

PWC

Fayetteville's

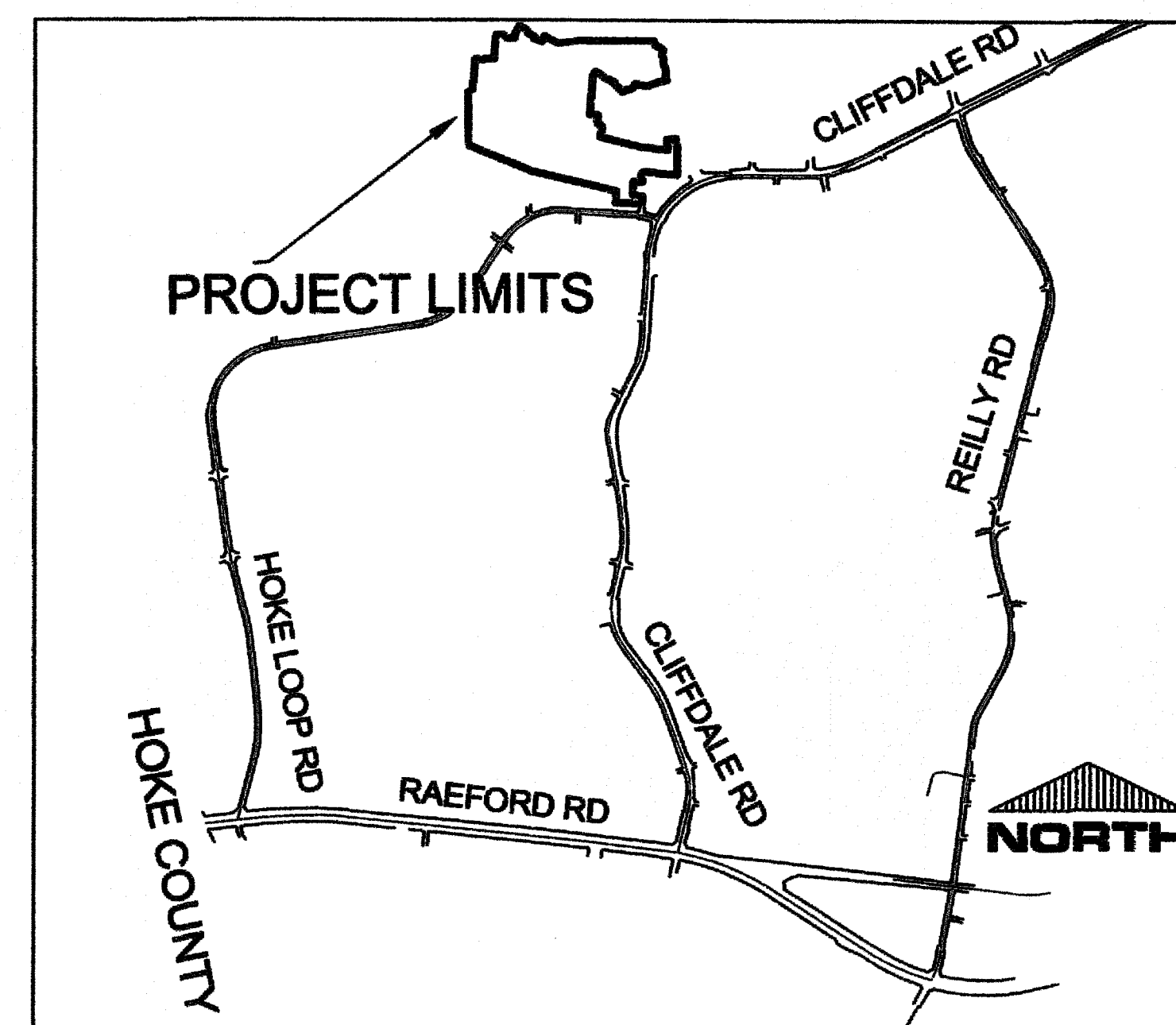
HOME TOWN UTILITY

FAYETTEVILLE, N.C.

Fayetteville Annexation Phase V

Construction Project XII

Area 26 - Cliffdale West



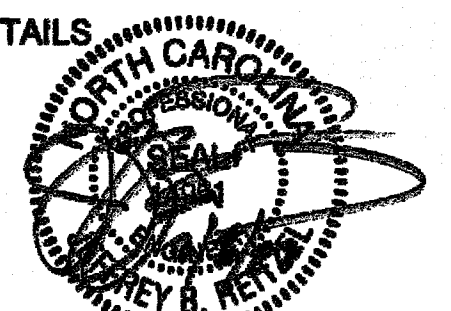
VICINITY MAP
N.T.S.



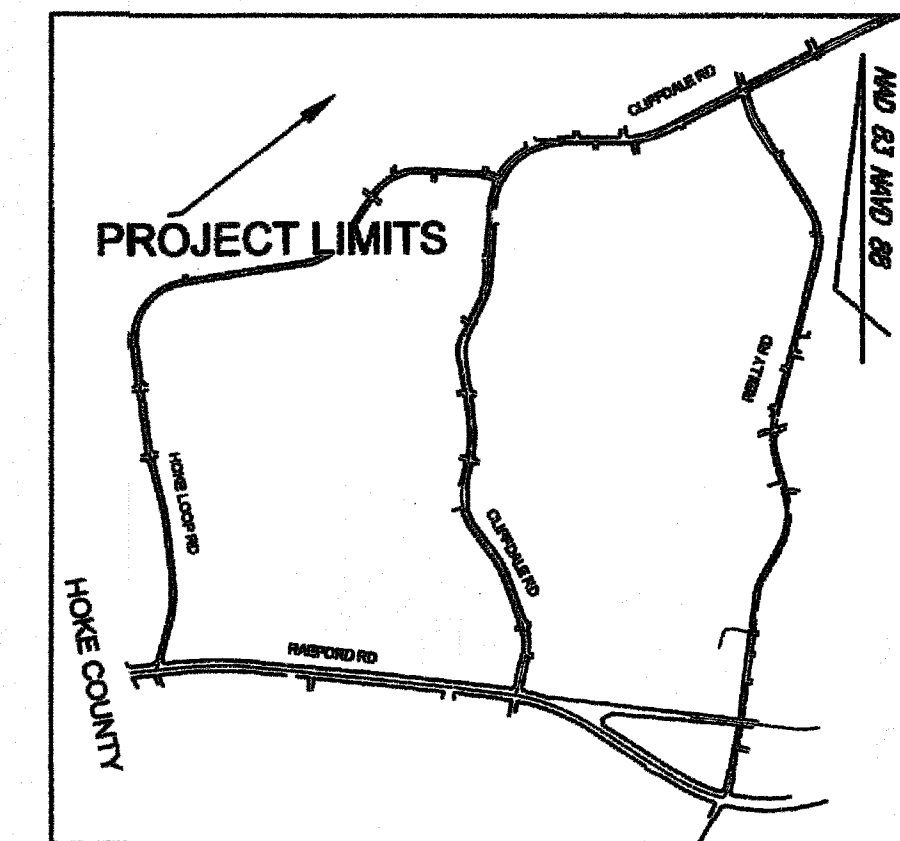
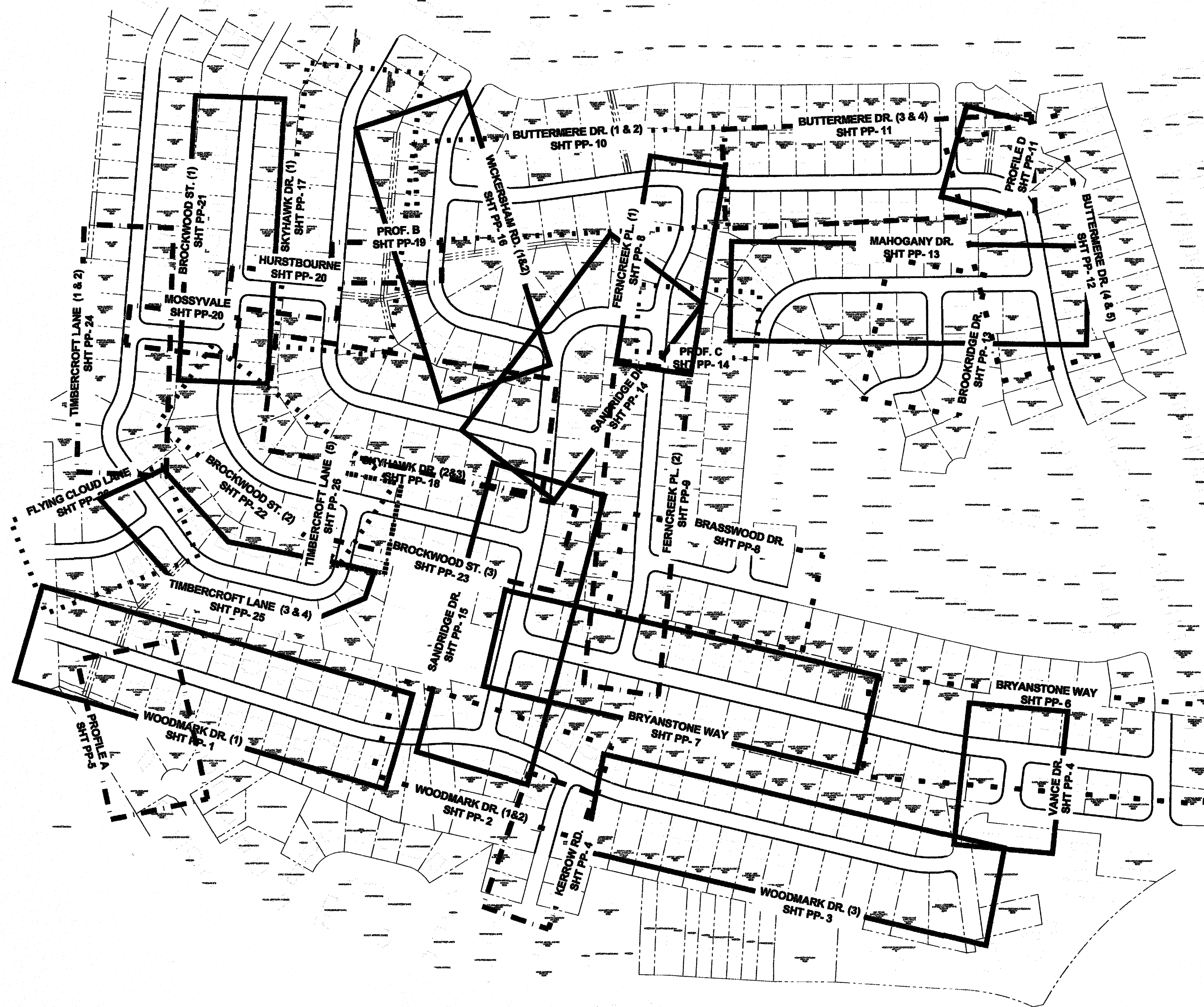
Know what's below.
Call before you dig.

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PWC DWG #DS-15462



VICINITY MAP
NTS

PWC
Water Resources Engineering
APPROVED FOR CONSTRUCTION
Project Name: Annexation Phase V Construction Project XII Area 26 - Cliffdale West
Water Permit #: N/A
Sewer Permit #: PWC-0023-5008
Expiration Date: 03/08/2025

Misty Manning *3/6/2023*
for Misty Manning, PE Date
Engineering Manager

200' 0' 200' 400'

PWC		FAYETTEVILLE PUBLIC WORKS COMMISSION	
ANNEXATION PHASE V CONSTRUCTION PROJECT XII AREA 26 - CLIFFDALE WEST			
ORIGINAL <input type="checkbox"/> TAPS ONLY <input type="checkbox"/> RECORD DRAWING <input type="checkbox"/> MODIFICATION <input type="checkbox"/>	DATE: <u>3-3-2023</u>	BY: <u>WCS</u>	DATE: <u>3-3-2023</u>
DESIGNED BY: <u>WCS</u>	PERMIT #: <u>1005935</u>	REVIEWED BY: <u>WCS</u>	DATE: <u>3-3-2023</u>
DATE: <u>3-3-2023</u>	DWG # <u>15-1542</u>	REVISION: <u>1</u>	DATE: <u>3-3-2023</u>
WREP # <u>1005935</u>	# OF SHEETS: <u>10</u>		

PWC DWG #DS-15462

Drawn by
David M. Moore
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey S. Reiter, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Sheet Key

Revision	By	Date



115 Broadfoot Avenue
Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
Firm No. F-0106

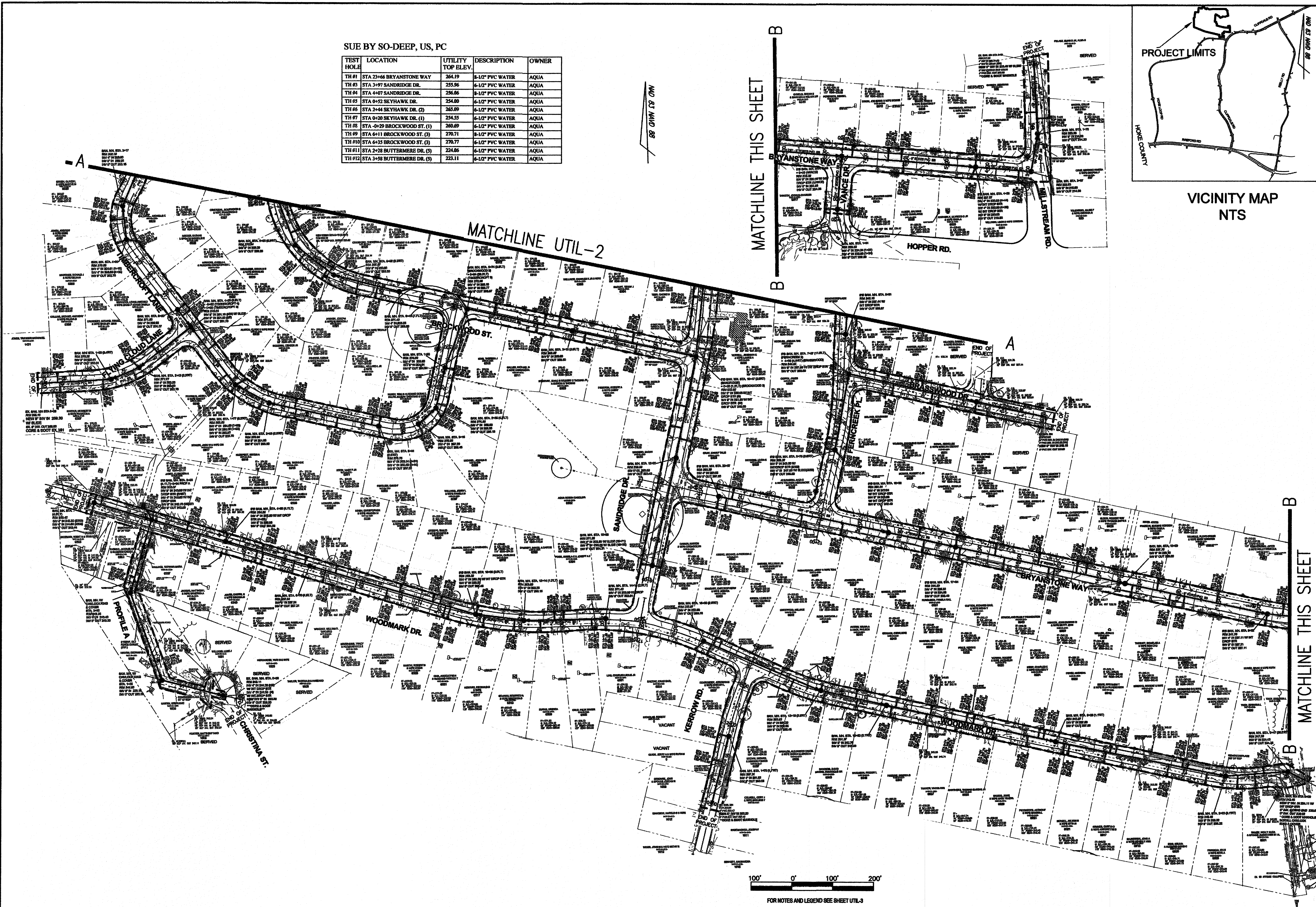
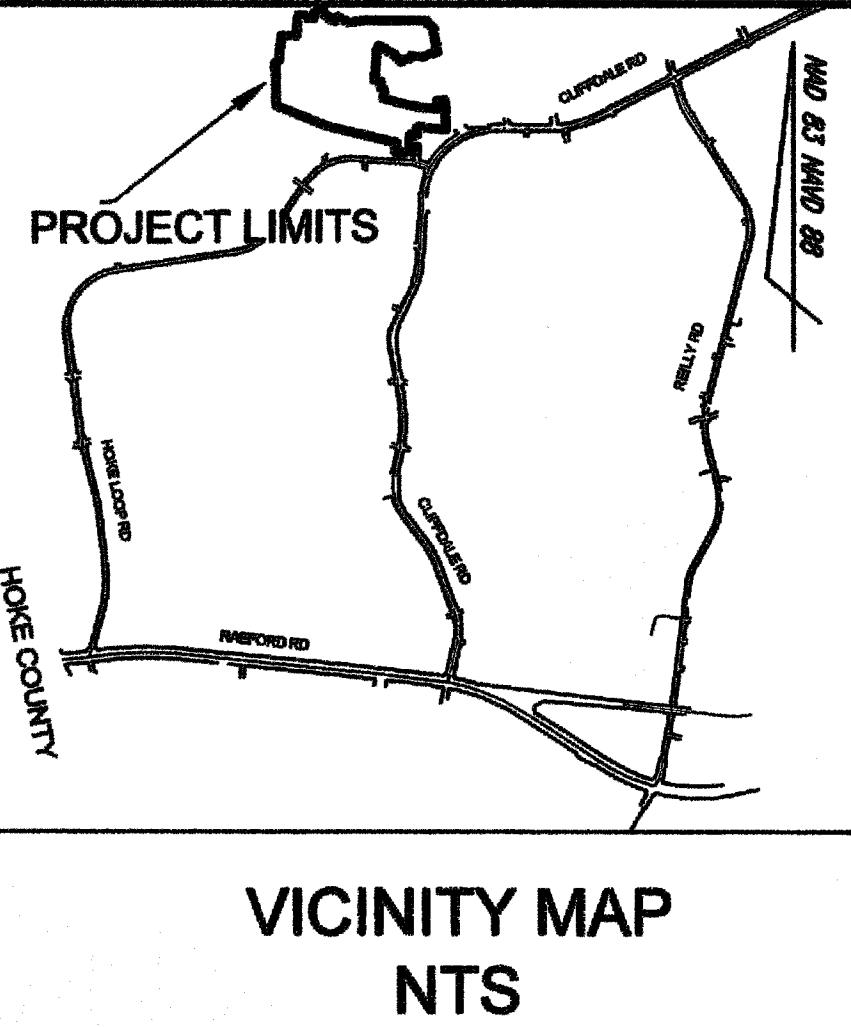


Scale 1" = 200'
Book no.
Sheet

SK-1

SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #1	STA 23+66 BRYANSTONE WAY	264.19	8-1/2" PVC WATER	AQUA
TH #3	STA 3+97 SANDRIDGE DR.	255.96	6-1/2" PVC WATER	AQUA
TH #4	STA 4+07 SANDRIDGE DR.	256.86	8-1/2" PVC WATER	AQUA
TH #5	STA 0+52 SKYHAWK DR.	254.80	6-1/2" PVC WATER	AQUA
TH #6	STA 2+44 SKYHAWK DR. (2)	265.89	6-1/2" PVC WATER	AQUA
TH #7	STA 0+20 SKYHAWK DR. (1)	254.55	6-1/2" PVC WATER	AQUA
TH #8	STA 0+29 BROCKWOOD ST. (1)	260.69	6-1/2" PVC WATER	AQUA
TH #9	STA 6+11 BROCKWOOD ST. (3)	270.71	8-1/2" PVC WATER	AQUA
TH #10	STA 6+35 BROCKWOOD ST. (3)	270.77	6-1/2" PVC WATER	AQUA
TH #11	STA 2+28 BUTTERMERE DR. (5)	224.86	6-1/2" PVC WATER	AQUA
TH #12	STA 3+58 BUTTERMERE DR. (5)	223.11	6-1/2" PVC WATER	AQUA



Drawn by
David M. Moore
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Reitzel, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Clifdale West
Partial Utility Plan

Revision

By

Date

115 Broadfort Avenue
Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
Firm No. F-0106

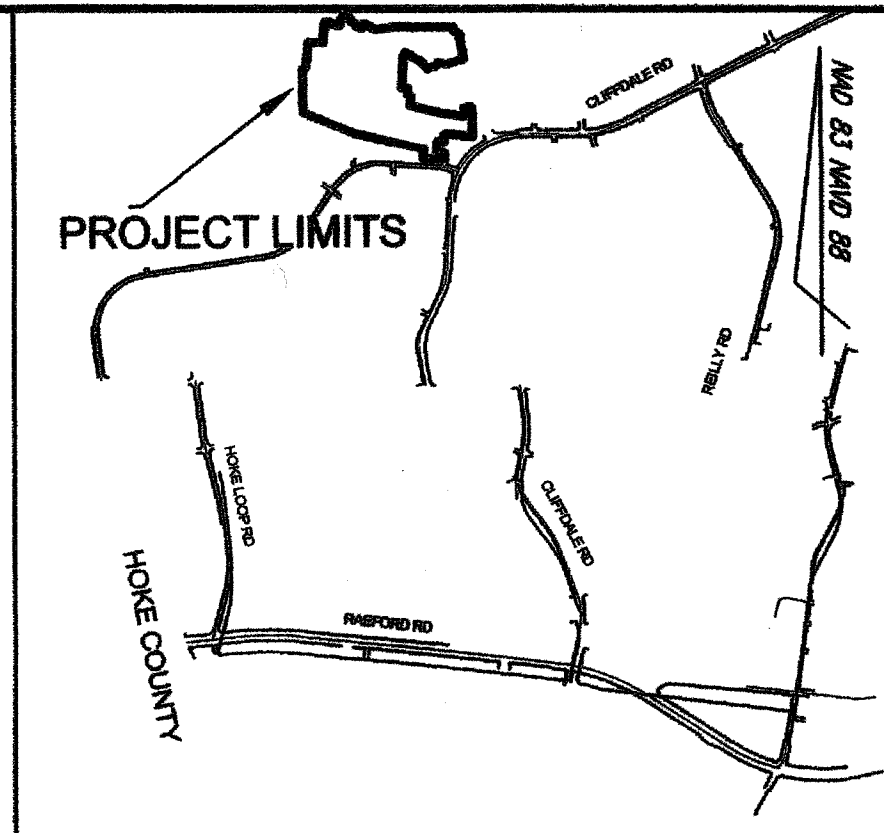
MOORMAN, KIZER & REITZEL, INC.
ENGINEERS
PLANNERS
SURVEYORS

Scale 1" = 100'
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Sheet
UTIL - 1

PWC DWG #DS-15462

SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #1	STA 23+46 DRYANSTONE WAY	264.19	8-1/2" PVC WATER	AQUA
TH #2	STA 3+97 SANDRIDGE DR.	255.96	6-1/2" PVC WATER	AQUA
TH #3	STA 4+87 SANDRIDGE DR.	256.06	8-1/2" PVC WATER	AQUA
TH #4	STA 0+52 SKYHAWK DR.	254.00	6-1/2" PVC WATER	AQUA
TH #5	STA 2+44 SKYHAWK DR. (2)	265.09	6-1/2" PVC WATER	AQUA
TH #7	STA 0+20 SKYHAWK DR. (1)	254.55	6-1/2" PVC WATER	AQUA
TH #8	STA 0+29 BROCKWOOD ST. (1)	268.69	6-1/2" PVC WATER	AQUA
TH #9	STA 6+11 BROCKWOOD ST. (2)	270.71	8-1/2" PVC WATER	AQUA
TH #10	STA 6+35 BROCKWOOD ST. (3)	270.77	6-1/2" PVC WATER	AQUA
TH #11	STA 2+28 BUTTERMERE DR. (5)	224.06	6-1/2" PVC WATER	AQUA
TH #12	STA 3+58 BUTTERMERE DR. (5)	223.11	6-1/2" PVC WATER	AQUA



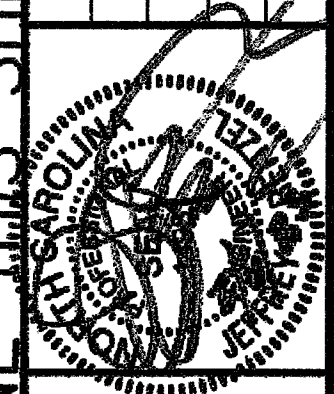
VICINITY MAP
NTS

MATCHLINE UTIL-2

Drawn by
David M. Moore
Checked
David E. Vaughn, P.E., PLS
Reviewed
Jeffrey B. Reitzel, P.E., PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Partial Utility Plan

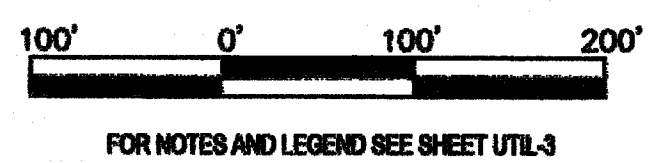
Revision	By	Date



115 Broadfoot Avenue
Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191



Scale 1" = 100'
Book no.
Sheet
UTIL - 2



FOR NOTES AND LEGEND SEE SHEET UTIL-3

KEY SYMBOL ANNEXATION TYPICAL NOTES KEY

- CLEAR AND GRUB PERMANENT EASEMENT DISPOSE OFF SITE - CLEAR ONLY TREES NECESSARY IN TEMPORARY EASEMENTS AND DISPOSE OFFSITE.
- TEMPORARY SILT FENCE (TYPICAL).
- DO NOT DISTURB WETLANDS OUTSIDE EASEMENTS (TYPICAL).
- REMOVE EXISTING FENCE AS NECESSARY FOR CONSTRUCTION. FENCE REINSTALLATION SHALL USE ALL NEW MATERIALS (NO SEPARATE PAYMENT). PLACE TEMPORARY 4' TALL CHAIN-LINK FENCE AT EDGE OF EASEMENT OR TIE IN OPENING OF FENCE TO SECURE CONTENTS PREVIOUSLY SECURED BY PERMANENT FENCE REMOVED FOR CONSTRUCTION. (TYPICAL).
- STRIP TOPSOIL IN AREAS TO BE DISTURBED, ADD AMENDMENTS AND RE-SPREAD TOPSOIL PRIOR TO INSTALLATION OF SOD. SOD SHALL BE SAME SPECIES AS EXISTING AND SHALL BE PLACED BY A LICENSED LANDSCAPE CONTRACTOR IN ALL DISTURBED AREAS NOT OTHERWISE IMPROVED. NO PAYMENT SHALL BE MADE FOR SOD REQUIRED TO RESTORE AREAS DISTURBED OUTSIDE OF AREAS INDICATED TO RECEIVE SOD. (TYPICAL).
- SEWER LATERAL 4" DIAMETER UNLESS OTHERWISE INDICATED (TYPICAL).
- DO NOT DISTURB STRUCTURES ETC. OUTSIDE OF EASEMENTS (TYPICAL).
- SOIL BORING, HAND AUGER (TYPICAL).
- REPAIR AQUA AMERICA WATER MAINS AND LATERALS DISTURBED BY CONSTRUCTION TO AQUA AMERICA STANDARDS. NO SEPARATE PAYMENT.
- CONTRACTOR SHALL REPAIR DAMAGE DUE TO CONSTRUCTION TO SEPTIC TANKS AND/OR DRAIN FIELD TO EXISTING OR BETTER CONDITIONS IMMEDIATELY UPON OCCURRENCE OF DAMAGE. CONTRACTOR SHALL OBTAIN PERMITS AND PUMP AND HAUL SEPTIC TANK CONTENTS AS NECESSARY DURING THE INTERIM BETWEEN SEPTIC SYSTEM DAMAGE AND REPAIR. NO SEPARATE PAYMENT (TYPICAL).
- LIMITS OF CONSTRUCTION ARE EDGE OF EASEMENTS AND BOUNDARY OF EXISTING STREET RIGHT OF WAY. (TYPICAL).
- CONTACT CITY ENGINEERING REPRESENTATIVE FOR INSPECTION OF STORM DRAIN PRIOR TO AND AFTER SD CROSSING (TYPICAL).
- REPAIR PWC WATER LATERALS DISTURBED BY CONSTRUCTION. REPAIR REQUIRES REPLACING LATERAL FROM, BUT NOT INCLUDING, CORPORATION AT THE MAIN (ADAPTER REQUIRED) TO THE METER WITH 1" TYPE "K" SOFT COPPER PIPE AND INCLUDES INSTALLING A NEW LOCK VALVE AND NECESSARY FITTINGS TO TRANSITION FROM THE NEW LOCK VALVE TO THE METER. ALL MATERIALS SHALL BE SUBMITTED AND APPROVED BY PWC PRIOR TO INCORPORATION INTO THE WORK. NO SEPARATE PAYMENT. (TYPICAL) SEE DETAILS.
- STRIP TOPSOIL, STOCKPILE, INSTALL LATERAL, OR MAIN, ADD AMENDMENTS TO TOPSOIL. SEED AND MULCH DISTURBED TURF AREA WITH SEED MIXTURE SIMILAR TO EXISTING LAWN.
- CONTRACTOR SHALL MULL WITH ZIPPER TYPE EQUIPMENT EXISTING PAVEMENT ALONG SEWER MAIN (10' MAXIMUM PAYMENT WIDTH FOR DEPTHS UP TO AND INCLUDING 10'; 12' MAXIMUM PAYMENT WIDTH FOR DEPTHS GREATER THAN 10' AS MEASURED VERTICALLY FROM THE SEWER INVERT) AND ALONG SEWER LATERALS (6' MAXIMUM PAYMENT WIDTH). BASE BID PATCH SHALL BE PERMANENT PATCH. (NO OVERLAGE ALLOWED, TYPICAL).
- STORM BASIN INLET PROTECTION (TYPICAL).
- MAINTAIN 10' MINIMUM HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER.
- CROSS UNDERGROUND ELECTRIC IN ACCORDANCE WITH N.E.C., TYPICAL, NO SEPARATE PAYMENT.
- CONTRACTOR SHALL PAY ANY AND ALL COSTS/FEES ETC. NECESSARY TO SUPPORT UTILITY POLE AND SHALL BE RESPONSIBLE FOR REPAIR/PAYMENT TO UTILITY OWNER FOR DAMAGE DUE TO CONSTRUCTION (TYPICAL).
- DO NOT DISTURB DRIVEWAYS; REPAIR DAMAGE DUE TO CONSTRUCTION TO EXISTING OR BETTER CONDITIONS WITH NO SEPARATE PAYMENT (TYPICAL).
- MAINTAIN MIN 18" SEPARATION BETWEEN TOP OF SANITARY SEWER AND BOTTOM OF WATER (TYPICAL).
- MAINTAIN MIN. 24" SEPARATION BETWEEN TOP OF SANITARY SEWER AND BOTTOM OF STORM DRAIN (TYPICAL).
- MAINTAIN MIN. 12" SEPARATION BETWEEN TOP OF SANITARY SEWER AND BOTTOM OF GAS (TYPICAL).
- REMOVE AND REPLACE DRIVEWAY DISTURBED BY CONSTRUCTION TO EXISTING OR BETTER CONDITION AT THE UNIT PRICE IN THE BID SCHEDULE.
- ACCESS TO SITES SHALL BE BY PUBLIC RIGHT-OF-WAYS AND UTILITY EASEMENTS. OTHER ACCESS LOCATIONS REQUIRED SHALL BE SECURED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. SUPPLEMENTAL EROSION CONTROL MEASURES SHALL BE REQUIRED TO INCLUDE CONSTRUCTION ENTRANCES, SILT FENCING, RESTORATION, ETC. ADDITIONAL MEASURES SHALL BE INCLUDED AS PART OF A SUPPLEMENTAL EROSION CONTROL PLAN PREPARED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE CONSTRUCTION STAGING AREA AT HIS EXPENSE, INCLUDING ENVIRONMENTAL SURVEYS.
- THE CONTRACTOR IS EXPECTED AND REQUIRED TO COOPERATE WITH THE PROPERTY OWNERS AFFECTED BY THE WORK. PRIVATE AGREEMENTS WITH PROPERTY OWNERS MUST BE IN WRITING ON A FORM APPROVED BY THE PROJECT ENGINEER AND A COPY SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES AFFECTED BY SAID AGREEMENT. THE AGREEMENT MUST SPECIFY THAT PWC, THE CITY, CONSTRUCTION MANAGER AND THE ENGINEER SHALL BE HELD HARMLESS AGAINST ALL CLAIMS ARISING FROM THE AGREEMENT. THE OWNER DISCOURAGES PRIVATE AGREEMENTS. BEFORE FINAL ACCEPTANCE, A RELEASE FROM EACH PROPERTY OWNER THAT THE CONTRACTOR HAS MADE AN AGREEMENT WITH SHALL BE REQUIRED. THE PROPERTY OWNER'S RELEASE IS A CONDITION OF FINAL ACCEPTANCE.
- CONTRACTOR SHALL MAINTAIN A NEAT AND CLEAN JOB-SITE TO INCLUDE STAGING/STORAGE AREAS AS FOLLOWS:
 - PERFORM DUST CONTROL BY WATERING DAILY AS NEEDED OR AS DIRECTED BY THE PWC PROJECT COORDINATOR.
- COORDINATOR.
 - SWEEP STREETS A MINIMUM OF ONCE WEEKLY (FRIDAY) OR AS DIRECTED BY THE PWC PROJECT COORDINATOR.
 - BLADE, LEVEL AND RE-COMPACT ALL EXPOSED TRENCHES WEEKLY OR AS DIRECTED BY THE PWC PROJECT COORDINATOR TO PRODUCE A SMOOTH "RIDE".
 - PERFORM DAILY CLEAN-UP OF ALL DIRT, DEBRIS AND SCRAP MATERIALS.
 - REMOVE EXCESS EQUIPMENT, MATERIALS, TOOLS, ETC. NOT NEEDED.
- EXCESS SUITABLE SOIL EXCAVATED DURING CONSTRUCTION SHALL BE STOCKPILED FOR USE ON THE PROJECT OR DISPOSED OF OFF-SITE AS DIRECTED BY THE PWC PROJECT COORDINATOR. THE CONTRACTOR SHALL NOT BE ALLOWED TO STOCKPILE MATERIALS OR EXCESS MATERIALS IN THE STREET RIGHT-OF-WAYS AT ANY TIME. THE CONTRACTOR SHALL PROVIDE A SUFFICIENT AND SUITABLE STOCKPILE AREA AND LOCATION AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROVIDE MEASURES DURING CONSTRUCTION TO SECURE THE SITE AND EXCAVATION FROM THE GENERAL PUBLIC AND COMPLY WITH ALL OSHA REGULATIONS. JOB SITE SAFETY IS THE EXCLUSIVE AND SOLE RESPONSIBILITY OF THE CONTRACTOR. OPEN EXCAVATION LEFT UNATTENDED OR OVER NIGHT IS NOT ACCEPTABLE AND SHALL BE FILLED IMMEDIATELY.
- CONTRACTOR SHALL REPAIR OR REPLACE DRIVES DISTURBED BY CONSTRUCTION TO EXISTING OR BETTER CONDITIONS. NO SEPARATE PAYMENT UNLESS OTHERWISE INDICATED.
- CONTRACTOR SHALL PROVIDE TEMPORARY FENCING WHERE FENCES ARE REMOVED FOR CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE FENCE REMOVAL/REINSTALLATION WITH INDIVIDUAL PROPERTY OWNERS PRIOR TO REMOVAL. CONTRACTOR SHALL REINSTALL ALL SHEDS, ETC. TO AS GOOD OR BETTER THAN EXISTING CONDITIONS UNLESS OTHERWISE INDICATED. FENCE REINSTALLATION SHALL USE ALL NEW MATERIALS. (NO SEPARATE PAYMENT).
- CONTRACTOR SHALL REPLACE ALL DISTURBED MAILBOXES, SIGNS, ETC. DISTURBED DURING CONSTRUCTION WITHIN 24 HOURS OF DISTURBANCE. PERMANENT ROAD SIGNAGE DISTURBED SHALL BE REPLACED IMMEDIATELY AND IF NECESSARY ROADWAY SIGNS SHALL BE TEMPORARILY INSTALLED IN A LOCATION CONSISTENT WITH THE NCDOT TO PROVIDE CONTINUOUS TRAFFIC AWARENESS OF ROADWAY CONDITIONS. (NO SEPARATE PAYMENT).
- CONTRACTOR SHALL PROVIDE SECURITY FENCING, SECURITY GUARD, AND ANY AND ALL OTHER MEASURES CONTRACTOR DEEMS NECESSARY TO PROTECT EQUIPMENT AND MATERIALS STORED ON THE PROJECT. (NO SEPARATE PAYMENT).
- WHERE CONTRACTOR CEASES WORK OPERATIONS FOR A 72 HOUR PERIOD OR LONGER, SUCH AS HOLIDAYS, ETC., THE FOLLOWING SHALL BE ACCOMPLISHED PRIOR TO THE WORK STOPPAGE.
 - CONTRACTOR SHALL STORE ALL EQUIPMENT IN THE CONTRACTOR STAGING AREA OR OFF SITE.
 - THE CONTRACTOR SHALL SWEEP ALL STREETS, PERFORM GENERAL CLEANUP AND SHALL PERFORM MAINTENANCE ON ALL EXPOSED PATCHES.
- CONTRACTOR SHALL SCHEDULE WORK AND MATERIAL DELIVERIES SO THAT STORED MATERIAL QUANTITIES ON THE JOB SITE SHALL BE MINIMIZED.
- CONTRACTOR SHALL STORE ALL MATERIALS IN THE CONTRACTOR STAGING AREA 72 HOURS PRIOR TO INCORPORATING INTO THE WORK TO REDUCE OBSTRUCTIONS TO TRAFFIC AND INCONVENIENCE TO RESIDENTS. WHERE UTILITIES ARE BEING CONSTRUCTED IN EASEMENTS OUT OF TRAFFIC AREAS CONTRACTOR MAY STORE MATERIALS AHEAD OF CONSTRUCTION FOR A DISTANCE NOT GREATER THAN 1800 FEET UNLESS APPROVED OTHERWISE BY THE PROJECT ENGINEER.
- AT THE PROPERTY OWNER'S REQUEST, THE CONTRACTOR SHALL DIG UP EXISTING SHRUBS AND BUSHES WITHIN UTILITY EASEMENT TO BE DISTURBED BY CONSTRUCTION AND SET OUTSIDE THE UTILITY EASEMENT AREA IN A LOCATION DETERMINED BY THE PROPERTY OWNER (NO SEPARATE PAYMENT). PROPERTY OWNER WILL BE RESPONSIBLE FOR REPLANTING SHRUBS AND BUSHES SO REMOVED, AND SHALL BE RESPONSIBLE FOR RE-ESTABLISHING GROWTH. IF NO REQUEST IS MADE BY THE PROPERTY OWNER, DISTURBED SHRUBS AND BUSHES SHALL BE REMOVED AND DISPOSED OF OFF-SITE UNLESS OTHERWISE INDICATED.
- CLEARING AND GRUBBING SHALL BE RESTRICTED TO PERMANENT EASEMENTS ONLY. CONTRACTOR SHALL LIMIT TREE/BUSH CLEARING & GRUBBING IN THE TEMPORARY EASEMENTS, BETWEEN HOUSES AND ALONG PROPERTY LINES TO ONLY THAT WHICH IS ABSOLUTELY NECESSARY FOR CONSTRUCTION.
- UPON COMPLETION OF CONSTRUCTION CONTRACTOR SHALL FLUSH AND CLEAN OUT STORM DRAINAGE SYSTEM TO INCLUDE DRIVEWAY PIPES, AND DISPOSE OF SPOIL MATERIAL OFFSITE. (NO SEPARATE PAYMENT)
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF FAYETTEVILLE. THE INSPECTION OF ALL STORM DRAINAGE TO BE IMPACTED BY CONSTRUCTION ACTIVITIES BEFORE AND AFTER ALL CONSTRUCTION ACTIVITIES HAVE TAKEN PLACE NEAR SUCH STORM DRAINAGE DEVICES (I.E. PIPE, CATCH BASINS, MANHOLES, ETC.), (NO SEPARATE PAYMENT).
- AT LOCATIONS WHERE CONFLICTS MAY OCCUR, THE CONTRACTOR SHALL DIG UP STORM DRAINAGE PIPES PRIOR TO INSTALLING SANITARY SEWER AND ALLOW THE CITY OF FAYETTEVILLE REPRESENTATIVE TO VERIFY INVERT ELEVATIONS AND LOCATION TO ALLOW FOR ADJUSTMENT. NO SEPARATE PAYMENT.
- THE CONTRACTOR SHALL REPAIR STORM DRAINAGE DAMAGED DUE TO CONSTRUCTION TO CITY OF FAYETTEVILLE STANDARD. NO SEPARATE PAYMENT.
- CONTRACTOR SHALL REPAIR DAMAGE TO SEPTIC SYSTEMS DUE TO CONSTRUCTION TO EXISTING OR BETTER CONDITIONS IMMEDIATELY UPON DAMAGE. CONTRACTOR SHALL PUMP AND HAUL SEPTIC TANK CONTENTS AS NECESSARY DURING THE INTERIM BETWEEN SEPTIC SYSTEM DAMAGE AND REPAIR. NO SEPARATE PAYMENT.

GENERAL NOTES FOR RESIDENT RELATIONS (MANDATORY)

THE PROPOSED WORK WILL BE CONSTRUCTED WITHIN A FULLY DEVELOPED SUBDIVISION. THE CONTRACTOR IS REQUIRED TO DEVELOP GOOD RELATIONS WITH THE RESIDENTS WHICH INCLUDES THE FOLLOWING MANDATORY MINIMUM REQUIREMENTS:

- NO SPEEDING WITH EQUIPMENT AND/OR VEHICLES (25 MPH MAX.)
- DO NOT BLOCK DRIVEWAYS AT ANY TIME
- DO NOT LITTER AT ANY TIME

- DO NOT USE RESIDENTS' WATER WITHOUT THEIR PERMISSION (SIGNED AGREEMENT REQUIRED)

- ALL REQUIREMENTS FOR BACKFLOW PREVENTION BY THE PLUMBING CODE WILL BE ADHERED TO. PWC BULK WATER POLICY

- RESPOND TO RESIDENTS' COMPLAINTS WITHIN 24 HOURS

- DO NOT USE ABUSIVE LANGUAGE, PROFANITY OR CAT-CALLING

- WEAR PROPER PROTECTIVE CLOTHING (HARD HATS, PROPER SHOES, SHIRTS, ETC.)

- MAINTAIN PROPER SAFETY MEASURES, PARTICULARLY ALONG OPEN TRENCHES IF CONSTRUCTION IS STOPPED AND THE OPEN TRENCH IS NOT MANNED.

- PERSONNEL MUST WEAR A CITY APPROVED SAFETY VEST AT ALL TIMES WHILE WORKING IN THE CITY AND/OR NCDOT RIGHT-OF-WAY.

- ALL TRAFFIC CONTROL FLAG PERSONS AND AT LEAST ONE PERSON ON EACH WORK CREW MUST BE FLUENT IN THE ENGLISH LANGUAGE. IF THE CONTRACTOR AND/OR SUBCONTRACTORS CANNOT ADEQUATELY PERFORM AND/OR COMPLY WITH THESE REQUIREMENTS, THE INDIVIDUAL, SUBCONTRACTOR, OR EMPLOYEES MAY BE DIRECTED TO LEAVE THE PROJECT PERMANENTLY. INCONSIDERATE, NON-COOPERATIVE ATTITUDES AND ACTIONS WILL NOT BE TOLERATED.

- CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS AT ALL TIMES.

ORDER OF PRECEDENCE GENERAL NOTES/TECHNICAL SPECIFICATIONS/ PHOTOS

1. THE NOTES CONTAINED HEREIN ARE INTENDED TO SUPPLEMENT THE TECHNICAL SPECIFICATIONS AND PROVIDE EASY REFERENCE FOR THE CONTRACTOR. IN NO CASE SHALL THESE NOTES VOID ANY PART, SECTION OR REQUIREMENT OUTLINED IN THE TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENTS. IF CONFLICTS OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS AND THE NOTES CONTAINED HEREIN, THE TECHNICAL SPECIFICATIONS SHALL SUPERSEDE.

NOTE: UTILITIES SHOWN ON PLAN PROFILE SHEETS

ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS & SPECIFICATIONS OF THE CITY OF FAYETTEVILLE PWC (TYP)

PROPOSED SANITARY SEWER MANHOLE RIM ELEVATIONS SHOWN ARE TO EXISTING PAVEMENT GRADES AND DO NOT REFLECT THE NEW RIM ELEVATIONS RESULTING FROM ASPHALT OVERLAY.

UTILITY OWNERS IN AREA:

WATER: AQUA AMERICA
SANITARY SEWER: FAYETTEVILLE PUBLIC WORKS COMMISSION
CABLE TELEVISION: SPECTRA
TELEPHONE: CENTURY LINK
STORM DRAINAGE: CITY OF FAYETTEVILLE AND NCDOT
ELECTRIC: FAYETTEVILLE PUBLIC WORKS COMMISSION
LUMBER RIVER EMC

EXISTING UNDERGROUND UTILITIES WARNING

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR LOCATING, PROTECTING, AND COORDINATING WITH OR ROUTING AROUND ALL EXISTING UTILITIES. EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, BASED UPON INFORMATION PROVIDED BY THE OWNER FROM PREVIOUS PROJECT DOCUMENTATION AND A PHYSICAL SURVEY OF VISIBLE OBJECTS AND SHOULD NOT BE CONSIDERED COMPLETE OR ACCURATE. THE CONTRACTOR MUST PROVIDE ALL NECESSARY LOCATING SERVICES AT CONTRACTOR'S EXPENSE PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF SAME PRIOR TO BEGINNING CONSTRUCTION. THE USE OF CURRENT TECHNOLOGY, EXPLORATORY EXCAVATION, GROUND PENETRATING RADAR, VACUUM EXCAVATION AND SIGNIFICANT HAND EXCAVATION IS EXPECTED AND REQUIRED. ANY UNDERGROUND ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

PWC WATER LATERAL REPAIR (TYP.)

CONTRACTOR SHALL REPAIR 1" WATER LATERALS DISTURBED BY CONSTRUCTION WITH 1" COPPER FROM MAIN TO METER. IF 3/4" WATER LATERAL IS DISTURBED DUE TO CONSTRUCTION CONTRACTOR SHALL REPLACE LATERAL WITH 1" COPPER FROM MAIN TO METER IN ACCORDANCE WITH PWC STANDARDS. NO SEPARATE PAYMENT.

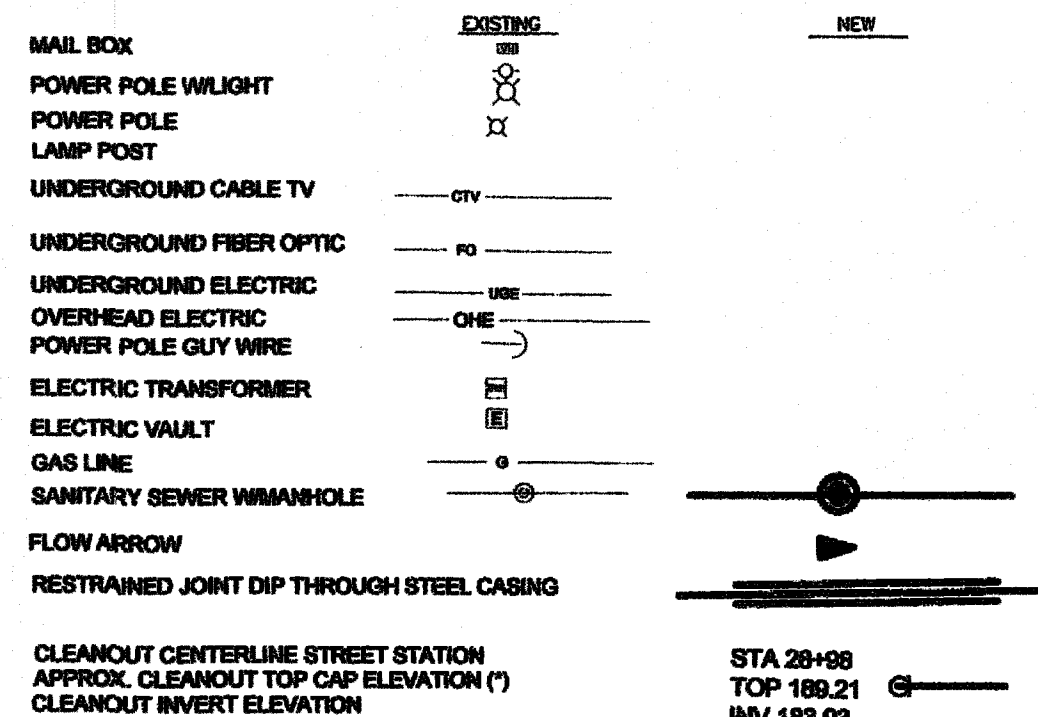
AQUA AMERICA WATER LATERAL REPAIR (TYP.)

CONTRACTOR SHALL REPAIR WATER LATERALS DISTURBED BY CONSTRUCTION IN ACCORDANCE WITH AQUA AMERICA WATER LATERAL STANDARDS. NO SEPARATE PAYMENT.

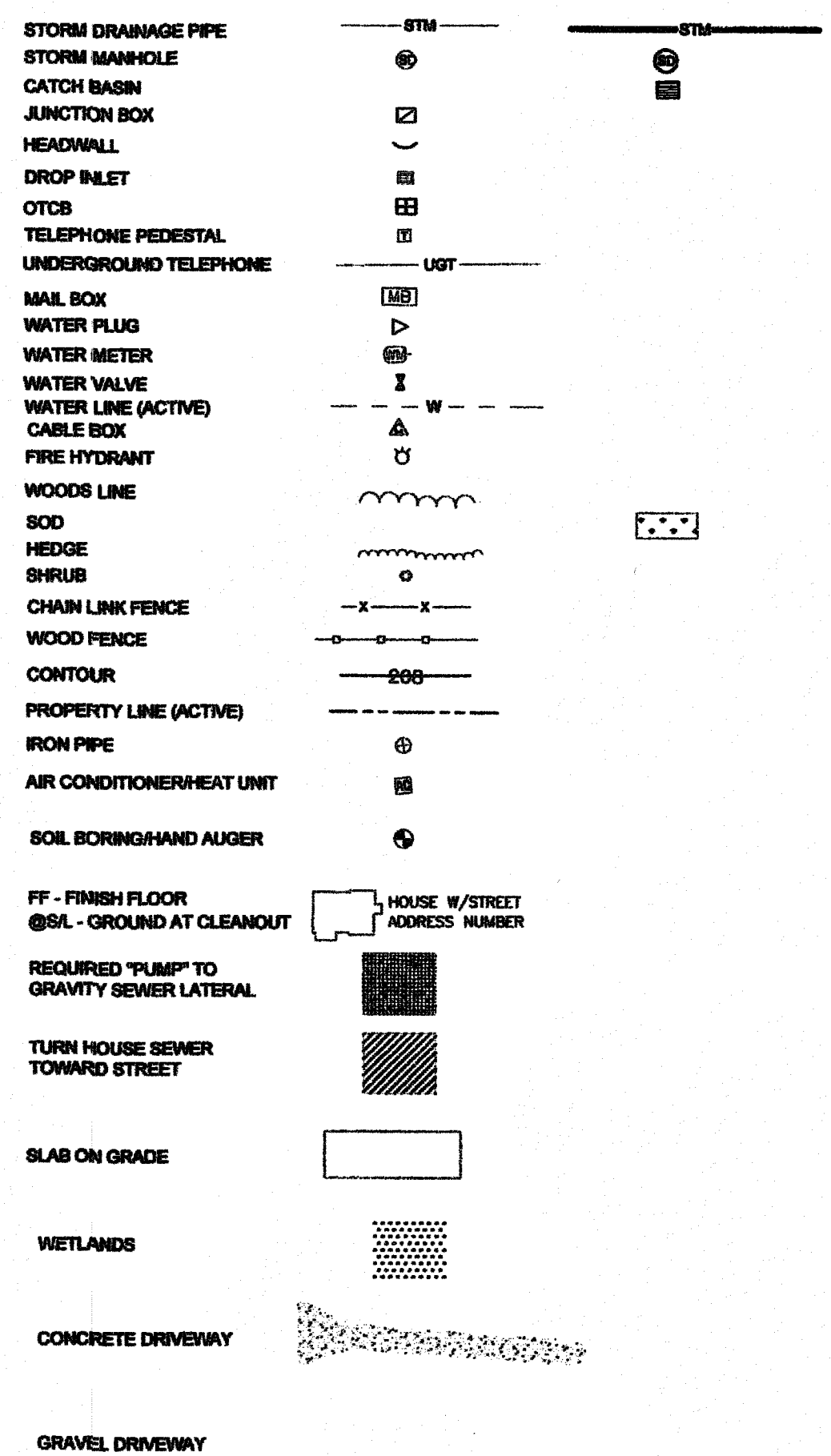
SURVEY NOTES

- SURVEY WAS PERFORMED BY: MOORMAN, KIZER & REITZEL, INC. FIRM LICENSE # F-0108 115 BROADFOOT AVE. FAYETTEVILLE, NC 28305 (910) 484-5191 (OFFICE)
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
- THE PRIMARY VERTICAL AND HORIZONTAL CONTROL POINTS FOR THIS PROJECT WERE GENERATED FROM SURVEYOR'S GPS OBSERVATIONS UTILIZING A SPECTRA SP80 FREQUENCY RECEIVER WITH BROADCAST CORRECTIONS FROM THE NORTH CAROLINA VIRTUAL REFERENCE SYSTEM (NRS).
- THE HORIZONTAL DATUM IS NC GRID (NAD83/2011) IN U.S. SURVEY FEET.
- THE VERTICAL DATUM IS (NAVD88) IN U.S. SURVEY FEET.
- THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES SHOWN HEREON ARE PLOTTED FROM DEEDS AND MAPS OF RECORD.
- THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A CERTIFIED TITLE REPORT AND THEREFORE, THE PROPERTY SHOWN MAY BE SUBJECT TO UNRECORDED OR UNRECORDED RIGHT-OF-WAYS, EASEMENTS, RESTRICTIONS OF RECORD, OR OTHER ENCUMBRANCES NOT OBSERVED OR SHOWN.
- THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATIONS AND ARE BASED ON ABOVE GROUND FEATURES, PHYSICAL EVIDENCE, PAINT MARKINGS PROVIDED BY OTHERS, AND UTILITY PLANS. THE SURVEYOR DOES NOT GUARANTEE THAT ALL EXISTING UNDERGROUND STRUCTURES SUCH AS UTILITIES, TANKS, PIPES, ETC. ARE LOCATED EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. NO EXCAVATIONS WERE MADE BY THE SURVEYOR TO LOCATE ANY BURIED UTILITIES OR STRUCTURES.
- NO DETERMINATION HAS BEEN MADE BY THE SURVEYOR AS TO THE FOLLOWING: WETLANDS, UNDERGROUND STORAGE FACILITIES, GRAVES, CEMETERIES OR BURIAL GROUNDS, HAZARDOUS WASTE DEPOSITS, OR MATERIALS.
- DATE OF SURVEY: 8/2020 THRU 12/2020.

LEGEND



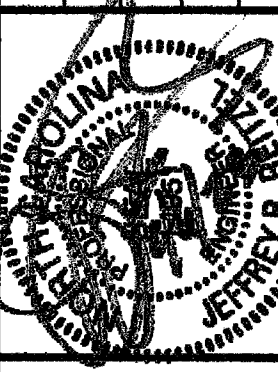
(*) CLEANOUT TOP ELEVATION IS APPROXIMATE AND SHALL BE ADJUSTED BY CONTRACTOR TO CONFORM WITH P.W.C. STANDARD SEWER LATERAL DETAIL COVER REQUIREMENT. (NO SEPARATE PAYMENT)



Drawn by David M...
Checked David E. Vaughn, PE, PLS
Reviewed Jeffrey B. Reitzel, PE, PLS
Date OCT 2022

Fayetteville Annexation Phase V Construction Project XII Area 26 - Cliffdale West Utility Notes & Legend

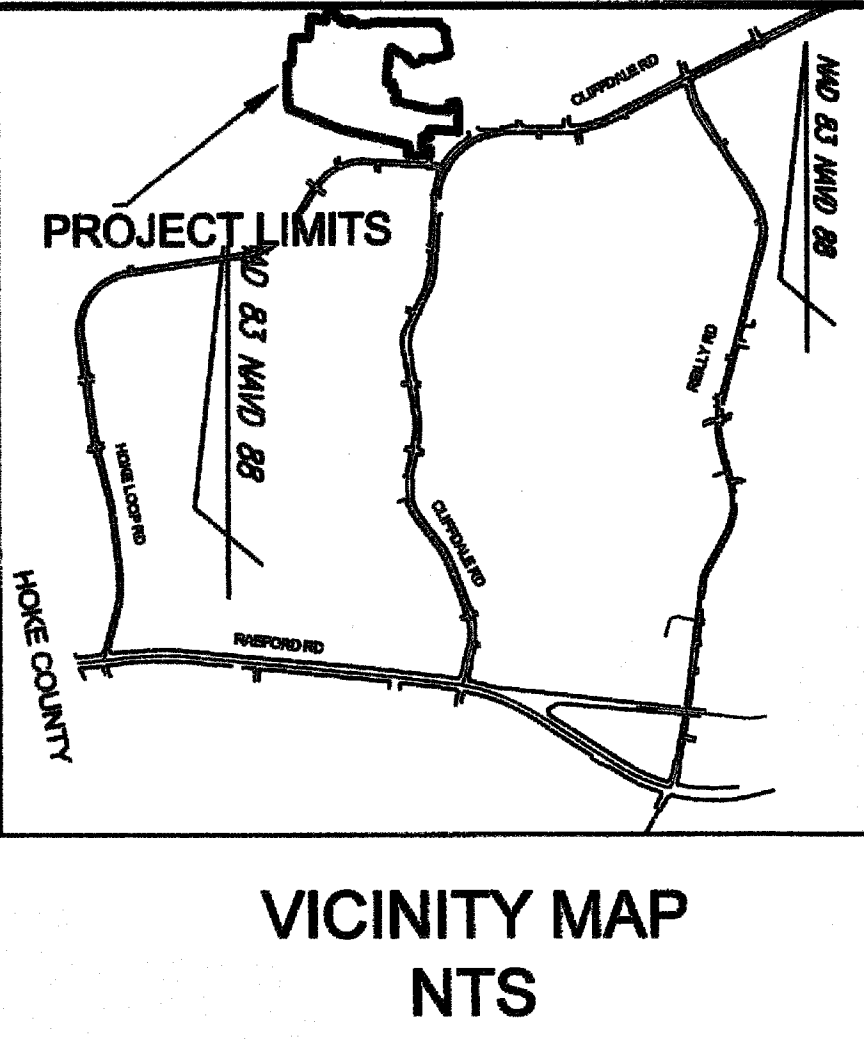
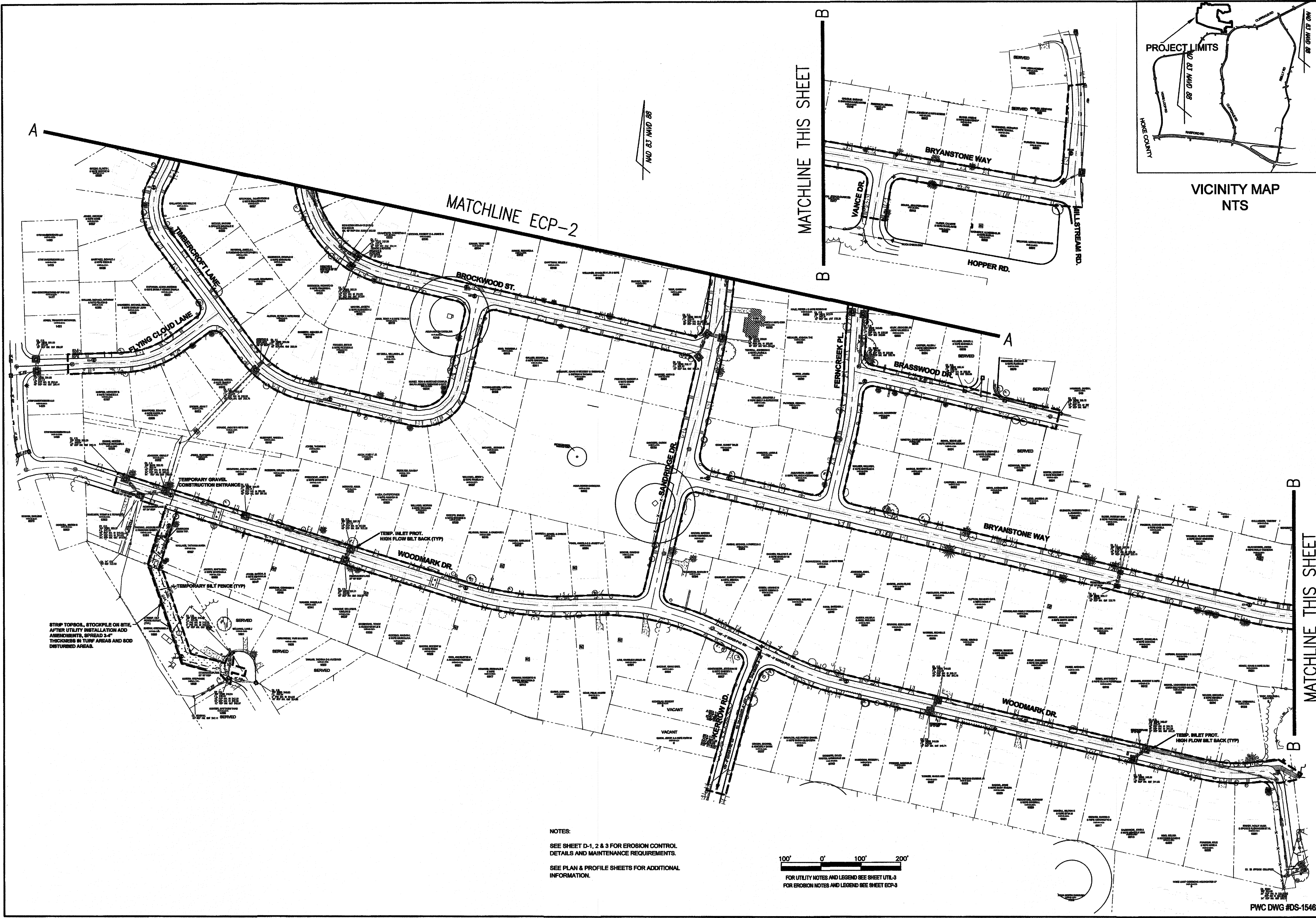
Revision	By	Date



115 Broadfoot Avenue
Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191



Scale 1" = 100'
Book no.
Sheet UTIL - 3



Drawn by
David E. Vaughn, PE, PLS
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Reitzel, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Partial Erosion Control Plan

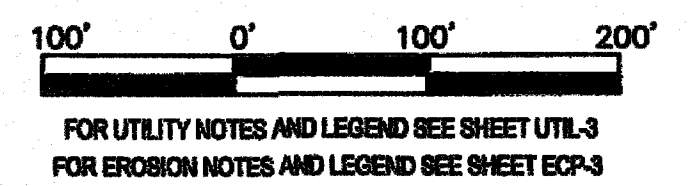
Revision	By	Date

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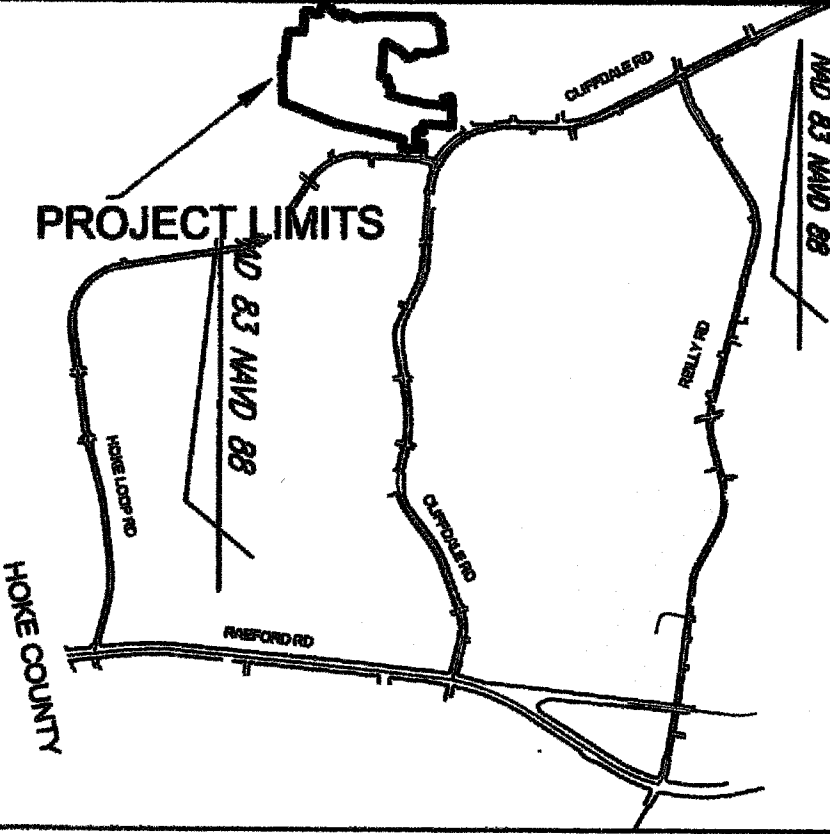
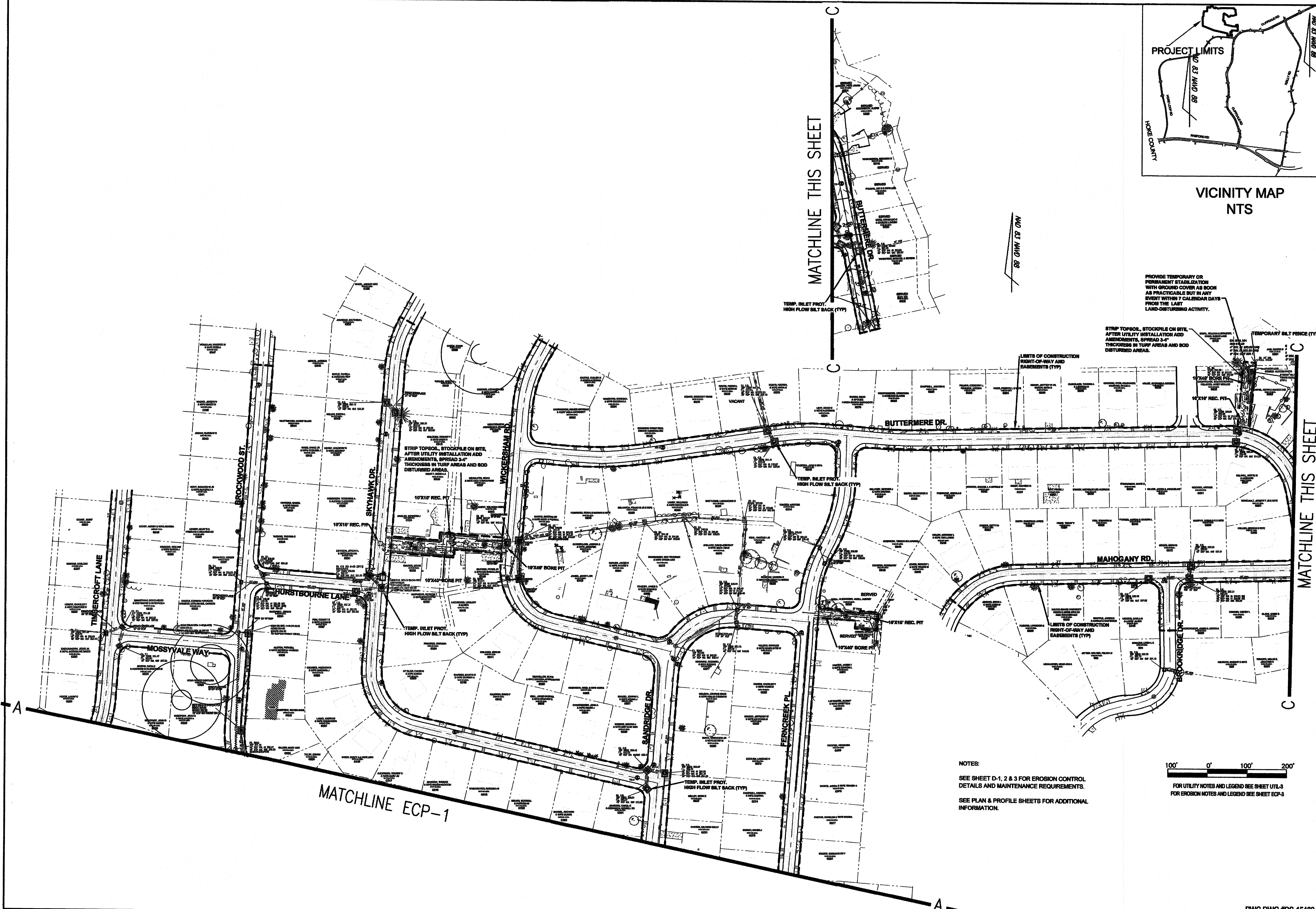
MOORMAN, KIZER & REITZEL, INC.
ENGINEERS
PLANNERS
SURVEYORS

Scale 1" = 100'
Book no.
Sheet
ECP - 1

NOTES:
SEE SHEET D-1, 2 & 3 FOR EROSION CONTROL
DETAILS AND MAINTENANCE REQUIREMENTS.
SEE PLAN & PROFILE SHEETS FOR ADDITIONAL
INFORMATION.



PWC DWG #DS-15462



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David M. Smith
Checked
David E. Vaughn, P.E., PLS
Reviewed
Jeffrey B. Reitzel, P.E., PLS
Date
OCT 2022

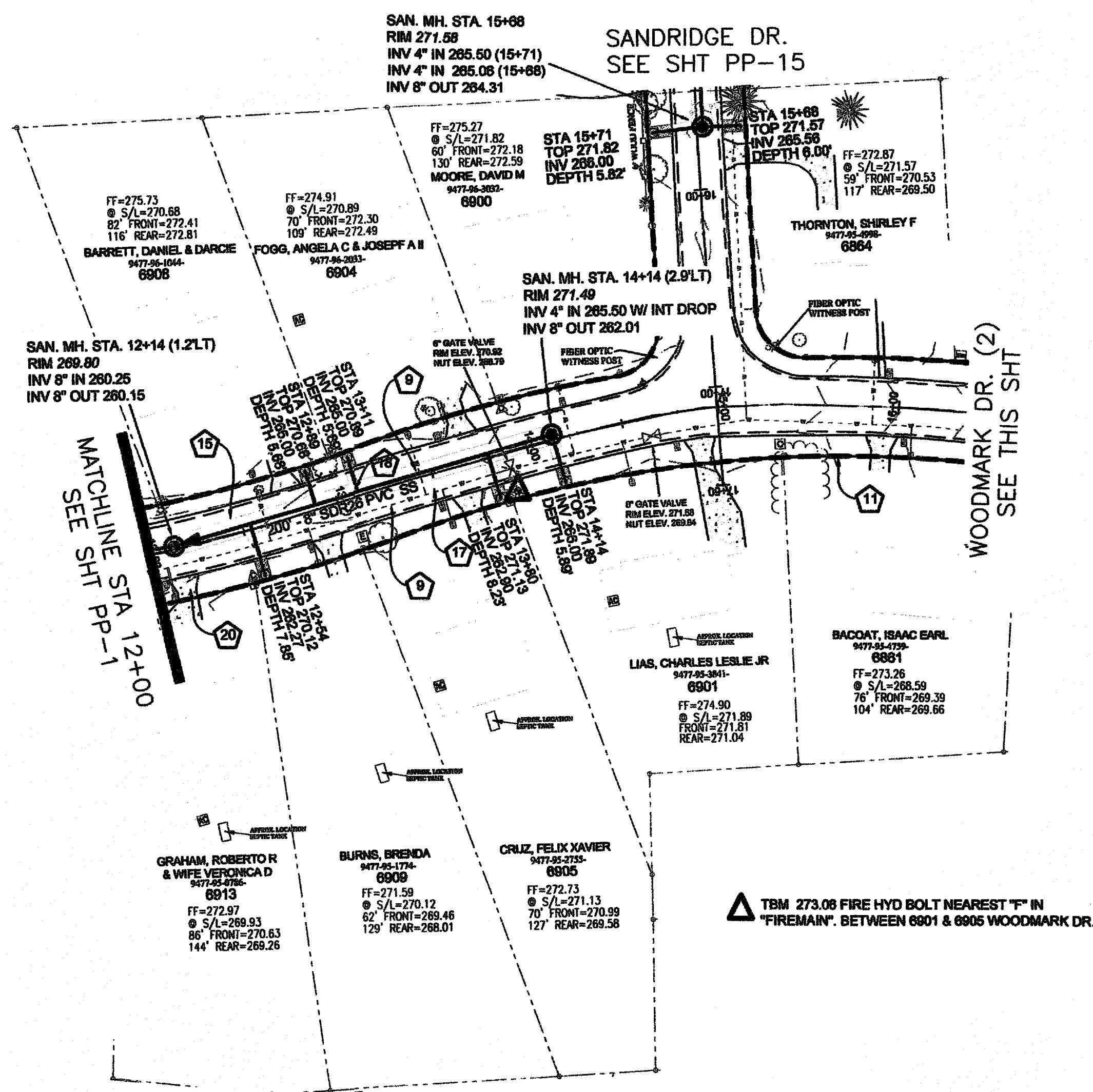
Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Partial Erosion Control Plan

Revision	By	Date

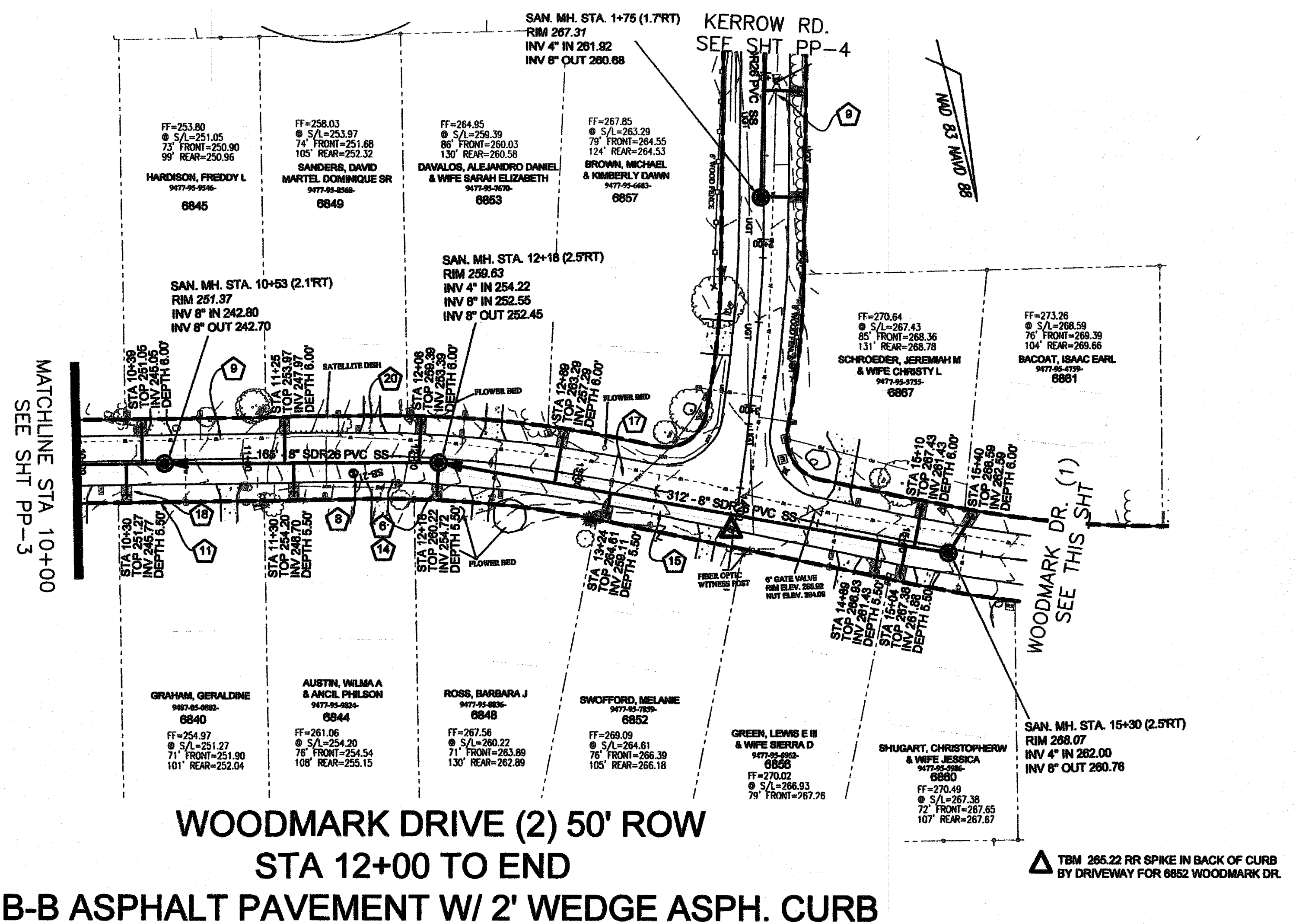
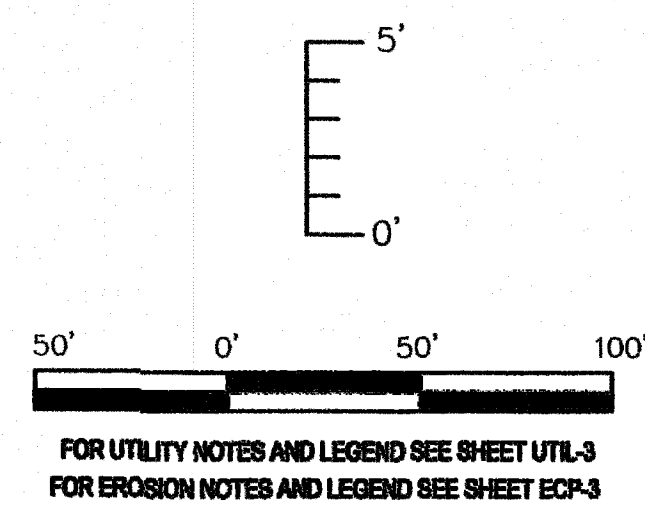
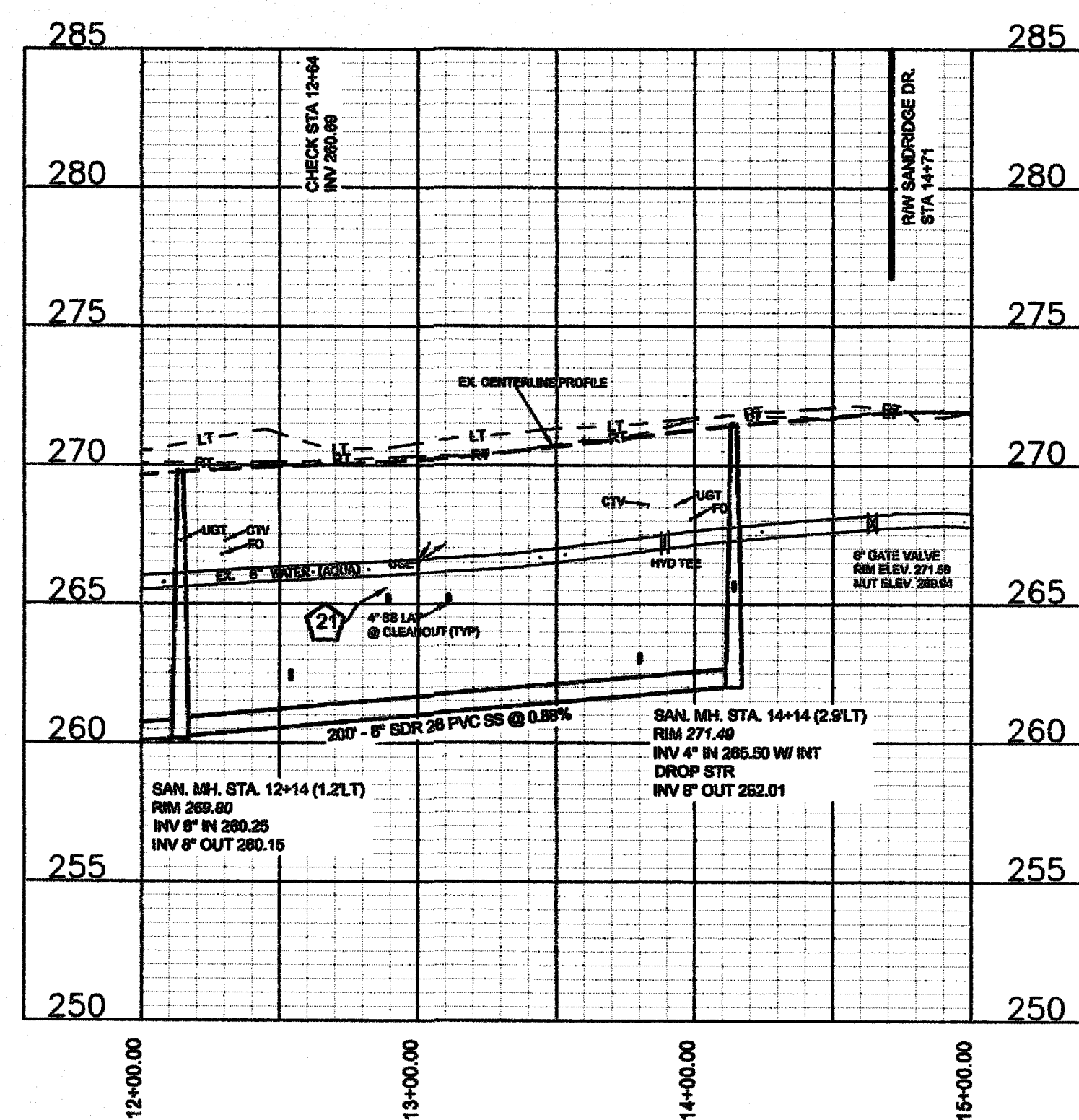
115 Broadfoot Avenue
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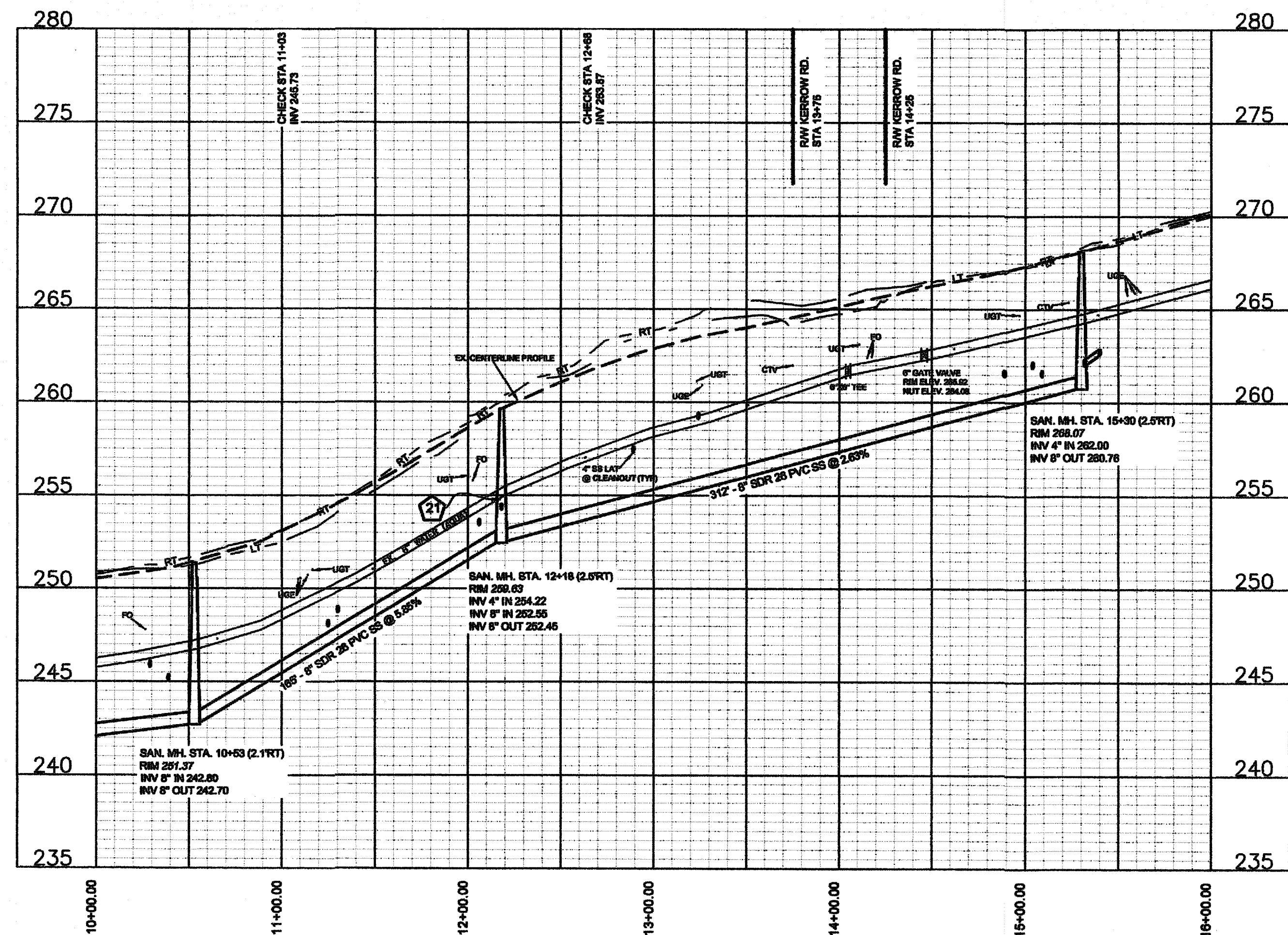
Scale 1" = 100'
Book no.
Sheet
ECP - 2



WOODMARK DRIVE (1) 50' ROW
STA 12+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



WOODMARK DRIVE (2) 50' ROW
STA 12+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Drawn by
David E. Vaughn, PE, PLS
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Ralston, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Woodmark Dr. (1) & (2) STA 12+00 to End

Revision	By	Date

115 Broadfoot Avenue
Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
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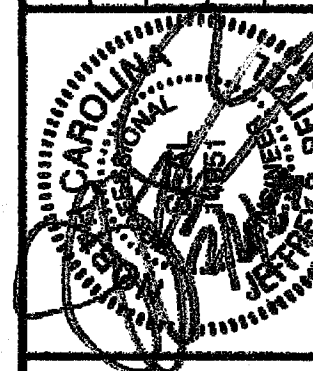
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SURVEYORS
MOORMAN, KIZER & REITZEL, INC.

Scale
1" = 50' HOR
1" = 5' VER

Book no.
Sheet
PP-2

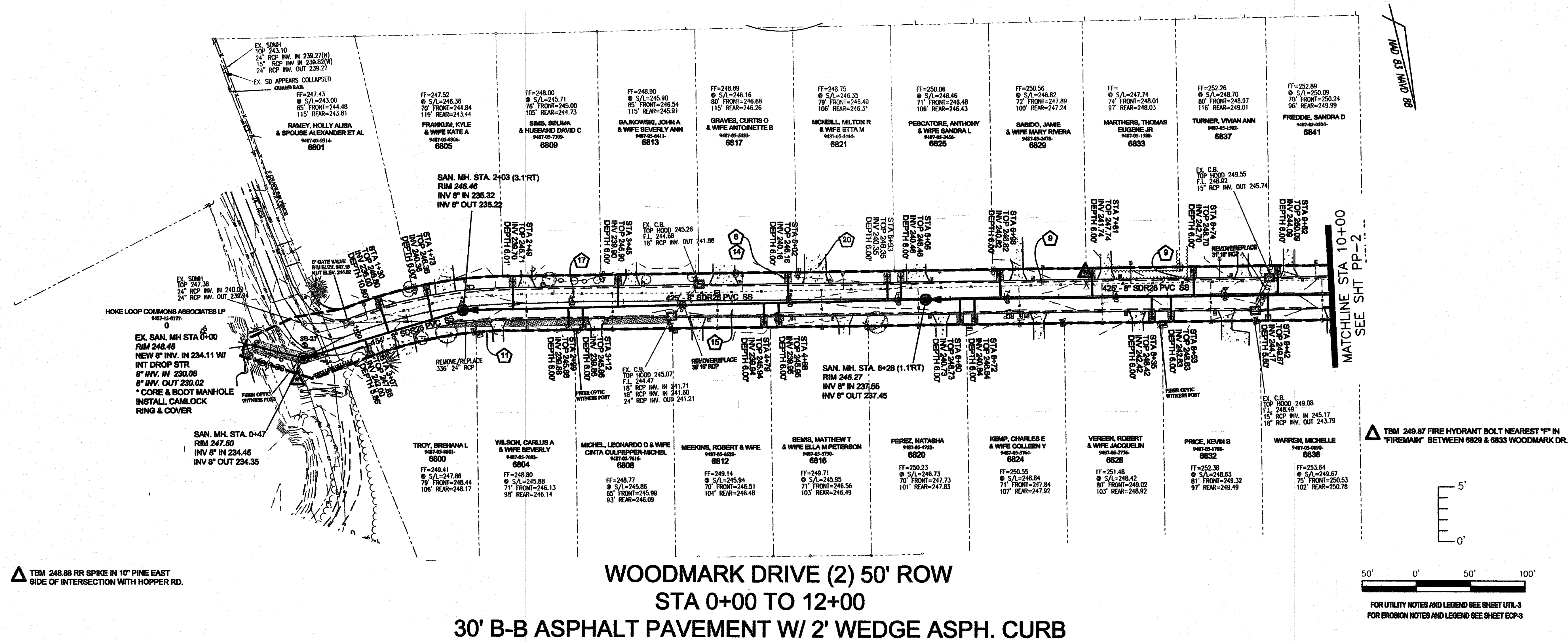
PWC DWG #DS-15482

By	Date
Revision	



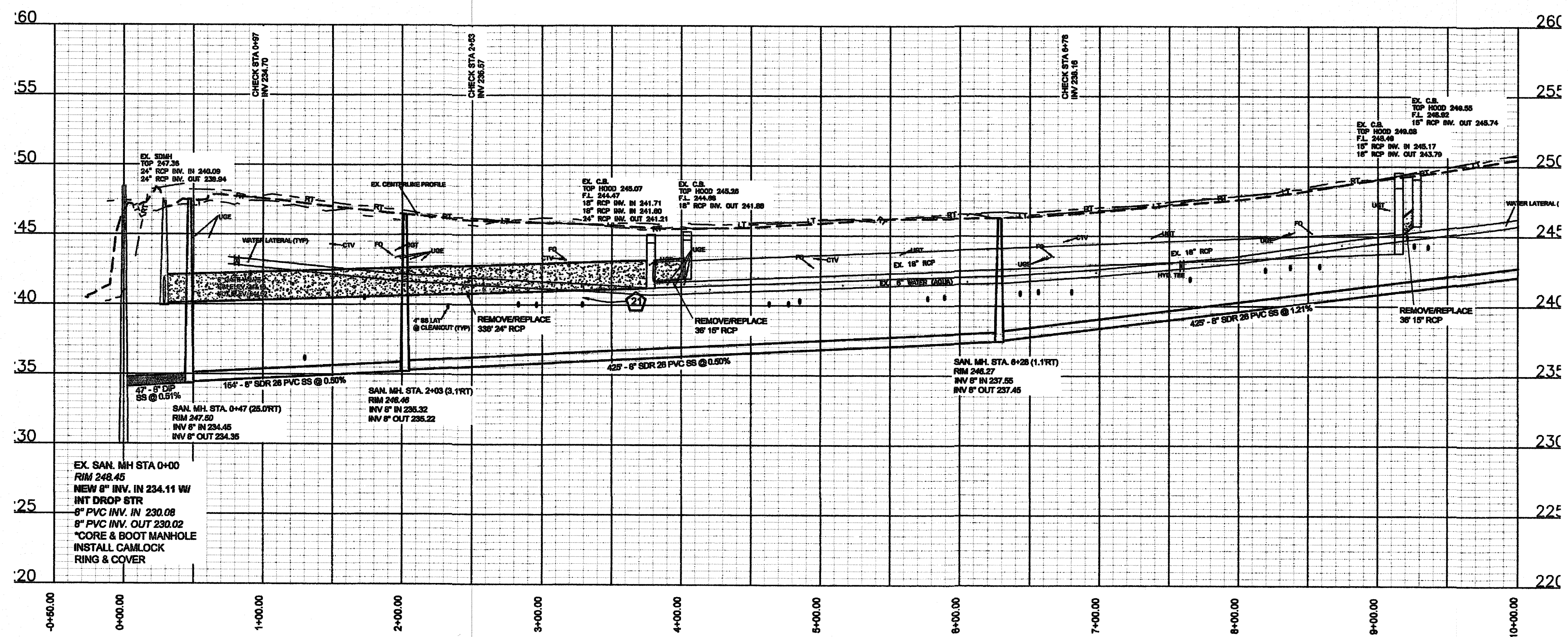
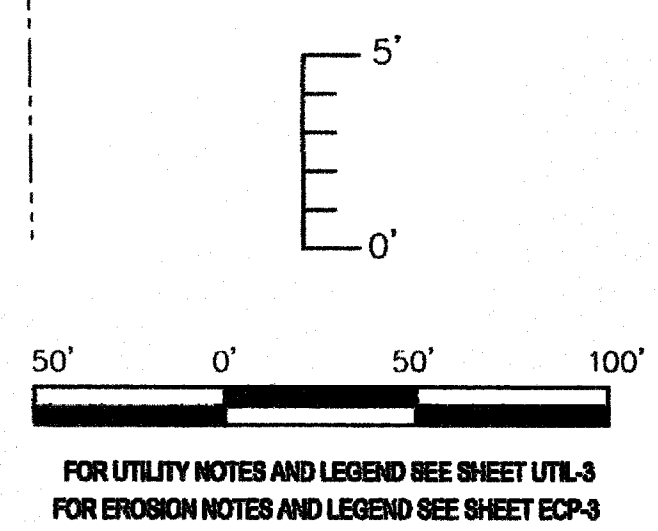
115 Broadfoot Avenue
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Phone 910-484-5191
Firm No. F-0106

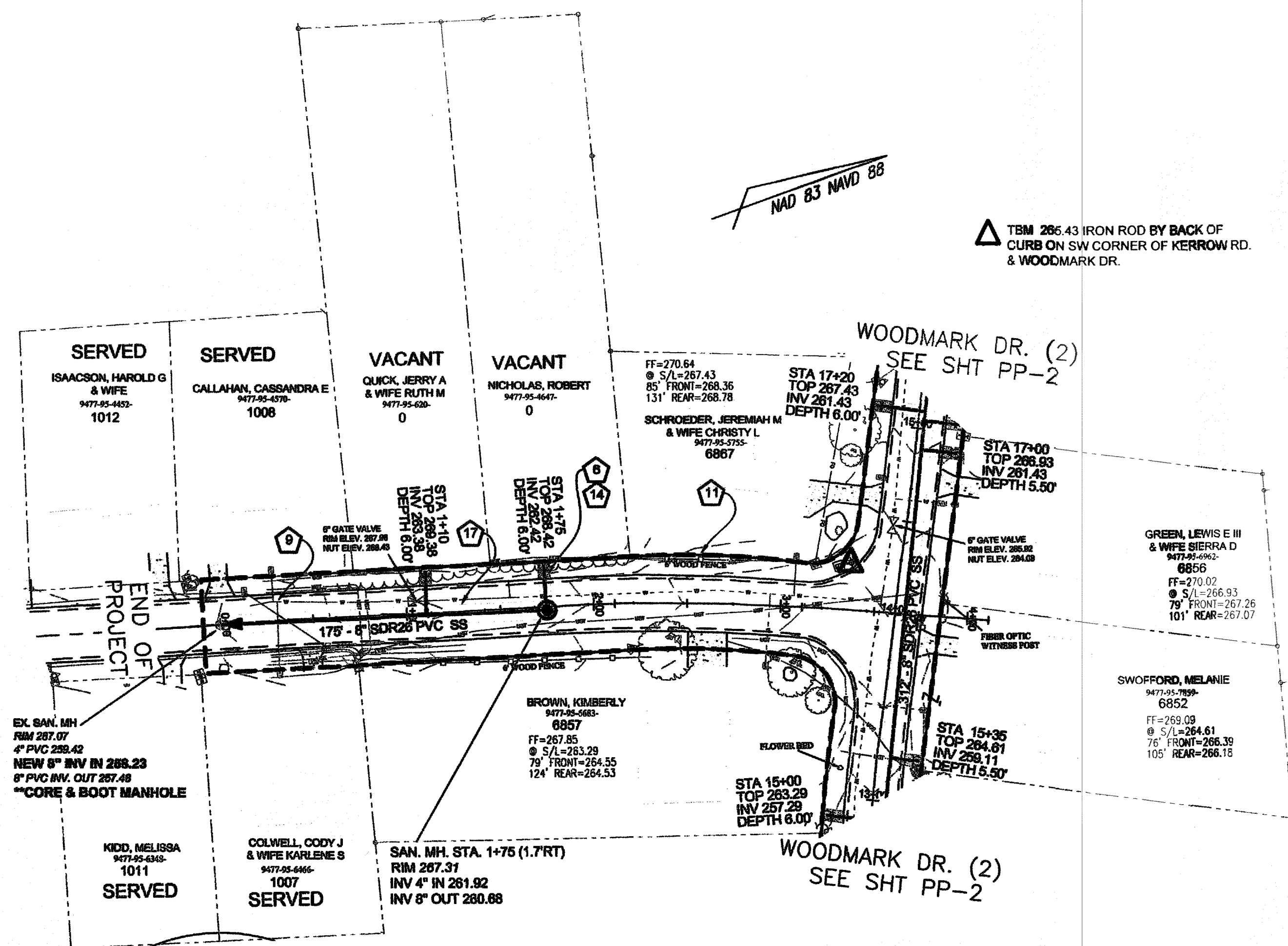
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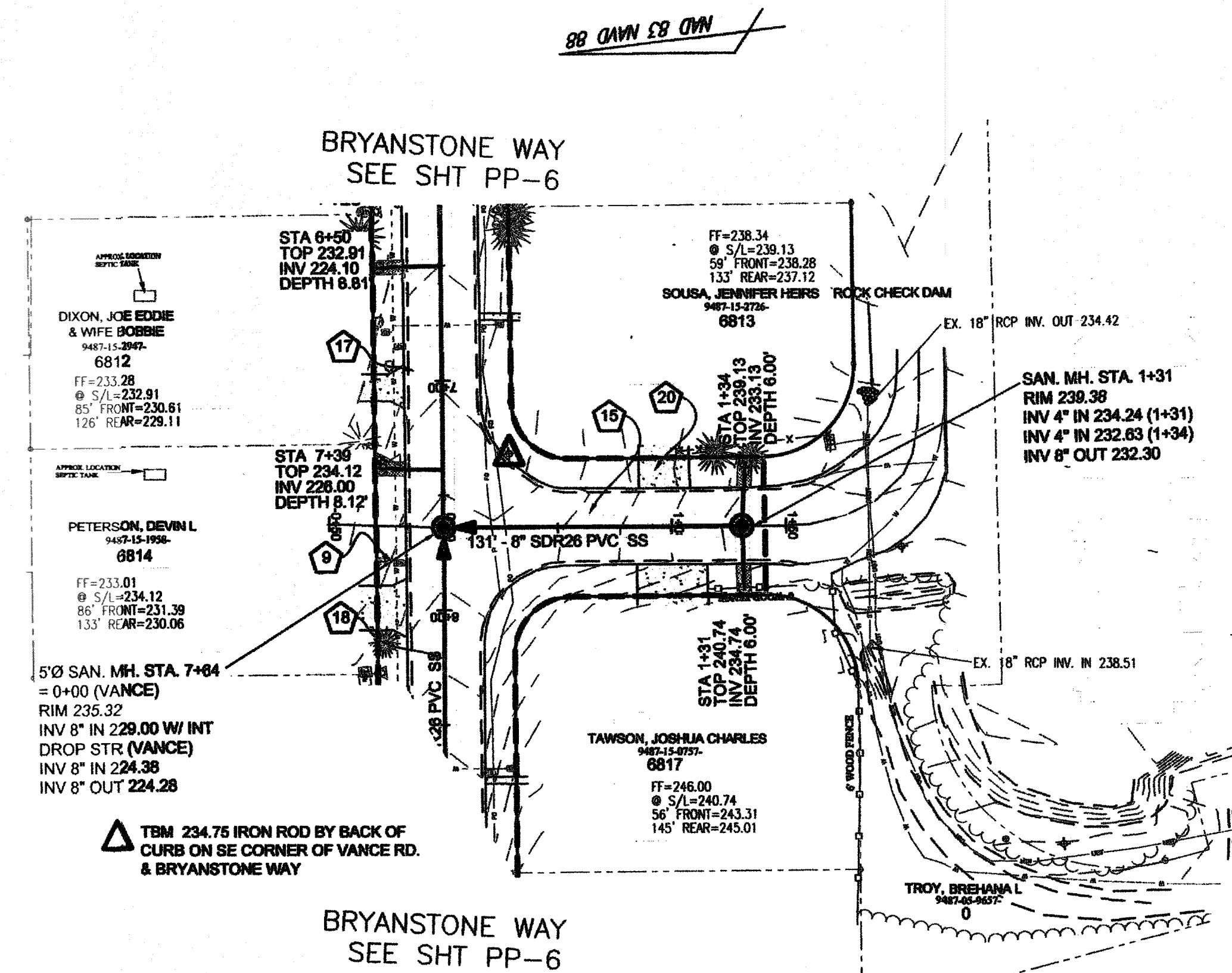
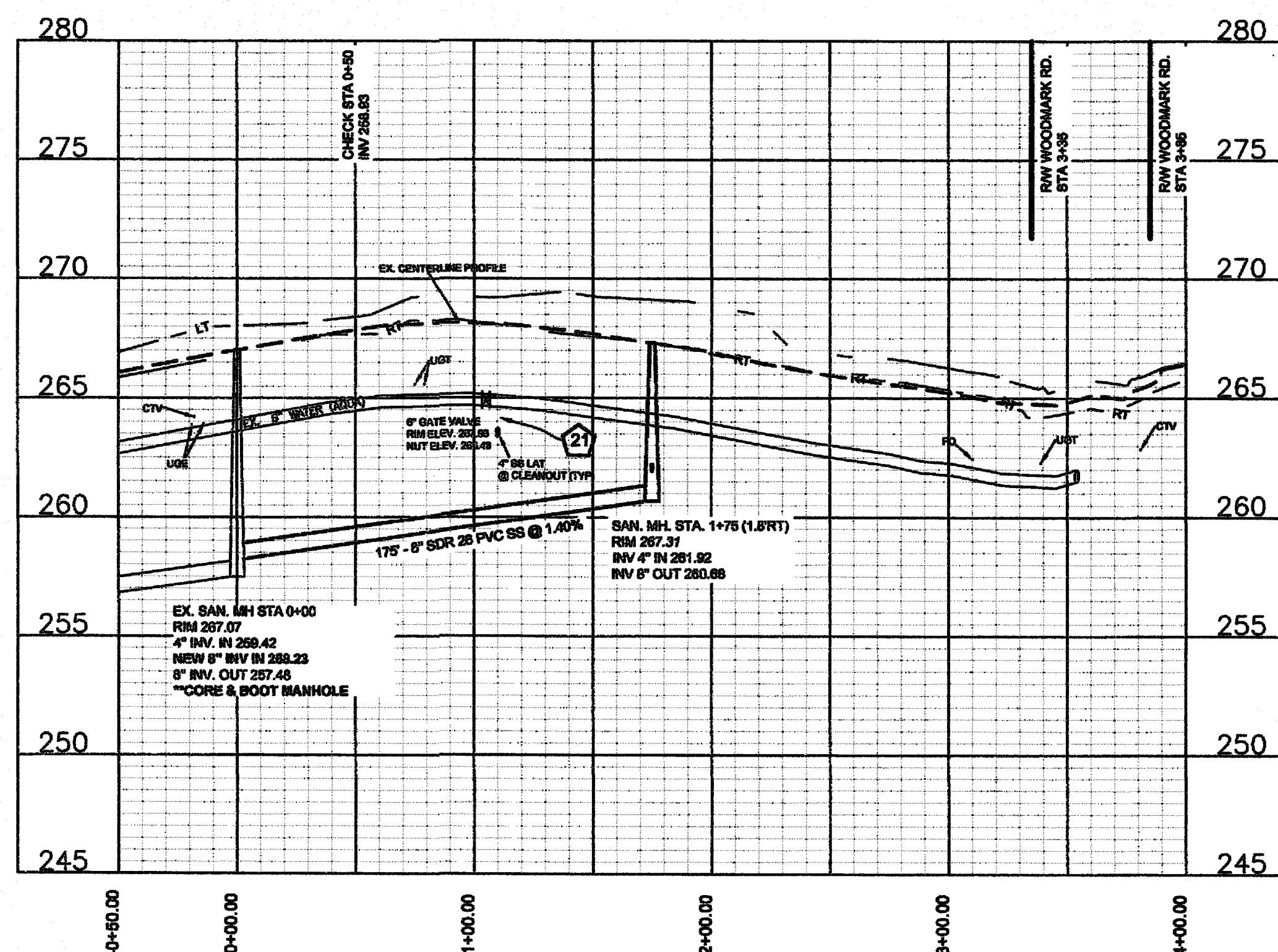
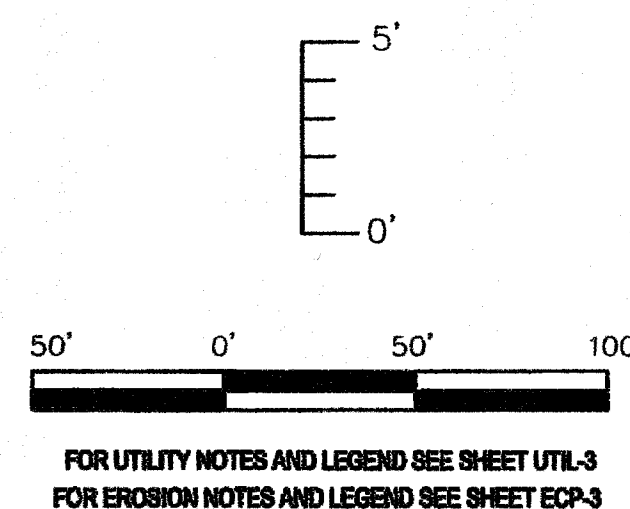
△ TBM 248.88 RR SPIKE IN 10' PINE EAST
SIDE OF INTERSECTION WITH HOPPER RD.

△ TBM 248.87 FIRE HYDRANT BOLT NEAREST "F" IN
"FIREMAIN" BETWEEN 6828 & 6833 WOODMARK DR.

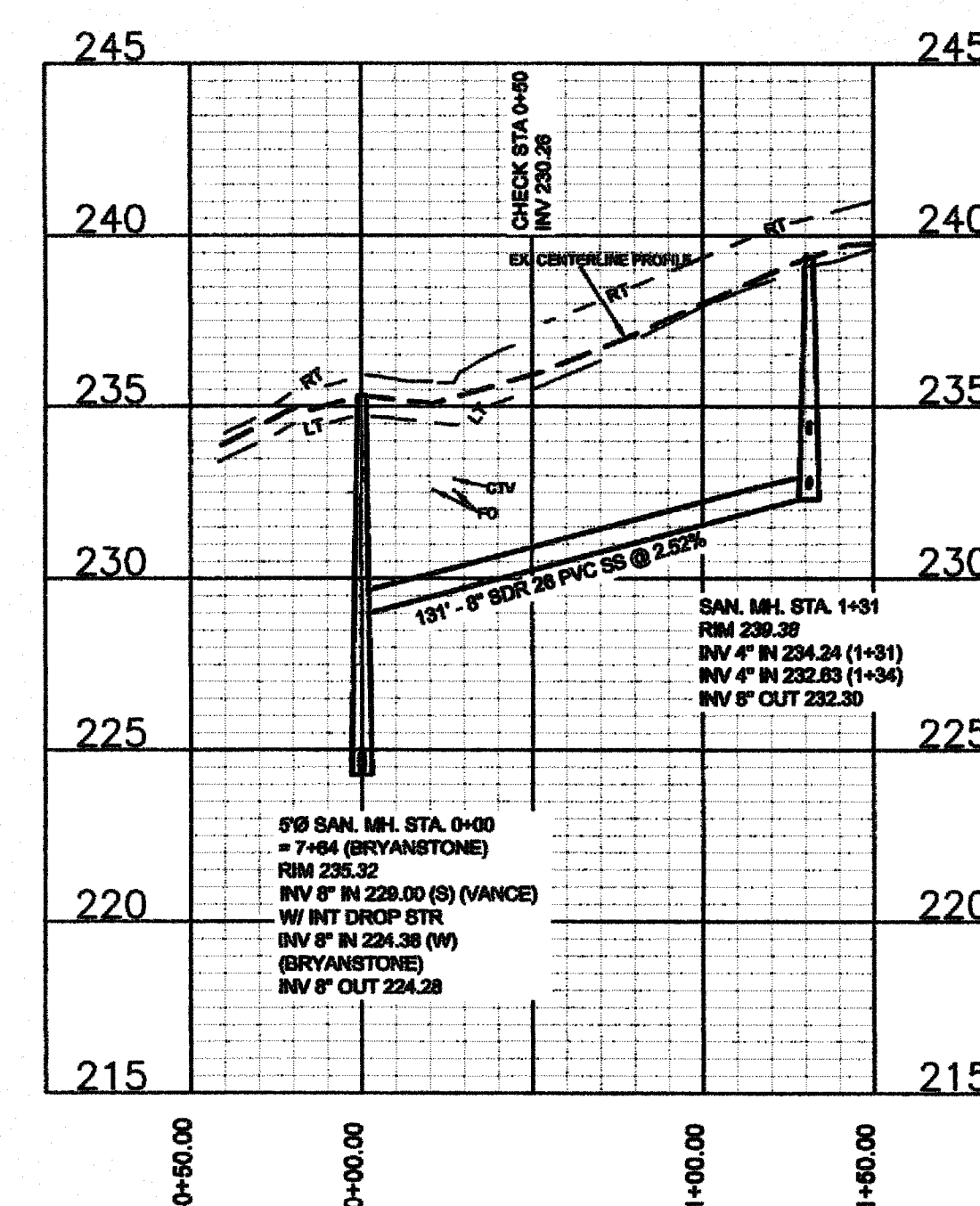




KERROW RD. 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



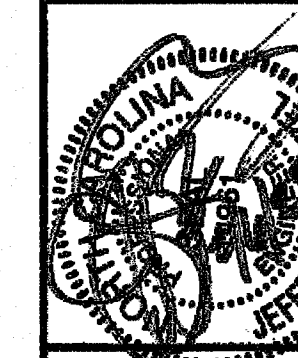
VANCE DR. 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Drawn by
David E. Vaughn, PE, PLS
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Ratzel, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Kerrow Rd. & Vance Dr. STA 0+00 to END

Revision	By	Date



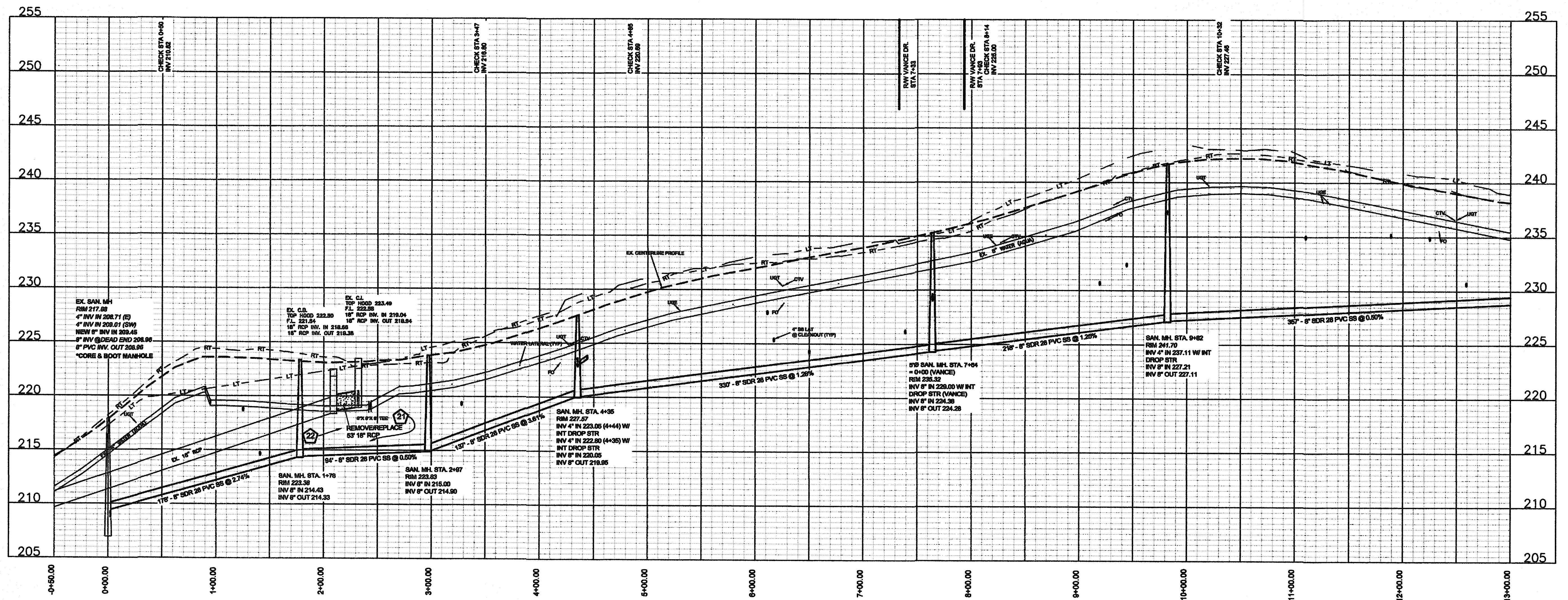
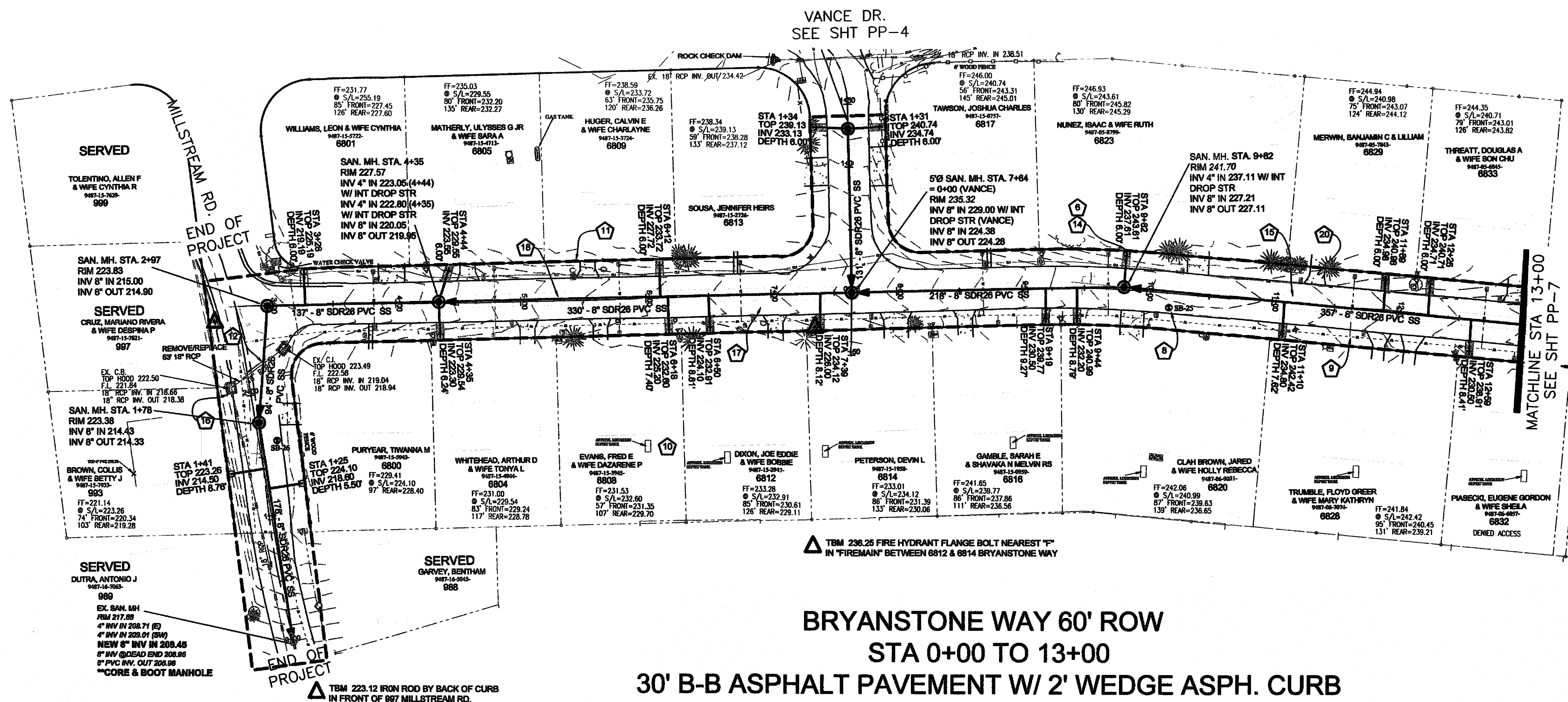
115 Broadfoot Avenue
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Phone 910-484-5191
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Sheet
PP-4

PWC DWG #DS-15462

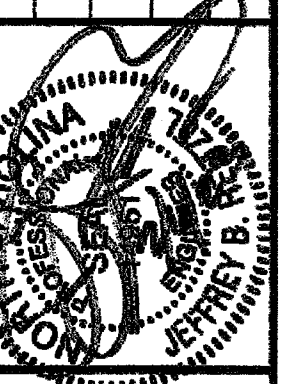
Kerrow Rd. & Vance Dr. STA 0+00 to End



Drawn by
David Maples
Checked
David E. Vaughn, P.E., PLS
Reviewed
Jeffrey B. Rasmussen, P.E., PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Bryanstone Way STA 0+00 to 13+00

Revision	By	Date



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Scale
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1" = 5' VER
Book no.
Sheet
PP-6

PWC DWG #DS-15462

Bryanstone Way STA 0+00 to 13+00

MATCHLINE STA 13+00
SEE SHT PP-6

SANDRIDGE DR.
SEE SHT PP-15

SANDRIDGE DR.
SEE SHT PP-15

FERNCREEK PL (2)
SEE SHT PP-9

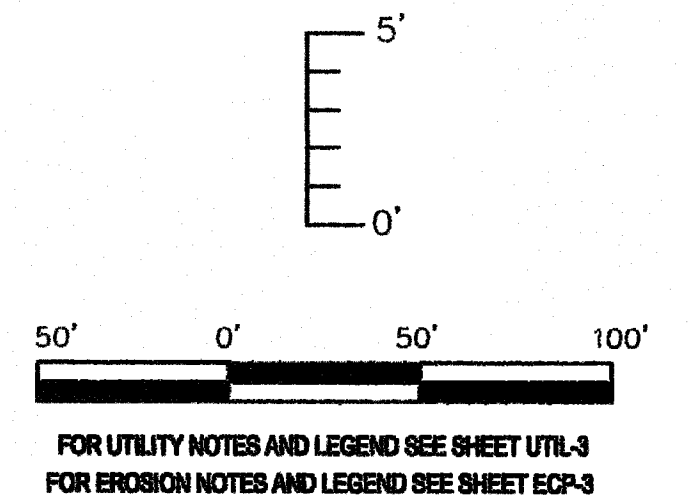
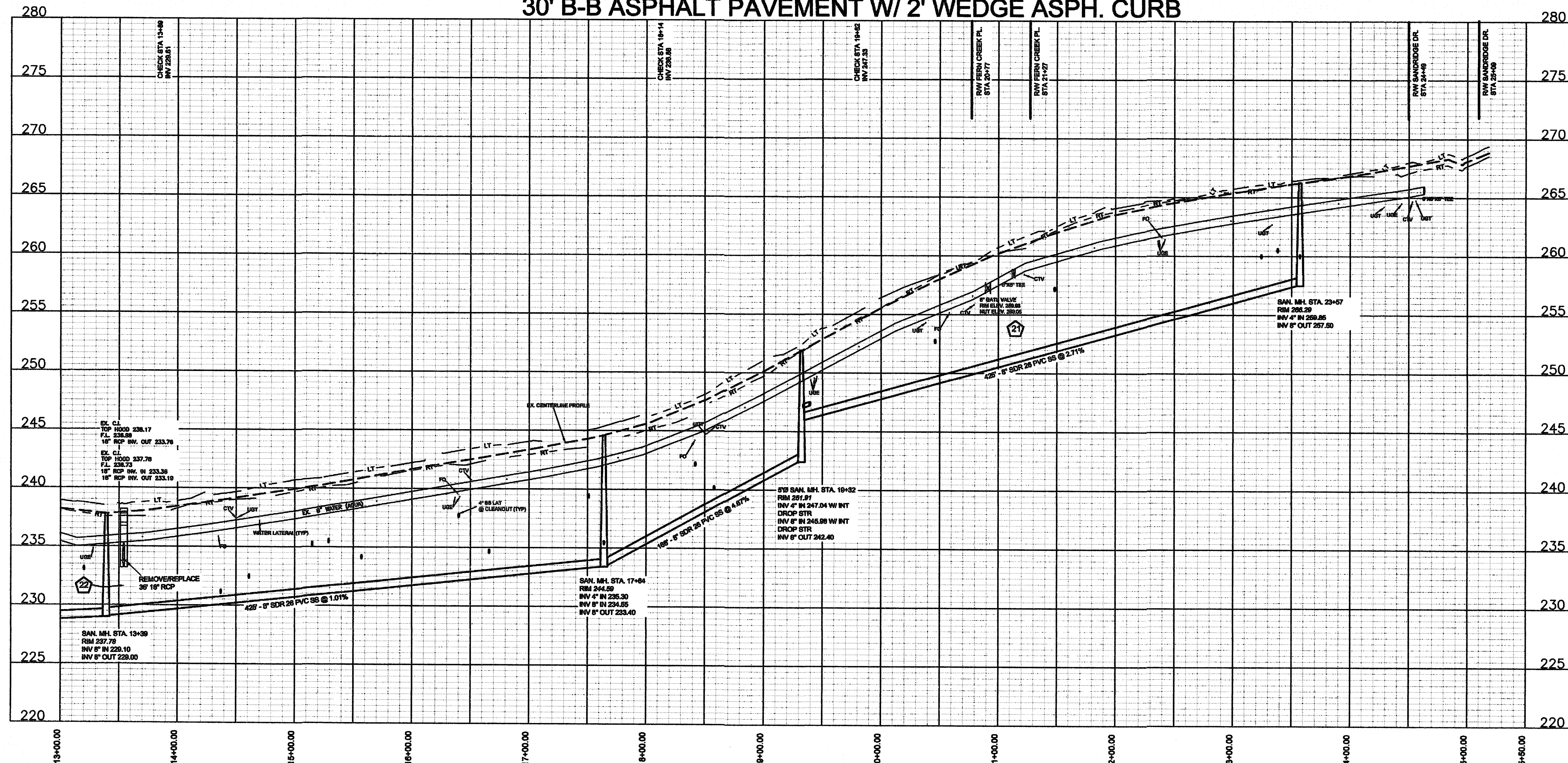
BRYANSTONE WAY 60' ROW

STA 13+00 TO END

30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB

SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #1	STA 23+66 BRYANSTONE WAY	264.19	8-1/2" PVC WATER	AQUA



Drawn by
David E. Vaughan, P.E., PLS
Checked
David E. Vaughan, P.E., PLS
Reviewed
Jeffrey B. Reitzel, P.E., PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Bryanstone Way STA 13+00 to END

By	Date

Revision	



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1" = 5' VER
Book no.
Sheet
PP-7

PWC DWG #DS-15462

Bryanstone Way STA 13+00 to End

5/0 SAN. MH. STA. 0+03 (SANDRIDGE)
= 0+00 (2.81%) (FERNCREEK 2)
= 0+00 (2.81%) (FERNCREEK 1)
RIM 240.28
INV 8" IN 233.50 W/ INT DROP STR (W)
INV 8" IN 230.27 (S)
INV 8" OUT 230.17

SANDRIDGE DR.
SEE SHT PP-14

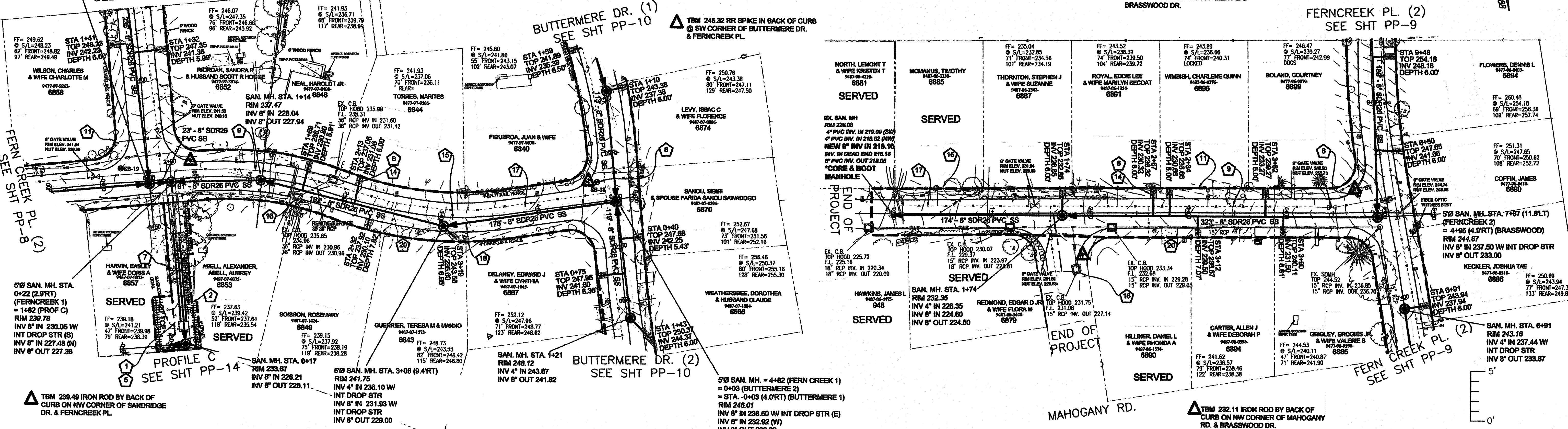
NAD 83 NAVD 88

BUTTERMERE DR. (1)
SEE SHT PP-10

△ TBM 245.32 RR SPIKE IN BACK OF CURB
@ SW CORNER OF BUTTERMERE DR.
& FERNCREEK PL.

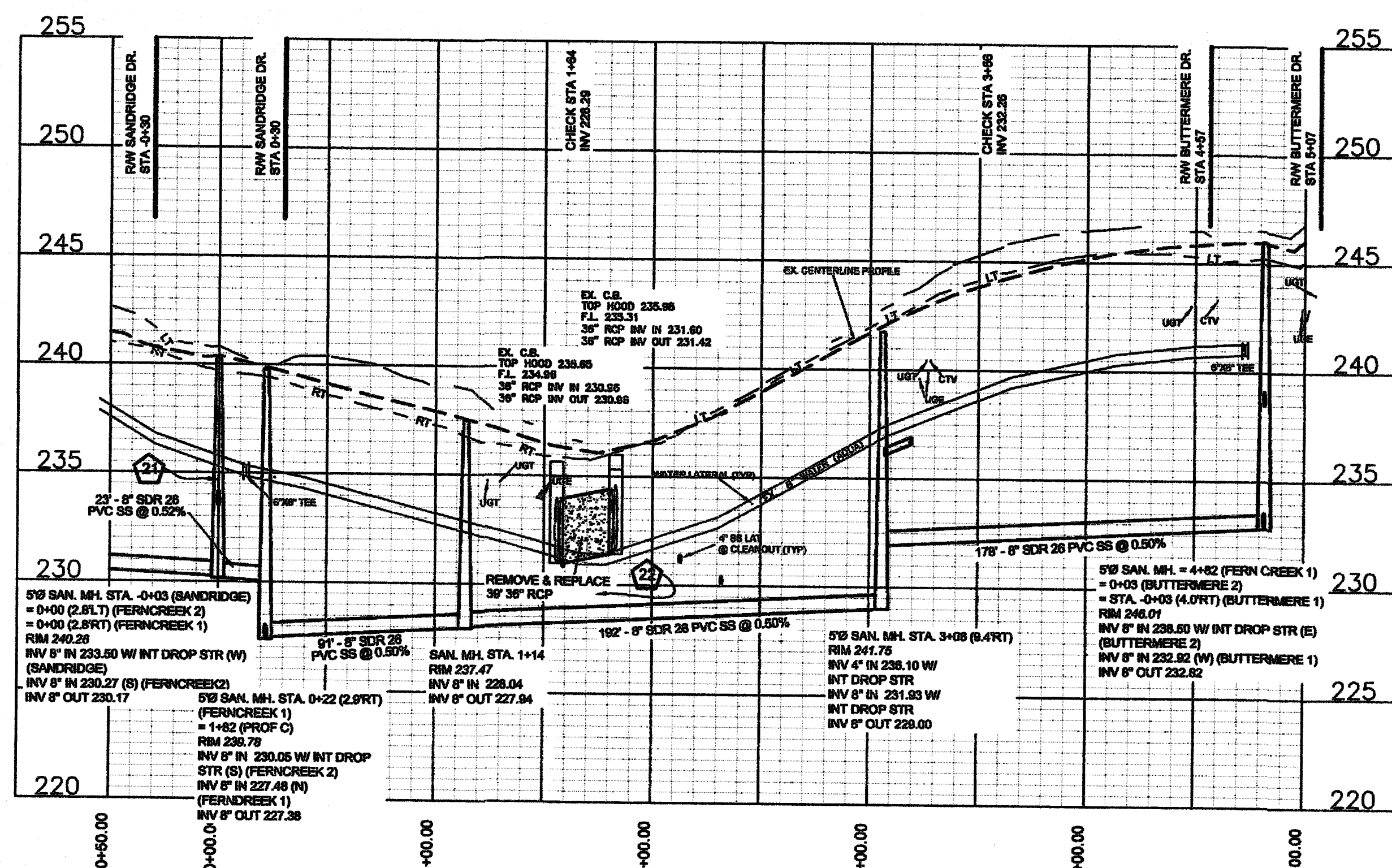
△ TBM 244.13 IRON ROD BY BACK OF CURB
ON SE CORNER OF FERNCREEK PL. &
BRASSWOOD DR.

FERNCREEK PL. (2)
SEE SHT PP-9

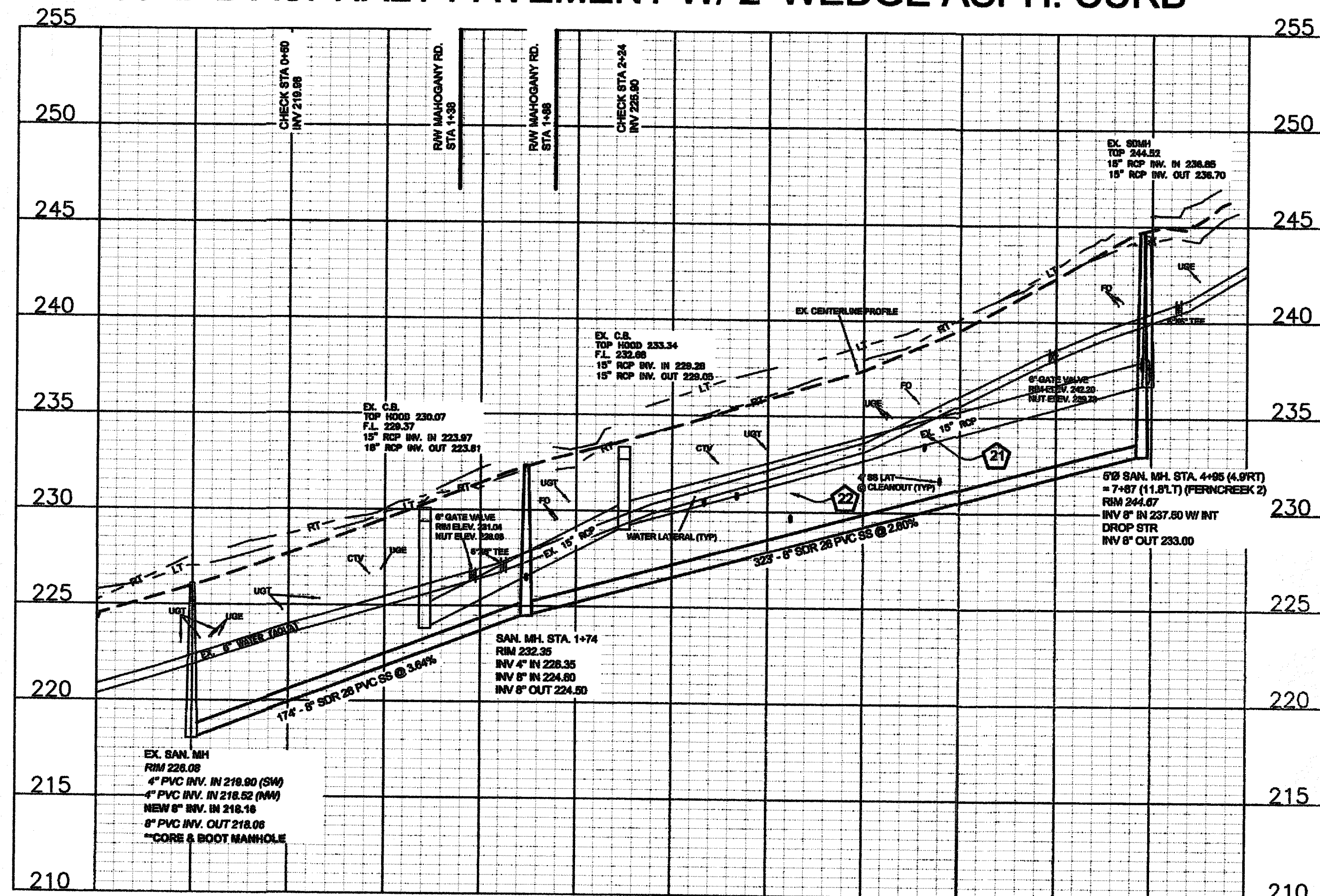


Parcel Number	Address	Special Conditions
9487-07-0375	6853 Ferncreek Pl.	Install Temporary Fencing to Constrain two Aggressive Dogs.
9487-07-0275	6857 Ferncreek Pl.	Do Not Disturb Grape Vine at Rear of Property.

FERNCREEK PL. (1) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



BRASSWOOD DR. 50' ROW
STA 0+00 TO 12+00
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Drawn by
David M. Smith
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Reinsel, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Ferncreek Pl(1) & Brasswood Dr. STA 0+00 to END

By	Date
Revision	

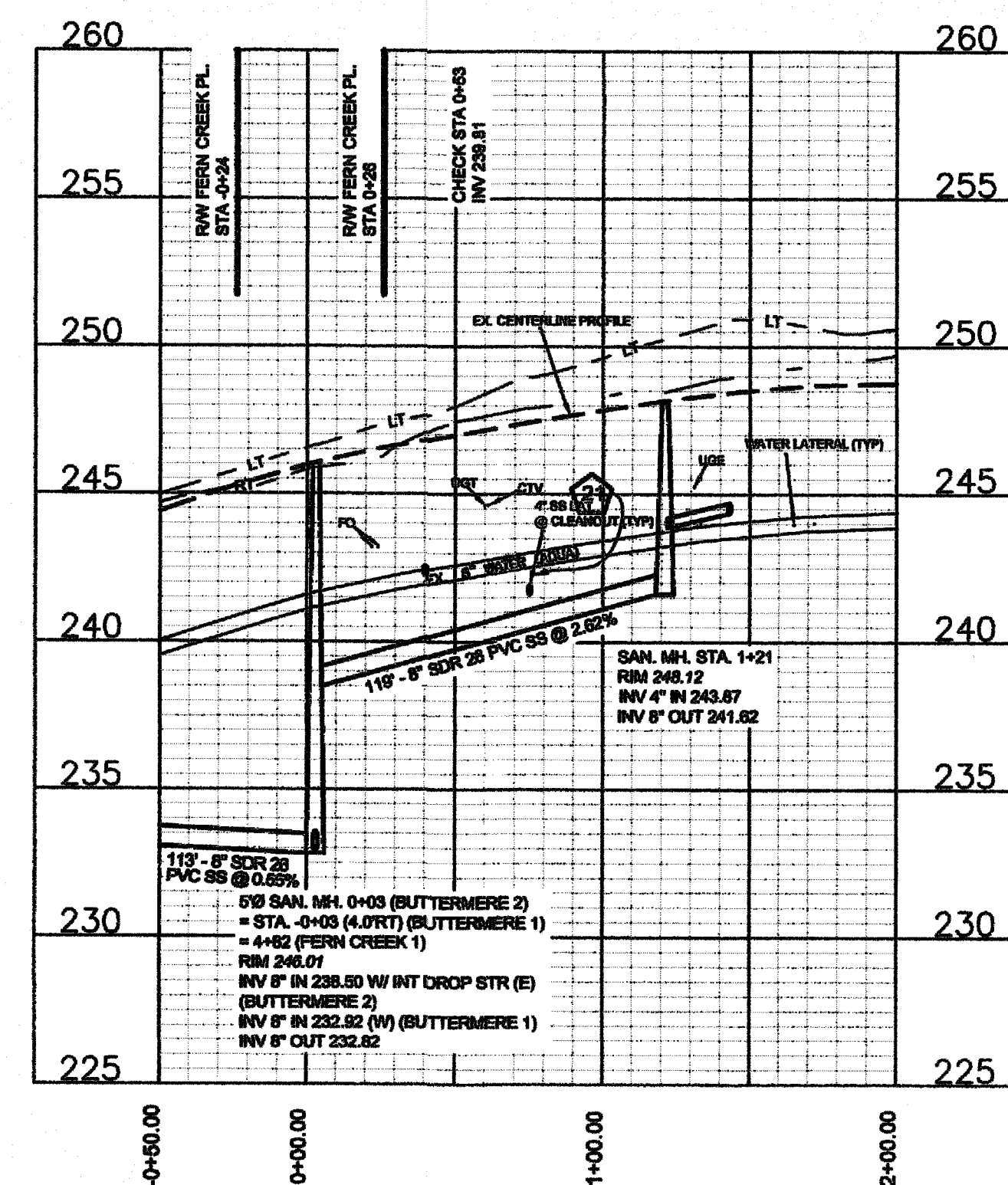
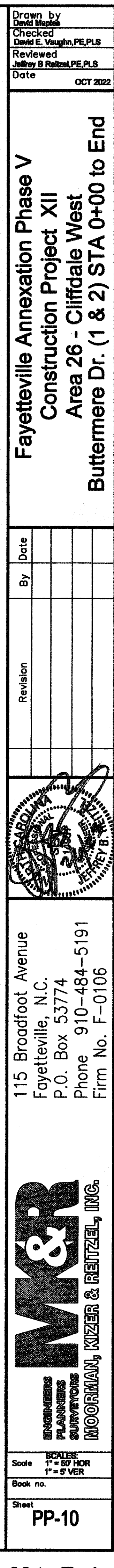
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Phone 910-484-5191
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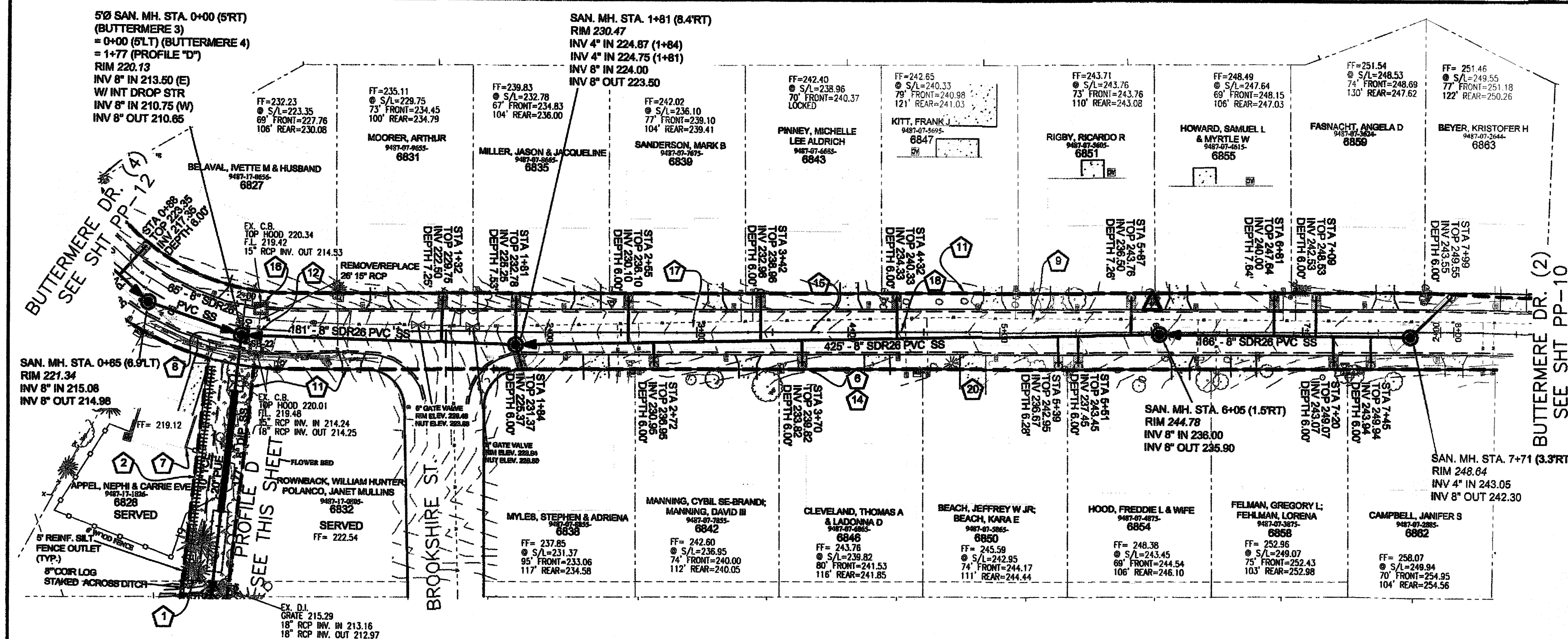
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PP-8

PWC DWG #DS-15462

Ferncreek Pl. (1) & Brasswood Dr. STA 0+00 to End

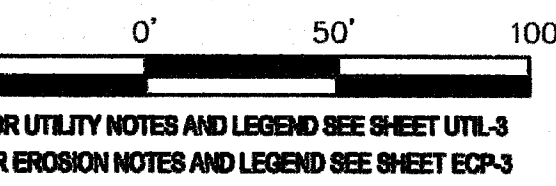




Parcel Number	Address	Special Conditions
9467-17-1826	6828 Buttermere Dr.	Install Temporary Fencing to Constrain Pets. Remove & Replace Wooden Fencing
9467-17-1928	6801 Beaverstone Rd.	Contractor Shall Enter Property From Rear Only.

BUTTERMERE DR. (3) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB

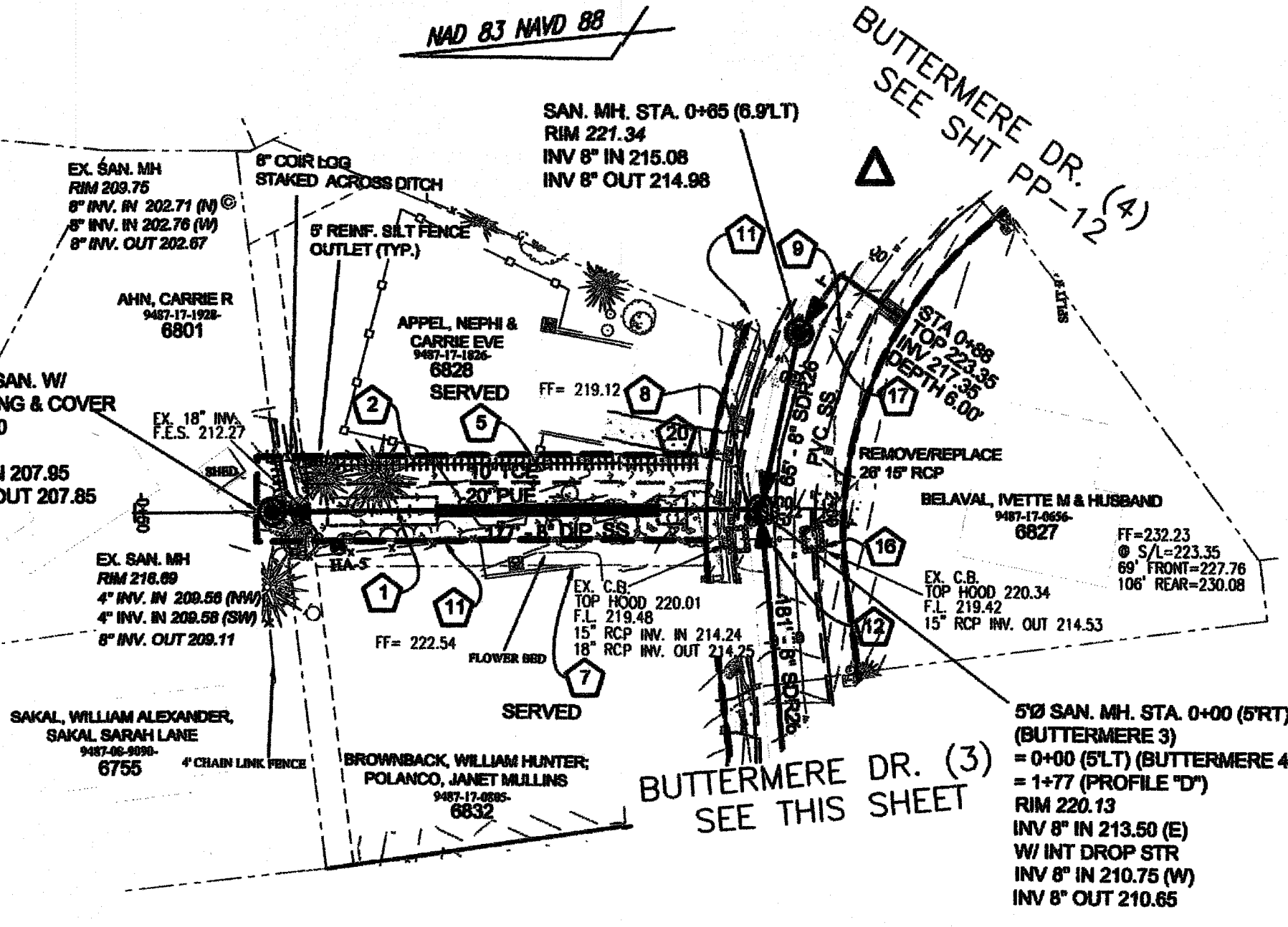
△ TBM 244.33 IRON ROD BY BACK OF CURB BETWEEN 6851 AND 6855 BUTTERMERE DR.



NAD 83 NAVD 88

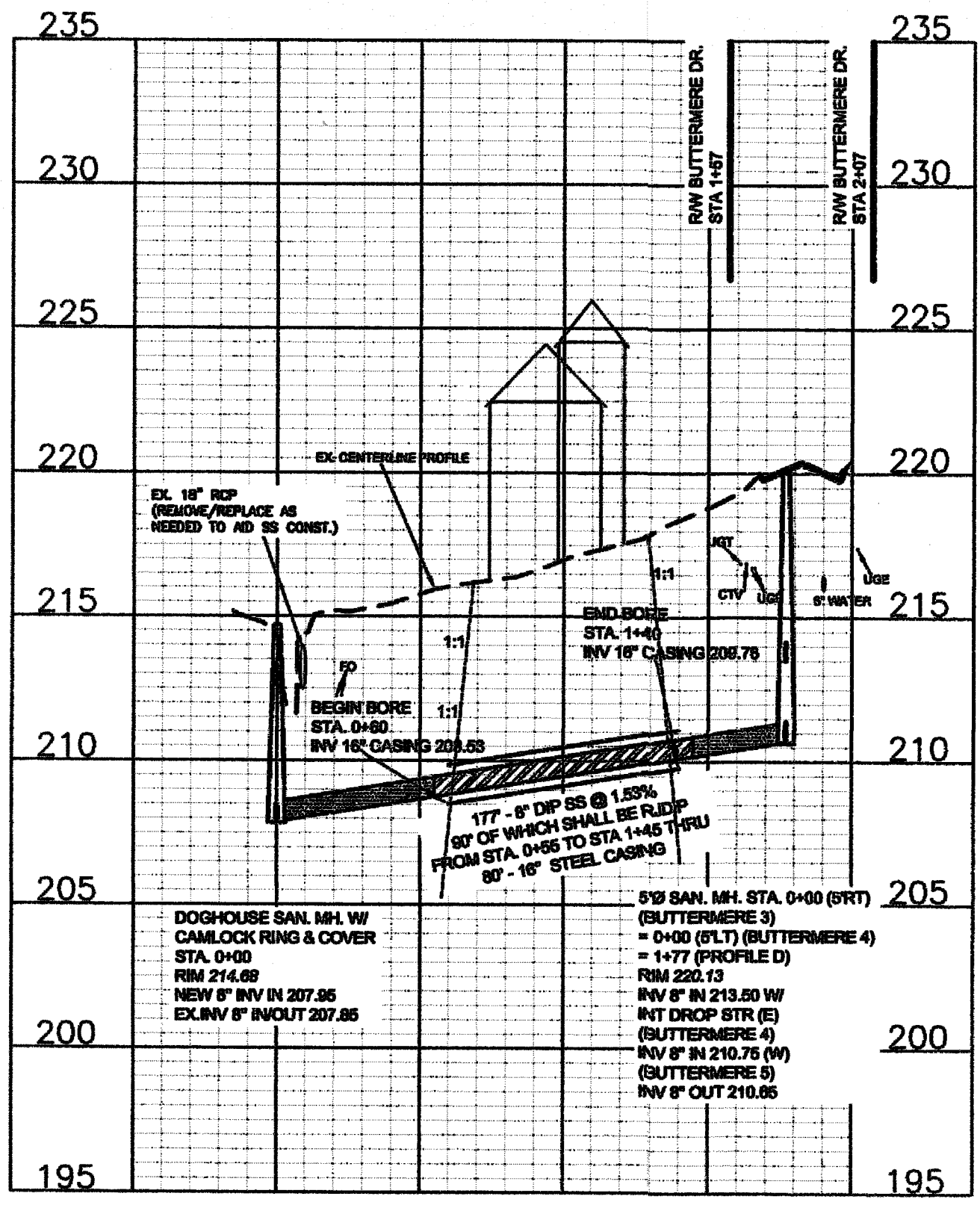
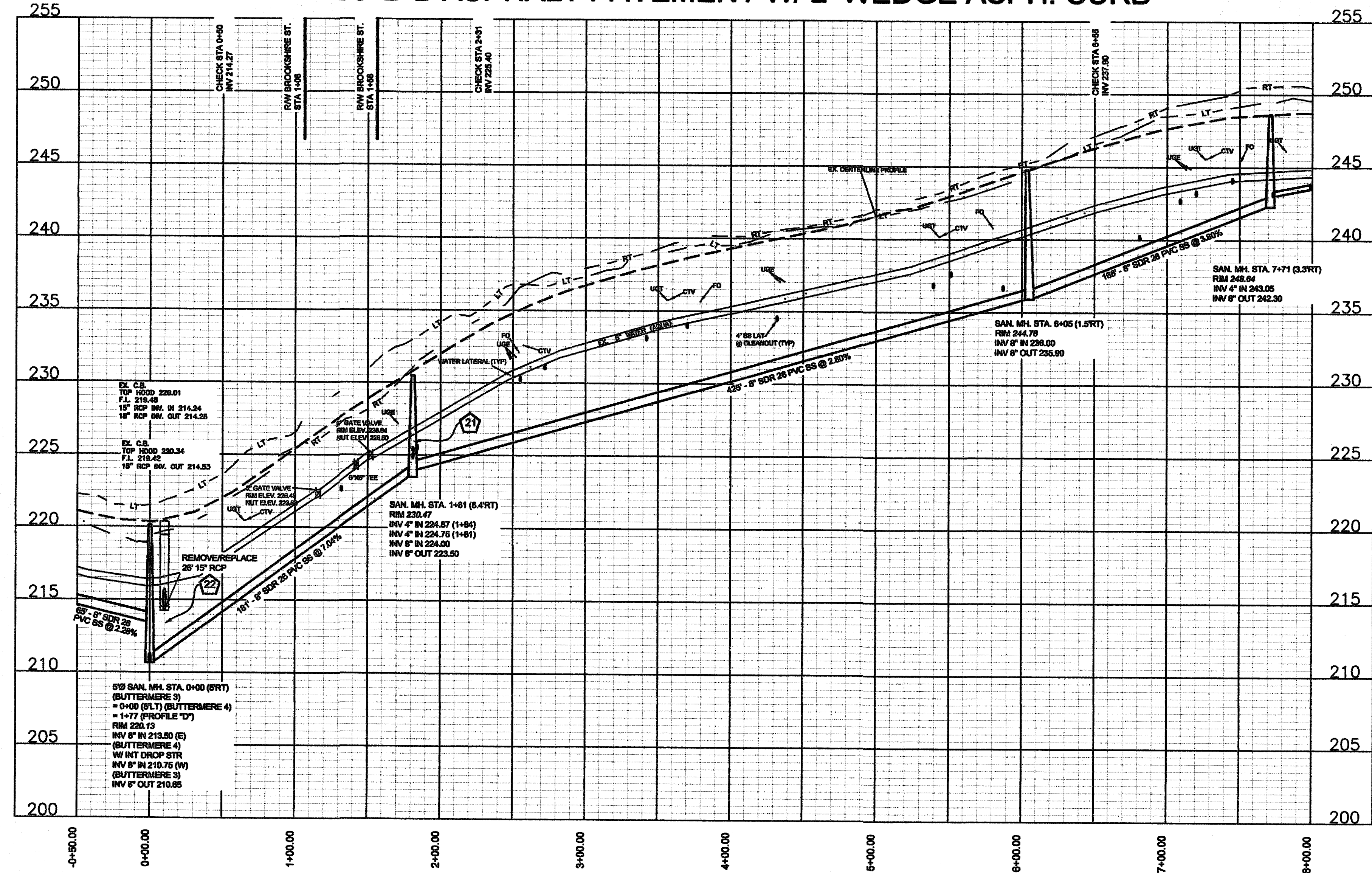
BUTTERMERE DR. (2) SEE SHT PP-10

BUTTERMERE DR. (3) SEE THIS SHEET



Parcel Number	Address	Special Conditions
9467-17-1826	6828 Buttermere Dr.	Install Temporary Fencing to Constrain Pets. Remove & Replace Wooden Fencing
9467-17-1928	6801 Beaverstone Rd.	Contractor Shall Enter Property From Rear Only.

PROFILE D



Drawn by
David E. Vaughan, PE, L.S.
Checked
David E. Vaughan, PE, L.S.
Reviewed
Jeffrey B. Reitzel, PE, L.S.
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Buttermere Dr. (3) & PROF. D STA 0+00 to End

By
Date

Revision

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P.O. Box 53774
Phone 910-484-5191
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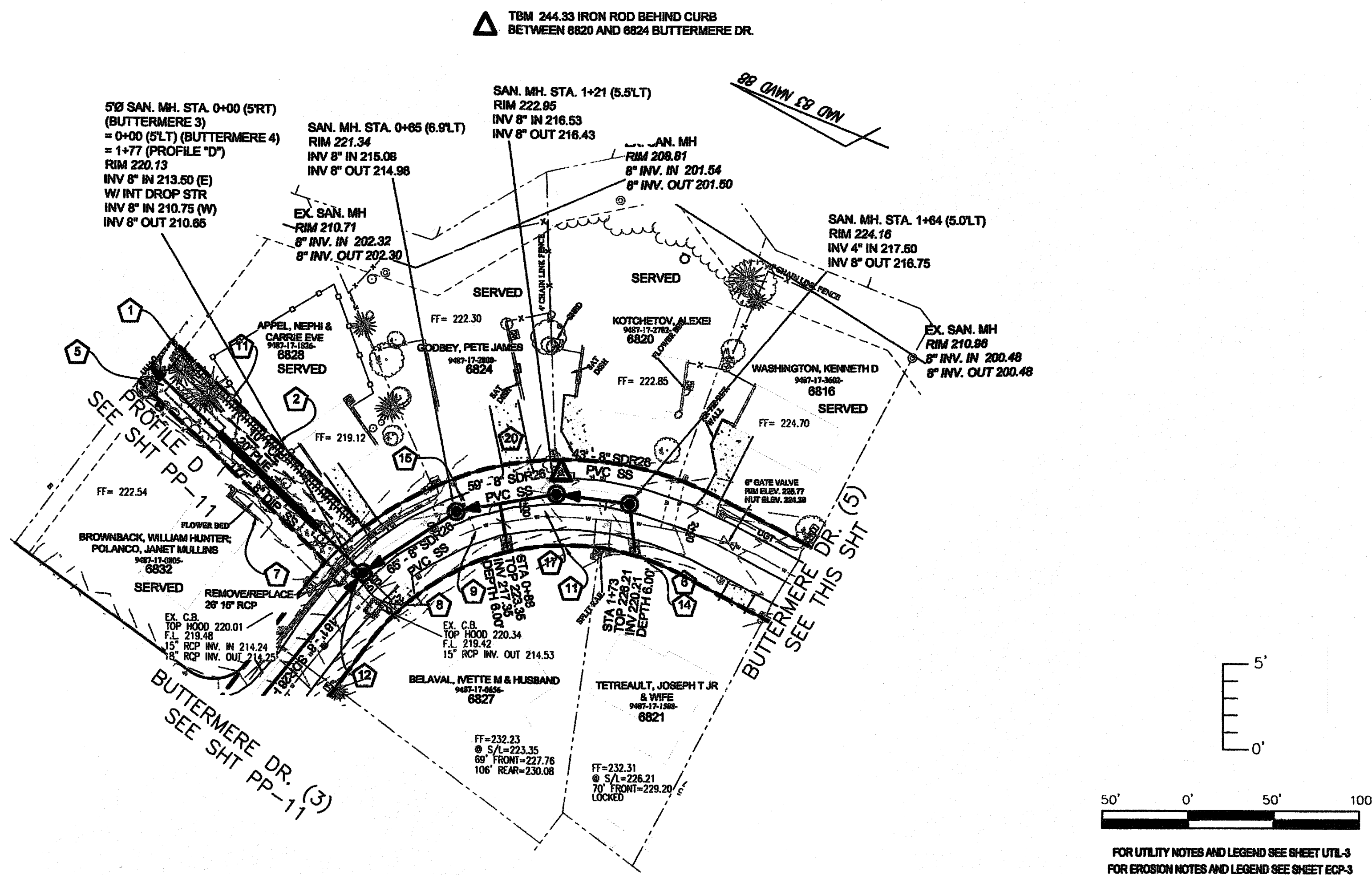
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MOORMAN, KIZER & REITZEL, INC.

Scale
1" = 50' HOR
1" = 5' VER

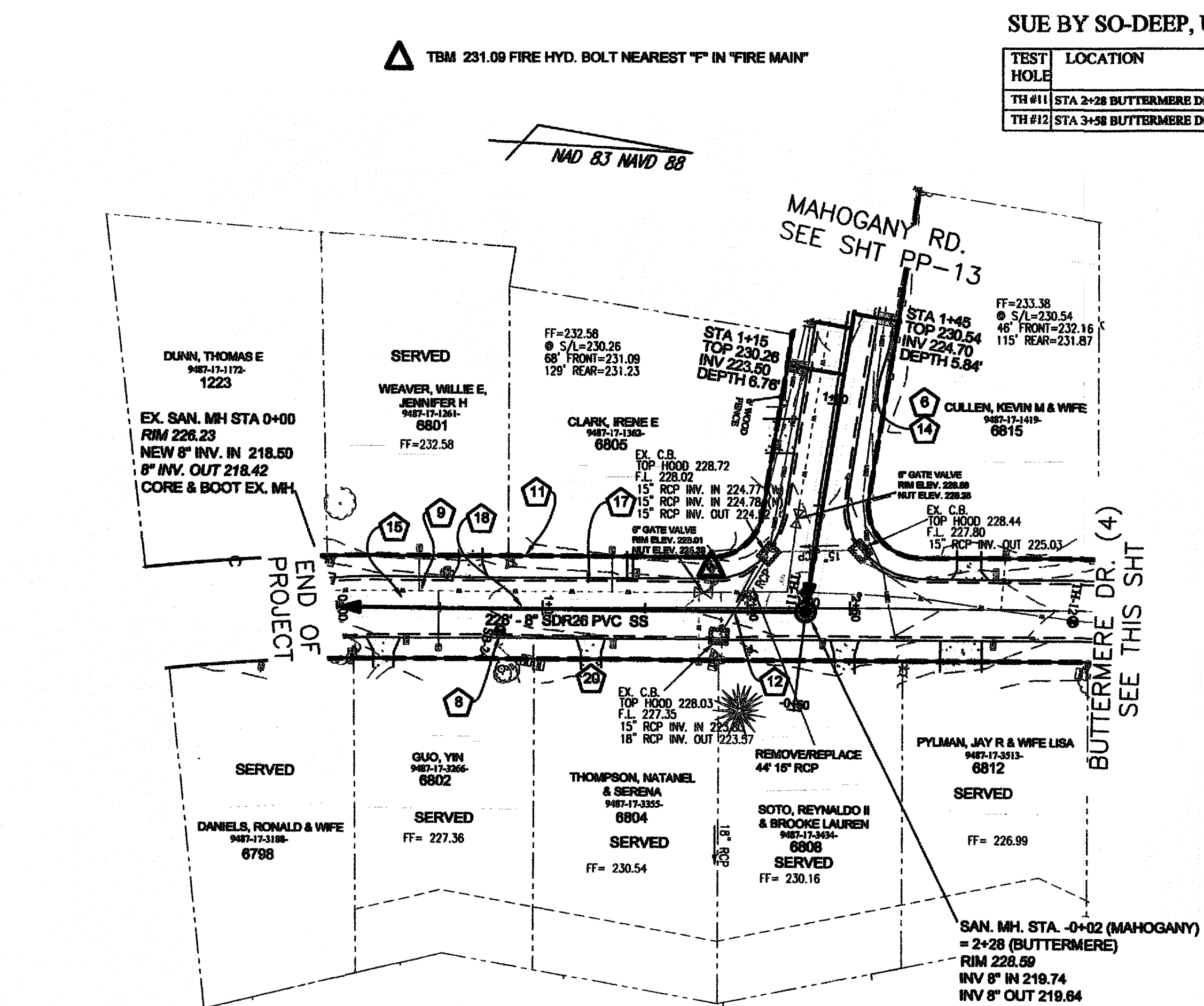
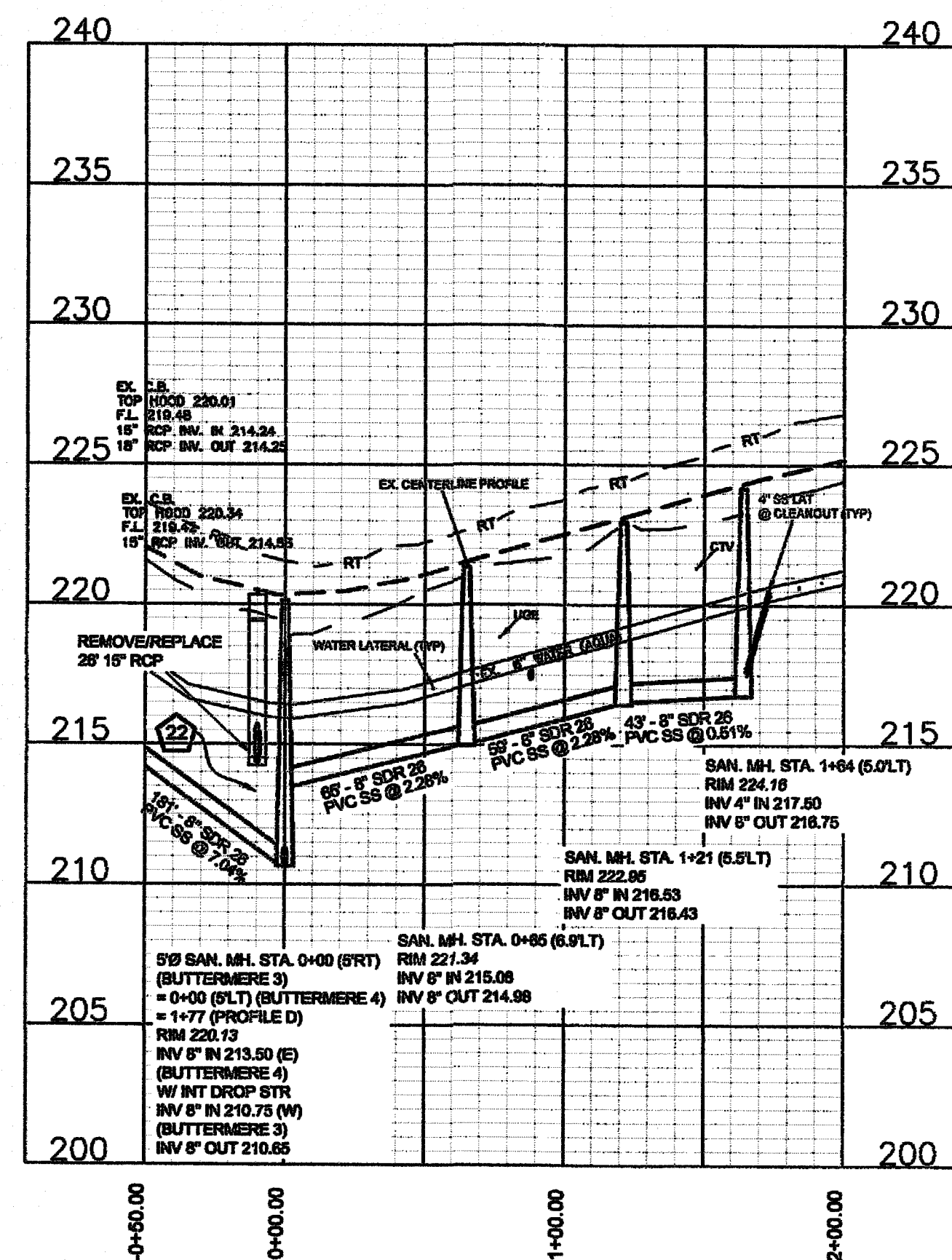
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PP-11

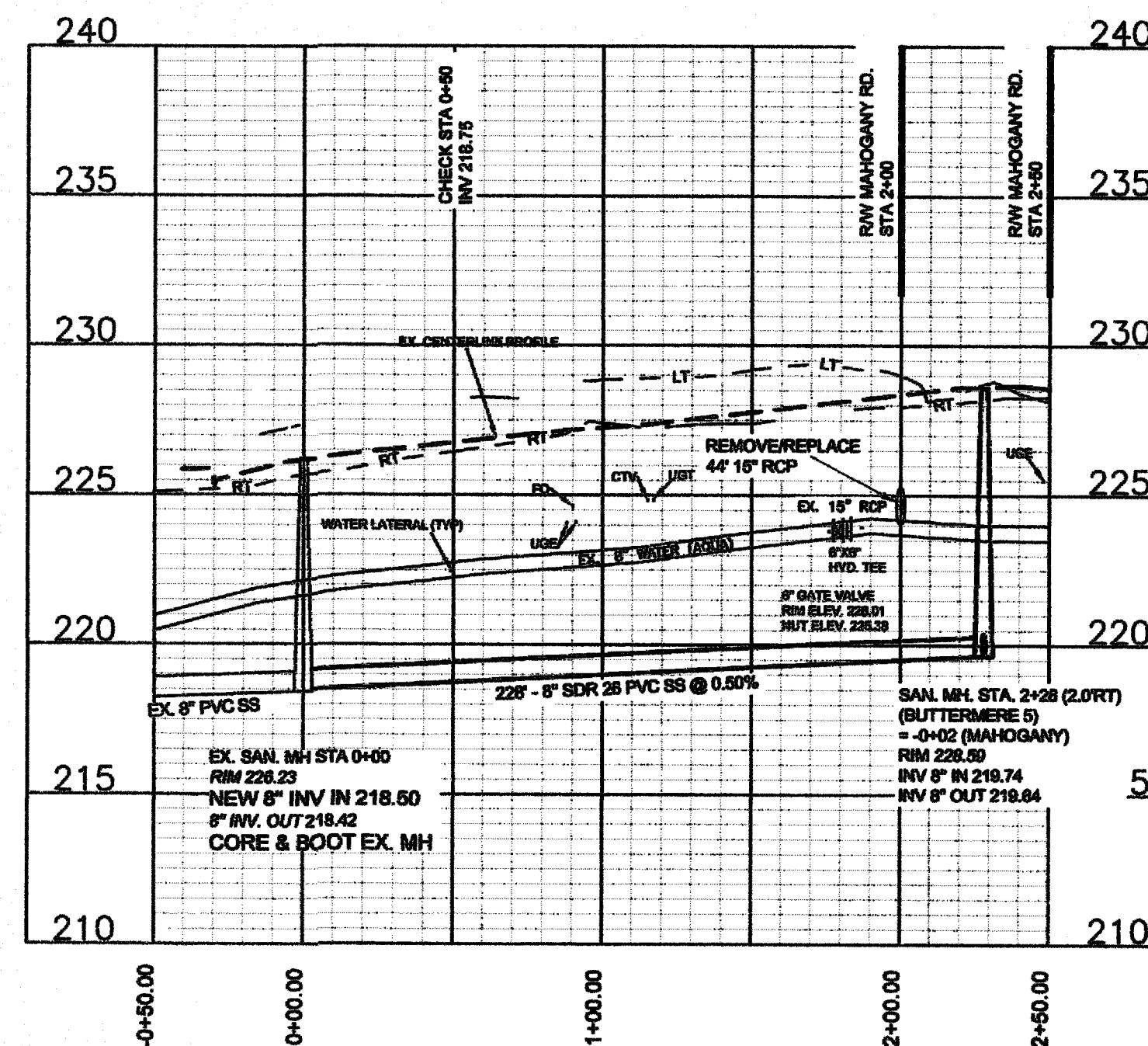
PWC DWG #DS-15462



BUTTERMERE DR. (4) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



BUTTERMERE DR. (5) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #11	STA 2+28 BUTTERMERE DR. (5)	224.06	6-1/2" PVC WATER	AQUA
TH #12	STA 3+38 BUTTERMERE DR. (5)	223.11	6-1/2" PVC WATER	AQUA

Drawn by David Maples
Checked David E. Vaughn, P.E., PLS
Reviewed Jeffrey B. Haines, P.E., PLS
Date OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Buttermere Dr. (4 & 5) STA 0+00 to End

By Date
Revision

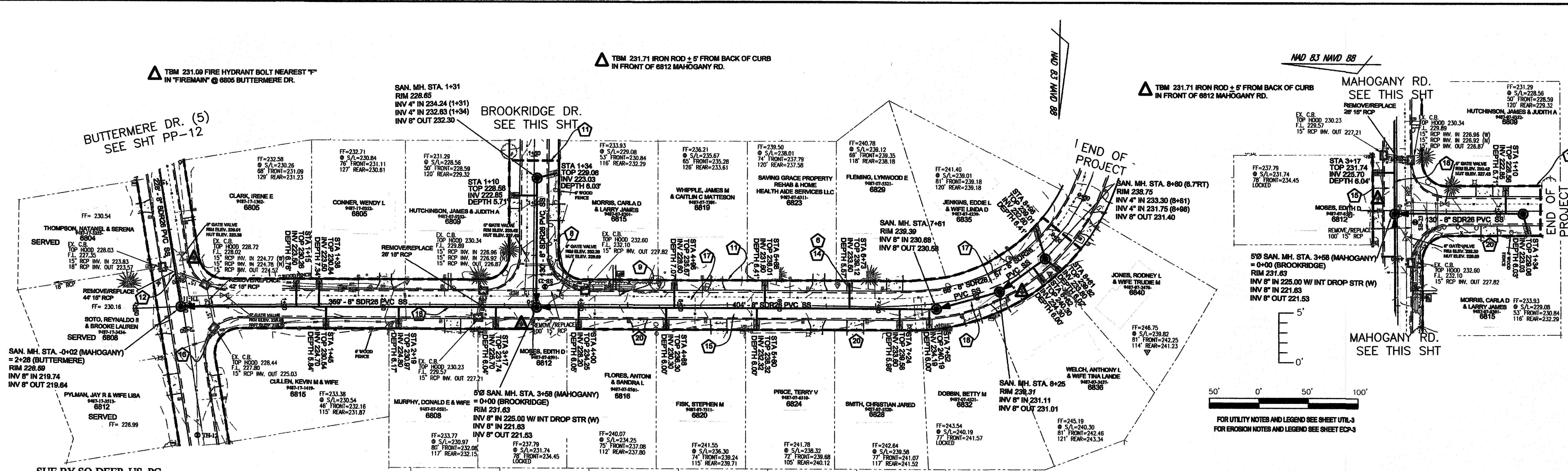
115 Broadfoot Avenue
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P.O. Box 53774
Phone 910-484-5191
Firm No. F-0106

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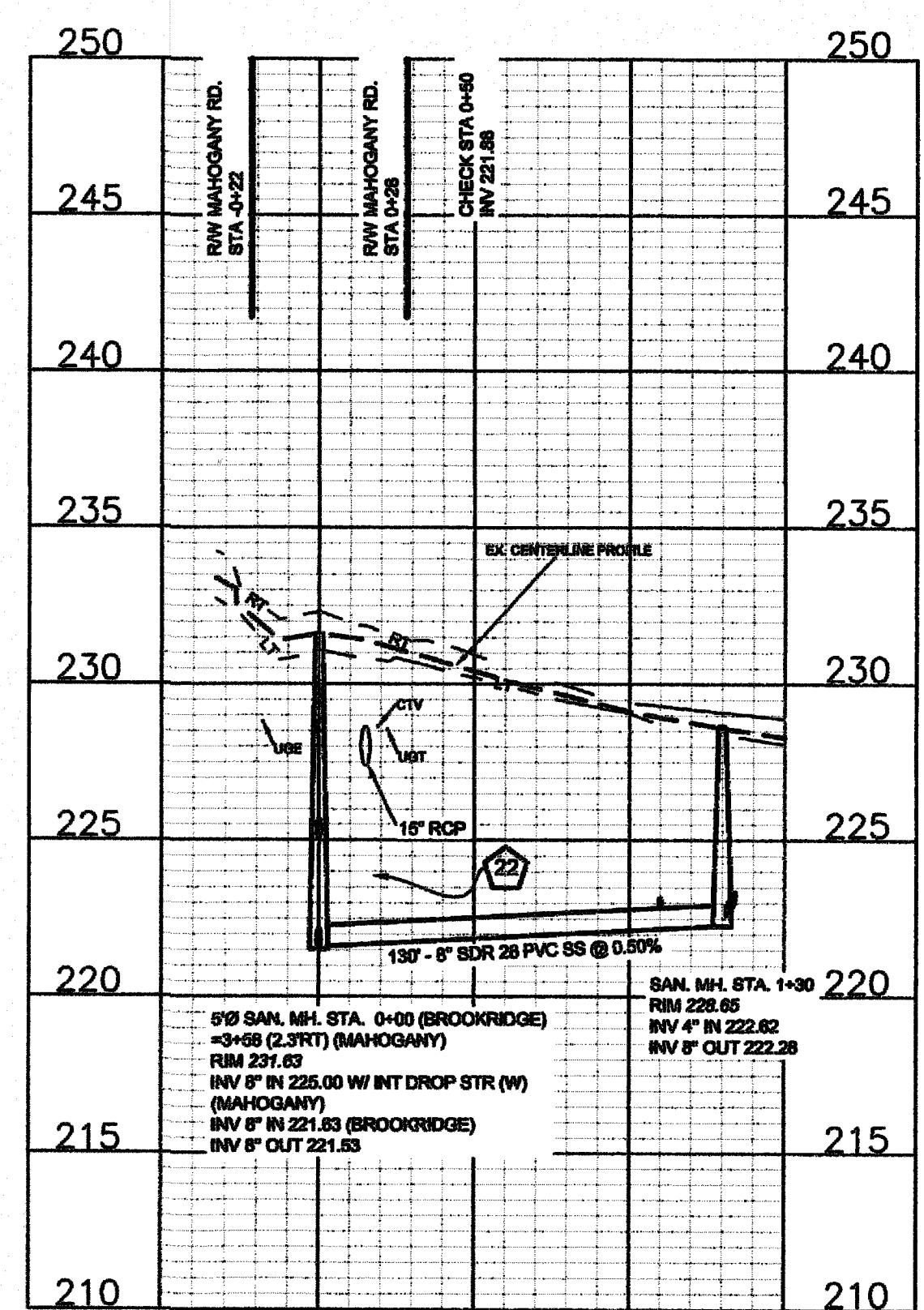
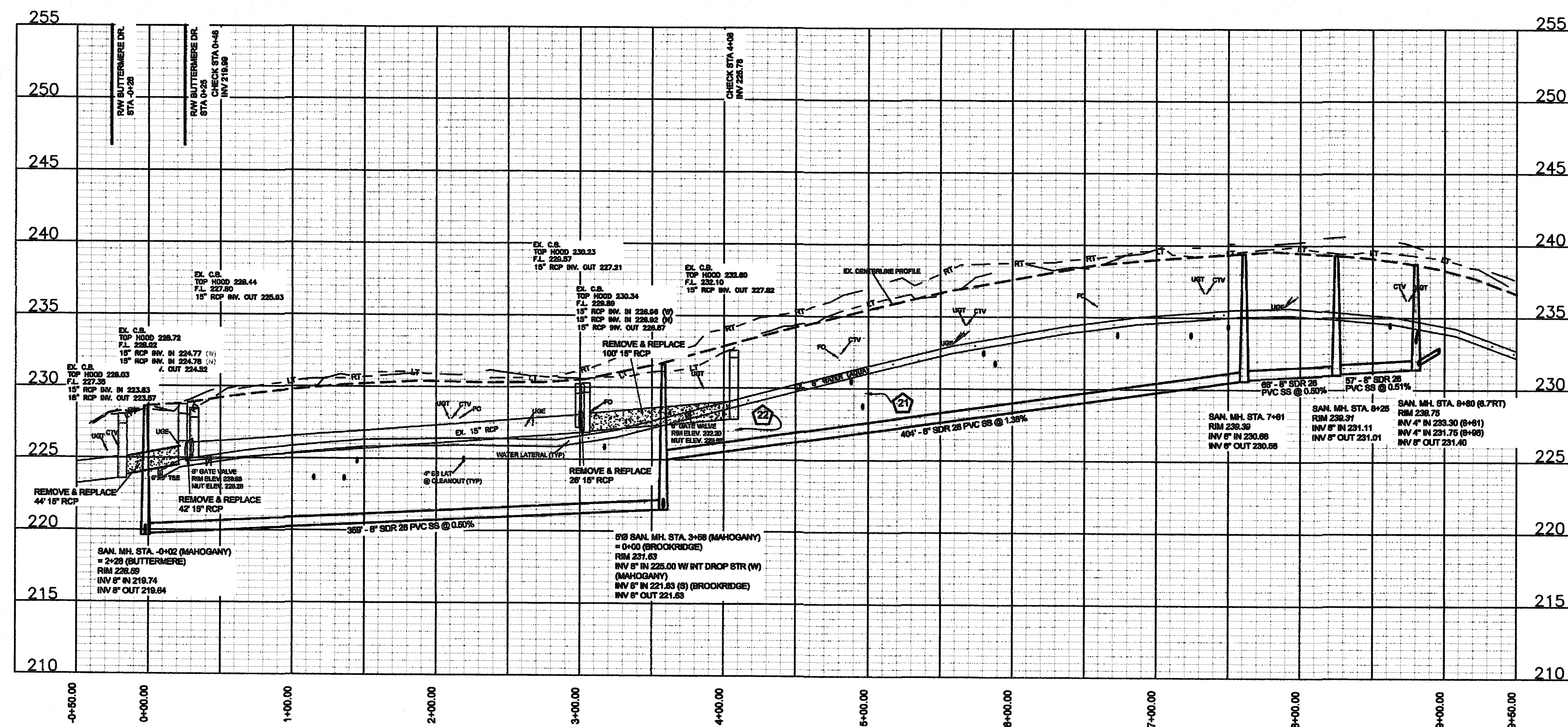


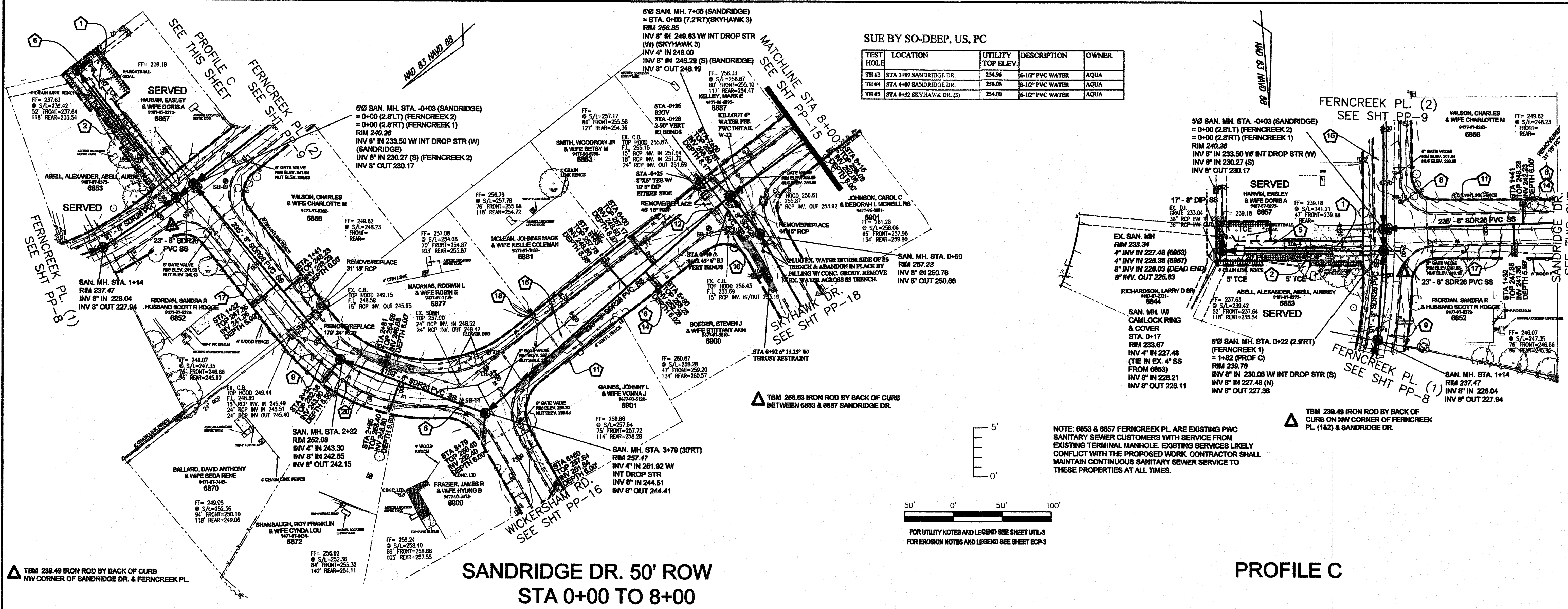
SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #11	STA 2+28 BUTTERMERE DR. (S)	224.06	6-1/2" PVC WATER	AQUA
TH #12	STA 3+36 BUTTERMERE DR. (S)	223.11	6-1/2" PVC WATER	AQUA

**MAHOGANY RD. 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**

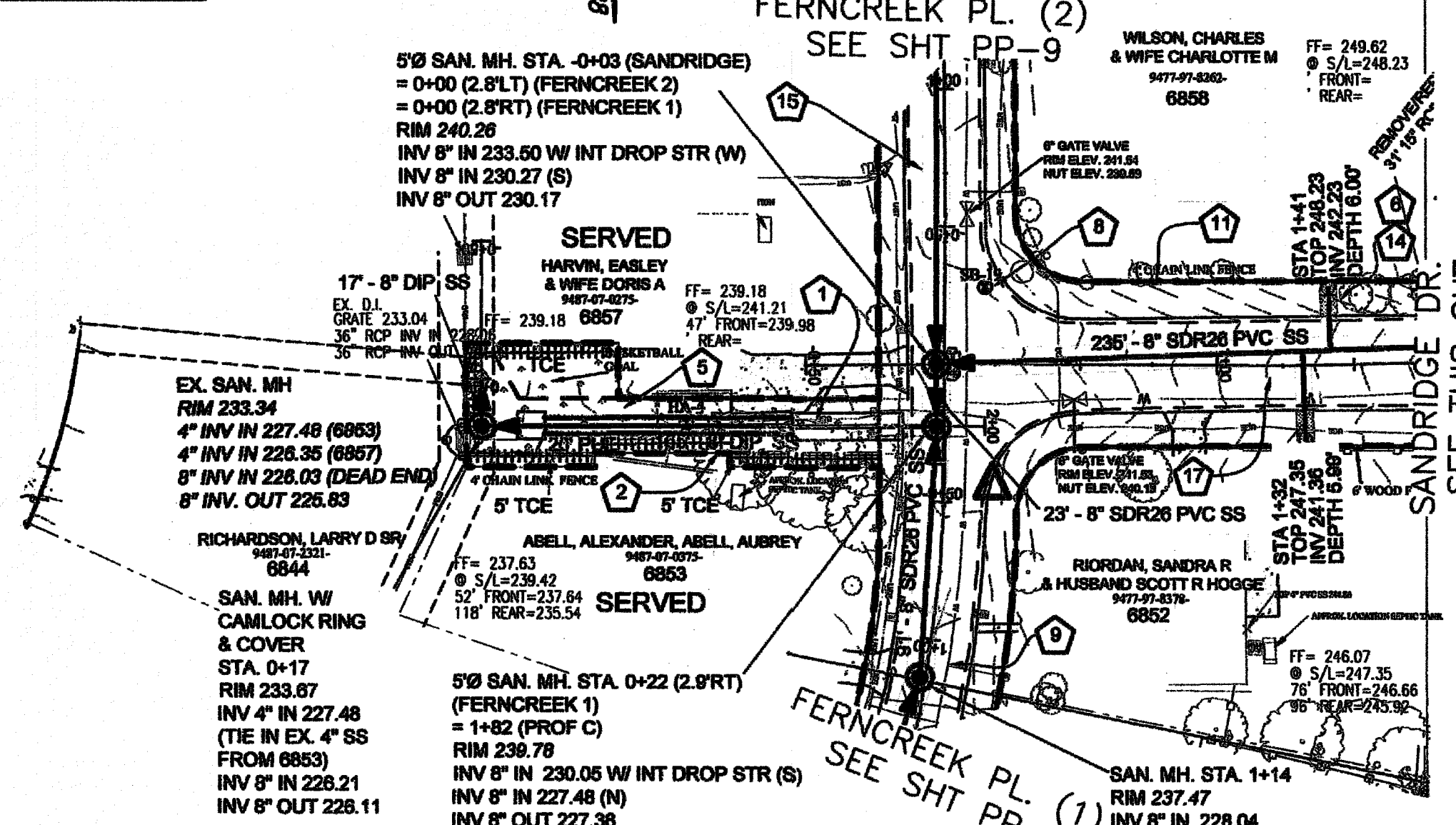
**BROOKRIDGE DR. 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT
W/ 2' WEDGE ASPH. CURB**



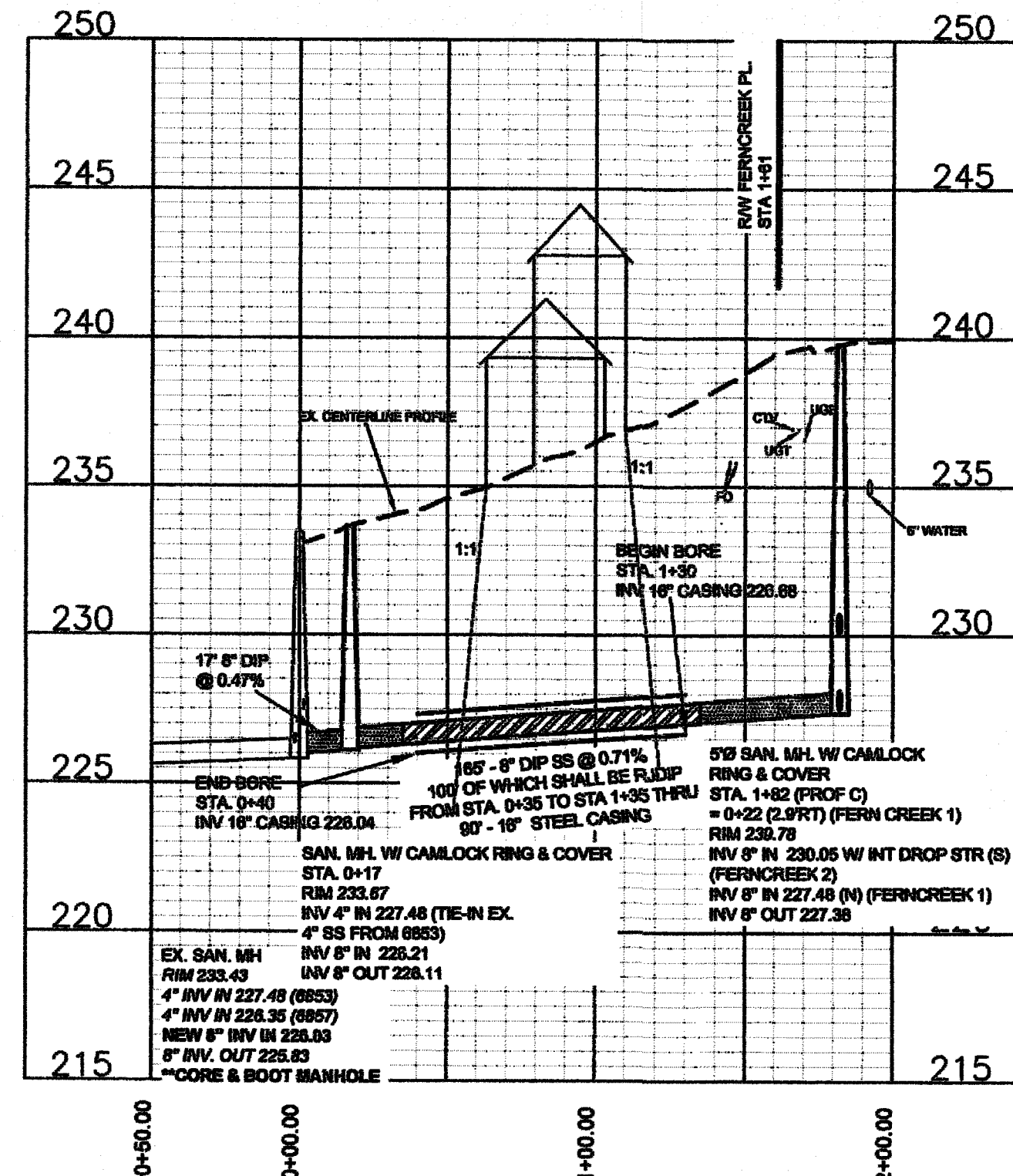
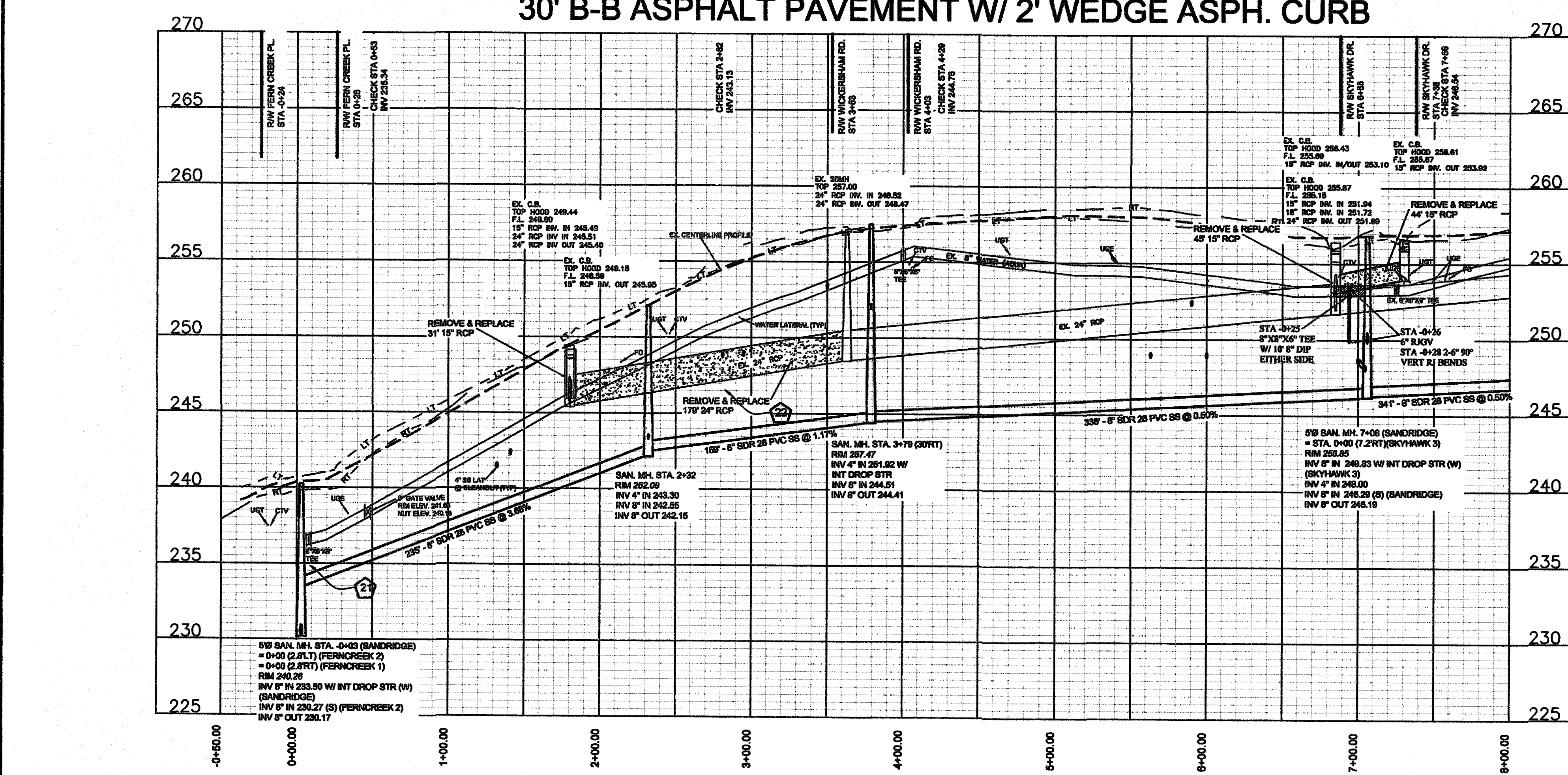


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TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #3	STA 3+97 SANDRIDGE DR.	254.96	4-1/2" PVC WATER	AQUA
TH #4	STA 4+07 SANDRIDGE DR.	256.06	8-1/2" PVC WATER	AQUA
TH #5	STA 5+32 SKYHAWK DR. (S)	254.00	6-1/2" PVC WATER	AQUA



PROFILE C



Drawn by
David E. Vaughn, P.E.
Checked
David E. Vaughn, P.E.
Reviewed
David E. Vaughn, P.E.
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Sandridge Dr. STA 0+00 to 8+00 & Profile C

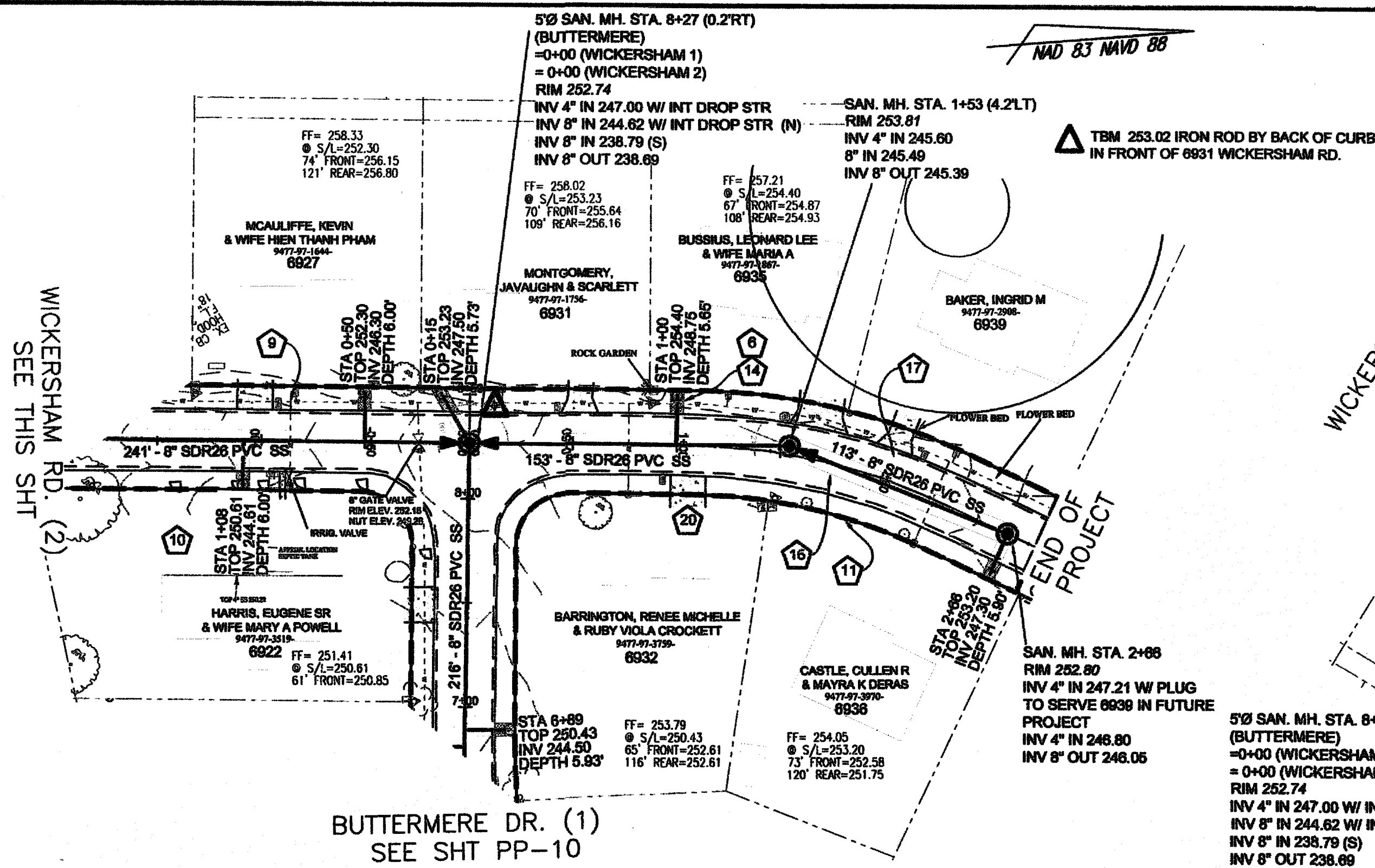
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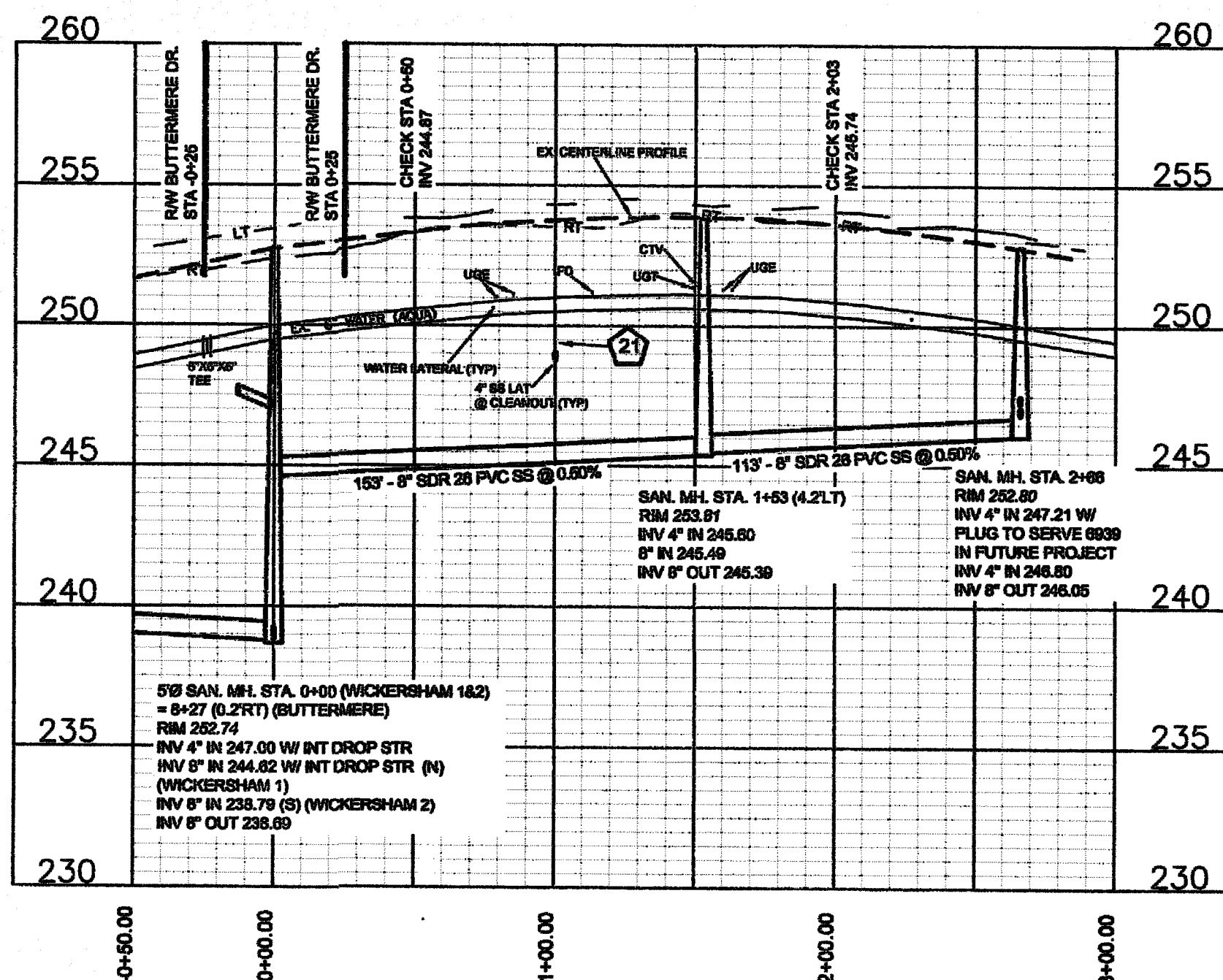
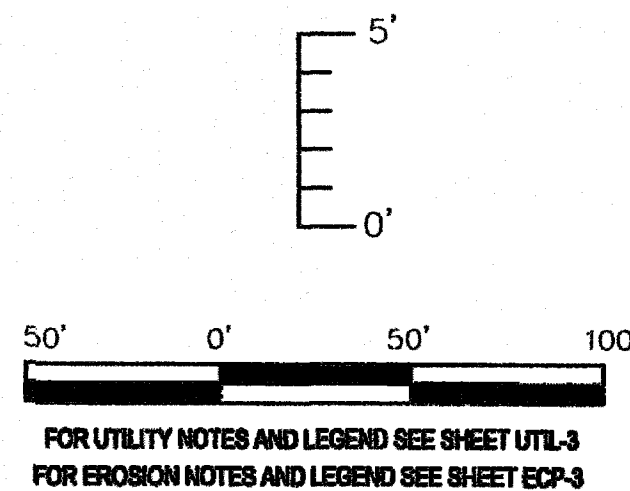
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BUTTERMERE DR. (1)
SEE SHT PP-10

WICKERSHAM RD. (1) 50' ROW
STA 0+00 TO END

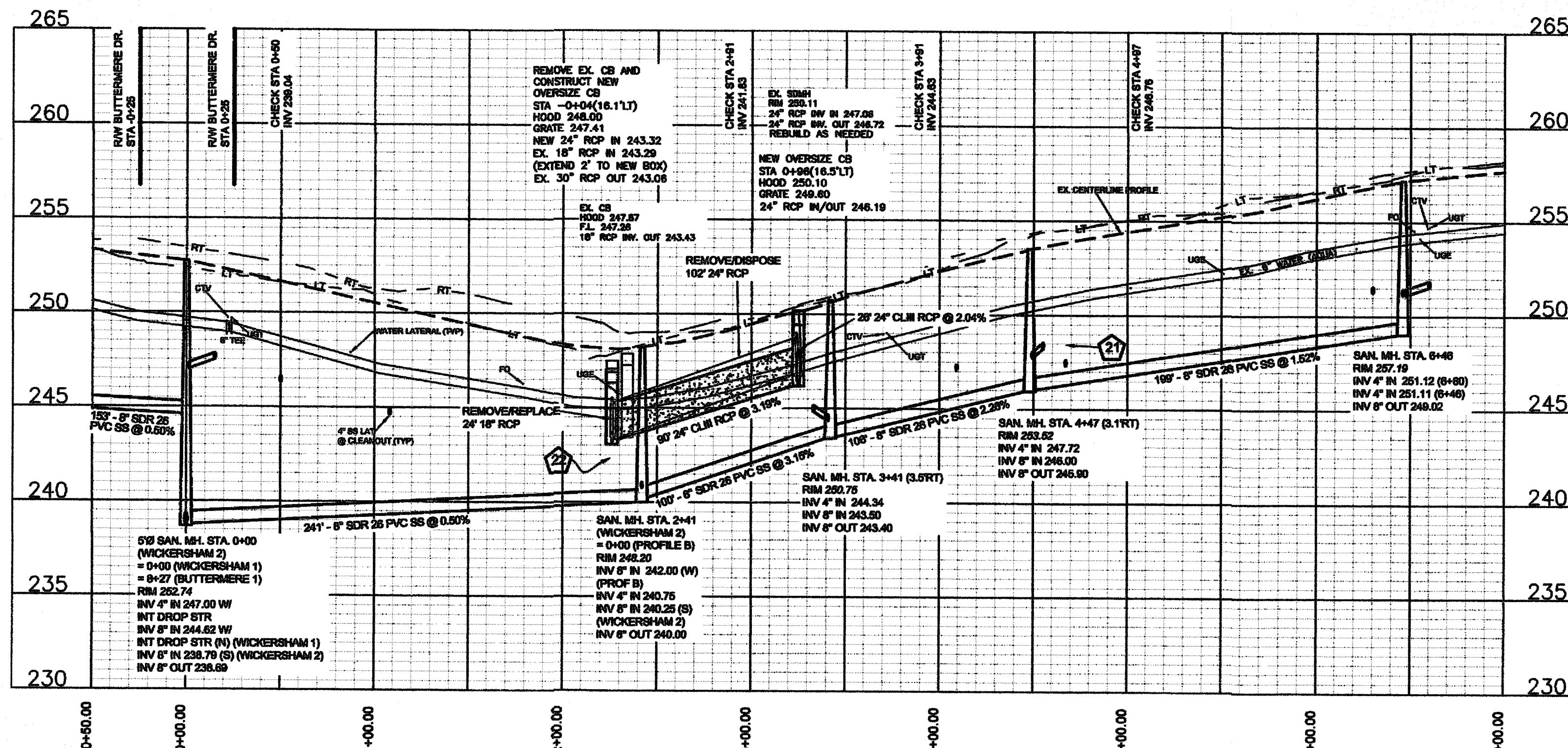
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Parcel Number	Address	Special Conditions
9477-97-1423	6919 Wickersham Rd.	Install 6' Temporary Fencing to Constrain Dog.
9477-97-1533	6923 Wickersham Rd.	Install 6' Temporary Fencing to Constrain Dogs.

WICKERSHAM RD. (2) 50' ROW
STA 0+00 TO END

30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



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TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #3	STA 3+97 SANDRIDGE DR.	254.96	6-1/2" PVC WATER	AQUA
TH #4	STA 4+07 SANDRIDGE DR.	256.06	8-1/2" PVC WATER	AQUA

Drawn by
David E. Vaughn
Checked
David E. Vaughn
Reviewed
David E. Vaughn
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Wickersham Rd. (1 & 2) STA 0+00 to End

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PWC DWG #DS-15462

Wickersham Rd. (1 & 2) STA 0+00 to End

Drawn by
David M. Jones
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Roberts, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Skyhawk Dr. (1) STA 0+00 to END

Revision	By	Date

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△ TBM 258.92 IRON ROD BY BACK OF CURB
BETWEEN 6847 AND 6851 SKYHAWK DRIVE

NAD 83 NAVD 88

HURSTBOURNE LN.
SEE SHT PP-20

5'0" SAN. MH. STA. 3+53 (PROF. B)
= 1+11 (SKYHAWK 1)
RIM 258.78
INV 4" IN 252.54 W/ INT DROP STR
INV 8" IN 247.38 (N)
INV 8" OUT 247.27 (S)

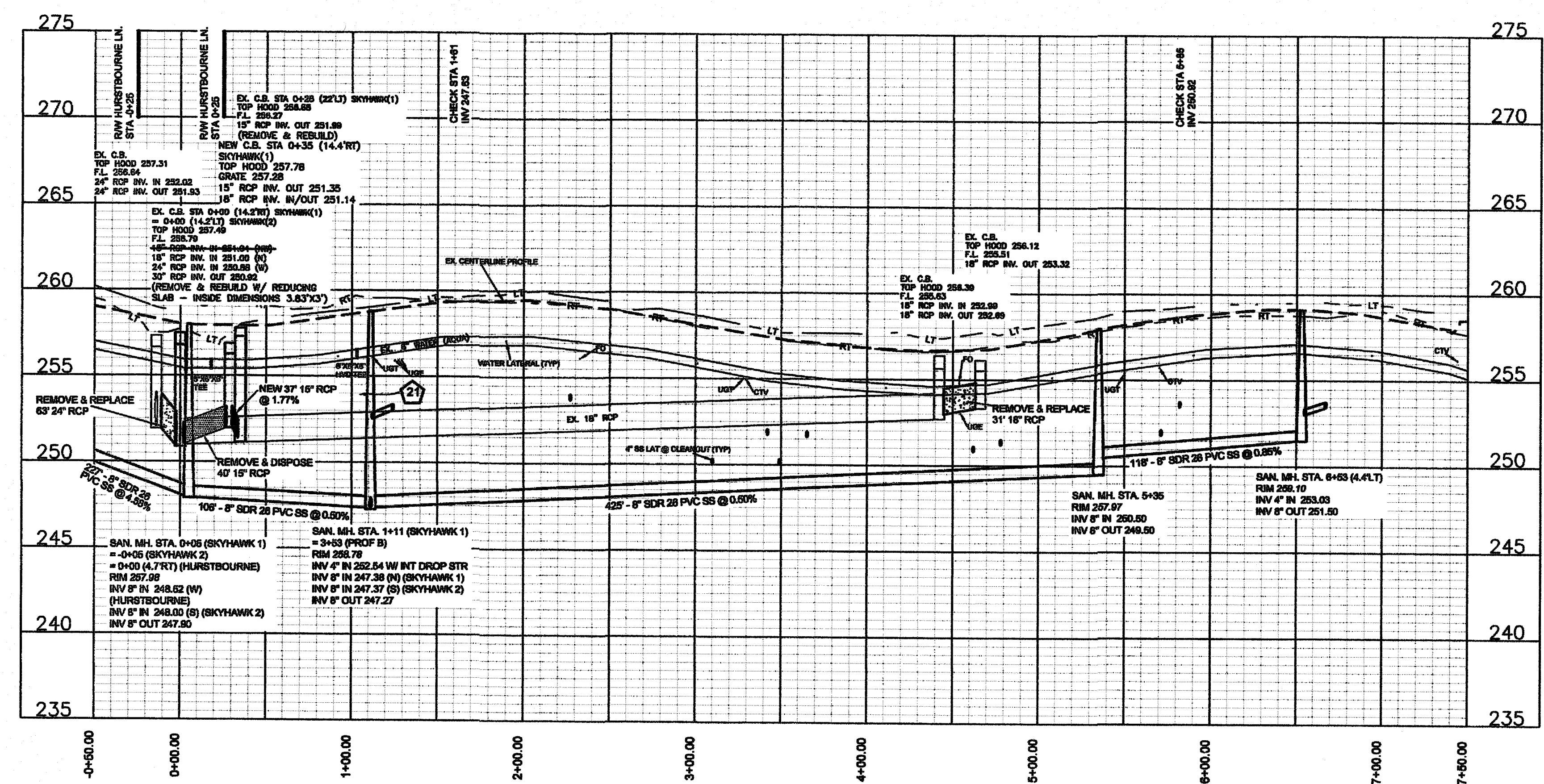
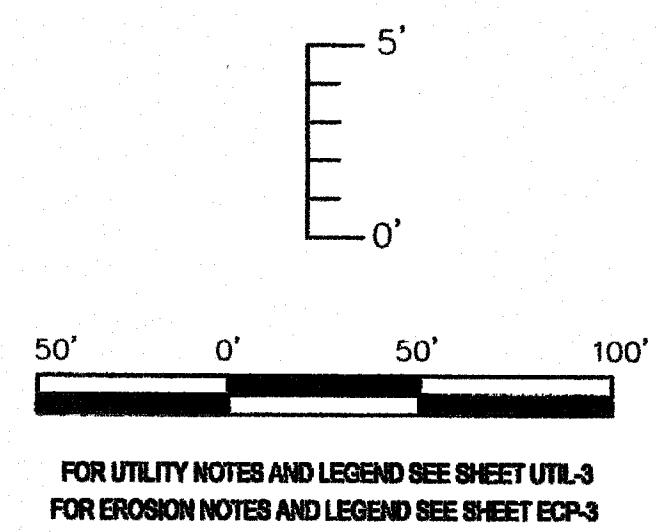
SAN. MH. STA. -0+05 (SKYHAWK 2)
= 0+00 (4.7' RT) (HURSTBOURNE)
RIM 257.98
INV 8" IN 248.52 (W)
INV 8" OUT 248.00 (S)
INV 8" OUT 247.90

SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #7	STA 0+20 SKYHAWK DR. (1)	254.55	6-1/2" PVC WATER	AQUA

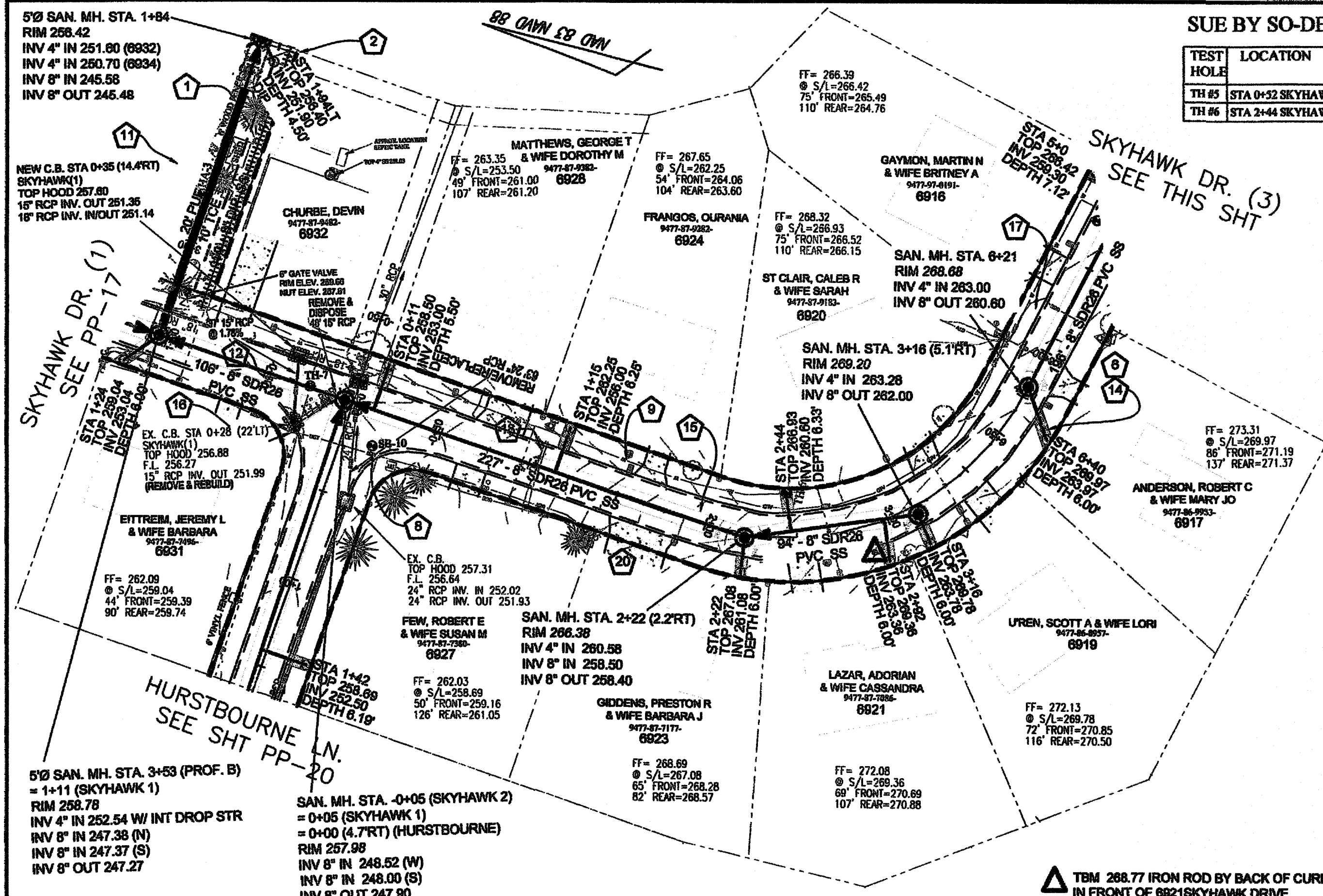
Parcel Number	Address	Special Conditions
9477-67-9482	6832 Skyhawk Rd.	Remove & Replace Wooden Fencing.
9477-67-9593	6934 Skyhawk Rd.	Remove & Dispose of Treehouse at Rear of Property and Metal Building.

SKYHAWK DRIVE (1) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB

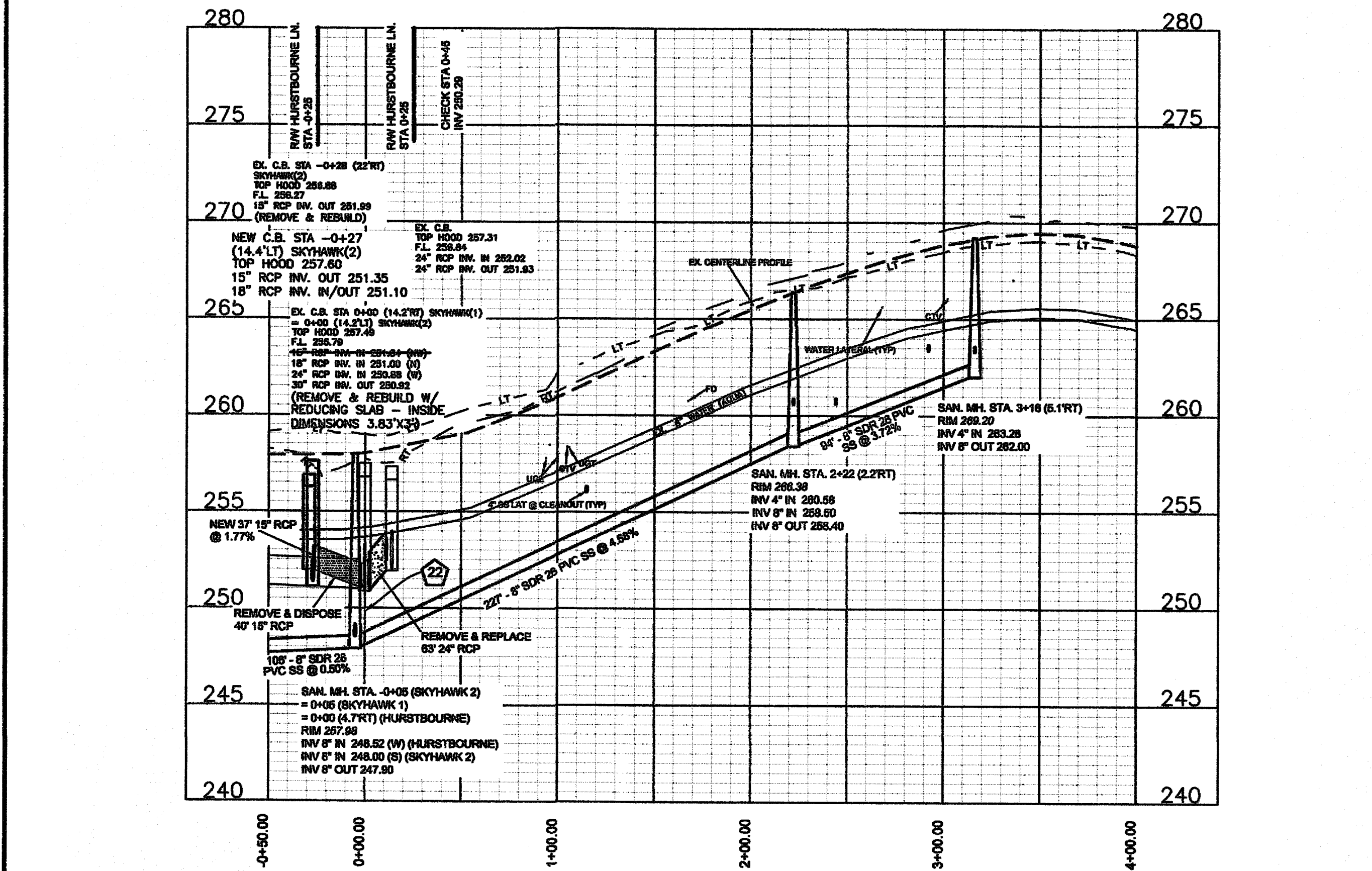


PWC DWG #DS-15462

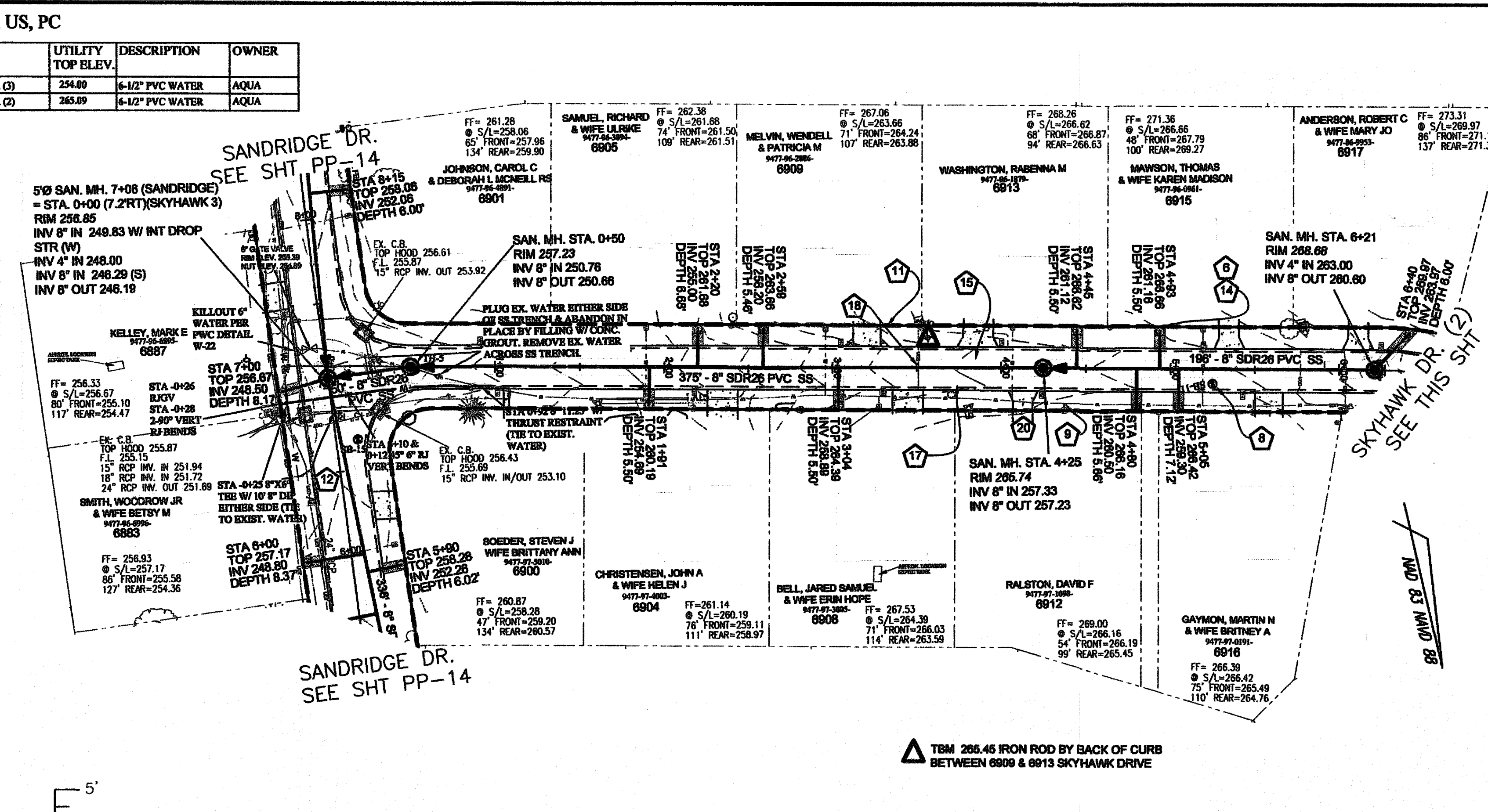
Skyhawk (1) STA 0+00 to End



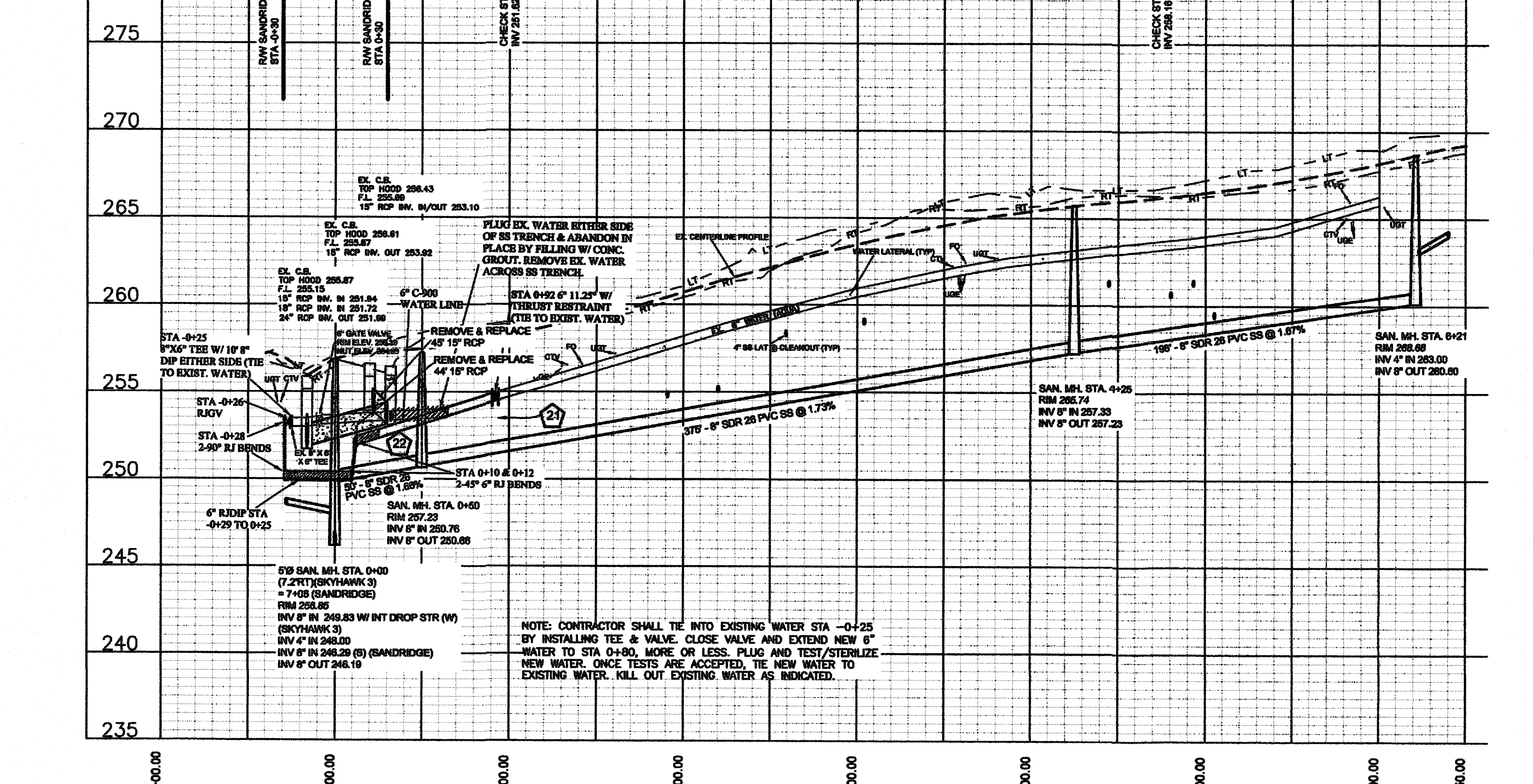
**SKYHAWK DRIVE (2) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**



**SKYHAWK DRIVE (3) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**



**SKYHAWK DRIVE (3) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**



**SKYHAWK DRIVE (2) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**

Drawn by
David E. Vaughn, PE, PLS
Checked
David E. Vaughn, PE, PLS
Reviewed
David E. Vaughn, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Skyhawk Dr. (2 & 3) STA 0+00 to End

By
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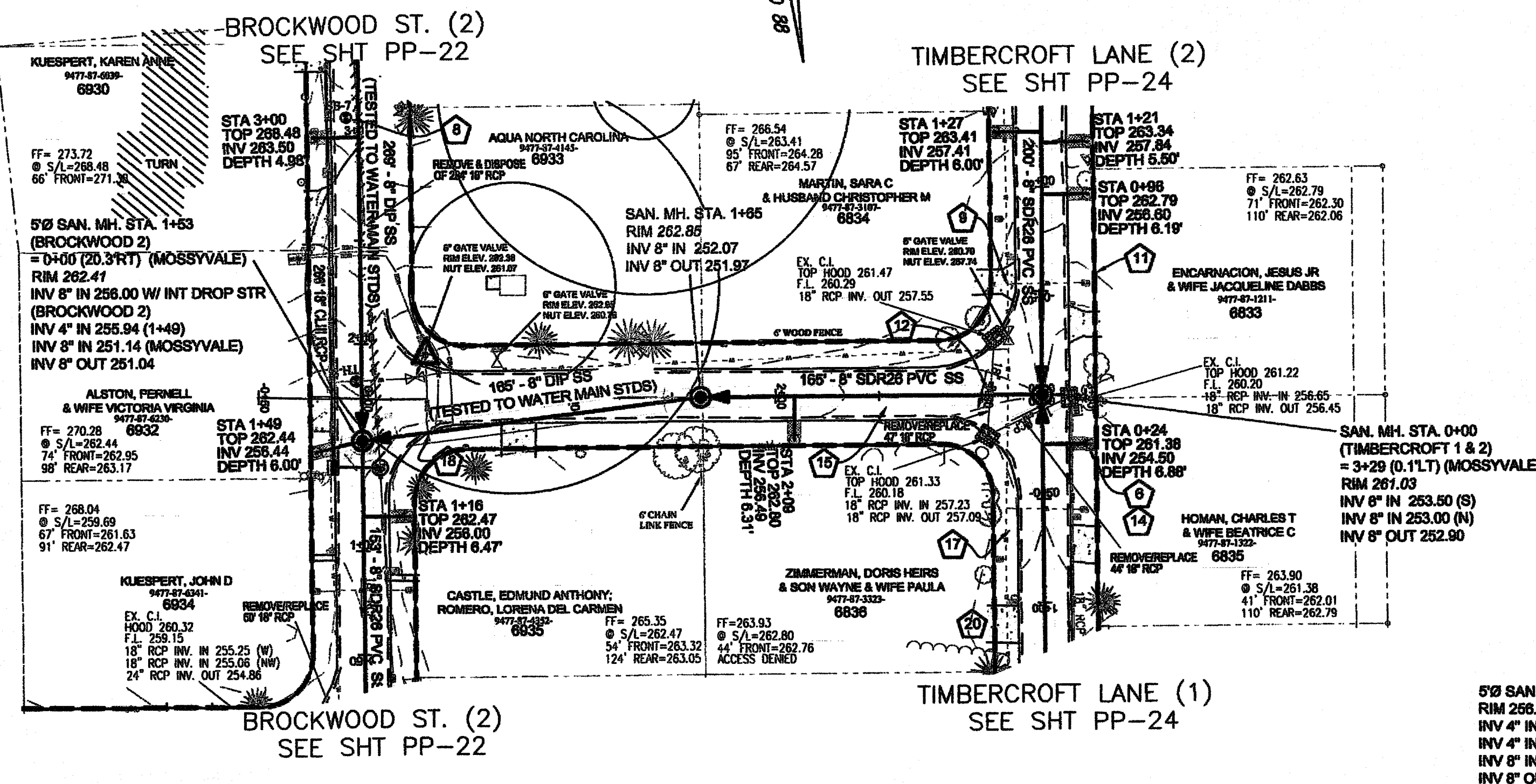
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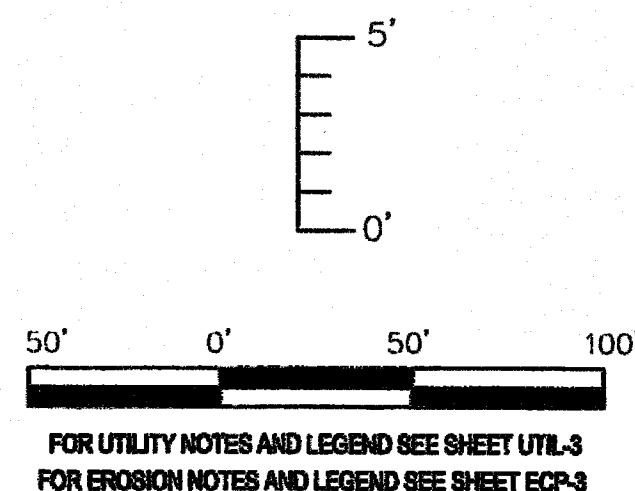
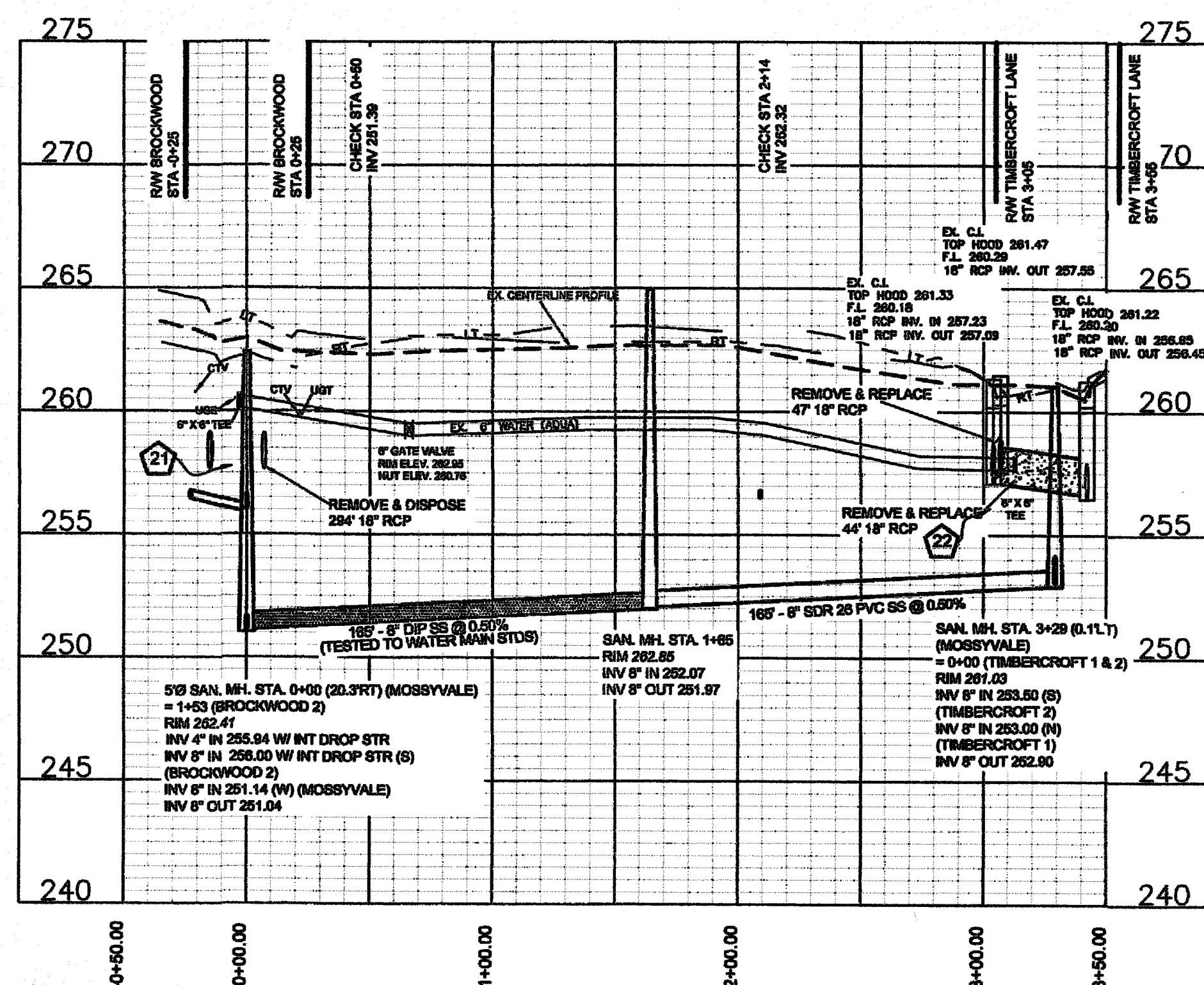
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TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #1	STA 1+82 BROCKWOOD ST. (2)	260.69	6-1/2" PVC WATER	AQUA



△ TBM 262.92 IRON ROD BY BACK OF CURB ON SW CORNER OF TIMBRCROFT LANE & MOSSYVALE WAY

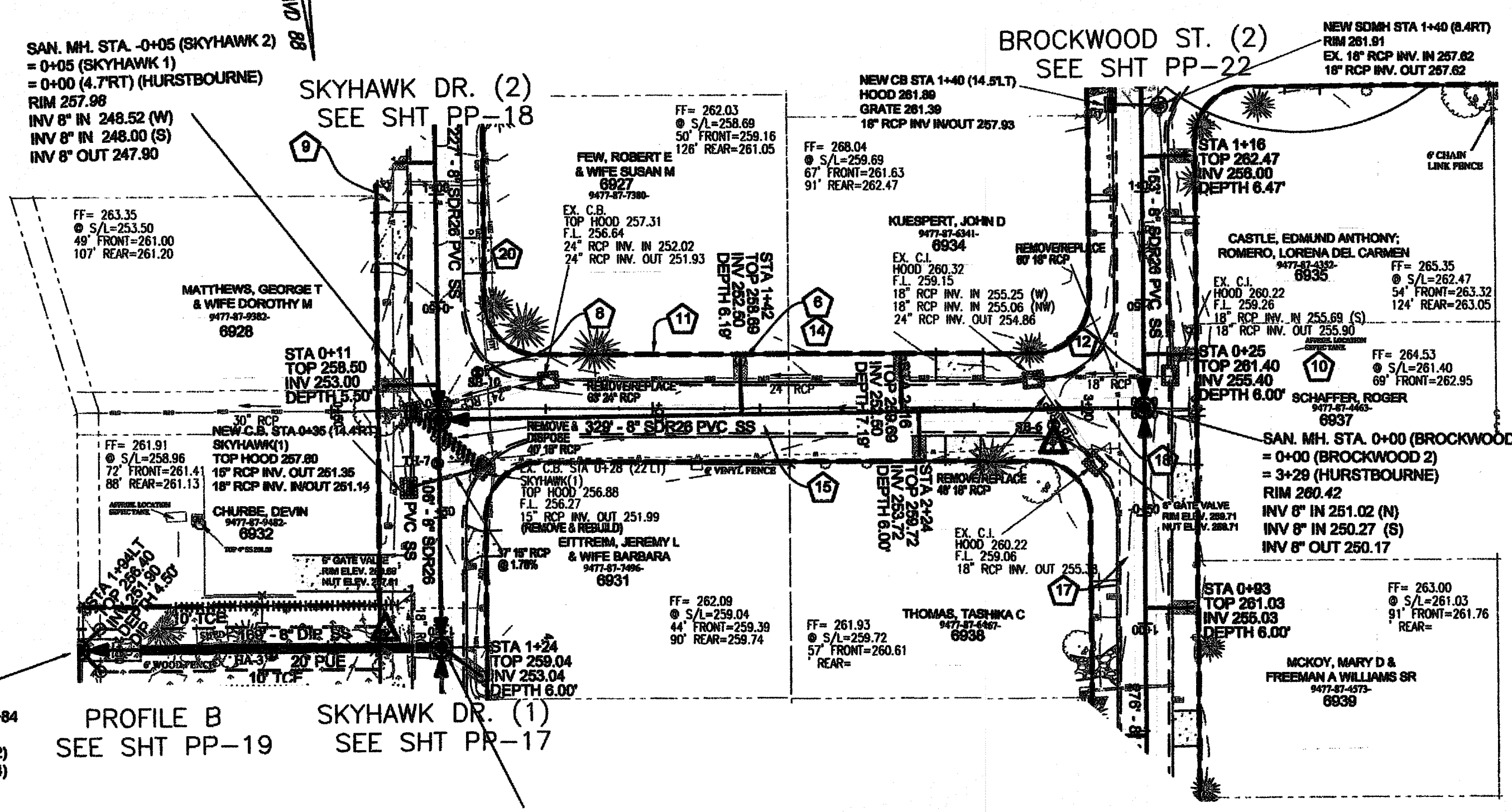
MOSSYVALE WAY 70' ROW
STA 0+00 TO END
26' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



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TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #7	STA 0+20 SKYHAWK DR. (1)	254.55	6-1/2" PVC WATER	AQUA

△ TBM 258.98 IRON ROD BY BACK OF CURB ON NE CORNER OF BROCKWOOD DR. & HURSTBOURNE LANE

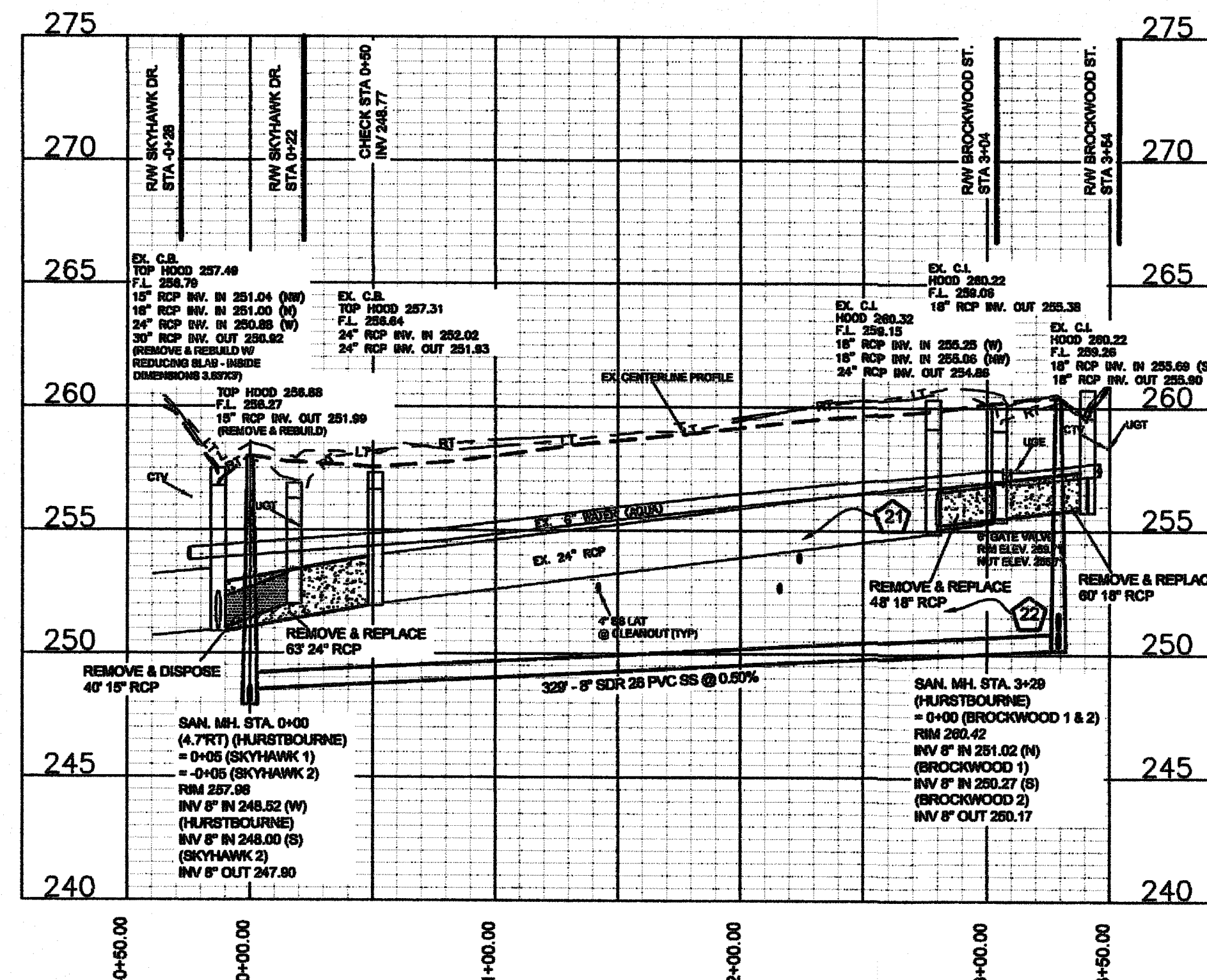


△ TBM 261.77 FIRE HYDRANT BOLT NEAREST "F" IN FIREMAIN BETWEEN 6432 & 6434 SKYHAWK DR.

5/8 SAN. MH. STA. 1+84
RIM 258.42
INV 4" IN 251.60 (6832)
INV 4" IN 250.70 (6834)
INV 8" IN 245.58
INV 8" OUT 245.48

5/8 SAN. MH. STA. 3+53 (PROF. B)
= 1+11 (SKYHAWK 1)
RIM 258.78
INV 4" IN 252.54 W/ INT DROP STR
INV 8" IN 247.38 (N)
INV 8" OUT 247.27

HURSTBOURNE LANE 70' ROW
STA 0+00 TO END
26' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Drawn by
David M. Hughes
Checked
David E. Vaughn, PE, PLS
Reviewed
Jeffrey B. Nelson, PE, PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Mossyvale & Hurstbourne STA 0+00 to END

Date	By	Revision



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David Maples
Checked
David E. Vaughn, P.E., PLS
Reviewed
Jeffrey B. Reitzel, P.E., PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Brockwood St. (2) STA 0+00 to End

By
Date
Revision

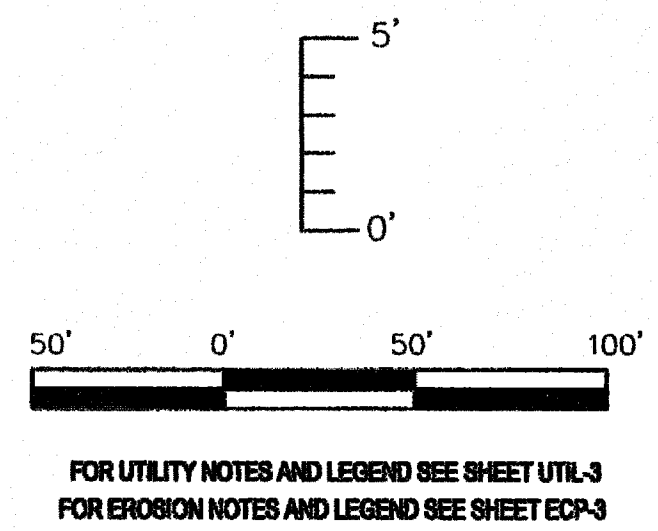
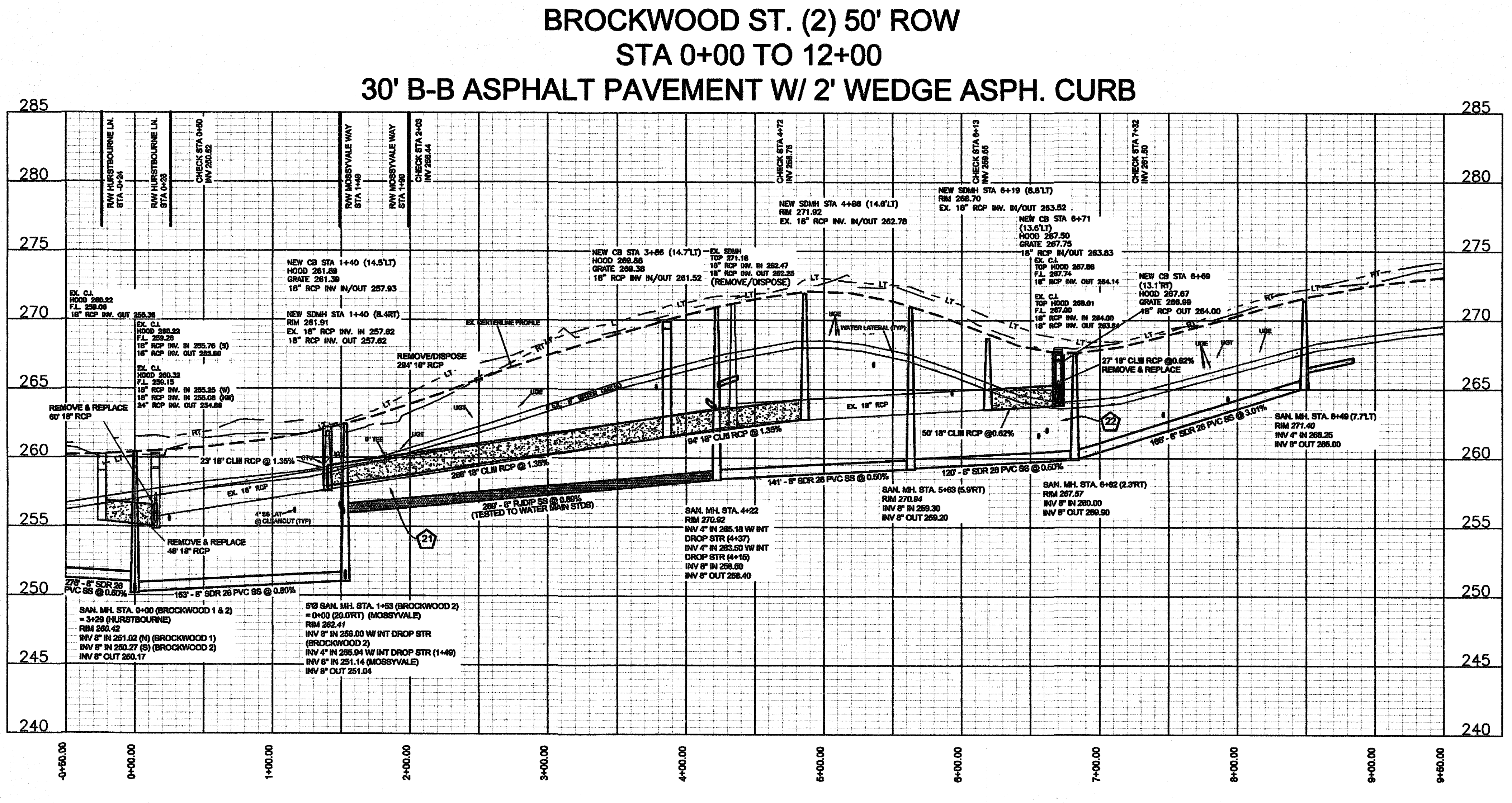
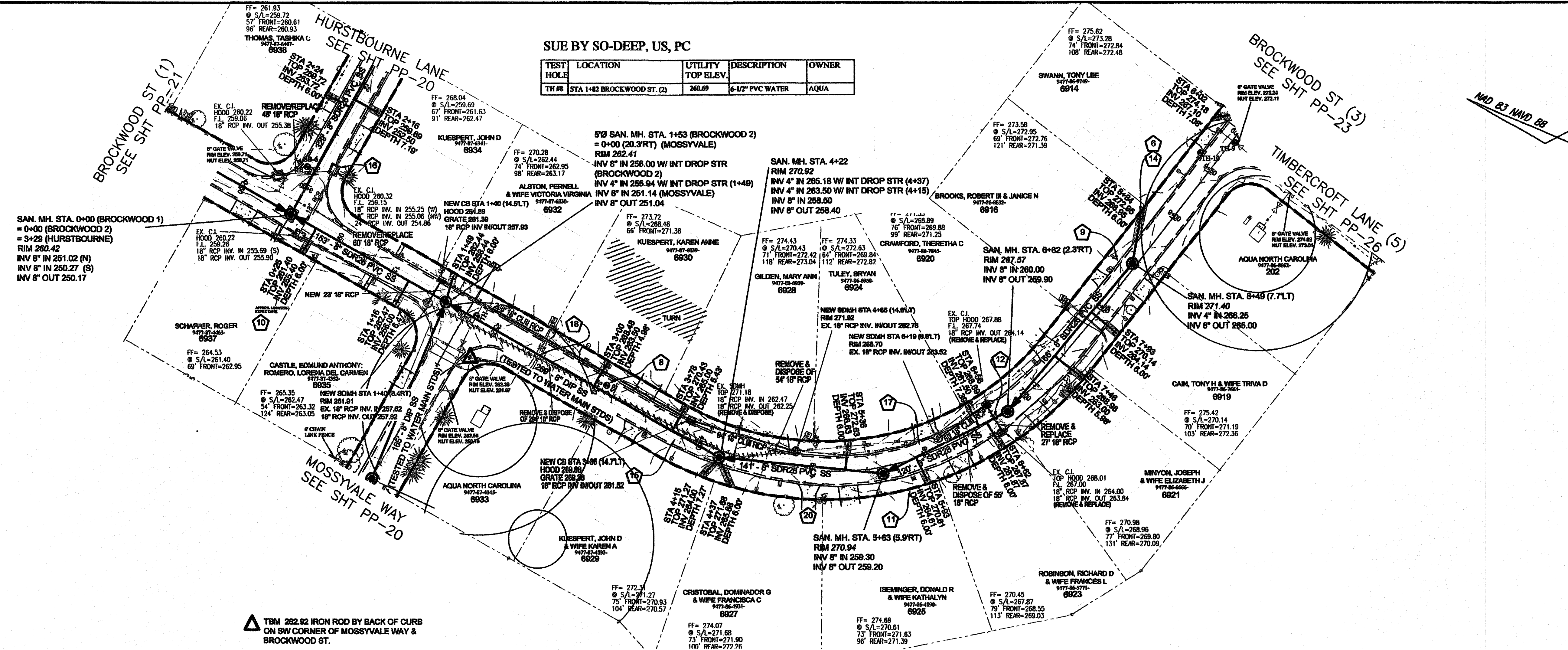
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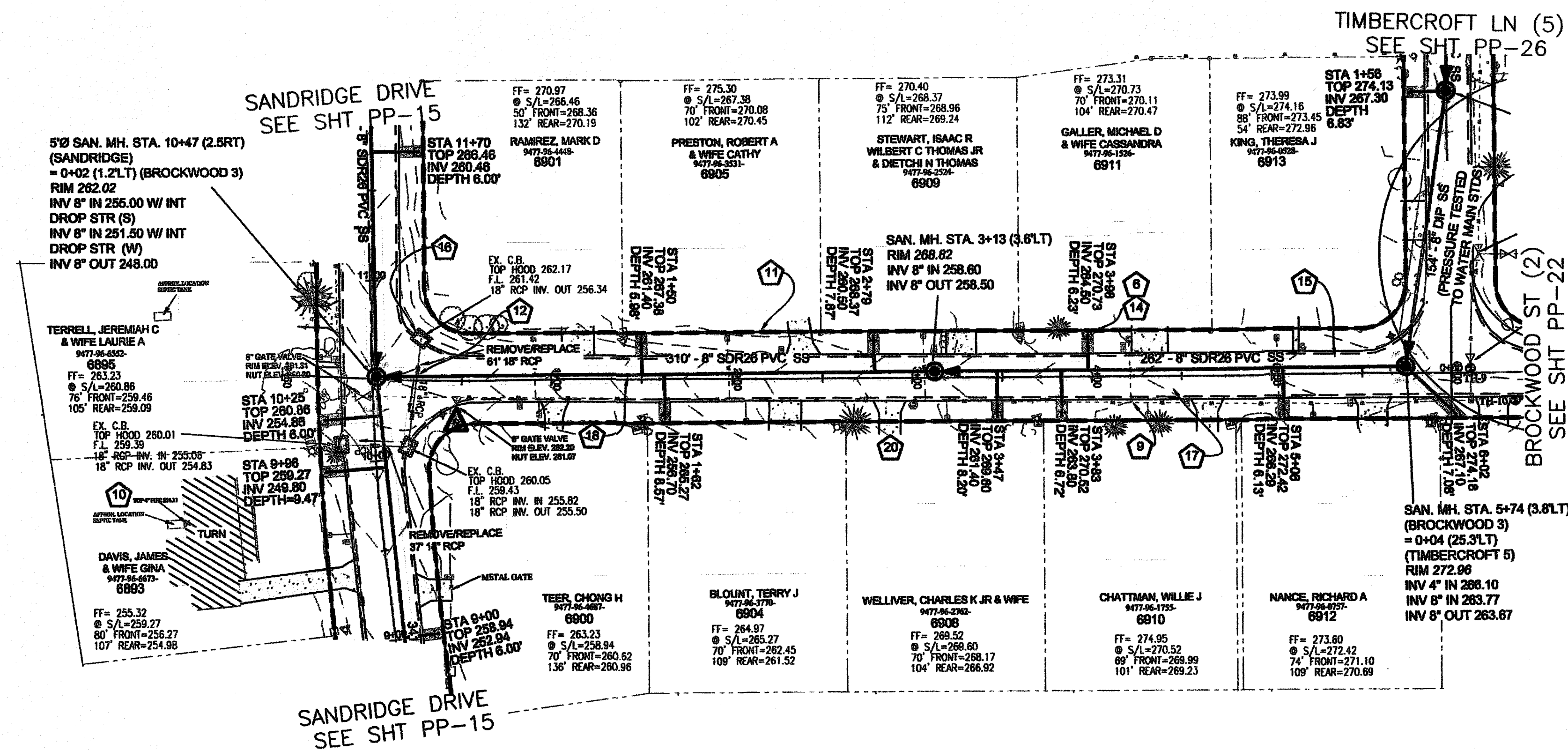
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TEST HOLE	LOCATION	UTILITY	DESCRIPTION	OWNER
TH #8	STA 1+82 BROCKWOOD ST. (2)	268.69	6-1/2" PVC WATER	AQUA



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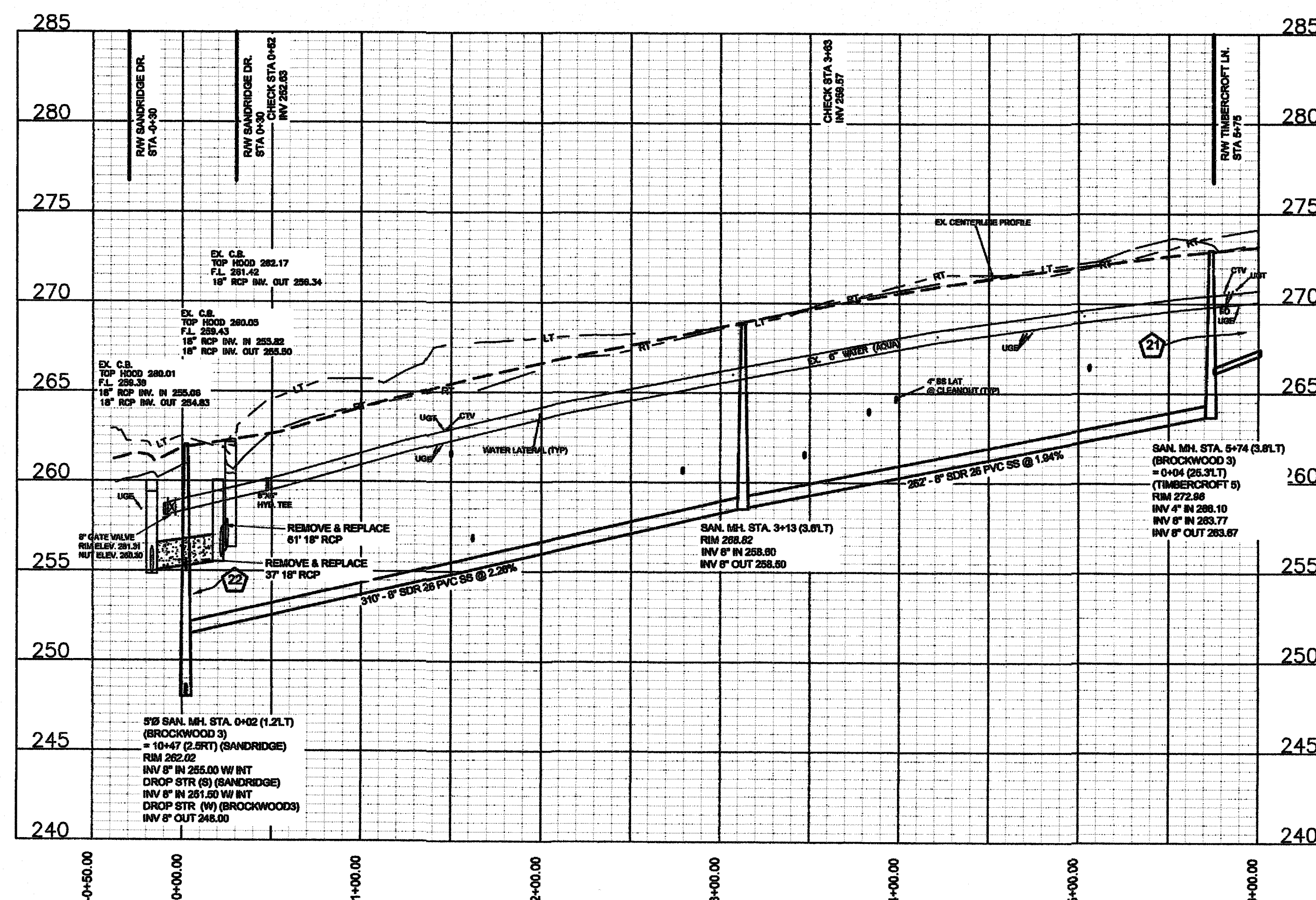
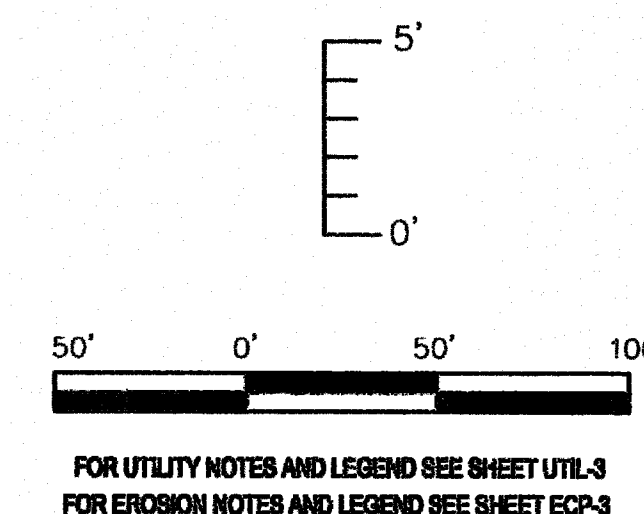


△ TBM 264.95 FIRE HYDRANT FLANGE BOLT
NEAREST "T" IN "FIREMAIN" NW CORNER OF
SANDRIDGE DR. & BROCKWOOD ST.

BROCKWOOD ST. (3) 50' ROW
STA 0+00 TO 12+00
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB

SUE BY SO-DEEP, US, PC

TEST HOLE	LOCATION	UTILITY TOP ELEV.	DESCRIPTION	OWNER
TH #9	STA 6+11 BROCKWOOD ST. (3)	270.71	8-1/2" PVC WATER	AQUA
TH #10	STA 6+35 BROCKWOOD ST. (3)	270.77	6-1/2" PVC WATER	AQUA

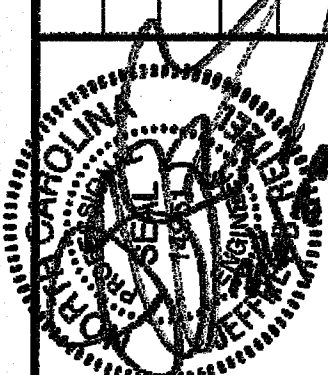


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Drawn by
David E. Vaughn, P.E., PLS
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David E. Vaughn, P.E., PLS
Reviewed
Jeffrey B. Ratcliff, P.E., PLS
Date
OCT 2022

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Brockwood St. (3) STA 0+00 to END

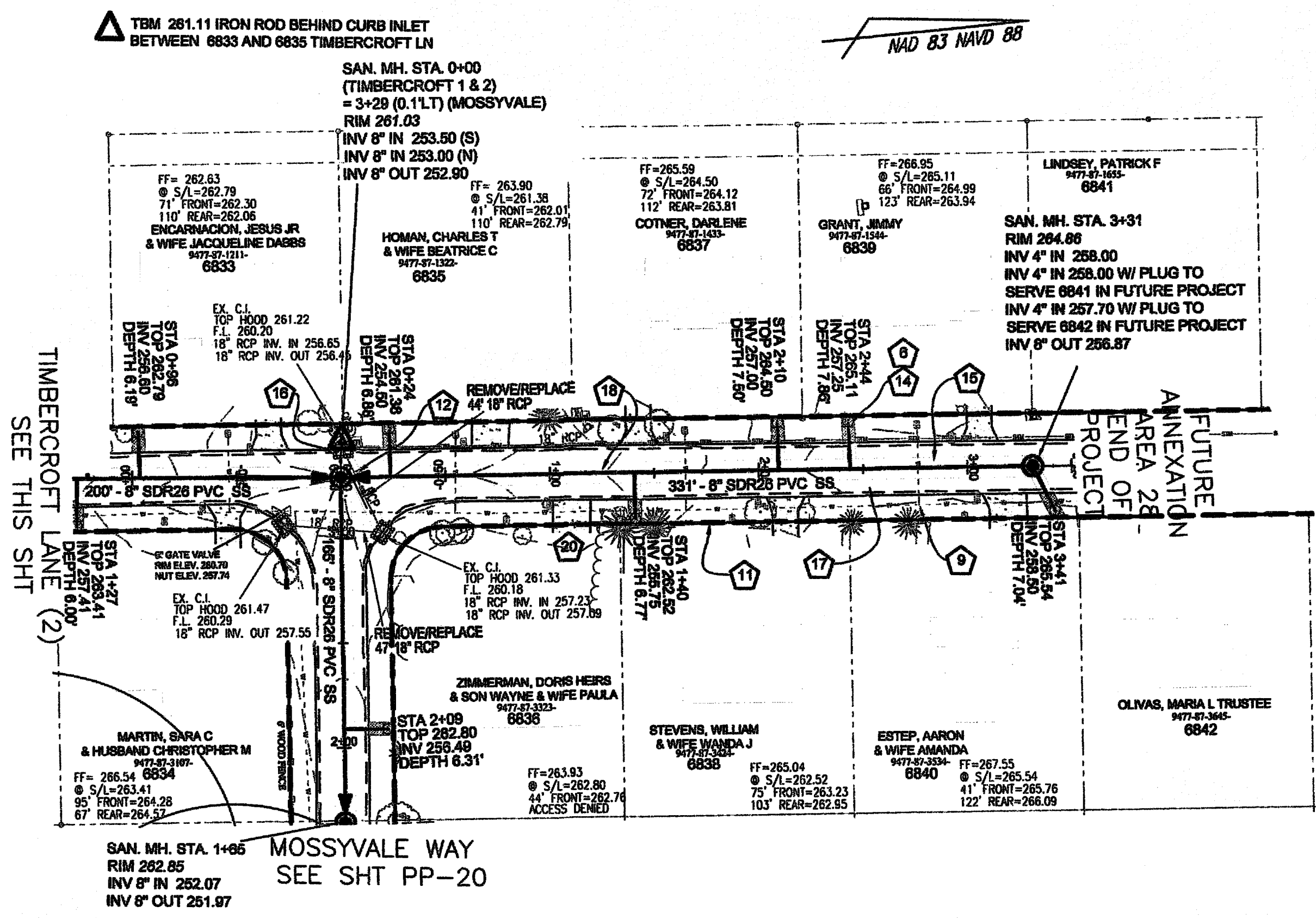
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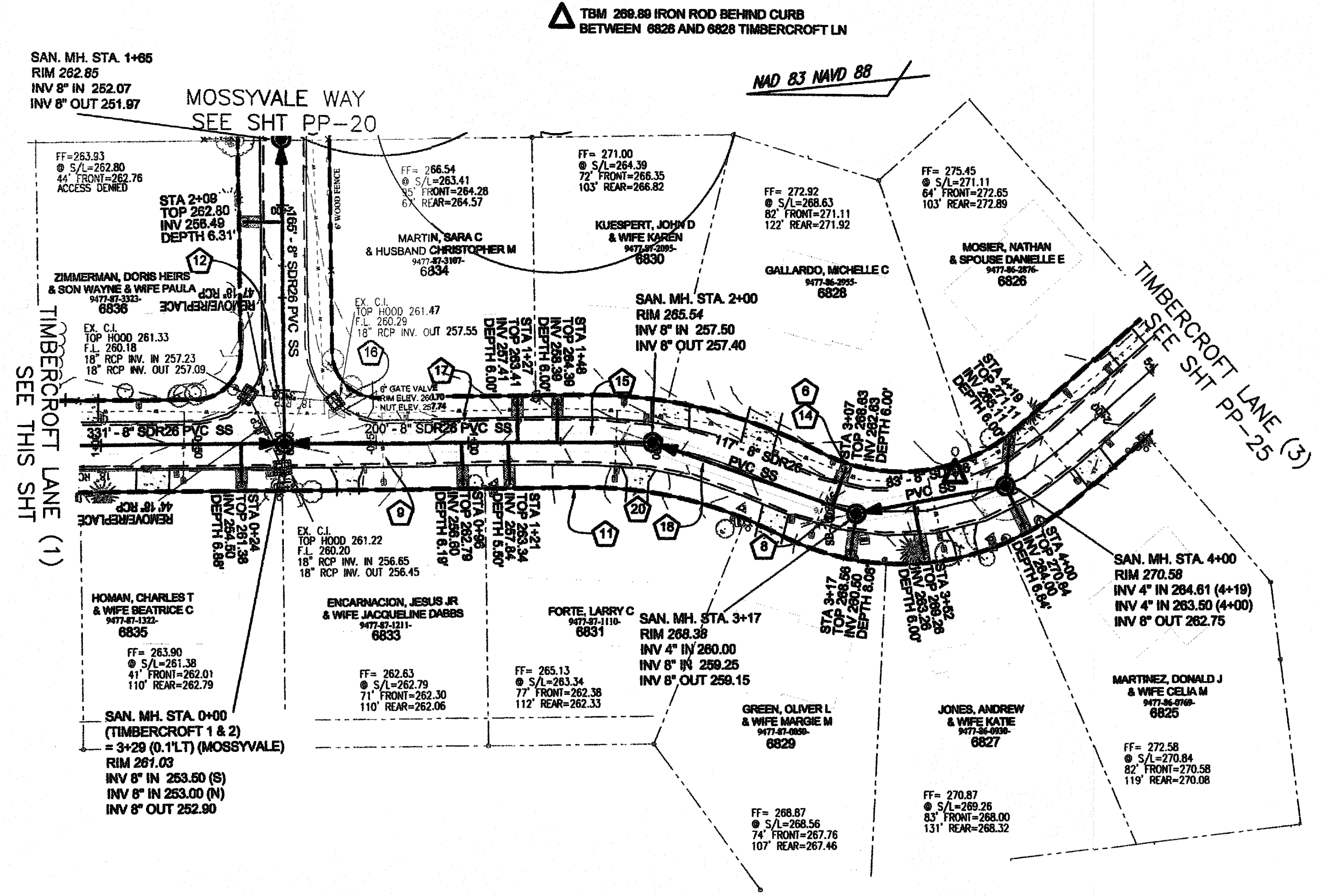
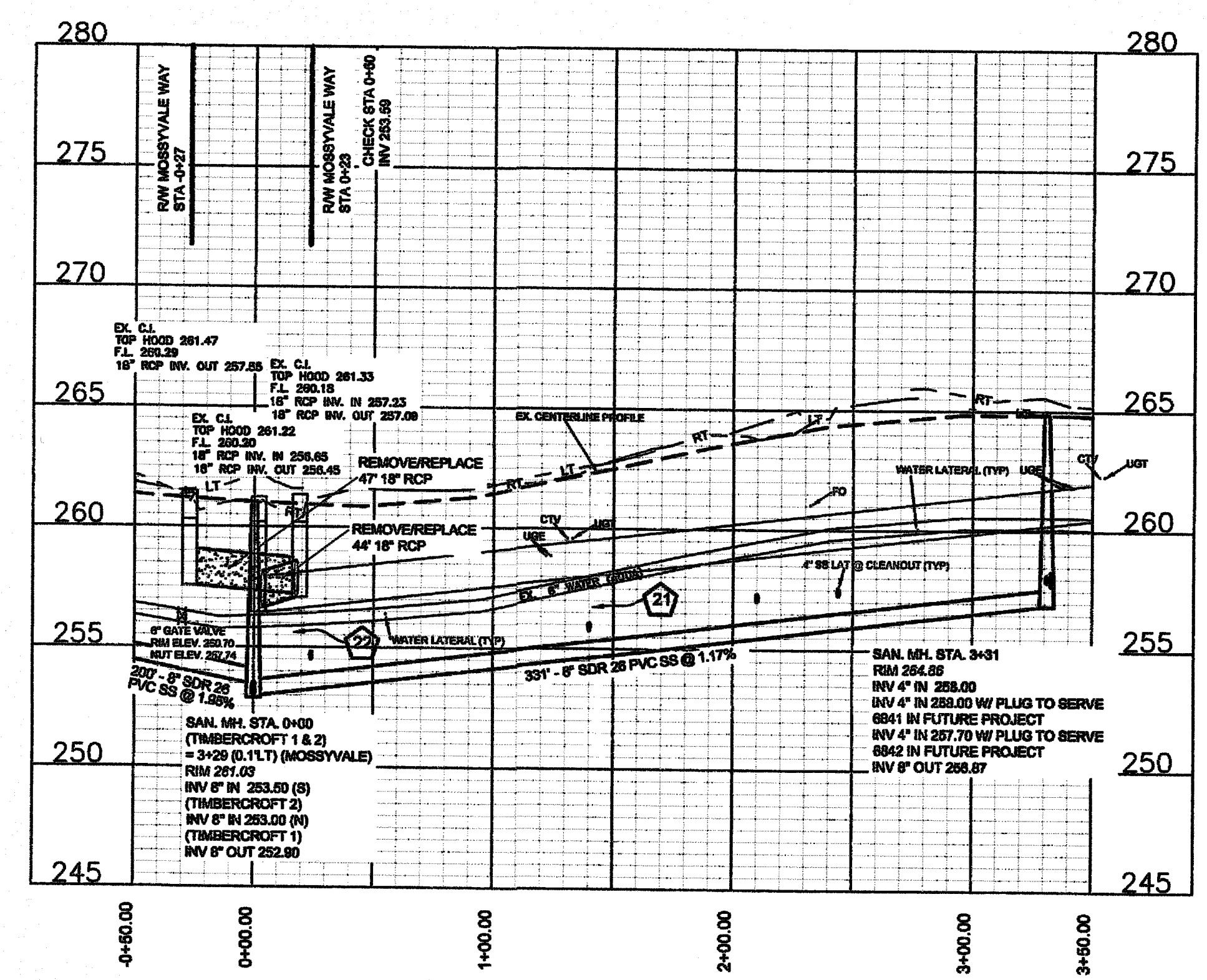
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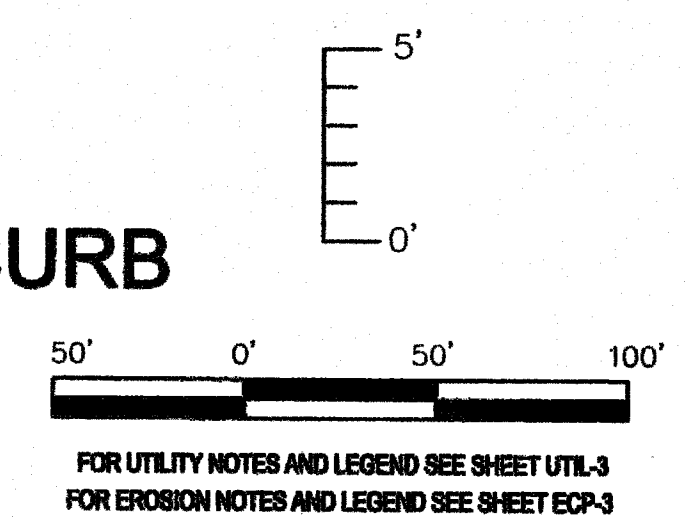
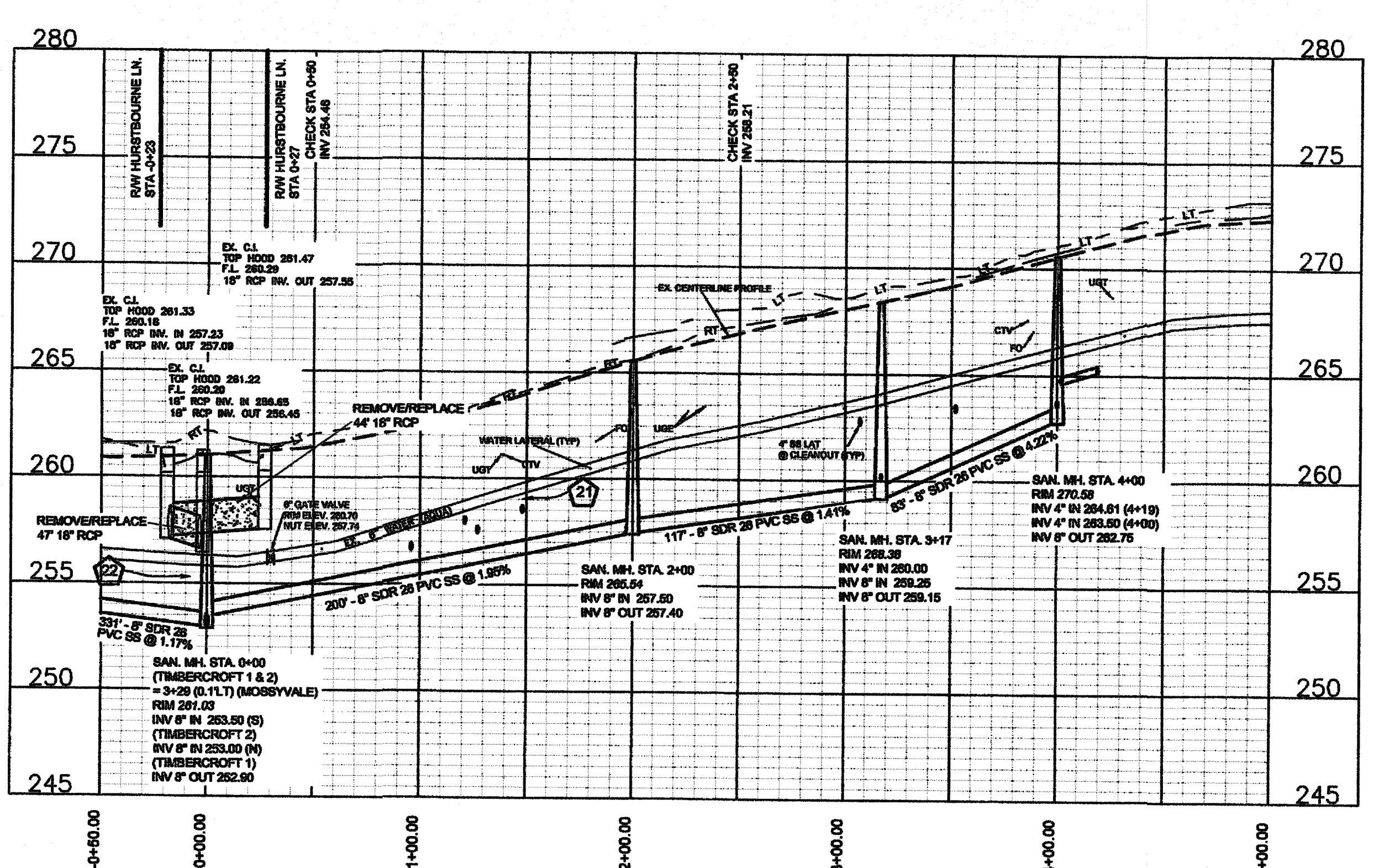
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**TIMBERCROFT LANE (1) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**



**TIMBERCROFT LANE (2) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB**



Drawn by
David E. Vaughn, P.E., PLS

Checked
David E. Vaughn, P.E., PLS

Reviewed
Jeffrey B. Reitzel, P.E., PLS

Date
OCT 2022

**Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
Timbercrot Lane (1 & 2) STA 0+00 to END**

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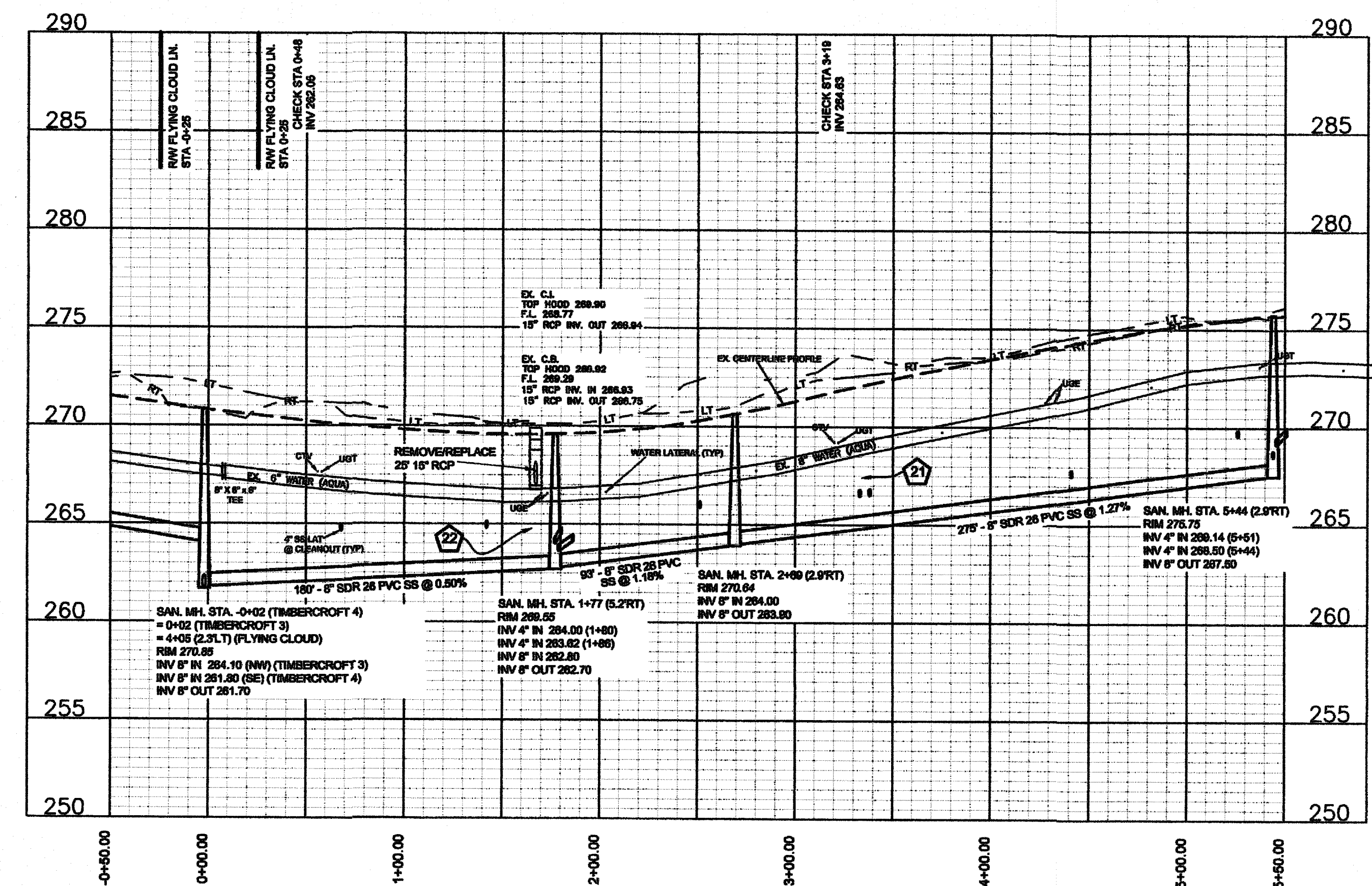
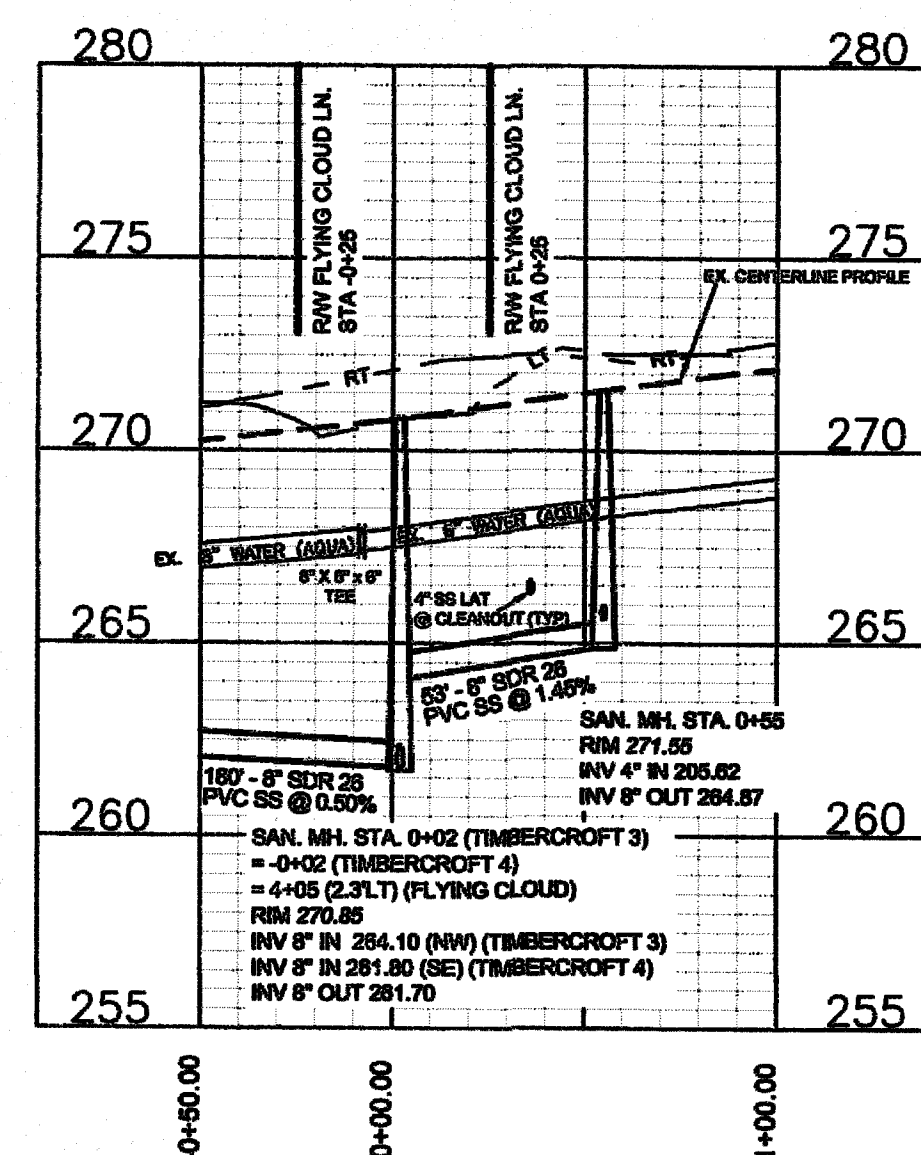
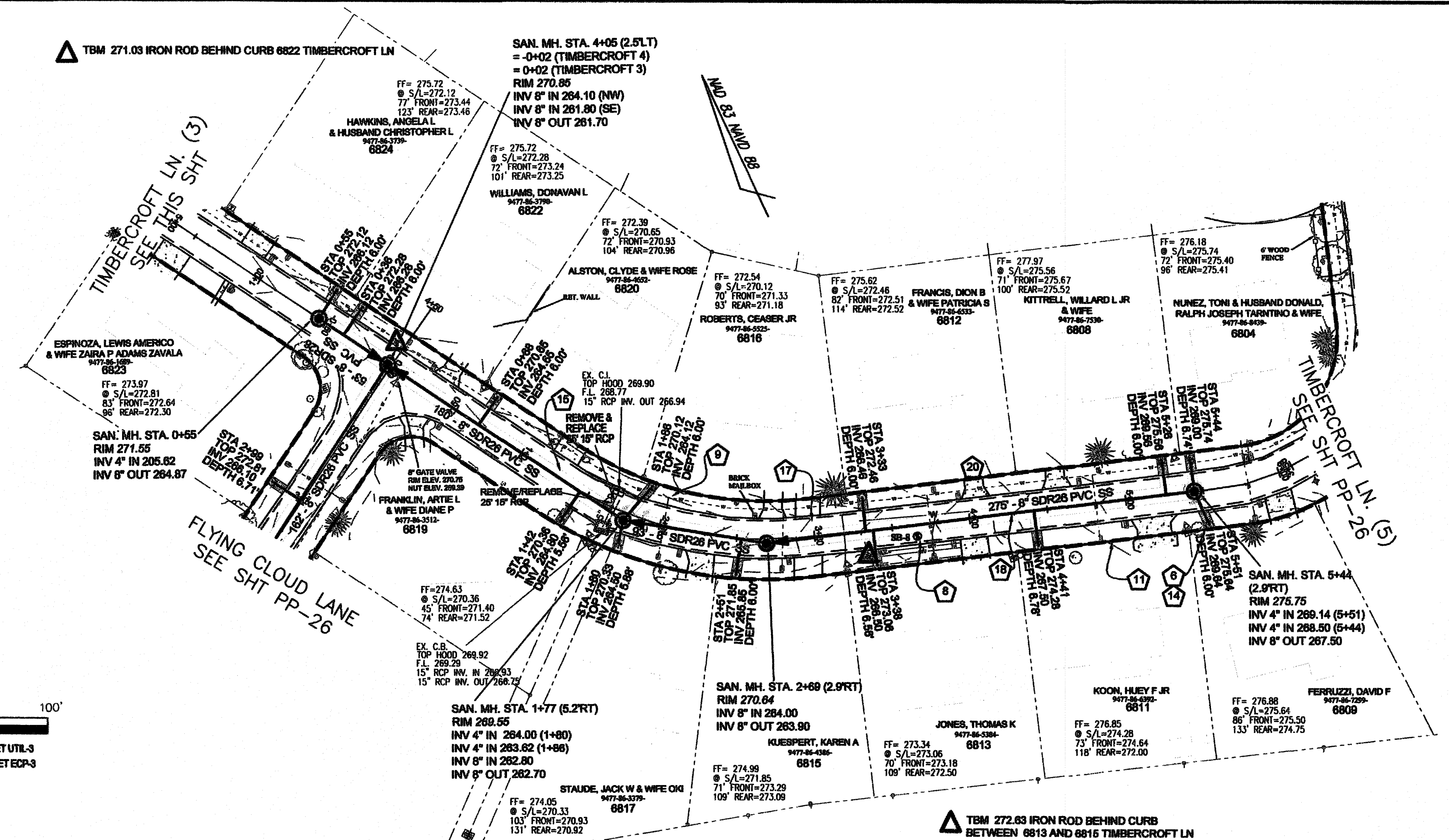
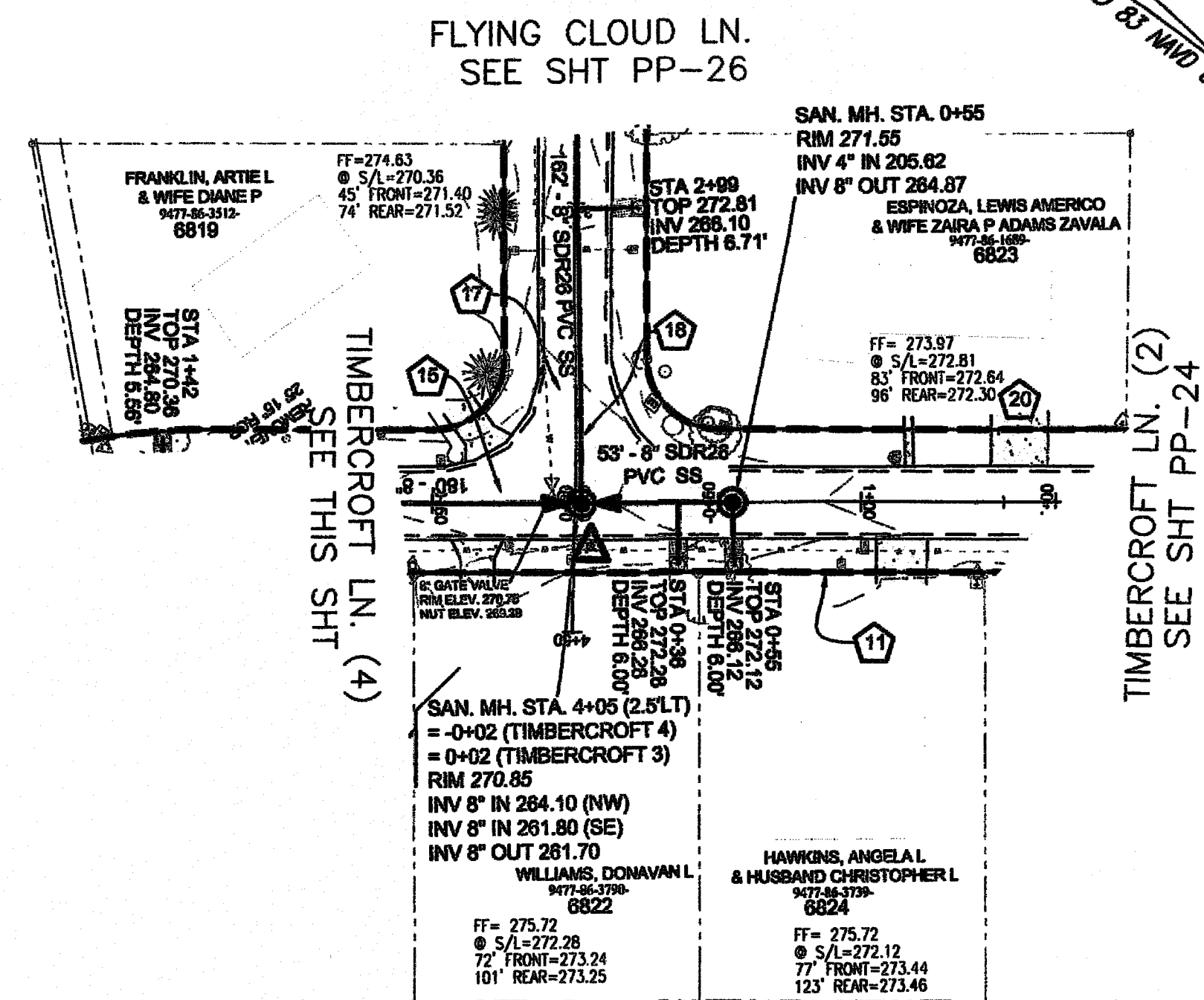
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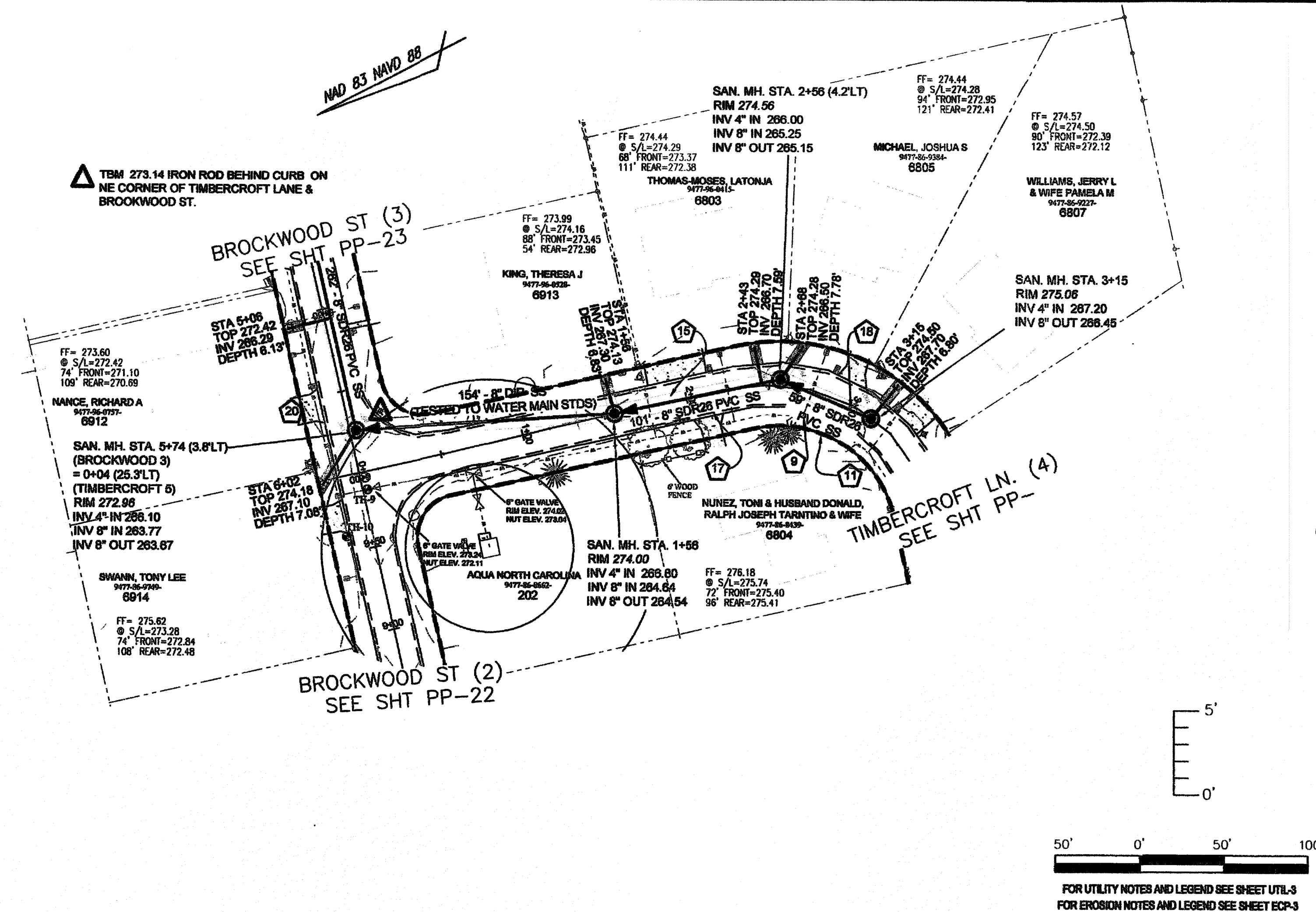
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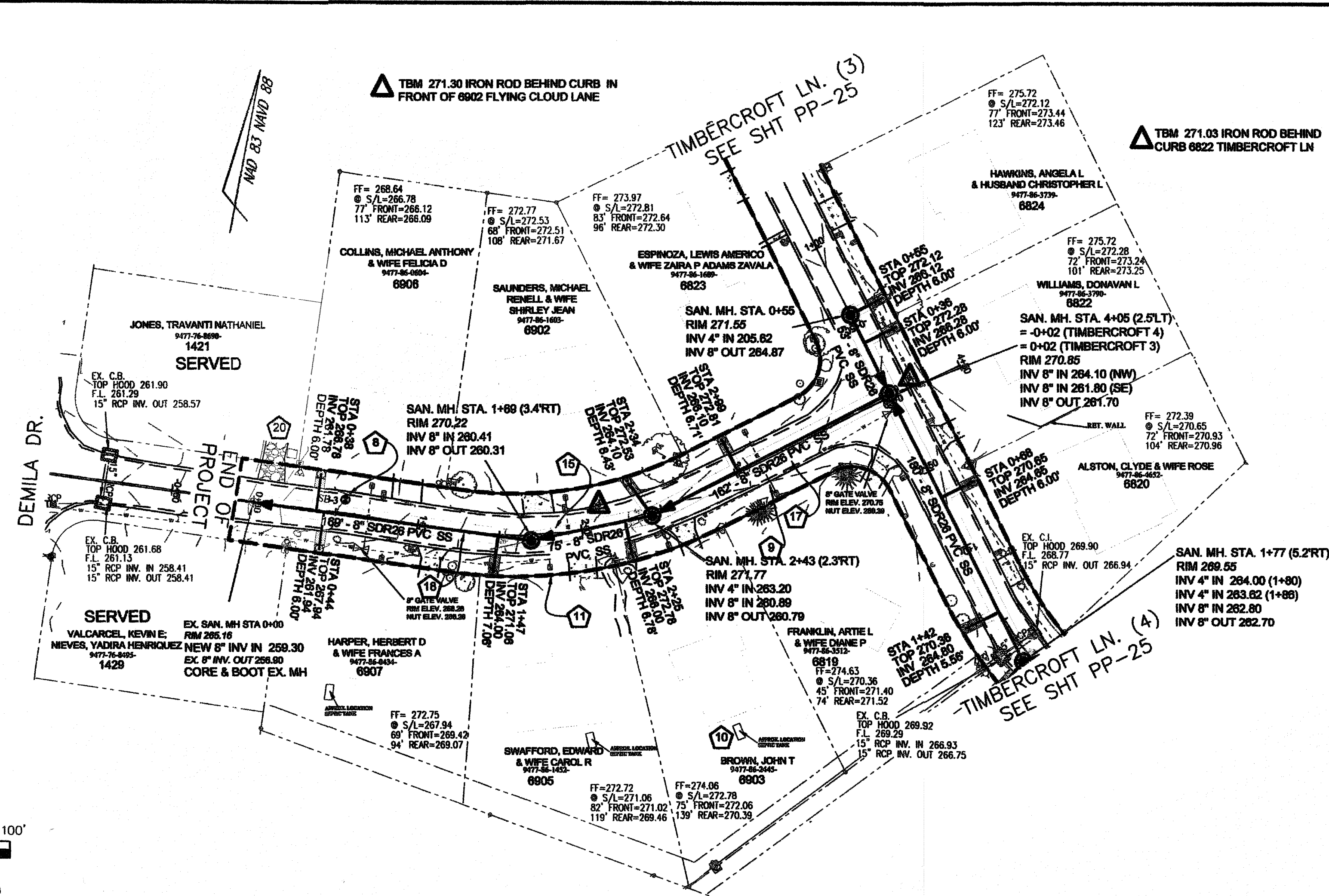
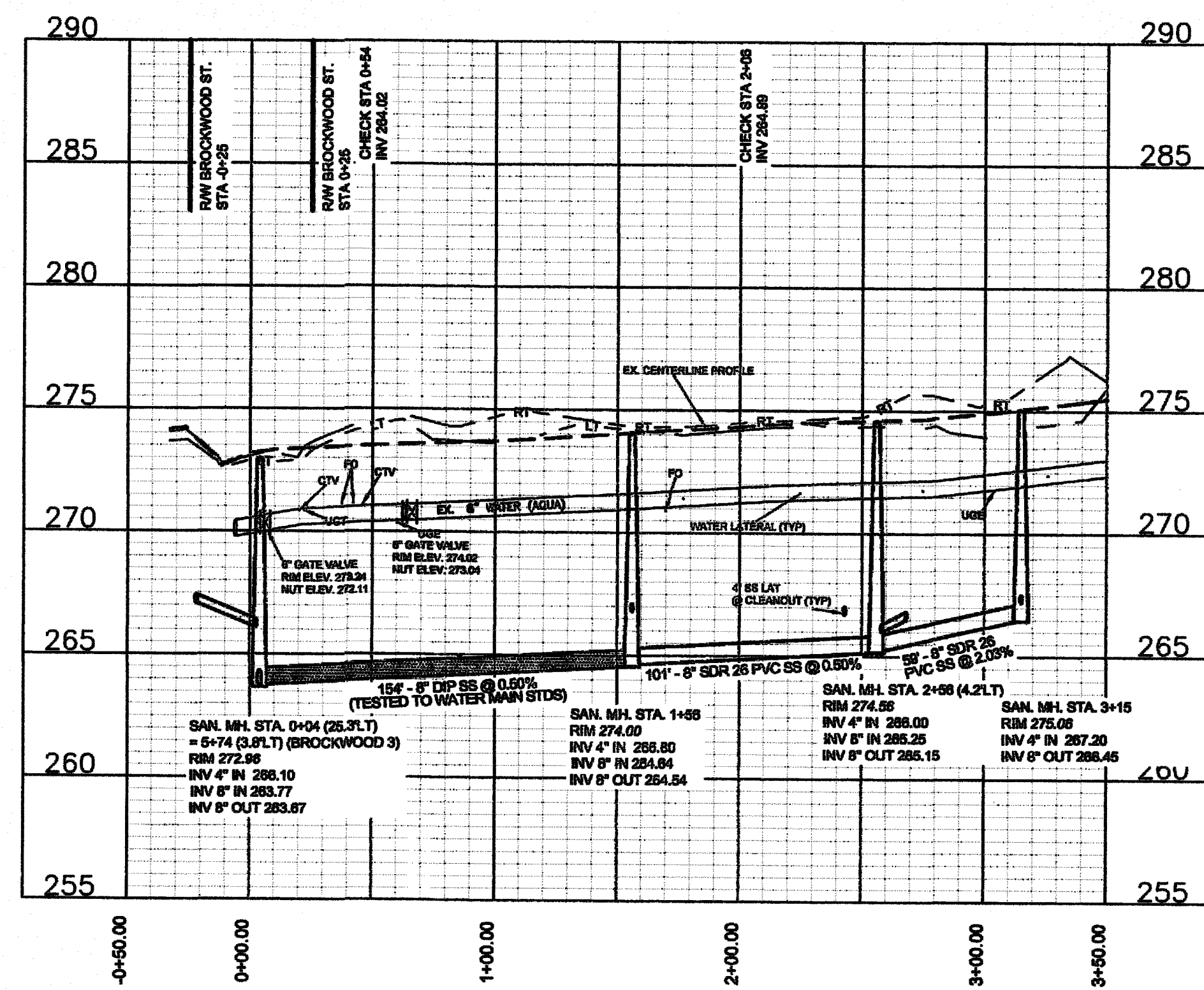
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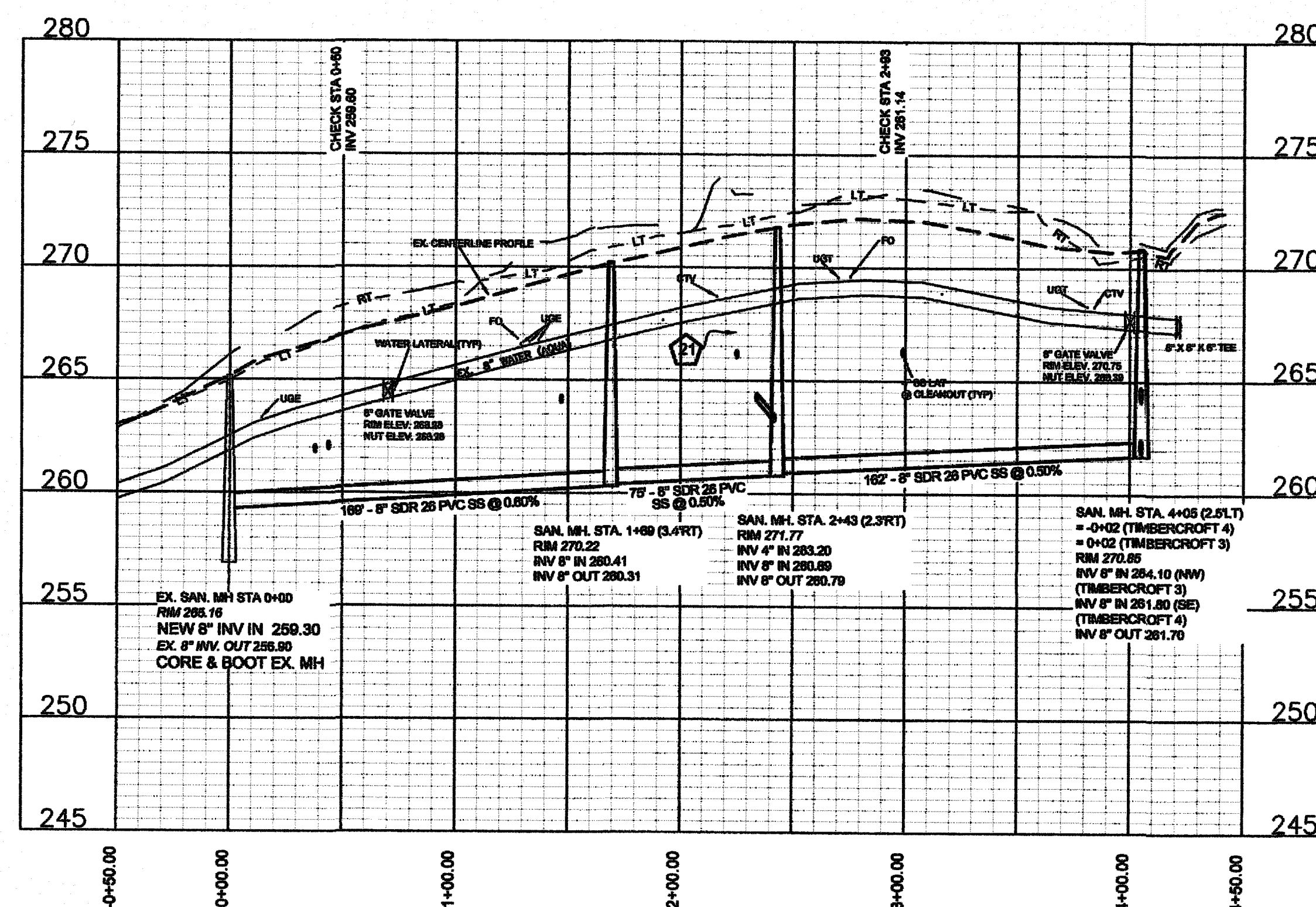




TIMBERCROFT LANE (5) 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



FLYING CLOUD LANE 50' ROW
STA 0+00 TO END
30' B-B ASPHALT PAVEMENT W/ 2' WEDGE ASPH. CURB



Drawn by
David Maples

Checked
David E. Vaughn, P.E., PLS

Reviewed
Jeffrey B. Pabst, P.E., PLS

Date
OCT 2022

Fayetteville Annexation Phase V

Construction Project XII

Area 26 - Cliffdale West

Timbercrot Ln. (5) & Flying Cloud 0+00 to END

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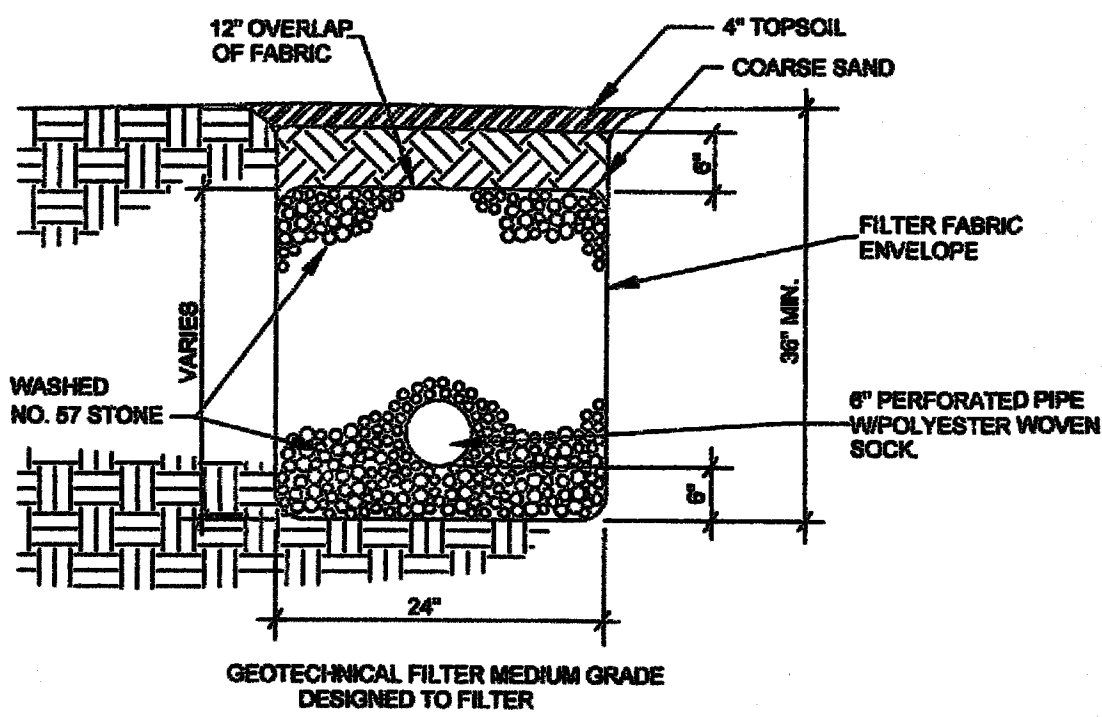
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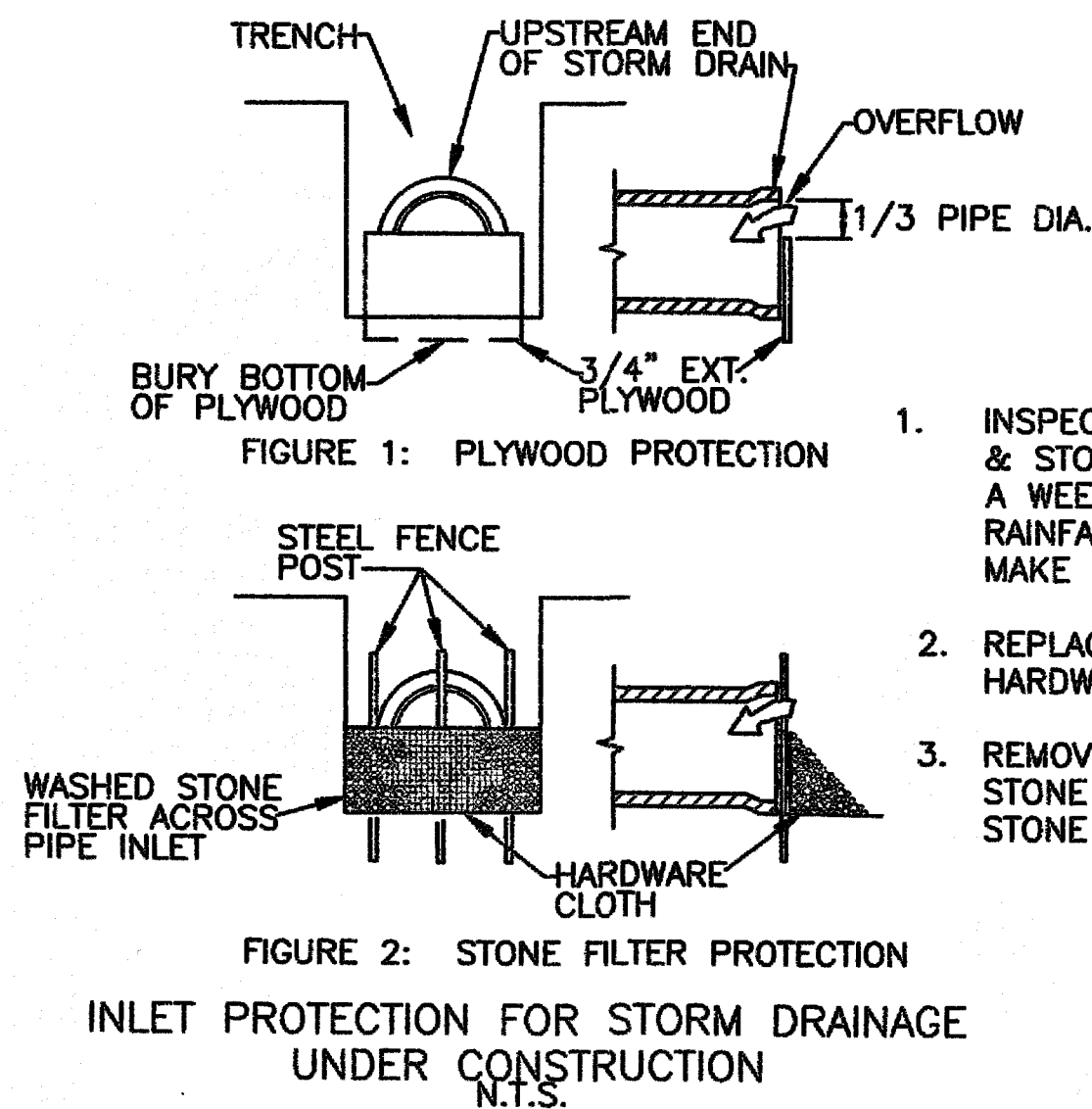


NOTES:

1. WRAP PERFORATED PIPE WITH FILTER FABRIC. PROVIDE 1.5 TIMES THE CIRCUMFERENCE.
2. PIPE SHALL BE PERFORATED WITH 1/2" DIAMETER HOLES AT 120 DEGREE ANGLES RADIAL FROM CENTER OF PIPE PLACED AT 8" ON CENTER.

FABRIC REQUIREMENTS		
PHYSICAL PROPERTIES	TEST METHOD	TYP. MIN. AVG
TENSILE STRENGTH (lb/in)	ASTM D-1682	90
TENSILE ELONGATION (%)	ASTM D-1682	60
BURST STRENGTH (PSI)	MULLEN BURST	230
ACCELERATED WEATHERING (STRENGTH RETAINED %)	FEDERAL TEST METHOD CCC-T-191 METHOD 6904 (600 HOURS EXPOSURE)	70
PERMEABILITY COEFFICIENT (cm/sec)	FALLING HEAD (75mm TO 25mm)	0.20
EQUIV. OPENING SIZE	CW-02216, U.S. SIEVE NO. EQUIV.	70 MIN.

FRENCH DRAIN NTS



1. INSPECT HARDWARE CLOTH & STONE AT LEAST ONCE A WEEK, AND AFTER EACH RAINFALL. MAKE REPAIRS IMMEDIATELY.
2. REPLACE ANY DAMAGED HARDWARE CLOTH
3. REMOVE SEDIMENT FROM STONE FILTER AND REPLACE STONE FILTER AS NECESSARY.

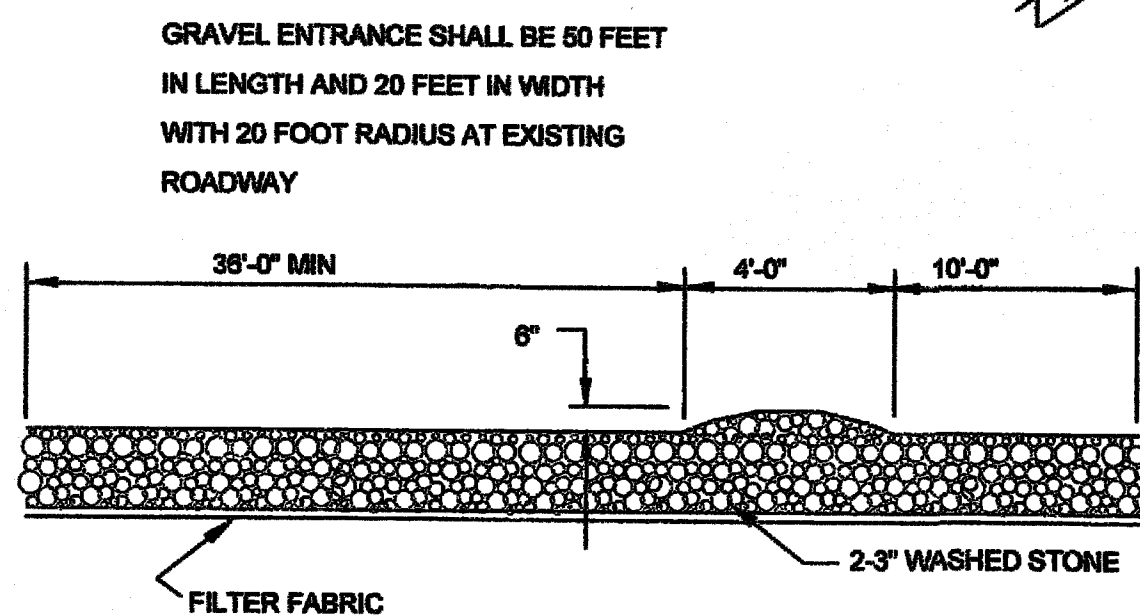
FIGURE 2: STONE FILTER PROTECTION
INLET PROTECTION FOR STORM DRAINAGE
N.T.S.

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 or 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

N.T.S.

CAD FILE : ENTENT

EC-2



GRAVEL CONSTRUCTION ENTRANCE/EXIT

DATE: 4/3/08 DRAWN BY: CSA
SCALE: N.T.S. CKD BY: JPB

Dates	Types	Rate
April 1 - July 15	Warm Season Mix Switchgrass, Cave-in-rock, Alamo Smartweed; and Japanese Millet or Sorghum Sudan Grass Hybrids (Mow prior to maturity)	8 pls #/acre or 4 oz./1000 s.f. 2 bulk #/acre or 1 oz./1000 s.f. 20-lb/acre or 1/2 lbs/1000 s.f.
July 16 - Sept 1	Temporary crop of Japanese Millet or Sorghum Sudan Grass Hybrids (To be followed by permanent mixture)	20-lb/acre or 1/2 lbs/1000 s.f.
Sept 2 - Nov 1	Cool Season Mix Reed Canary Grass Smartweed	12 bulk #/acre or 6 oz./1000 s.f. 2 bulk #/acre or 1 oz./1000 s.f.
Nov 2 - March 31	Temporary Crop of Wheat (To be followed by permanent mixture)	40 lbs/acre

WETLANDS SEEDING MIX

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK. (NO SEPARATE PAYMENT).
2. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO FINAL INSPECTION.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NCDEM REGIONAL OFFICE FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER NCDEM OR THE ENGINEER. (NO SEPARATE PAYMENT).

GENERAL EROSION AND SEDIMENT CONTROL NOTES

7. ALL DISTURBED AREAS ARE TO DRAW TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
8. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SOODED OR SEEDED AS INDICATED AND STABILIZED.
9. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
10. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. (NO SEPARATE PAYMENT). NCDEM'S FINAL APPROVAL IS REQUIRED.
12. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. (NO SEPARATE PAYMENT).
13. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE CONTRACTOR SHALL REPAIR WITH FABRIC DISTURBED BANKS AND CHANNEL AND RESTORE SLOPES TO ORIGINAL CONTOURS, BUT NOT STEEPER THAN 2:1 MAXIMUM. DISTURBED CREEK AREA SHALL BE STABILIZED IMMEDIATELY.

WETLAND CONSTRUCTION REQUIREMENTS

1. CONSTRUCTION LIMITS/CORRIDOR (INCLUDING ROADS AND STOCKPILE AREA) TO A MAXIMUM 40 FOOT WIDTH.
2. POST CONSTRUCTION GROUND CONTOURS AND ELEVATIONS MUST BE RESTORED TO THE ORIGINAL ELEVATIONS.
3. THE TOP 6" TO 12" OF THE TRENCH SHALL BE BACKFILLED WITH THE TOPSOIL AND/OR SOIL EXISTING PRIOR TO CONSTRUCTION.
4. EXCESS MATERIAL MUST BE REMOVED TO UPLAND AREAS AND DISPOSED OF OFF-SITE. TEMPORARY PLACEMENT/STOCKPILE FOR ABSOLUTE MINIMUM PERIOD OF TIME.
5. DISTURBED SLOPES AND STREAM BANKS MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF THE UTILITY LINE OR IMMEDIATELY AT EACH STREAM CROSSING.
6. NOTIFY COE DISTRICT ENGINEER AND RECEIVE WRITTEN APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
7. INSTALL ANTI-SEEP COLLARS EVERY 150 FEET OR AS SHOWN ON PLANS.
8. NO FERTILIZER SHALL BE APPLIED WITHIN 10 FEET OF STREAM.
9. NO FRESH CONCRETE SHALL BE IN CONTACT WITH STREAMS.
10. SEEDING SHALL BE IN ACCORDANCE WITH THE SPECIFIED MIXTURE FOR WETLAND AREAS.

WETLAND CONSTRUCTION REQUIREMENTS

SHEET NO. 1 OF 1
DWG. NO. N.6
DATE: JAN. 01, 2019

FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.

WATER RESOURCES
ENGINEERING DEPARTMENT

NO. DATE REVISION

NO. DATE REVISION

NS-WETLAND-NOTES.dwg

DESIGN CRITERIA:

Height: 18" Minimum from Channel Bottom to Ridge Top

Slope: 2:1 or flatter
3:1 or flatter where vehicles cross

Base Width of Ridge: 6' minimum

Spacing of Water Bars	Spacing (ft)
Slope (%)	
< 5	125
5 to 10	100
10 to 20	75
20 to 35	50
> 35	25

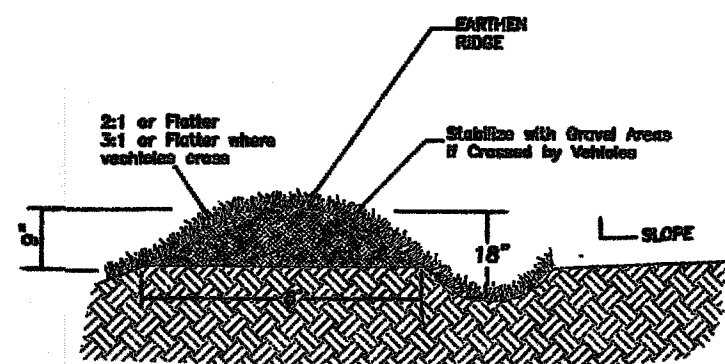
Grade and Angle: Crossing angle selected to provide a positive grade not to exceed 2%

Outlet: Diversions should have stable outlets, either natural or constructed. Site spacing may need to be adjusted for field conditions to use the most suitable areas for water disposal.

NOTES:

1. Install the diversion as soon as the right-of-way has been cleared and graded.
2. Disk the base for the constructed ridge before placing fill.
3. Track the ridge to compact it to the design cross section.
4. Locate the outlet on an undisturbed area. Adjust field spacing of the diversion to use the most stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection (Practice 6.40, Level Spreader, and 6.41, Outlet Stabilization Structure).
5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with gravel areas to be crossed by vehicles.

R/W DIVERSION (WATER BAR)
NTS



MAINTENANCE:

Periodically inspect right-of-way diversions for wear and after every heavy rainfall for erosion damage. Immediately remove sediment from the flow area and repair ditches. Check outlet areas and make timely repairs as needed. When permanent road drainage is established and the area above the temporary right-of-way diversions is permanently stabilized, remove the ditches and fill the channel to blend with the natural ground, and appropriately stabilize the disturbed area.

SILTSACK SPECIFICATIONS

NOTE: THE SILTSACK SHALL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4832	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4832	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3788	800 PSI
TRAPEZOID TEAR	ASTM D-4833	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4791	40 US SIEVE
FLOW RATE	ASTM D-4481	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4481	0.05 SEC-1

HI-FLOW SILTSACK

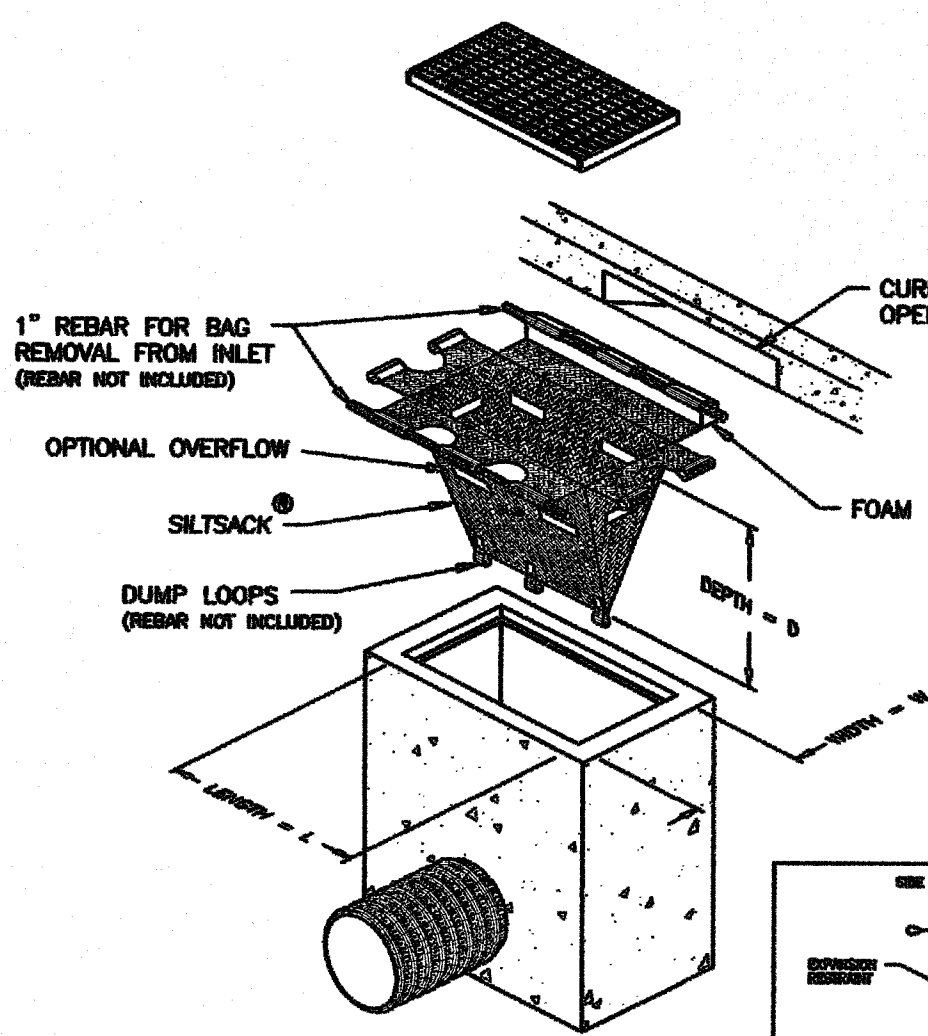
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4832	285 LBS
GRAB TENSILE ELONGATION	ASTM D-4832	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3788	420 PSI
TRAPEZOID TEAR	ASTM D-4833	45 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4791	20 US SIEVE
FLOW RATE	ASTM D-4481	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4481	1.5 SEC-1

OIL-ABSORBANT SILTSACK

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK WITH A WOVEN PILLLOW INSERT.



HIGH FLOW SILT SACK
NTS

MAINTENANCE

Inspect all sacks at least once a week and after each rainfall. Make any required repairs immediately.

Should the fabric of a silt sack collapse, tear, decompose or become ineffective, replace it promptly.

Removal Of Accumulated Silt

Remove sediment deposits, soil on tops and around foam at inlet opening as necessary.

Remove heavy cover grate.

Remove silt sack by selecting cables to rubber for lifting.

Place wheel barrow or similar device under bag.

Remove rubber from dump loops and empty bag.

Brush inside of bag to remove soil materials left after dumping operation.

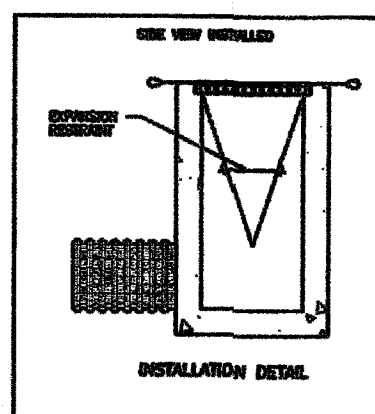
Replace rubber in dump loops.

Place all sack in basin, insure emptying flaps are flat.

Place grate frame sack is properly positioned in inlet.

Remove soil from wheel barrow and haul to approved disposal area or permitted landfill.

Remove all flammable materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.



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Checked
Reviewed
Date JAN 2023

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
EROSION CONTROL DETAILS

By Date
Revision



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Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
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INFO

Implications

REPORT

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**Cliffdale West
Area 26 - Cliffdale West
SANITARY SEWER DETAILS**

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REPORT

REPORT

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	Revision	By	Date

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ENVIRONMENTAL

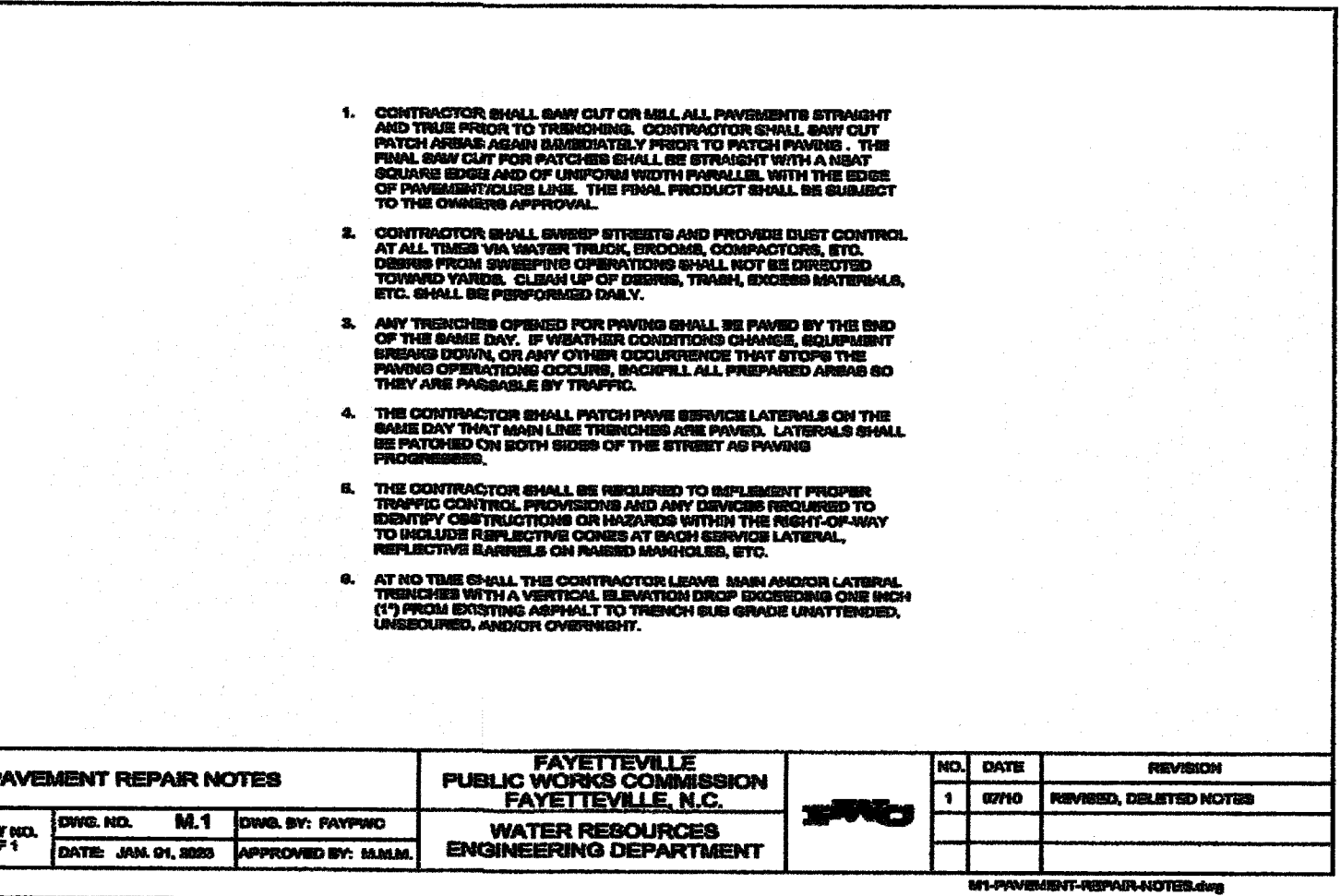
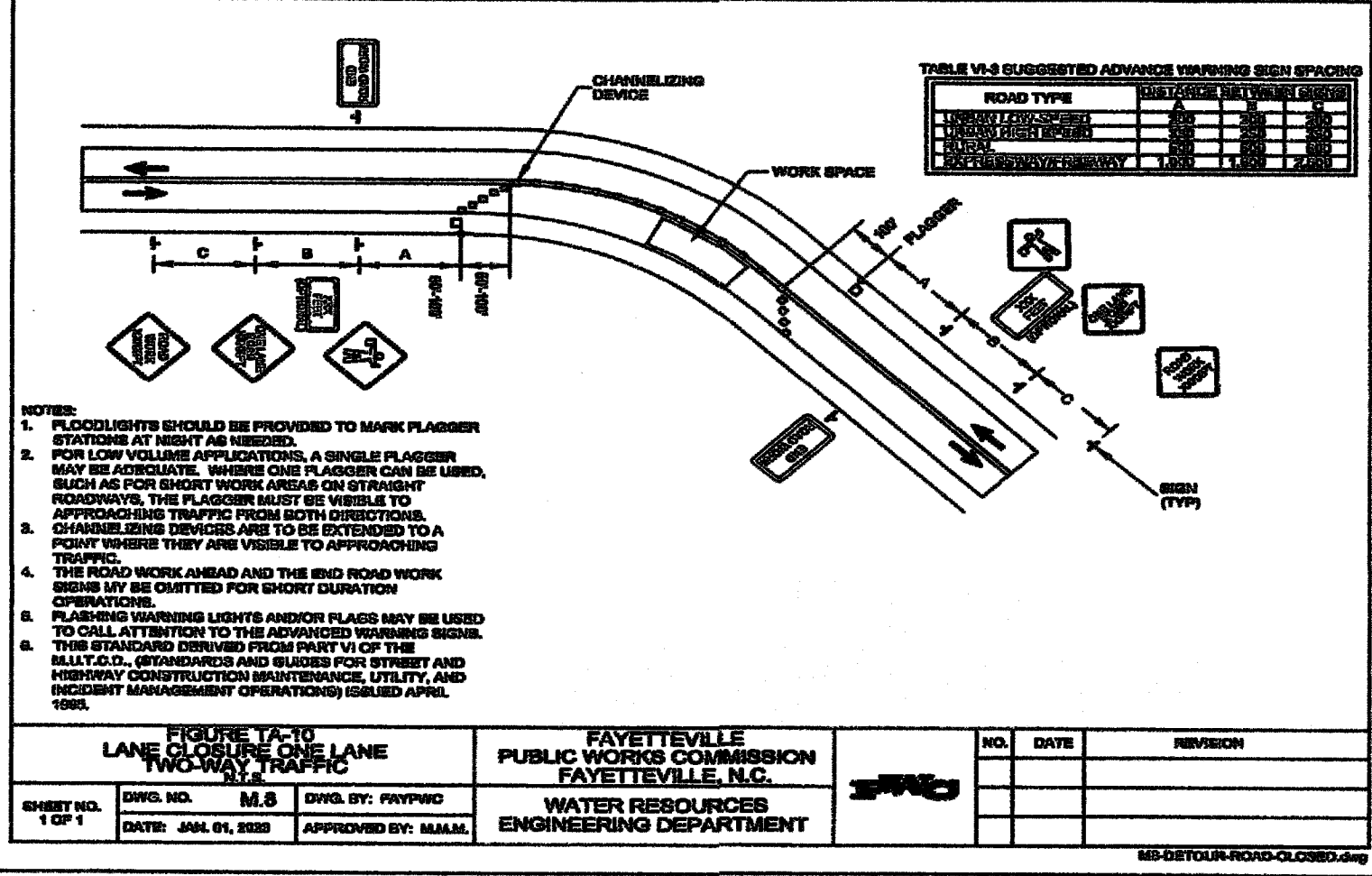
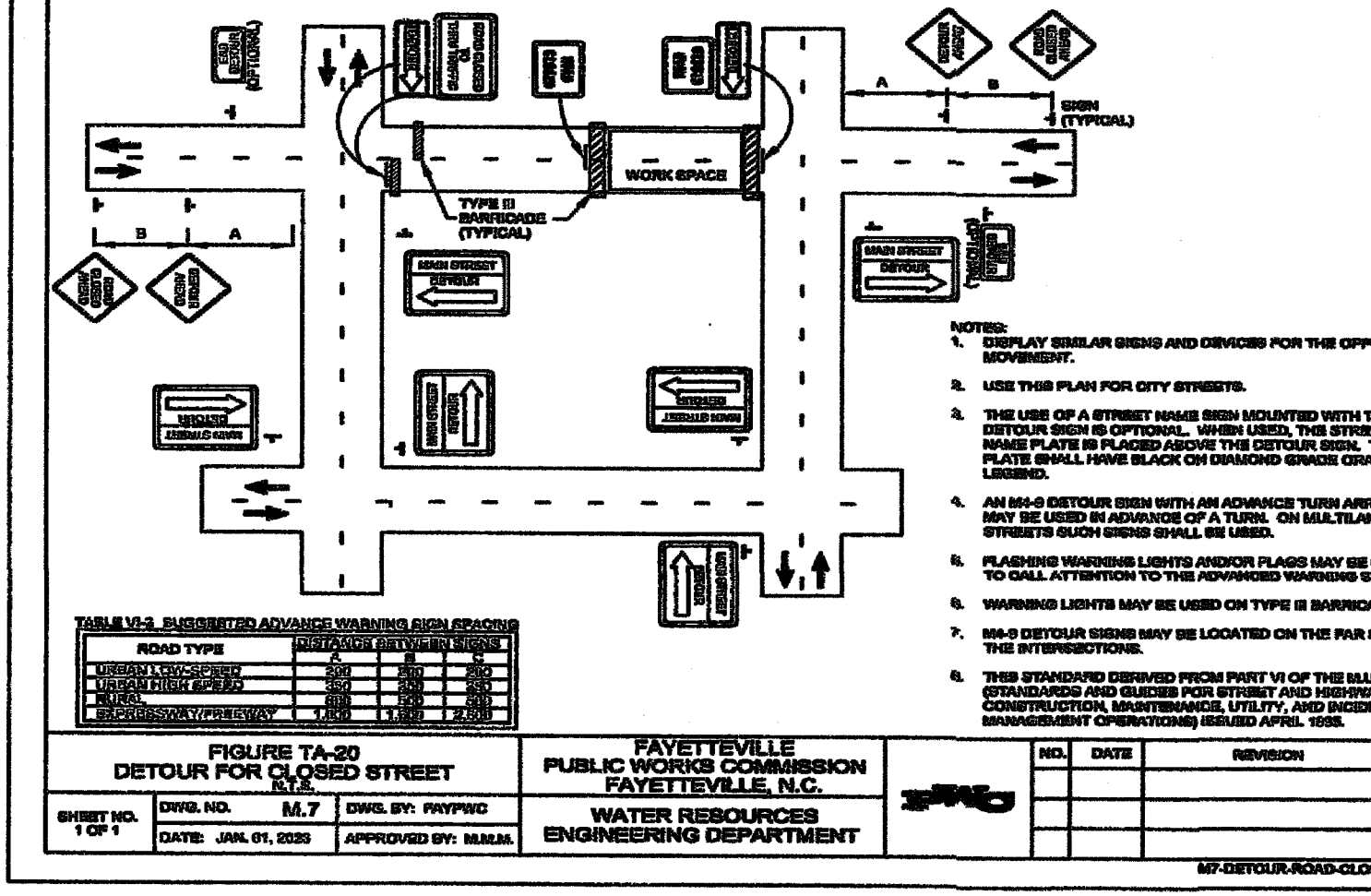
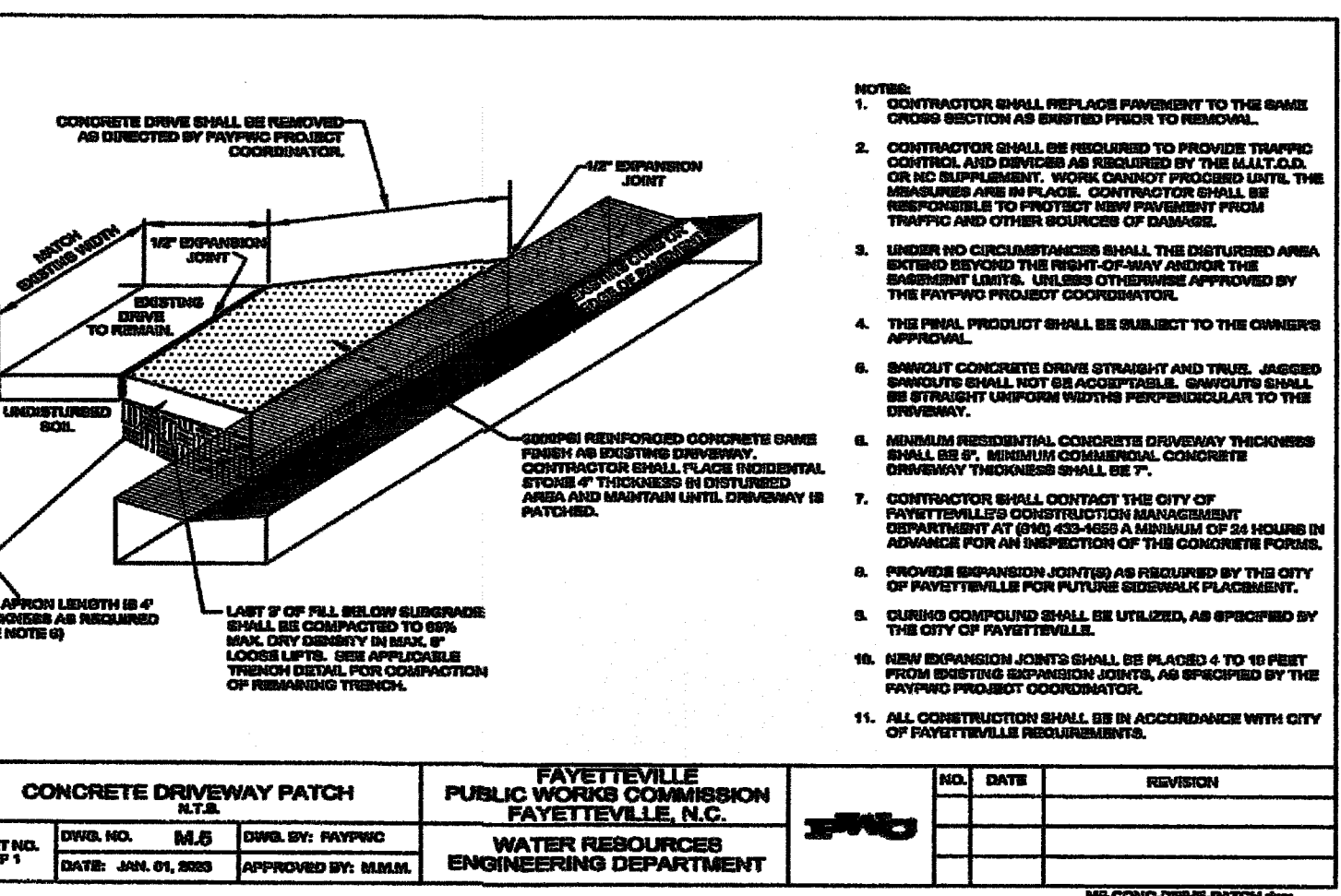
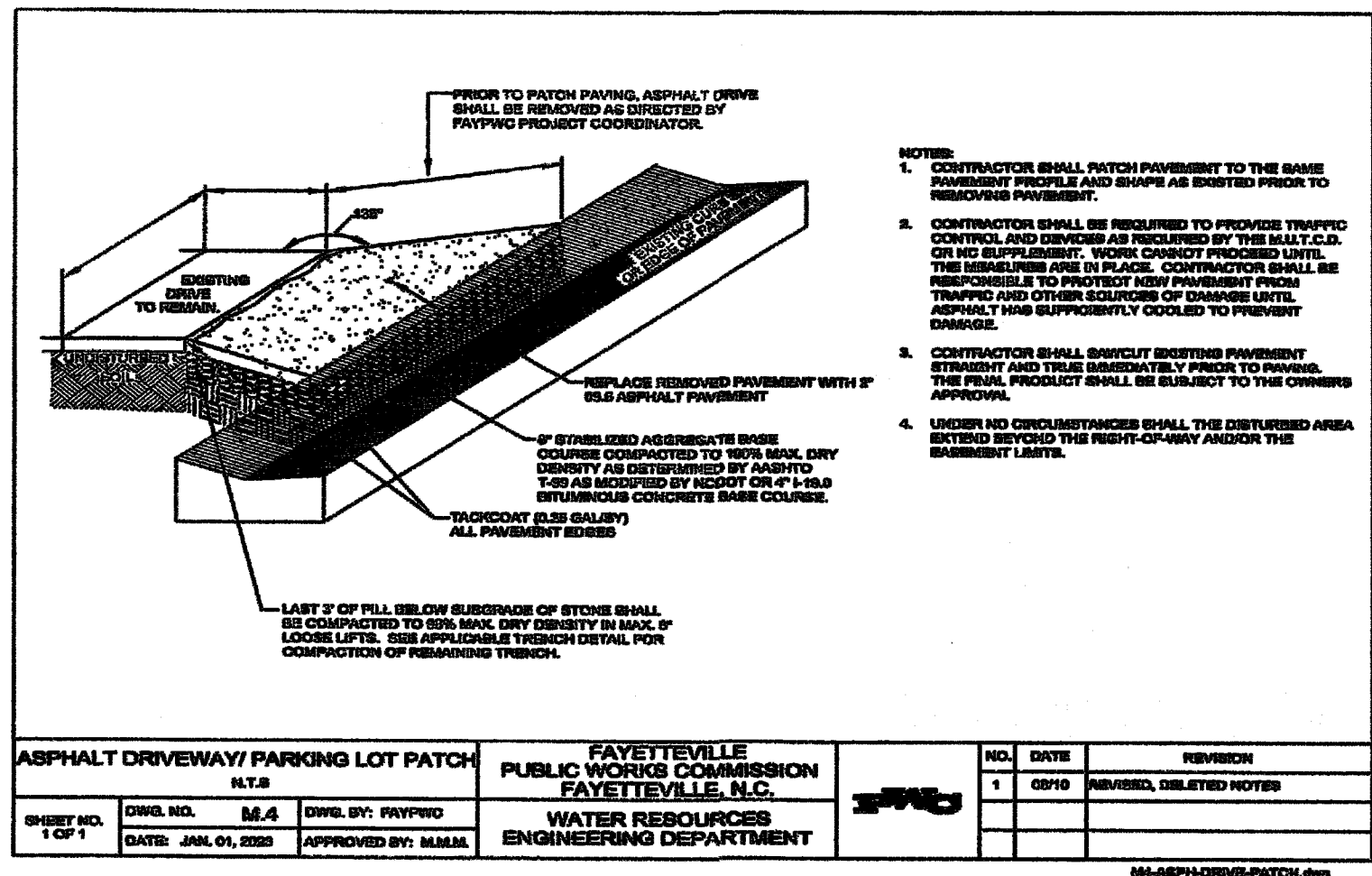
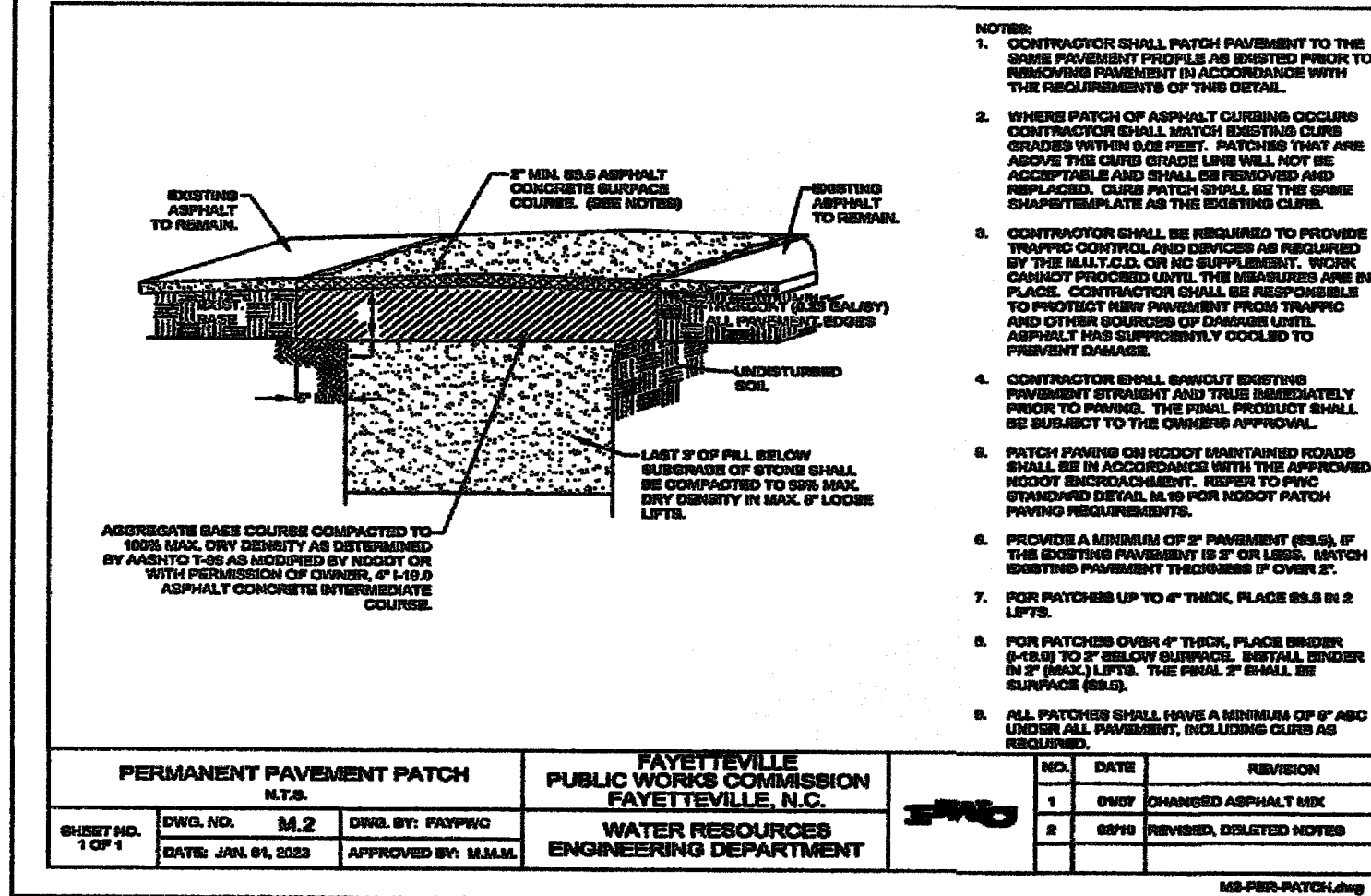
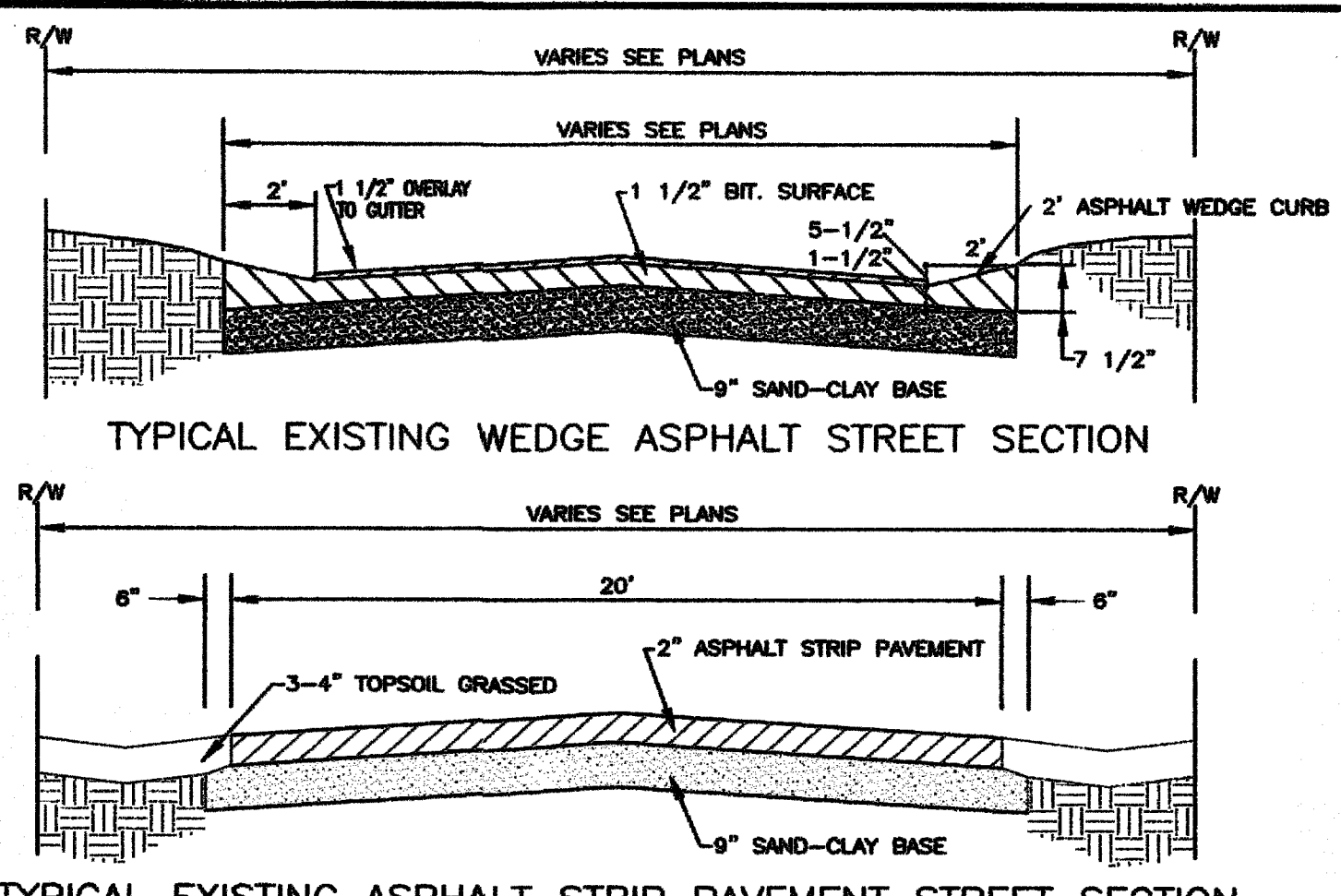
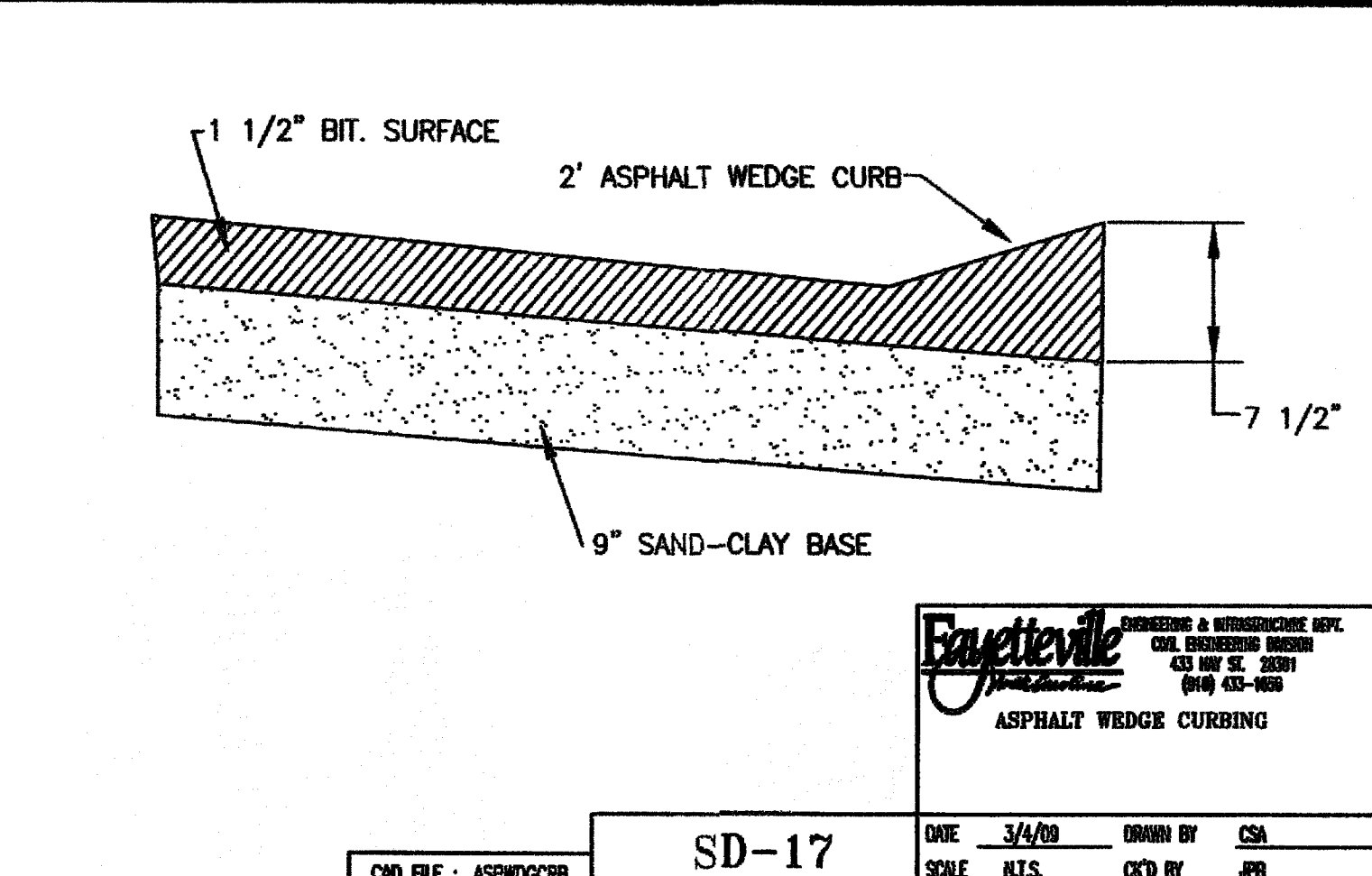
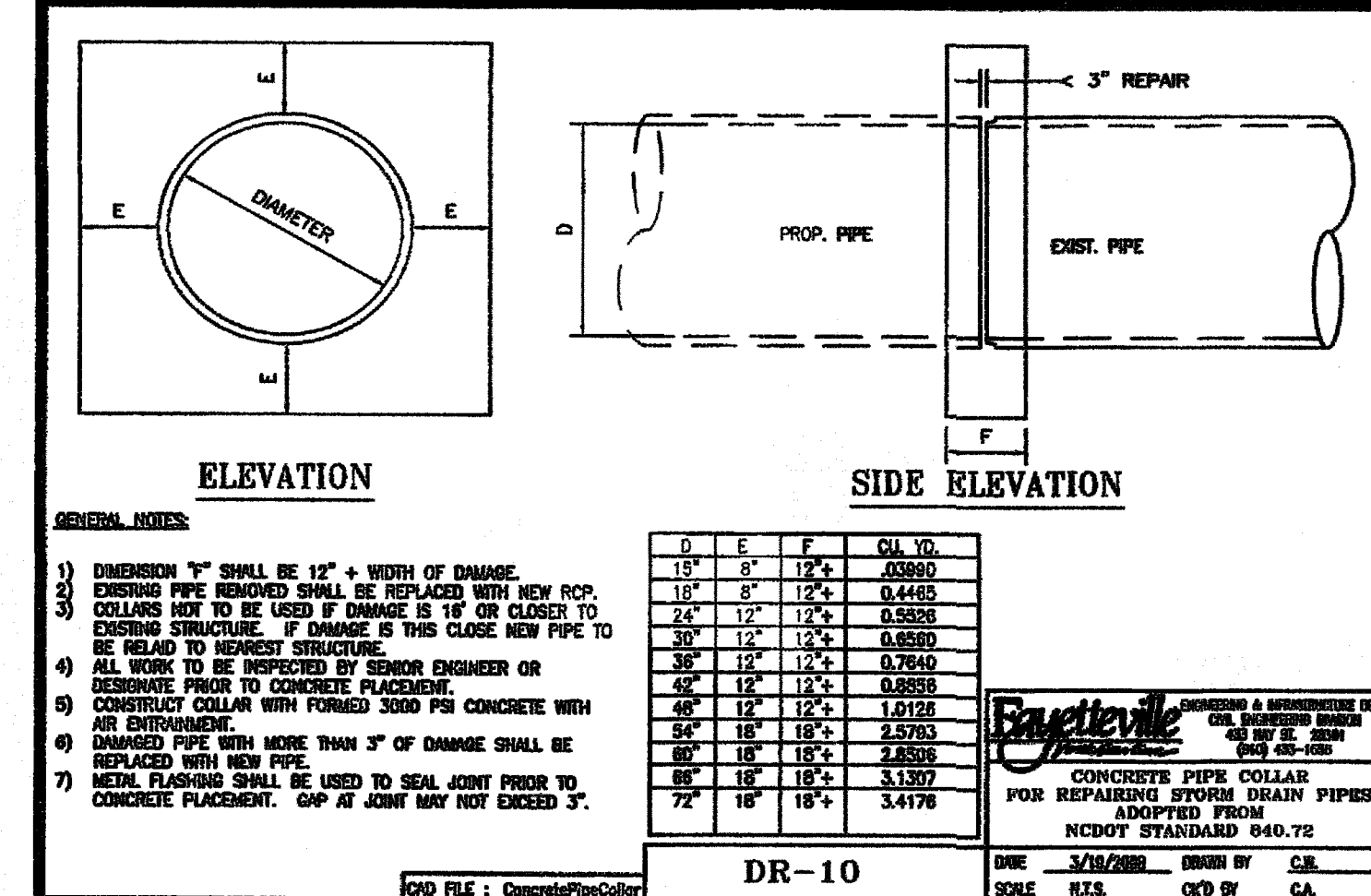
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Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
Firm No. F-0106

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Sheet **D-3**



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Date

Fayetteville Annexation Phase V
Construction Project XII
Area 26 - Cliffdale West
PAVEMENT & TRAFFIC DETAILS

By
Date

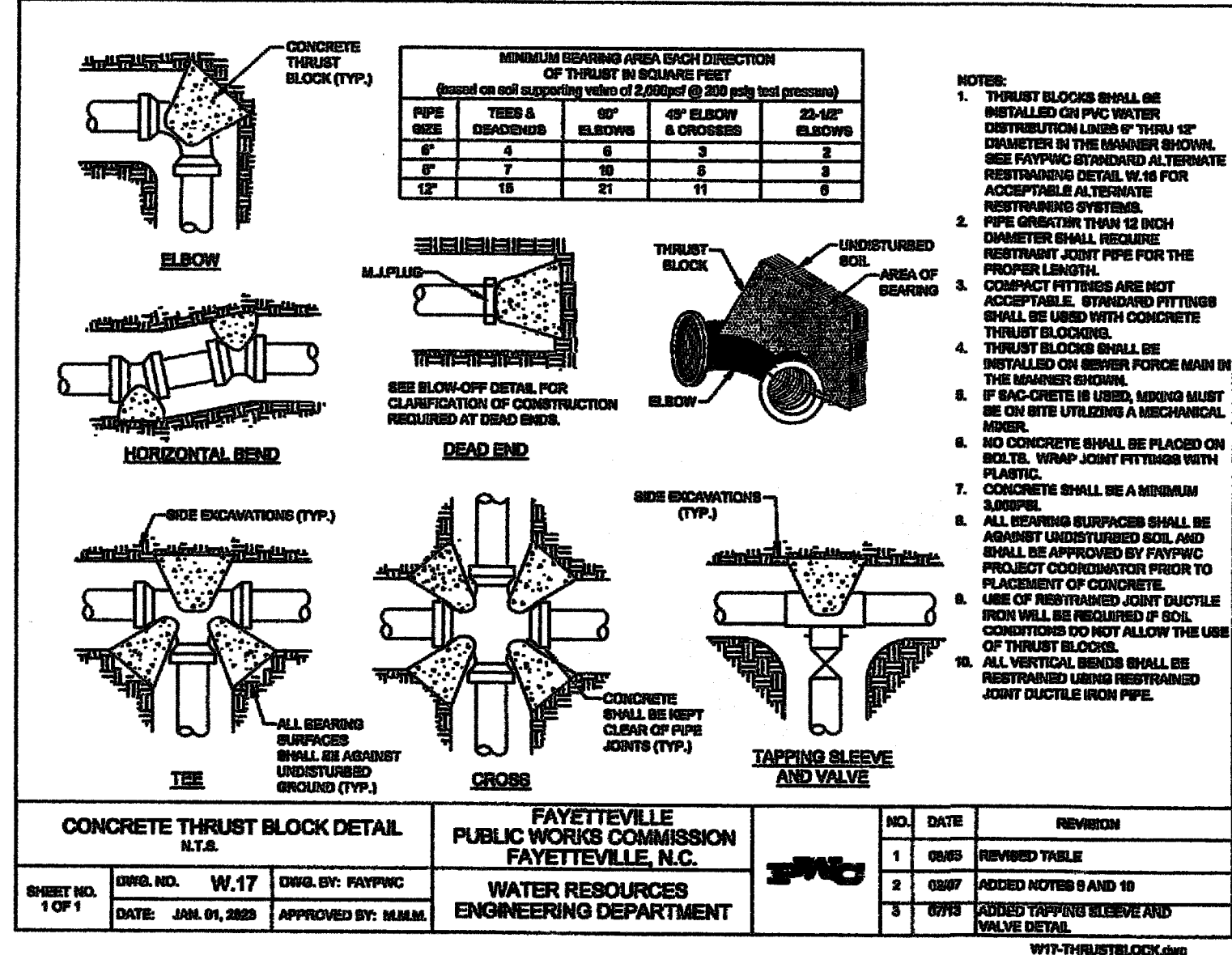
Revision

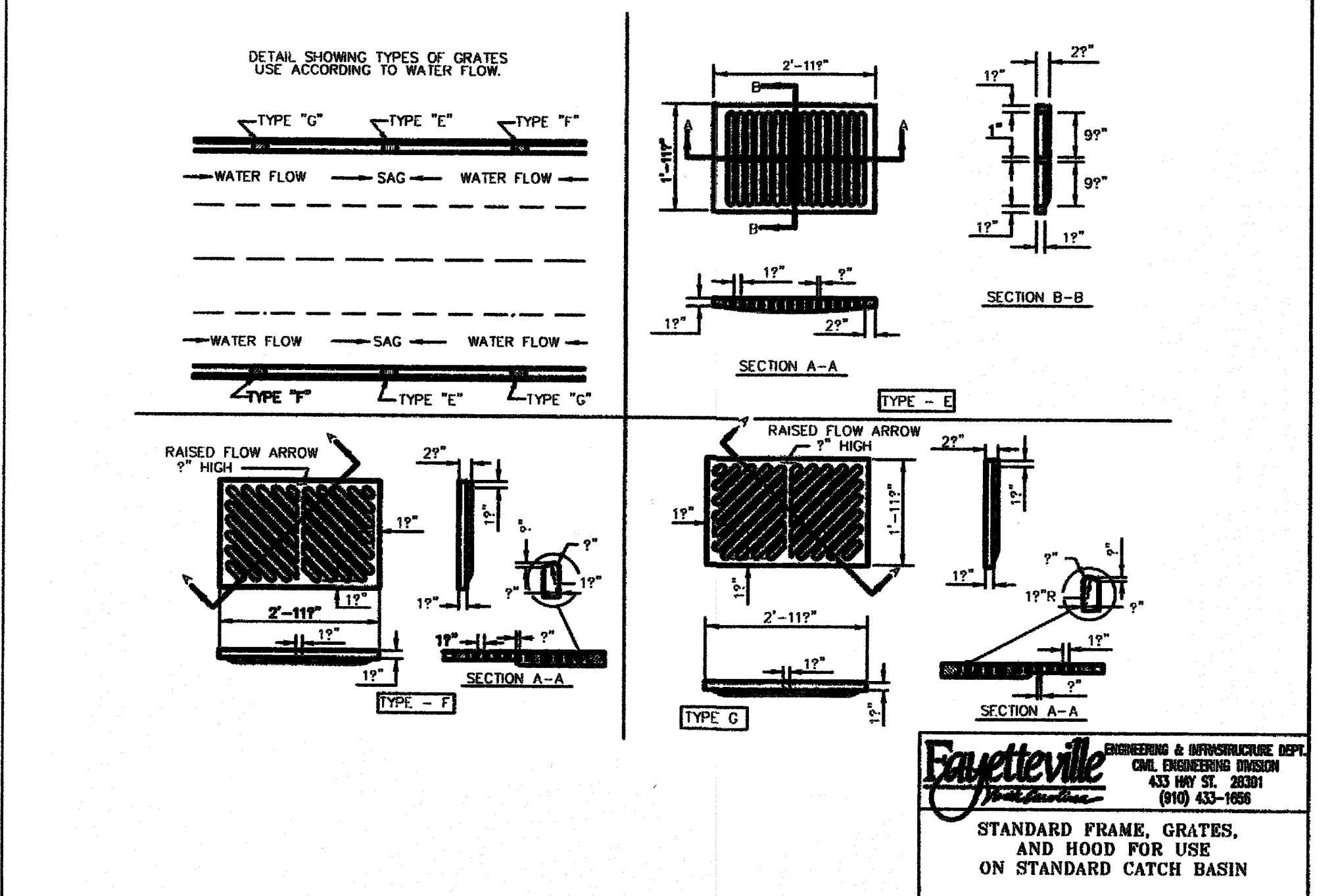
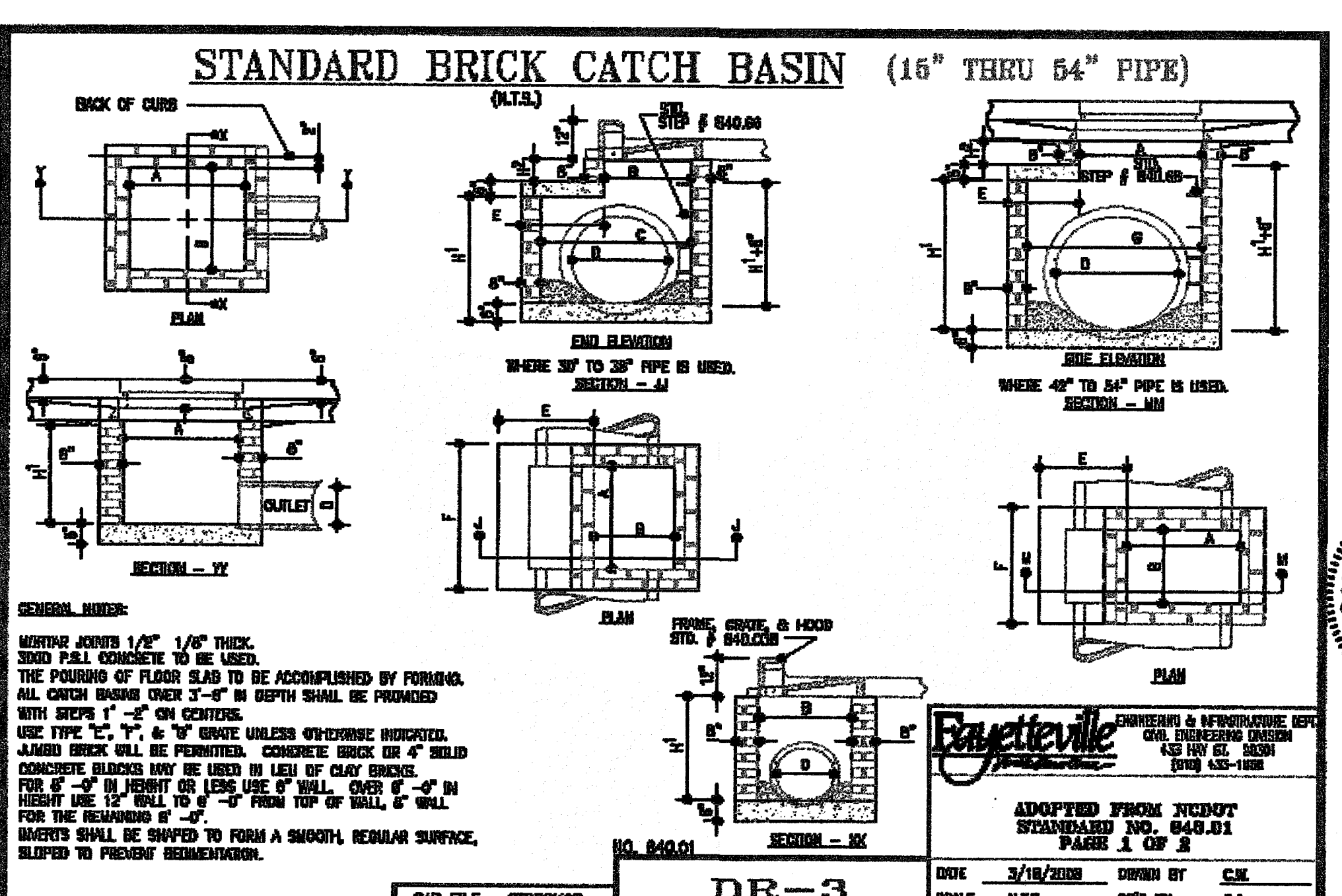
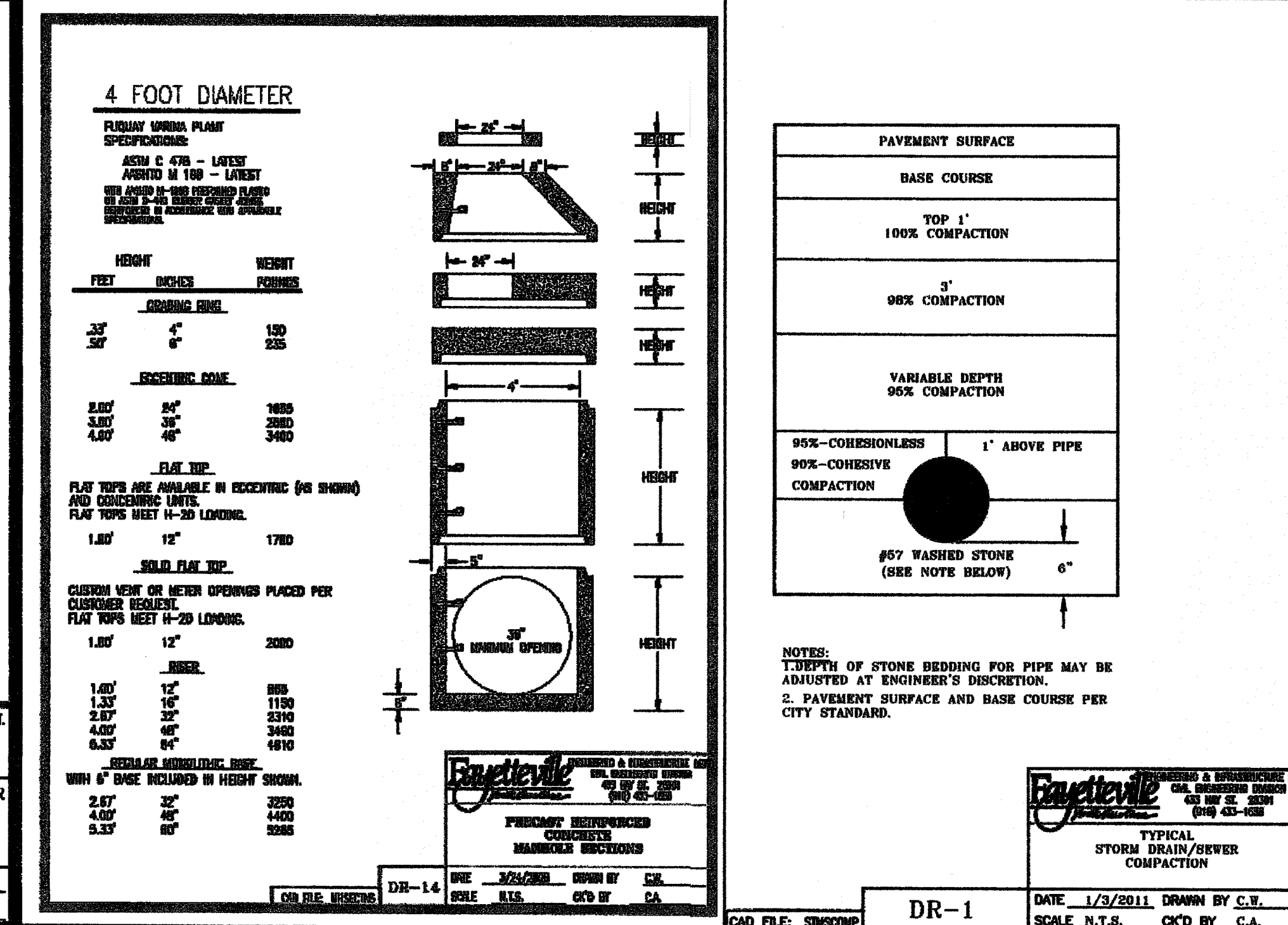
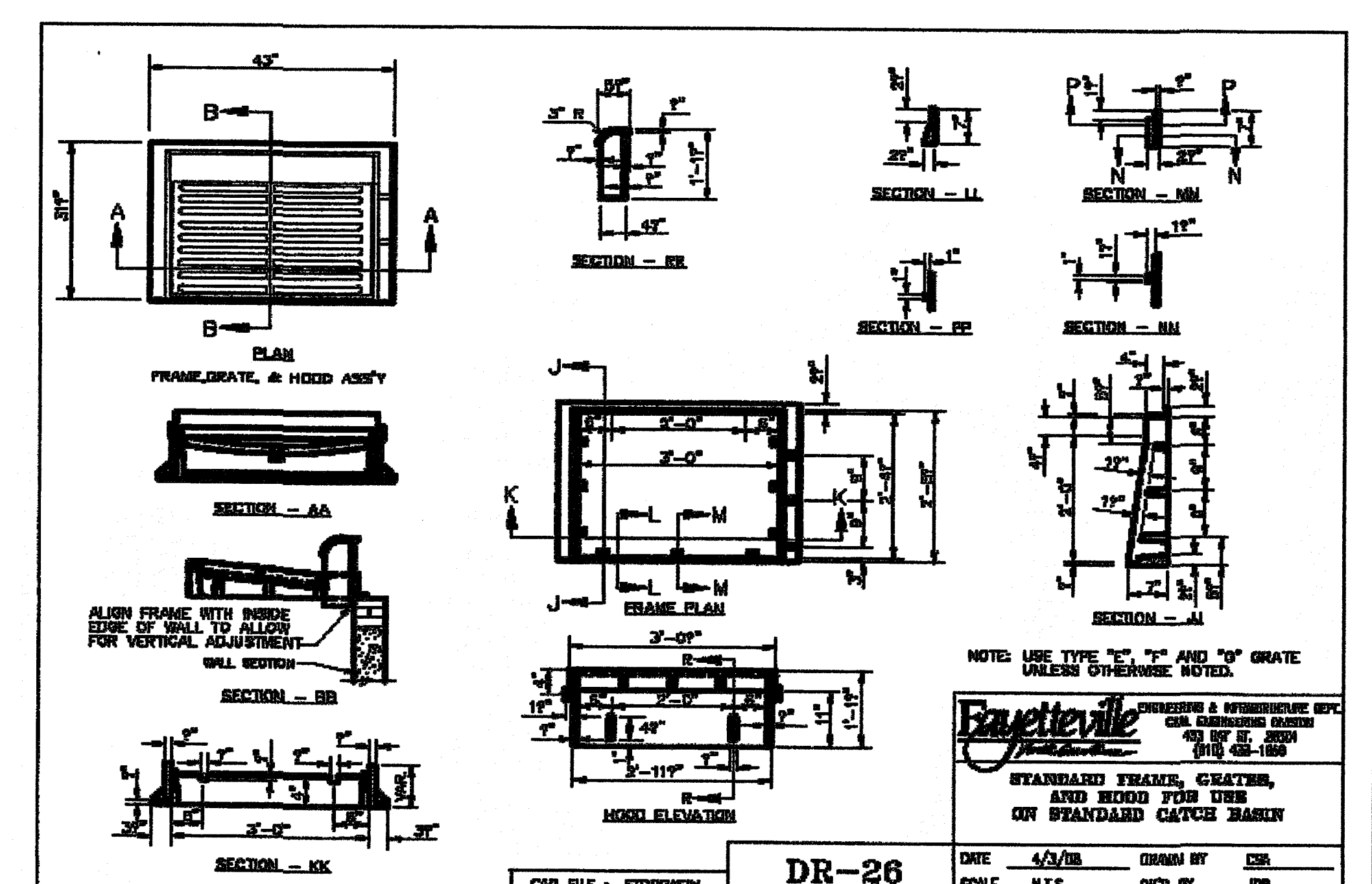
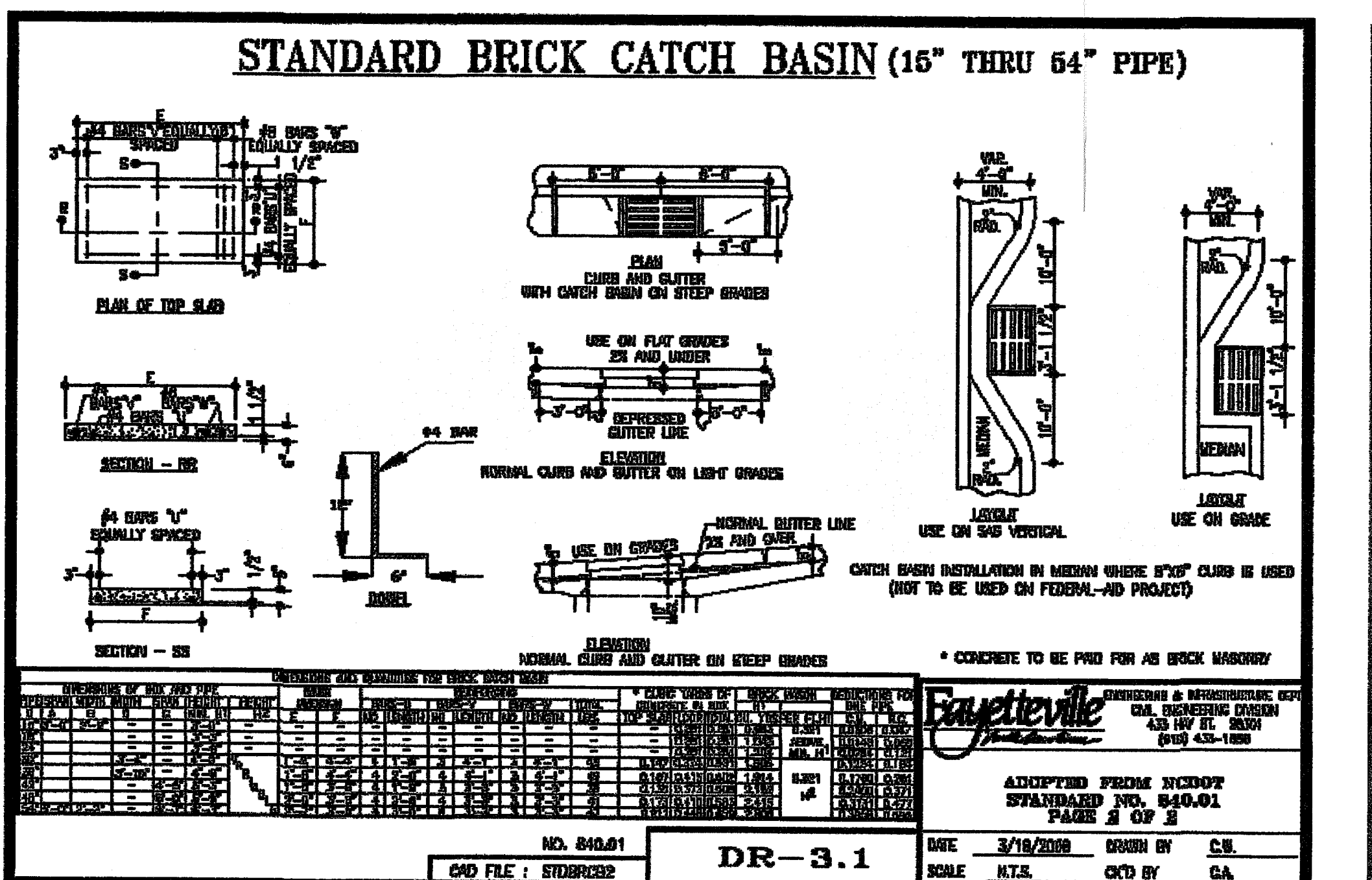
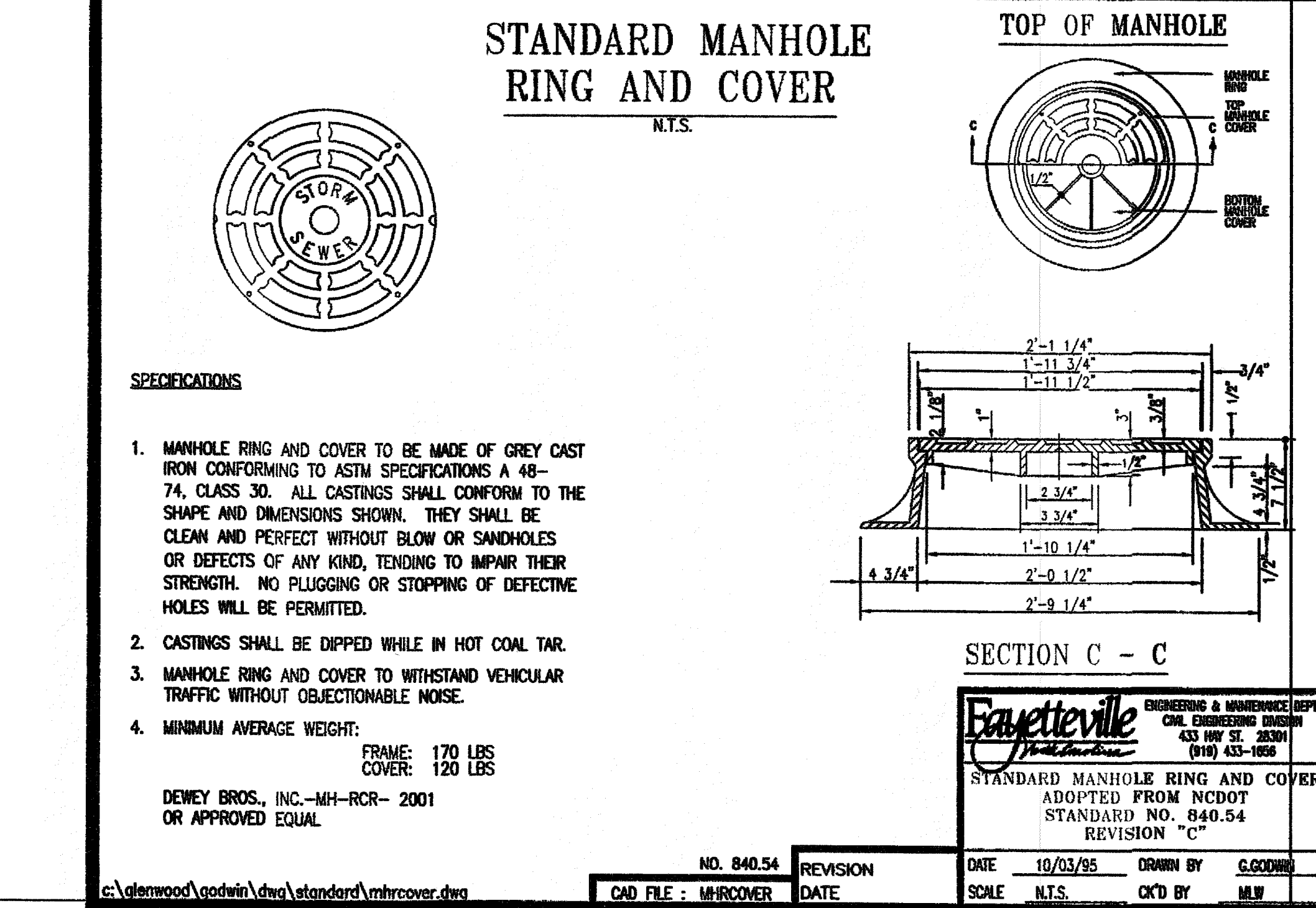
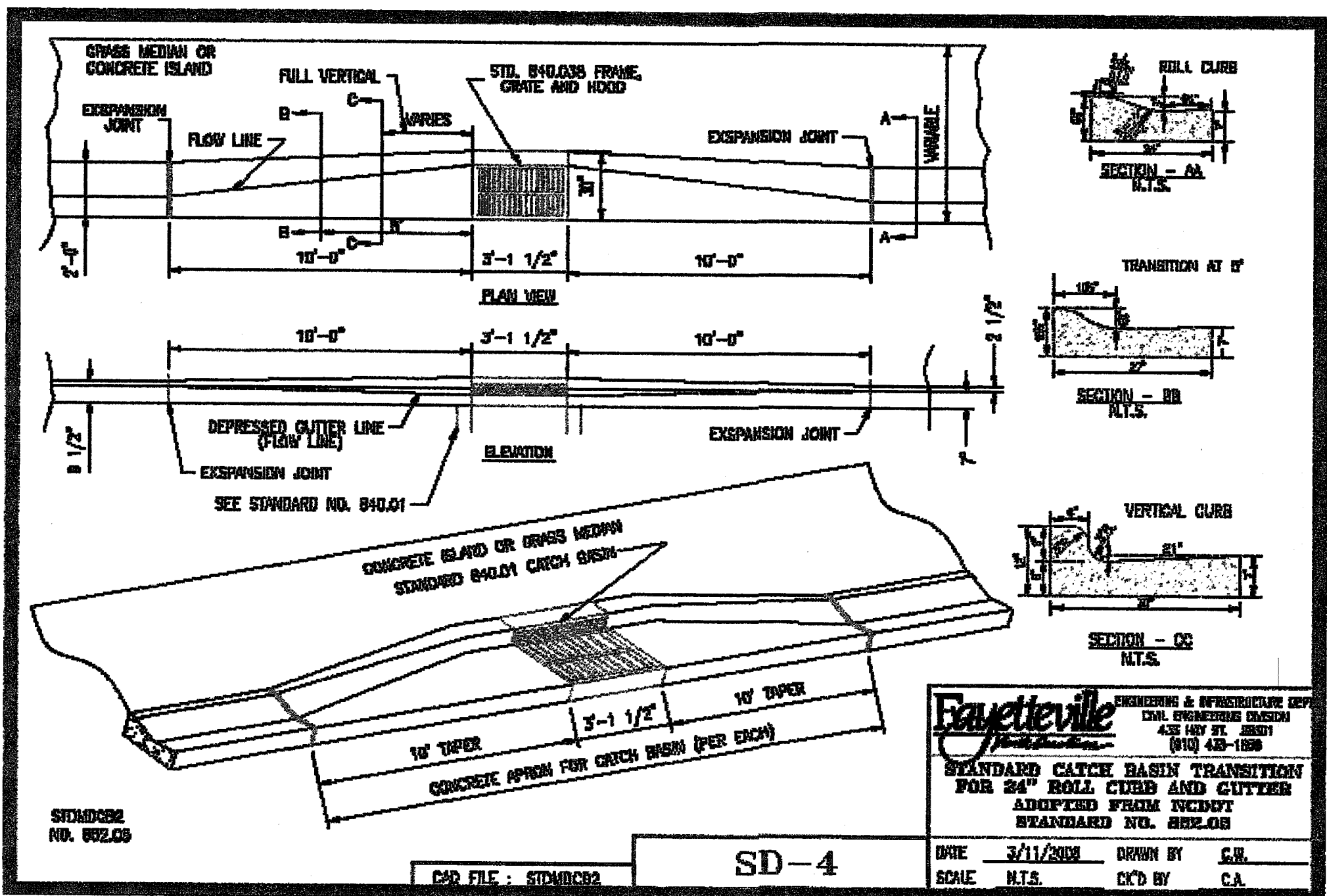
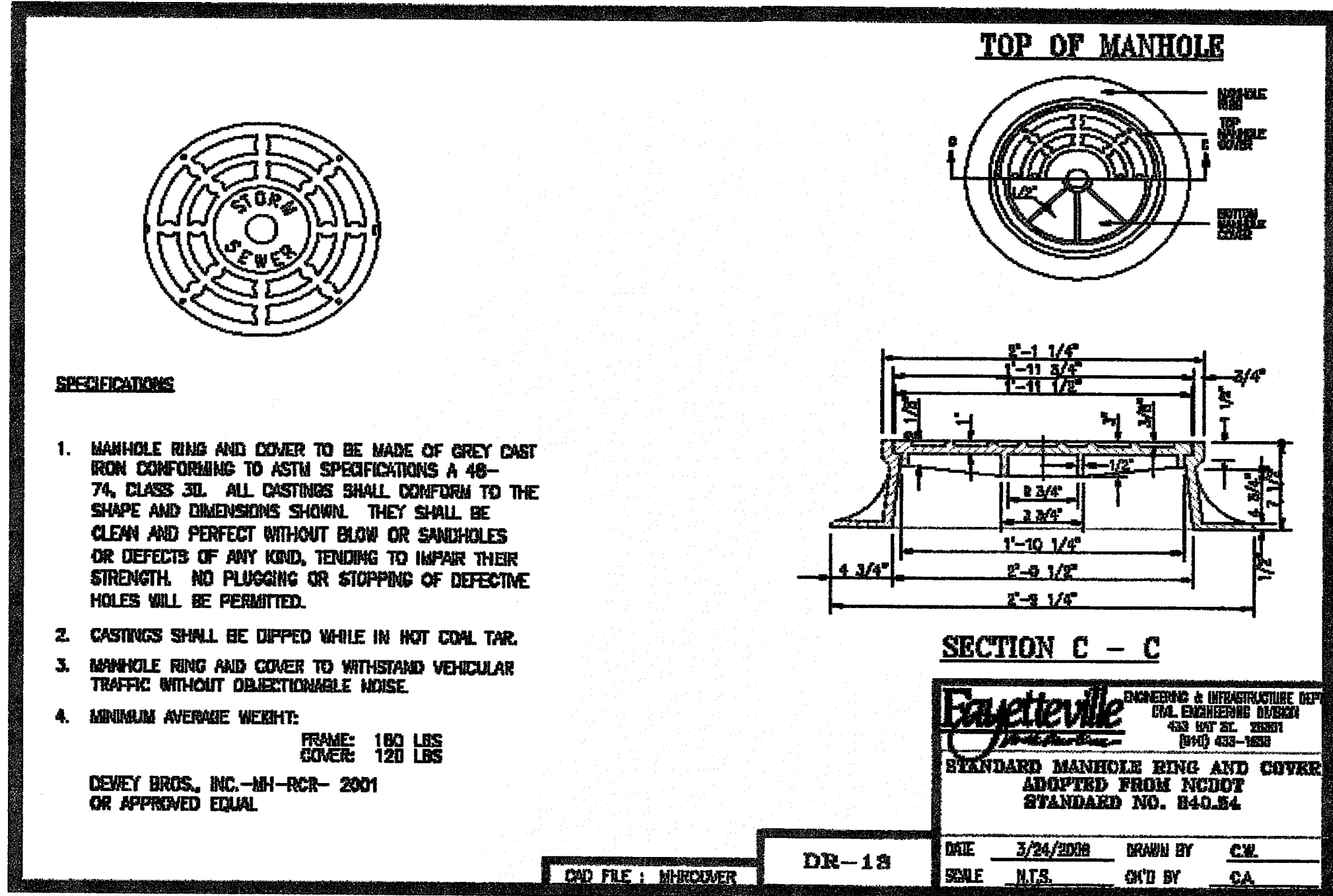
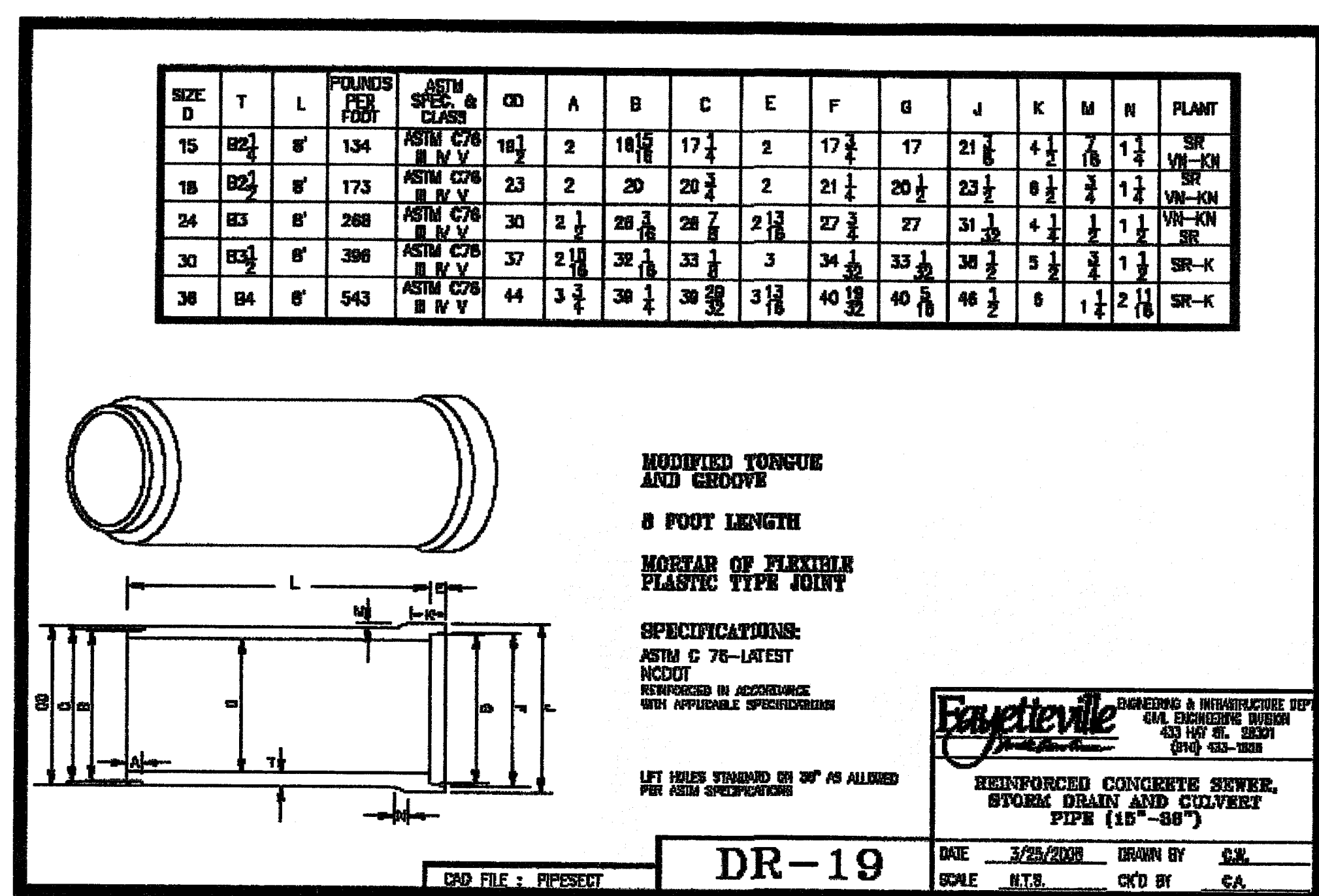
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Fayetteville, N.C.
P.O. Box 53774
Phone 910-484-5191
Firm No. F-0106

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Checked: Jeffrey B. Reitzel, PE, PLS
Reviewed: Jeffrey B. Reitzel, PE, PLS
Date: JAN 2023

Fayetteville Annexation Phase V
Construction Project XII
Area 26 Cliffdale West
STORM DRAINAGE DETAILS

115 Broadfoot Avenue
Fayetteville, N.C.
P.O. Box 53774
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