

VICINITY MAP NOT TO SCALE

SITE NOTES:

- 1) ZONING: COMMERCIAL (HWY 87 CORRIDOR OVERLAY DISTRICT)
- 2) PROPOSED WATER AND SEWER BY HARNETT COUNTY
- 3) ALL DISTANCES ARE HORIZONTAL
- 4) SITE ADDRESS: 107 CARLETTA CAGLE DRIVE CAMERON, NC 28326
- 5) PIN: 9585-70-0210.000
- 6) DB 3069 PG 0698

UTILITY KEYNOTES:

- 2" DOMESTIC WATER METER, CONTRACTOR SHALL COORDINATE WITH HARNETT COUNTY.
- 2" DOMESTIC REDUCED PRESSURE BACKFLOW PREVENTER WATTS MODEL 009M2QT OR APPROVED EQUAL FROM HCDPU LIST IN ABOVE GROUND HEATED, INSULATED ENCLOSURE.

 2" DOMESTIC WATER SERVICE, CONTRACTOR SHALL COORDINATE WITH HARNETT COUNTY.

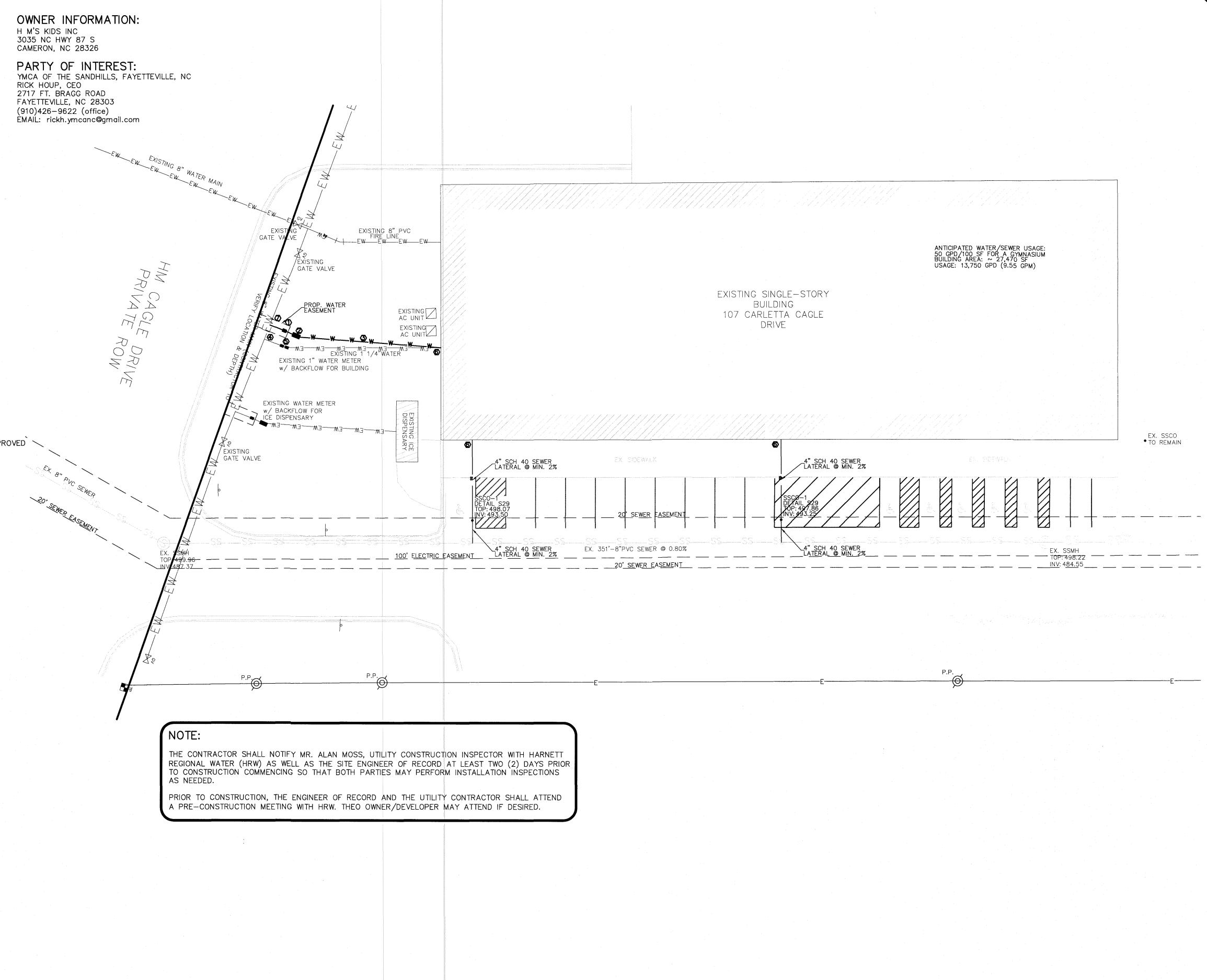
 4 REMOVE "KILL OUT" EXISTING WATER SERVICE TO CORPORATION STOP AT THE MAIN
- REMOVE, "KILL OUT" EXISTING WATER SERVICE TO CORPORATION STOP AT THE MAIN.
 REMOVE EXISTING WATER METER AND BACKFLOW PREVENTER. COORDINATE WITH HARNETT COUNTY.
 LOCATION OF CONNECTION TO BUILDING PLUMBING IS APPROXIMATE. SEE BUILDING PLANS
- 8"x2" TAPPING SADDLE WITH 2" BALL VALVE.

UTILITY NOTES:

- 1. UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATIONS OF EXISTING UTILITIES AND IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES, EITHER PUBLIC OR PRIVATE, SHOWN HEREON OR NOT SHOWN HEREON. ANY REPAIRS SHALL BE DONE TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY.
- THE GENERAL CONTRACTOR SHALL CONFIRM ALL NEW UTILITY TAP LOCATIONS WITH THE UTILITY OWNERS. ALL FEES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
 IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL
- LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.

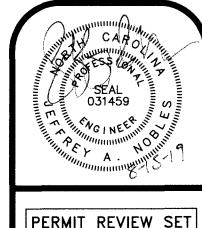
 4. BELOW GRADE WATER SERVICE PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBIL
- 4. BELOW GRADE WATER SERVICE PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING WITH SILVER SOLDER JOINTS. SOLDERS CONTAINING LEAD SHALL NOT BE USED FOR ANY PURPOSE ON THIS PROJECT. WHERE PIPING IS REQUIRED TO RUN BELOW BUILDING SLAB, IT SHALL BE INSTALLED WITHOUT JOINTS BELOW SLAB.
- 5. WATER PIPING SHALL BE CONNECTED TO BUILDING STUBS. VERIFY LOCATIONS PRIOR TO BEGINNING WATER PIPE INSTALLATION.
- 6. CONTRACTOR SHALL NOTIFY NC811 AT 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICE INDEPENDENTLY.
- 7. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HARNETT COUNTY PUBLIC UTILITIES AND CROSS CONNECTION CONTROL REGULATIONS AND STANDARDS.

LEGEND		
	EXISTING	PROPOSED
DENOTES REBAR OR BREAK IN LINE CONCRETE MONUMENT WATER METER GATE VALVE WATER LINE	○ □ □ □ · · · · · · · · · · · · · · · ·	□ → →
FIRE HYDRANT	***	*
SANITARY SEWER MANHOLE SANITARY SEWER CLEAN OUT SANITARY SEWER LINE		⑤ • s
STORM DRAINAGE LINE CATCH BASIN		
DROP INLET/JUNCTION BOX STORM DRAIN MANHOLE		© ©
NOTE — ALL PROPERTY CORNERS DISTINGUISHED BY REBAR UNLESS OTHERWISE NOTED.		



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DO NOT USE FOR CONSTRUCTION

No.

Owner:

Owner:

YMCA of the

SANDHILLS

CONTACT: 2717 FT. BRAGG RD. FAYETTEVILLE, NC 28303 (910)426-9622

Project:

YMCA of HARNETT COUNTY

tax id #: 9585-70-0210.000
township: Barbecue
county: Harnett

WATER &
SEWER
CONNECTIONS

CONSTRUCTION DOCUMENTS

job no.: P19-018
date: 5/24/19
drawn by: JN
survey by: CJ
checked by:

C-0'

sheet no.:

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

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:

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 5¼ main valve opening three way (two hose nozzles and one pumper nozzle;

American Darling - Mark B-84-B model with a 5¼"
main valve opening three way (two hose nozzles and
one pumper nozzle);

Waterous - Pacer B-67-250 model with a 5¼" main valve onening three way (two bose nozzles and one

valve opening three way (two hose nozzles and one pumper nozzle) or approved equal for standardization Fire hydrants are installed at certain elevations. Any grade change in the vicinity of any fire hydrant which impedes its peration 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. 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 invironmental 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

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.

Department of Environment and Natural Resources - Division of Water

of the sewer system improvements.

Quality (NCDENR-DWQ) on site prior to the start of construction

The permit must be maintained on site during the construction

The Utility Contractor shall notify Harnett County Department o

Public Utilities (HCDPU) and the Professional Engineer (PE) at

Contractor must schedule a pre-construction conference with Mr

Alan Moss, HCDPU Utility Construction Inspector at least two (2)

and acceptance of the wastewater system(s). Construction work

The Professional Engineer (PE) shall provide HCDPU with a set of

NCDENR approved plans marked "Released For Construction" a

least two days prior to construction commencing. HCDPU will

stamp the approved plans as "Released for Construction" and

provide copies to the utility contractor. The Registered Land

stakes for the proposed finish grade for each street and sewer

line before the Utility Contractor begins construction or

D. The Utility Contractor shall provide the HCDPU Utility

The sanitary sewer lateral connections should be installed 90°

(perpendicular) to the sanitary sewer gravity lines with schedule 40 PVC pipe.

and associated each sanitary sewer clean-out. These measurements should be

HCDPU requires the Utility Contractor to provide the Professional Engineer

installation of the manholes, sanitary sewer gravity line(s)

Construction Inspector with material submittals and shop

gravity sewer line(s), manhole(s), sewer lift station(s) and

associated force main(s) in Harnett County. The materials to b

used on the project must meet the established specifications of

HCDPU and be approved by the Engineer of Record prior to

approved for use in Harnett County found on the project site

must be removed immediately when notified by the HCDPU

construction. All substandard materials or materials not

sewer lift stations and/or sanitary sewer force main(s). The

Surveyor (RLS) shall stake out all lot corners and establish grade

grade stakes should be set with a consistent offset from the street

centerline so as not to interfere with the street grading or utility

drawings for all project materials prior to the construction of any

least two days prior to construction commencing. The Utility

days before construction will begin and the Utility Contractor

must coordinate with HCDPU for regular inspection visitations

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 Itility 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. 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 ound on the project site must be removed immediately when otified by the HCDPU Utility Construction Inspector. The water main(s), fire hydrants, service lines, meter setters and all associated appurtenances shall be constructed in strict in

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 upply Section (NCDENR-DEH, PWSS) and accepted by HCDPU. Prior to acceptance, all services will be inspected to insure tha

they are installed at the proper depth. All meter boxes must be

flush with the ground level at finish grade and the meter setters

must be a minimum of 8" below the meter box lid. Meter setters

shall be centered in the meter box and supported by brick, block

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 of assemblies and all associated appurtenances for all water line(s)

constructed in Harnett County. The red line drawings should clearly identify any deviations from the NCDENR approved plans. All change orders must be approved by HCDPU and the Professional Engineer (PE) in writing and properly documented in the red line

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 nonpotable 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 naintained. The ductile iron pipe must be laid so the mechanica joints are at least (10') feet from the point where the potable water main crosses the non-potable water line.

Potable water mains installed parallel to non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a ninimum 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 in 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.

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 34" 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

coordinate with Harnett County to witness all pressure testing 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.

M. Prior to the commencement of any work within established

is required to notify all concerned utility companies in

NC One Call Center at 811 or (800) 632-4949 to verify the

location of existing utilities prior to the beginning of

GAS, ETC.).

utility easements or NCDOT right-of-ways the Utility Contractor

accordance with G.S. 87-102. The Utility Contractor must call the

construction. Existing utilities shown in these plans are taken

from maps furnished by various utility companies and have not

been physically located by the P.E. (i.e. TELEPHONE, CABLE.

The Utility Contractor shall spot dig to expose each existing

proposed sanitary sewer line extensions well in advance to verify

Professional Engineer (PE) to allow the PE to adjust the sanitary

underground utilities. The Utility Contractor shall coordinate

relocation of existing utilities and/or securing existing utility

locations of the existing utilities. The Utility Contractor shall

utility pipe or line which may conflict with construction of

provide both horizontal and vertical clearances to the

sewer line design in order to avoid conflicts with existing

with the utility owner and be responsible for temporary

poles, pipes, wires, cables, signs and/or utilities including

services in accordance with the utility owner's requirement

When making a tap on an existing sewer force main, the Utility

Department of Environment and Natural Resources - Division of

Water Quality (NCDENR-DWQ) prior to begin the tap work. The

Utility Contractor shall conduct a pneumatic pressure test using

sanitary sewer force main. This pneumatic pressure test must be

Utility Contractor shall use Romac brand stainless steel tapping

sleeve(s) or approved equal for all taps made on sanitary sewer

force mains in Harnett County. The Utility Contractor shall use

or approved equal for all taps made on existing sanitary sewer

gravity lines in Harnett County.

P. The Utility Contractor shall provide a grease trap for each sanitary

facility and any other commercial or industrial facility as required by the

sewer service lateral that will be connected to a restaurant, food processing

Harnett County Fat, Oil & Grease Ordinance. The grease trap must be rated for

a minimum capacity of at least 1,000 gallons unless otherwise approved in

Romac brand Style "CB" sewer saddles with stainless steel bands

compressed air or other inert gas on the stainless steel tapping

sleeve and gate valve prior to making the tap on an existing

witnessed by the HCDPU Utility Construction Inspector. The

during sanitary sewer line installation, grading and street

Contractor must have a permit from the North Carolina

WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL

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

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 yault piping

and valve vault piping. The Utility Contractor must provide sho

service lines that cross under the payement inside a schedule 40

PVC conduit to allow for removal and replacement in the future

inside one (1) - two (2") inch schedule 40 PVC conduit or two (2)

independent 1" water service lines may be installed inside one

service shall be tapped directly to the water main. Split services

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 hydrostati

pressure test(s) must be witnessed by the HCDPU Utility

HCDPU when they are ready to begin filling in lines and

Construction Inspector. The Utility Contractor must notif

(1) - three (3") inch schedule 40 PVC conduit, but each water

Two (2) independent 34" water service lines may be installed

drawings for the meter vaults to HCDPU prior to ordering the

The Utility Contractor will install polyethylene SDR-9 water

concrete vaults.

are not allowed by HCDPU.

the concrete vault and the bottom of the meter setter. The

master meter must be provided test ports if the meter is not

temporary relocation and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner requirements during water line installation, grading and street construction. X. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to have a signed NCDOT encroachment agreement

> writing by the HCDPU Pre-Treatment Coordinator. Garbage disposals should not be installed in homes and husinesses that discharge wastewater to the Harnett County Sanitary Sewer System as they are not approved by HCDPU. Q. Each sewer lift station must be provided with three phase power (at least 480 volts) and constructed to meet the minimum

All water mains will be constructed with SDR-21 PVC Pipe or

staging, and installation. PVC pipe must be protected from

accordance with the standard specifications of the Harnett

collected for bacteria testing will be collected by the HCDPU

All fittings larger than two (2") inches diameter shall be ductile

grip rings as "Megalug" fittings are not approved by Harnett

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

in Harnett County. The tracer wire may be secured with duct

The Utility Contractor will provide Professional Engineer (PE)

and the HCDPU Utility Construction Inspector with a set of red

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

The Utility Contractor shall spot dig to expose each utility pipe o

extensions well in advance to verify locations of the existing

existing underground utilities. The Utility Contractor shall

coordinate with the utility owner and be responsible for

line which may conflict with construction of proposed water line

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

line field drawings to identify the installed locations of the water

connections shall be made underground on tracer wire installed

the top of the valve boxes or manholes. No spliced wire

tape to the top of the pipe before backfilling.

iron. HCDPU requires that mechanical joints be assembled with

County for pipe sizes smaller than twelve inches (12") diameter

PVC pipe used for water mains shall be connected by slip joint or

County Department of Public Utilities. All water samples

Utility Construction Inspector and tested in the HCDPU

extended exposure to sunlight prior to installation.

All water mains will be flushed and disinfected in strict

pipes must be protected during loading, transport, unloading,

Class 50 Ductile Iron Pipe rated for at least 200 psi or greater. All

requirements of the latest version of the National Electrical Code (NEC) and Harnett County standard specifications and details. If three phase power is not available from the power company other arrangements must be approved by HCDPU Engineering prior to the start of construction. Where a new sanitary sewer force main is connected to an existing manhole in the Harnett County sewer collections system the Utility Contractor must provide a protective coating (coal tar

epoxy) for the interior surfaces of the manhole to protect it against corrosion, erosion and deterioration from the release of sewer gases such as methane and hydrogen sulfide. The sewer lift station design and associated equipment must meet or exceed the MINIMUM REQUIREMENTS FOR HARNETT COUNTY SEWER LIFT STATIONS 2009 edition. Each sanitary sewer lift station must be constructed with an all-weather access road that is at least 20 feet wide. The lift station site must be covered with weed blocking material and at least six (6") inches

of # 57 stone (crush and run). Once a sewer lift station has been installed, the Utility Contractor is responsible to schedule a draw down test with HCDPU Engineering and Collections staff, the Professional Engineer (PE), the Electrician, the original equipment manufacturer's (OEM) representatives [For both the Pumps and the Generator]. This draw down test must be completed with power supplied from the electrical utility company and with power supplied by the emergency generator with satisfactory results before final inspections are conducted by the HCDPU Utility Construction

Once the Utility Contractor completes the installation of a sewer lift station, the Professional Engineer (PE) must submit the sewer permit certification and As-Built Record Drawings to the North Carolina Department of Environment and Natural Resources Division of Water Quality (NCDENR-DWO) and HCDPU for fina approval. The Utility Contractor must supply HCDPU Engineering staff with three original Operation & Maintenance (O&M) Manuals along with the associated pump curves and equipment including all warranty information and

CAPITOL FOUNDRY OF VA, INC.

STANDARD TRAFFIC BEARING CLEANOUT BOX & LID (LAMPHOLE)

MATERIAL SPEC: ASTM A-48 CLASS 35B

V. Once the Utility Contractor completes the installation of a sewer lift station, the Developer must pay HCDPU the established System Control and Data Acquisition (SCADA) fees before the

posted on site and notify all concerned utility companies in accordance

plans are taken from maps furnished by various utility

POWER, FIBER OPTIC, NATURAL GAS, ETC.). The Utility

Y. The Utility Contractor shall provide HCDPU with at least one (1)

These items must be provided to HCDPU before the final

subdivision with fire hydrants developed in Harnett County

the satisfaction of the related utility company.

Center at 811 or

with G.S. 87-102. The Utility Contractor must call the NC One Call

(800) 632-4949 to verify the location of existing utilities prior to

the beginning of construction. Existing utilities shown in these

companies and have not been physically located or verified b

the P.E. (i.e. TELEPHONE, CABLE, WATER, SEWER, ELECTRICA

Contractor will be responsible to repair any and all damages to

fire hydrant wrench and one (1) break-away flange kit for ever

inspection will be scheduled by the HCDPU Utility Construction

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

concrete marker to the center of the valve box. This distance (in

of the concrete valve marker. In lieu of installing the concrete

valve markers, the Utility Contractor may provide at least two

structures to the Professional Engineer (PE) in the red line

drawings to identify the valve locations. The Professional

Z. The Utility Contractor will be responsible for any and all repairs

Record Drawings submitted to HCDPU.

place to prevent erosion issues on site.

measurements from two independent permanent above ground

Engineer (PE) must include these measurements in the As-Built

due to leakage damage from poor workmanship during the one

(1) year warranty period once the water system improvements

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

contractors until the water lines have been approved by NCDENR

improvements cannot be scheduled with HCDPU until the streets

and accepted by HCDPU. The final inspection of water system

have been paved; the rights-of-way and utility easements have

been seeded and stabilized with an adequate stand of grass in

SCADA system will be installed at the new sewer lift station. The

SCADA system must be installed and operational before the

and associated appurtenances for other utilities and their

have been accepted by Harnett County. Harnett County will

linear feet) shall be stamped on the brass plate located on the top

with the exception of the fire hydrant isolation valves. The

contractor shall measure the distance from the center of the

Inspector. In addition, the Utility Contractor shall install a 4" x 4"

utilities may be accepted by HCDPU and placed into operation W. HCDPU requires the Utility Contractor to provide all necessary equipment and devices for the testing and inspection of the sanitary sewer system. The equipment and devices may include but not limited to lamping with mirrors, mandrels, sewer balls, plugs, air compressors and associated compressed air lines. I the HCDPU Utility Construction Inspector deems that a closed circuit video camera inspection of the newly constructed sewe system is necessary, then all costs for the closed circuit camera inspection will be the responsibility of the Utility Contractor. All closed circuit video camera inspections must be recorded on VH tapes that will released to HCDPU for record keeping, review and approval of the sewer system.

Any use of sewer plugs to temporarily block Harnett County's existing sanitary sewer lines must be coordinated with the HCDPU Collections Supervisor at least two (2) days in advance of installing the plugs. The sewer plugs must be removed as soon as possible once the new sanitary sewer lines have been inspected, pressure tested, mandrel tested, approved by the North Carolina epartment of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU to allow the sewer to flow as designed in Harnett County's existing sanitary sewer lines or when so ordered by the HCDPU Collections Supervisor to limit interruptions to the normal flow of the sanitary sewer collection system(s). The Utility Contractor must provide the pumps hoses and necessary connectors for a temporary pump around setup if required by the HCDPU Collections Supervisor, Mr. Randolph Clegg, HCDPU Collections

Supervisor may be contacted between 8:00 am and 5:00 pm Monday through Friday at (910) 893-7575 extension 3241. The Utility Contractor will be responsible for any and all repairs due to leakage or damage resulting from poor workmanship during the one (1) year warranty period once the sewer system improvements have been approved by the North Carolina Department of Environment and Natural Resources Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new sanitary sewer lines and associat appurtenances for other utilities and their contractors until the sanitary

sewer lines have been

AA The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineer practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HCDPIL. 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

SANITARY SEWER The Professional Engineer (PE) shall obtain and supply a copy of the sewer permit for the construction and operation of the wastewater collection system to the Utility Contractor before the construction of the sanitary sewer line, sewer lift station and associated force main shall begin. The Utility Contractor must post a copy of the sewer permit issued by the North Carolina

approved by NCDENR and accepted by HCDPU. HCDPU will provide maintenance and warranty repairs if necessary due to lack of response within 48 hours of notification of warranty work. HCDPU will invoice the Developer and/or Utility Contractor for materials and labor in such cases

In developments and projects that require utility easements to be established for future HCDPU right-of-way, the Registered Land Surveyor (RLS) must provide the HCDPU Right-of-Way Agent with an official copy of the recorded plat and legal description of the said easement as recorded with the Harnett County Register of Deeds. The recorded documents must be provided to the HCDPU Right-of-Way Agent before the utility mprovements within the said easement can be placed into operation. Any and all easements that must be obtained from adjoining property owners must be provided to HCDPU by the Developer at no cost to Harnett County. The final inspection of all sanitary sewer system improvements cannot be scheduled with HCDPU until the streets have been paved; the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site

AA. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HCDPU. A copy of each engineer's field report is to be submitted to HCDPU as each such inspection is made on system improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HCDPU specifications and those of all applicable regulatory agencies. These tests include, but are not limited to: air test, vacuum test, mandrel test, visual test, pressure test, bacteriological test, etc. A HCDPU Inspector must be present during testing and all test results shall be submitted to HCDPU. All tests must be satisfied before the final inspection will be 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

inspection. In the event the number of inspections performed by the HCDPU exceeds two, additional fees may be accessed to the

from the nearest downstream manhole up along the sanitary sewe main to the in-line wye fitting (or tapping saddle) and then another measurement from the in-line wve fitting (or tapping saddle) to the 4" x 4" long sweep combination wye fitting at the bottom of the sewer clean-out stack. These field measurement must be provided to the Professional Engineer (PE) in the red line drawings from the Utility Contractor for proper

nentation in the As-Built Record Drawings submitted to The Utility Contractor shall be responsible to locate the newly installed sanitary sewer gravity line(s), sanitary sewer force main(s), sanitary sewer service lateral(s) and all associated sewer clean-out(s) in the proposed sanitary sewer system for other utility companies and their contractors until the new sanitary sewer line(s) and associated appurtenances have been approved by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWO) and accepted by HCDPU. All new sanitary sewer lines must have at least three (3 ft.) feet of cover and extend under all existing water main and storm water lines with a least 24" of vertical clearance below the bottom of the existing water main and storm

The sanitary sewer gravity line(s), manhole(s), sanitary sewer service lateral(s) and associated clean-out(s) shall be constructed in strict accordance with the standard specifications of the Harnett County Department of Public Utilities. The sanitary sewer gravity line(s) must pneumatically pressure tested with compressed air at 5 psi and the sanitary sewer force main(s) must hydrostatically pressure tested with water or air at 200 psi. Sanitary sewer manholes must be vacuum tested to 10 inches of mercury and cannot drop below 9 inches in 60 seconds for 4 ft. diameter manholes, 75 seconds for 5 ft. diameter manholes. All tests mentioned above must be witnessed by the HCDPU Utility Construction Inspector and Engineer.

Prior to acceptance, all sewer service laterals will be inspected to insure that they are installed at the proper depth. All sewer clean-outs must be installed so the 4" x 4" long sweep combination wye is at least three (3') feet but no more than four (4') feet below the finish grade unless otherwise approved in writing by HCDPU. The sewer cleanouts shall have a four (4" schedule 40 PVC pipe stubbed up from both ends of the 4" x 4" long sweep combination wye to be at least two (2') feet above the ade and cover each end with a four (4") inch temporar cap to keep out dirt, sand, rocks, water and construction debris The vertical stack on each clean-out must be provided with a concrete donut for protection.

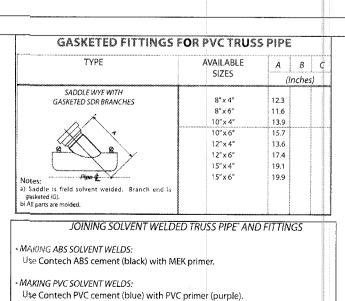
Once the sanitary sewer gravity line(s) have been installed, pneumatically pressure tested and in place for at least 30 days the Utility Contractor must contact the HCDPU Utility Construction Inspector to witness the mandrel test on each PVC sanitary sewer gravity line. The Utility Contractor will notify HCDPU to schedule the mandrel testing. The mandrel and proving ring must be supplied by the Utility Contractor. Closed circuit video camera inspections (at the Utility Contractor's expense) may be required by the HCDPU Utility Construction Inspector if the mandrel and mirror tamping testing cannot be completed with satisfactory results. The sanitary sewer lines should be flushed clean using a sewer ball of the proper diameter before any mandrel testing can be performed. The Utility Contractor is responsible to remove all dirt, sand, silt, gravel, mud and debris from the newly constructed sewer lines exercising care to keep the Harnett County's existing sanitary

sewer systems clean. Sanitary sewer force main(s) shall be pressure tested to 200 psi for at least 2 hours like water lines. The Utility Contractor shall be responsible to locate the newly installed sanitary sewer system(s) for other utility companies and their contractors until the new sanitary sewer system(s) have been approved by the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDENR-DWQ) and accepted by HCDPU.

HCDPU requires that the Utility Contractor install tracer wire in the trench with all sanitary sewer force mains. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling. The tracer wire is not required for the gravity sewer line(s) between

The Utility Contractor shall provide the Professional Engineer (PE) and HCDPU Utility Construction Inspector with a set of red line drawings identifying the complete sewer system installed for each project. The red line drawings should identify the materials, pipe sizes and approximate depths of the sewer lines as well as the installed locations of the manhole(s), sanitary sewer gravity line(s), sanitary sewer service laterals, clean-outs, sewer lift station(s) and associated force main(s). The red line drawings should clearly identify any deviations from the NCDENR approved plans. All change orders must be approved by HCDPU and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.

> CLEANOUT BOX & LID (OR APPROVED BOULD IN TRAFFIC RATED AREAS
>
> EASEMENT SHALL BE PROVIDED FOR SERVICE CONNECTION WHERE SERVICE CONNECTION WHERE SERVICE CONNECTION WHERE CONNECTION WHERE SERVICE CONNECTION IS PLA-OUTSIDE OF RW DUE TO PHYSICAL CONSTRAINTS. CAST IRON VALVE BOX W/ CHARLOTTE HUB



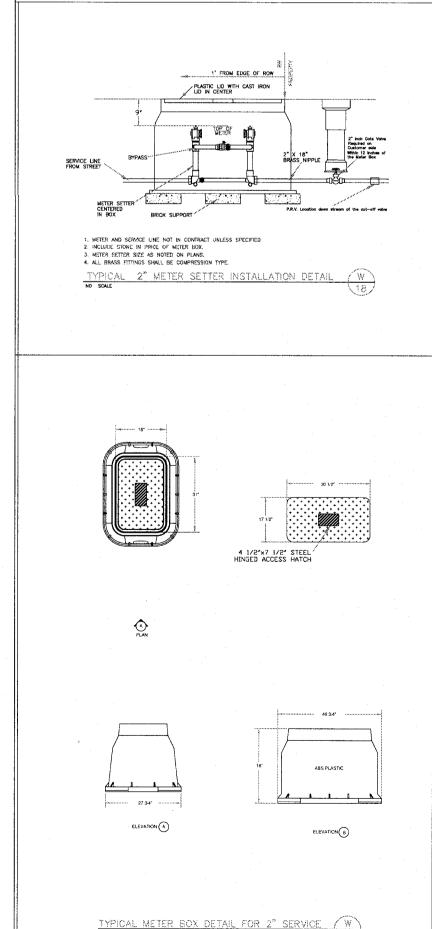
Note: Solvent welding PVC in standing or running water is not recommended

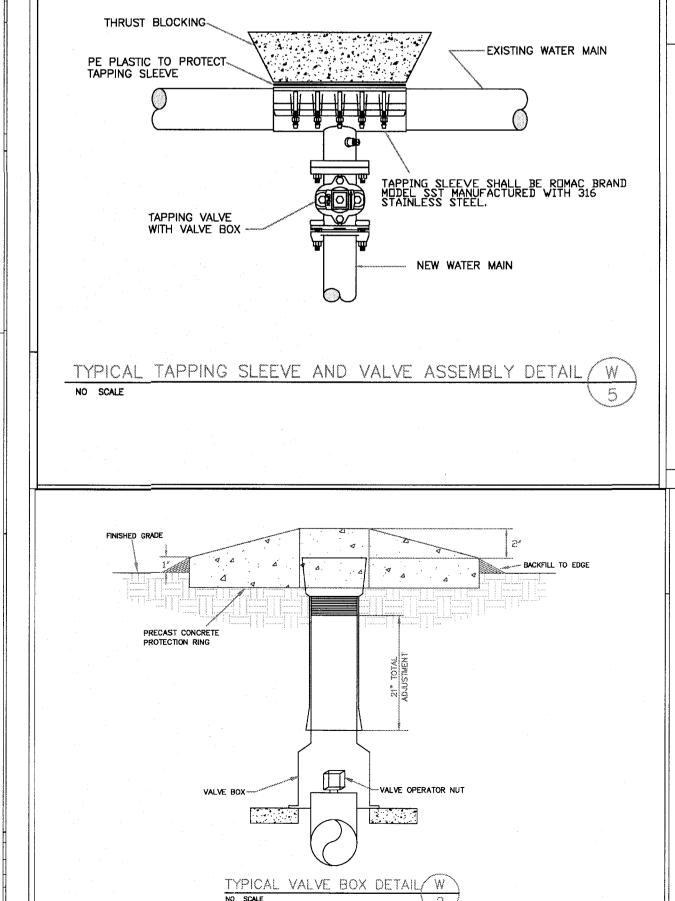
RIMER & CEMENT REQUIREMENTS FOR MAKING SOLVENT

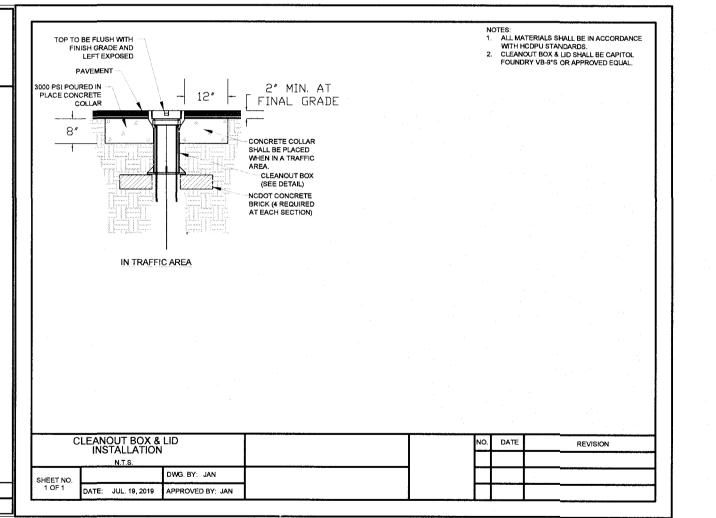
<u>Weld Pipe Joints:</u>

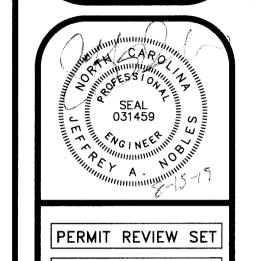
VIRGINIA BEACH, VA 2345 FAX: (757) 427-9308 ww.capitelfoundry.ne LE 3/4' DIA 3 1/4"DIA-----

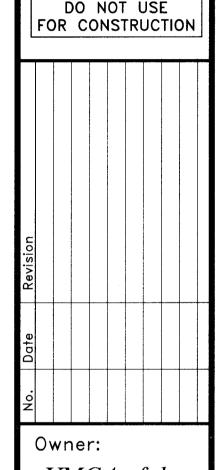
CLEANOUT BOX & LID SHALL BE CAPITOL FOUNDRY VB-9*S OR APPROVED EQUAL. PAVEMENT SHALL BE PLACED WHEN IN A TRAFFIC NCDOT CONCRETE BRICK (4 REQUIRED IN TRAFFIC AREA CLEANOUT BOX & LID INSTALLATION DWG, BY: JAN











YMCA of the SANDHILLS

CONTACT: 2717 FT. BRAGG RD. *FAYETTEVILLE, NC 28303* (910)426-9622

Project:

YMCA of **HARNETT** COUNTY

tax id #: 9585-70-0210.000 Barbecue Harnett

WATER & **SEWER** CONNECTIONS

CONSTRUCTION DOCUMENTS

job no.: P19-018 date: 5/24/19 drawn by: survey by: checked by: sheet no.: