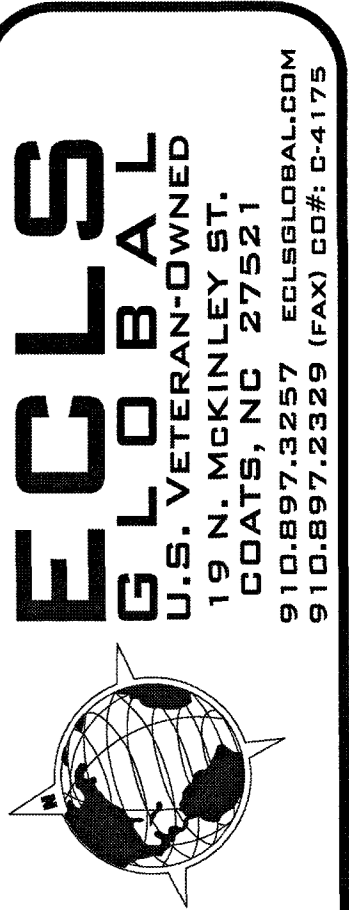
ACCESS, DRAINAGE, AND POND EASEMENT (WIDTH VARIES)

TEMPORARY GRADING EASEMENT

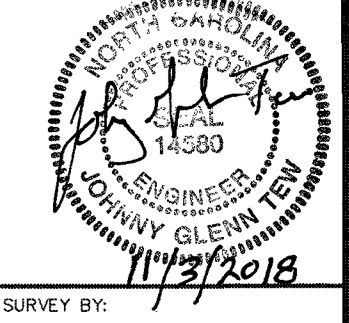
N/F GRACE COMMUNITY CHURCH OF HARNETT COUNTY D.B. 1424, PG. 980 ZONE: RA30

N/F STUART L. MATTHEWS & JEFFREY H. MATTHEWS HEIRS D.B. 93E, PG. 102 ZONED: RA30

SEE LANE WIDENING PLAN SHEET #6 OF 9 FOR "COMPLETE" EXTENT, DIMENSIONS, SPECIFICATIONS, AND NEW STRIPING PLAN FOR PROPOSED NEW LANE WIDENING AND ALL IMPROVEMENTS WITHIN NCDOT/ROW.



REVISIONS:  
 11/23/2018 TOWN OF LILLINGTON REVIEW COMMENTS: -JTP



SURVEY BY:

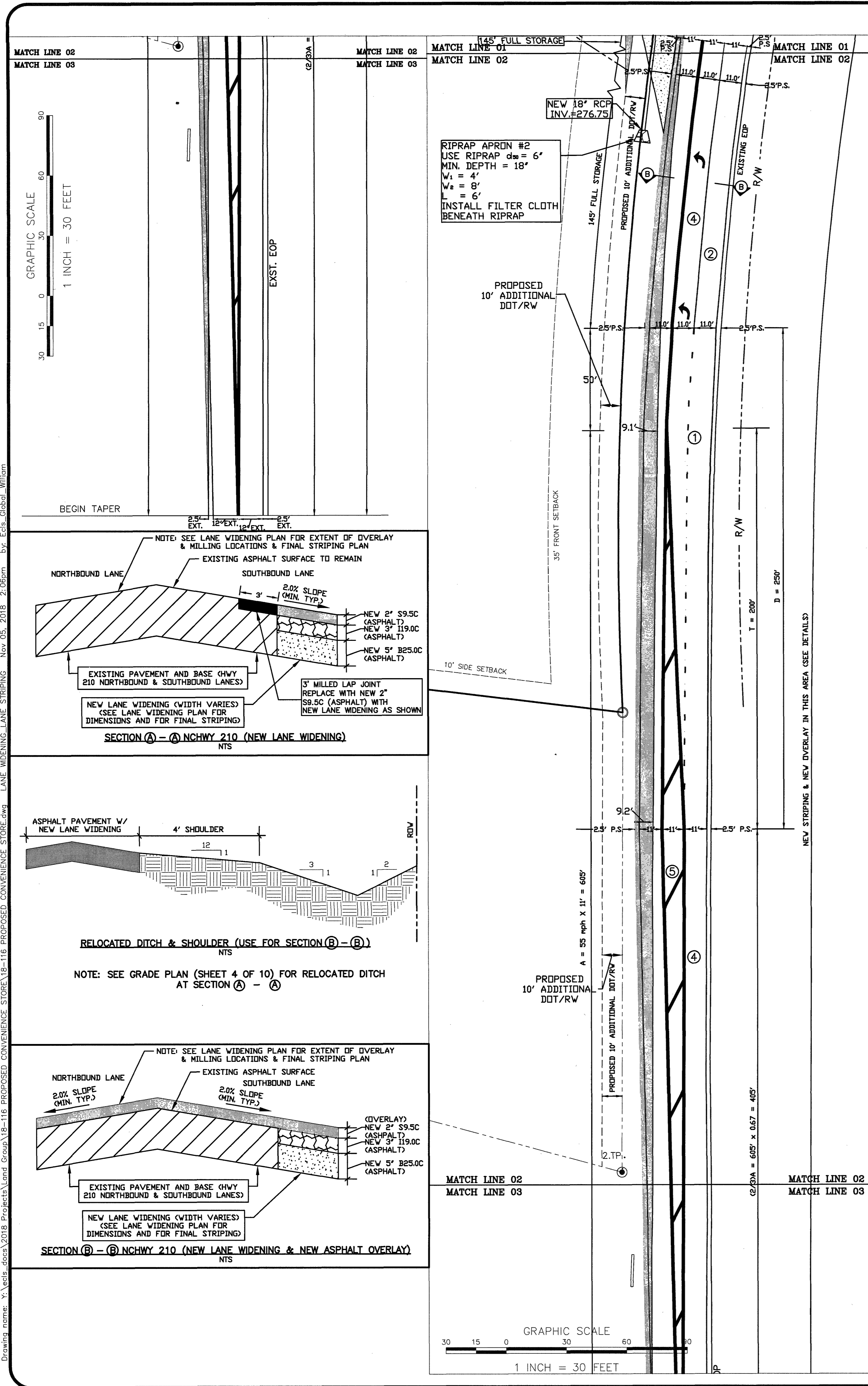
UTILITY PLAN

HARNETT CENTRAL CROSSING  
 4585 NC 210 N  
 LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-9308.000  
 DEED BOOK: 93E, PAGE: 0102

PROJ. NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: JTP/RC  
 SCALE: 1"=30'  
 DATE: 06-19-2018



Drawing name: Y:\ecls\2018 Projects\Land Group\18-116 PROPOSED CONVENIENCE STORE.dwg UTILITY PLAN Nov. 05, 2018 2:21pm By: Ecls\_Global\_William



CONTACT (810)384-0808  
 PRIOR TO ANY PLACEMENT OF PAVEMENT  
 MARKINGS (THERMOPLASTIC)

FINAL STRIPING LEGEND	
①	WHITE 3" (8" SPACING) MINI-SKIP LINE (4" WIDE) (REMOVE EXISTING LINE WHERE APPLICABLE)
②	WHITE LANE LINE (4" WIDE)
③	WHITE EDGE LINE (4" WIDE)
④	DOUBLE YELLOW CENTER LINES (4" WIDE WITH 6" SPACE BETWEEN)
⑤	YELLOW DIAGONAL LINE (12" WIDE)
⑥	EXISTING STRIPING TO REMAIN UNDISTURBED
⑦	NEW 2" MONOLITHIC CONCRETE ISLAND (NCDOT STANDARD DRAWING 852 - SEE DETAIL)
⑧	REMOVE EXISTING OUTER LANE MARKING IN THIS AREA. APPLY NEW STRIPING FOR NEW RIGHT TURN LANE AS SHOWN

TURN LANE SHALL FOLLOW  
 THE CROWN OR SUPER OF THE  
 EXISTING ROADWAY

ANY PARCELS OR EXCLUDED AREAS  
 ARE TO BE SERVED INTERNALLY WITH  
 NO ACCESS ONTO DEPARTMENTAL  
 RIGHT OF WAY

ONLY NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION APPROVED  
 STRUCTURES ARE TO BE CONSTRUCTED  
 ON PUBLIC RIGHT OF WAY

ALL DRAINAGE EASEMENTS SHALL BE  
 DEDICATED AS PUBLIC AND IT SHALL BE  
 THE RESPONSIBILITY OF THE PROPERTY  
 OWNERS TO MAINTAIN THE DRAINAGE  
 EASEMENTS AND ANY DRAINAGE  
 STRUCTURES THERE IN, SO AS TO MAINTAIN  
 THE INTEGRITY OF THE DRAINAGE SYSTEM  
 AND INSURE POSITIVE DRAINAGE.

RIGHT OF WAY TO BE DEDICATED  
 BY RECORDATION OF NORTH  
 CAROLINA WARRANTY DEED AND  
 PLAT

N/F  
 GRACE COMMUNITY CHURCH  
 OF HARNETT COUNTY  
 D.B. 1424, PG. 980  
 ZONE: RA30

N/F  
 STUART L. MATTHEWS &  
 JEFFREY H. MATTHEWS HEIRS  
 D.B. 93E, PG. 102  
 ZONED: RA30

200.00' NEW TURN LANE  
 TAPER ASPHALT WIDTH  
 VARIES FROM 12' TO 0'.  
 3' MILLED LAP JOINT (2'  
 DEEP) SEE DETAIL  
 SECTION (A) - (A)

RIGHT TURN LANE  
 Q DIVISION REQUIREMENTS:  
 REDUCING REQUIREMENTS  
 AS SET FORTH IN MANUAL.

6.42' FROM FACE OF EXISTING  
 POWER POLE TO NEW EP

130.00' FULL WIDTH TURN  
 LANE ASPHALT. NEW  
 ASPHALT WIDTH EQUAL 12'  
 FROM EXISTING EP TO NEW  
 EP

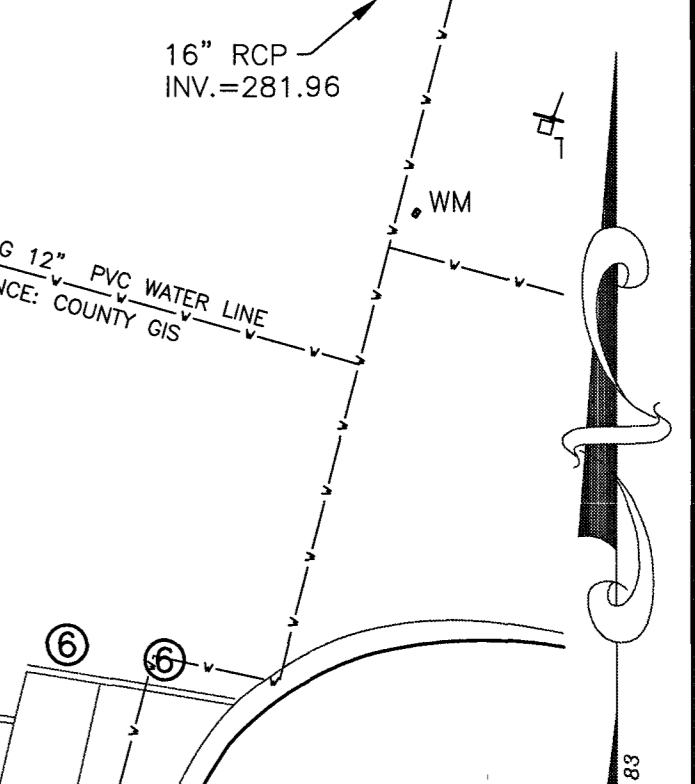
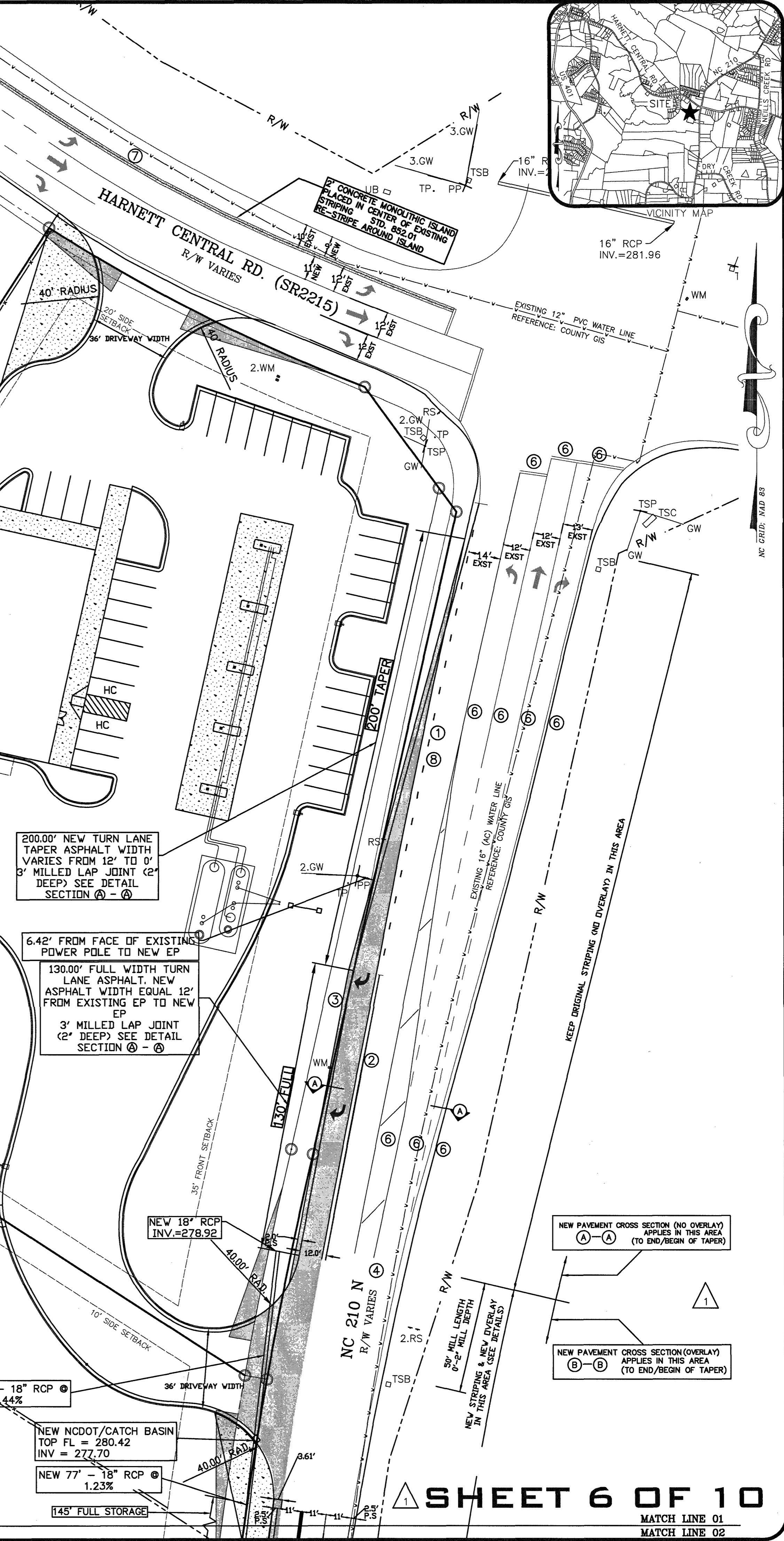
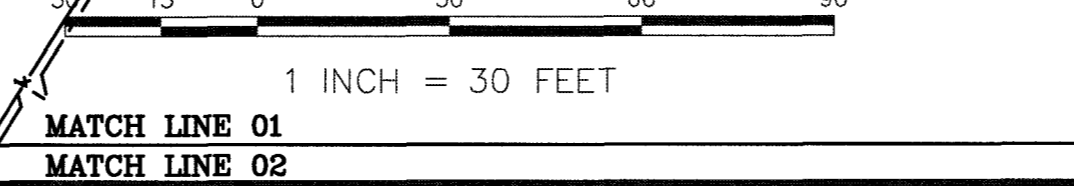
3' MILLED LAP JOINT  
 (2' DEEP) SEE DETAIL  
 SECTION (A) - (A)

NEW 18" RCP  
 INV.=278.92

NEW 77' - 18" RCP  
 1.23%

NEW 85' - 18" RCP  
 1.44%

NEW NCDOT/CATCH BASIN  
 TOP FL = 280.42  
 INV = 277.70

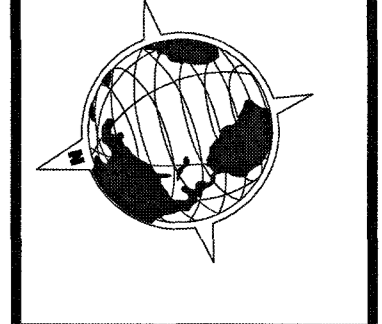


REVISIONS:  
 11/13/2018 TOWN OF  
 LILLINGTON REVIEW  
 COMMENTS AND NCDOT  
 COMMENTS. --LTP

SURVEY BY:  
 (Signature)  
 11/27/2018

SCALE:  
 1"=30'

DATE:  
 06-19-2018



PROJECT NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: JTP/RC  
 SCALE: 1"=30'  
 DATE: 06-19-2018

**HARNETT CENTRAL CROSSING**

4565 NC 210 N., CO., N.C.  
 LILLINGTON, HARNETT CO., N.C.  
 PLOT NO.: 218  
 DEED BOOK: 93E, PAGE: 0102

**LANE WIDENING/LANE  
 STRIPING PLAN**

Drawing name: X:\ecls\_dosca\2018\Projects\Land\Comp\18-116 PROPOSED CONVENIENCE STORE\18-116 PROPOSED CONVENIENCE STORE.dwg  
 LANE WIDENING/LANE STRIPING Nov. 05. 2018 2:06pm. by: Ecls Global, William

**CONSTRUCTION SEQUENCE**

- 1) INSTALL CONSTRUCTION ENTRANCES (2 EACH)
- 2) INSTALL SILT FENCING AND SILT FENCE OUTLETS (DISTURBING ONLY THE AREA NECESSARY FOR FENCE AND OUTLET INSTALLATIONS), AS SHOWN ON SHEET #4 OF 9.
- 3) INSTALL TEMPORARY SKIMMER BASIN #1 ALONG WITH TEMPORARY DIVERSION BERMS TO SKIMMER BASIN.
- 4) GRADE SITE
- 5) SEED AND MULCH ALL AREAS AS PER GROUND STABILIZATION SPECIFICATIONS FOR TIME REQUIREMENTS FOR ESTABLISHING TEMPORARY SEEDING AND PERMANENT SEEDING AND FOR SEEDING RATES & TYPES.
- 6) TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE NOT TO BE REMOVED WITHOUT THE APPROVAL OF NCDEQ.

**SEEDING SPECIFICATIONS**

**SEEDBED PREPARATION**  
THOROUGHLY CULTIVATE LAWN AREAS BY DISCING TO A DEPTH OF 6" AND RAKING THE SURFACE SMOOTH TO REQUIRED GRADES. APPLY 4,000 LBS. OF AGRICULTURE LIME PER ACRE AND 1,000 LBS. OF 10-10-10 OR EQUIVALENT FERTILIZER PER ACRE.

**TEMPORARY SEEDING**

WHERE TEMPORARY SEEDING IS REQUIRED PRIOR TO SEEDING OF PERMANENT LAWNS OR FILL SLOPES PROCEED AS FOLLOWS:

- |                     |   |
|---------------------|---|
| OCT. 15TH-MAR. 1ST  | SOW RYE GRAIN AT THE RATE OF 120 LBS. PER ACRE.   |
| MAR. 1ST-AUG. 15TH  | SOW GRAIN MILLET AT THE RATE OF 40 LBS. PER ACRE. |
| AUG. 15TH-OCT. 15TH | SOW RYE GRAIN AT THE RATE OF 120 LBS. PER ACRE.   |

GROUND COVER WILL BE ESTABLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS AND WITHIN 7 CALENDAR DAYS IN AREAS WITH SLOPES OF 3:1 OR STEEPER AND AROUND THE PERIMETER OF THE PROJECT. SEE GROUND STABILIZATION CHART #1.

**MULCHING (FOR TEMPORARY SEEDING)**

IMMEDIATELY FOLLOWING SEEDING, APPLY STRAW MULCH ON SEEDED AREAS (PROVIDE AT A RATE OF 2 TONS PER ACRE FOR SMALL GRAIN STRAW). PLACE STRAW MULCH UNIFORMLY IN A CONTINUOUS BLANKET. ALL SLOPES LESS THAN 3:1 STEEPNESS AND ALL LAWN AREAS ARE TO HAVE MULCH ANCHORED BY THE USE OF A TRACTOR DRAWN MULCH ANCHORING TOOL TO PUNCH MULCH INTO THE SOIL. ALL SLOPES 3:1 OR GREATER ARE TO HAVE ASPHALT TACK APPLIED AT THE RATE OF 225 GALLONS/ACRE. APPLY WATER WITH A FINE SPRAY IMMEDIATELY AFTER EACH AREA HAS BEEN MULCHED.

**PERMANENT SEEDING**

SEED PERMANENT LAWN AREAS BETWEEN MARCH 1ST TO AUGUST 15TH WITH HULLED COMMON BERMUDA 3 LBS. PER 1,000 SQUARE FEET OR PLANT WITH BERMUDA 419 SOD WHERE SPECIFIED.

BETWEEN THE DATES OF AUGUST 24 - SEPTEMBER 15 (BEST) OR AUGUST 20 - OCTOBER 25 (POSSIBLE) AND FEBRUARY 15 - MARCH 21 (BEST) OR FEBRUARY 1 - MARCH 1 (POSSIBLE) USE THE FOLLOWING SEEDING MIXTURE:

- 200/250 LBS. TALL FESCUE
- 20 LBS. SERICEA LESPEDEZA
- 10 LBS. KOBE LESPEDEZA
- 1000 LBS. 10-10-10 FERTILIZER
- 4000 LBS. LIMESTONE

SEED PERMANENT FILL SLOPE AREAS BETWEEN MARCH 1ST TO AUGUST 15TH WITH 40 LBS. SERICEA LESPEDEZA AND 10 LBS. HULLED COMMON BERMUDA PER ACRE.

PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE PROVIDED FOR ANY PORTION OF A LAND-DISTURBING ACTIVITY WITHIN FIFTEEN (15) WORKING DAYS OR SIXTY (60) CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT, WHICHEVER PERIOD IS SHORTER.

**MULCHING (FOR PERMANENT SEEDING)**

IMMEDIATELY FOLLOWING SEEDING, APPLY STRAW MULCH ON SEEDED AREAS TO A THICKNESS OF ONE INCH. PLACE STRAW MULCH UNIFORMLY IN A CONTINUOUS BLANKET. ALL SLOPES LESS THAN 3:1 STEEPNESS AND ALL LAWN AREAS ARE TO HAVE MULCH ANCHORED BY THE USE OF A TRACTOR DRAWN MULCH ANCHORING TOOL TO PUNCH MULCH INTO THE SOIL. ALL SLOPES 3:1 OR GREATER ARE TO HAVE ASPHALT TACK APPLIED AT THE RATE OF 225 GALLONS/ACRE. APPLY WATER WITH A FINE SPRAY IMMEDIATELY AFTER EACH AREA HAS BEEN MULCHED.

TEMPORARY CHANNEL LININGS IF REQUIRED SHALL BE INSTALLED IN AREAS AS SHOWN ON PLANS, OR AS REQUIRED TO PREVENT EROSION. LININGS ARE TO BE LEFT IN PLACE THROUGHOUT PERMANENT SEEDING PROCEDURE.

**MAINTENANCE:** RE-SEED AND RE-APPLY MULCHING IN ANY AREAS THAT FAIL TO ESTABLISH GROUND COVER. (DURING TEMPORARY AND PERMANENT SEEDING OPERATIONS)

**PROJECT MANAGEMENT SCHEDULE**

NOTE: ALL TEMPORARY EROSION CONTROL DEVICES ARE TO BE INSPECTED FOR POSSIBLE ROUTINE MAINTENANCE A MINIMUM OF ONCE EACH WEEK AND AFTER ANY SIGNIFICANT RAIN EVENT (1/2" OR GREATER). ADDRESS ANY MAINTENANCE NEED WITHOUT DELAY IN ORDER TO PREVENT FUTURE EROSION ISSUES ON SITE.

NOTE: ALL PERMANENT EROSION CONTROL MEASURES ARE TO BE MAINTAINED ON A PERMANENT BASIS (THROUGHOUT THE LIFE OF THE PROJECT) TO PREVENT POSSIBLE FUTURE EROSION ISSUES ON THE SITE.

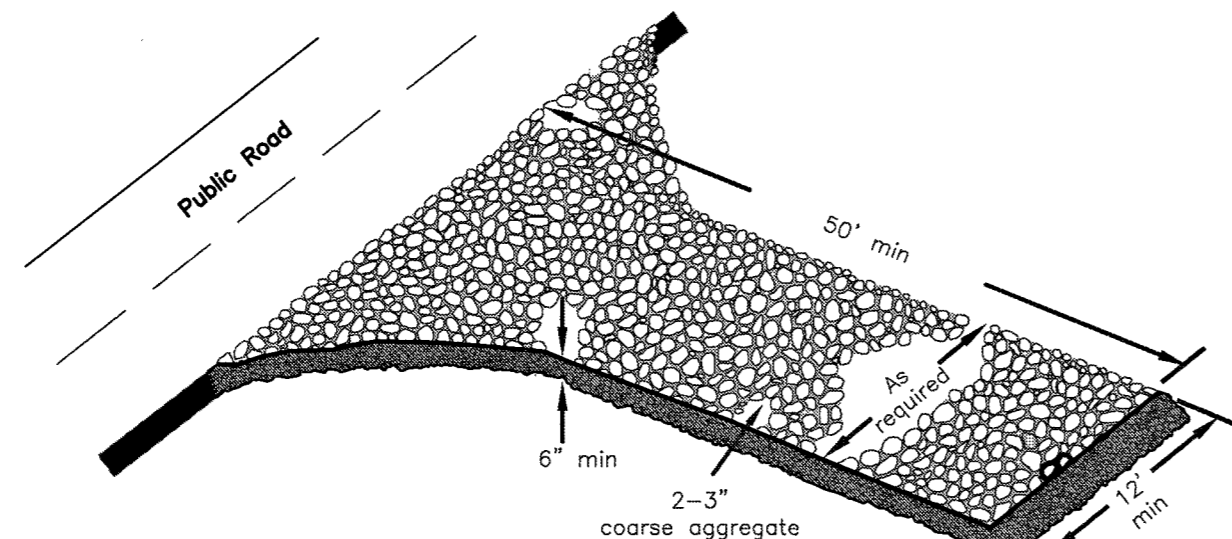
NOTE: A WRITTEN LOG OF THE WEEKLY MAINTENANCE INSPECTION IS TO BE KEPT ON SITE AT ALL TIMES.

**EROSION CONTROL NOTES:**

1. TOTAL AREA OF DISTURBANCE = 175,105 S.F. (4.02 AC.)
2. CONTOURS TAKEN FROM ON GROUND SURVEY (NAVD 1988 DATUM.)
3. THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES.
4. GROUND COVER WILL BE ESTABLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS AND WITHIN 7 CALENDAR DAYS IN AREAS WITH SLOPES OF 3:1 OR STEEPER AND AROUND THE PERIMETER OF THE PROJECT. SEE GROUND STABILIZATION CHART #1.

5. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE NOT TO BE REMOVED WITHOUT PRIOR APPROVAL FROM NCDEQ.

6. ANY OFF SITE BORROW OR SPOIL ACTIVITIES RELATED TO THIS PROJECT MUST TAKE PLACE ON A SITE THAT IS REGULATED UNDER THE MINING ACT OF 1971 OR IS A LANDFILL REGULATED BY THE DIVISION OF WASTE MANAGEMENT ON ANOTHER EROSION AND SEDIMENT CONTROL PERMITTED SITE.



**Construction Specifications**  
1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.

2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.

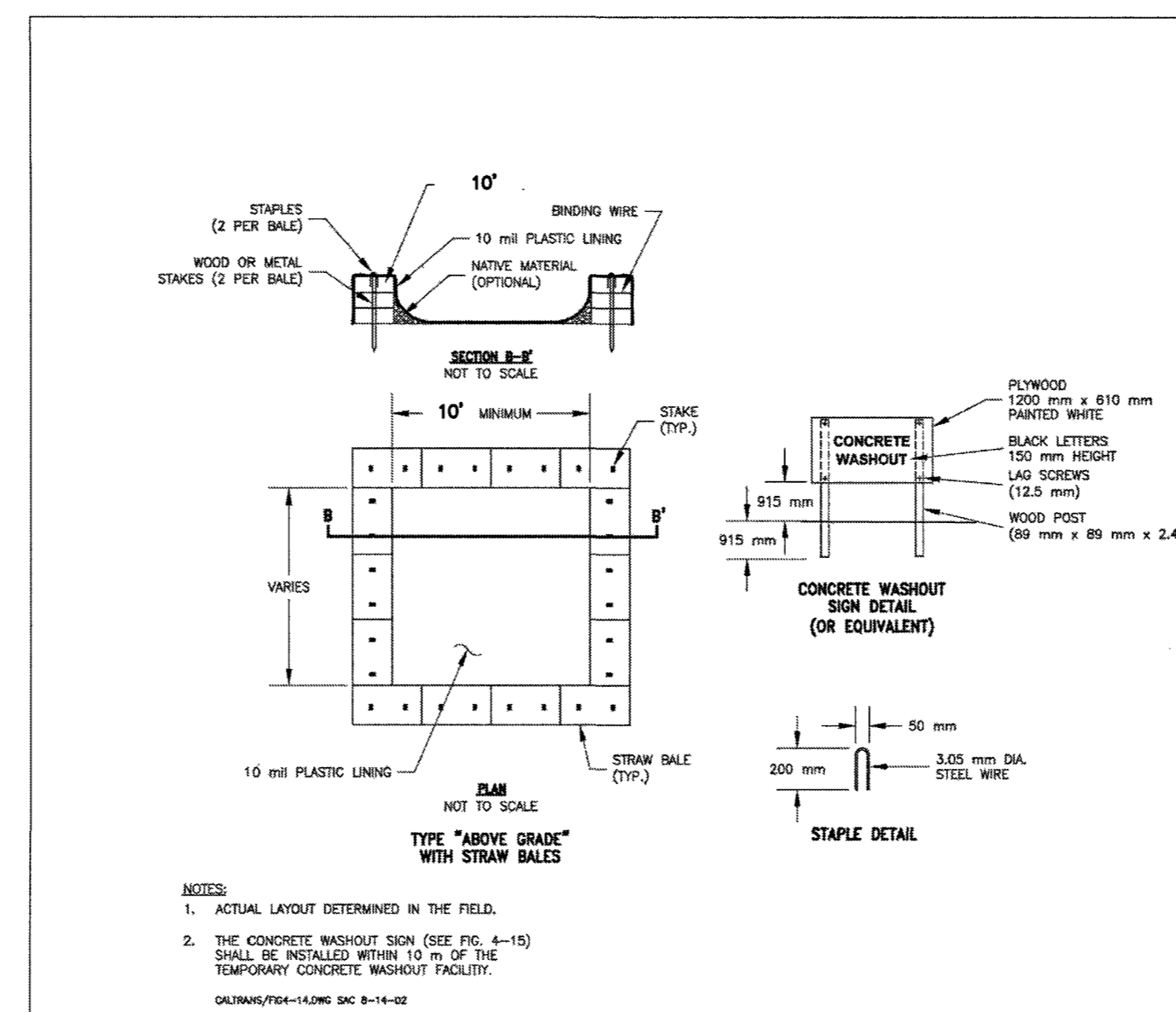
3. Provide drainage to carry water to a sediment trap of other suitable outlet.

4. Use geotextile fabrics because they improve stability of the foundation in locations subject to seepage or high water table.

**Maintenance**  
Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways.

**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT**

-NO SCALE-



**CONCRETE WASHOUT AREA DETAIL**

-NO SCALE-

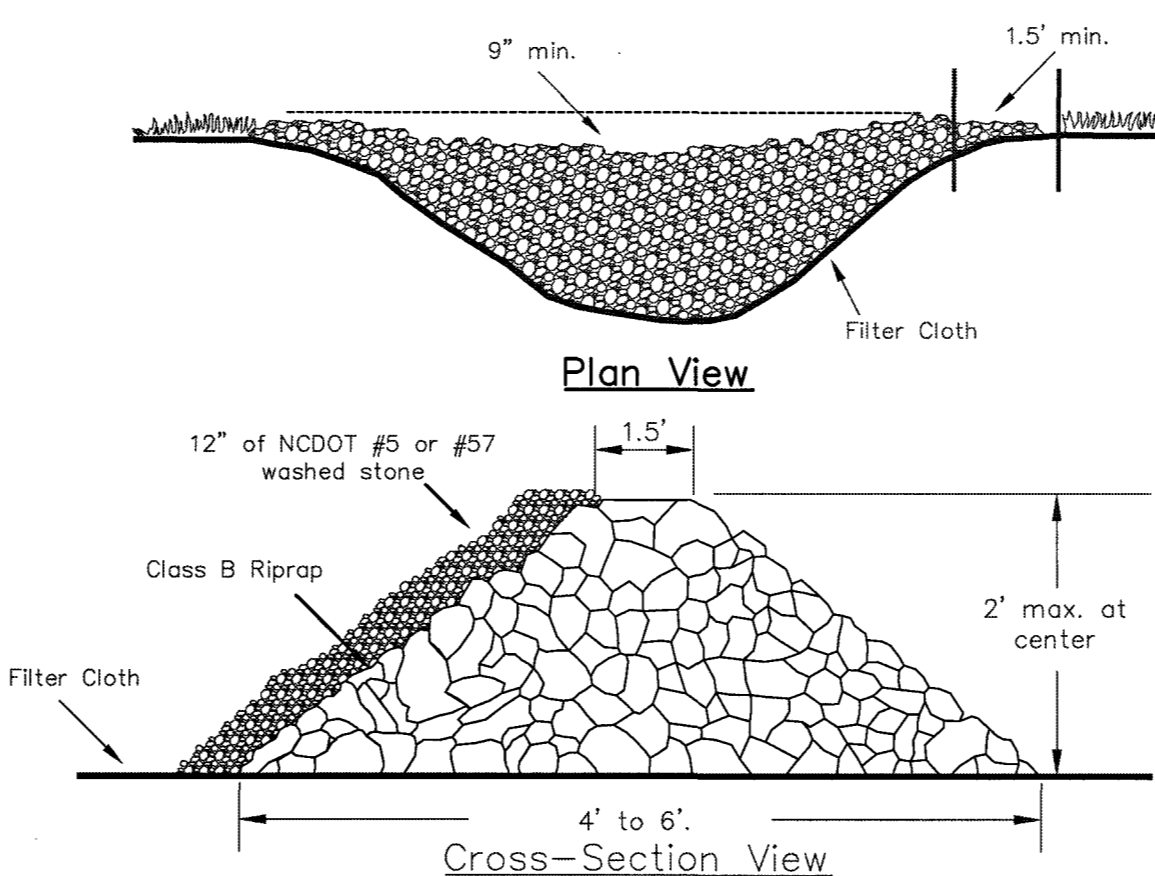


Figure 6.83b Stone check dam stone should be placed over the channel banks to keep water from cutting around the dam.

**Maintenance**  
Inspect check dams and channels at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Clean out sediment, straw, limbs, or other debris that could clog the channel when needed.

Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as, installing a protective riprap liner in that portion of the channel (Practice 6.31, Riprap-line and Paved Channels).

Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large flows from carrying sediment over the dam. Add stones to dams as needed to maintain design height and cross section.

**STONE CHECK DAM**

-NO SCALE-

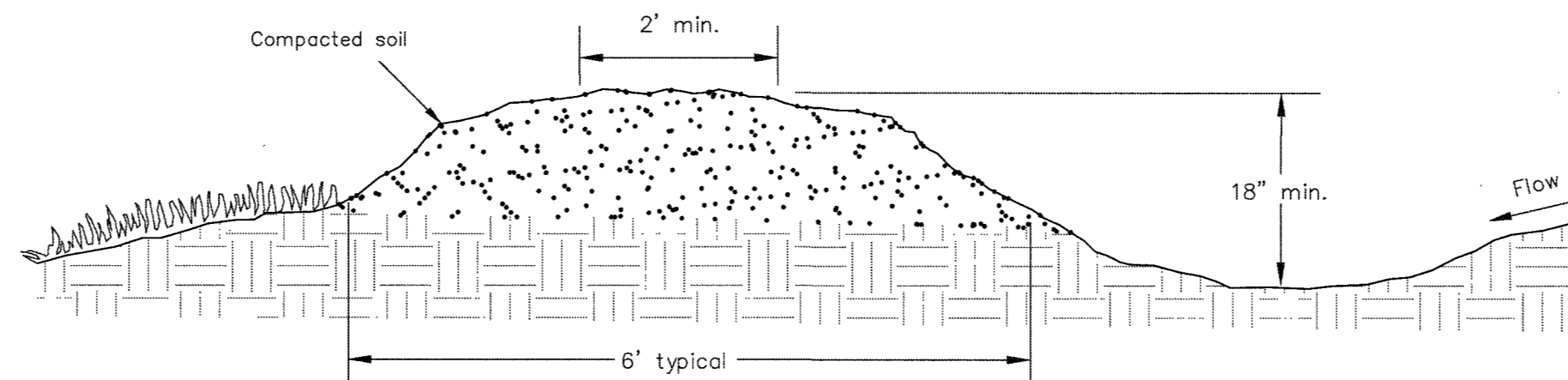
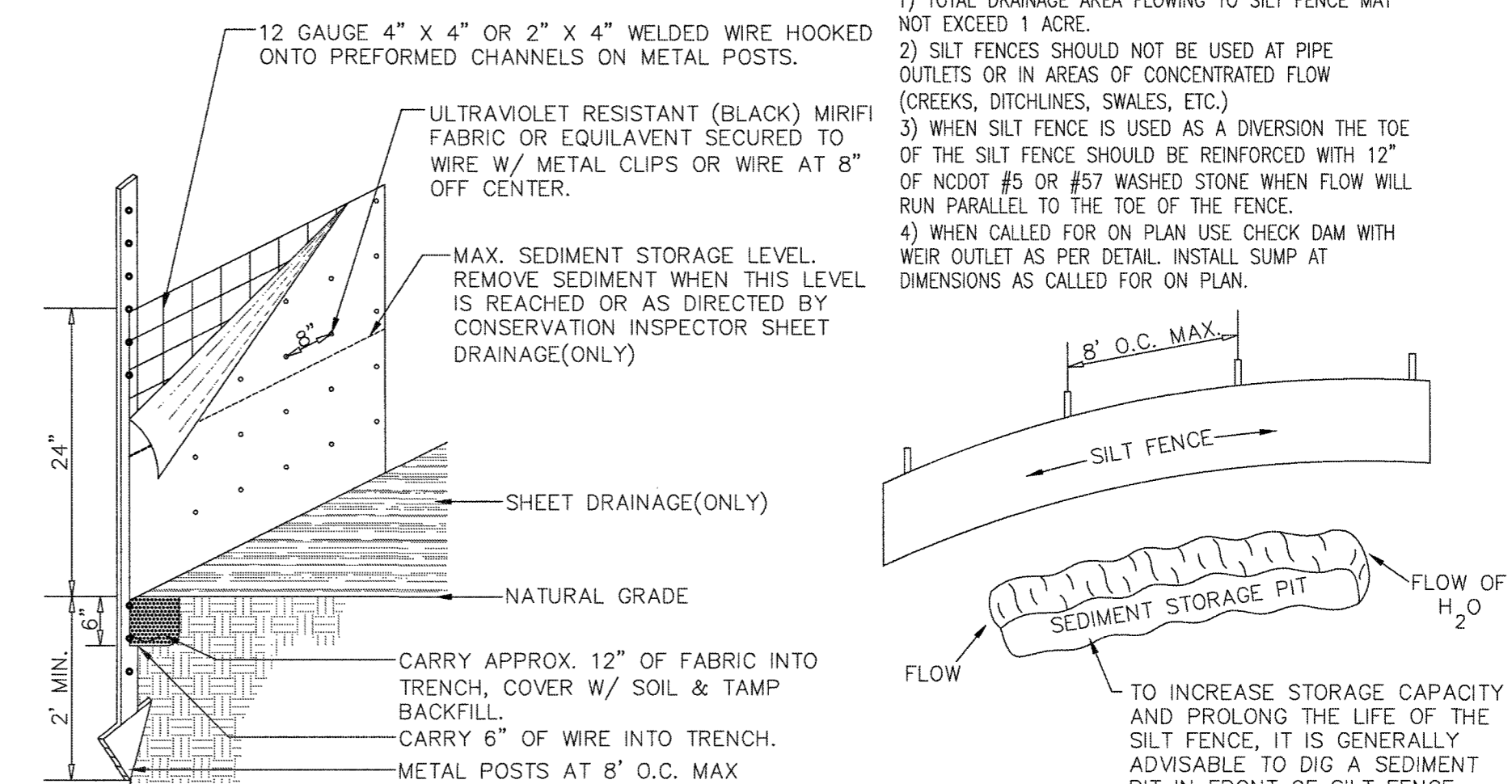


Figure 6.20a Temporary earthen diversion dike.

**Maintenance**  
Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion ridge. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, remove the ridge and the channel to blend with the natural ground level and appropriately stabilize it.

**TEMPORARY DIVERSION BERM**

-NO SCALE-



**SILT FENCE DETAIL**

-NO SCALE-

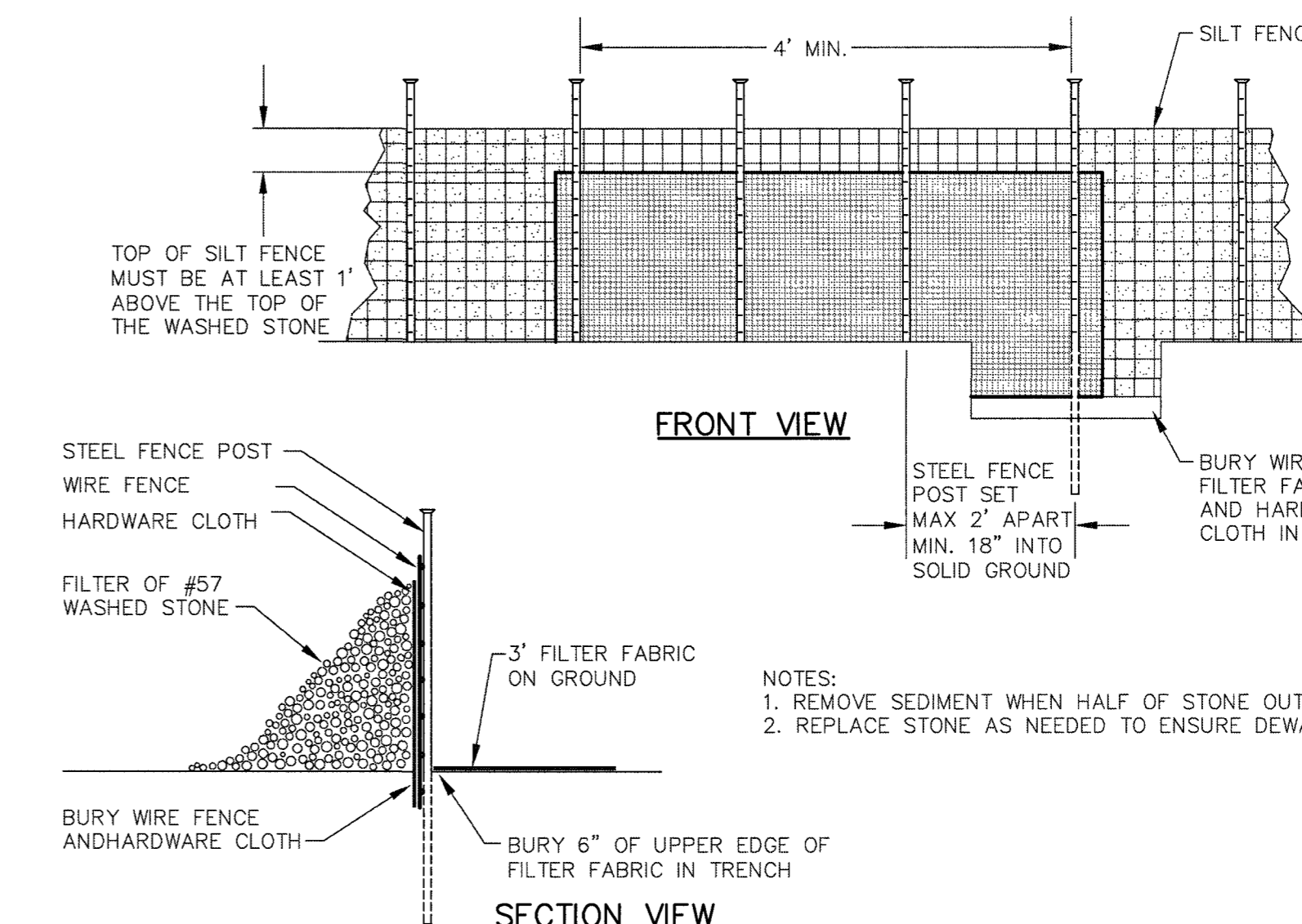
**MAINTENANCE**

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



**STANDARD SILT FENCE OUTLET**

-NO SCALE-

**1) Ground Stabilization\***

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
• Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
• Slopes 3:1 or flatter	14 days	7-days for slopes greater than 50 feet in length
• All other areas with slopes flatter than 4:1	14 days	None (except for perimeter and HQW Zones)

\* Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impractical." (Section II.B(2)(b))

Drawing name: X:\ecds\docs\2018\Projects\Land\Group\18-116\PROPOSED CONVENIENCE STORE.dwg

**ECLS GLOBAL**  
U.S. VETERAN-OWNED  
19 N. MCKINLEY ST.  
COATS, NC 27521  
910.897.3257 ECLSGLOBAL.COM  
910.897.2359 (FAX) CO# C-4175

REVISIONS:  
11/3/2018 TOWN OF LILLINGTON REVIEW COMMENTS: -JTP

11/3/2018

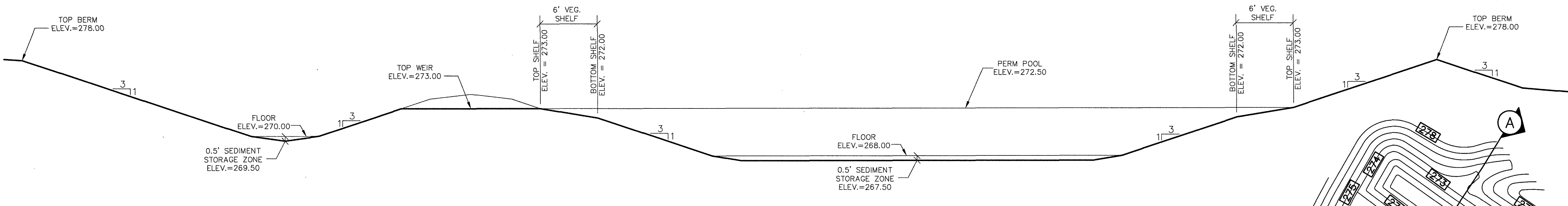
SURVEY BY:

**SITE & EROSION CONTROL DETAILS**

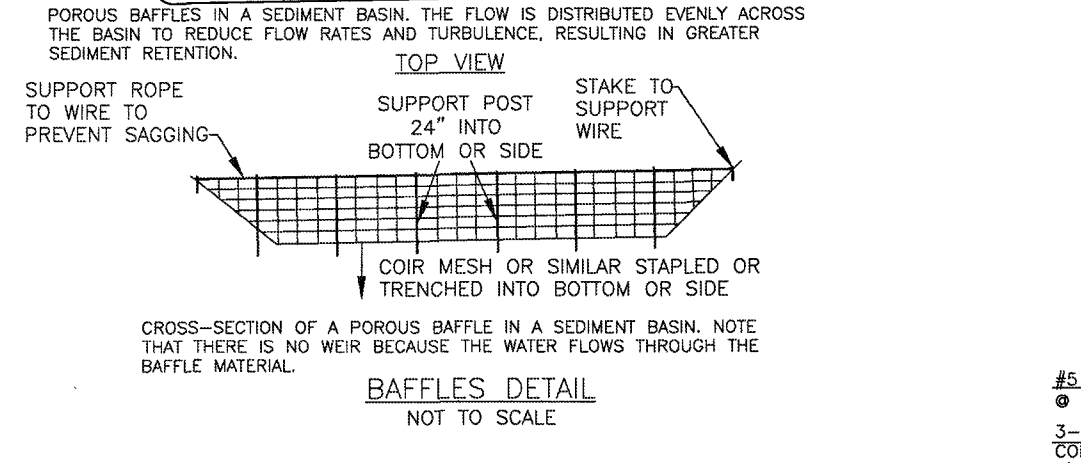
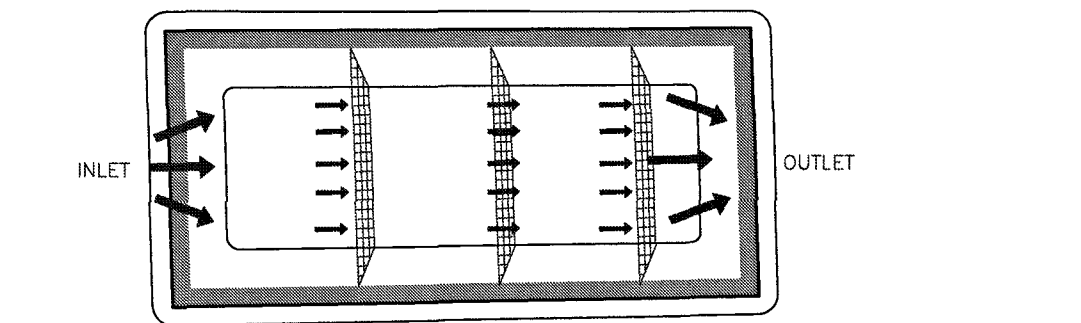
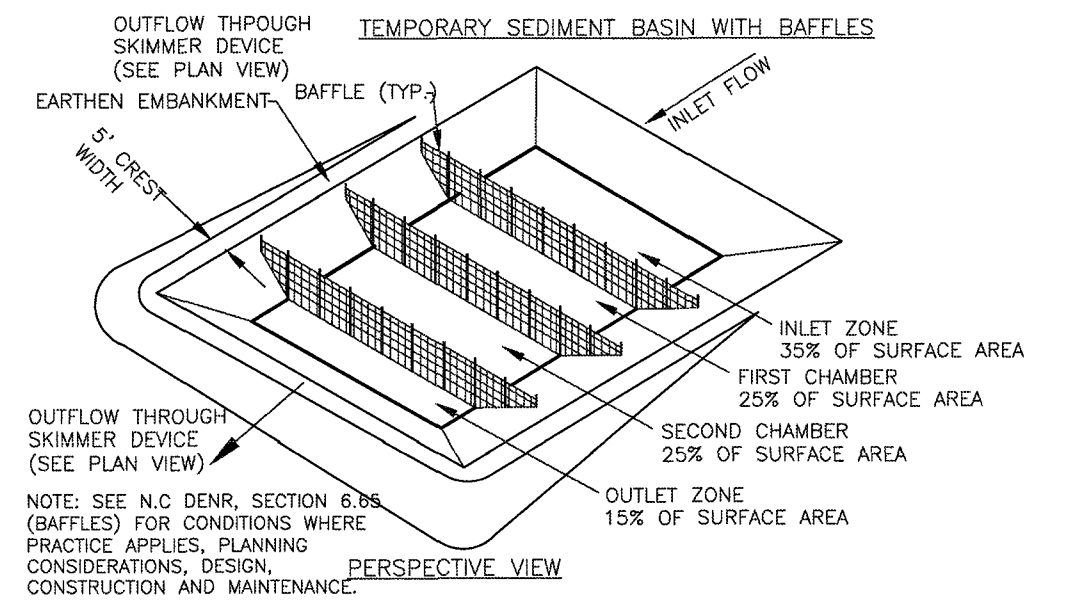
**HARNETT CENTRAL CROSSING**  
4585 NC 210 N.  
LILLINGTON, HARNETT CO., N.C.  
P.O. BOX 112-9308.000  
DEED BOOK: 98E, PAGE: 0102

PROJ. NO.: 18-116  
FILENAME: 18-116  
DRAWN BY: LLL  
SCALE: NTS  
DATE: 06-19-2018

**ECLS**



PERMANENT RETENTION POND CROSS SECTION (A) - NO SCALE

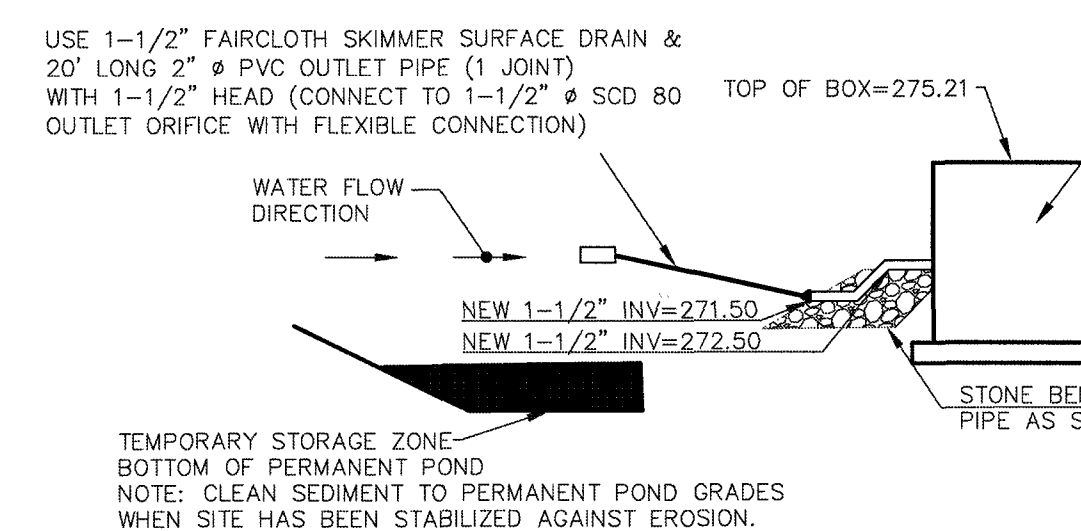


**POURIOUS BAFFLES MAINTENANCE**  
 Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.

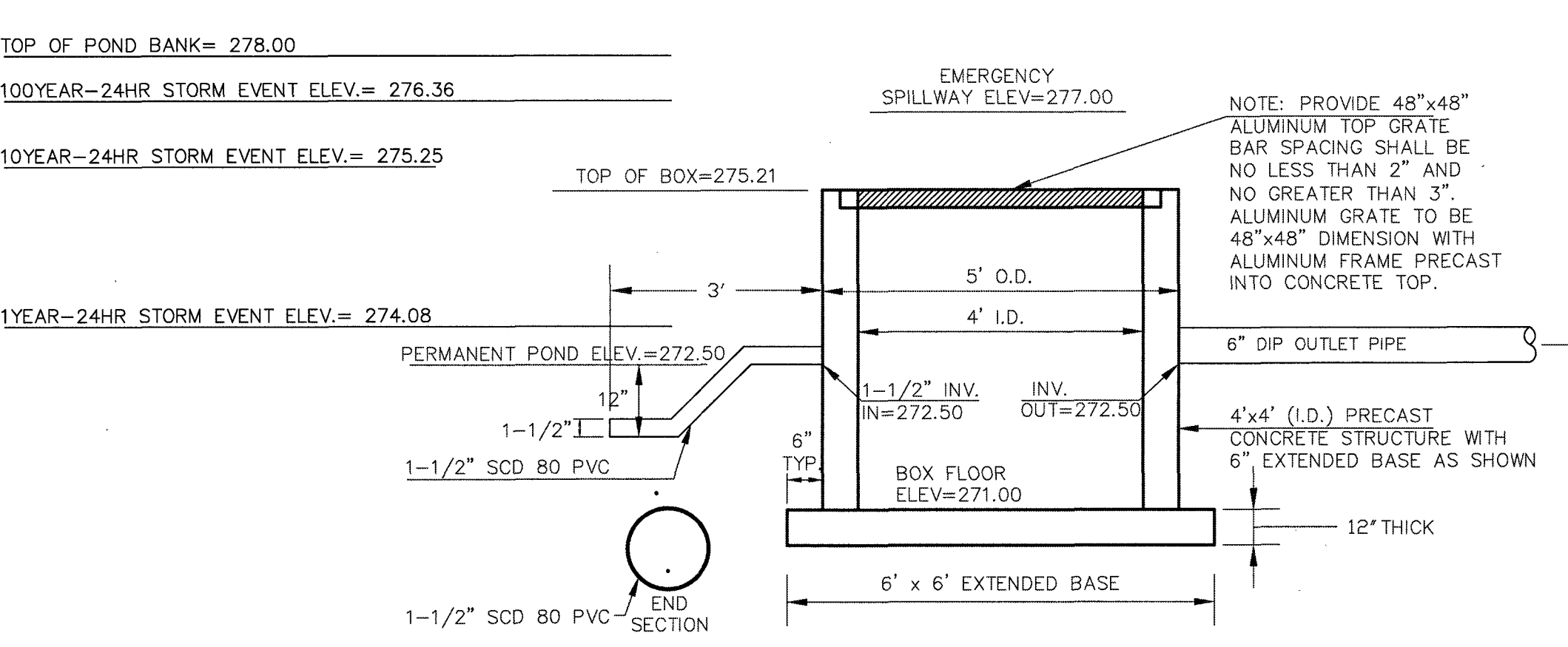
Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half 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 cleanout. Sediment depth should never exceed half the designed storage depth.

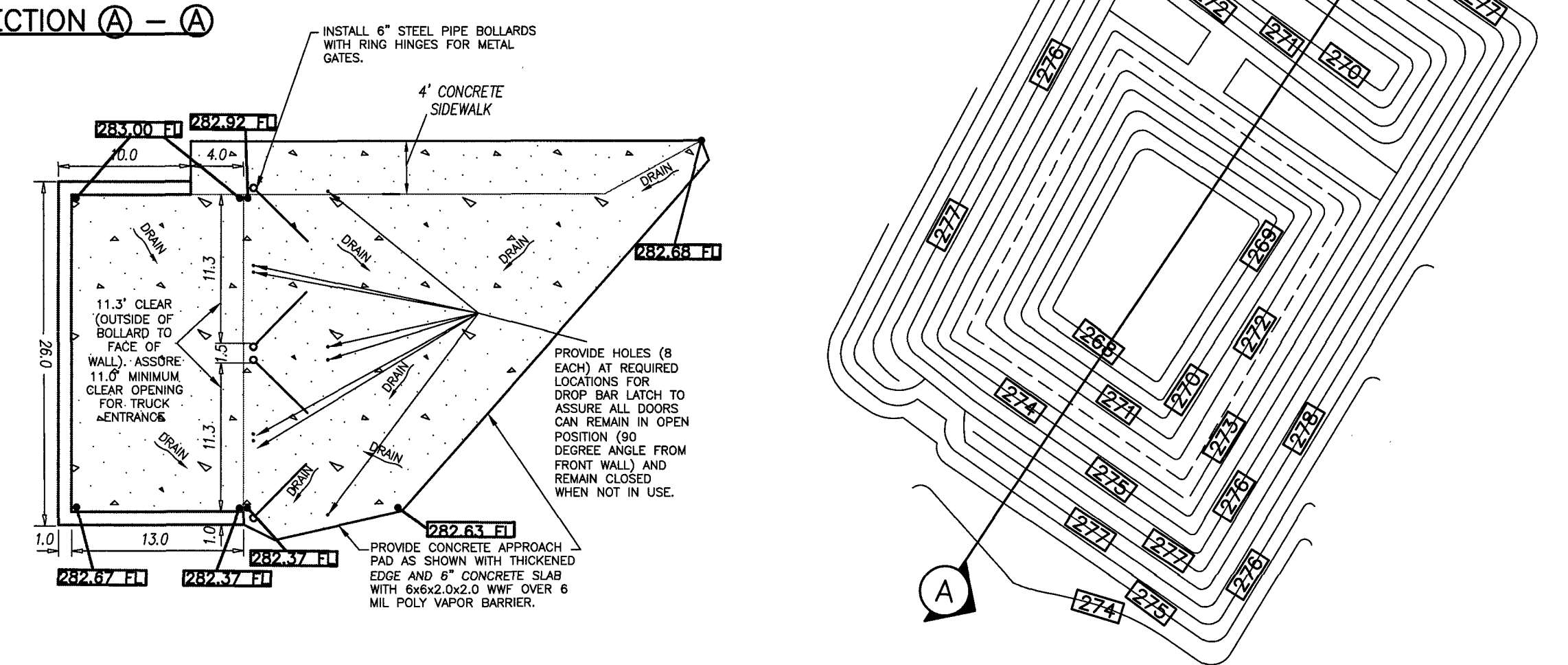
After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.



TEMPORARY SKIMMER DEVICE AT POND OUTLET - NO SCALE

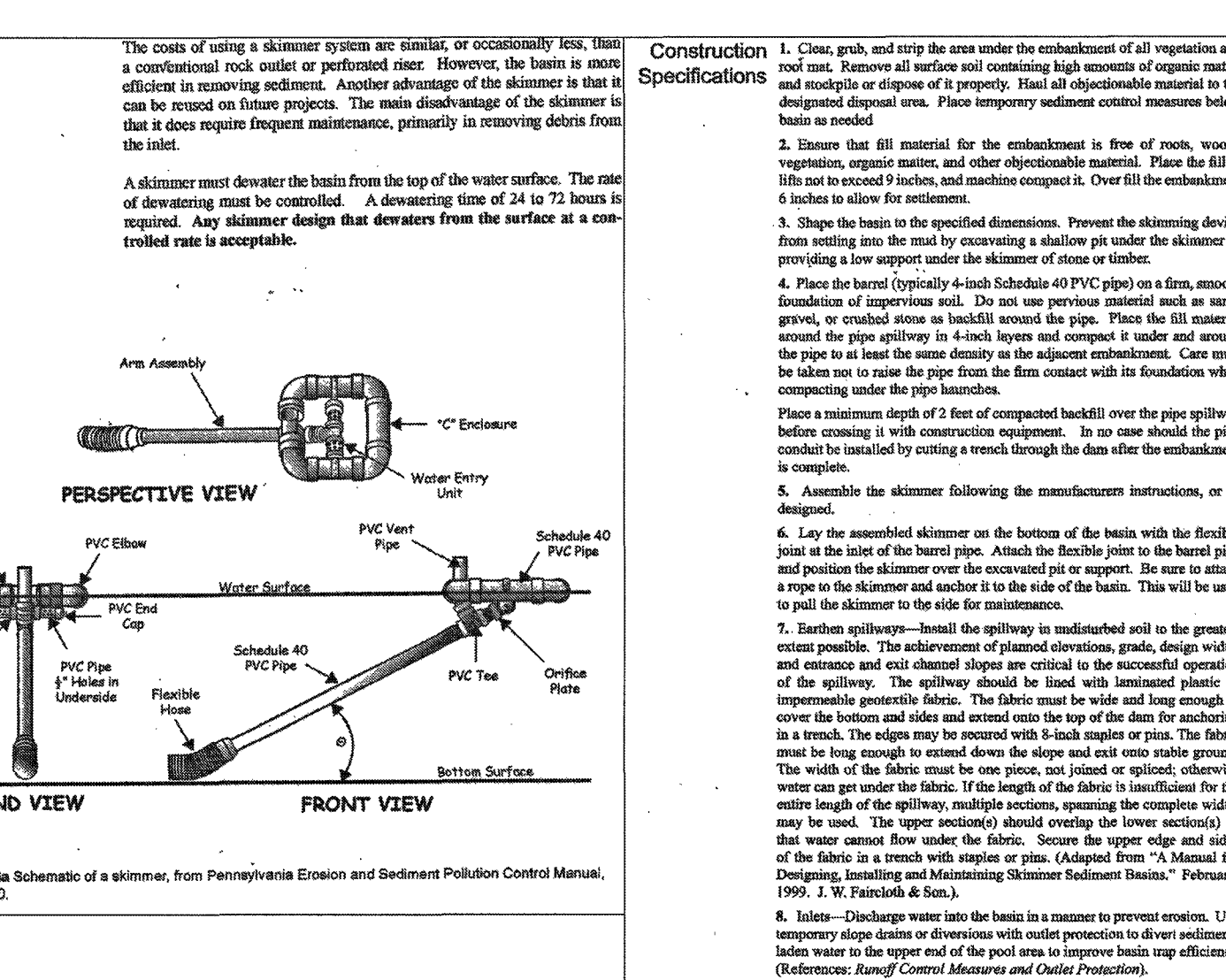


PERMANENT RETENTION POND PRINCIPAL SPILLWAY OUTLET STRUCTURE - NO SCALE

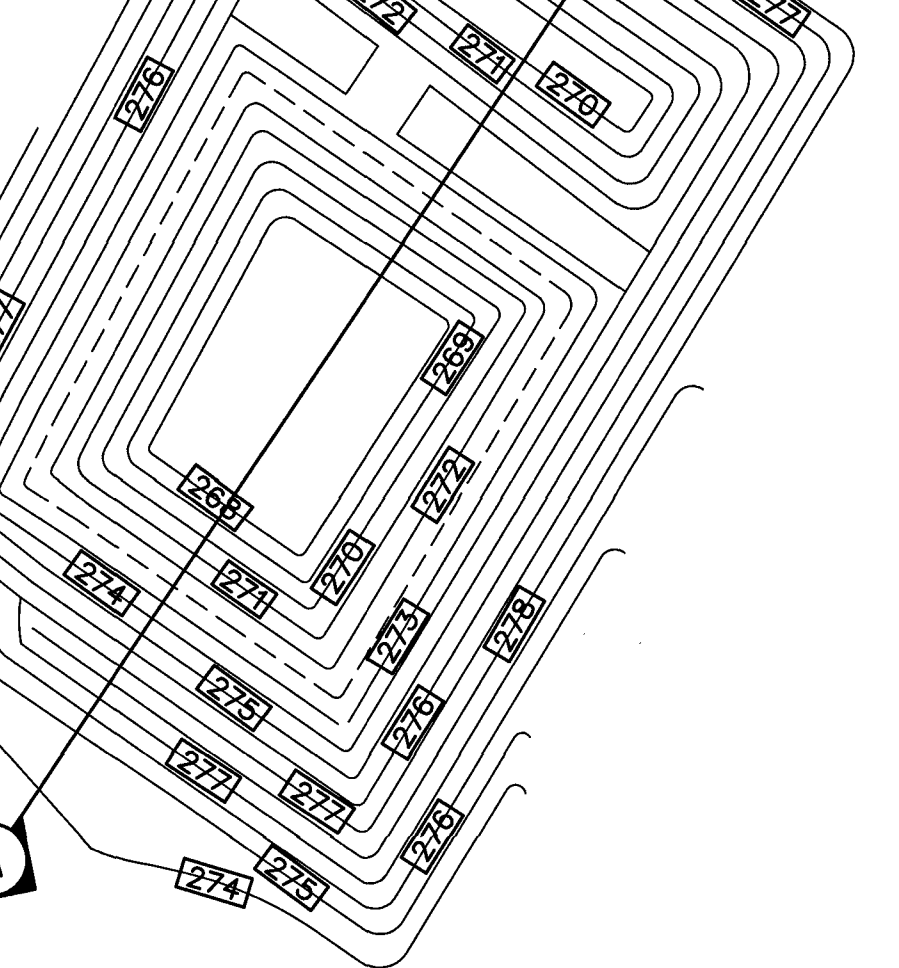


DUMPSTER ENCLOSURE - NO SCALE

POND ELEVATIONS / AREAS / VOLUMES LEGEND									
MAIN BODY					FOREBAY				
ELEVATION	AREA (FT <sup>2</sup> )	DEPTH	INCREMENTAL VOLUME (FT <sup>3</sup> )	TOTAL VOLUME (FT <sup>3</sup> )	ELEVATION	AREA (FT <sup>2</sup> )	INCREMENTAL VOLUME (FT <sup>3</sup> )	TOTAL VOLUME (FT <sup>3</sup> )	ELEVATION
268	1319.75	1	1557.46	1557.46	268	1319.75	1	1557.46	1557.46
269	1795.17	1	2067.36	3624.82	269	1795.17	1	2067.36	3624.82
270	2339.55	1	2661.09	6285.92	270	2708.84	1	3212.78	6837.60
271	2982.64	1	3320.73	9606.65	271	3716.73	1	4291.32	11128.92
272	3658.81	0.5	2030.88	11637.53	272	4885.89	0.5	2899.38	13828.29
272.5	4464.71	0.5	2441.99	14079.52	272.5	5931.64	0.5	3240.42	17068.71
273	5303.24	1	5728.85	19808.37	273	7030.01	1	7776.67	24845.38
274	6150.46	1	6510.42	26316.79	274	8523.33	1	8092.92	33938.30
275	6870.37	1	7260.55	33577.35	275	9662.50	1	10924.23	44322.53
276	7650.74	1	8051.42	41628.77	276	10925.97	1	11567.75	55890.28
277	8452.10	1	8845.47	50474.24	277	12209.52	1	12850.63	68650.91
278	9238.83	1			278	13491.73	1		



SKIMMER/SKIMMER DEVICE - NO SCALE



CONSTRUCTION SPECIFICATIONS

1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of filter cloth over the damaged areas. All connecting joints should overlap so the top layer is above the downstream layer a minimum of 1 foot. If the damage is extensive, replace the entire filter cloth.
4. Riprap may be placed by equipment, but take care to avoid damaging the filter.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter.
6. Riprap may be field stone or rough quarry stone. It should be hard, angular, highly weather-resistant and well graded.
7. Construct the apron on zero grade with no overfill at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
9. Immediately after construction, stabilize all disturbed areas with vegetation (Practices 6.10, Temporary Seeding, and 6.11, Permanent Seeding).

**Maintenance**  
 Inspect riprap outlet structures weekly and after significant (1/2 inch or greater) rainfall events to see if any erosion around or below the riprap has taken place, or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

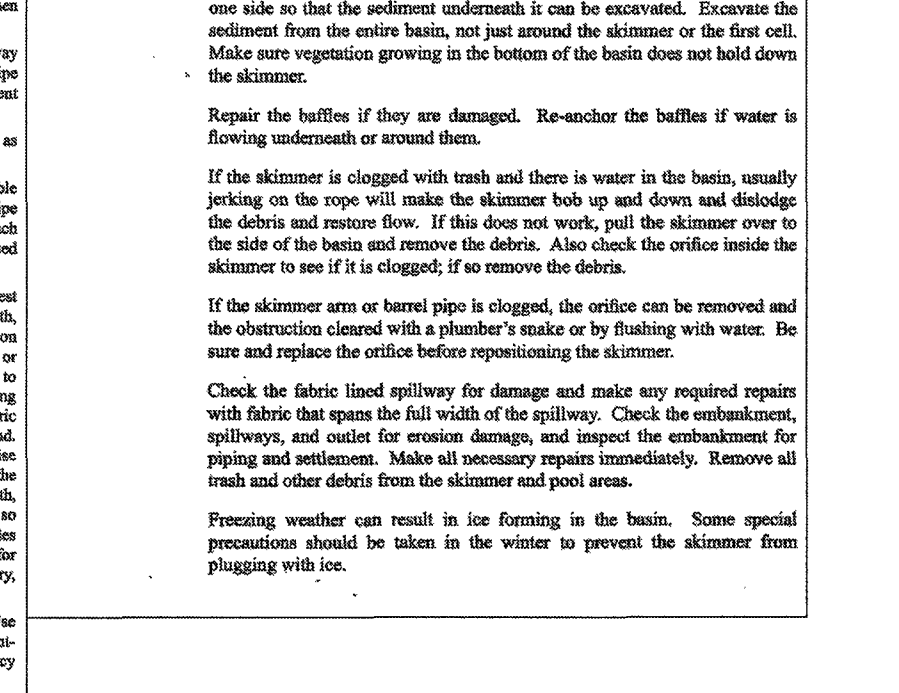
**References**  
 Surface Stabilization  
 6.10, Temporary Seeding  
 6.11, Permanent Seeding  
 6.15, Riprap

**Appendix**  
 8.06, Design of Riprap Outlet Protection

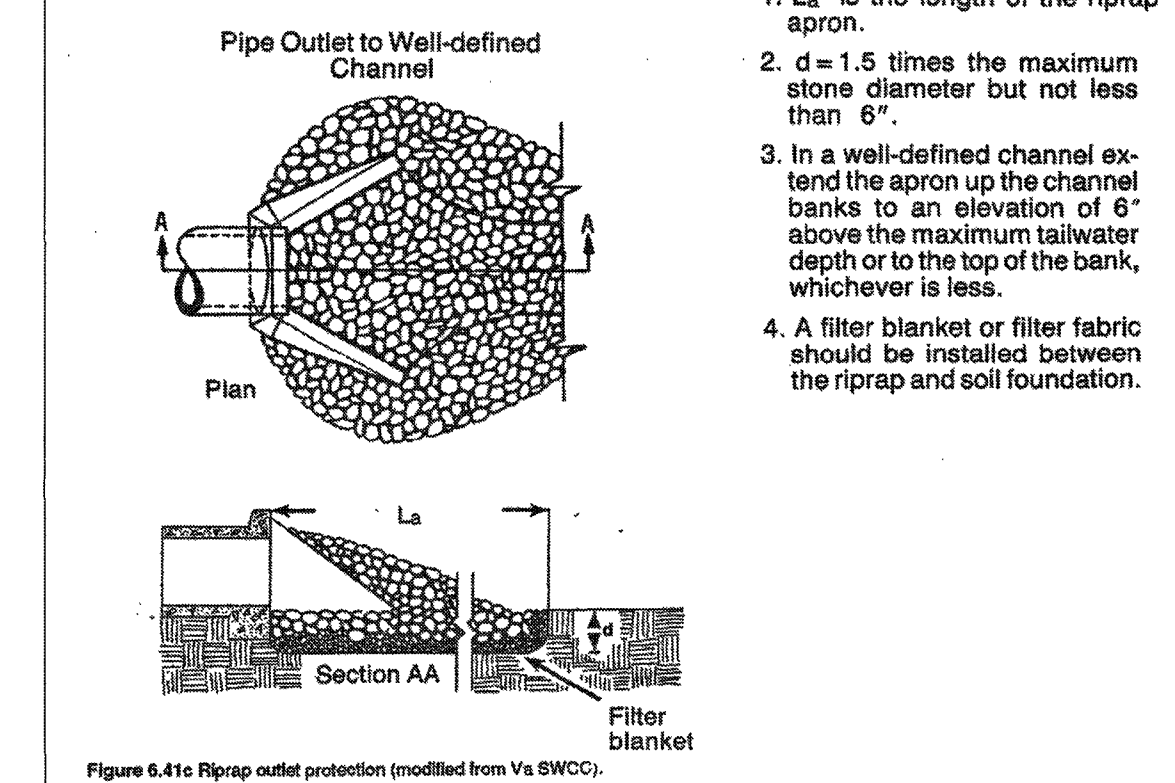
Rice, C.E., Kadavy, K.C. "Riprap Design for Pipe Spillways at  $-1 < TWD < 0.7$ " Presented at the December 13, 1994 International Water Meeting, American Society of Agricultural Engineers, Paper Number 942541.

Rice, C.E. and K.C. Kadavy, 1994. Plunge Pool Design at Submerged Pipe Spillway Outlets. Transactions of the ASAE 37(4):1167-1173.

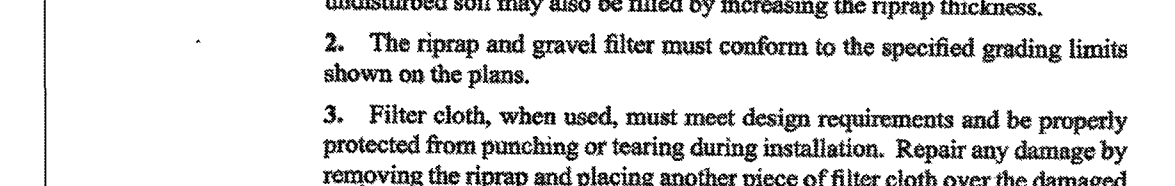
FHWA. 1983. Hydraulic Design of Energy Dissipaters for Culverts and Channels. Hydraulic Engineering Circular Number 14.



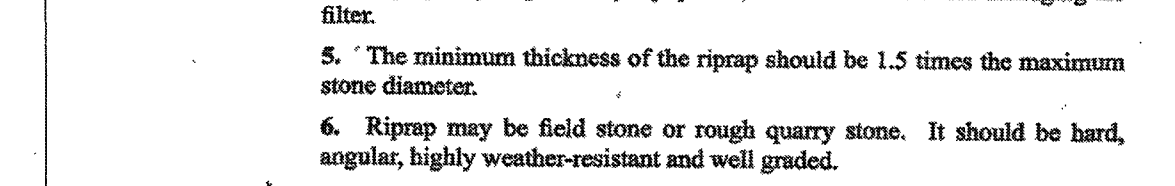
OUTLET STABILIZATION STRUCTURE - NO SCALE



CONCRETE ANTI-SEEP COLLAR - NO SCALE



SKIMMER/SKIMMER DEVICE - NO SCALE



CONSTRUCTION SPECIFICATIONS

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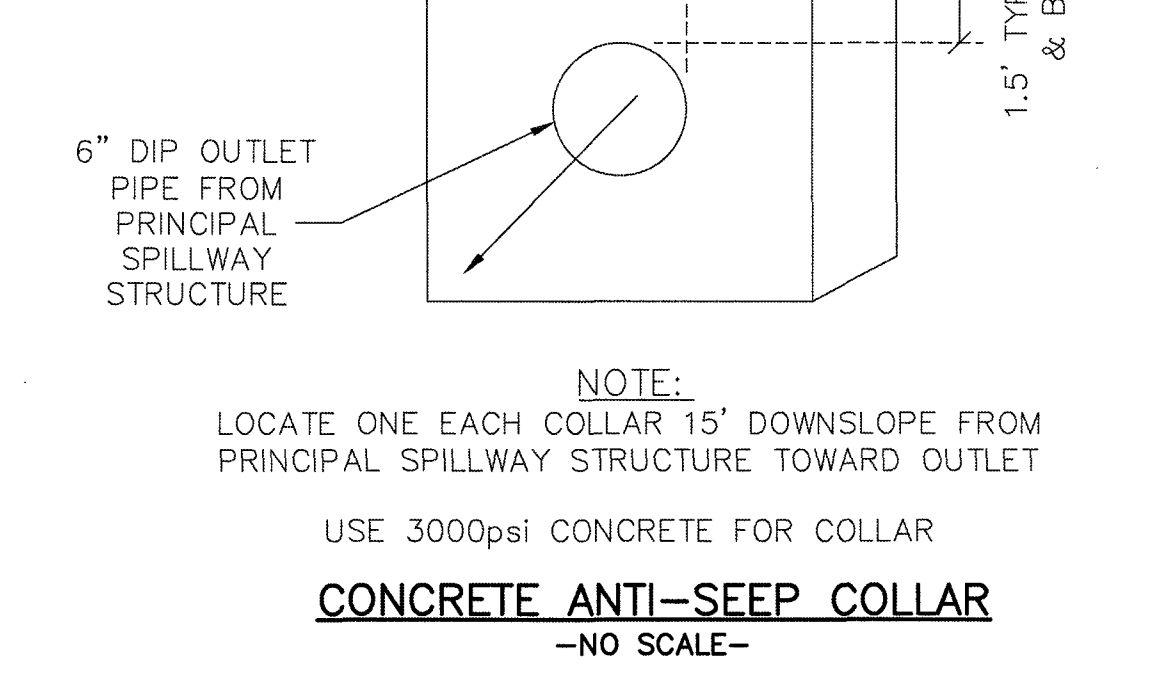
**References**  
 Surface Stabilization  
 6.10, Temporary Seeding  
 6.11, Permanent Seeding  
 6.15, Riprap

**Appendix**  
 8.06, Design of Riprap Outlet Protection

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Rice, C.E. and K.C. Kadavy, 1994. Plunge Pool Design at Submerged Pipe Spillway Outlets. Transactions of the ASAE 37(4):1167-1173.

FHWA. 1983. Hydraulic Design of Energy Dissipaters for Culverts and Channels. Hydraulic Engineering Circular Number 14.



OUTLET STABILIZATION STRUCTURE - NO SCALE

**ECLS**  
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 U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 COATS, NC 27521  
 910.897.3257 ECLGLOBAL.COM  
 910.897.2329 (FAX) COF. C-4175

REVISIONS:  
 11/3/2018 TOWN OF LILLINGTON REVIEW COMMENTS: -JTP

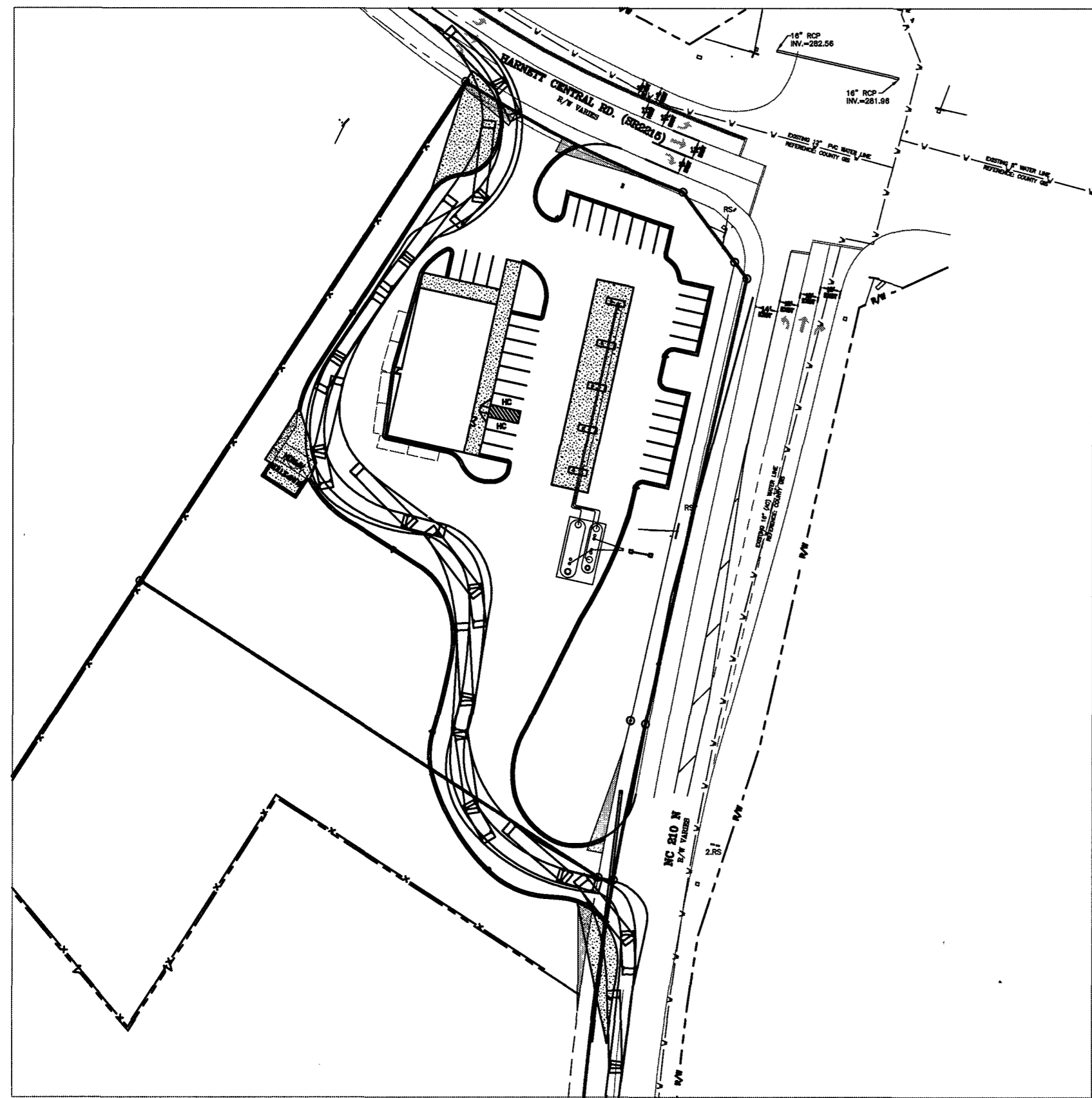
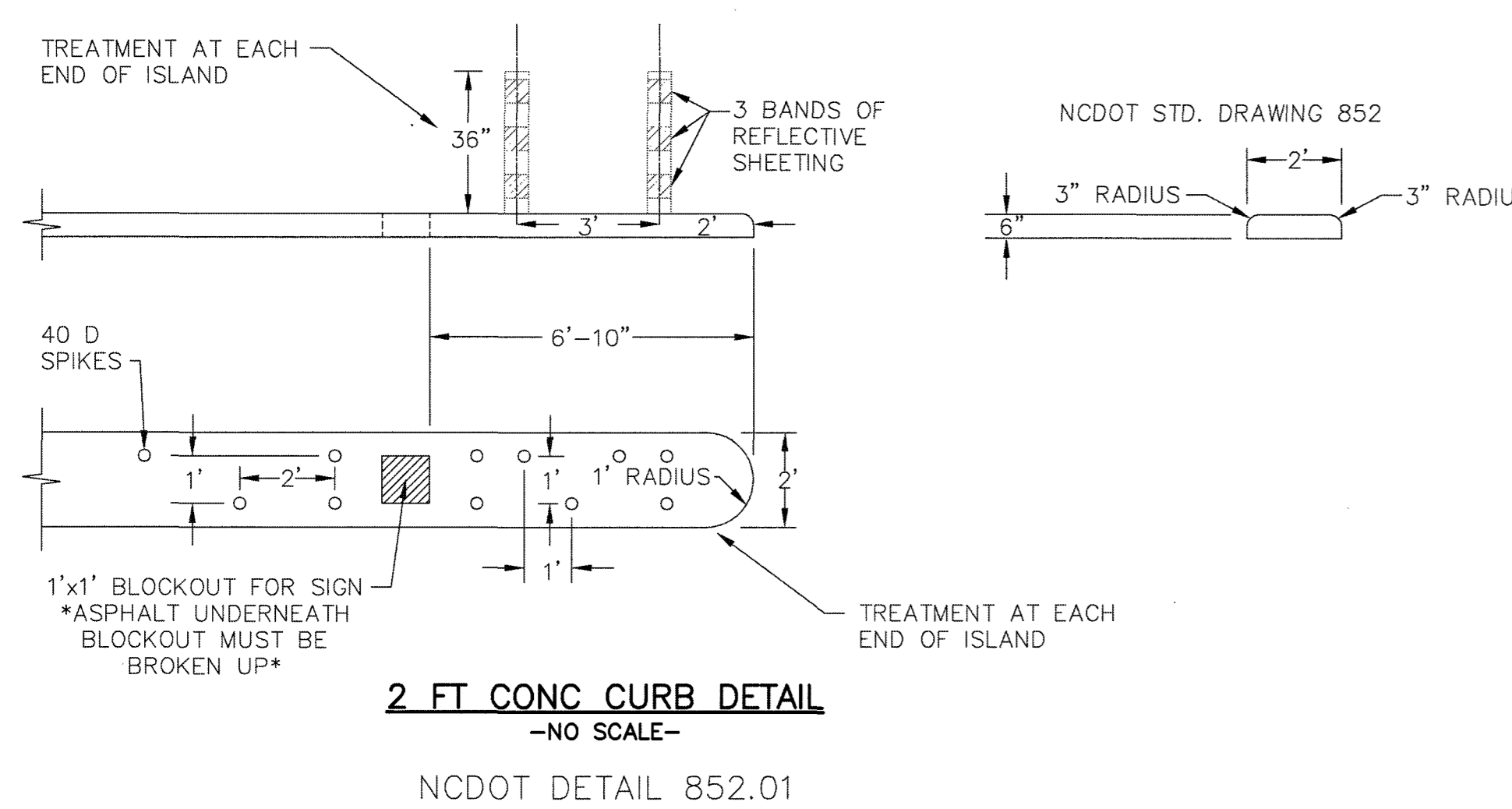
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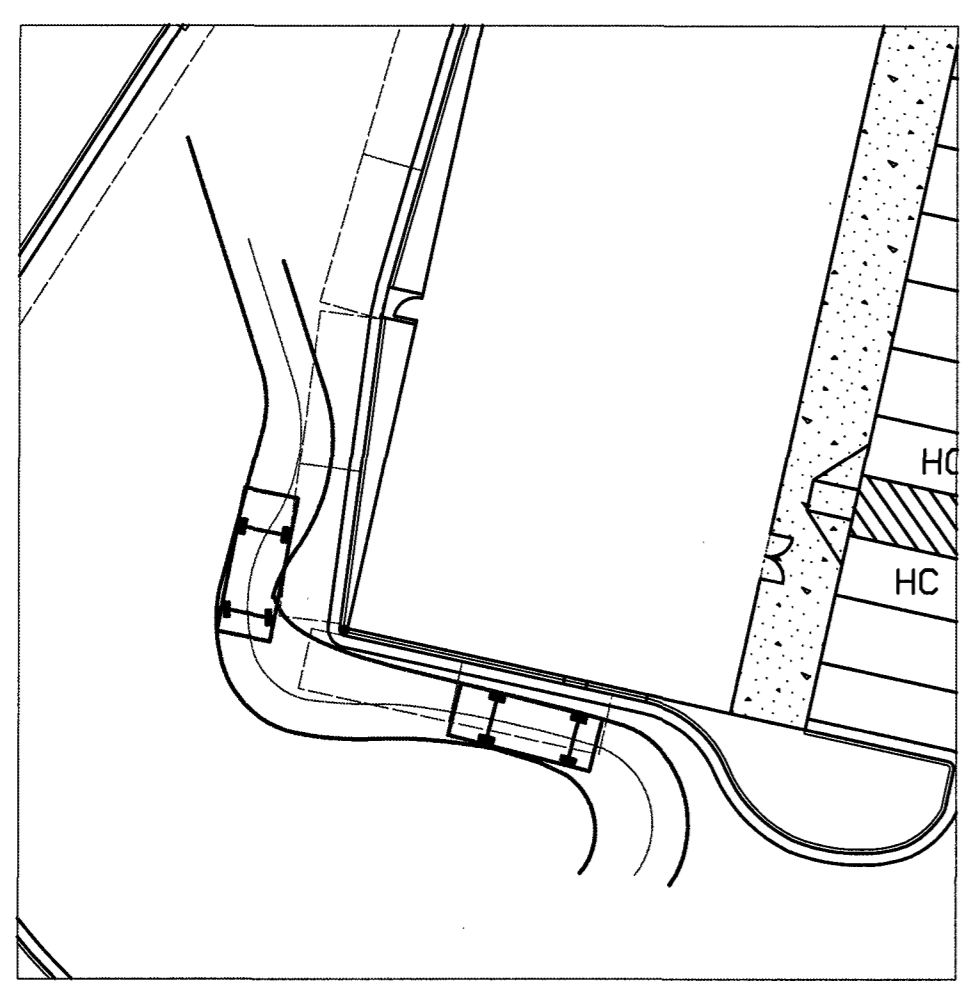
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**ECLS**

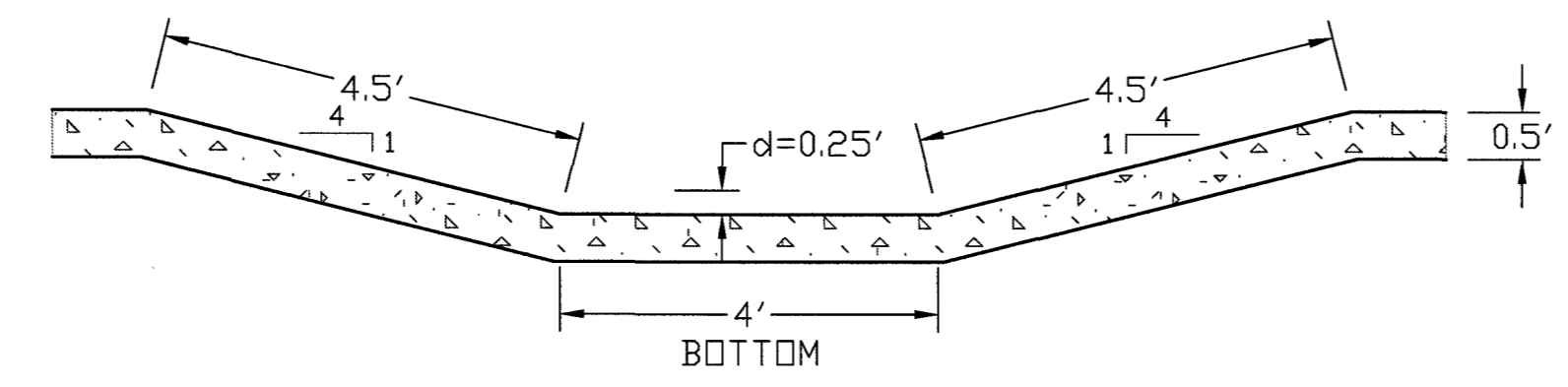




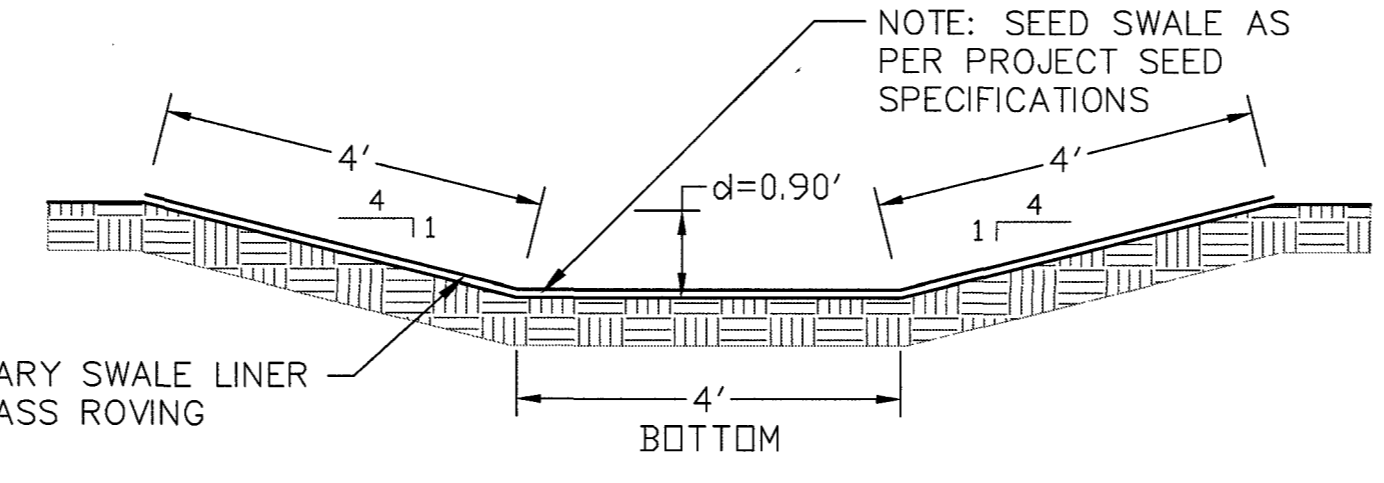
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SCALE: 1"=80'



CAR TURN RADIUS  
SCALE: 1"=40'

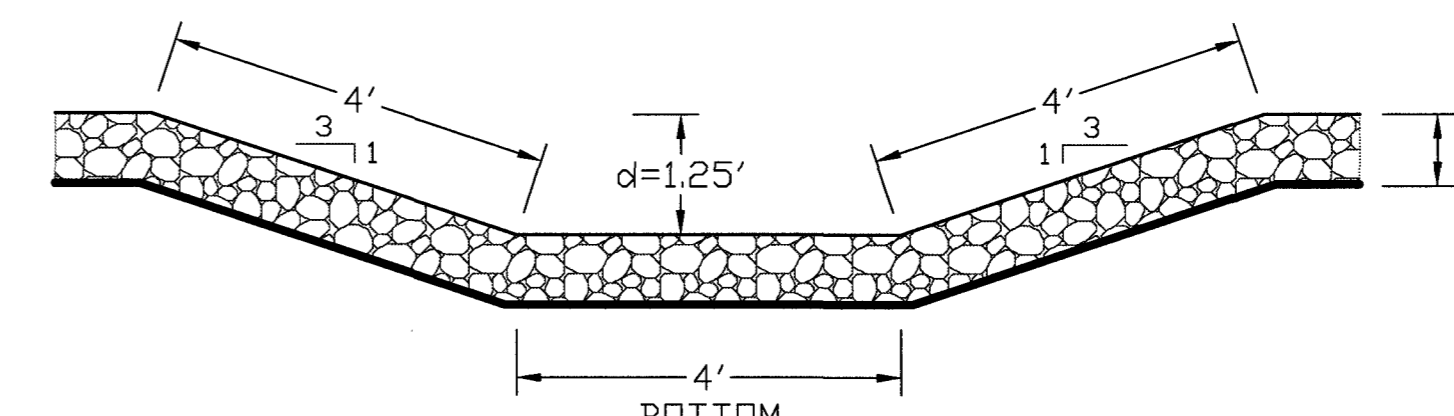


SWALE A (CONCRETE SWALE)  
-NO SCALE-



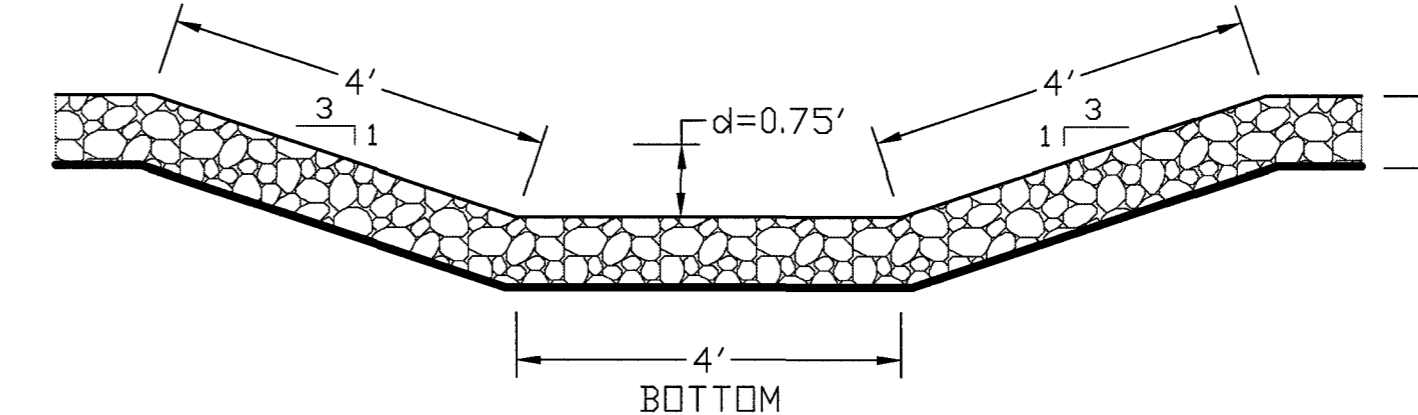
SWALE C (GRASS SWALE)  
-NO SCALE-

TEMPORARY SWALE LINER  
FIBERGLASS ROVING  
(SINGLE)



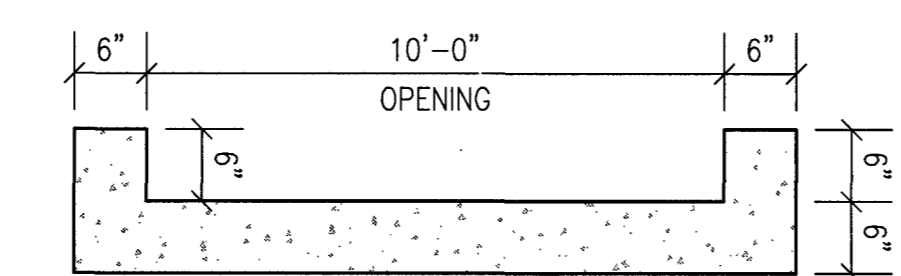
SWALE B (RIPRAP SWALE)  
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USE RIPRAP  $d_{50} = 9"$   
MIN. DEPTH = 21"  
NOTE: INSTALL FILTER CLOTH BENEATH RIPRAP

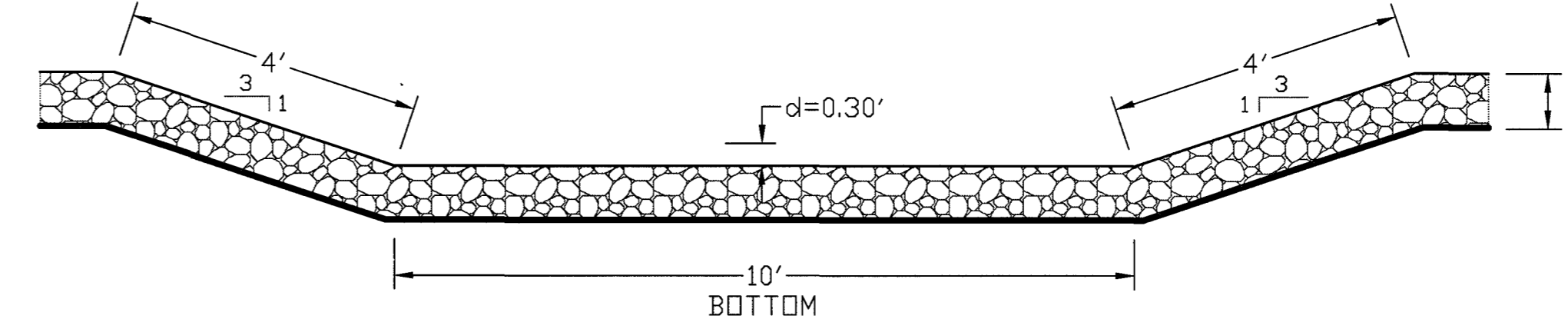


SWALE D (RIPRAP SWALE)  
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MIN. DEPTH = 21"  
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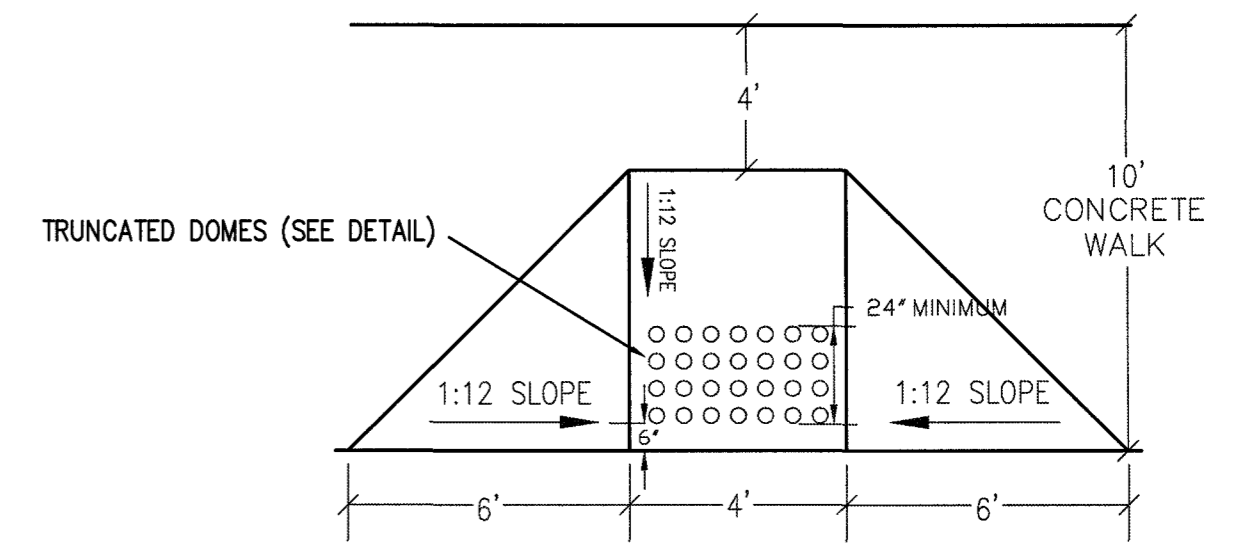


10' CONCRETE CURB CUT  
-NO SCALE-

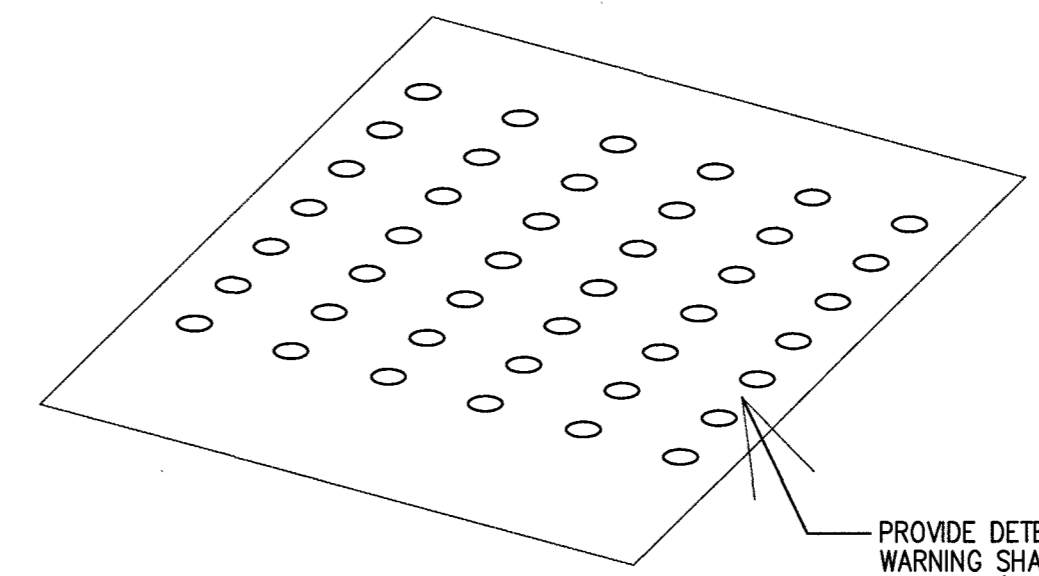


BYPASS SWALE (RIPRAP SWALE)  
-NO SCALE-

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MIN. DEPTH = 27"  
NOTE: INSTALL FILTER CLOTH BENEATH RIPRAP

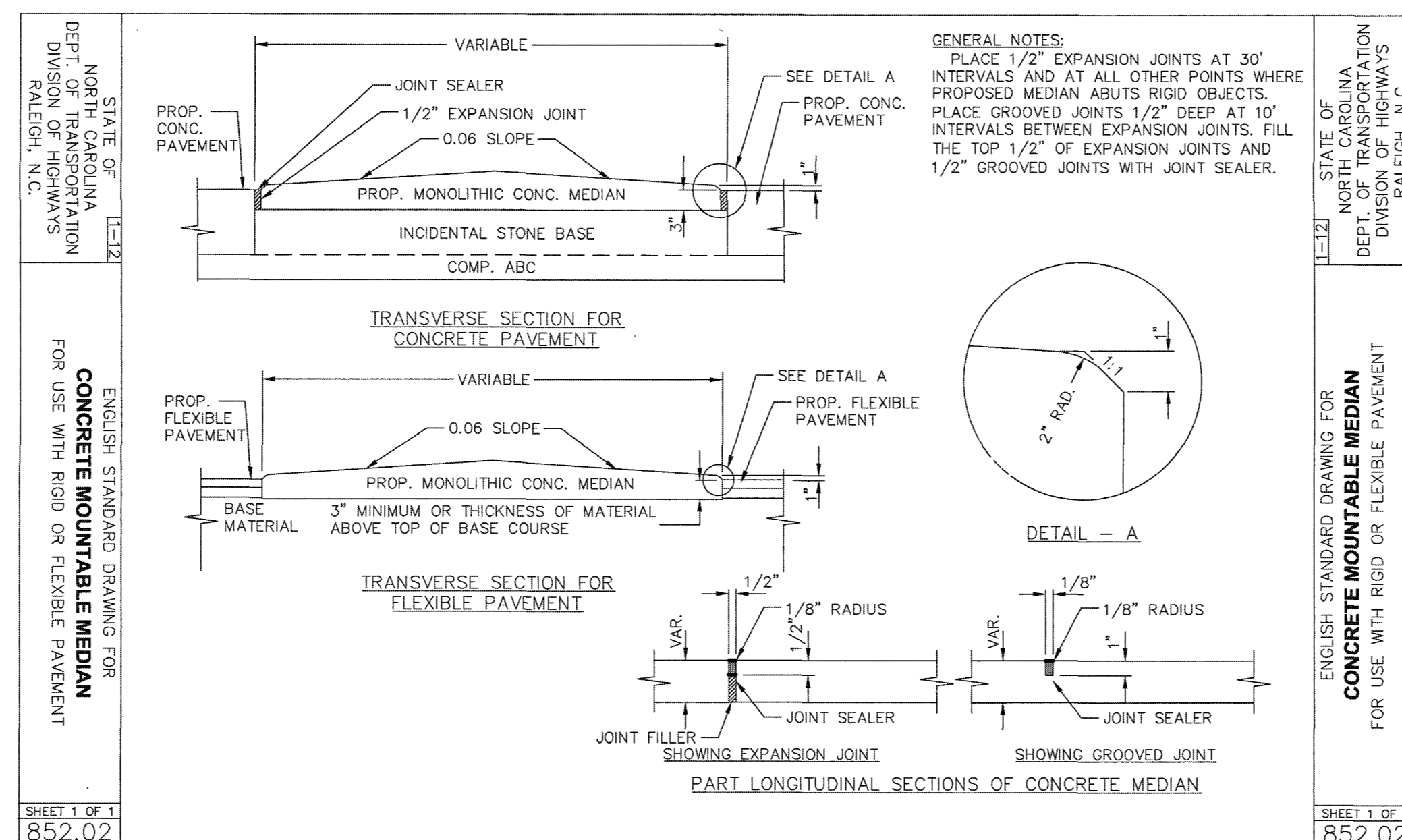


HANDICAP RAMP TYPE 'A'  
-NO SCALE-



TRUNCATED DOMES DETAIL  
NO SCALE

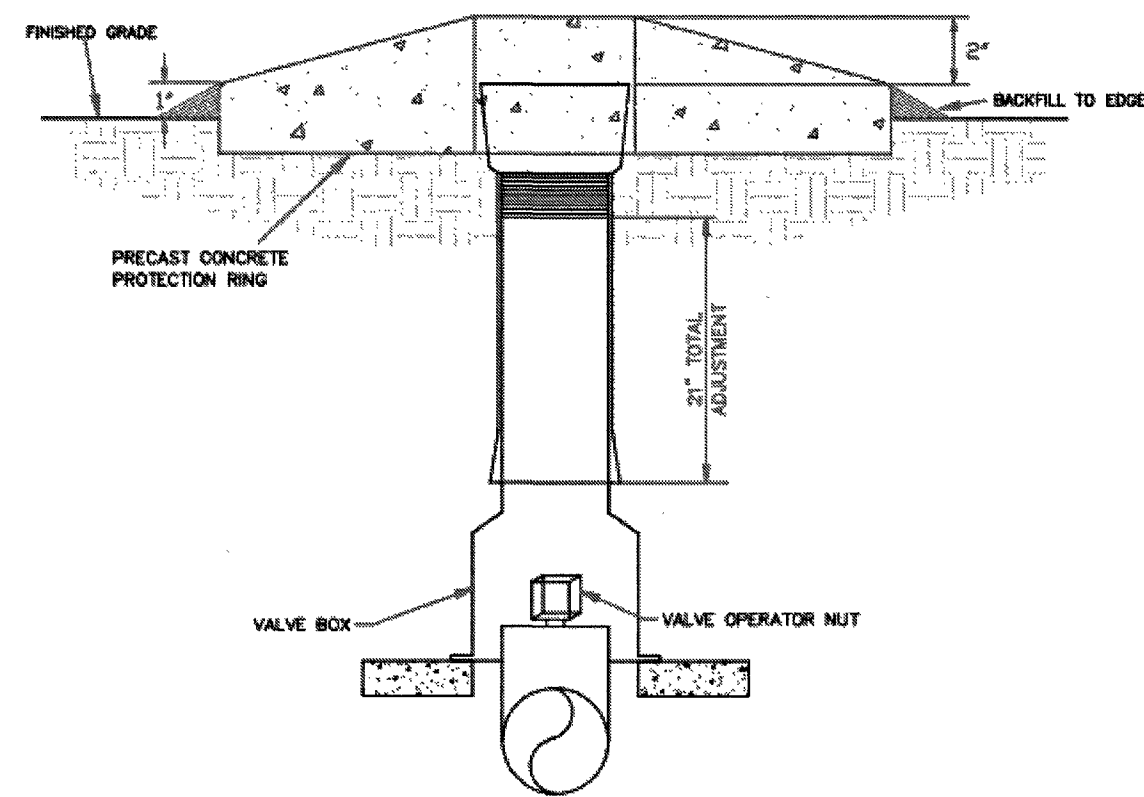
PROVIDE DETECTABLE WARNING ON WALKING SURFACE -  
WARNING SHALL CONSIST OF RAISED TRUNCATED  
DOMES W/ DIAMETER OF 9 IN. A HEIGHT OF 2 IN.  
AND A CENTER-TO-CENTER SPACING OF 2.35 IN. &  
SHALL CONTRAST VISUALLY W/ ADJOINING SURFACE -



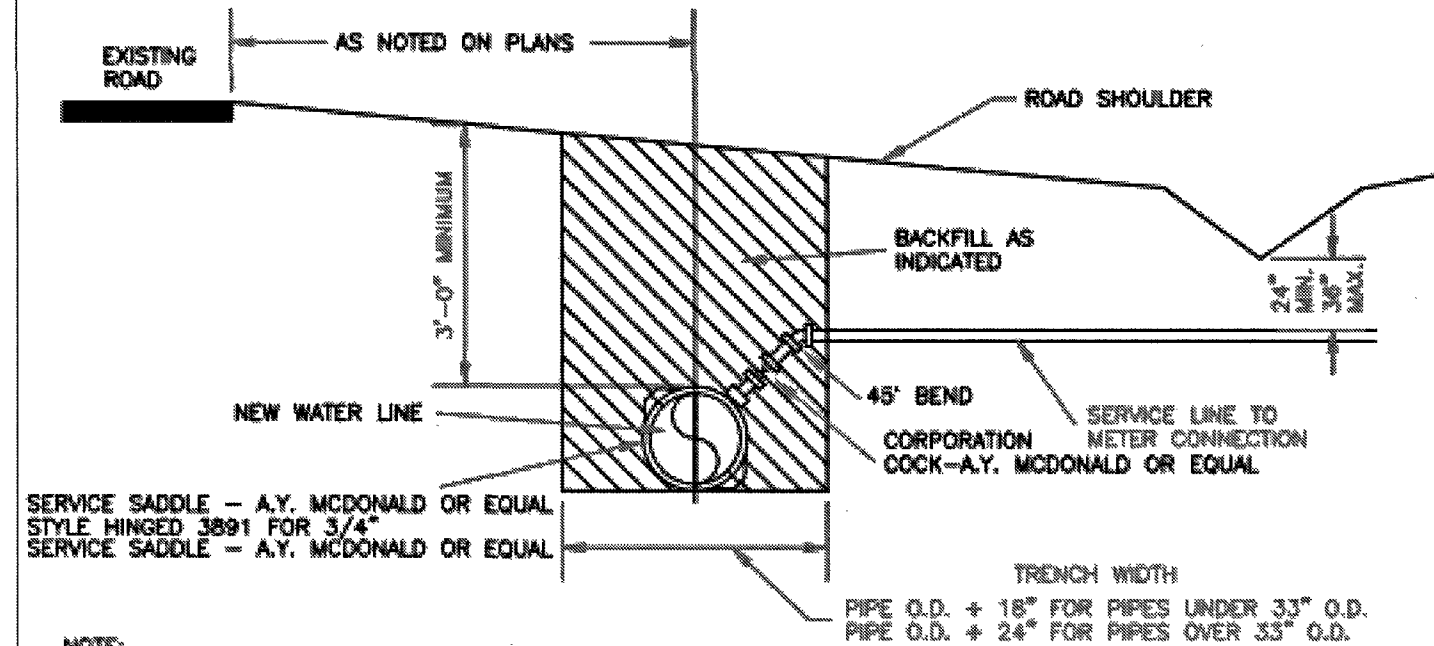
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852.02

SHEET 1 OF 1  
852.02

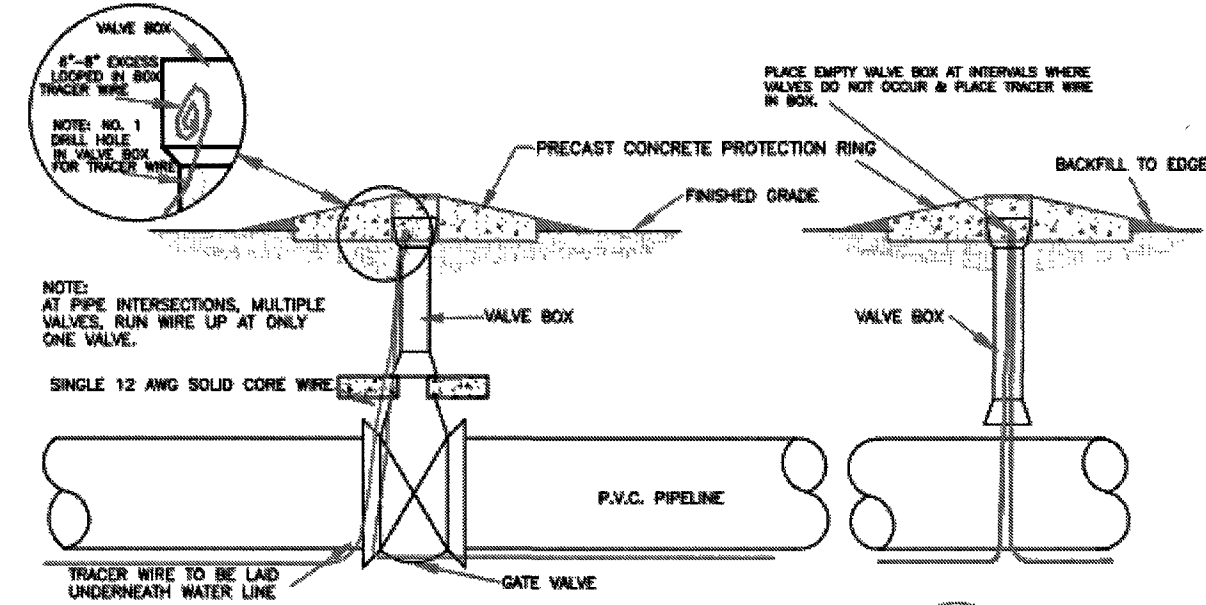
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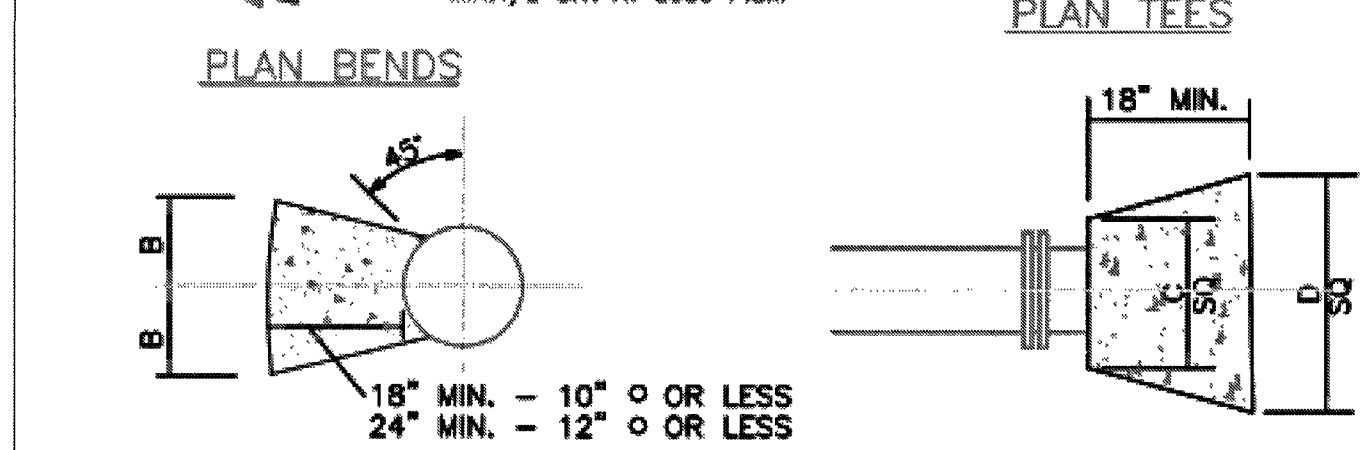
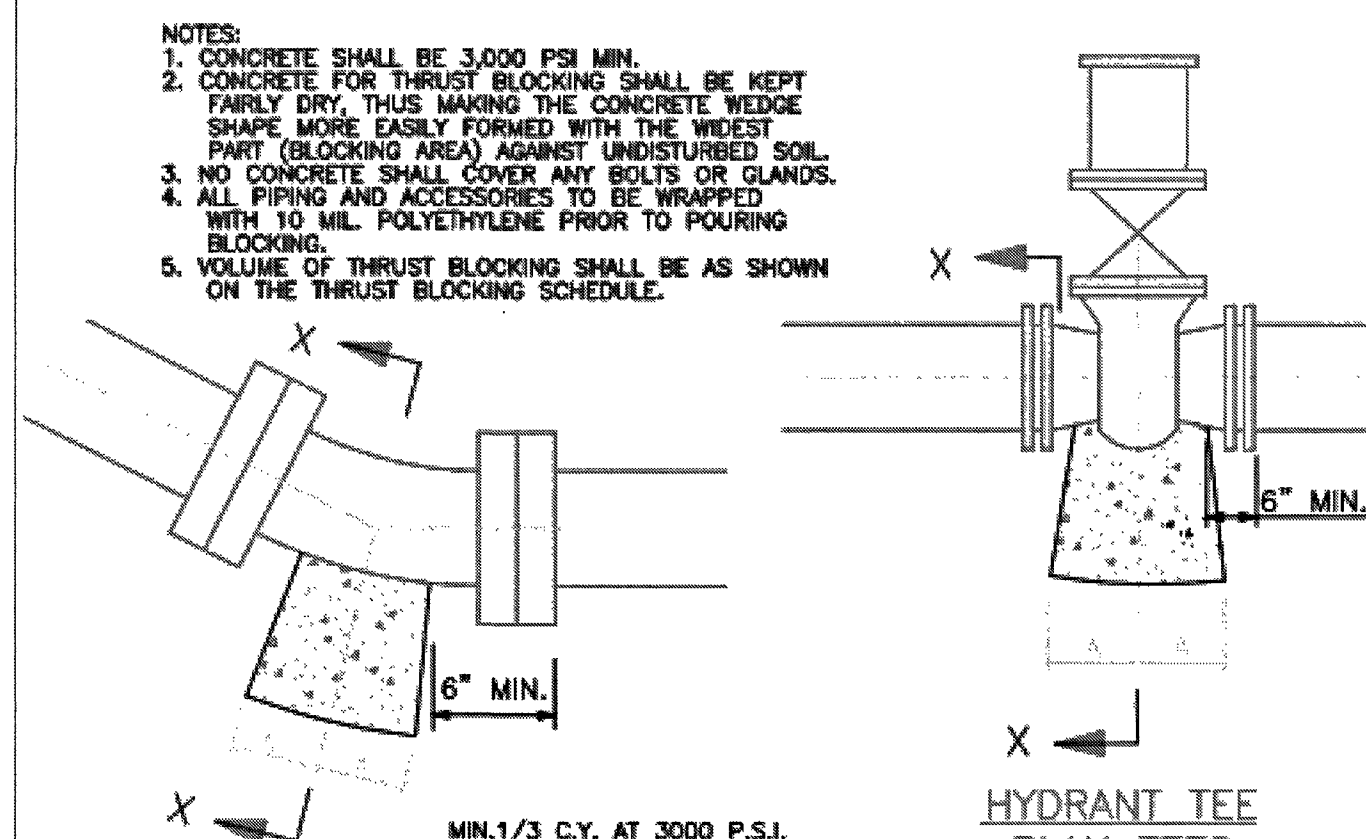
TYPICAL VALVE BOX DETAIL (W) 2  
NO SCALE



TYPICAL WATER SERVICE CONNECTION USING TAPPING SADDLE DETAIL (W) 13  
NO SCALE

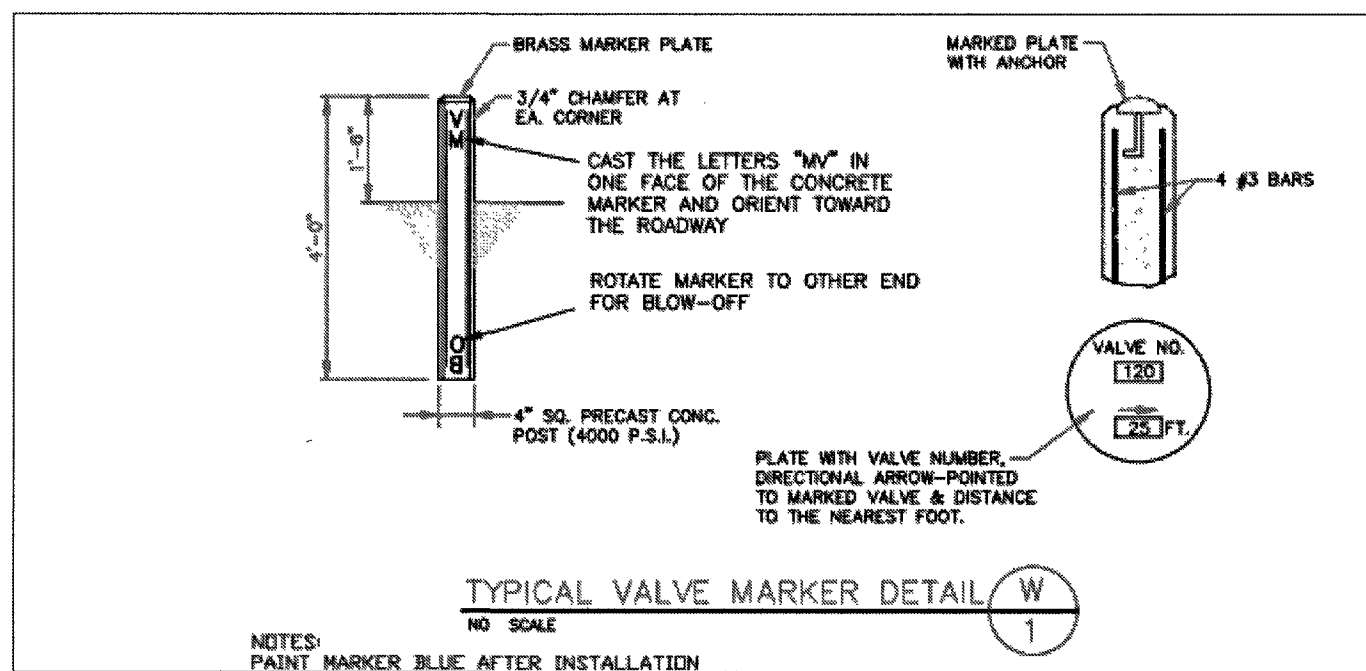


TYPICAL TRACER WIRE INSTALLATION DETAIL (W) 3  
NO SCALE



PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE			PLUG	
	A	B	A	B	A	B	A	B	A	B	C		D
4"	8"	12"	8"	8"	8"	8"	8"	8"	8"	8"	10"	10"	18"
6"	10"	12"	8"	10"	8"	8"	8"	8"	8"	10"	10"	12"	18"
8"	15"	13"	10"	10"	8"	8"	8"	8"	8"	10"	12"	12"	24"
10"	16"	14"	10"	12"	8"	10"	6"	10"	11"	14"	14"	25"	
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"	
14"	22"	18"	14"	18"	10"	14"	10"	14"	16"	18"	18"	34"	
16"	26"	20"	16"	18"	12"	16"	12"	16"	18"	20"	20"	36"	

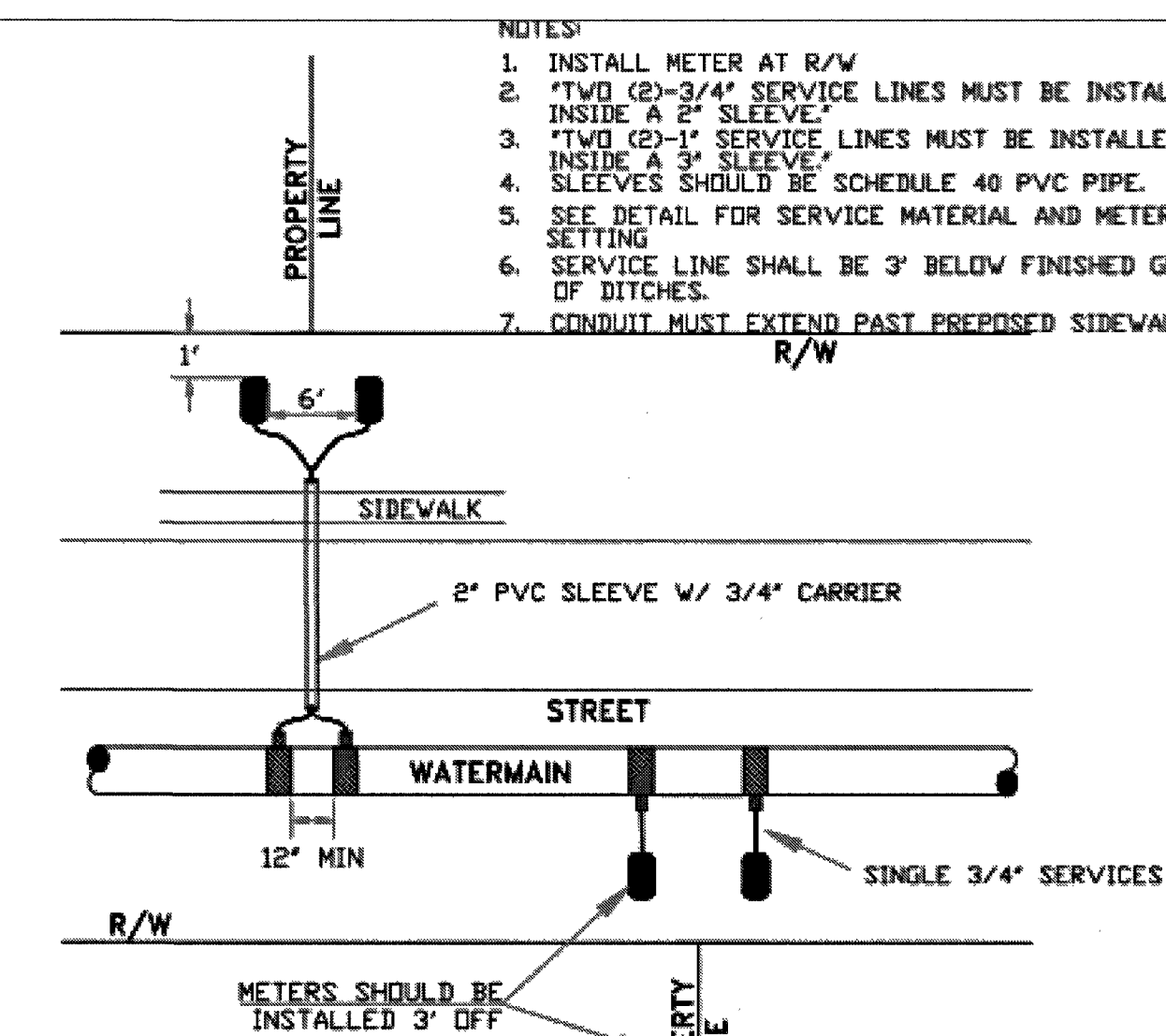
TYPICAL THRUST BLOCK DETAIL (W) 7  
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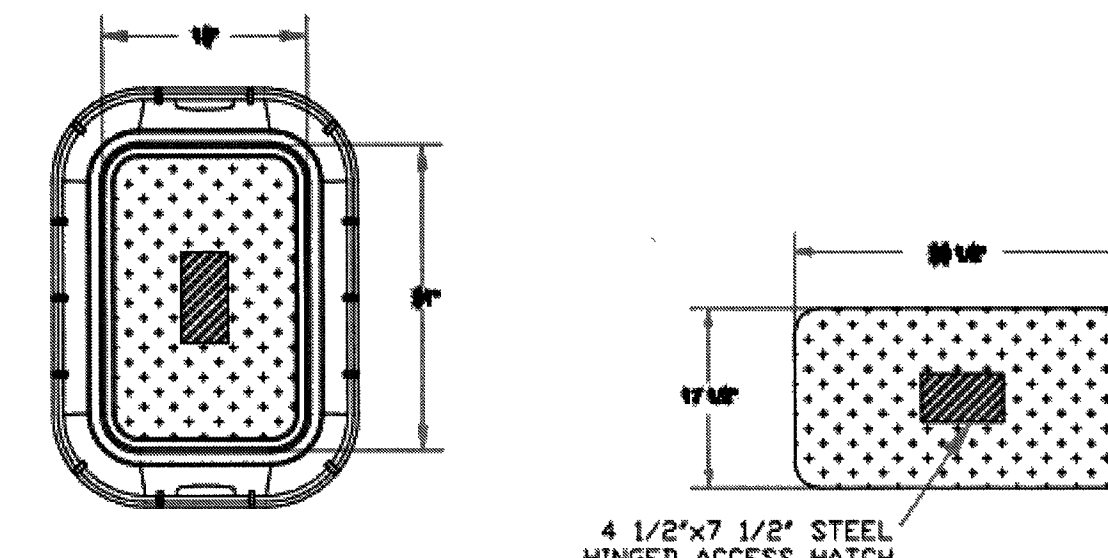
TYPICAL VALVE MARKER DETAIL (W) 1  
NO SCALE

LAYING CONDITIONS	DESCRIPTION	PROJECT USE
TYPE 1	FLAT BOTTOM UNDISTURBED EARTH TRENCH, LOOSE BACKFILL	NOT USED.
TYPE 2	FLAT BOTTOMED UNDISTURBED EARTH TRENCH, BACKFILL LIGHTLY CONSOLIDATED TO CENTERLINE OF PIPE.	NOT USED.
TYPE 3	PIPE BEDDED IN 4" MINIMUM JOB EXCAVATED MATERIAL, BACKFILL LIGHTLY CONSOLIDATED TO TOP OF PIPE.	ALL DUCTILE IRON GRAVITY SEWER LINE.
TYPE 4	PIPE BEDDED IN SAND, GRANULAR MATERIAL OR GRADED GRAVEL TO THE DEPTH OF 1/8 PIPE DIAMETER, 4" MIN. JOB EXCAVATED MATERIAL COMPACTED TO 4" ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL PVC WATER LINE AND PVC FORCE MAIN.
TYPE 5	PIPE BEDDED TO ITS CENTERLINE IN COMPACTED GRANULAR MATERIAL 4" MIN. UNDER PIPE, COMPACTED GRANULAR OR SAND MATERIAL TO 4" ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL PVC GRAVITY SEWER LINE.

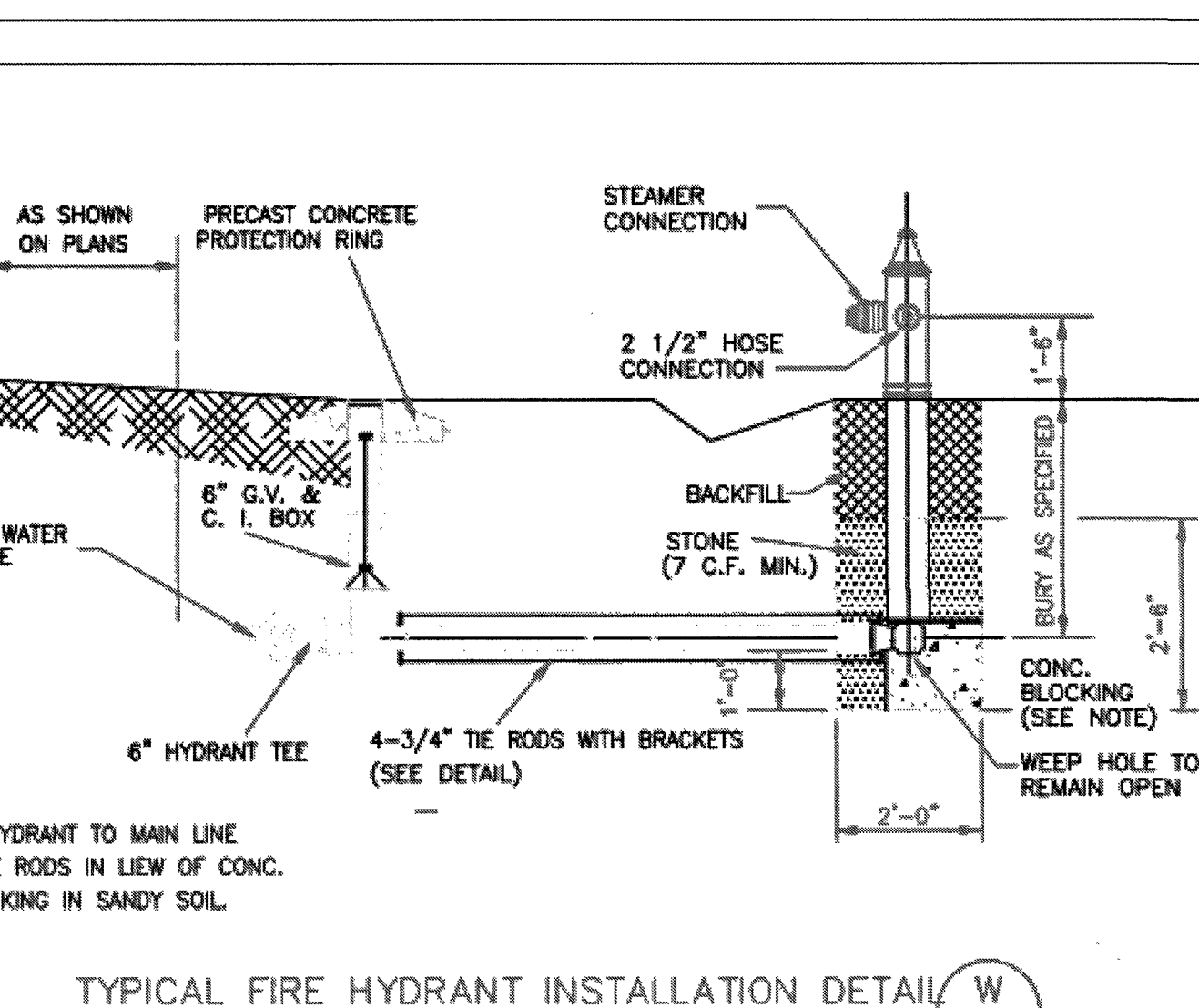
TYPICAL LAYING CONDITIONS DETAIL (W) 11  
NO SCALE



TYPICAL DOMESTIC WATER SERVICE INSTALLATION DETAIL (W) 12  
NO SCALE



TYPICAL METER BOX DETAIL FOR 1/2" SERVICE (W) 19  
NO SCALE



TYPICAL FIRE HYDRANT INSTALLATION DETAIL (W) 6  
NO SCALE

Drawing name: X:\acis\_dwg\2018\Projects\Land Group\18-116\_PROPOSED\_CONVENIENCE\_STORE.dwg DETAILS 4 Nov. 05. 2018 2:06pm by: Ecls\_Global\_William

**ECLS GLOBAL**  
U.S. VETERAN-OWNED  
19 N. MCKINLEY ST.  
COATS, NC 27521  
910.897.3257 ECLS@ECLS.COM  
910.897.2329 (FAX) ED:1175

REVISIONS:  
11/3/2018 TOWN OF LILLINGTON REVIEW COMMENTS: -JTP

11/3/2018

SURVEY BY:

**HARNETT CENTRAL CROSSING**

4585 NC 210 N.  
LILLINGTON, HARNETT CO., N.C.  
P.O. BOX 12-9308.000  
DEED BOOK: 95E, PAGE: 0102

PROJ. NO.: 18-116  
FILENAME: 18-116  
DRAWN BY: JTP/RC  
SCALE: NTS  
DATE: 06-19-2018



**LANDSCAPE CALCULATIONS**

SREET TREE CALC: 413 / 30 = 13.7 (14 TREES)  
 (DOES NOT INCLUDE DRIVEWAYS AND SITE DISTANCE TRIANGLES)

TYPE "A" BUFFER CALCS  
 TOTAL BUFFER LENGTH: 1,156.9 - 170.25 (POND SLOPE AND FIELD ACCESS) = 986.6  
 EVERGREEN TREE: 986.6 / 100 = 9.86 x 1 = 9.86 (10 TREES)  
 CANOPY TREES: 986.6 / 100 = 9.86 x 1 = 9.86 (10 TREES)  
 UNDERSTORY TREES: 986.6 / 100 = 9.86 x 3 = 29.5 (30 TREES)  
 SHRUBS: 986.6 / 100 = 9.86 x 12 = 118.3 (119 SHRUBS)

**GENERAL LANDSCAPE NOTES**

ALL PROPERTY BOUNDARIES ARE TO BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION.  
 CONTRACTOR IS TO MAKE SURE ALL LOCAL ORDINANCES ARE MET, UTILITIES LOCATED, ETC. BEFORE BEGINNING CONSTRUCTION. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE IF PROPER PRECAUTIONS ARE NOT TAKEN.

KEY	TYPE	QUANT.	COMMON NAME	BOTANICAL NAME	HEIGHT	SPREAD	ROOT	REMARKS
ABE	Shrub	61	Abutilon	Abutilon grandiflorum	5 gallon			
DCJ	Shrub	21	Dwarf Japanese Cedar	Cryptomeria japonica, 'Gibbesa Nana'	5 gallon		Container	4' On Center
IGS	Shrub	59	Isiberry	Ilex glabra 'Shamrock'	18-24"	5 gallon	Container	5' On Center
KOR	Shrub	21	Red Knockout Rose	Rosa, 'Knockout'	18-24"	5 gallon	Container	4' On Center
LOR	Shrub	24	Chinese Lagerström	Lagerström chinensis 'Ever Red'	18-24"	5 gallon	Container	4' On Center
VIT	Tree	3	Vitis	Vitis rotundifolia, multi-stem tree form	6-8'		Container	
WAX	Shrub	15	Shrubform Wax Mistle	Mitella caroliniana	4-5' 4"		Field Grown	2' On Center
CEP	Tree	10	Eastern Red Cedar	Juniperus virginiana	6-8'		Field Grown	
CMP	Tree	16	Hill Peak Crape Myrtle	Lagerström chinensis, 'Miami'	6-8'		Multi-stem	
GIN	Tree	1	Maidenhair Tree	Ginkgo biloba (Male)	28-30"		Field Grown	
RPH	Tree	6	Heritage River Birch	Betula nana 'Heritage'	10-12'	10-12"	Field Grown	Multi-stem
RMD	Tree	11	October Glory Maple	Acer rubrum 'October Glory'	9'		Field Grown	
WOK	Tree	7	Willow Oak	Quercus phellos	12-14'	5"	Field Grown	

**PLANT LIST**

**PLANTING NOTES**

PLANT QUANTITIES PROVIDED BY THE LANDSCAPE ARCHITECT ARE FOR REFERENCE PURPOSES ONLY. LANDSCAPE CONTRACTOR SHALL VERIFY ALL CONDITIONS, QUANTITIES, AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CORRECTIONS OR ADJUSTMENT. ONCE CONSTRUCTION HAS BEGUN, CONTRACTOR WILL ASSUME ALL RESPONSIBILITY.  
 ACTUAL FIELD CONDITIONS MAY ALTER THE LOCATION OF GRASSED AREAS AND PLANTINGS. THE LANDSCAPE ARCHITECT SHALL BE CONSULTED IF SUCH CHANGES ARE NECESSARY.  
 ALL AREAS NOT MOWED, PAVED OR IN NATURAL AREAS ARE TO BE GRASSED ACCORDING TO SPECIFICATIONS.

**BED/SOIL PREPARATION**

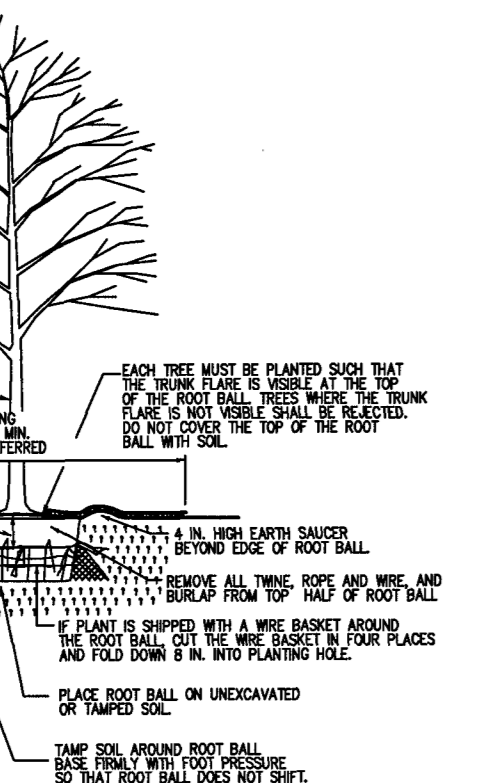
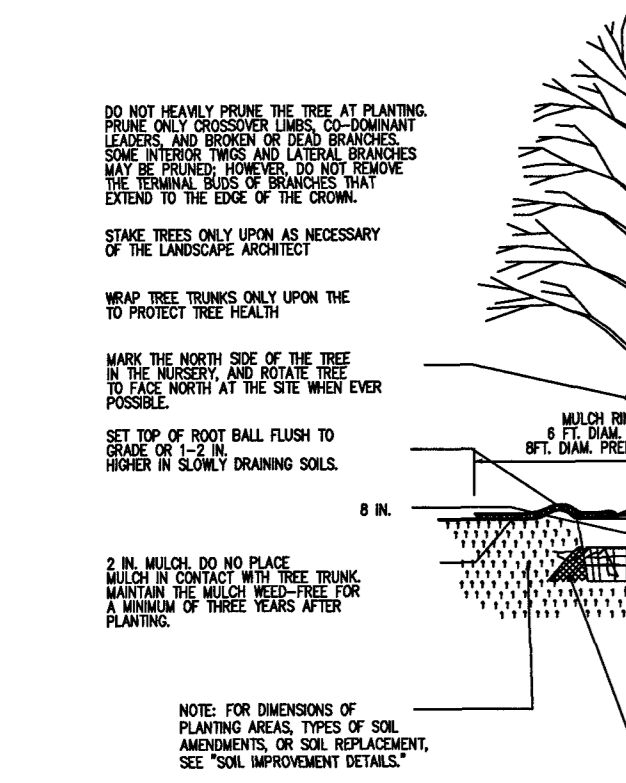
ALL PLANTING BEDS SHALL BE THOROUGHLY TILLED TO A DEPTH OF 12" INCORPORATING A LAYER OF GOOD TOP SOIL. GRADE AND A LAYER OF CLEAN FILL. ALL INCORPORATED TOPSOIL IS TO BE FREE OF STONES OR OTHER MATERIALS LARGER THAN 1/4" IN DIAMETER AND ALL SOIL CLOSURE REMOVE ANY EXISTING WEEDS AND OTHER STRONGWEED MATERIALS. FINISHED PLANT BEDS SHALL BE MOWED SHORT PRIOR TO INSTALLATION OF FRESH MULCH. DO NOT WORK ANY SOILS UNDER FROZEN OR WET CONDITIONS.  
 SOIL SAMPLES FOR ALL BEDS SHALL BE SUBMITTED TO THE N.C. DEPARTMENT OF AGRICULTURE. SOIL TESTING SERVICES FOR ANALYSIS AND RECOMMENDATIONS FOR LIME APPLICATION.  
 MULCH MULCH ALL PLANT BEDS AND NATURAL AREAS WITH 3" CLEAN PINE STRAW EXCEPT AS OTHERWISE NOTED.

**LAWN SEEDING/SOD NOTES**

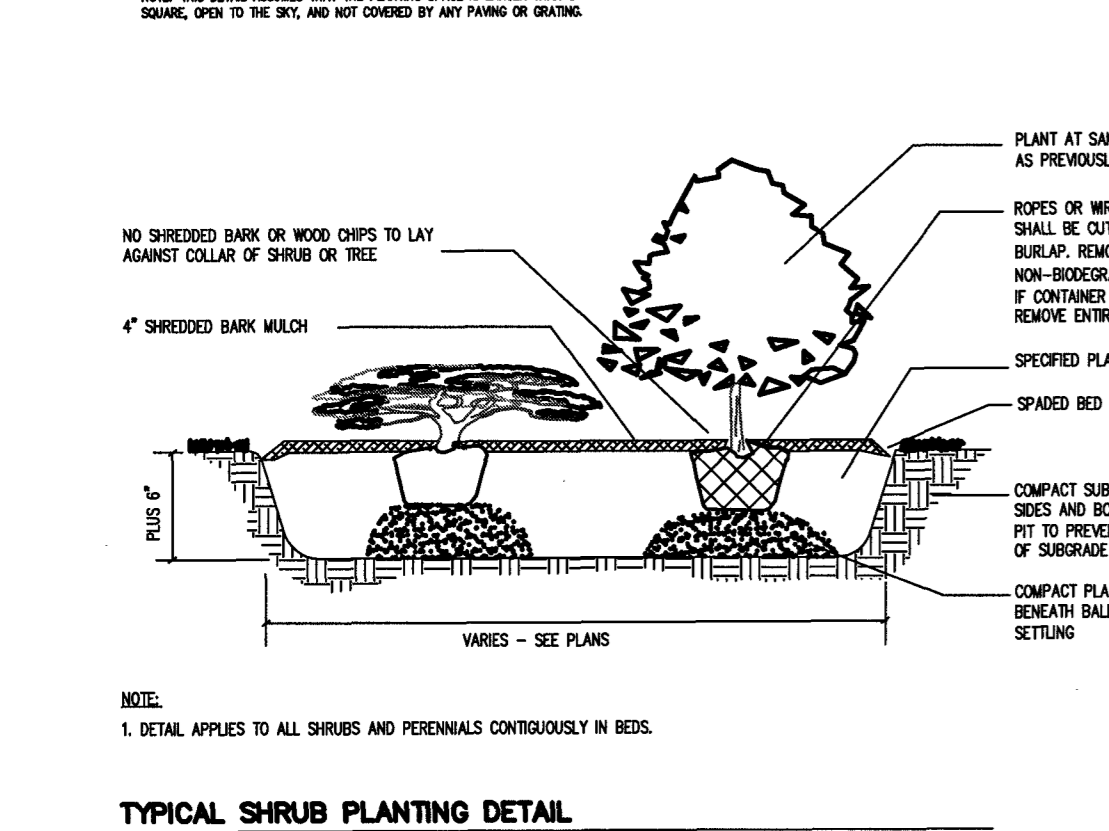
CULTIVATE TO A DEPTH OF 4" IN AREAS WHERE TOPSOIL HAS NOT BEEN TYPICAL, ADD SPECIFIED SOIL AMENDMENTS AND WATER THOROUGHLY INTO TOP 4" OF SOIL, TILLING SURFACE TO LEVEL THE TEXTURE.  
 LOOSEN SUBGRADE TO A DEPTH OF 4" IN AREAS WHERE TOPSOIL HAS BEEN STRIPPED. SPREAD 2" DEPTH OF TOPSOIL, TILL TO MIX TO DEPTH OF TOPSOIL, ADD SPECIFIED SOIL AMENDMENTS AND MIX THOROUGHLY INTO TOP 4" OF TOPSOIL, TILL SURFACE TO LEVEL, FINE SURFACE.  
 GRADE AND ROLL PREPARED LAWN SURFACE. WATER THOROUGHLY BUT DO NOT CREATE MUDDY SOIL CONDITION.  
 LAY SOD STRIPS WITH TIGHT JOINTS, ROLL OR LAMP LIGHTLY, AND WATER THOROUGHLY.  
 SOW GRASS SEED UNIFORMLY IN TWO DIRECTIONS IN THE QUANTITIES RECOMMENDED BY THE SEED PRODUCER EXCEPT AS OTHERWISE INDICATED. SOW SEED LIGHTLY INTO TOP 1/2" INCH OF LAWN SURFACE. WATER THOROUGHLY WITH FINE SPRAY.  
 PROTECT SEEDING AREAS AGAINST BROADSWORD SPREADING STRAW WITH A UNIFORM LOOSE DEPTH OF 1 - 1/2" INCH.  
 LAWN CENTRE SEED RATE: 2 LBS. / 1000 S.F.  
 FERTILIZER: 18-4-8 SLOW RELEASE RATE TO LBS./1000 S.F.  
 LIME: APPLY LIME @ RATE OF 50 LBS./1000 S.F.

**PLANT GUARANTEE**

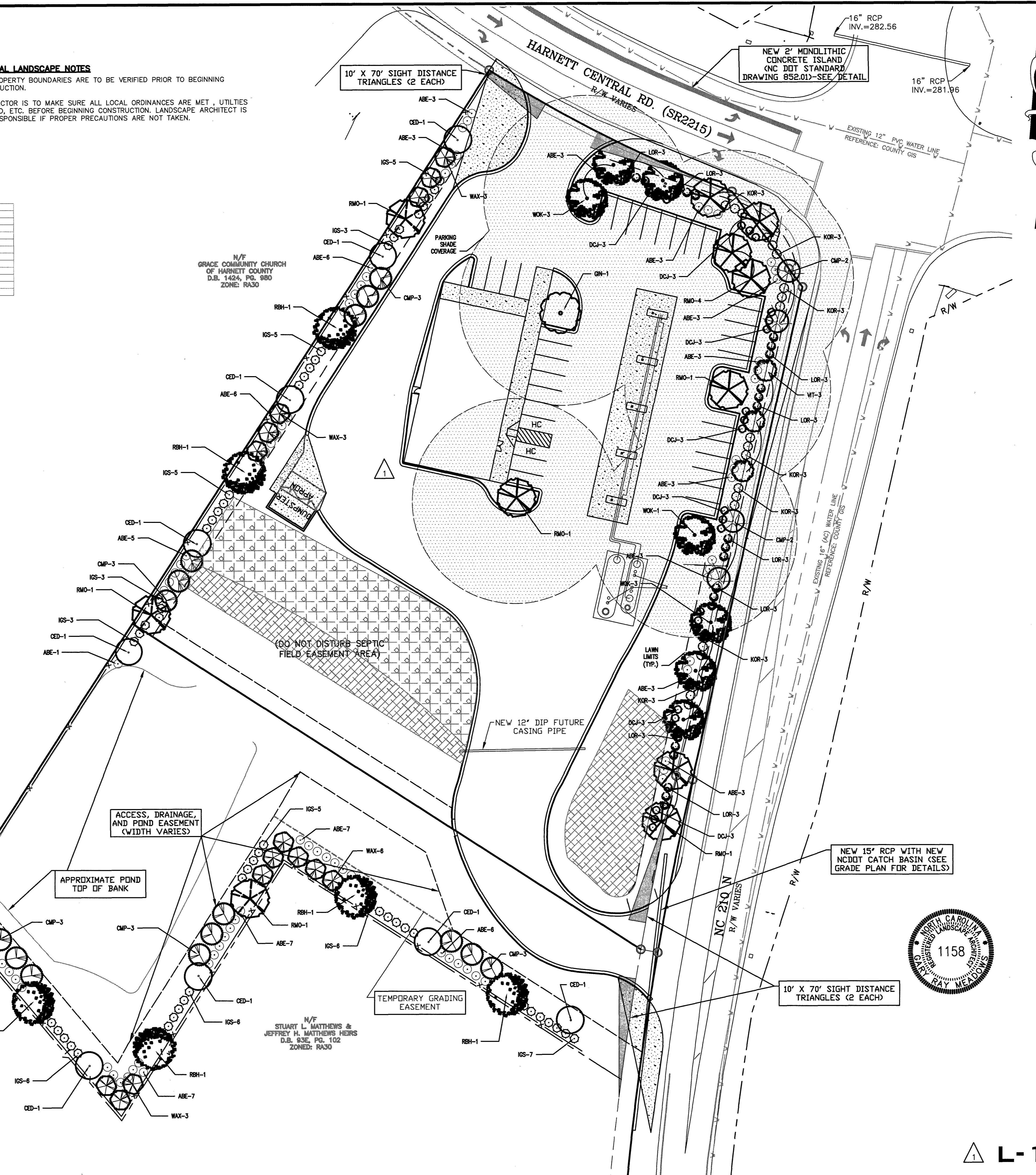
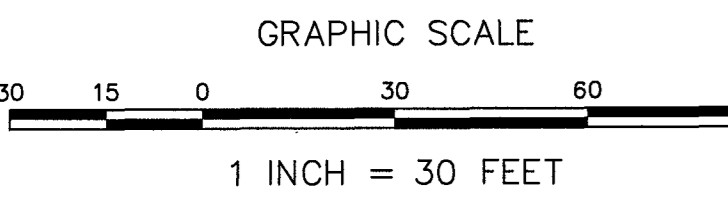
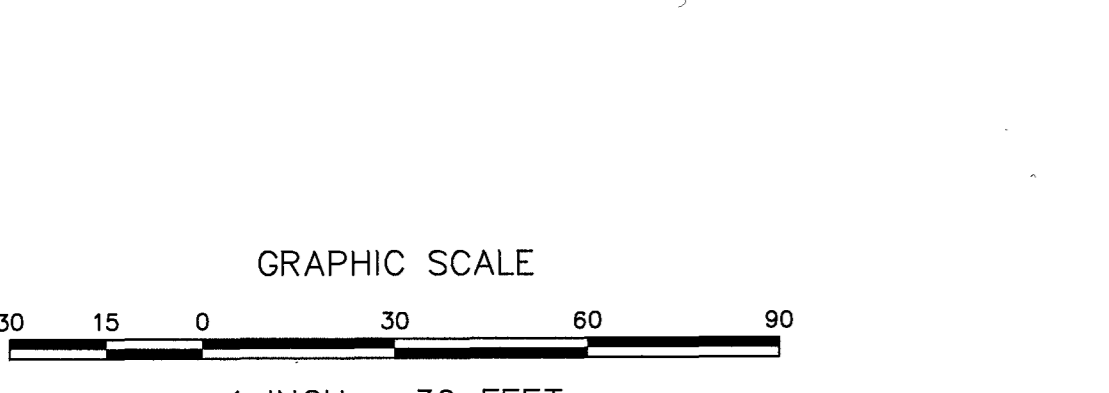
TREES AND SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. GUARANTEE SHALL BE AGAINST DEFECTS, INCLUDING DEATH AND UNDESIRABLE GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE FROM OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH WERE BEYOND THE LANDSCAPE INSTALLER'S CONTROL. MISSING PLANTS SHALL BE THE RESPONSIBILITY OF THE OWNER AFTER FINAL ACCEPTANCE.



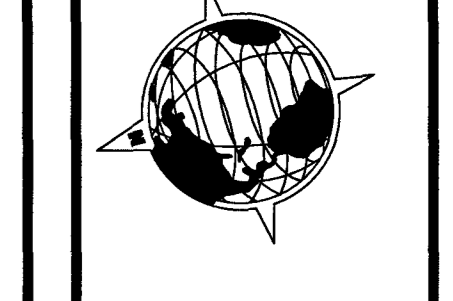
**TREE PLANTING DETAIL - BAR TREES IN ALL SOIL TYPES**



**TYPICAL SHRUB PLANTING DETAIL**



**ECLS GLOBAL**  
 U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 COATS, NC 27521  
 910.897.2829 (FAX) 910.897.2829



REVISIONS:

11/13/2018	TOWN OF LILLINGTON REVIEW	COMMENTS: -JTP
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LANDSCAPE PLAN

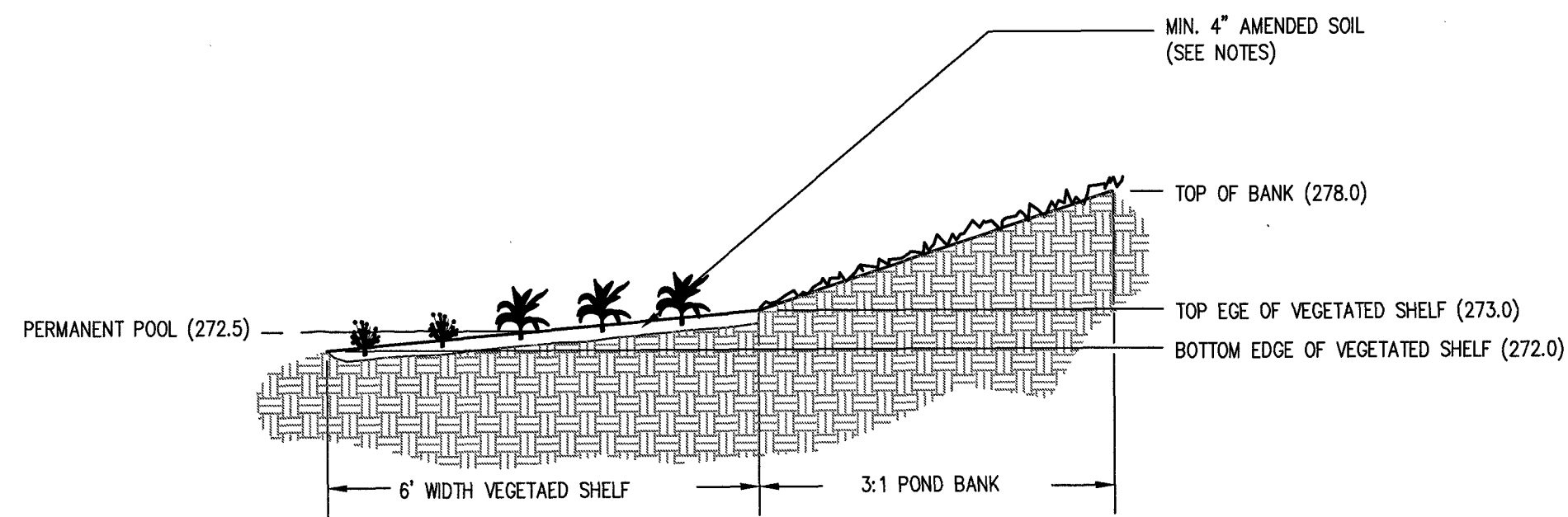
HARNETT CENTRAL CROSSING  
 4555 NC 210 N., LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-9908-000  
 DEED BOOK: 93E, PAGE: 0102



PROJ. NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: GRM  
 SCALE: 1"=30'  
 DATE: 06-18-2018  
**ECLS**



VICINITY MAP



VEGETATED SHELF PLANTING DETAIL

NOTE: STABILIZE ALL 3:1 SLOPES ABOVE PERMANENT POOL WITH BIODEGRADABLE NETTING.

BPLANT LIST / LEGEND								
SYMBOL	KEY	QUANTITY	TYPE	COMMON NAME	SCIENTIFIC NAME	PLANTING SIZE	ROOT	SPACING
[Symbol]	HC	101	HERB	SPIDER LILY	HYMENOCALLIS CAROLINIANA	PLUG	CONTAINER	24"
[Symbol]	IR	73	HERB	IRIS VIRGINICA	IRIS VIRGINICA	PLUG	CONTAINER	24"
[Symbol]	SC	51	HERB	LIZARD'S TAIL	SAURURUS CERNAUS	PLUG	CONTAINER	24"
[Symbol]	JL	67	HERB	SOFTGRASS	JUNCUS EFFUSUS	PLUG	CONTAINER	24"
[Symbol]	PC	65	HERB	PICKERELWEED	PONTERERIA CORDATA	PLUG	CONTAINER	24"
[Symbol]	CH	55	GRASS	CENTPEDEE SEED	EREMOPHLOA OPHUROIDES	SEED	SO. FOOT	
[Symbol]	CH	55	GRASS	RIVER OATS	CHASMANTHUM LATIFOLIUM	PLUG	CONTAINER	24"

-THE CONTRACTOR SHALL SEED AND MULCH ALL BARE AREAS NOT COVERED BY PLANT MATERIAL AFTER CONSTRUCTION IS COMPLETE. SILT FENCE SHOULD REMAIN IN PLACE UNTIL GRASS HAS BECOME ESTABLISHED.  
 -THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS REQUIRED BY THE NC DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
 -EXISTING GRADES SHOWN ON PLANS ARE TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCING ANY WORK  
 -PLANTING AREA SOIL DEPTH MINIMUM SHALL BE 4"  
 -AREAS SHOWN AS GROUND COVER ARE TO BE PLANTED IN A "NATURALIZED" MANNER WITH PLANTS GROUPED WITHIN AREAS AS LABELED.  
 -ALL OTHER AREAS WHERE NO PLANT MATERIAL IS IDENTIFIED ARE TO BE PLANTED WITH COMBINATIONS OF NATIVE GRASSES, LEGUMES, CLOVERS AND WILDFLOWERS OR TURFGRASS WHERE APPLICABLE

CONTRACTOR SHOULD CONTACT LOCAL NURSERIES FOR PLANT SELECTION.			
CILIDE NATIVE PLANT NURSERY	621 STARBURST LANE, RALEIGH, NC 27603	919.662.5566	http://wetlandplantnursery.com
NICHE GARDENS	1111 DAWSON ROAD, CHAPEL HILL, NC 27516	919.967.0078	http://www.nichegardens.com
PLANT DELIGHTS NURSERY	9241 SAULS ROAD, RALEIGH, NC 27603	919.772.4794	http://www.plantdelights.com
TARHEEL NATIVE TREES	4339 PEELE ROAD, CLAYTON, NC 27520	919.553.5927	http://www.tarheelnativetrees.com
TAYLOR'S NURSERY, INC.	3705 NEW BERN AVE., RALEIGH, NC 27610	919.231.6161	http://www.tayloranursery.com
MELLOW MARSH FARM	1312 WOODY STORE ROAD, SILER CITY, NC 27344	919.742-1200	http://www.mellowmarshfarm.com
PINELANDS NURSERY	323 ISLAND ROAD, COLUMBUS, NJ 08022	800-667-2729	http://www.pinelandsnursery.com
CURE NURSERY	880 BUTEO RIDGE RD., PITTSBORO, NC 27312	919-542-6186	http://www.tayloranursery.com

**PLANT CALCULATIONS:**  
**10' VEGETATED SHELF**  
 PLANTING AREA 1,644 SF  
 1,644 SF / 200 SF = 8.2  
 8.2 X 50 PLANTS = 411 PLANTS REQUIRED  
 PLANTS PROVIDED = 411 PLANTS PROVIDED

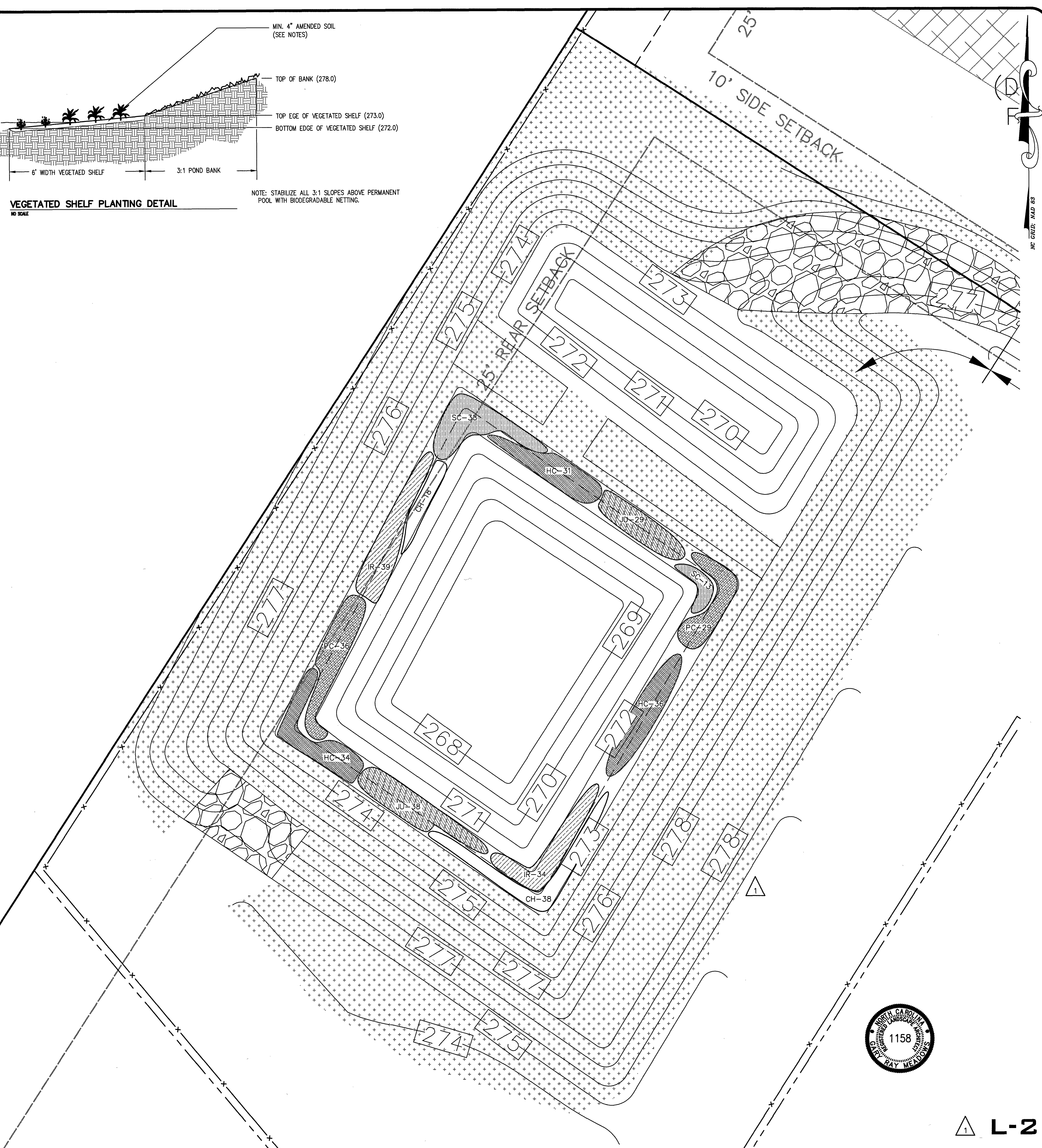
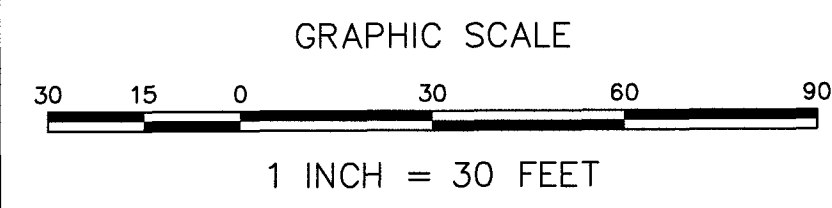
**SOILS NOTE:**  
**HAND TAMPED PLANTING MIXTURE**  
 - 1 PART APPROVED ORGANIC MATTER  
 - 4 PARTS NATIVE SOIL  
 - 1/2 LB. 10-10-10 FERTILIZER PER CU. YD. OF BACKFILL OR APPROVED SUBSTITUTE

\*\*\* ALL REQUIRED PLANTINGS MUST BE COVERED BY A TWO YEAR REPLACEMENT WARRANTY.  
 AT THE END OF THE FIRST YEAR AND AGAIN AT THE END OF THE TWO-YEAR WARRANTY PERIOD, ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED. ESTABLISHMENT PROCEDURES, SUCH AS CONTROL OF INVASIVE WEEDS, ANIMAL AND VANDAL DAMAGE, MULCHING, RE-STAKING, WATERING, AND MESH OR TUBE PROTECTION REPLACEMENT, SHALL BE IMPLEMENTED TO THE EXTENT NEEDED TO ENSURE PLANT SURVIVAL. STAKING MUST BE REMOVED AFTER ESTABLISHMENT (APPROXIMATELY 12 MONTHS), TO PREVENT GIRDLING (STRANGLING) OF ALL WOODY PLANTS.

**TURF SEEDING/SOD NOTES:**

Cultivate to a depth of 6" in areas where topsoil has not been stripped, add specified soil amendments and mix thoroughly into top 4" of soil, tilling surface to a level, fine texture.  
 Loosen subgrade to a depth of 4" in areas where topsoil has been stripped, spread 2" depth of topsoil, till to mix topsoil with subsoil, spread additional 2" depth of topsoil, add specified soil amendments and mix thoroughly into top 4" of topsoil, till surface to level, fine surface.  
 Grade and roll prepared lawn surface. Water thoroughly but do not create muddy soil condition.

Sow grass seed uniformly in two directions in the quantity recommended by the seed producer, except as otherwise indicated. Rake seed lightly into top 1/8 inch of lawn surface. Water thoroughly with fine spray.  
 Protect seeded areas against erosion spreading straw to a uniform loose depth of 1 - 1/2 inch.  
 Lawn: Centipede Seed  
 Rate: 2 lbs. / 1000 S.F.  
 Fertilizer: 16-4-8 Slow Release  
 Rate: 10 lbs./1000 S.F.  
 Lime: Apply lime @ rate of 50 lbs./1000 S.F.



1 L-2

**ECLS GLOBAL**  
 U.S. VETERAN-OWNED  
 19 N. MCKINLEY ST.  
 COATS, NC 27521  
 910.897.3257 FAX 910.897.3257  
 ECLS@ECLS.COM

REVISIONS:  
 11/3/2018 TOWN OF LILLINGTON REVIEW COMMENTS - JTP

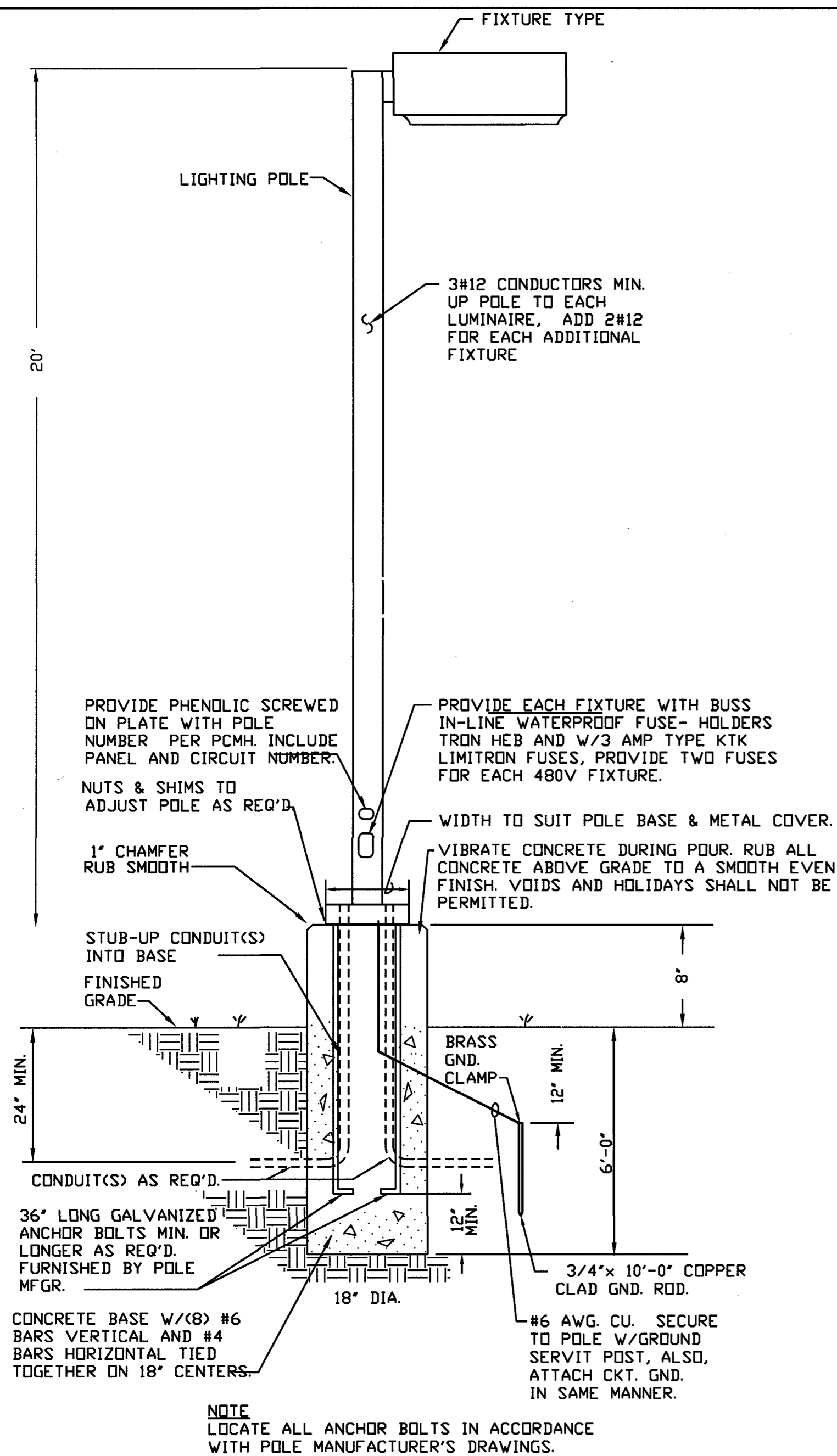
SURVEY BY:

**DETENTION POND LANDSCAPE PLAN**

HARNETT CENTRAL CROSSING  
 4585 NC 210 N.  
 LILLINGTON, HARNETT CO., N.C.  
 PIN: 0662-12-9308.000  
 DEED BOOK: 99E, PAGE: 0102

PROJ. NO.: 18-116  
 FILENAME: 18-116  
 DRAWN BY: GRM  
 SCALE: 1"=10'  
 DATE: 05-03-2018

**ECLS**



NOTE  
LOCATE ALL ANCHOR BOLTS IN ACCORDANCE  
WITH POLE MANUFACTURER'S DRAWINGS.

2 SITE LIGHT POLE DETAIL  
NTS

Project Name: \_\_\_\_\_ Part Number: \_\_\_\_\_ Type: \_\_\_\_\_

### AREA LIGHT - 320W LED OUTDOOR

ILP 407-478-3759 www.ilp-inc.com

**FEATURES**

- Bronze die-cast aluminum housing
- Custom and factory select colors available (Contact factory for pricing)
- Type II, III, IV, & V/S optics available
- Tool-less hinged drop down driver access
- Universal Pole Mounting Bracket available (UPMB)
- Swappable driver cover
- IP66 Rated
- 3000K, 4000K, & 5000K color options
- 0-10V Dimmable Driver
- Dark Sky Compliant<sup>2</sup>
- 5 year warranty
- DesignLights Consortium<sup>®</sup> Qualified Luminaire

<sup>1</sup>Must select 3000K to qualify  
<sup>2</sup>Must select UPMB, ARM6, or HTMA mounting options to qualify

**SUITABLE APPLICATIONS**

- Parking Lots
- Roadways
- Car Dealerships
- Shopping Centers

**LED SYSTEMS INFO**

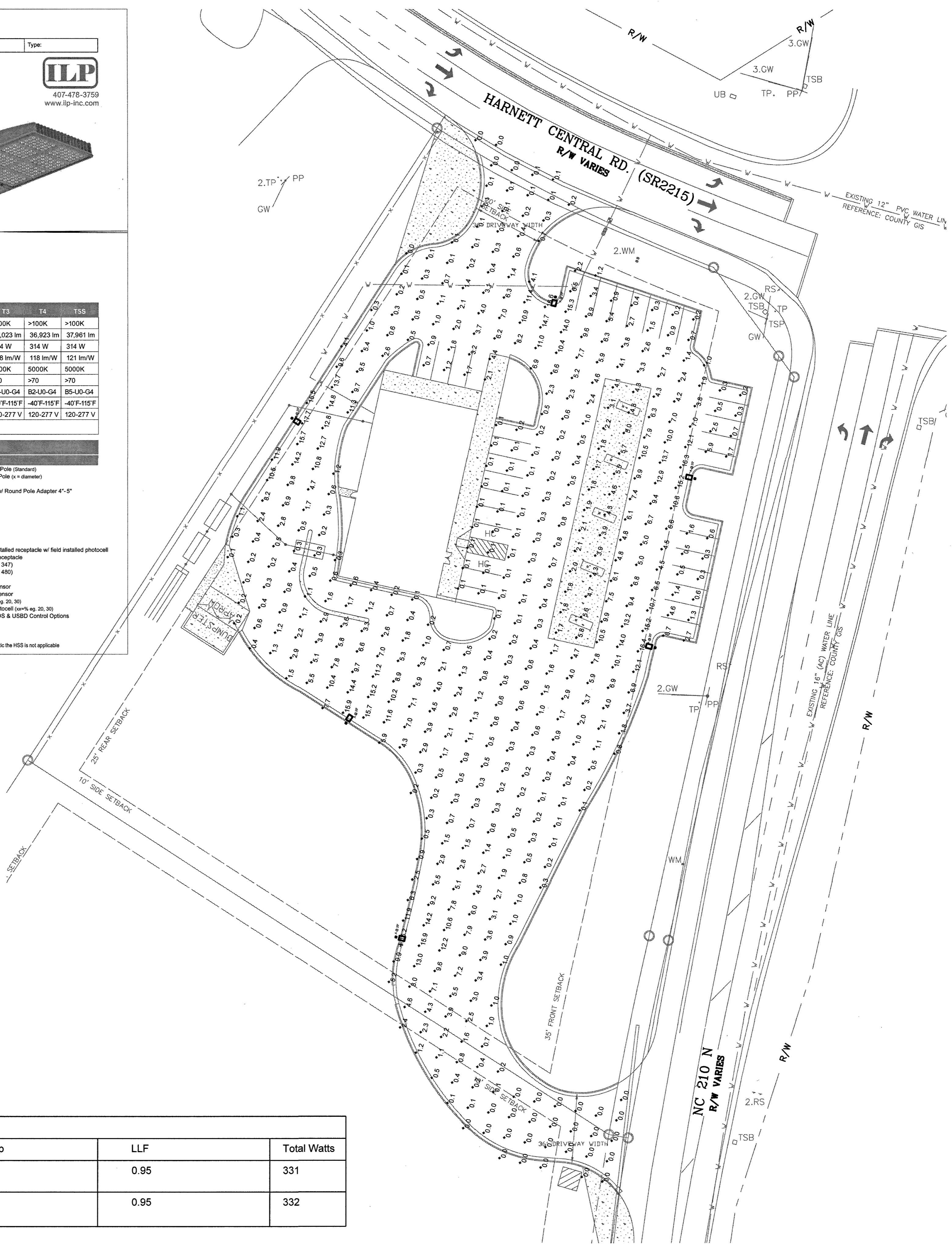
	T2	T3	T4	T5S	T2	T3	T4	T5S
Calculated L70 (TM-21)	>100K	>100K	>100K	>100K	>100K	>100K	>100K	>100K
Delivered Lumens	38,431 lm	37,452 lm	37,352 lm	38,401 lm	37,991 lm	37,023 lm	36,923 lm	37,961 lm
Total Input Watts	314 W	314 W	314 W	314 W	314 W	314 W	314 W	314 W
Luminaire Efficacy Rating (LER)	122 lm/W	119 lm/W	119 lm/W	122 lm/W	121 lm/W	118 lm/W	118 lm/W	121 lm/W
Correlated Color Temperature (CCT)	4000K	4000K	4000K	4000K	5000K	5000K	5000K	5000K
Color Rendering Index (CRI)	>70	>70	>70	>70	>70	>70	>70	>70
BUG Rating	B4-U0-G4	B4-U0-G4	B2-U0-G4	B5-U0-G4	B4-U0-G4	B4-U0-G4	B2-U0-G4	B5-U0-G4
Ambient Temperature Range	-40°F-115°F	-40°F-115°F	-40°F-115°F	-40°F-115°F	-40°F-115°F	-40°F-115°F	-40°F-115°F	-40°F-115°F
Universal Driver	120-277 V	120-277 V	120-277 V	120-277 V	120-277 V	120-277 V	120-277 V	120-277 V

LED System data above based on: AL-320WLED-UNIV-40 and AL-320WLED-UNIV-50  
LED Lumen maintenance estimates based on TM-21 projections for the light source at 25°C ambient.

**ORDERING GUIDE:**

Status	Watts	Driver	Color	Optics	Options
<input checked="" type="checkbox"/>	320WLED	UNIV 120-277V Driver	<input checked="" type="checkbox"/> 50 <input checked="" type="checkbox"/> 40 <input type="checkbox"/> 30	<input checked="" type="checkbox"/> T2 <input checked="" type="checkbox"/> T3 <input checked="" type="checkbox"/> T4 <input type="checkbox"/> T5S	<input type="checkbox"/> ARM6-S 6" Straight Arm Adaptor for Square Pole (Standard) <input type="checkbox"/> ARM6-Rx 6" Straight Arm Adaptor for Round Pole (x = diameter) <input type="checkbox"/> UPMB Universal Pole Mounting Bracket <input type="checkbox"/> UPMB-R Universal Pole Mounting Bracket w/ Round Pole Adapter 4"-5" <input type="checkbox"/> WMB Wall Mount Bracket <input type="checkbox"/> AL-SLPP Adjustable Slip Filter <input type="checkbox"/> HTMA Horizontal Tension Mount Adaptor <input type="checkbox"/> HSS House Side Shield <input type="checkbox"/> GS Glare Shield <input type="checkbox"/> SP1 10KA Max Univolt Surge Protector <input type="checkbox"/> SP2 22KA Max Univolt Surge Protector <input type="checkbox"/> TLPC Univ. twist lock photocell factory installed receptacle w/ field installed photocell <input type="checkbox"/> 7PIN-PCR 7 Pin Photocell Factory installed Receptacle <input type="checkbox"/> FUSE/XXX Single-line Voltage Fuse (120, 277, 347) <input type="checkbox"/> FUSE/OXXX Single-line Voltage Fuse (208, 240, 480) <input type="checkbox"/> SP40V2 20KA MAX 480V Surge Protector <input type="checkbox"/> WLOS Wet Location Rated Occupancy Sensor <input type="checkbox"/> USBD User Select Bi-Level Dim w/ Occ. Sensor <input type="checkbox"/> B2ix Preset Bi-Level Dim Sensor (see pg. 20, 30) <input type="checkbox"/> B2xPC Preset Bi-Level Dim Sensor w/ Photocell (see pg. 20, 30) <input type="checkbox"/> FSR100 Remote Configuration Tool for WLOS & USBD Control Options <input type="checkbox"/> SD40W 480V Step Down Transformer <input type="checkbox"/> SD347V 347V Step Down Transformer

<sup>1</sup> Due to the optical pattern of the T5S optic the HSS is not applicable



Luminaire Schedule								
Symbol	Label	Qty	Arrangement	Description	LAMP	Lumens/Lamp	LLF	Total Watts
■	A	1	SINGLE	INDUSTRIAL LIGHTING PRODUCTS INC AL-320WLED-UNIV-40-T4-HSS	192 WHITE LEDS	34952	0.95	331
■	A	1	SINGLE	INDUSTRIAL LIGHTING PRODUCTS INC AL-320WLED-UNIV-40-T2-HSS	192 WHITE LEDS	36464	0.95	332

STATISTICS							
DESCRIPTION	SYMBOL	Units	Avg	Max	Min	Avg/Min	Max/Min
LAYOUT	+	Fc	3.2	17.7	0.0	N.A.	N.A.

REVISIONS


**75% COMPLETE CONSTRUCTION DOCUMENTS**  
NOT FOR CONSTRUCTION

**BLACKWELL ARCHITECT**  
E.J. "BJUD" BLACKWELL, AIA, NCARB  
310 FAIRWOOD COURT FAYETTEVILLE, NC 28305  
PHONE: 910.485.8579

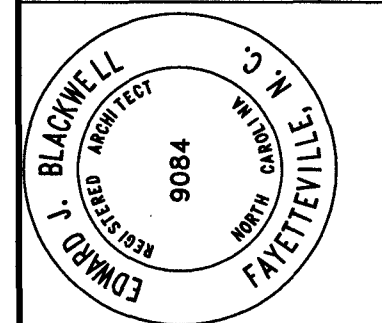
**SHRI CONSULTING**  
e-mail: prasad hvac@yahoo.com  
3434 Edwards Mill Rd, Suite 112  
RALEIGH N.C. 27612

**HARNETT CENTRAL CROSSING FOOD MARKET**  
4853 NC HWY 210 NORTH  
LILLINGTON NC 27546

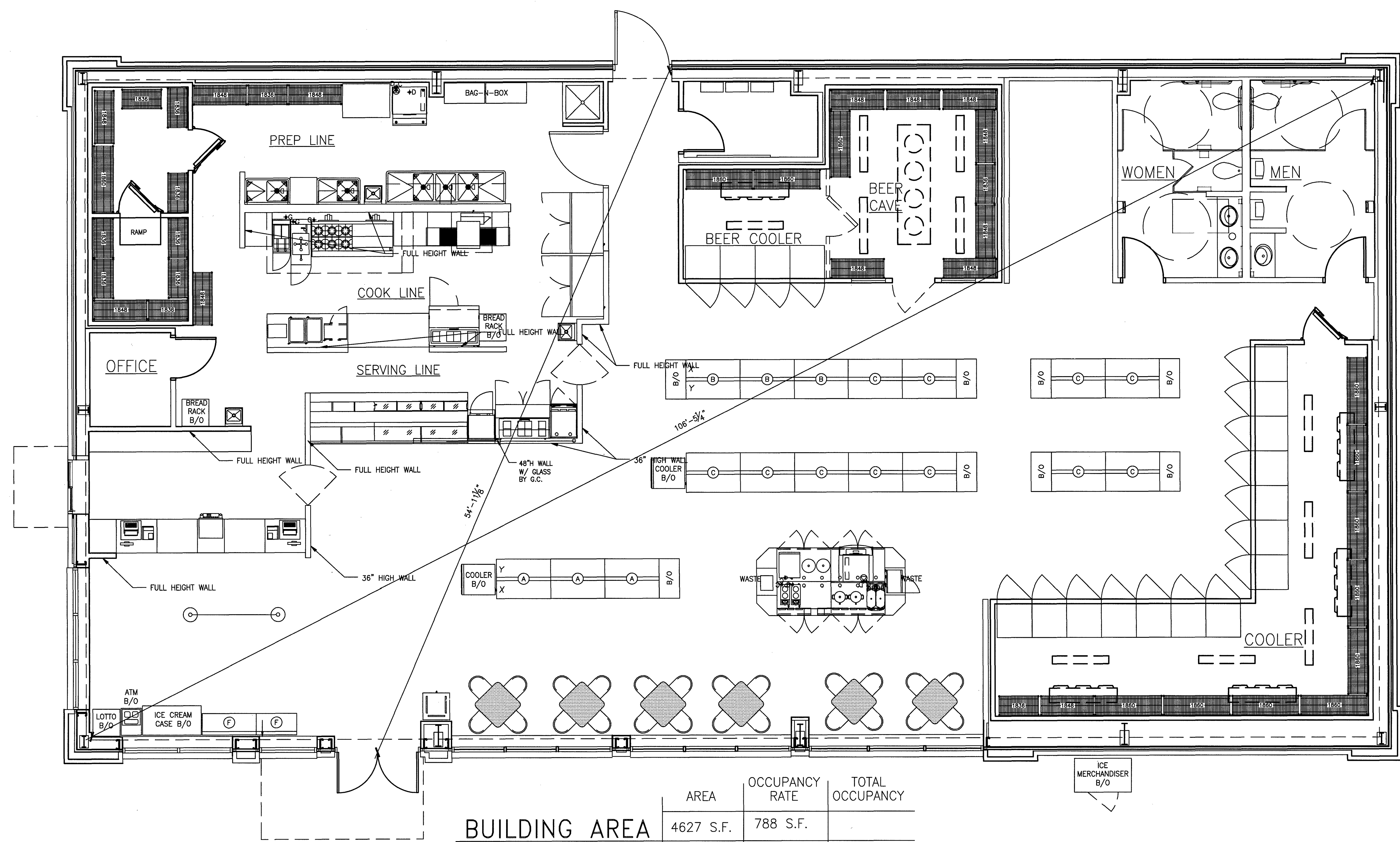
10-31-18  
SITE PLAN ELECTRICAL

**E1**

**LIFE SAFETY NOTES**  
 PROVIDE FIRE EXTINGUISHERS HAVING A MINIMUM RATING OF 2-A10-BC FOR EVERY 3,000 S.F. OF FLOOR AREA. TRAVEL DISTANCE TO AN EXTINGUISHER TO NOT EXCEED 75 FEET.



**BLACKWELL ARCHITECT**  
 E.J. "BUD" BLACKWELL, AIA, NCARB  
 310 FAIRWOOD CT., FAYETTEVILLE, NC, 28305  
 910-485-8579 bb.BlackwellArchitect@yahoo.com



	AREA	OCCUPANCY RATE	TOTAL OCCUPANCY
<b>BUILDING AREA</b>	4627 S.F.	788 S.F.	
<b>SALES AREA</b>	2488 S.F.	60	42
<b>KITCHEN</b>	788 S.F.	200	4.
<b>COOLERS</b>	754 S.F.	300	3

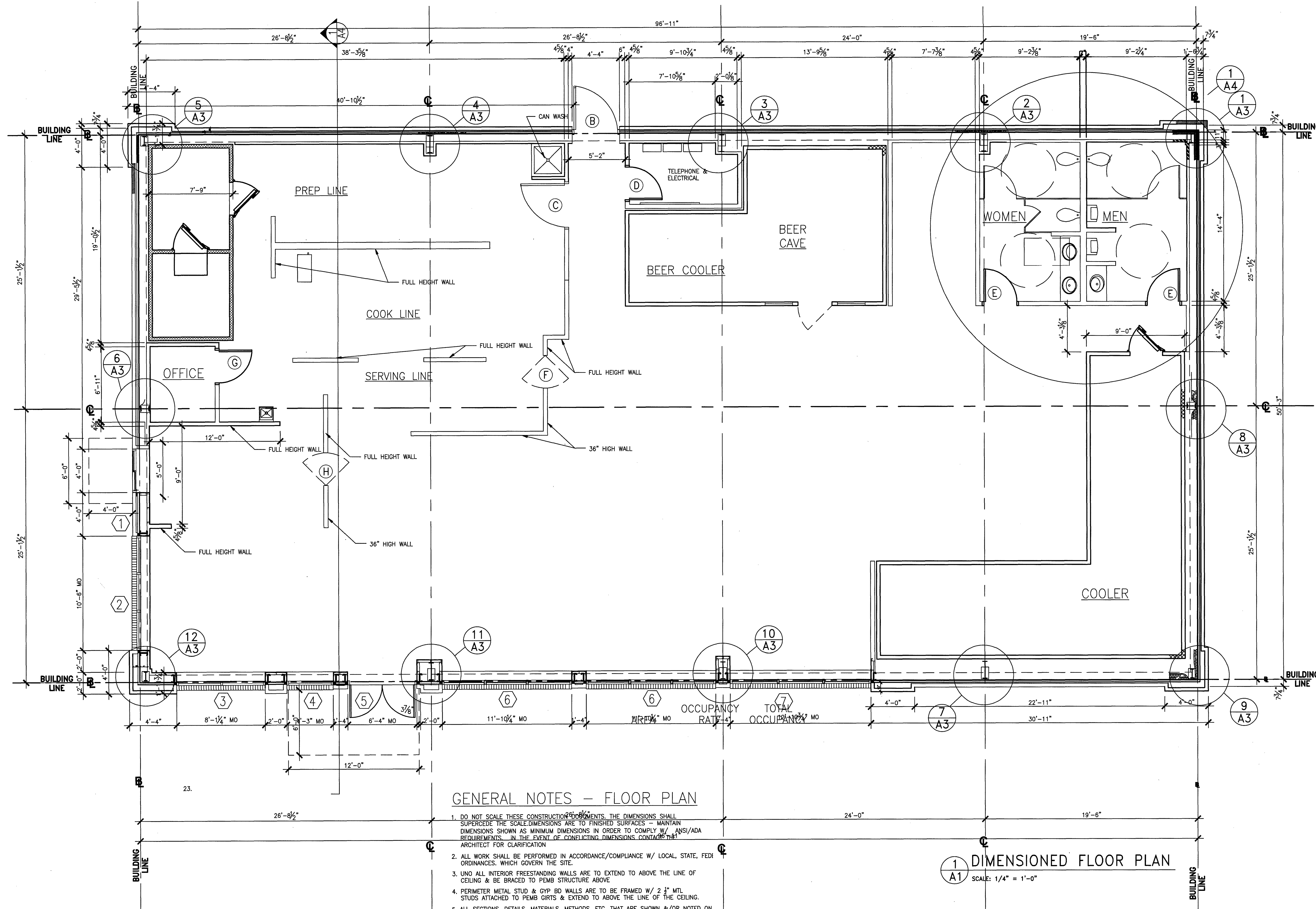
**1 FLOOR/LIFE SAFETY PLAN**  
 A1 SCALE: 1/4" = 1'-0"

**HARNETT CENTRAL CROSSING FOOD MARKET**  
 4853 NC HWY 210 NORTH  
 LILLINGTON, NC 27546

10-23-18

LIFE SAFETY PLAN

**A1**



**GENERAL NOTES - FLOOR PLAN**

1. DO NOT SCALE THESE CONSTRUCTION DOCUMENTS. THE DIMENSIONS SHALL SUPERCEDE THE SCALE. DIMENSIONS ARE TO FINISHED SURFACES - MAINTAIN DIMENSIONS SHOWN AS MINIMUM DIMENSIONS IN ORDER TO COMPLY W/ ANSI/ADA REQUIREMENTS. IN THE EVENT OF CONFLICTING DIMENSIONS CONTACT THE ARCHITECT FOR CLARIFICATION.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE/COMPLIANCE W/ LOCAL, STATE, FEDI ORDINANCES, WHICH GOVERN THE SITE.
3. UNO ALL INTERIOR FREESTANDING WALLS ARE TO EXTEND TO ABOVE THE LINE OF CEILING & BE BRACED TO PEMB STRUCTURE ABOVE.
4. PERIMETER METAL STUD & GYP BD WALLS ARE TO BE FRAMED W/ 2 1/2" MTL STUDS ATTACHED TO PEMB GIRTS & EXTEND TO ABOVE THE LINE OF THE CEILING.
5. ALL SECTIONS, DETAILS, MATERIALS, METHODS, ETC. THAT ARE SHOWN &/OR NOTED ON SECTION, DETAIL OR SCHEDULE SHALL APPLY TO ALL OTHER SIMILAR LOCATIONS UNLESS NOTED OTHERWISE.
6. REFER TO ENGINEERING DRAWINGS BY PRE-ENGINEERED METAL BUILDING SYSTEMS FOR ANCHOR BOLT LOCATIONS, EXTERIOR METAL SIDING & ROOF PANELS.

**1 DIMENSIONED FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

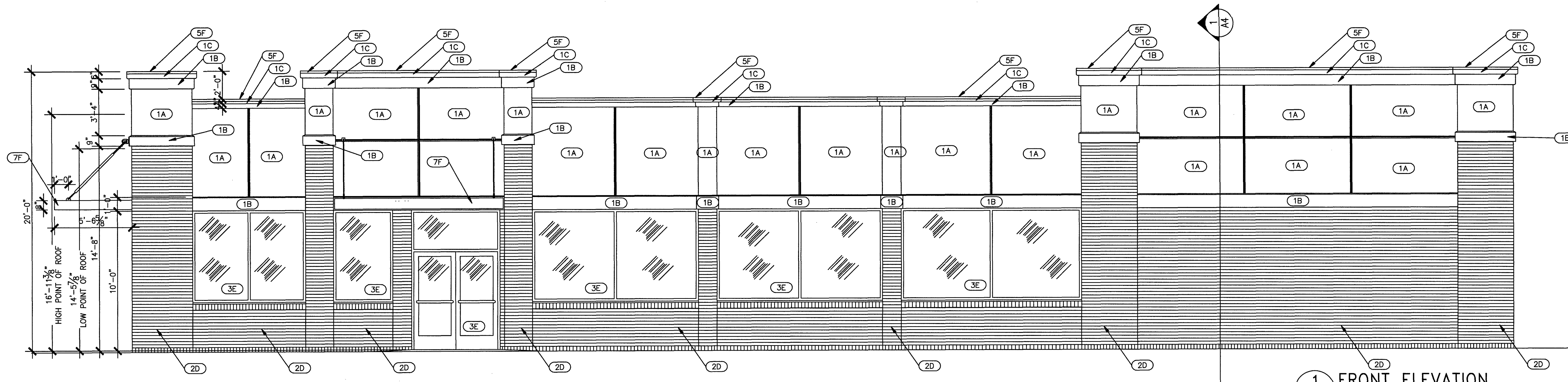
REVISIONS	

**BLACKWELL ARCHITECT**  
 E.J. "BUD" BLACKWELL, AIA, NCARB  
 510 FAIRWOOD CT., FAYETTEVILLE, NC, 28305  
 910-485-8579 bb.BlackwellArchitect@yahoo.com

**HARNETT CENTRAL CROSSING FOOD MARKET**  
 4853 NC HWY 210 NORTH  
 LILLINGTON, NC 27546

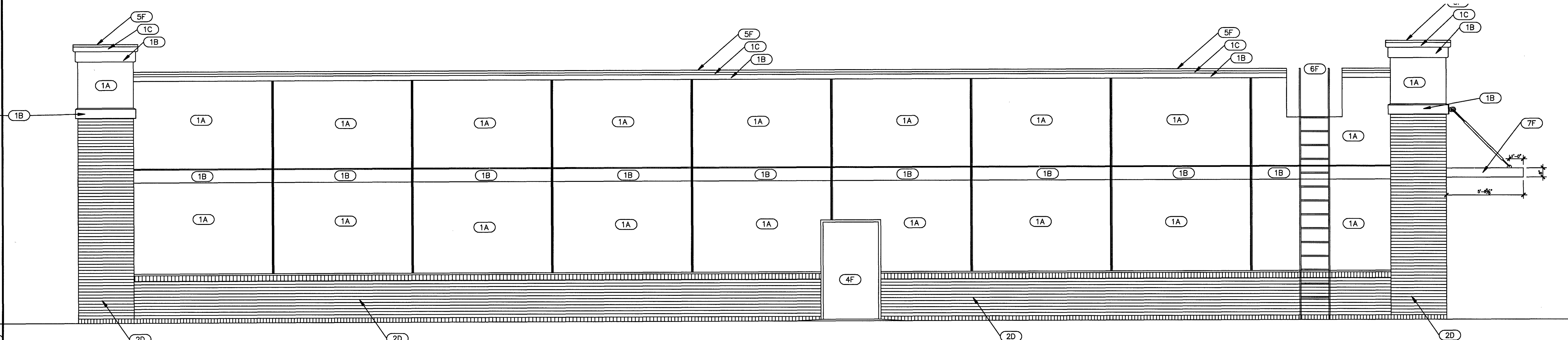
10-23-18  
 DIMENSIONED PLAN

A2

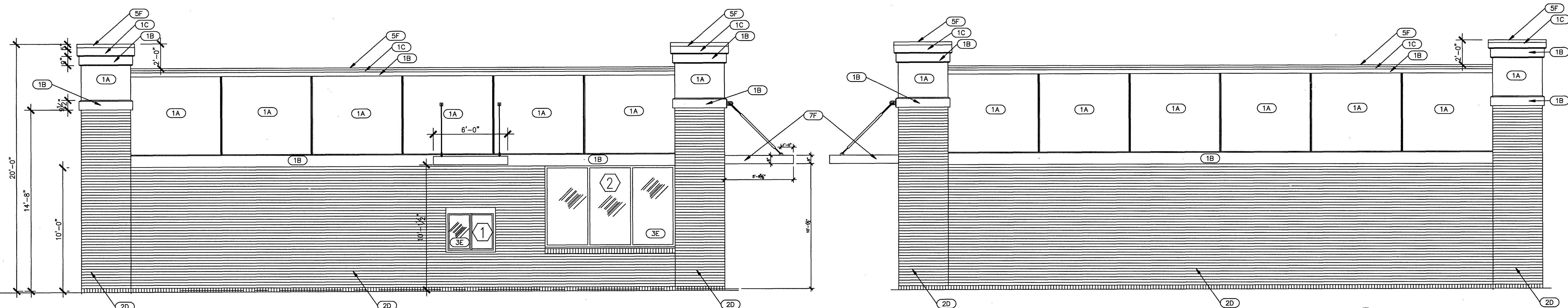


1 FRONT ELEVATION  
A6 SCALE: 1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE	
MATERIAL	COLOR
MATERIAL (CIRCLE) VARIES (DASH)	
1 - EIFS/SYNTHETIC STUCCO - DRYVIT OR EQUAL - 3 COLOR SYSTEM	
2 - FACE BRICK - LEE BRICK	
3 - ALUMINUM STOREFRONT SYSTEM - KAWNEER 450-T	
4 - HOLLOW METAL DOORS & FRAMES	
5 - METAL COPING - KYNAR FINISH	
6 - FERROUS METALS - BOLLARDS, LADDER - EXTERIOR ENAMEL	
7 - CANOPIES - KYNAR	
COLOR	
A - COLOR A - OWNER SELECTION	
B - COLOR B - OWNER SELECTION	
C - COLOR C - OWNER SELECTION	
D - #201 - RED	
E - BRONZE ANODIZED	
F - DARK BRONZE	



2 REAR ELEVATION  
A6 SCALE: 1/4" = 1'-0"



3 SIDE ELEVATION  
A6 SCALE: 1/4" = 1'-0"

4 SIDE ELEVATION  
A6 SCALE: 1/4" = 1'-0"

REVISIONS


BLACKWELL ARCHITECT  
9084  
FAYETTEVILLE, NC  
E.J. "BUD" BLACKWELL, AIA, NCARB  
310 FAIRWOOD CT., FAYETTEVILLE, NC, 28305  
910-485-8579 bb.BlackwellArchitect@yahoo.com

HARNETT CENTRAL CROSSING  
FOOD MARKET  
4853 NC HWY 210 NORTH  
LILLINGTON, NC 27546  
10-23-18  
EXTERIOR ELEVATIONS

A6

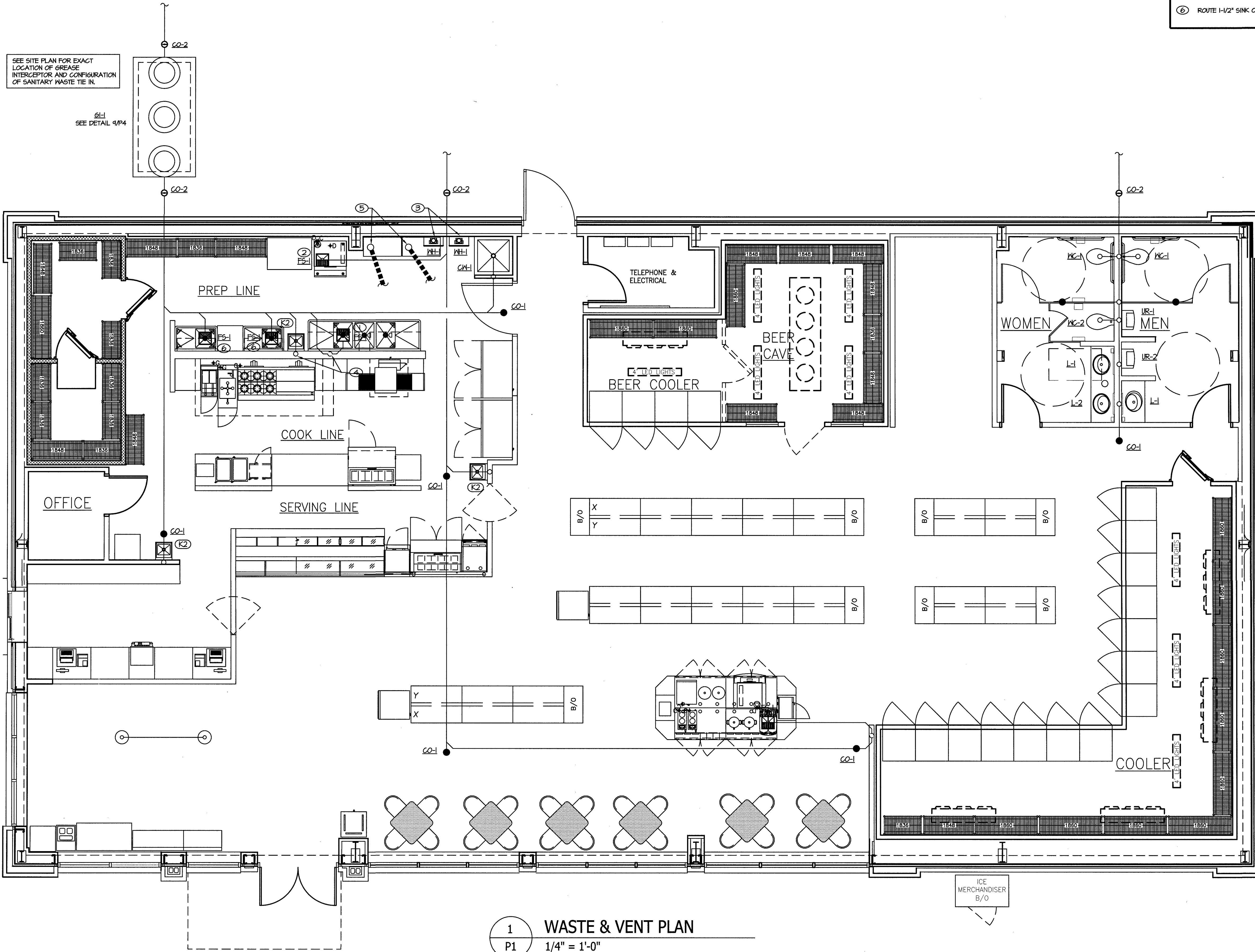


**GENERAL NOTES:**

1. SEE SHEET P1 FOR ALL GENERAL NOTES.
2. SEE DETAIL 10/P4 FOR RTU CONDENSATE TERMINATION.

**CONSTRUCTION NOTES:**

- ① INTERCONNECT 1-1/2" SINK COMPARTMENT DRAINS AND ROUTE TO FLOOR SINK. TERMINATE WITH 2" AIR GAP (MIN).
- ② ROUTE EQUIPMENT DRAIN(S) DOWN TO DRAIN. PROVIDE AIR GAP TWICE THE DIAMETER OF THE DRAIN PIPE.
- ③ ROUTE INDIVIDUALLY WATER HEATER T&P RELIEF VALVE DRAINS TO EXTERIOR. TERMINATE WITH AIR GAP TWICE THE DIAMETER OF THE DRAIN PIPE.
- ④ P.C. SHALL PROVIDE CAST IRON PIPING IN WALL BEHIND KITCHEN HOOD.
- ⑤ P.C. SHALL PROVIDE SYRUP BUNDLE FROM DRINK SYSTEM, EXTEND TO DRINK MACHINE. VERIFY WITH OWNER FOR EXACT LOCATIONS. P.C. SHALL USE SCHEDULE 40 DWV P.V.G. & FITTINGS FOR SYRUP BUNDLE.
- ⑥ ROUTE 1-1/2" SINK COMPARTMENT DRAINS TO FLOOR SINK. TERMINATE WITH 2" AIR GAP (MIN).



SEE SITE PLAN FOR EXACT LOCATION OF GREASE INTERCEPTOR AND CONFIGURATION OF SANITARY WASTE TIE IN.

9/1-1  
SEE DETAIL 4/P4

**1**  
P1  
**WASTE & VENT PLAN**  
1/4" = 1'-0"

REVISIONS

NO.	DESCRIPTION

**BLACKWELL ARCHITECT**  
E.J. 'BUD' BLACKWELL, AIA, NCARB  
310 FAIRWOOD COURT, FAYETTEVILLE, NC 28305  
PHONE: 910.485.8579

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10101 W. HUNTER CREEK RD.  
FAYETTEVILLE, NC 27324  
PH: 919.896.4399  
WWW.FINISHLINEENGINEERING.COM  
NC BOARD OF EXAMINERS LICENSE NUMBER: P-6003

**HARNETT CENTRAL CROSSING FOOD MART**  
4863 NC 210 NORTH  
LILLINGTON, NC 27546

**PLUMBING WASTE & VENT PLANS**

**P1**

KITCHEN EQUIPMENT SCHEDULE		
MARK	DESCRIPTION (PROVIDED BY KITCHEN CONTRACTOR)	REMARKS
K1	3-COMPARTMENT SINK	PROVIDE 3/4" x 14" x 40" x 14" AT 30 1/2" AFF. PROVIDE MCGUIRE 16T SUPPLIES. PROVIDE TRIM FOR SINK TO DRAIN INTO FLOOR SINK. ALL PIPING ABOVE SLAB SHALL BE CHROME PLATED BRASS.
K2	HAND SINK	PROVIDE 3/4" x 14" x 14" AT 30 1/2" AFF. PROVIDE MCGUIRE 16T SUPPLIES. ALL PIPING ABOVE SLAB SHALL BE CHROME PLATED BRASS.
K3	1-COMPARTMENT SINK	PROVIDE 3/4" x 14" x 40" x 14" AT 28 1/2" A.F.F. PROVIDE 27" x 14" A.F.F. PROVIDE MCGUIRE 16T SUPPLIES. PROVIDE TRIM TO DRAIN INTO FLOOR SINK.
K4	UNDERCOUNTER DISHWASHER	PROVIDE 3/4" x 14" x 40" x 14" AT 30 1/2" AFF. PROVIDE MCGUIRE 16T SUPPLIES. PROVIDE TRIM FOR SINK TO DRAIN INTO FLOOR SINK. ALL PIPING ABOVE SLAB SHALL BE CHROME PLATED BRASS.
K5	FRYERS	PROVIDE 1" GAS FROM GAS PIPING MANIFOLD TO EQMT. PROVIDE ISOLATION VALVE & UNION.
K6	FRYERS	PROVIDE 1" GAS FROM GAS PIPING MANIFOLD TO EQMT. PROVIDE ISOLATION VALVE & UNION.
K7	RANGE	PROVIDE 1 1/2" GAS FROM GAS PIPING MANIFOLD TO EQMT. PROVIDE ISOLATION VALVE & UNION.
K8	ICE MACHINE	PROVIDE 3/4" x 14" AT 48" AFF. PROVIDE WATER FILTER & BACKFLOW PREVENTER. PROVIDE TRIM TO DRAIN INTO FLOOR SINK.

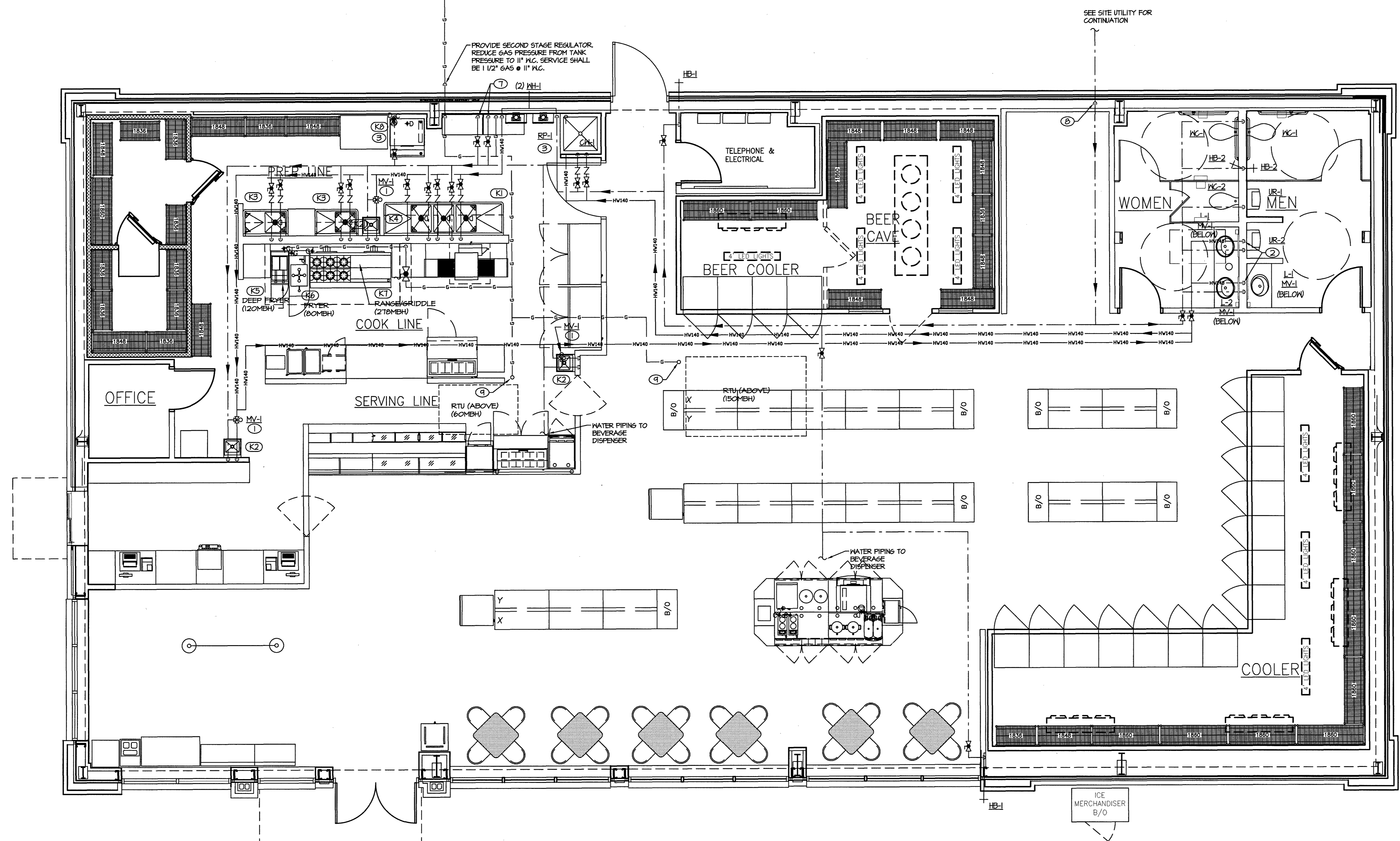
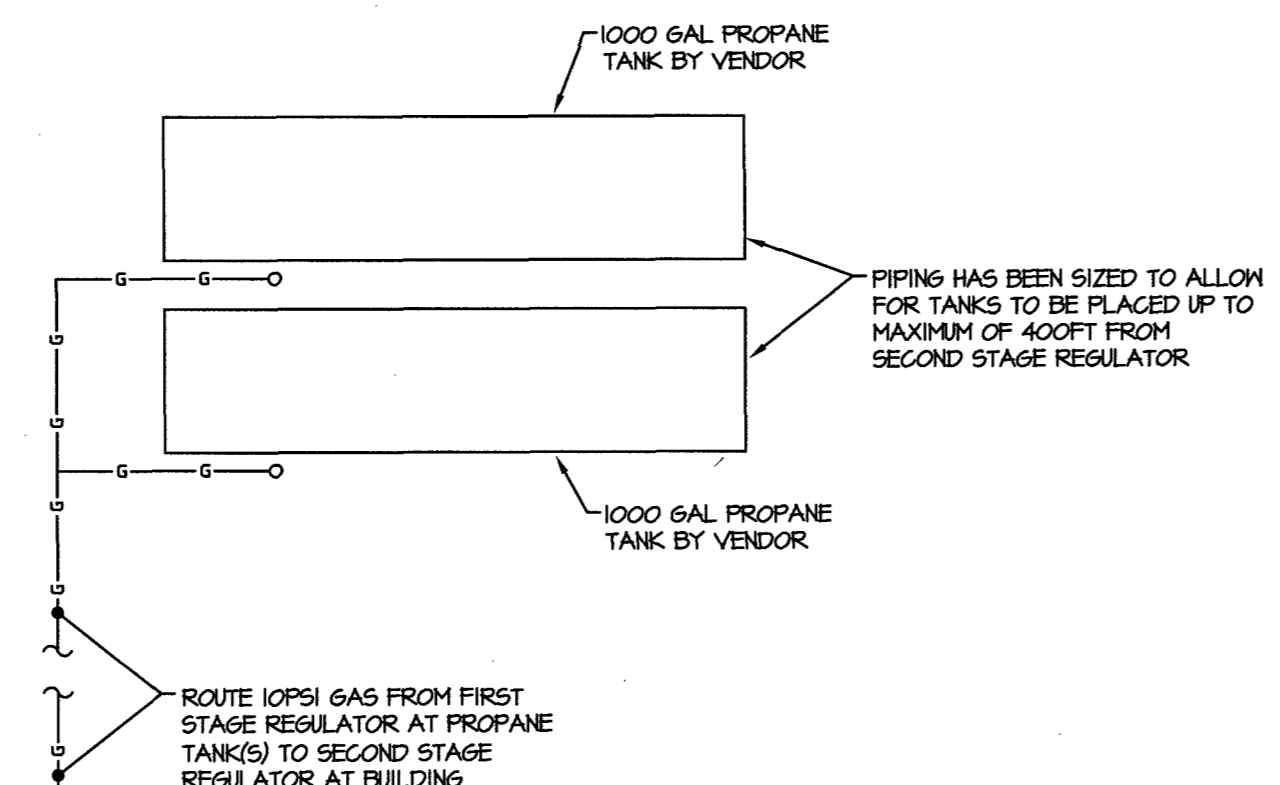
- NOTE:
- ALL KITCHEN EQUIPMENT IS FURNISHED AND INSTALLED BY OTHERS.
  - ALL ROUGH-IN, MISCELLANEOUS TRIM, AND ALL FINAL CONNECTIONS SHALL BE BY DIVISION 22 CONTRACTOR.

### GENERAL NOTES:

- SEE SHEET P1 FOR ALL GENERAL NOTES.
- DUCTWORK, CONDUIT AND PIPING SHALL BE INSTALLED BETWEEN TRUSSES OR THROUGH TRUSSES IN CEILING SHIPPING ROOM AS SHOWN WITH ALL ITEMS LOCATED ABOVE THE BOTTOM OF STRUCTURE UNLESS OTHERWISE NOTED ON PLAN.
- P.C. SHALL PROVIDE ASSE 1022 BACKFLOW PREVENTER FOR EACH PIECE OF SPECIALTY EQUIPMENT. P.C. SHALL VERIFY EXACT EQUIPMENT.

### PLAN NOTES:

- P.C. SHALL INSTALL MIXING VALVE ABOVE CEILING IN ACCESSIBLE LOCATION. SET MIXING VALVE AT 110 DEG. F (MAX). SEE DETAIL 3/P5.
- P.C. SHALL INSTALL MIXING VALVE BELOW LAVATORY. SET MIXING VALVE AT 110 DEG. F (MAX). SEE DETAIL 4/P5.
- LOCATE HOT WATER REGULATION PUMP ABOVE CEILING.
- PROVIDE GAS SOLENOID VALVE FOR GAS EQUIPMENT LOCATED BELOW KITCHEN HOOD. PROVIDE GAS PIPING MANIFOLD EXPOSED BEHIND EQUIPMENT. PROVIDE UNION, GAS PRESSURE REGULATOR, ISOLATION VALVE, AND DIRT LEG AT EQUIPMENT CONNECTION.
- GAS PIPING UP TO RTU ABOVE. FIELD VERIFY EXACT LOCATION OF GAS CONNECTION ON RTU BEFORE PENETRATING ROOF. ROOF PENETRATION SHALL BE AS CLOSE AS POSSIBLE TO RTU GAS CONNECTION. PROVIDE UNION, GAS PRESSURE REGULATOR, ISOLATION VALVE, AND DIRT LEG AT EQUIPMENT CONNECTION.
- PROVIDE MATTS MODEL SD-2, ASSE 1010, BACKFLOW PREVENTER ON SUPPLY PIPING FOR ICE MACHINE.
- CH TO BAGS'BOX. VERIFY LOCATION WITH OWNER FOR FINAL CONNECTION.
- 1 1/2" CH SERVICE UP FROM BELOW SLAB TO ABOVE CEILING.
- GAS PIPING UP THRU ROOF TO ROOF TOP UNIT. PROVIDE ISOLATION VALVE, 6" DIRT LEG, & UNION AT EQUIPMENT CONNECTION.



1 WATER & GAS PLAN  
P2 1/4" = 1'-0"

REVISIONS

**BLACKWELL ARCHITECT**  
E.J. "BUD" BLACKWELL, AIA, NCARB  
310 FAIRWOOD COURT FAYETTEVILLE, NC 28305  
PHONE: 910.485.8579

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P.O. BOX 98802  
Raleigh, NC 27616-0802  
TEL: 919.876.4389  
FAX: 919.876.4399  
NC BOARD OF EXAMINERS LICENSE NUMBER: P-6003

HARNETT CENTRAL CROSSING  
FOOD MART  
4863 NC 210 NORTH  
LILLINGTON, NC 27546

PLUMBING  
WATER & GAS PLANS

P2

PLUMBING GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR. CONTRACTOR SHALL INSTALL SYSTEMS, EQUIPMENT & COMPONENTS IN ACCORDANCE WITH MINIMUM REQUIREMENTS SHOWN IN THESE PLANS. ANY DEVIATION FROM THE DESIGN PLANS SHALL ONLY BE PERFORMED IF APPROVED BY THE OWNER REPRESENTATIVE OR DESIGN ENGINEER. ALL WORK SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS. HOWEVER, ANY DEVIATION FROM THE DESIGN PLANS IMPLIED BY LOCAL CODES THAT SUGGESTS INSTALLATION OF LESS THAN THE REQUIREMENTS SPECIFIED IN THESE DESIGN PLANS SHALL NOT BE ALLOWED WITHOUT APPROVAL BY THE OWNER REPRESENTATIVE OR THE DESIGN ENGINEER.
2. IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO INSURE THAT ITEMS TO BE FURNISHED UNDER PLUMBING CONTRACT WILL FIT THE SPACE AVAILABLE. PLUMBING CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
3. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR WATER, VENT, AND WASTE SYSTEM TESTS, PER LOCAL CODE REQUIREMENTS. ALL HVAC AND EXHAUST SYSTEMS MUST BE RUNNING WHILE THESE WASTE/VENT TESTS ARE BEING PERFORMED. A CERTIFICATE WILL BE REQUIRED FROM THE PLUMBING CONTRACTOR CERTIFYING COMPLIANCE AND ACCEPTANCE OF THESE TESTS.
4. INSTALL ALL PLUMBING FIXTURES TO BE FULLY ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990. FIXTURES AND THEIR INSTALLATION SHALL ALSO COMPLY WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATION A117.1 - PROVIDING ACCESSIBILITY AND USABILITY FOR PHYSICALLY HANDICAPPED PEOPLE AND/OR GOVERNING CODES. ALL PLUMBING FIXTURES EQUIPMENT, TRIM, & FITTINGS SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES.
5. THE SCHEDULED AND/OR SPECIFIED PLUMBING FIXTURES AND EQUIPMENT REPRESENT THE MINIMUM CRITERIA AND SHALL BE THE BASIS FOR THE CONTRACTOR'S BASE BID. IF THE SCHEDULED OR SPECIFIED FIXTURES OR EQUIPMENT DO NOT COMPLY WITH GOVERNING CODES OR REGULATIONS IN ALL RESPECTS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR COMPLYING FIXTURES, EQUIPMENT, TRIM, OR FITTINGS. THE ABSENCE OF AN ALTERNATE BID SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR'S BID INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS & CODES.
6. GENERAL CONTRACTOR SHALL PROVIDE ALL OPENINGS IN WALLS, FLOORS, AND ROOF WITH EACH CONTRACTOR BE RESPONSIBLE FOR VERIFYING LOCATION AND SIZES OF ALL OPENINGS REQUIRED UNDER HIS CONTRACT, UNLESS NOTED OTHERWISE ON THE PLANS.
7. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO KITCHEN EQUIPMENT THAT REQUIRE A WATER AND/OR WASTE CONNECTIONS, ALONG WITH ALL PIPE, VALVES, WATER HAMMER ARRESTORS, PRESSURE REGULATORS, ETC., REQUIRED FOR A COMPLETE INSTALLATION.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR APPROVED FLOOR PLAN AND DIMENSIONS. DO NOT SCALE PLUMBING DRAWINGS.
9. ANY DEVIATIONS FROM SPECIFIED PLUMBING FIXTURES AND LISTED IN FIXTURE SCHEDULE SHALL OBTAIN PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE.

EXISTING CONDITIONS

- 10. EXISTING WASTE/VENT AND WATER SUPPLY LINES AND FIXTURES ARE SHOWN IN APPROXIMATE LOCATION. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND SIZES BEFORE INSTALLATION OF ANY NEW EQUIPMENT. MAKE NECESSARY ADJUSTMENTS AS REQUIRED.

COORDINATION

- 11. IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO ENSURE THAT ITEMS TO BE FURNISHED UNDER PLUMBING CONTRACT WILL FIT THE SPACE AVAILABLE. PLUMBING CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

- 12. PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL PRIME CONTRACTORS PRIOR TO INSTALLATION OF HIS WORK.
13. MECHANICAL DUCTWORK SHALL HAVE RIGHT-OF-WAY OVER ALL PLUMBING PIPES AND ELECTRICAL CONDUITS.
14. PLUMBING CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SHEETS.

INSTALLATION

- 15. ALL PLUMBING LINES ARE TO BE RECESSED WITHIN THE WALL CAVITIES UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS.
16. ALL PLUMBING FIXTURES SHALL BE NEATLY CAULKED WITH SILICONE COMPOUND WHERE FIXTURE MEETS WALL.
17. ALL PIPES PASSING THROUGH FLOOR SLAB OR WALLS SHALL BE INSTALLED WITH FOAM RUBBER INSULATION.
18. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL A BACKFLOW PREVENTER OR VACUUM BREAKER AT ALL FIXTURE CONNECTIONS AND AS REQUIRED BY LOCAL CODES AT ANY POINT WHERE THERE IS DANGER OF NON-POTABLE WATER COMING IN CONTACT WITH THE POTABLE WATER SYSTEM OR ANY DANGER OF BACKFLOW. COORDINATE WITH LOCAL INSPECTOR.
19. WHERE TUBING PASSES BEHIND STUCCO, PLASTER OR AREAS WHERE STAPLES ARE USED, IT SHALL BE PROTECTED BY CONTINUOUS SLEEVE OR APPROVED SHIELD THAT IS TWICE THE DIAMETER OF THE TUBING BEING PROTECTED.
20. PLUMBING CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR APPROVED FLOOR PLAN AND DIMENSIONS. DO NOT SCALE PLUMBING DRAWINGS.

DRY PIPING

- 21. INSTALL ALL THREADED CLEANOUT PLUGS WITH PIPE DOPE TO ALLOW EASY REMOVAL IN THE FUTURE.
22. ALL INDIRECT WASTE LINES SHALL HAVE A MINIMUM OF 2" AIR GAP OR TWICE THE EFFECTIVE DRAIN DIAMETER (WHICH EVER IS LARGER) WHERE IT TERMINATES AT THE RECEPTOR.
23. ALL HUB/FLOOR/TRENCH DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH DEEP SEAL TRAPS.
24. SET TOP RIM OF ALL IN-FLOOR FIXTURES (DRAINS, FLOOR SINKS, CLEAN-OUTS, ETC.) FLUSH WITH FINISHED FLOOR UNLESS DRAWINGS EXPLICITLY SPECIFY OTHERWISE.
25. CLEANOUTS LOCATED IN TRAFFIC-BEARING AREAS SHALL BE INSTALLED WITH A VEHICLE TRAFFIC BEARING BOX. THE BOX SHALL BE SET IN CONCRETE SLAB, EXTENDING AT LEAST 12" FROM THE PERIMETER OF THE CLEANOUT. THE SLAB SHALL BE NOT LESS THAN 6" THICK. THE CONCRETE SHALL BE NOT LESS THAN 2500 PSI.

WATER PIPING

- 26. PLUMBING CONTRACTOR SHALL INSTALL SHOCK ABSORBERS/WATER HAMMER ARRESTORS TO MEET ALL STATE AND LOCAL CODE REQUIREMENTS.
27. PLUMBING CONTRACTOR SHALL INSTALL WATER SUPPLY PIPES SO THAT NO PIPE JOINTS ARE UNDER FLOOR SLAB- ALL JOINTS WILL BE ABOVE THE FLOOR IN ACCESSIBLE WALLS.
28. ALL NEW HOT AND COLD WATER PIPING IN WALLS, ABOVE CEILINGS, AND EXPOSED SHALL BE INSULATED WITH AN INSULATION HAVING A MAXIMUM K FACTOR OF 0.21, THICK CLOSED CELL PLASTIC TYPE INSULATION SIMILAR TO JOHNS-MANVILLE "AEROTUBE". INSULATE FITTINGS CONTINUOUSLY, BUT DO NOT INSULATE VALVE BODIES, NOR FIXTURE SUPPLIES.
a. LONGITUDINAL SEAMS SHALL BE SEALED.
b. LATERAL SEAMS (BUTT JOINTS) SHALL BE SEALED ON COLD WATER PIPES ONLY.
c. THICKNESS SHALL BE 3/4" FOR COLD WATER PIPES UP TO 1-1/4" AND 1" FOR COLD WATER PIPES 1-1/2" dia. AND GREATER.
d. THICKNESS SHALL BE 1" MIN. FOR ALL HOT WATER PIPES.
P.C. SHALL INSTALL ALL DOMESTIC HOT AND COLD WATER PIPING LOCATED IN EXTERIOR WALLS AND CEILING ON HEATED SIDE OF THE INSULATION.
P.C. SHALL CLOSELY COORDINATE PIPING INSTALLATION WITH GENERAL CONTRACTOR AND VERIFY NO BUILDING INSULATION IS COMPROMISED IN EXTERIOR WALLS.

- 29. HOT AND COLD WATER PIPING ABOVE GROUND SHALL BE TYPE "M" HARD DRAWN COPPER TUBING ASSEMBLED WITH THROUGH SWEAT FITTINGS. BRANCH PIPING MAY BE CROSS-LINKED POLYETHYLENE (PEX-C) TUBING AND ASTM F-1960 COLD EXPANSION FITTINGS. ALL WATER PIPING BELOW GRADE OR BELOW CONCRETE SLAB SHALL BE TYPE "L" COPPER TUBING. JOINTS IN COPPER TUBING SHALL BE WITH SILVER SOLDER SIMILAR OR EQUAL TO SIL-PHOS.

- 30. ALL VALVES SHALL BE SAME SIZE AS PIPING SERVED (MIN)

GAS PIPING

- 31. PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL GAS PIPING AS SHOWN ON PLANS. ALL GAS PIPING SHALL COMPLY WITH LOCAL CODES. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL GAS EQUIPMENT. INSTALL REGULATORS AT EQUIPMENT WHERE REQUIRED BY MANUFACTURER OR CUTS SUPPLIED BY FURNISHING CONTRACTOR.

PLUMBING FIXTURE SCHEDULE

Table with 2 columns: MARK, PLUMBING FIXTURE SCHEDULE. Rows include: CO-1 FLOOR CLEANOUT, CO-2 EXTERIOR CLEANOUT, FD-1 FLOOR DRAIN, FS-1 FLOOR SINK, GI-1 GREASE INTERCEPTOR, HB-1 EXTERIOR HOSE BIBB, HB-2 INTERIOR HOSE BIBB, L-1 LAVATORY, WASH, CAN WASH, and various equipment details.

PLUMBING FIXTURE SCHEDULE

Table with 2 columns: MARK, PLUMBING FIXTURE SCHEDULE. Rows include: MV-1 MIXING VALVE, RP-1 HOT WATER RECIRCULATION PUMP & ACCESSORIES, UR-1 URINAL, UR-2 URINAL, WC-1 WATER CLOSET, WC-2 WATER CLOSET, and WH-1 INTERIOR GAS WATER HEATER.

LEGEND

Legend table with columns: LINE TYPE, SYMBOLS, DESCRIPTION, ABBREVIATION. Includes symbols for waste piping, vent piping, cold water piping, hot water piping, gas piping, condensate piping, floor clean-out, exterior cleanout, wall cleanout, hub drain, floor drain, floor sink, trench drain, vent thru roof, ball valve, check valve, gas cock, gas pressure regulator, and union.

WATER HEATER SIZING CALCULATION

Tankless Water Heater Sizing Calculator form. Includes facility name (Lillington Convenient Store), address, and a table of equipment with quantities and GPM calculated. Total Gallons per Minute (GPM) Needed: 10.94.

BUILDING SUMMARY

Building Summary table showing Grease Waste (FU) 21.0, Sanitary Waste (FU) 40.0, Domestic Water (FU) Demand (GPM) 67.5, Demand (GPM) 32.44, and Max. Gas Demand (MBH) for Kitchen (0.00), Heating (200.00), Water Heater (210.00), and Total (199.00).

GAS DEMAND AND NOTES

Table with columns: DEMAND (MBH), ITEM, IND. DEMAND. Includes items like 6 Burner Gas Range & Oven (278.00), Gas Deep Fryer (80.00), Subtotal Kitchen (200.00), Subtotal Heating (210.00), and Total Demand (609.00).

- 1. ALL VALVES SHALL BE SAME SIZE AS PIPING SERVED (MIN).
2. ALL GAS PIPE SIZES BASED ON NATURAL GAS: 1" I.C., 0.5 PSI (MAX.), 0.6 SPECIFIC GRAVITY, AND 0.5" I.C. PRESSURE DROP/100 FT. MAX. LENGTH IF GAS SERVICE VARIES FROM DESIGN. PLUMBING CONTRACTOR SHALL RESIZE PIPING BASED ON SERVICE AVAILABLE. P.C. SHALL VERIFY THAT GAS SYSTEM PRESSURE DOES NOT EXCEED ALLOWABLE LIMITS OF GAS UTILIZATION EQUIPMENT.
3. SEE SHEET P4 FOR GAS PIPING PLAN.
4. CONTRACTOR SHALL RUN FULL 2 1/2" DIAMETER PIPE FROM GAS METER. ANY REDUCTION ON SIZE WILL NOT BE ACCEPTABLE.

PLUMBING FIXTURE UNIT SCHEDULE

DRAINAGE

Drainage table with columns: ITEM, #, IND. F.U., TOT. F.U. Includes Grease Drainage (21.0), Sanitary Drainage (12.0), and Subtotal S.S. (40.0).

WATER SUPPLY

Water Supply table with columns: ITEM, #, IND. F.U., TOT. F.U. Includes Water Closet Flush Tank (15.00), Urinal (10.00), Lavatory (8.00), Hand Sink (6.00), Mop Sink (4.00), Area Floor Drain (0.00), Indirect Receptor FS/HD (0.00), Area Trench Drain (0.00), Subtotal Grease (21.0), and Subtotal S.S. (40.0).

REVISIONS

Revisions table with columns for revision number, description, and date.

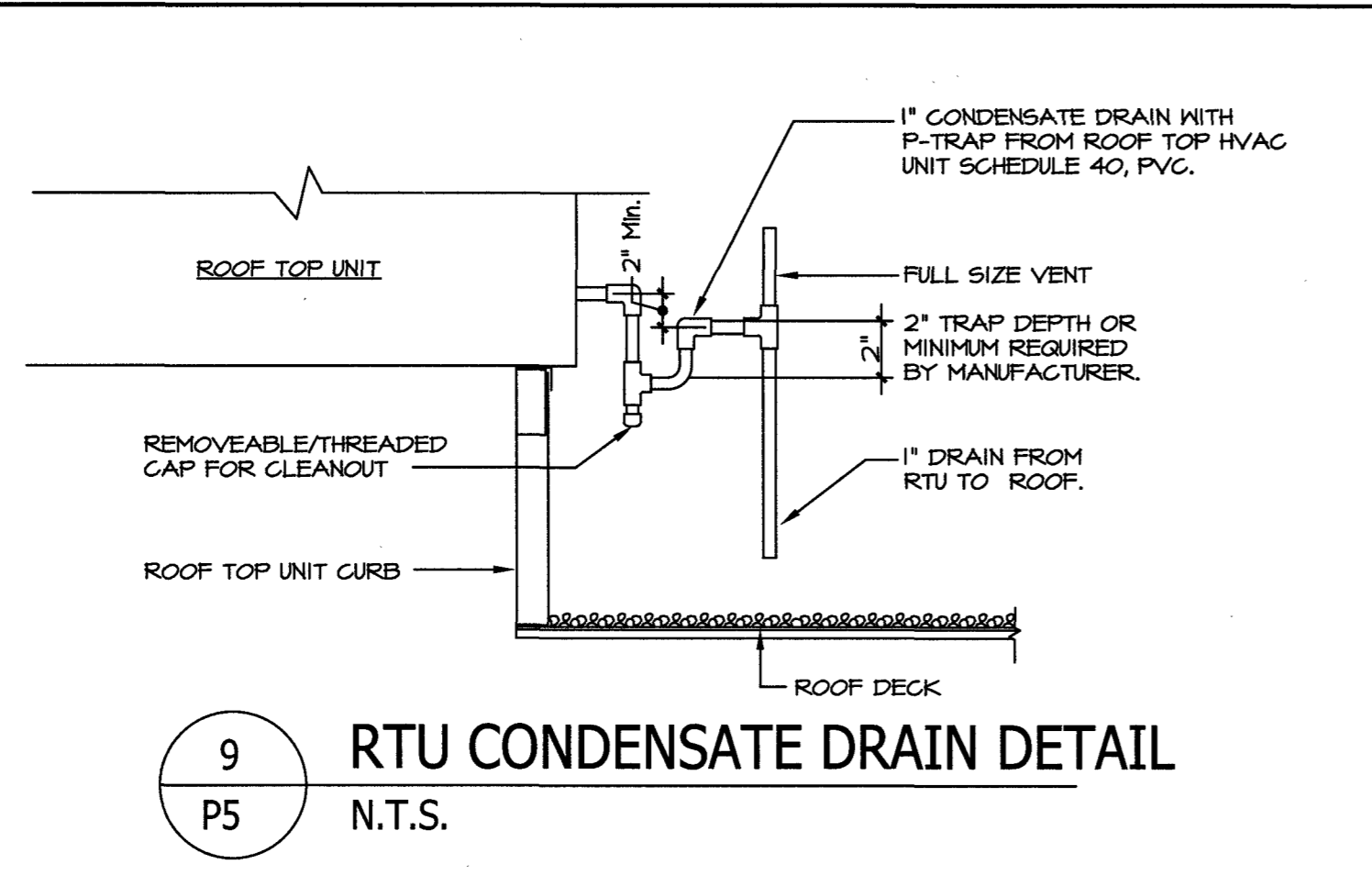
BLACKWELL ARCHITECT
E.J. 'BUJ' BLACKWELL, AIA, NCARB
310 FAIRWOOD COURT FAYETTEVILLE, NC 28305
PHONE: 910.485.8579

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RALEIGH, NC 27624
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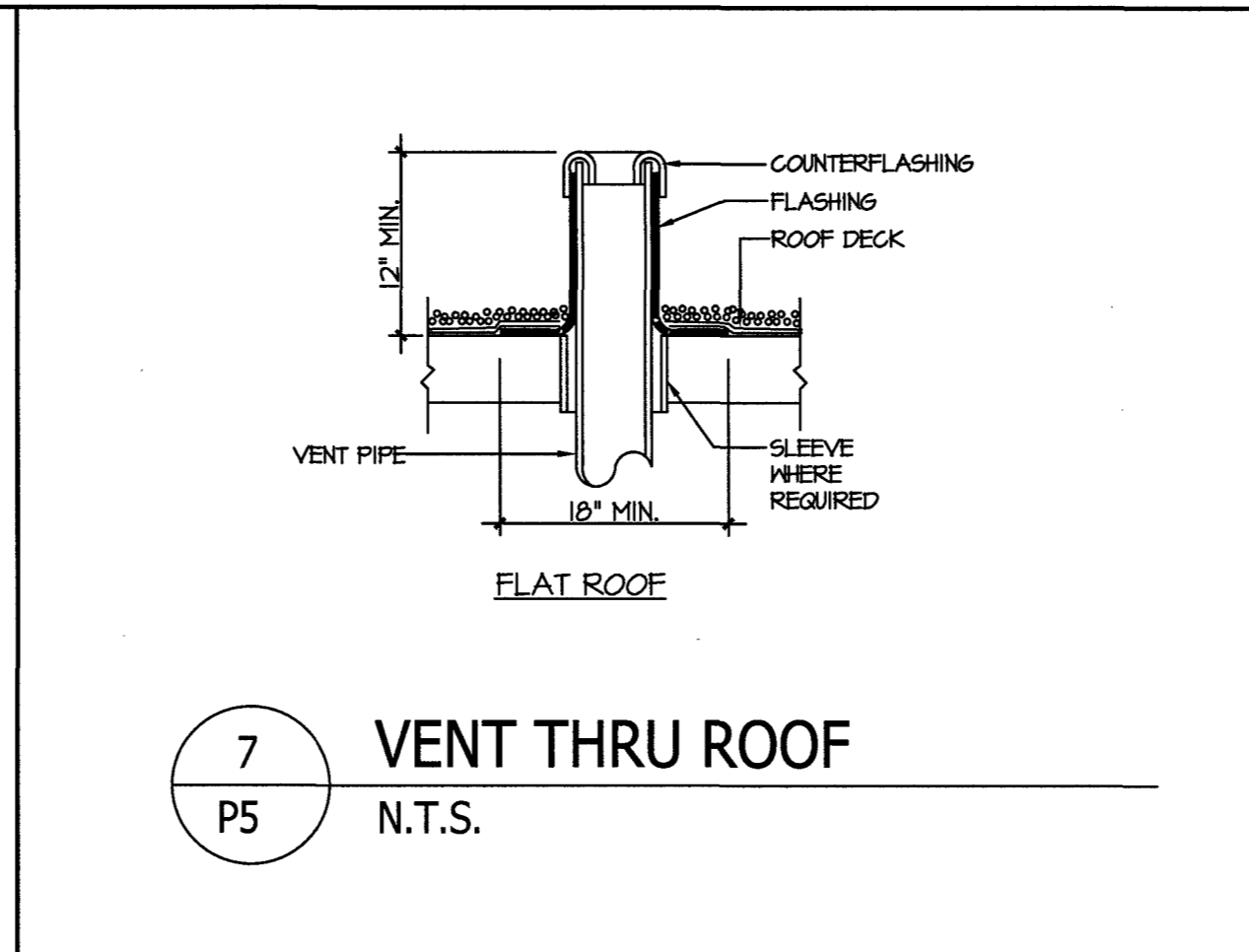
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PLUMBING INFORMATION SHEET

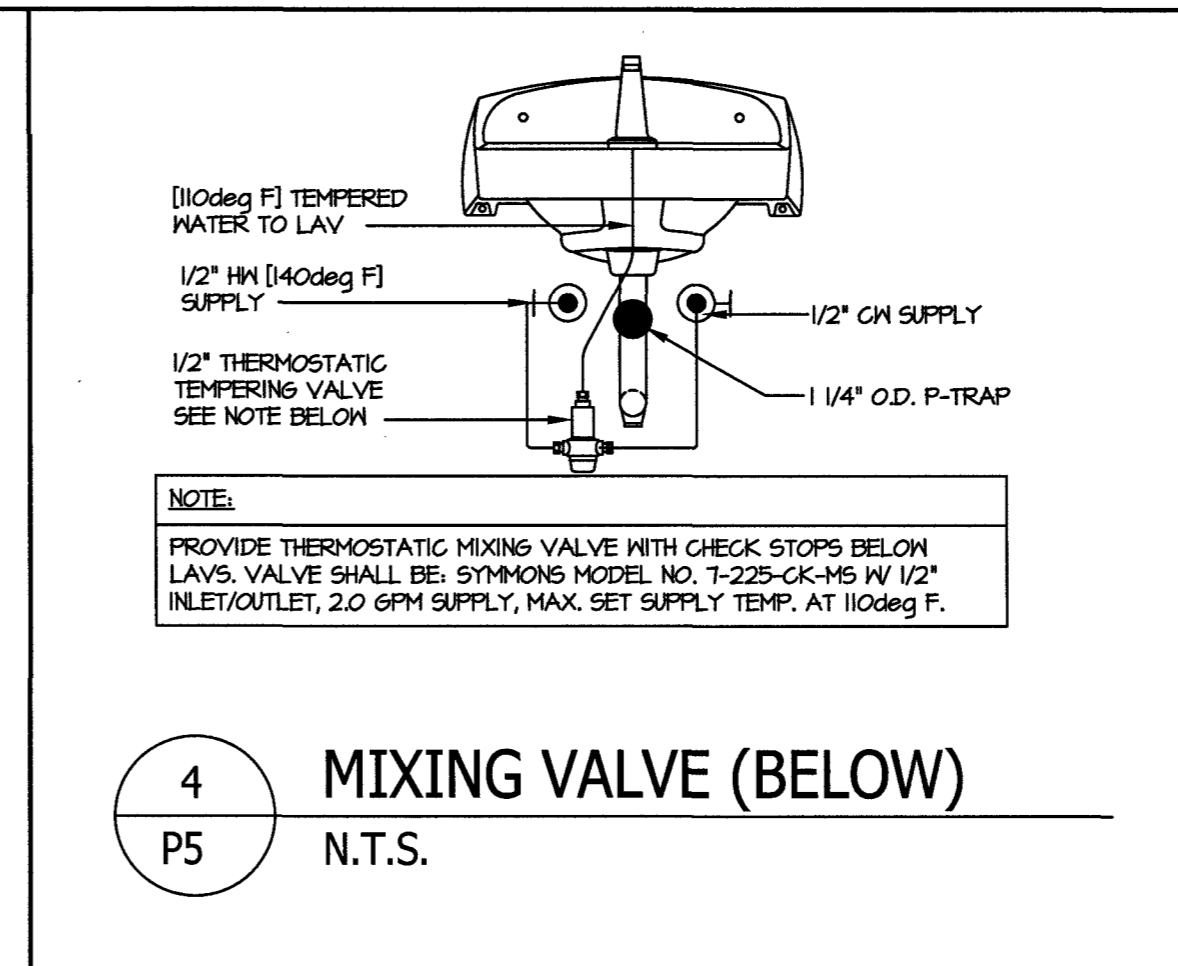
P4



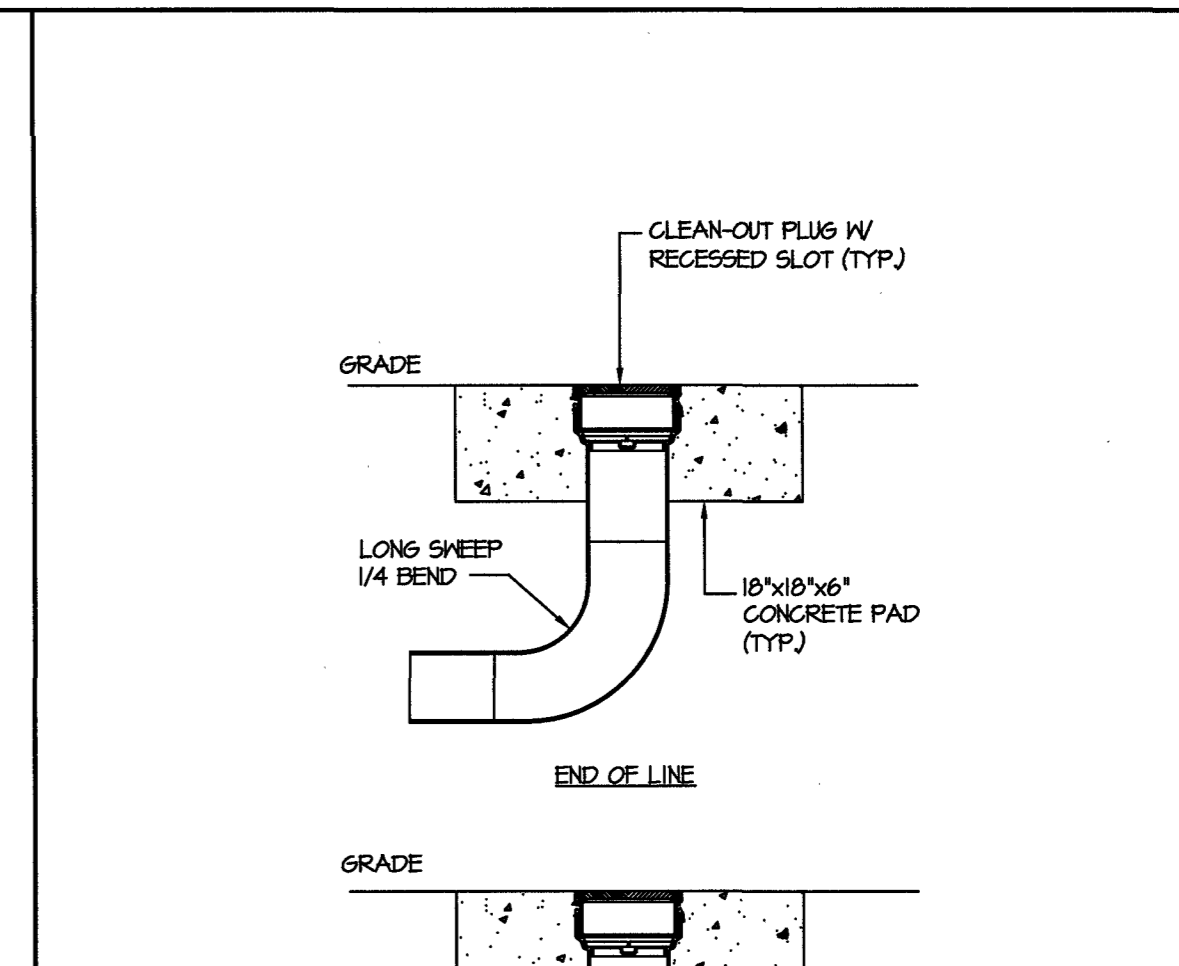
9 RTU CONDENSATE DRAIN DETAIL  
P5 N.T.S.



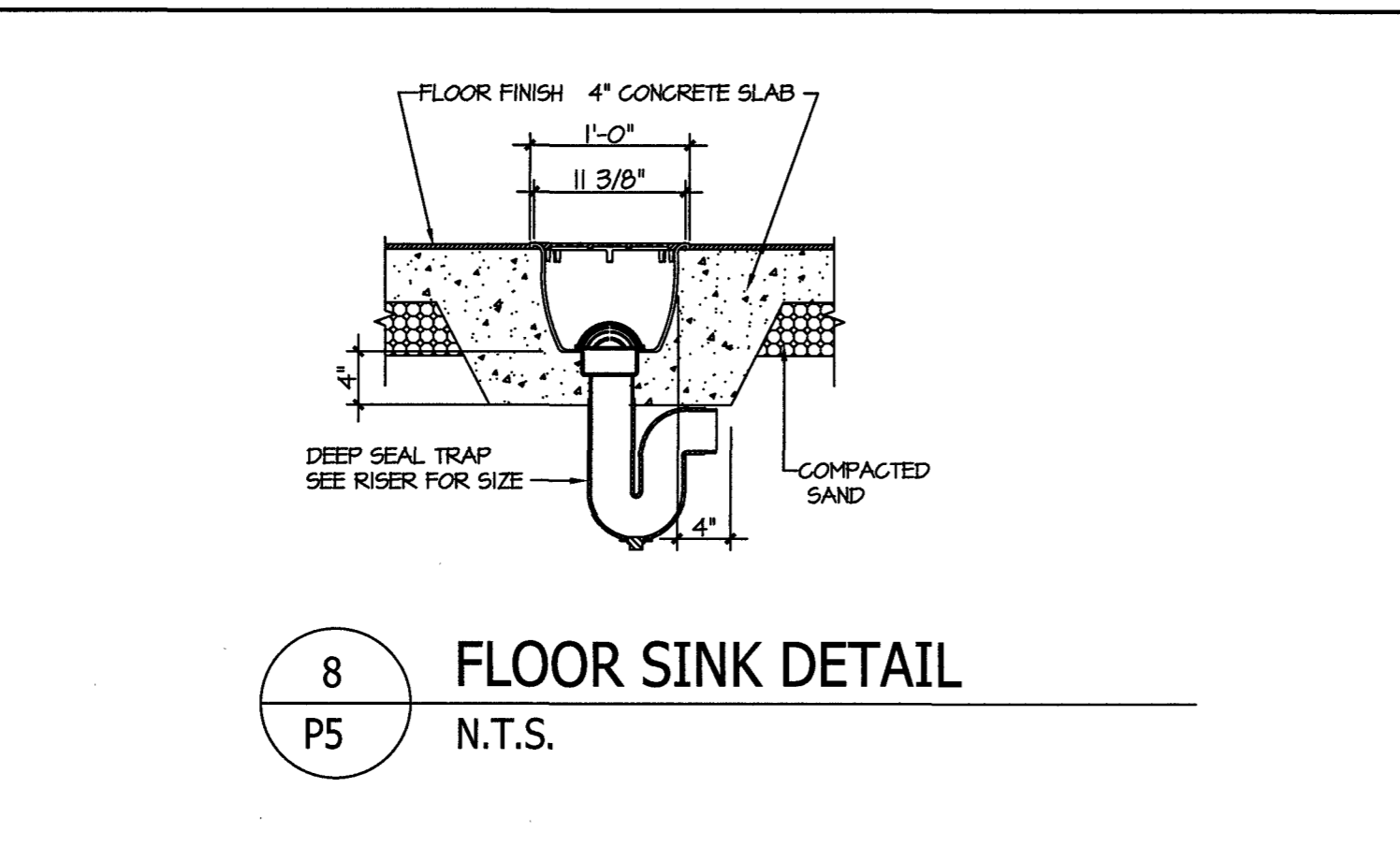
7 VENT THRU ROOF  
P5 N.T.S.



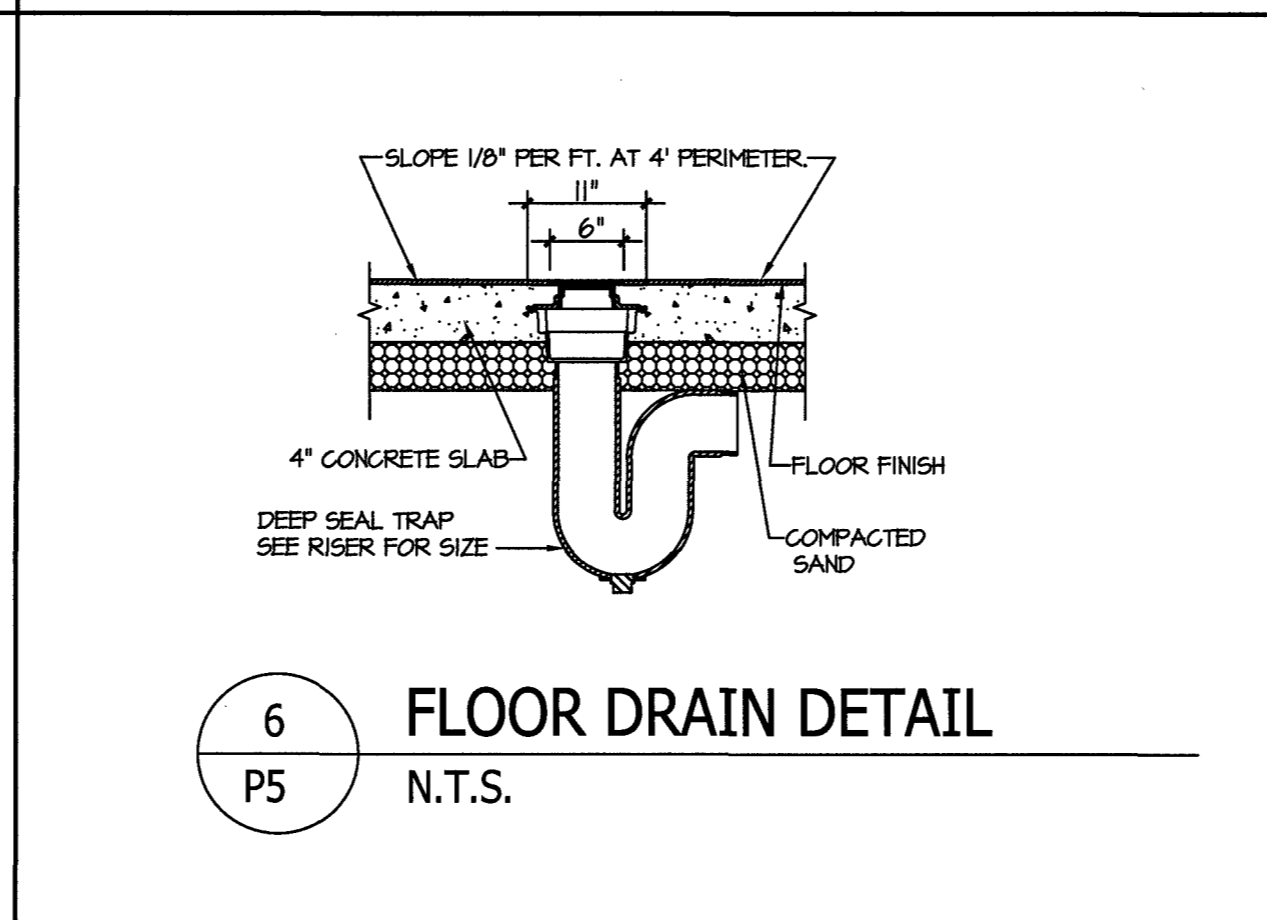
4 MIXING VALVE (BELOW)  
P5 N.T.S.



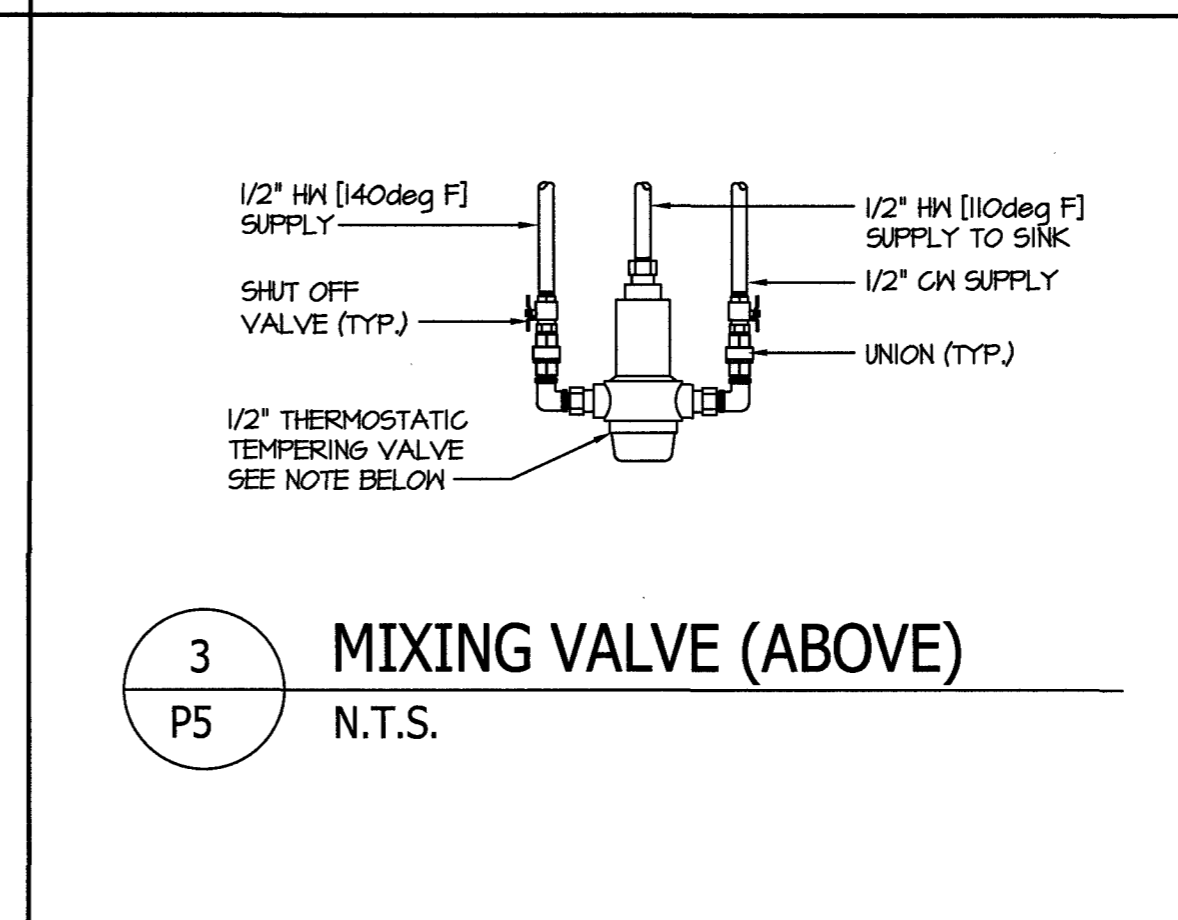
2 EXTERIOR CLEANOUT  
P5 N.T.S.



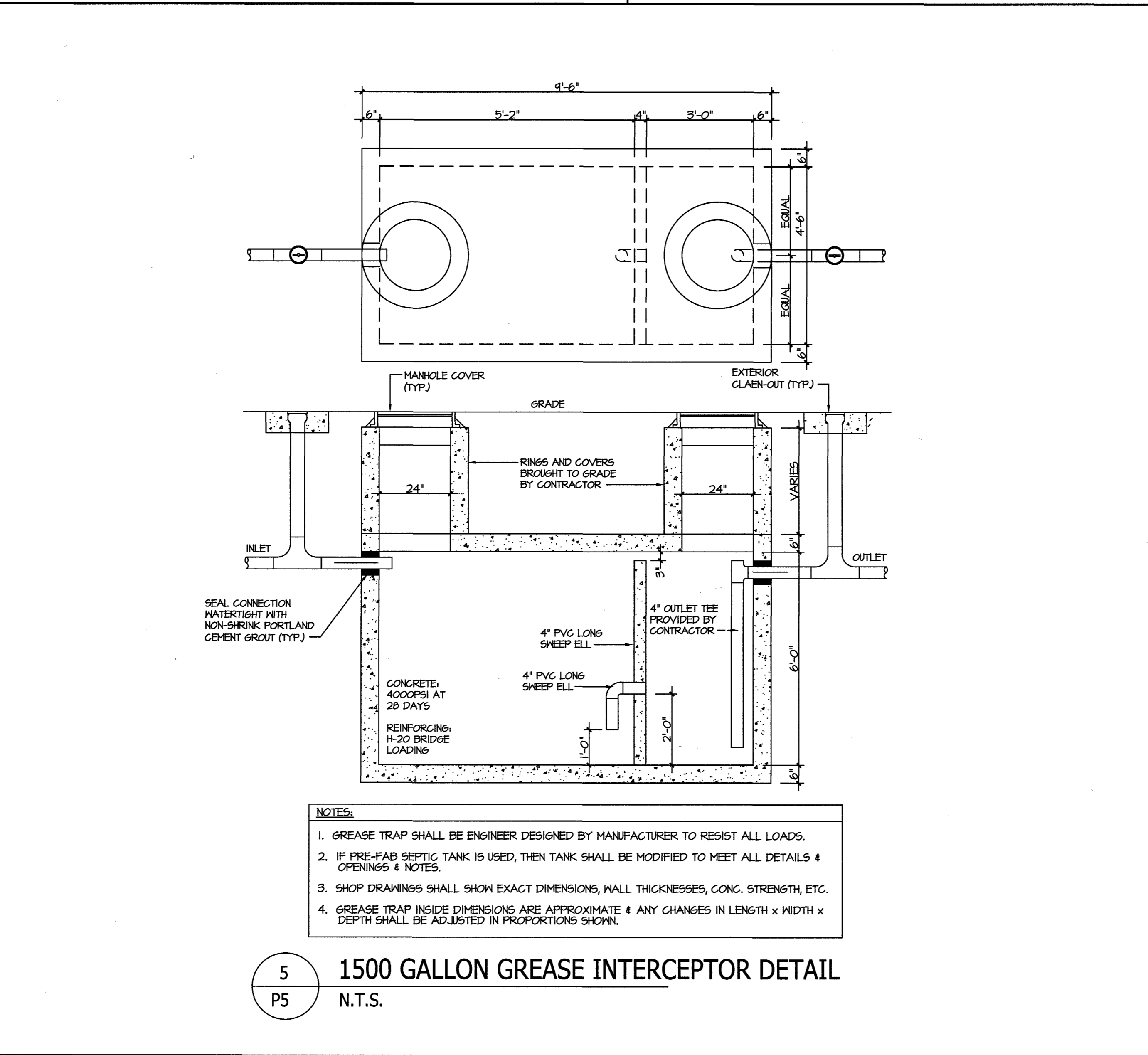
8 FLOOR SINK DETAIL  
P5 N.T.S.



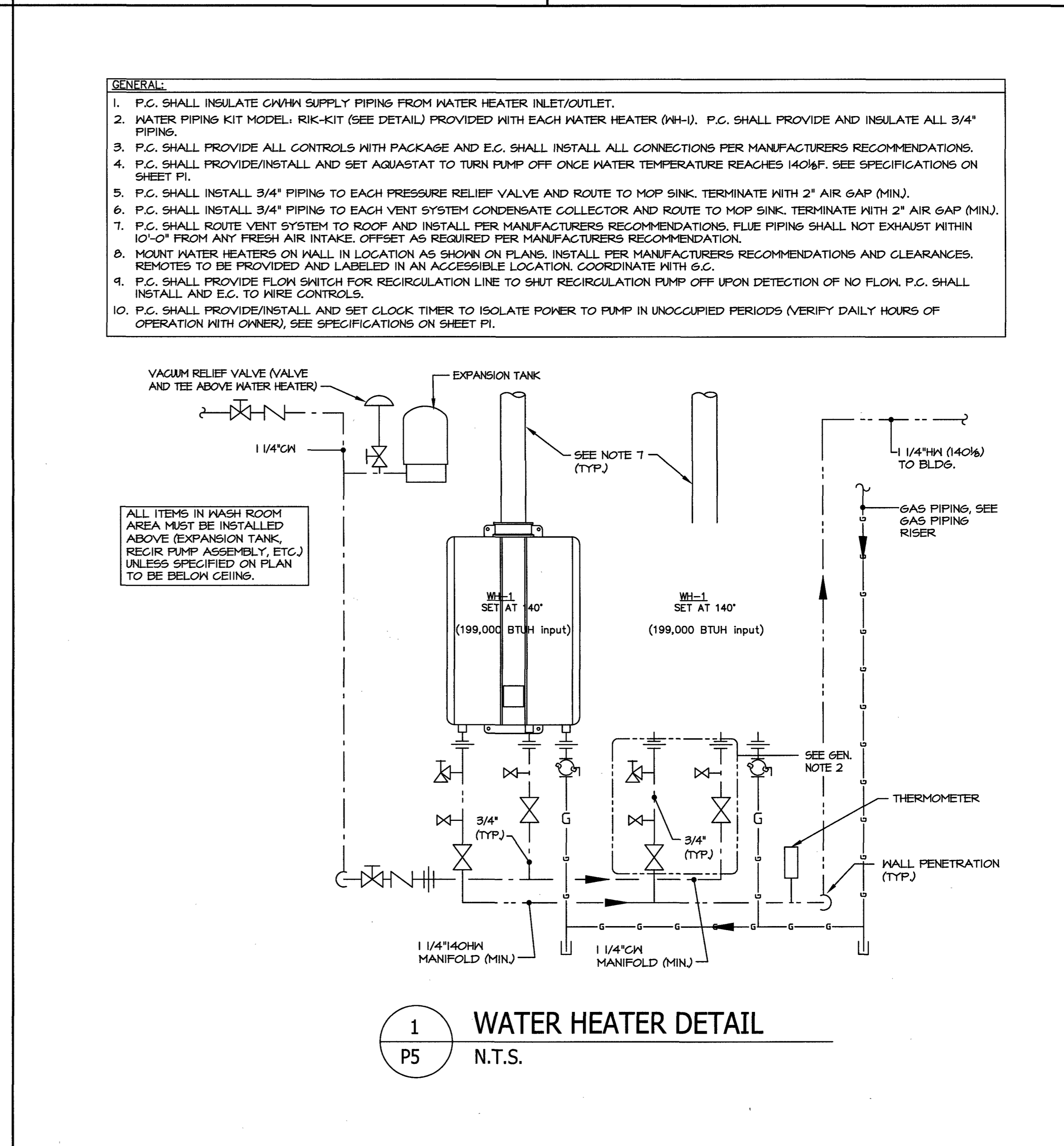
6 FLOOR DRAIN DETAIL  
P5 N.T.S.



3 MIXING VALVE (ABOVE)  
P5 N.T.S.



5 1500 GALLON GREASE INTERCEPTOR DETAIL  
P5 N.T.S.



1 WATER HEATER DETAIL  
P5 N.T.S.

REVISIONS


**BLACKWELL ARCHITECT**  
E.J. "BUD" BLACKWELL, AIA, NCARB  
310 FAIRWOOD COURT FAYETTEVILLE, NC 28305  
PHONE: 910.485.8579

DWG. ELECTRONICALLY SIGNED, ANY DUPLICATION EXPRESSLY PROHIBITED BY FINISH LINE ENGINEERING, PLLC. DATE: 08/27/2016. P.O. BOX 9800 RALEIGH, NC 27624 REGISTERED ARCHITECT FINISHLINEARCHITECT.COM NC BOARD OF EXAMINERS LICENSE NUMBER: P-603

**FINISH LINE ENGINEERING P.L.L.C.**

**HARNETT CENTRAL CROSSING FOOD MART**  
4863 NC 210 NORTH LILLINGTON, NC 27546

PLUMBING DETAILS

**P5**