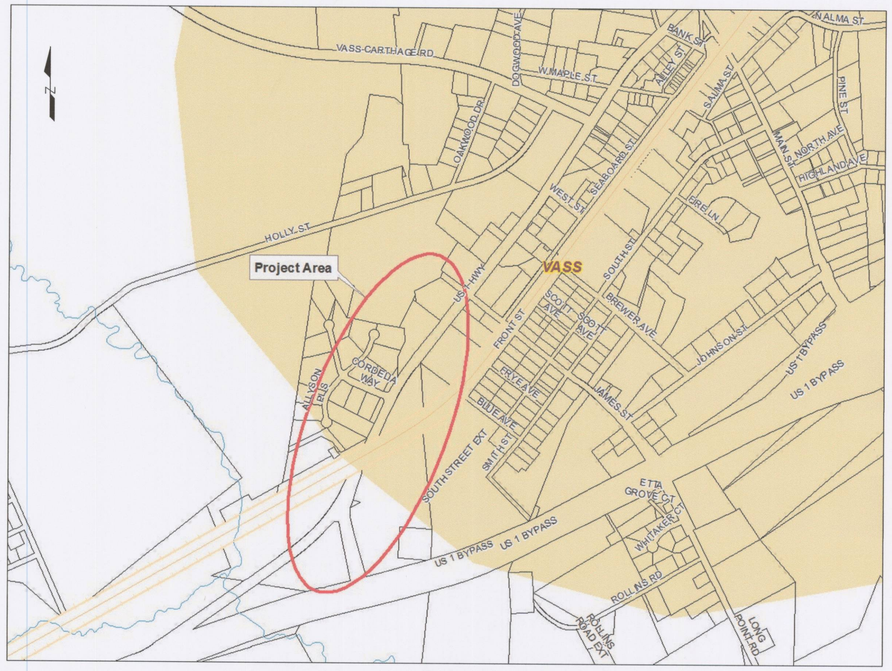
Lift Station V-1 Elimination

Vass, NC

March 2016

Project Area



Vicinity Map

DRAWING SCHEDULE

G1	COVER SHEET
G2	GENERAL NOTES
C1	PLAN & PROFILE STA 00+00 TO 13+50
C2	PLAN & PROFILE STA 13+50 TO 26+37.99
C3	CONSTRUCTION DETAILS
C4	CONSTRUCTION DETAILS

MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

NORTH CAROLINA PROFESSIONAL SEAL 036163 ENGINEER LEONARD McBRYDE III
3/29/16

CALL BEFORE YOU DIG!
NC ONE CALL CENTER
811 or 1-800-632-4949
CALL THREE DAYS
BEFORE DIGGING

LEGEND

Ⓢ	EXISTING MANHOLE
S	PROPOSED MANHOLE
	EXISTING POWER POLE
Transportation R/W	NCDOT RIGHT OF WAY
Railroad R/W	CSX RAILROAD RIGHT OF WAY
W W	EXISTING WATERLINES
	PROPOSED 8" SANITARY SEWER
	EXISTING 8" SANITARY SEWER
	EXISTING PROPERTY LINE
	EXISTING CHAIN LINK FENCE
P P	EXISTING POWER LINE
	TEMPORARY SILT FENCE
	EASEMENT AREA

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN THE ORIGINAL SITE, OR AS NOTED.
2. LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. AFTER EXISTING BURIED UTILITIES HAVE BEEN LOCATED AND AT LEAST THREE DAYS PRIOR TO CONSTRUCTION, CONTRACTOR MUST NOTIFY MOORE COUNTY PUBLIC UTILITIES, (910)947-6315 AND CALL BEFORE YOU DIG, NORTH CAROLINA ONE CALL (1-800-632-4949).
3. CONTRACTOR MUST PROVIDE EROSION CONTROL DEVICES TO CONTROL RUNOFF FROM THE CONSTRUCTION SITE. CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES THAT MAY BE LEVIED DUE TO POLLUTION CREATED DURING CONSTRUCTION.
4. CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO CONSTRUCTION OPERATIONS.
5. WATER AND SEWER LINES SHALL HAVE A MINIMUM 10' HORIZONTAL SEPARATION OR A MINIMUM 18' VERTICAL SEPARATION WITH THE WATER OVER SEWER, OR BOTH WATER AND SEWER LINES SHALL BE DUCTILE IRON PIPE 10' EITHER SIDE OF THE CROSSING.
6. SEWER LINES SHALL HAVE 3' MINIMUM COVER UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL TRAFFIC CONTROL SHALL CONFORM TO THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS OR RAILROADS DURING CONSTRUCTION AND SHALL REPAIR ROADS OR RAILROADS PER REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND/OR CSX TRANSPORTATION INC. NO OPEN CUTS OF EXISTING ROADS SHALL BE ALLOWED EXCEPT WHERE INDICATED ON THE DRAWINGS OR WHERE SPECIFIC PERMISSION IS GRANTED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. SAND OR A SIMILAR MATERIAL APPROVED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SHALL BE PLACED AS A PROTECTIVE BARRIER BETWEEN TRACK EQUIPMENT AND THE ROAD AND CLEANED UP PROPERLY AFTER CONSTRUCTION.
9. ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN TEMPORARY CONSTRUCTION EASEMENT GRANTED WITHIN THE EXISTING ROAD RIGHT-OF-WAY, RAILROAD RIGHT OF WAY, AND PROPERTY BOUNDARIES AS SHOWN ON THE PLANS.
10. MOORE COUNTY PUBLIC UTILITIES REQUIRES A MINIMUM OF FORTY-EIGHT (48) HOURS OF NOTICE WHEN REQUESTING AN ENGINEERING INSPECTION. INSPECTION REQUESTS MAY BE MADE BY CALLING THE MOORE COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT AT (910)947-6315.
11. THE CONTRACTOR SHALL KEEP A CLEAN LEGIBLE COPY OF THE AUTHORIZATION TO CONSTRUCT AND 1 SET OF RECORD DRAWINGS ON SITE AT ALL TIMES. RECORD DRAWINGS SHALL BE CHECKED WEEKLY.
12. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOORE COUNTY PUBLIC UTILITIES, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT), AND CSX TRANSPORTATION INC. STANDARDS AND SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN STANDARDS, THE MORE STRINGENT SHALL GOVERN.
13. ALL SOIL EROSION CONTROL MEASURES SHALL BE PERFORMED PRIOR TO GRADING, CLEARING, OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. DURING THE LIFE OF THE PROJECT, IF A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO EXTRA COST AND ALL SILT WASHED OFF OF THE PROJECT SITE ONTO ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO EXTRA COST.
14. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT OWN EXPENSE.
15. IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STONE AS DIRECTED BY THE ENGINEER.
16. ALL AREAS WHERE THERE IS EXPOSED DIRT IT SHALL BE SEEDED, FERTILIZED, AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES AND GOUGES PRIOR TO SEEDING. THE SURFACE SHALL BE LOOSENED TO A DEPTH OF ±4"-6" TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEERS APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER.
17. CONTRACTOR SHALL KEEP ALL EXISTING SEWER LINES IN SERVICE DURING CONSTRUCTION UNLESS PRIOR APPROVAL IS OBTAINED FROM COUNTY ENGINEER (910)947-6315.

MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

LIFT STATION V-1 ELIMINATION
VASS, NC

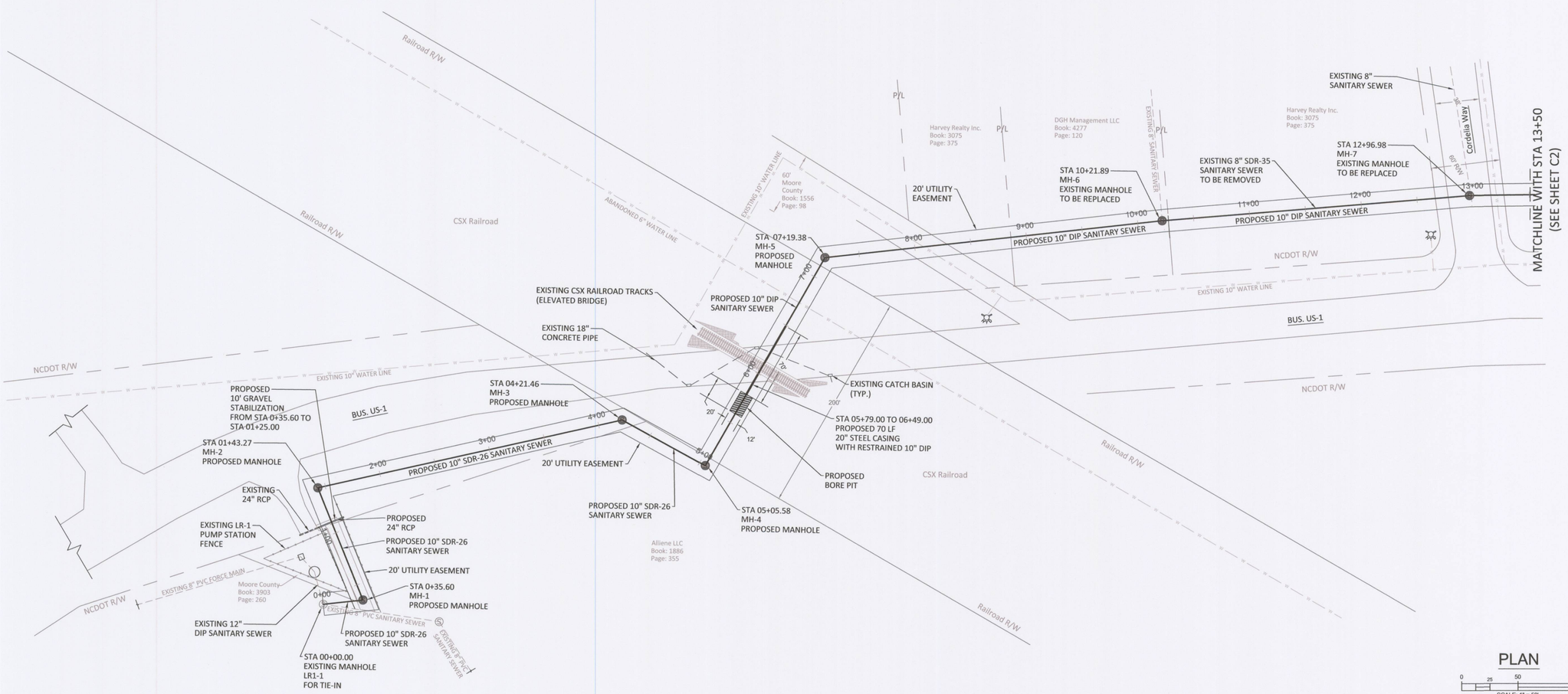
DATE: MAR. 2016
DESIGNED BY: LM III
CADD BY: MHS

GENERAL NOTES

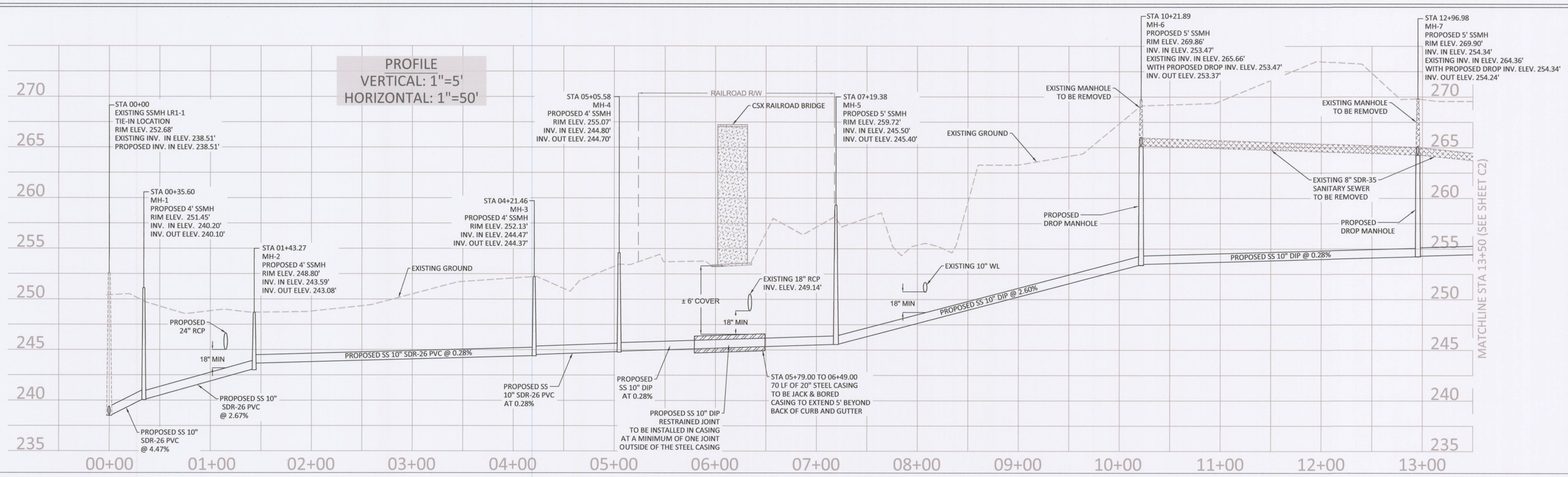
REVISIONS

NO.	DATE	BY	DESCRIPTION

SHEET
G2



CALL BEFORE YOU DIG!
NC ONE CALL CENTER
811 or 1-800-632-4949
CALL THREE DAYS
BEFORE DIGGING



MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

LIFT STATION V-1 ELIMINATION

VASS, NC

DATE: MAR. 2016
DESIGNED BY: LM III
CADD BY: MHS

PLAN AND PROFILE
STA. 00+00 TO STA. 13+50

REVISIONS

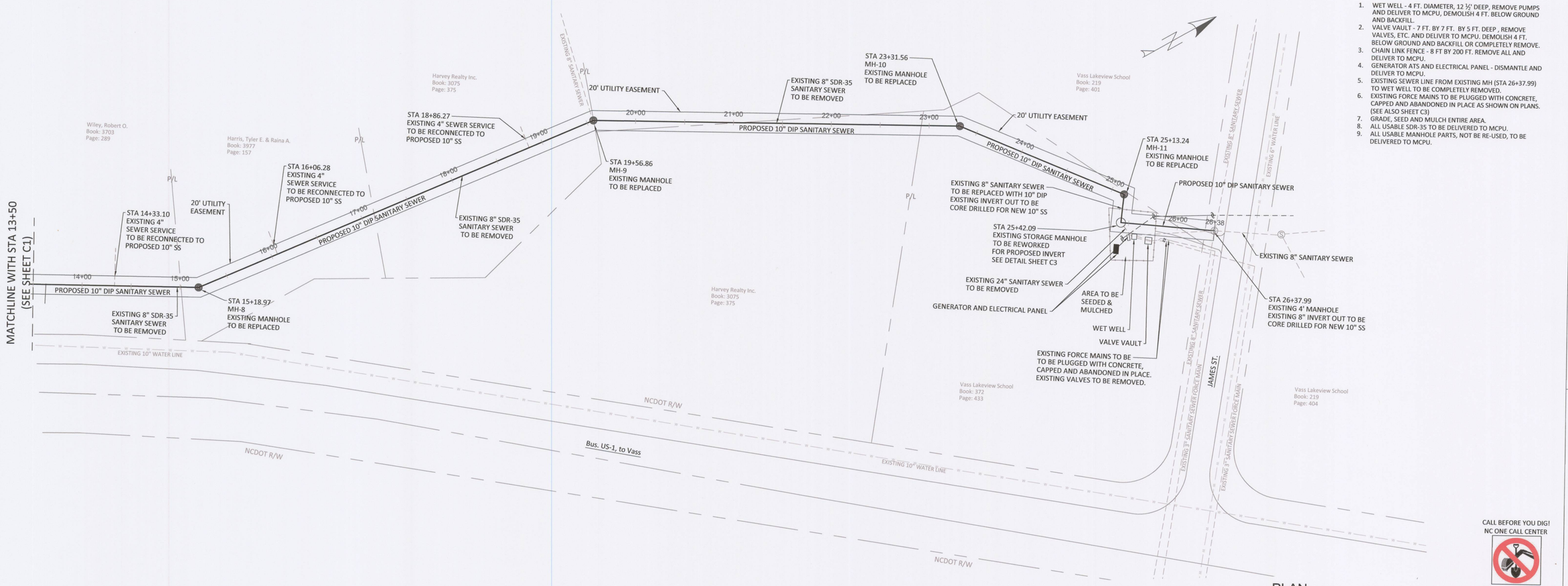
NO.	DATE	BY	DESCRIPTION

SHEET

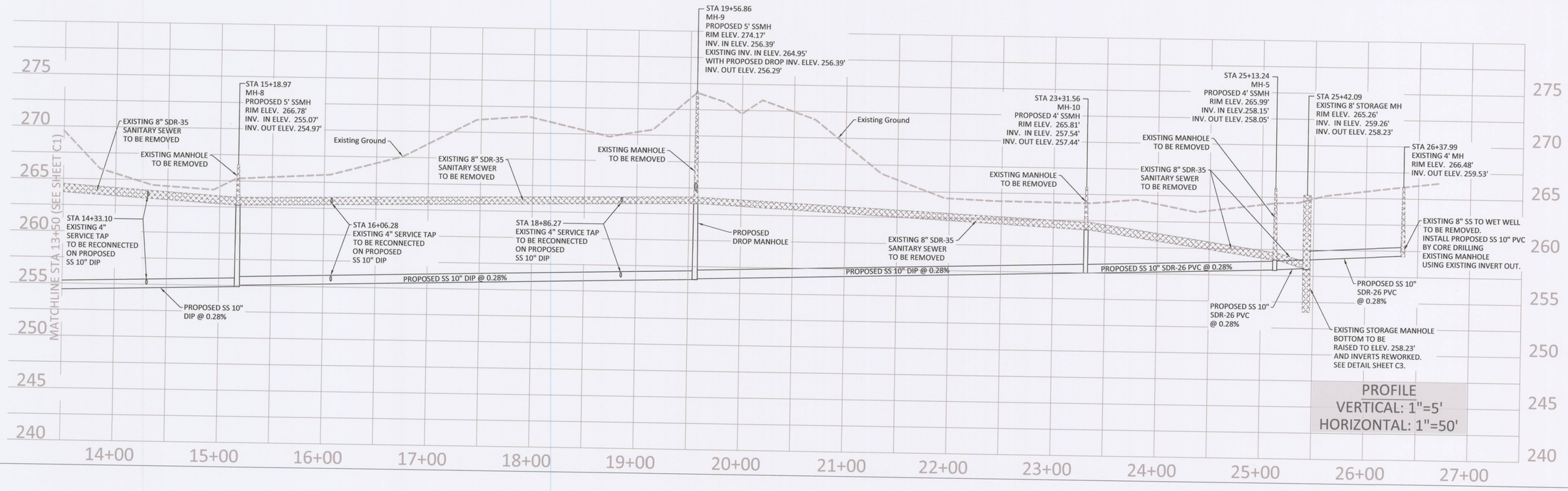
C1

THE FOLLOWING MUST BE COMPLETED BY THE CONTRACTOR:

1. WET WELL - 4 FT. DIAMETER, 12 ½' DEEP, REMOVE PUMPS AND DELIVER TO MCPU, DEMOLISH 4 FT. BELOW GROUND AND BACKFILL.
2. VALVE VAULT - 7 FT. BY 7 FT. BY 5 FT. DEEP , REMOVE VALVES, ETC. AND DELIVER TO MCPU. DEMOLISH 4 FT. BELOW GROUND AND BACKFILL OR COMPLETELY REMOVE.
3. CHAIN LINK FENCE - 8 FT BY 200 FT. REMOVE ALL AND DELIVER TO MCPU.
4. GENERATOR ATS AND ELECTRICAL PANEL - DISMANTLE AND DELIVER TO MCPU.
5. EXISTING SEWER LINE FROM EXISTING MH (STA 26+37.99) TO WET WELL TO BE COMPLETELY REMOVED.
6. EXISTING FORCE MAINS TO BE PLUGGED WITH CONCRETE, CAPPED AND ABANDONED IN PLACE AS SHOWN ON PLANS. (SEE ALSO SHEET C3)
7. GRADE, SEED AND MULCH ENTIRE AREA.
8. ALL USABLE SDR-35 TO BE DELIVERED TO MCPU.
9. ALL USABLE MANHOLE PARTS, NOT BE RE-USED, TO BE DELIVERED TO MCPU.



CALL BEFORE YOU DIG!
NC ONE CALL CENTER
811 or 1-800-632-4949
CALL THREE DAYS BEFORE DIGGING



MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

LIFT STATION V-1 ELIMINATION
VASS, NC

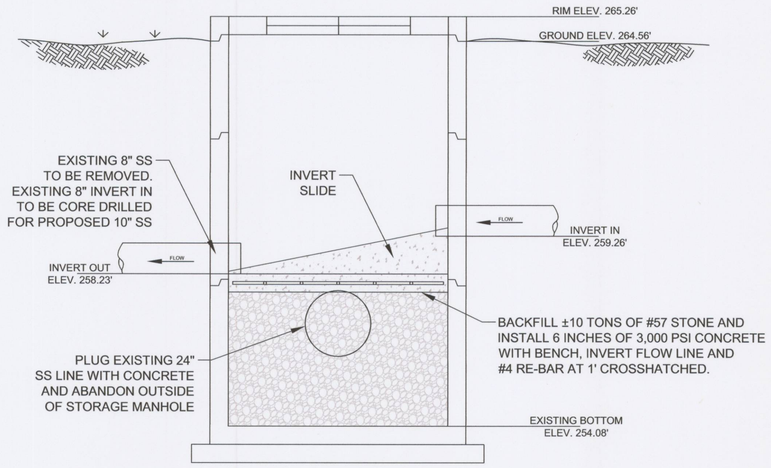
DATE: MAR. 2016
DESIGNED BY: LM III
CADD BY: MHS

SANITARY SEWER LINE
STA. 13+50 TO STA. 35+87

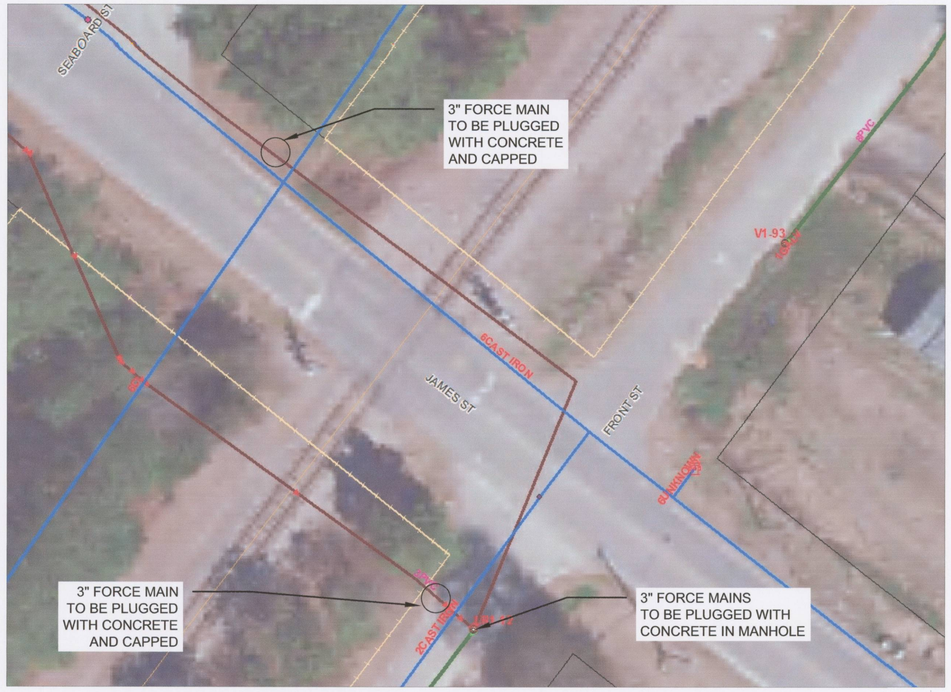
REVISIONS

NO.	DATE	BY	DESCRIPTION

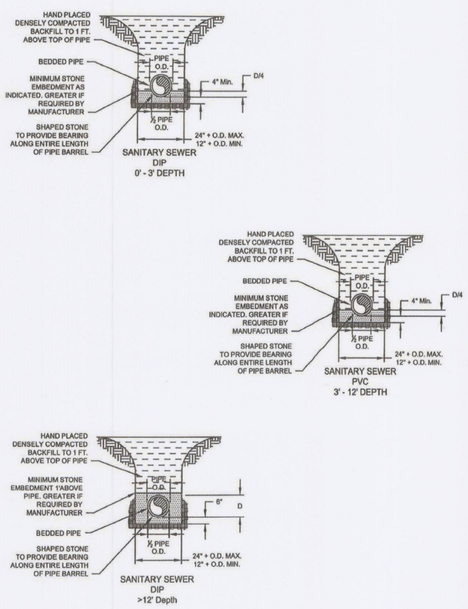
SHEET
C2



STORAGE MANHOLE DETAIL
NOT TO SCALE

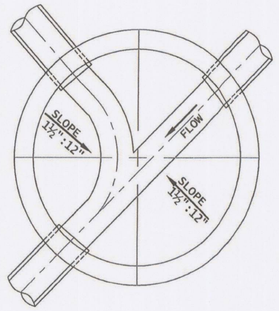


FORCE MAIN ABANDONMENT DETAIL
NOT TO SCALE



REVISED		MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	PIPE LAYING PVC & DIP	STD NO. SS-1
DATE	DESCRIPTION			

AUG 2015

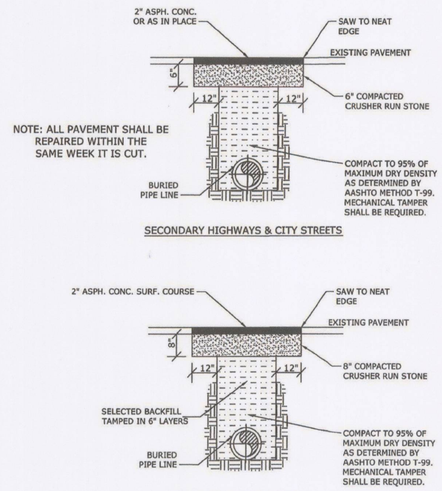


TYPICAL MANHOLE INVERT

(NTS)

REVISED		MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	MANHOLE INVERT	STD NO. SS-7
DATE	DESCRIPTION			

AUG 2015



PAVEMENT REPAIRS FOR NCDOT ROAD OPEN CUTS
NOT TO SCALE

REVISED		MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	ROADWAY PAVEMENT OPEN CUT & PATCH	STD NO. GC-1
DATE	DESCRIPTION			

JAN 2015

MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

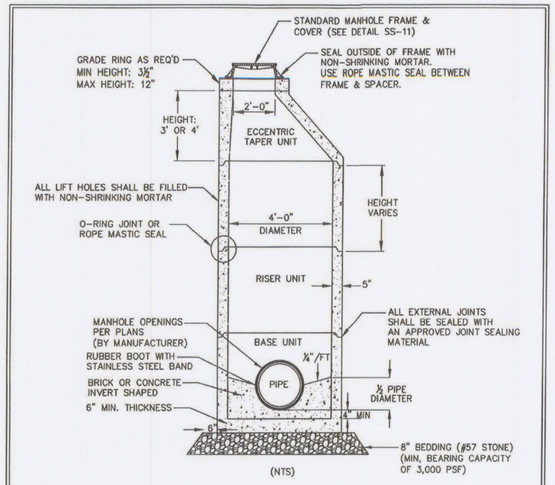
LIFT STATION V-1 ELIMINATION
VASS, NC

DATE: MAR. 2016
DESIGNED BY: LM III
CADD BY: MHS

CONSTRUCTION DETAILS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

SHEET
C3

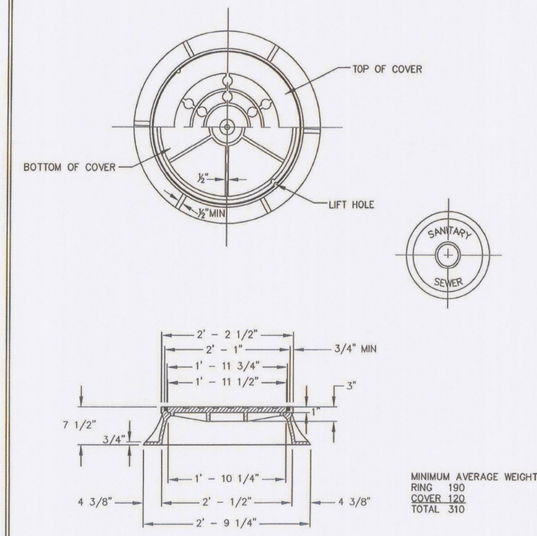


(NTS)

NOTES:
1. 4,000 PSI CONCRETE MIN. A.S.: 0.17 SQ.IN/FT (REINF. NOT SHOWN)
2. FOR TEMPORARY DEAD-END MANHOLES, THE INVERT THROUGH CONSTRUCTION SHALL BE EXTENDED THROUGH THE MANHOLE. FOR PERMANENT DEAD-END MANHOLES, THE INVERT SHALL BE BOWL SHAPE.
3. EXTENDED BASE REQUIRED FOR ALL MANHOLES OVER 10' IN DEPTH.
4. IN INSTALLATION AREAS WHERE GROUNDWATER IS ENCOUNTERED, UPLIFT COMPUTATIONS & BALLASTING MAY BE REQUIRED.
5. BASE AND BASE SLAB SHALL BE MONOLITHIC.
6. ALL MANHOLE CONNECTIONS SHALL BE PREFABRICATED OR CORED WITH A CONCRETE CORING MACHINE.
7. ALL MANHOLES SHALL BE VACUUM TESTED.

REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	4' STANDARD MANHOLE	STD NO. SS-18

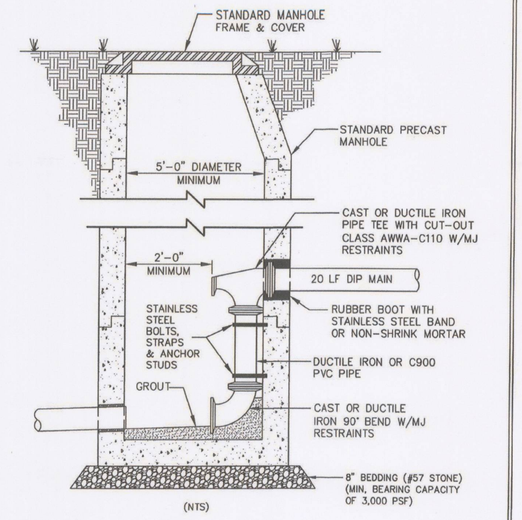
AUG 2015



MINIMUM AVERAGE WEIGHT
RING 190
COVER 120
TOTAL 310

REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	STANDARD MANHOLE FRAME & COVER	STD NO. SS-19

AUG 2015

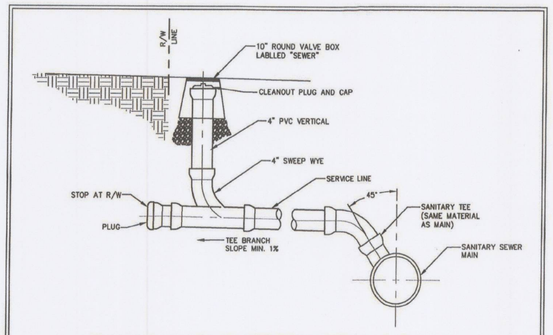


(NTS)

NOTE:
ALL DUCTILE IRON FITTINGS TO BE #401 COATED

REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	MAIN LINE MANHOLE INSIDE DROP	STD NO. SS-14

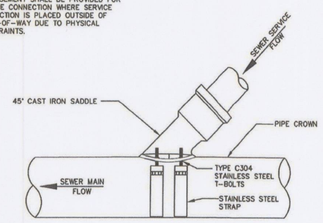
AUG 2015



TYPICAL SEWER SERVICE CONNECTION

(NTS)

NOTES:
AN EASEMENT SHALL BE PROVIDED FOR SERVICE CONNECTION WHERE SERVICE CONNECTION IS PLACED OUTSIDE OF RIGHT-OF-WAY DUE TO PHYSICAL CONSTRAINTS.

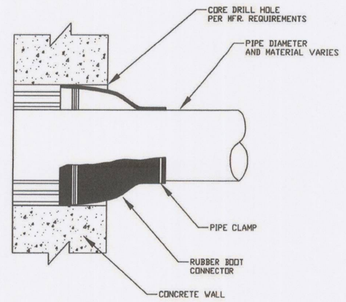


(NTS)

NOTES:
1) VITRIFIED CLAY PIPE SHALL BE BLOCKED AND SEALED WITH CONCRETE.
2) IN-LINE WYE FITTING TO BE PROVIDED WITH NEW CONSTRUCTION.

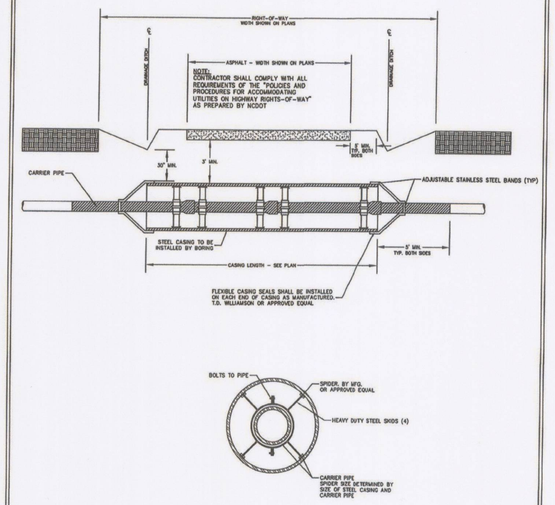
REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	SERVICE CONNECTION AND CLEANOUT	STD NO. SS-4

AUG 2015



REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	RUBBER BOOT DETAIL	STD NO. SS-16

AUG 2015



REVISED DATE	REVISED DESCRIPTION	MOORE COUNTY PUBLIC WORKS ENGINEERING DIVISION	STANDARD BORE ENCASEMENT	STD NO. GC-3

JAN 2015

MOORE COUNTY PUBLIC WORKS
www.moorecountync.gov
5227 HWY 15-501
P.O. BOX 1927
CARTHAGE, NC 28327
(910) 947-6315

LIFT STATION V-1 ELIMINATION

VASS, NC

DATE: MAR. 2016
DESIGNED BY: LM III
CADD BY: MHS

CONSTRUCTION DETAILS

REVISIONS NO.	DATE	BY	DESCRIPTION

SHEET
C4