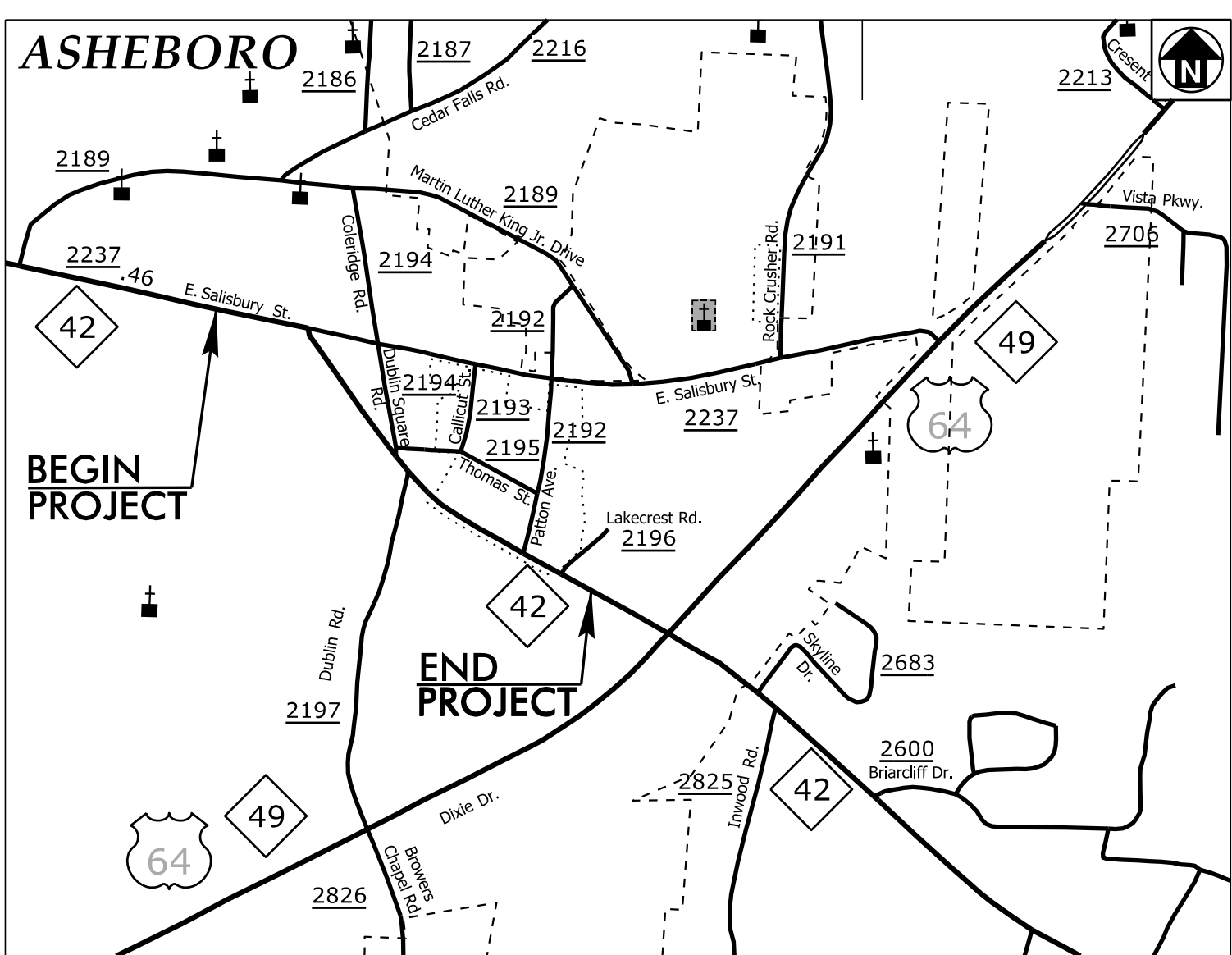


09_028/494

TIP PROJECT: U-5743



VICINITY MAP (NOT TO SCALE)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS
RANDOLPH COUNTY**

LOCATION: NC 42 FROM SR 2237 (EAST SALISBURY STREET) TO NORTH OF US 64 /NC 49 (DIXIE DRIVE) IN ASHEBORO

TYPE OF WORK: UTILITY CONSTRUCTION

END CONSTRUCTION
-Y3- POT Sta. 10 + 75.00

END CONSTRUCTION
-Y1- POT Sta. 16 + 50.00

BEGIN TIP PROJECT U-5743
-L- POT Sta. 15 + 00.00

BEGIN CONSTRUCTION
-L- POT Sta. 14 + 75.00

BEGIN CONSTRUCTION
-Y7- POT Sta. 10 + 15.00

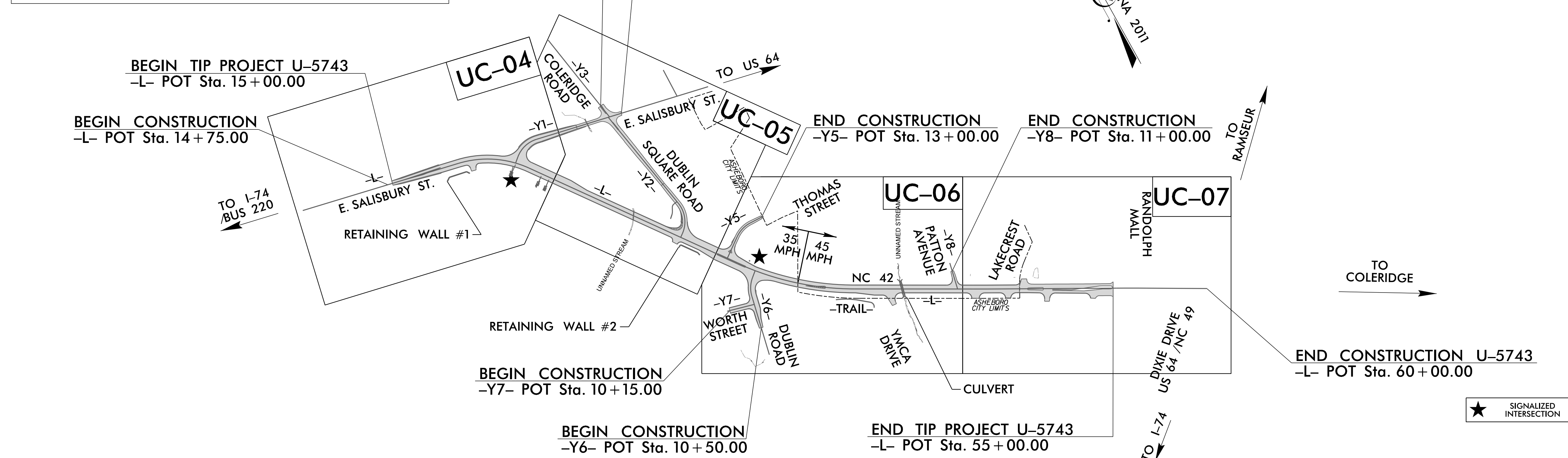
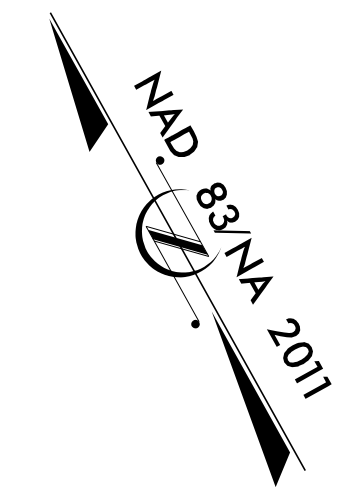
BEGIN CONSTRUCTION
-Y6- POT Sta. 10 + 50.00

END CONSTRUCTION
-Y5- POT Sta. 13 + 00.00

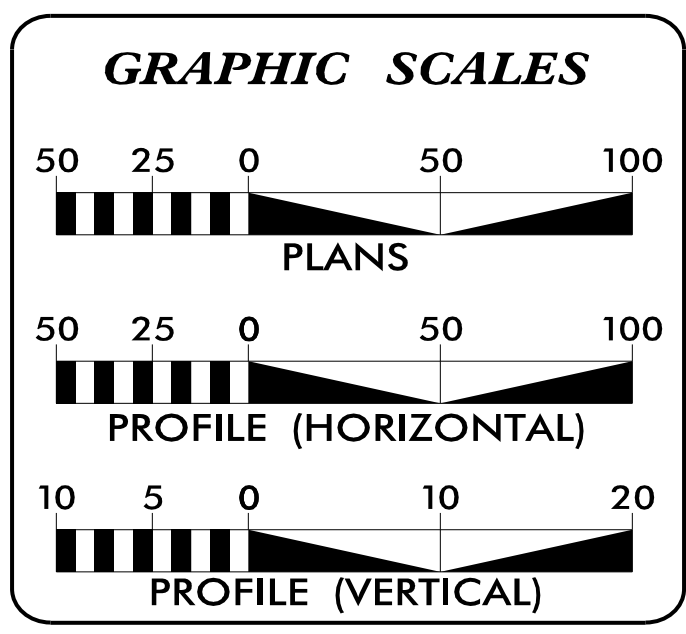
END CONSTRUCTION
-Y8- POT Sta. 11 + 00.00

END CONSTRUCTION U-5743
-L- POT Sta. 60 + 00.00

END TIP PROJECT U-5743
-L- POT Sta. 55 + 00.00



DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	UTILITY NOTES
UC-3A THRU UC-3B	UTILITY DETAILS
UC-4 THRU UC-7	UTILITY CONSTR. PLANS
UC-8 THRU UC-11	UTILITY PROFILES

WATER AND SEWER OWNERS ON PROJECT

(A) WATER, GRAVITY SEWER AND FORCE MAIN SEWER
- CITY OF ASHEBORO

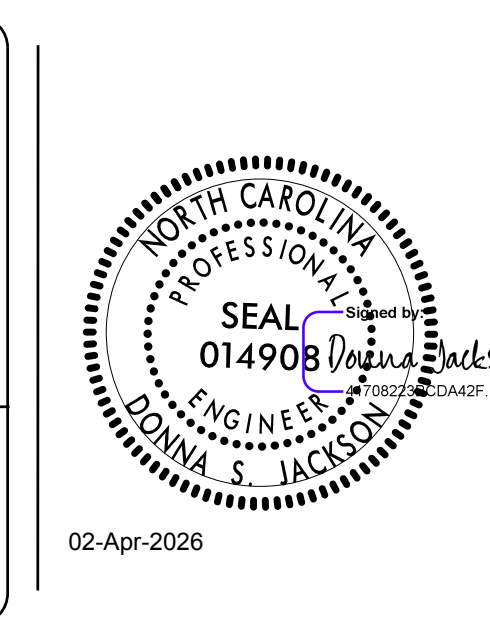
PREPARED IN THE OFFICE OF

M
MOTT
MACDONALD

930 Main Campus Dr.
Raleigh, NC 27606
www.mottmac.com

NC LICENSE NO. F-0669

DONNA JACKSON P.E. CONSULTANT CONTACT #1
BUDDY STEWART CONSULTANT CONTACT #2



**DIVISION OF HIGHWAYS
UTILITIES UNIT**

1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

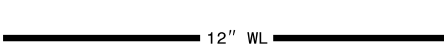























MICHAEL RICKETTS DIVISION 8 UTILITIES ENGINEER

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS





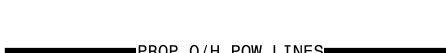
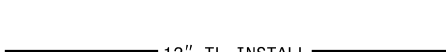


PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	


PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

*For Existing Utilities
 Utility Line Drawn from Record (Type as Shown) 
 Designated Utility Line (Type as Shown) 

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REV: 2/1/2012

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PROJECT REFERENCE NO. U-5743	SHEET NO. UC-3
DESIGNED BY: DSJ	
DRAWN BY: PJ	
CHECKED BY:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING UTILITIES BELONG TO CITY OF ASHEBORO.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

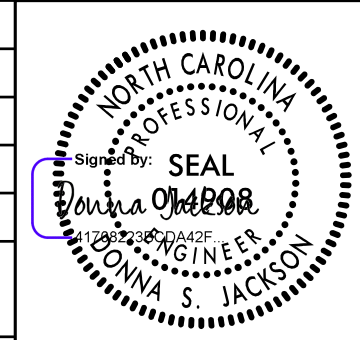
1. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. ALL EXISTING WATER SERVICES ON WATER MAINS TO BE TAKEN OUT OF SERVICE SHALL BE REPLACED WITH A NEW SERVICE, METER SETTERS AND METER BOX OF EQUAL SIZE IN ACCORDANCE WITH CITY OF ASHEBORO STANDARDS.
3. WELL IN ADVANCE OF BEGINNING UTILITY WORK, SOFT DIGS SHALL BE PERFORMED BY CONTRACTOR TO VERIFY ACTUAL WATER LINE DEPTH AND MATERIAL AT PROPOSED TIE-IN LOCATIONS.
4. LAY PIPE STRAIGHT IN ALIGNMENT AND GRADIENT OR FOLLOW TRUE CURVES AS NEARLY AS POSSIBLE. DO NOT DEFLECT ANY JOINT MORE THAN THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
5. ANY SERVICE INTERRUPTIONS SHALL BE SCHEDULED FOR MINIMAL IMPACT TO CUSTOMERS AND APPROVED BY CITY OF ASHEBORO.
6. THE CONTRACTOR SHALL NOTIFY CITY OF ASHEBORO IN ADVANCE OF THE FOLLOWING ACTIVITIES:
 - A. START OF UTILITY CONSTRUCTION- 48 HOURS
 - B. MAIN LINE SERVICE INTERRUPTIONS- 96 HOURS
 - C. PRESSURE TESTING- 24 HOURS
 - D. DISINFECTION- 24 HOURS
7. CITY OF ASHEBORO AND NCDOT HAVE RIGHT-OF-ENTRY TO THE PROJECT SITE.
8. THE PROPOSED PIPELINE SHALL BE INSTALLED AT THE DEPTHS SHOWN IN THE PROFILE TO AVOID HIGH POINTS THAT CAN TRAP AIR. ALL COST FOR INSTALLATION IN DEEPER CUTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHOULD BE INCLUDED IN THE PRICE FOR THE WATER MAIN INSTALLATION.
9. ALL VALVES USED IN PROJECT SHALL BE GATE VALVES.
10. THE CONTRACTOR SHALL LOCATE ALL SERVICES CURRENTLY CONNECTED TO EXISTING SEWER MAIN (WHETHER SHOWN OR NOT ON THE PLANS) AND CONNECT TO THE NEW SEWER BY INSTALLING A NEW CLEANOUT ASSEMBLY.

UTILITY CONSTRUCTION

11. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 36", THIS INCLUDES 2" WATER LINES.

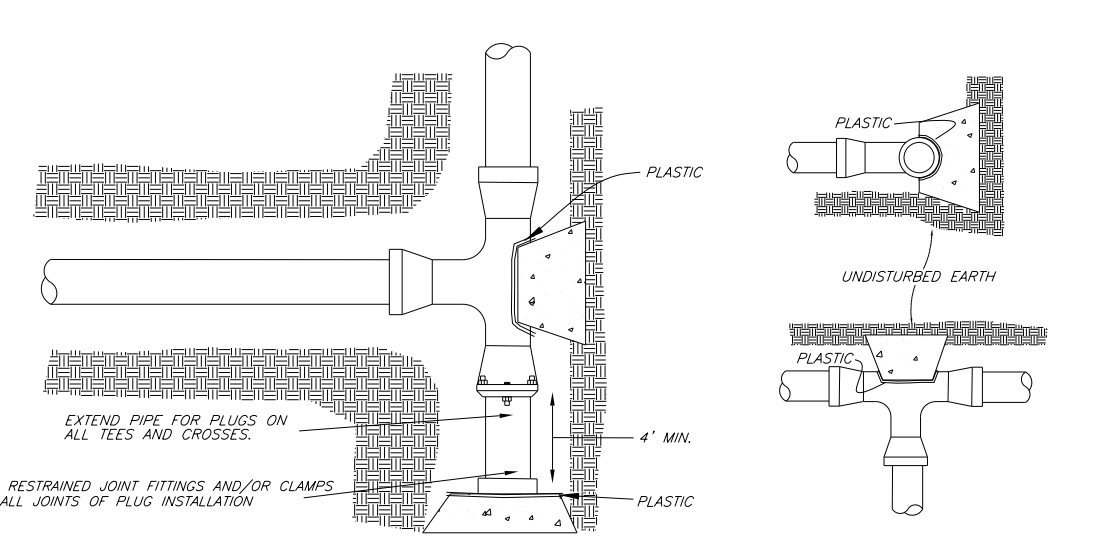
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UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	U-5743	SHEET NO.	UC-3A
DESIGNED BY:	DSJ		
DRAWN BY:	PJ		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

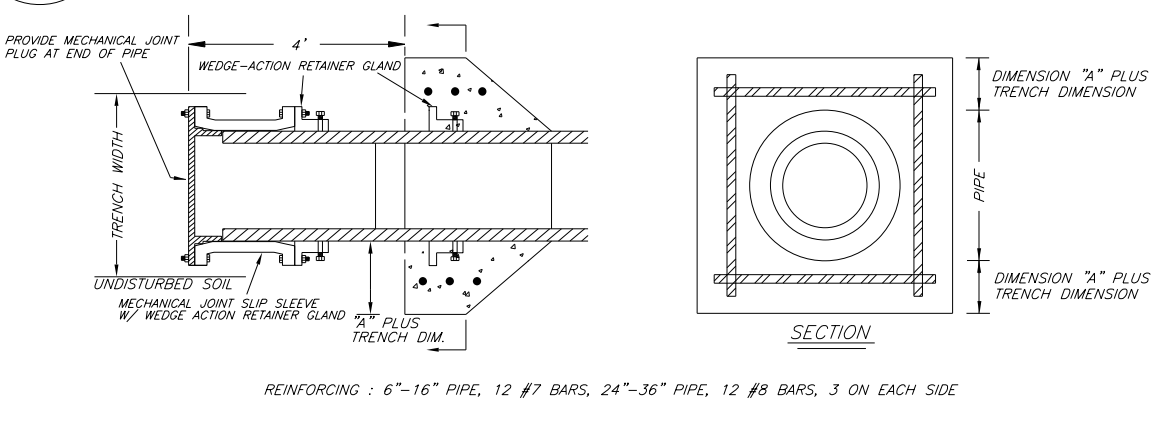
CONCRETE THRUST BLOCKING



PIPE DIA	CONC. THURST BLOCK	MIN. CONC. QUANTITY
4"	1' x 1' x 1'	0.1
6"	1' x 1' x 1'	0.1
8"	1' x 1' x 1'	0.1
10"	1' x 1' x 1'	0.1
12"	1' x 1' x 1'	0.1
14"	1' x 1' x 1'	0.1
16"	1' x 1' x 1'	0.1
18"	1' x 1' x 1'	0.1
20"	1' x 1' x 1'	0.1
24"	1' x 1' x 1'	0.1
30"	1' x 1' x 1'	0.1
36"	1' x 1' x 1'	0.1

INCREASE BLOCKING AREA AND CONCRETE QUANTITY FOR PRESSURES ABOVE 200 P.S.I. OR POOR SOIL CONDITIONS.
KEEP CONCRETE AWAY FROM JOINTS. PLACE CONCRETE FAIRLY DRY AND FORM IF REQUIRED FOR MAXIMUM AREA AGAINST UNDISTURBED SOIL.
ALL FITTINGS AND ACCESSORIES TO BE WRAPPED WITH 10 MIL POLYETHYLENE PRIOR TO POURING BLOCKING.
USE 3000 P.S.I. CONCRETE.

THRUST COLLAR INSTALLATION



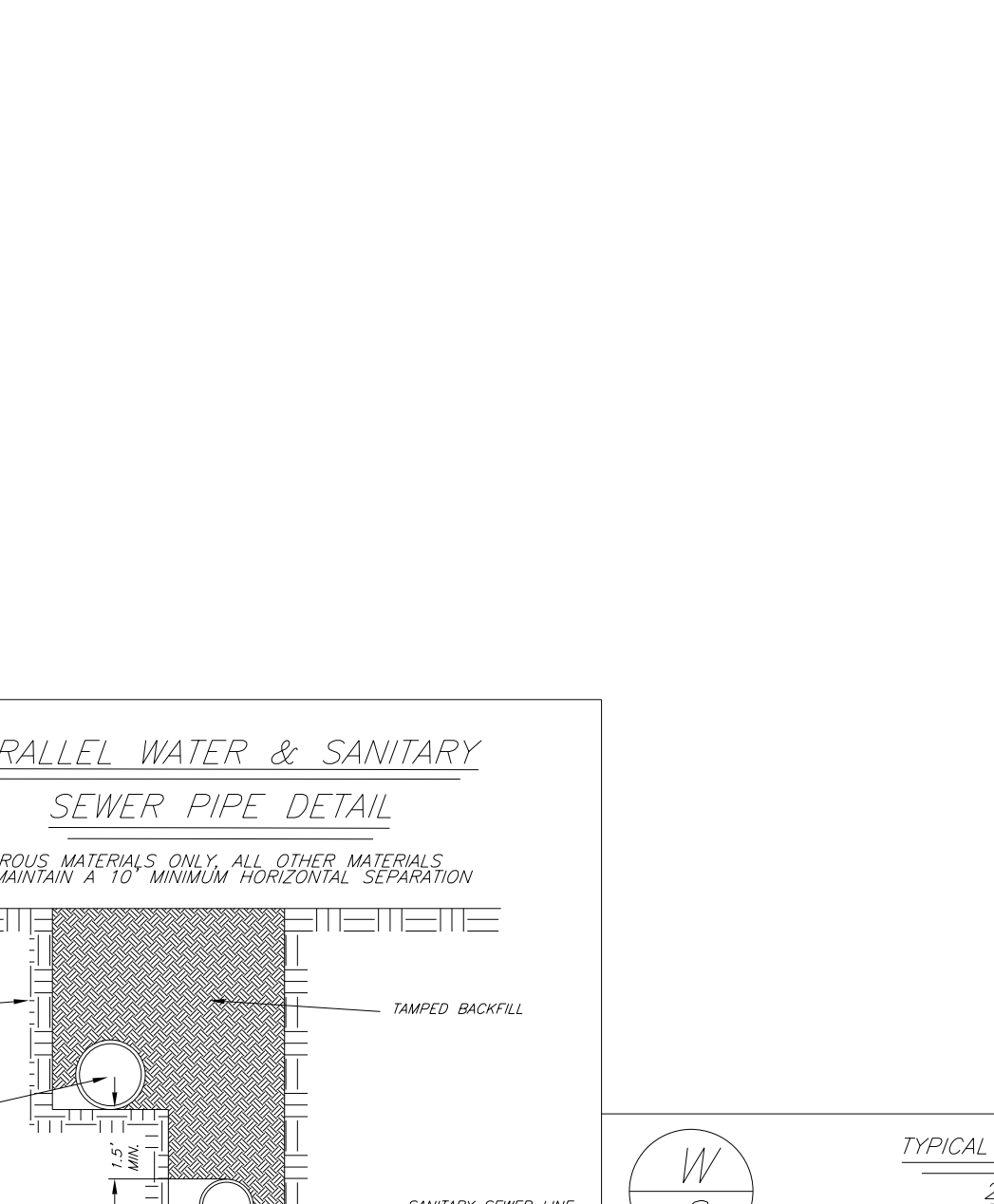
REINFORCING: 6"-16" PIPE, 12 #7 BARS, 24"-36" PIPE, 12 #8 BARS, 3 ON EACH SIDE

PIPE DIA	CONC.	THRUST BLOCK
3/4"	2"	3"
1"	2"	3"
1 1/4"	2"	3"
1 1/2"	2"	3"
1 3/4"	2"	3"
2"	2"	3"
2 1/4"	2"	3"
2 1/2"	2"	3"
2 3/4"	2"	3"
3"	2"	3"
3 1/4"	2"	3"
3 1/2"	2"	3"
3 3/4"	2"	3"
4"	2"	3"

SIZE OF CONC. THRUST BLOCK AROUND PIPE TO BE DETERMINED BY DITCH (TRENCH) UNIFORM PLUS EXTENSION AT BOTH SIDES AND BOTTOM AS SHOWN IN SCHEDULE. CONC. INTO SIDES OF DITCH TO BE POURED AGAINST FIRM UNDISTURBED SOIL. FALL AGAINST CONIC BLOCKING TO BE COMPARED TO 95% PRACTICE FOR LENGTH ALONG PIPE OF AT LEAST 6'-0" EACH SIDE.
WHERE THRUST BLOCKING OCCURS, THE TRENCH SHOULD BE AT MINIMUM WIDTH.

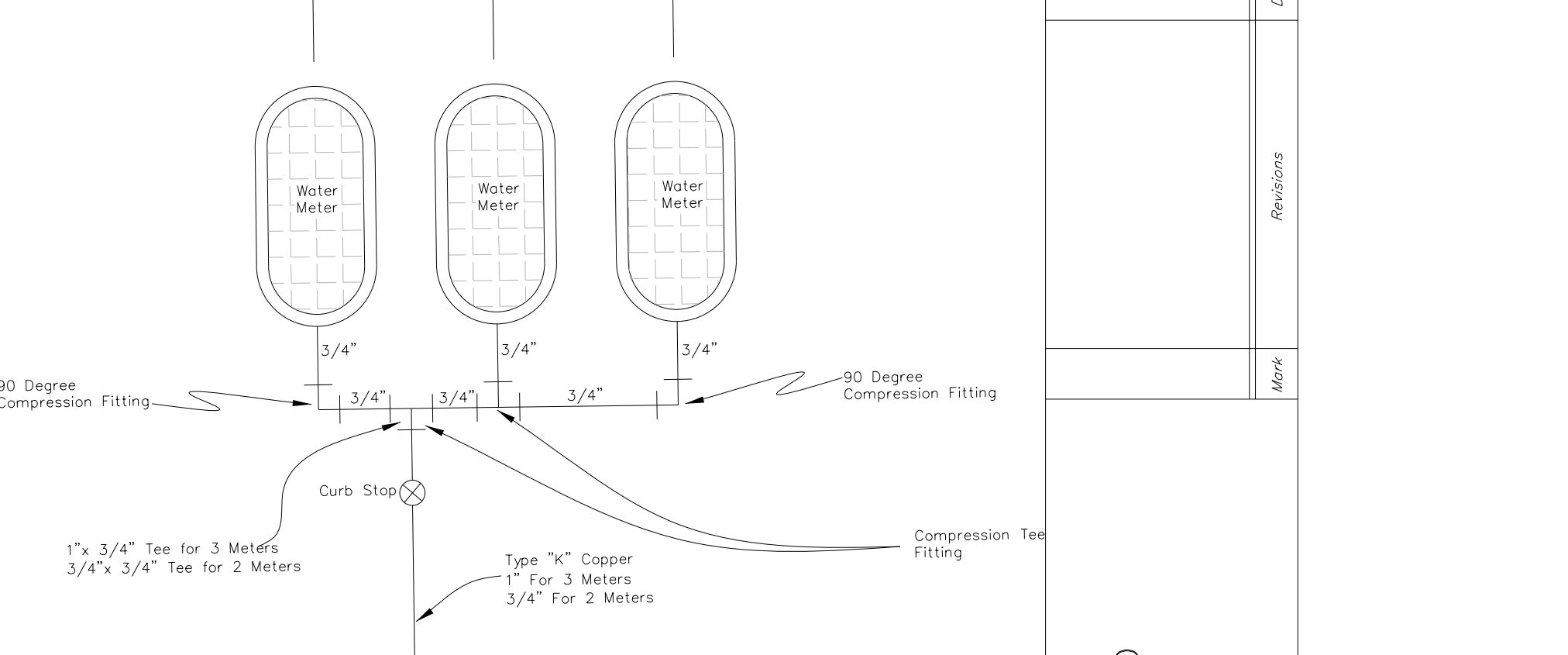
PARALLEL WATER & SANITARY SEWER PIPE DETAIL

FERROUS MATERIALS ONLY. ALL OTHER MATERIALS MUST MAINTAIN A 10 MINIMUM HORIZONTAL SEPARATION



UNDISTURBED SOIL, WATER LINE, SANITARY SEWER LINE, TAMPED BACKFILL.

Multiple Water Meters For Single Tap



90 Degree Compression Fitting, 3/4" Tee for 3 Meters, 3/4" x 3/4" Tee for 2 Meters, Type "K" Copper, 1" For 3 Meters, 3/4" For 2 Meters, Compression Tee Fitting.

Not To Scale

METER BOXES

METER BOXES SHALL BE MANUFACTURED IN THE FOLLOWING SIZES AND MODELS:

SIZE	RUSSELL	VOLCAN	SUMNER MACHINE
3/4"	MBX-2	VB404-2	MB2-MBC2

METER SETTERS

METER SETTERS SHALL BE ALL BRASS MANUFACTURED IN THE FOLLOWING SIZES AND MODELS:

SIZE	MUELLER	MCDONALD	FORD
3/4"	B-2404-24	20-209WDD33	VBK72-98-11-33

SERVICE SADDLES

TURNISH AND INSTALL DOUBLE STAINLESS STEEL STRAP SERVICE SADDLES FOR ALL TAPS MADE ON A.C. P.V.C. OR D.I. MAINS. NO SERVICE SADDLE REQUIRED FOR DIRECT TAPS OF 3/4" AND 1" UNLESS D.I. PIPE IS LESS THAN 4" DIAMETER. SADDLES FURNISHED SHALL BE MANUFACTURED FOR TYPE OF PIPE INTO WHICH TAP IS MADE IN THE FOLLOWING SIZES AND MODELS AND SHALL INCLUDE A GASKET:

SIZE	D.I. PIPE	SMITH-BLAIR	ROMAC	FORD
3/4"	SERVICE SADDLE WITH 3/4" CC (O.D. X 3/4")	313-001	202NU	FS202
2"	SERVICE SADDLE WITH 2" CC (O.D. X 2")	313-001	202NU	FS202

CURB STOPS

CURB STOPS SHALL BE ALL BRASS MANUFACTURED IN THE FOLLOWING SIZES AND MODELS:

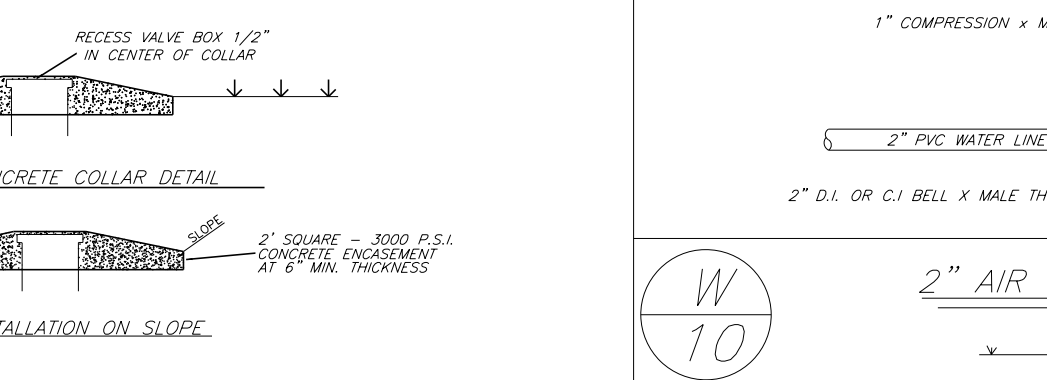
SIZE	MUELLER	MCDONALD	FORD
3/4"	B-25172	6102WT	B41-333-0

CORPORATION STOPS

CORPORATION STOPS SHALL BE ALL BRASS WITH ANBR CROSS SECTIONED THROUGHS MANUFACTURED IN THE FOLLOWING SIZES AND MODELS:

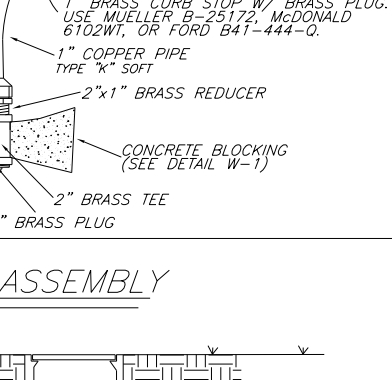
SIZE	MUELLER	MCDONALD	FORD
3/4"	B-25008	74701BT	F-1000-3-0

VALVE INSTALLATION



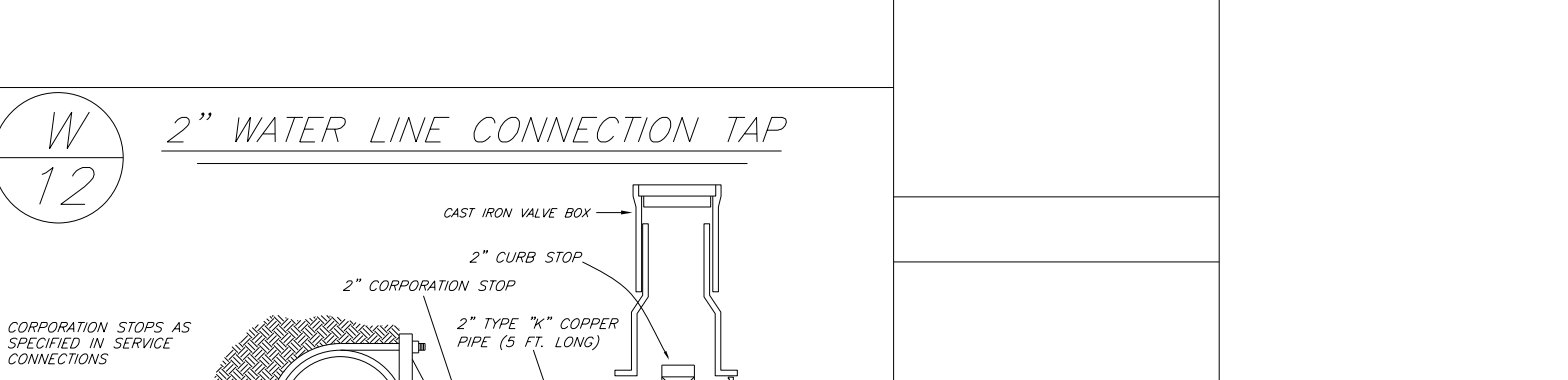
RECESS VALVE BOX 1/2" IN CENTER OF COLLAR. SET UPPER OUTSIDE EDGE OF COLLAR FLUSH WITH FINISHING GRADE. INSTALLATION ON SLOPE.

TYPICAL BLOW OFF AT END OF 2" WATER MAINS



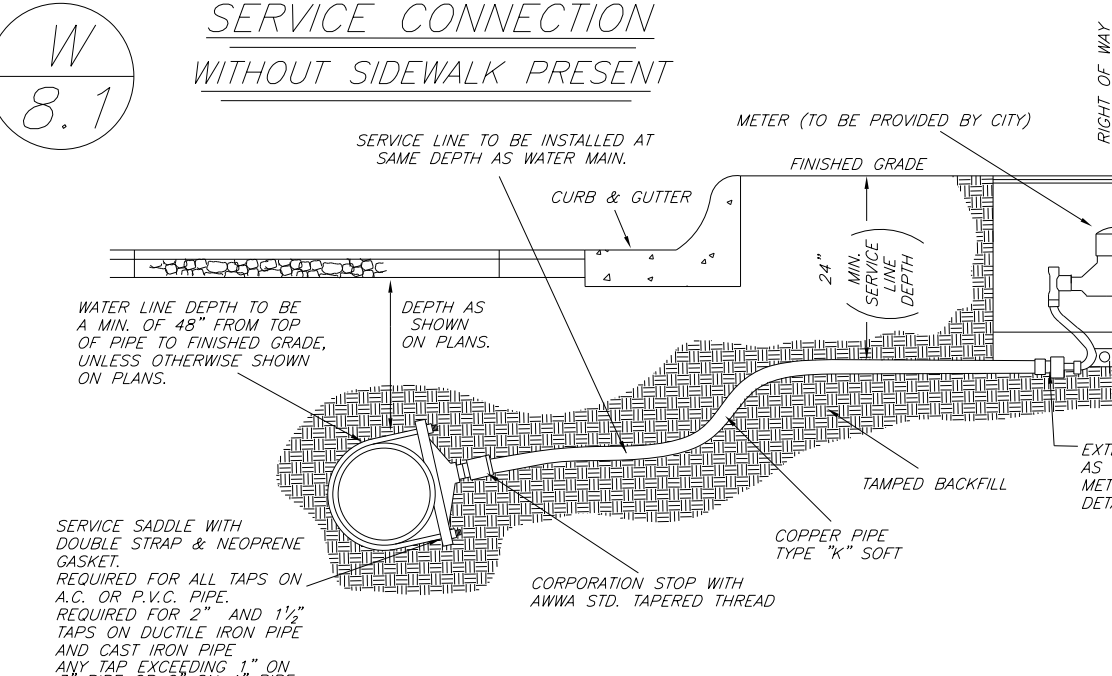
1" COMPRESSION x MALE ADAPTOR, CAST IRON METER BOX, 1" BRASS CURB STOP W/ BRASS PLUG, 1" COPPER PIPE TYPE "K" SOFT, 2" x 1" BRASS REDUCER, 2" BRASS TEE, 2" BRASS PLUG.

2" WATER LINE CONNECTION TAP



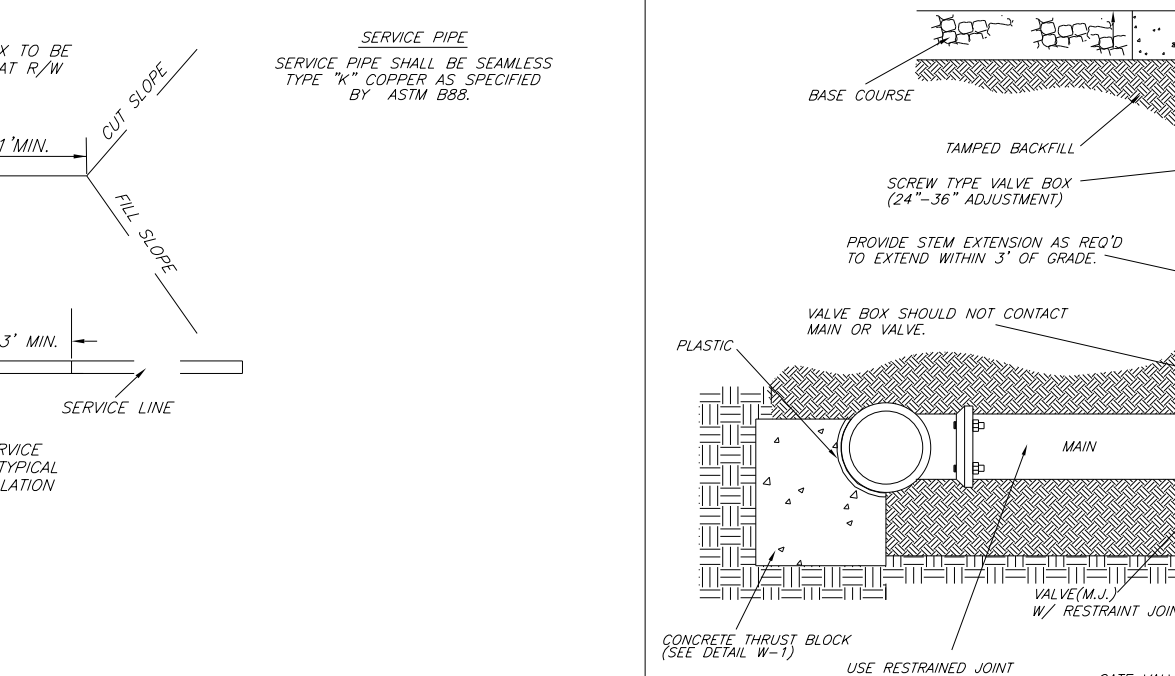
2" CURB STOP, 2" CORPORATION STOP, 2" TYPE "K" COPPER PIPE (5 FT. LONG), 2" D.I. OR C.I. BELL & MALE THREAD ADAPTOR ON NEW INSTALLATIONS, 2" SERVICE SADDLE, 2" BRASS PIPES & STREETER COUPLING TO CONNECT EXISTING PIPE.

SERVICE CONNECTION WITHOUT SIDEWALK PRESENT



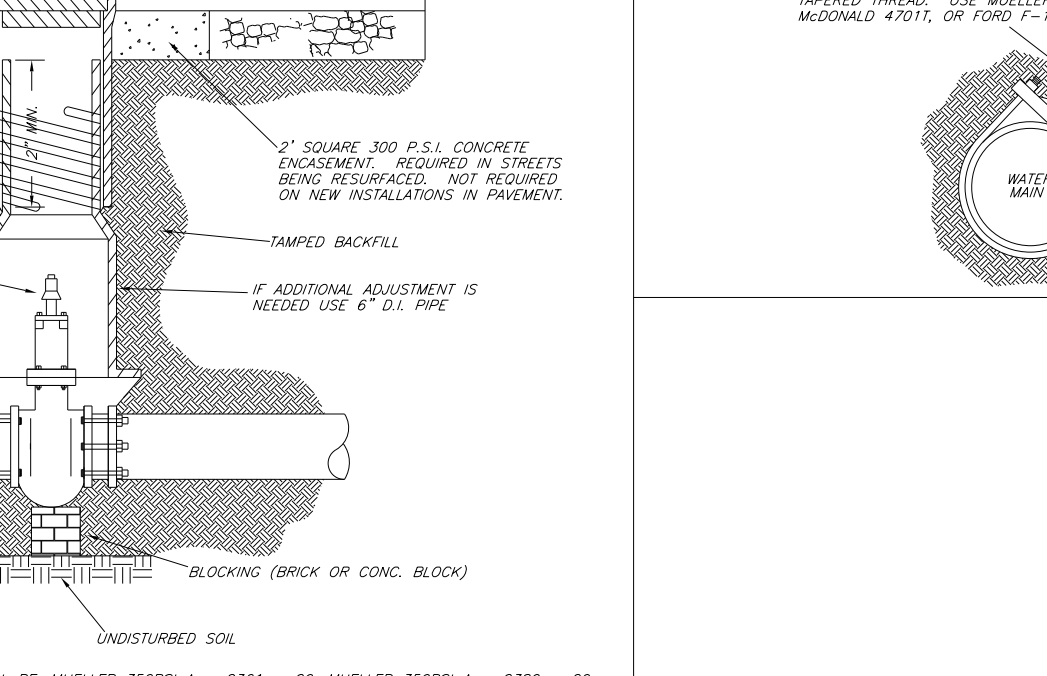
WATER LINE DEPTH TO BE A MIN. OF 48" FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE SHOWN ON PLANS. SERVICE LINE TO BE INSTALLED AT SAME DEPTH AS WATER MAIN. METER BOX TO BE LOCATED AT 8" FROM CURB & GUTTER. FINISHED GRADE, 1" MIN. FROM METER BOX TO CURB & GUTTER. 3" MIN. FROM METER BOX TO SIDEWALK. 1" MIN. FROM METER BOX TO FINISHED GRADE. 24" MIN. (MIN. SERVICE LINE LENGTH) FROM METER BOX TO MAIN. EXTEND WATER SERVICE AS INDICATED ON TYPICAL METER BOX INSTALLATION DETAIL. TAMPED BACKFILL. COPPER PIPE TYPE "K" SOFT. CORPORATION STOP WITH ANNA STD. TAPERED THREAD. SERVICE SADDLE WITH DOUBLE STRAP & NEOPRENE GASKET. REQUIRED FOR ALL TAPS ON A.C. OR P.V.C. PIPE. REQUIRED FOR 1" AND 1 1/2" TAPS ON DUCTILE IRON PIPE AND CAST IRON PIPE. ANY TAP EXCEEDING 1" ON P.V.C. OR 1 1/2" ON D.I. PIPE MUST HAVE TEE CUT IN.

VALVE INSTALLATION (Continued)



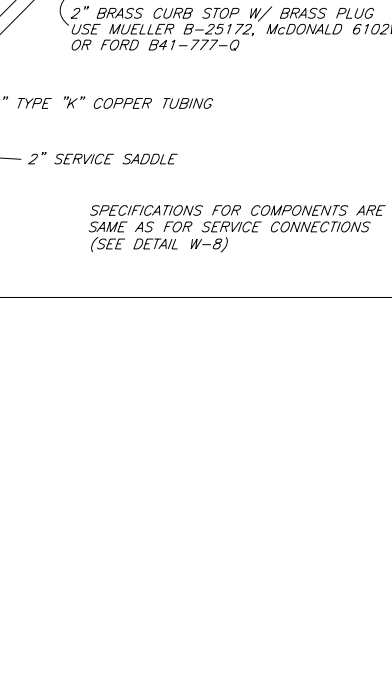
VALVE BOX COVER, FINISHED GRADE, 2" SQUARE - 3000 P.S.I. CONCRETE ENCASEMENT AT 6" MIN. THICKNESS. SET UPPER OUTSIDE EDGE OF COLLAR FLUSH WITH FINISHING GRADE. MATCH PAVING THICKNESS IN STREETS BEING REPAIRED. 1/2" IN AREAS NOT PAVED. TAMPED BACKFILL. 2" SQUARE 800 P.S.I. CONCRETE ENCASEMENT REQUIRED IN STREETS BEING REPAIRED. REQUIRED IN NEW INSTALLATIONS IN PAVEMENT. PROVIDE STEM EXTENSION AS REQ'D TO EXTEND WITHIN 3" OF GRADE. IF ADDITIONAL ADJUSTMENT IS NEEDED USE 6" D.I. PIPE. VALVE BOX SHOULD NOT CONTACT MAIN OR VALVE. VALVE W/ RESTRAINT JOINT. CONCRETE THRUST BLOCK (SEE DETAIL W-1). USE RESTRAINED JOINT FITTINGS ON HYDRANT TEE. GATE VALVES SHALL BE MUELLER 3505D A - 2361 - 20, MUELLER 3505D A - 2380 - 20, M & H 67 - 01, M & H 3067 - 01, AMERICAN AVM SERIES 2500 OR CLOW MODEL F-6100 (SIZE 3" - 12"). HYDRANTS SHALL BE MUELLER SUPER CONVENTION #4233, STREETER MANHOLE #299 OR AMERICAN MANHOLE #299 WITH WHITE TOP AND CAPS. INSTALL HYDRANT SO BREAKAWAY FLANGE IS BETWEEN 2" & 6" ABOVE FINISHED GRADE. REMOVE CHAINS FROM HYDRANT. CURB & GUTTER. FINISHED GRADE. SIDEWALK. 1" MIN. FROM METER BOX TO SIDEWALK. 1" MIN. FROM METER BOX TO FINISHED GRADE. 24" MIN. (MIN. SERVICE LINE LENGTH) FROM METER BOX TO MAIN. EXTEND WATER SERVICE AS INDICATED ON TYPICAL METER BOX INSTALLATION DETAIL. TAMPED BACKFILL. COPPER PIPE TYPE "K" SOFT. CORPORATION STOP WITH ANNA STD. TAPERED THREAD. SERVICE SADDLE WITH DOUBLE STRAP & NEOPRENE GASKET. REQUIRED FOR ALL TAPS ON A.C. OR P.V.C. PIPE. REQUIRED FOR 1" AND 1 1/2" TAPS ON DUCTILE IRON PIPE AND CAST IRON PIPE. ANY TAP EXCEEDING 1" ON P.V.C. OR 1 1/2" ON D.I. PIPE MUST HAVE TEE CUT IN.

2" AIR RELIEF ASSEMBLY



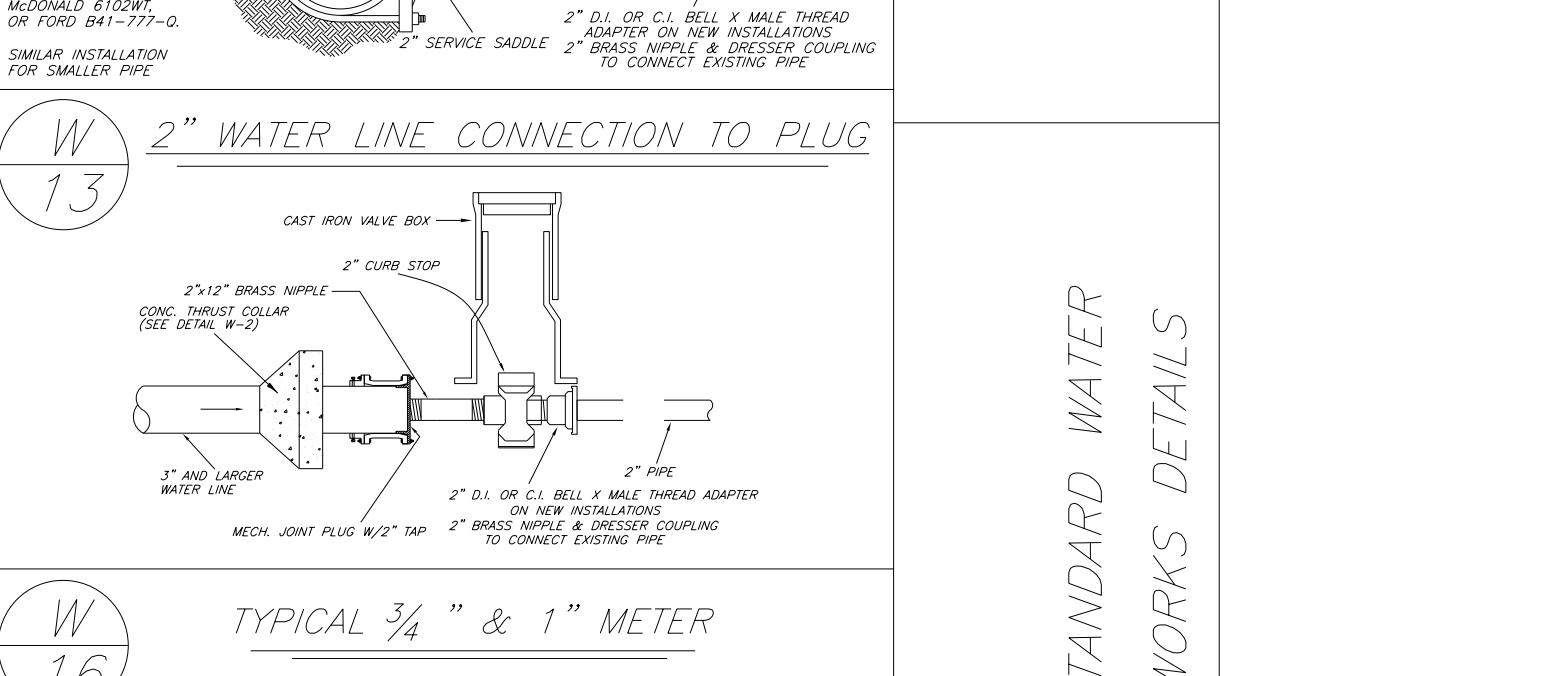
2" CORPORATION STOP WITH ANNA STD. TAPERED THREAD. USE MUELLER H-1500RB, MCDONALD 4701T, OR FORD F-1000-7-0. 2" TYPE "K" COPPER TUBING. 2" SERVICE SADDLE. SPECIFICATIONS FOR COMPONENTS ARE THE SAME AS FOR SERVICE CONNECTIONS (SEE DETAIL W-4).

2" WATER LINE CONNECTION TO PLUG



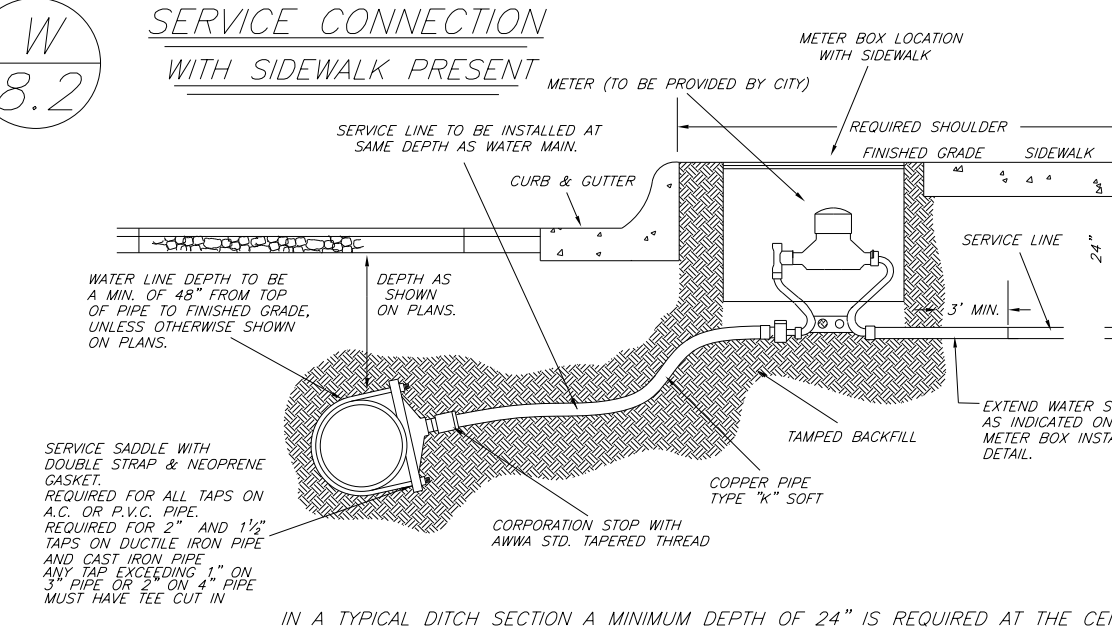
2" CURB STOP, 2" CORPORATION STOP, 2" TYPE "K" COPPER PIPE (5 FT. LONG), 2" D.I. OR C.I. BELL & MALE THREAD ADAPTOR ON NEW INSTALLATIONS, 2" SERVICE SADDLE, 2" BRASS PIPES & STREETER COUPLING TO CONNECT EXISTING PIPE.

TYPICAL 3/4" & 1" METER BOX INSTALLATION



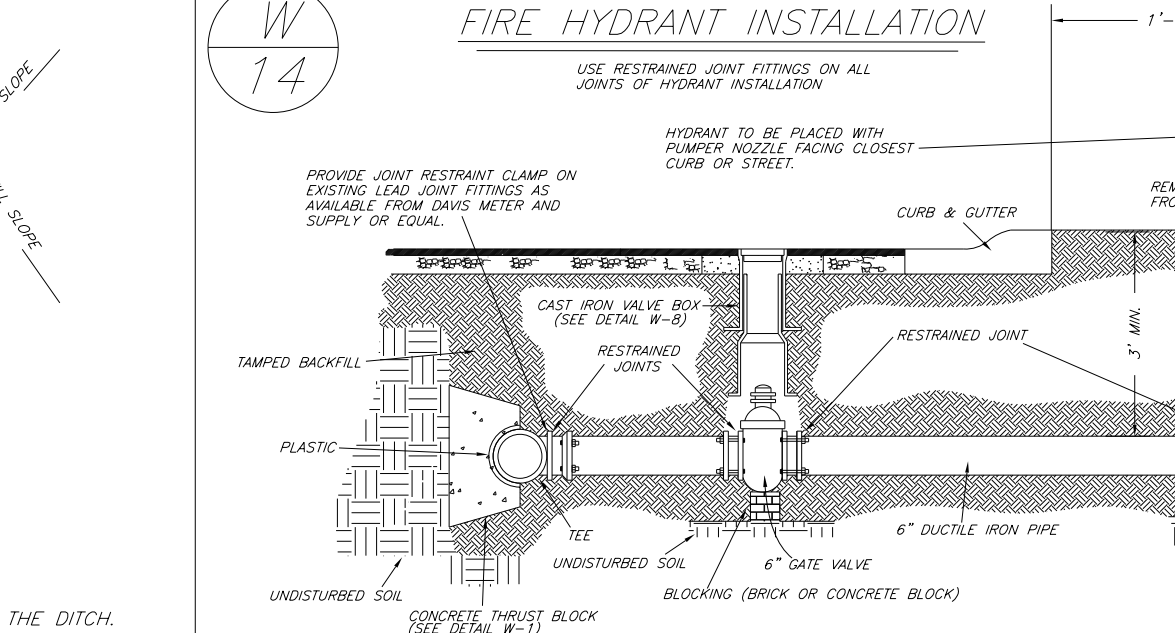
METER BOX (Flush with Grade), METER, METER SETTER TO BE SET AS LEVEL AS POSSIBLE, COMPACTED BACKFILL, CURB STOP (REQUIRED FOR EACH METER), 5" MIN. FROM METER BOX TO CURB & GUTTER. 1" MIN. FROM METER BOX TO SIDEWALK. 1" MIN. FROM METER BOX TO FINISHED GRADE. 24" MIN. (MIN. SERVICE LINE LENGTH) FROM METER BOX TO MAIN. EXTEND WATER SERVICE AS INDICATED ON TYPICAL METER BOX INSTALLATION DETAIL. TAMPED BACKFILL. COPPER PIPE TYPE "K" SOFT. CORPORATION STOP WITH ANNA STD. TAPERED THREAD. SERVICE SADDLE WITH DOUBLE STRAP & NEOPRENE GASKET. REQUIRED FOR ALL TAPS ON A.C. OR P.V.C. PIPE. REQUIRED FOR 1" AND 1 1/2" TAPS ON DUCTILE IRON PIPE AND CAST IRON PIPE. ANY TAP EXCEEDING 1" ON P.V.C. OR 1 1/2" ON D.I. PIPE MUST HAVE TEE CUT IN. BRICK ON EACH CORNER. BRASS BARBED COUPLING W/ STAINLESS STEEL CLAMP ON PLASTIC PIPE. PLUG END OF PIPE. SDR 9, 160 PSI PE, PLASTIC PIPE OR TYPE "K" COPPER TAIL PIECE.

SERVICE CONNECTION WITH SIDEWALK PRESENT



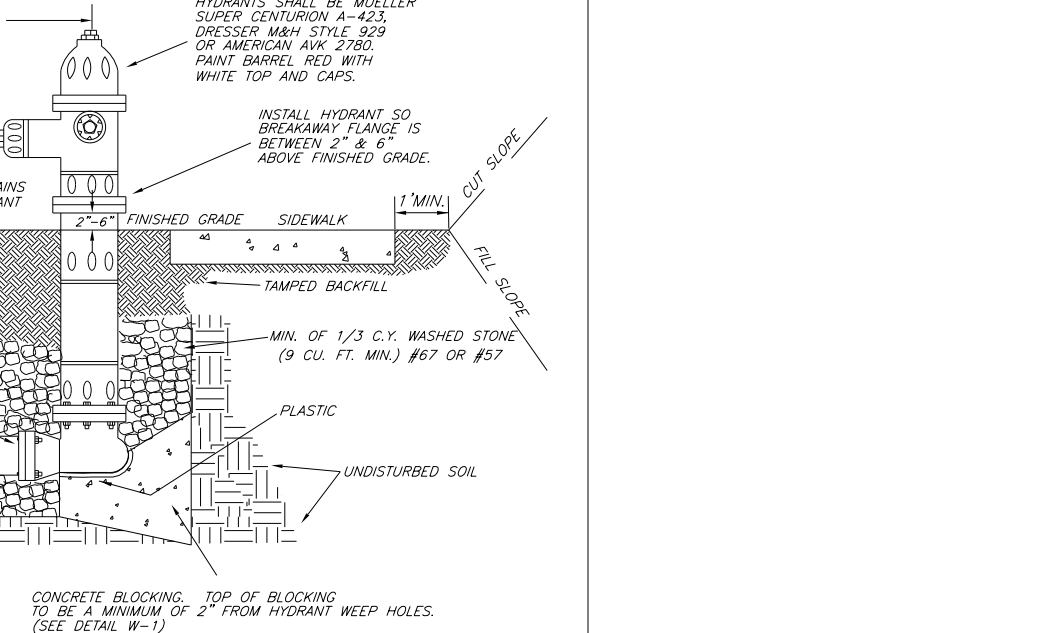
WATER LINE DEPTH TO BE A MIN. OF 48" FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE SHOWN ON PLANS. SERVICE LINE TO BE INSTALLED AT SAME DEPTH AS WATER MAIN. METER BOX TO BE LOCATED AT 8" FROM CURB & GUTTER. FINISHED GRADE, 1" MIN. FROM METER BOX TO CURB & GUTTER. 3" MIN. FROM METER BOX TO SIDEWALK. 1" MIN. FROM METER BOX TO FINISHED GRADE. 24" MIN. (MIN. SERVICE LINE LENGTH) FROM METER BOX TO MAIN. EXTEND WATER SERVICE AS INDICATED ON TYPICAL METER BOX INSTALLATION DETAIL. TAMPED BACKFILL. COPPER PIPE TYPE "K" SOFT. CORPORATION STOP WITH ANNA STD. TAPERED THREAD. SERVICE SADDLE WITH DOUBLE STRAP & NEOPRENE GASKET. REQUIRED FOR ALL TAPS ON A.C. OR P.V.C. PIPE. REQUIRED FOR 1" AND 1 1/2" TAPS ON DUCTILE IRON PIPE AND CAST IRON PIPE. ANY TAP EXCEEDING 1" ON P.V.C. OR 1 1/2" ON D.I. PIPE MUST HAVE TEE CUT IN.

FIRE HYDRANT INSTALLATION



USE RESTRAINED JOINT FITTINGS ON ALL JOINTS OF HYDRANT INSTALLATION. HYDRANT TO BE PLACED WITH FLOWER NOZZLE FACING CLOSEST CURB OF STREET. CURB & GUTTER. FINISHED GRADE. SIDEWALK. 1" MIN. FROM METER BOX TO SIDEWALK. 1" MIN. FROM METER BOX TO FINISHED GRADE. 24" MIN. (MIN. SERVICE LINE LENGTH) FROM METER BOX TO MAIN. EXTEND WATER SERVICE AS INDICATED ON TYPICAL METER BOX INSTALLATION DETAIL. TAMPED BACKFILL. COPPER PIPE TYPE "K" SOFT. CORPORATION STOP WITH ANNA STD. TAPERED THREAD. SERVICE SADDLE WITH DOUBLE STRAP & NEOPRENE GASKET. REQUIRED FOR ALL TAPS ON A.C. OR P.V.C. PIPE. REQUIRED FOR 1" AND 1 1/2" TAPS ON DUCTILE IRON PIPE AND CAST IRON PIPE. ANY TAP EXCEEDING 1" ON P.V.C. OR 1 1/2" ON D.I. PIPE MUST HAVE TEE CUT IN. IN A TYPICAL DITCH SECTION A MINIMUM DEPTH OF 24" IS REQUIRED AT THE CENTERLINE OF THE DITCH. 6" DUCTILE IRON PIPE. 6" GATE VALVE. RESTRAINED JOINTS. RESTRAINED JOINT. TAMPED BACKFILL. PLASTIC. UNDISTURBED SOIL. CONCRETE THRUST BLOCK (SEE DETAIL W-1). CONCRETE BLOCKING. TOP OF BLOCKING TO BE A MINIMUM OF 3" FROM HYDRANT KEEP HOLES. (SEE DETAIL W-1).

2" WATER LINE CONNECTION TAP (Continued)



2" CURB STOP, 2" CORPORATION STOP, 2" TYPE "K" COPPER PIPE (5 FT. LONG), 2" D.I. OR C.I. BELL & MALE THREAD ADAPTOR ON NEW INSTALLATIONS, 2" SERVICE SADDLE, 2" BRASS PIPES & STREETER COUPLING TO CONNECT EXISTING PIPE.

2" WATER LINE CONNECTION TO PLUG (Continued)



2" CURB STOP, 2" CORPORATION STOP, 2" TYPE "K" COPPER PIPE (5 FT. LONG), 2" D.I. OR C.I. BELL & MALE THREAD ADAPTOR ON NEW INSTALLATIONS, 2" SERVICE SADDLE, 2" BRASS PIPES & STREETER COUPLING TO CONNECT EXISTING PIPE.

STANDARD WATER WORKS DETAILS

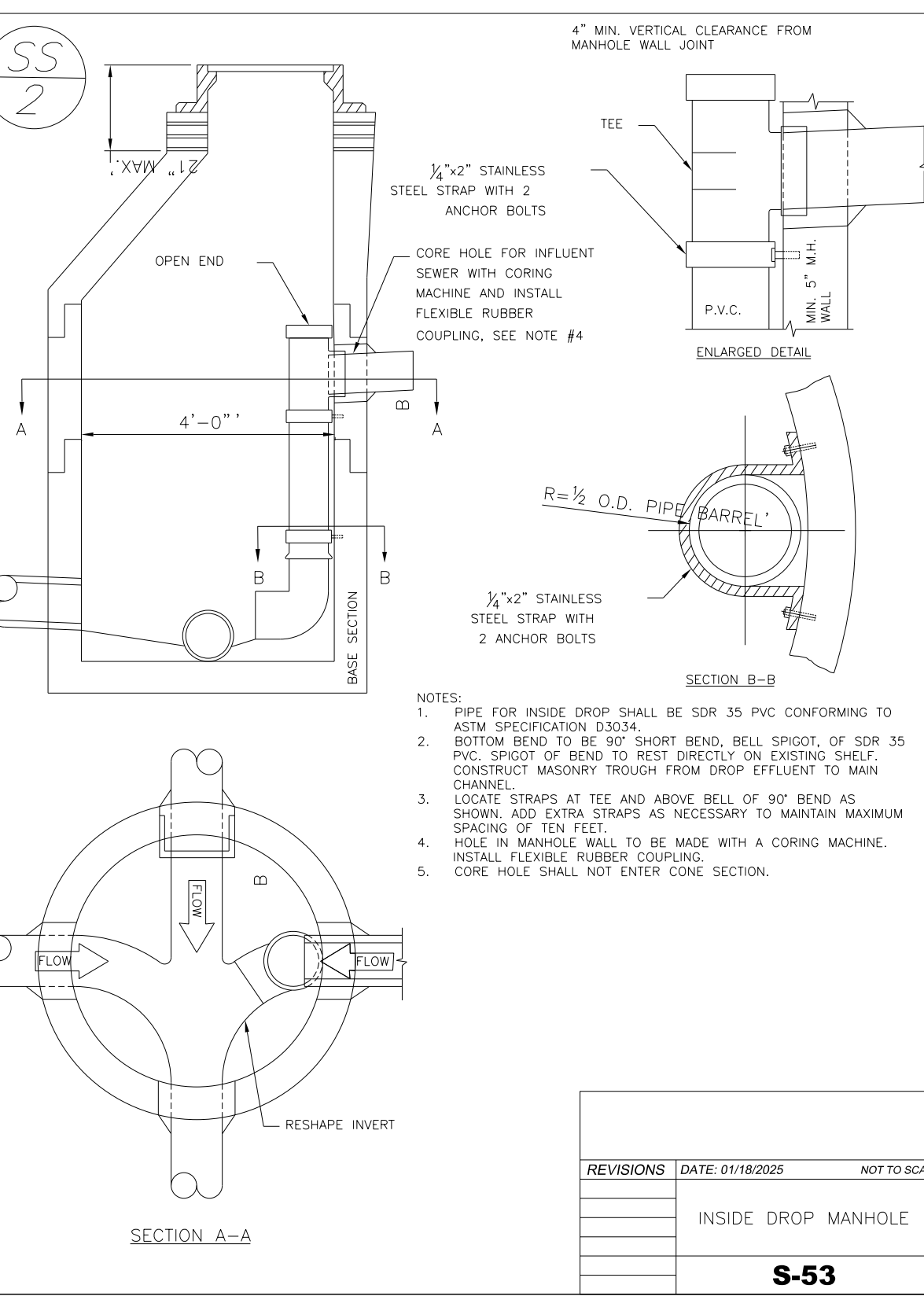
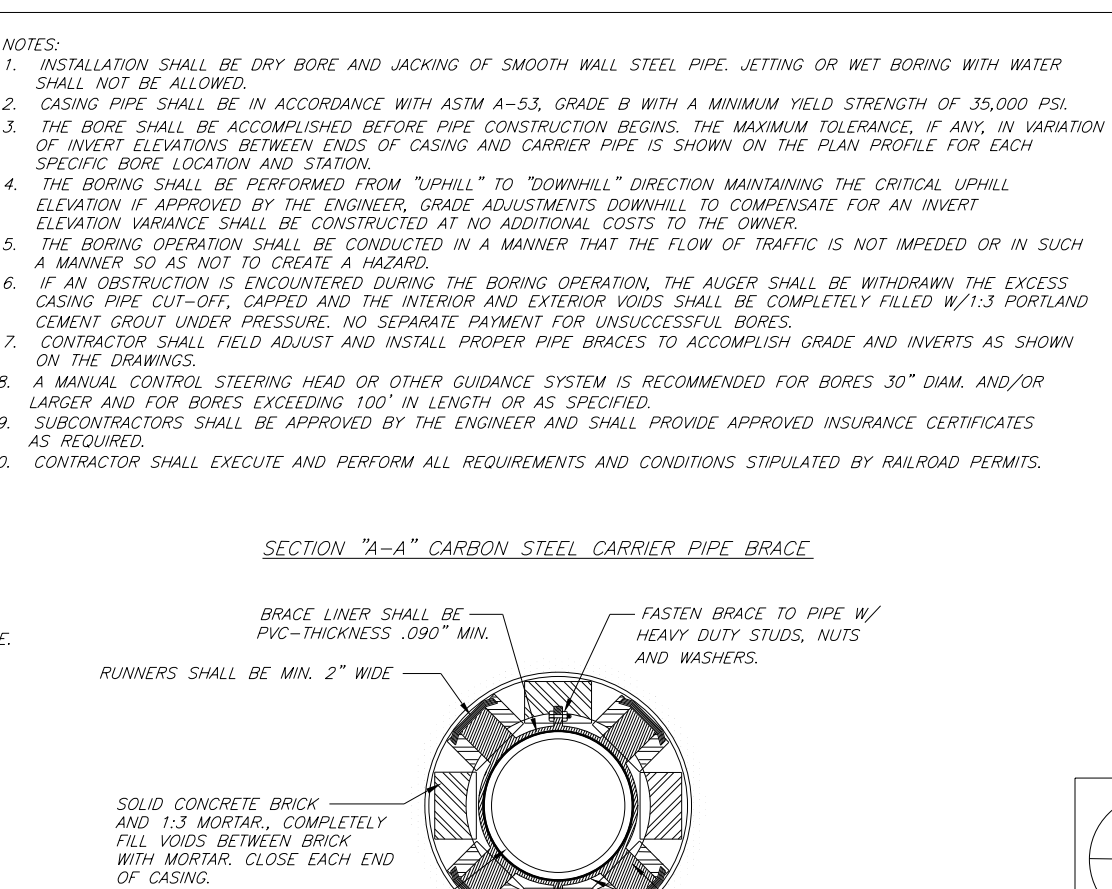
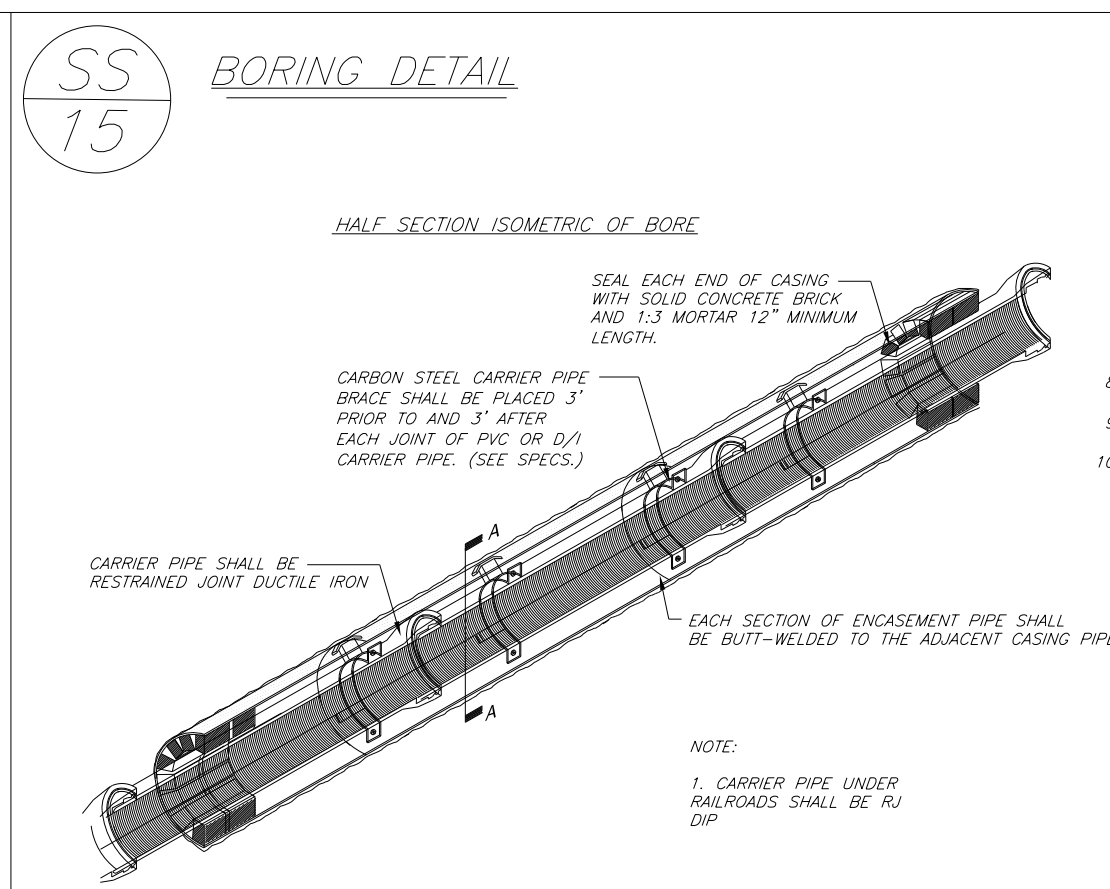
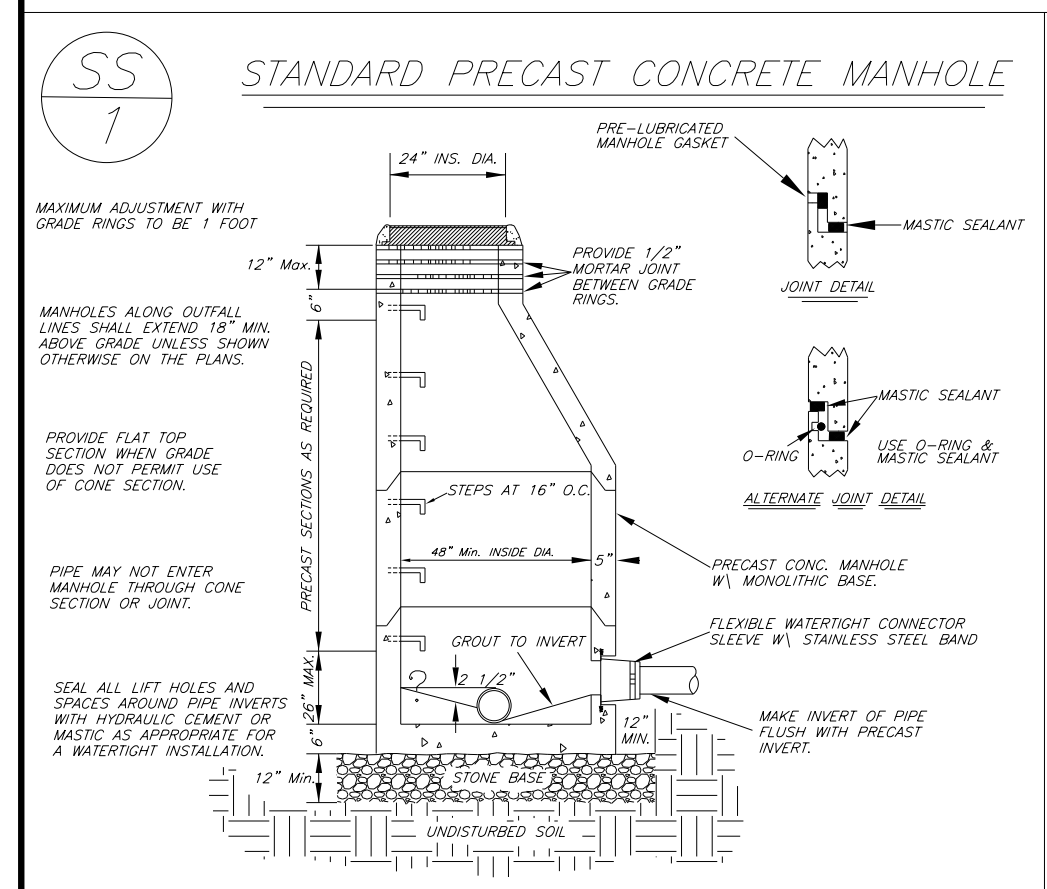
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 Sheet No. ? of ?

CITY OF ASHEBORO
ENGINEERING DEPARTMENT
146 NORTH CHURCH STREET
ASHEBORO, NORTH CAROLINA

Date	Apr-21
Revisions	
Mark	

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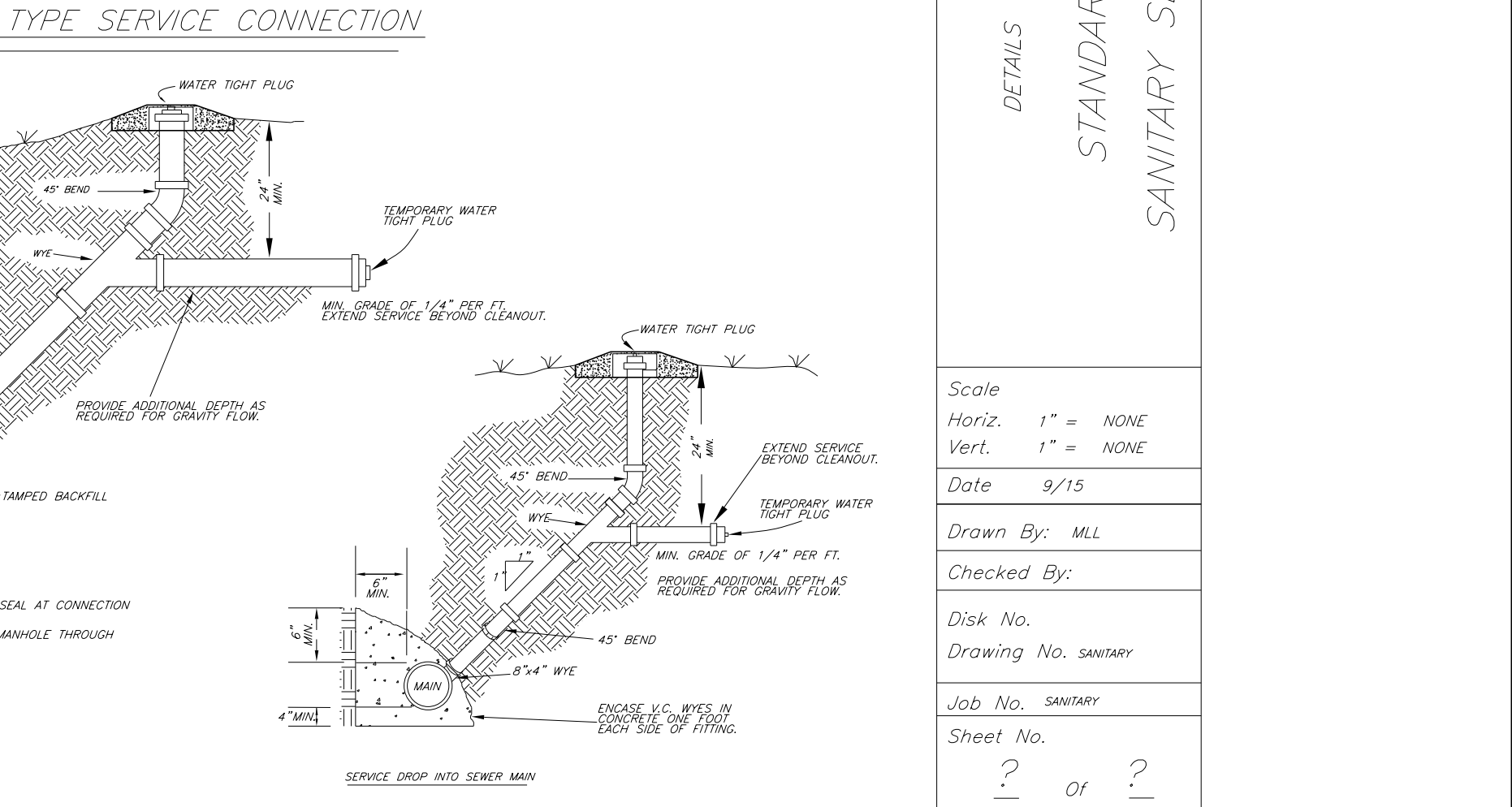
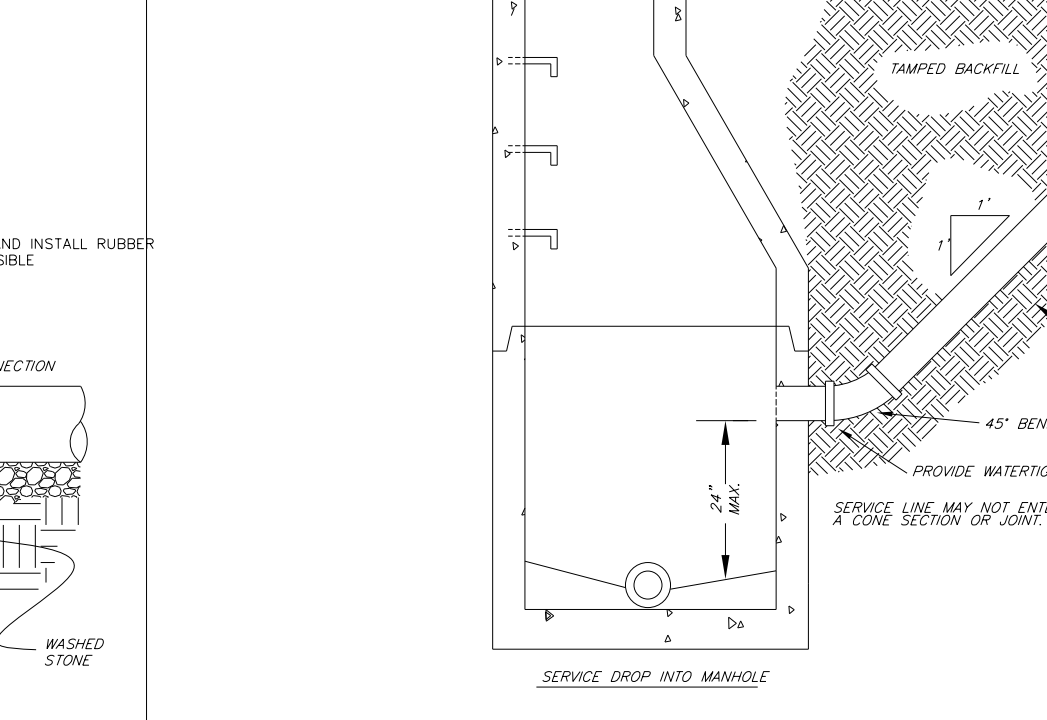
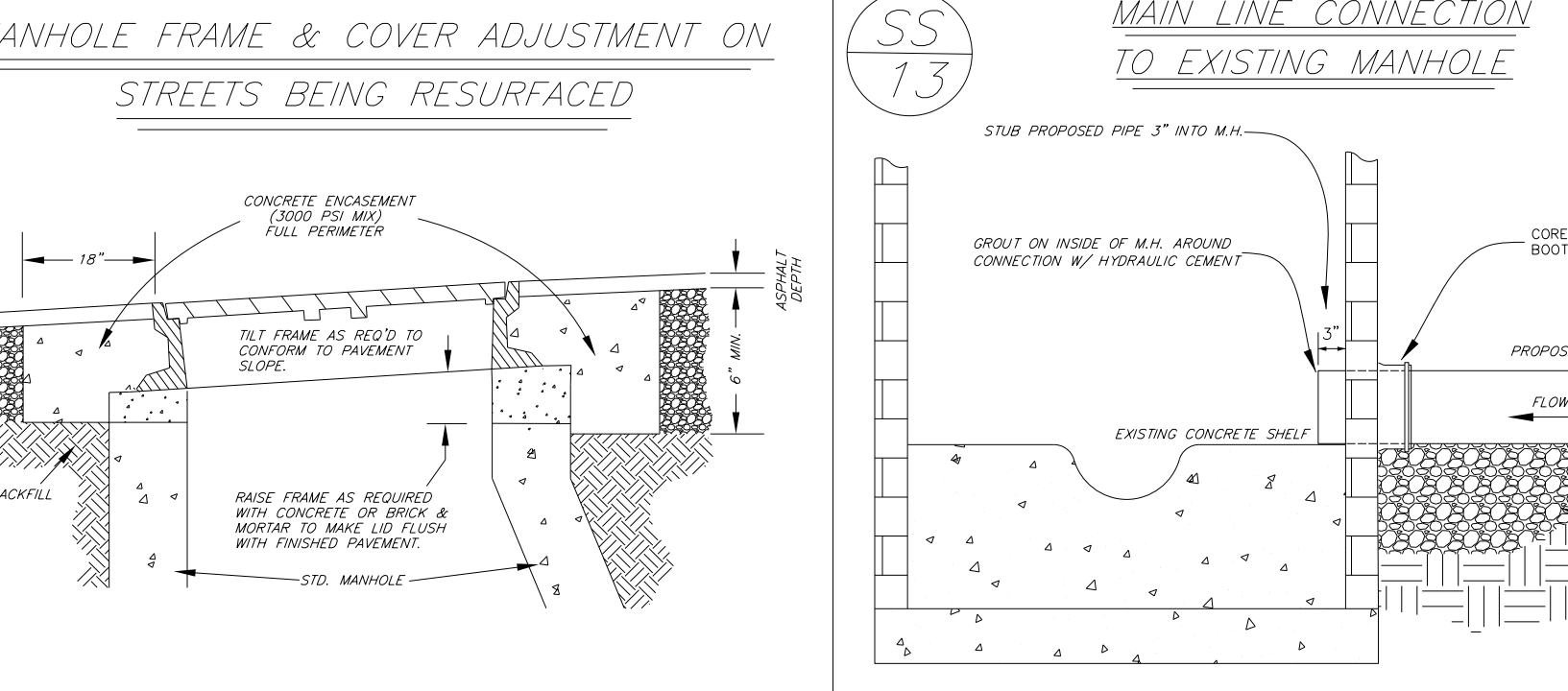
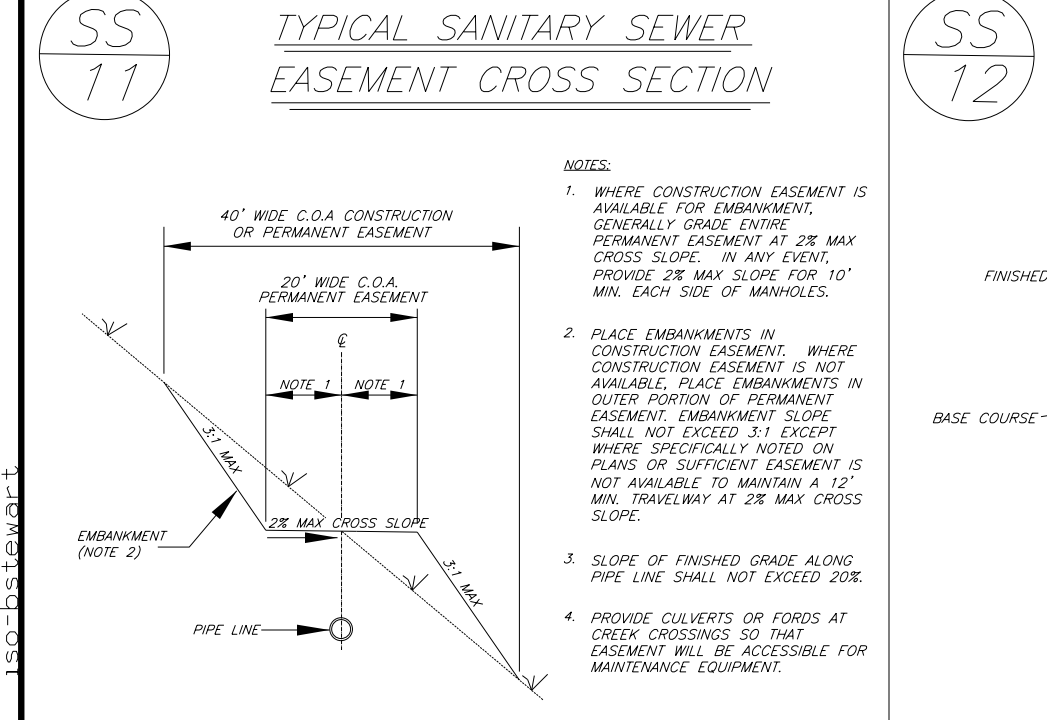
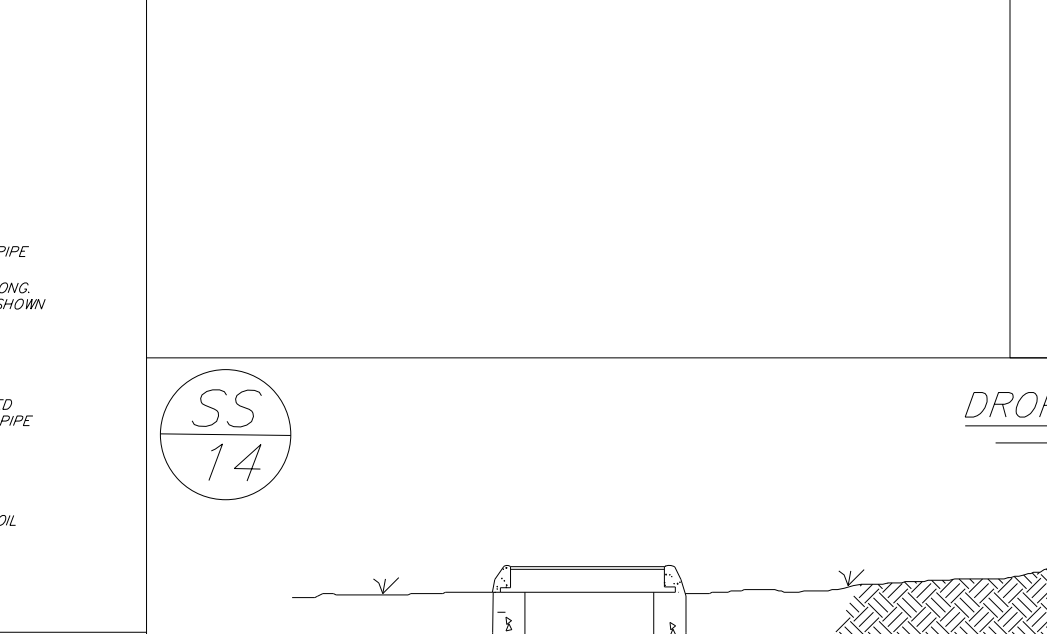
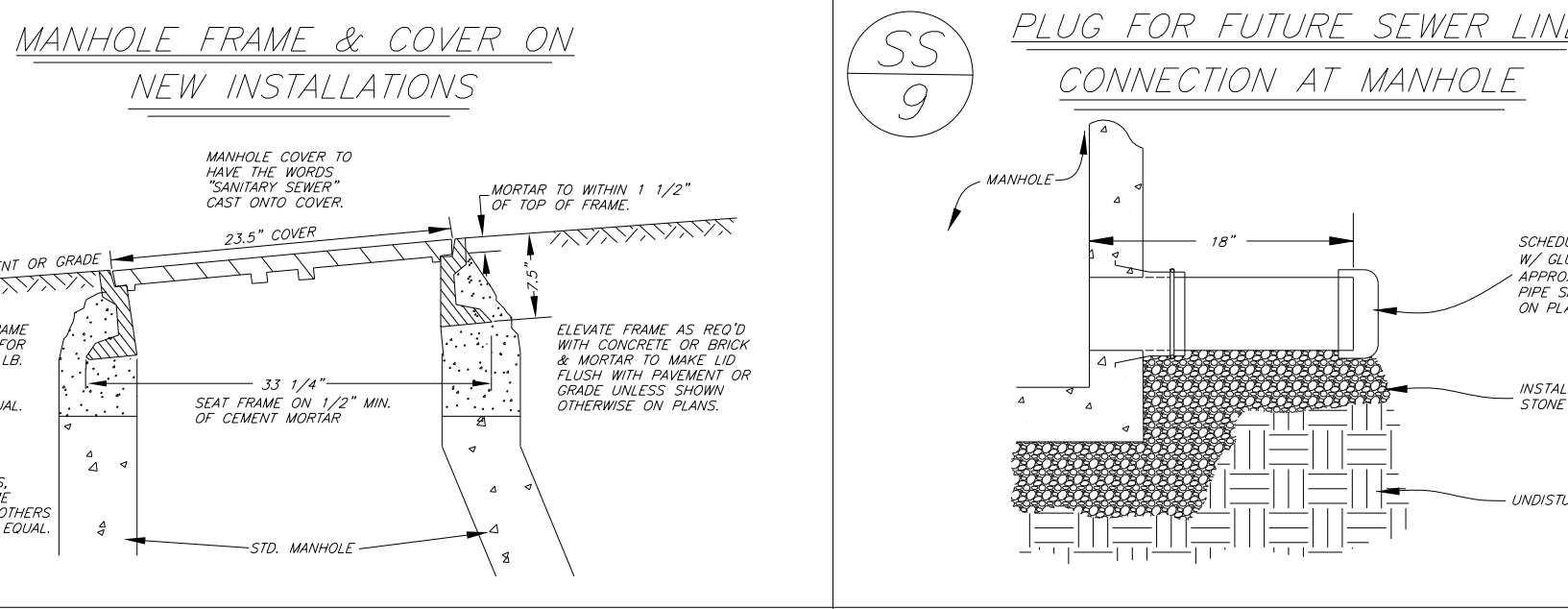
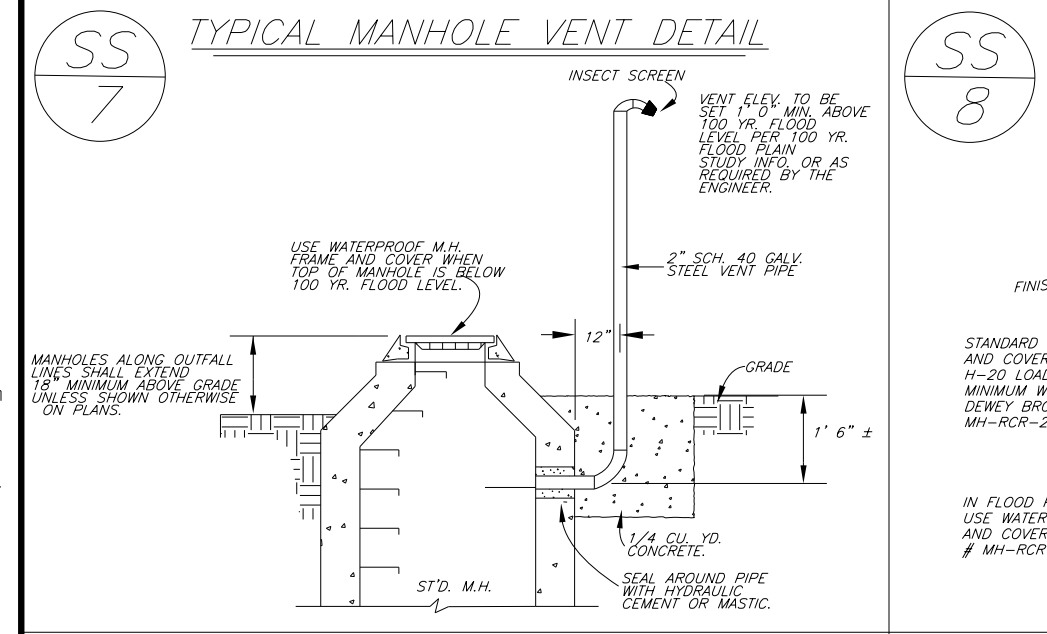
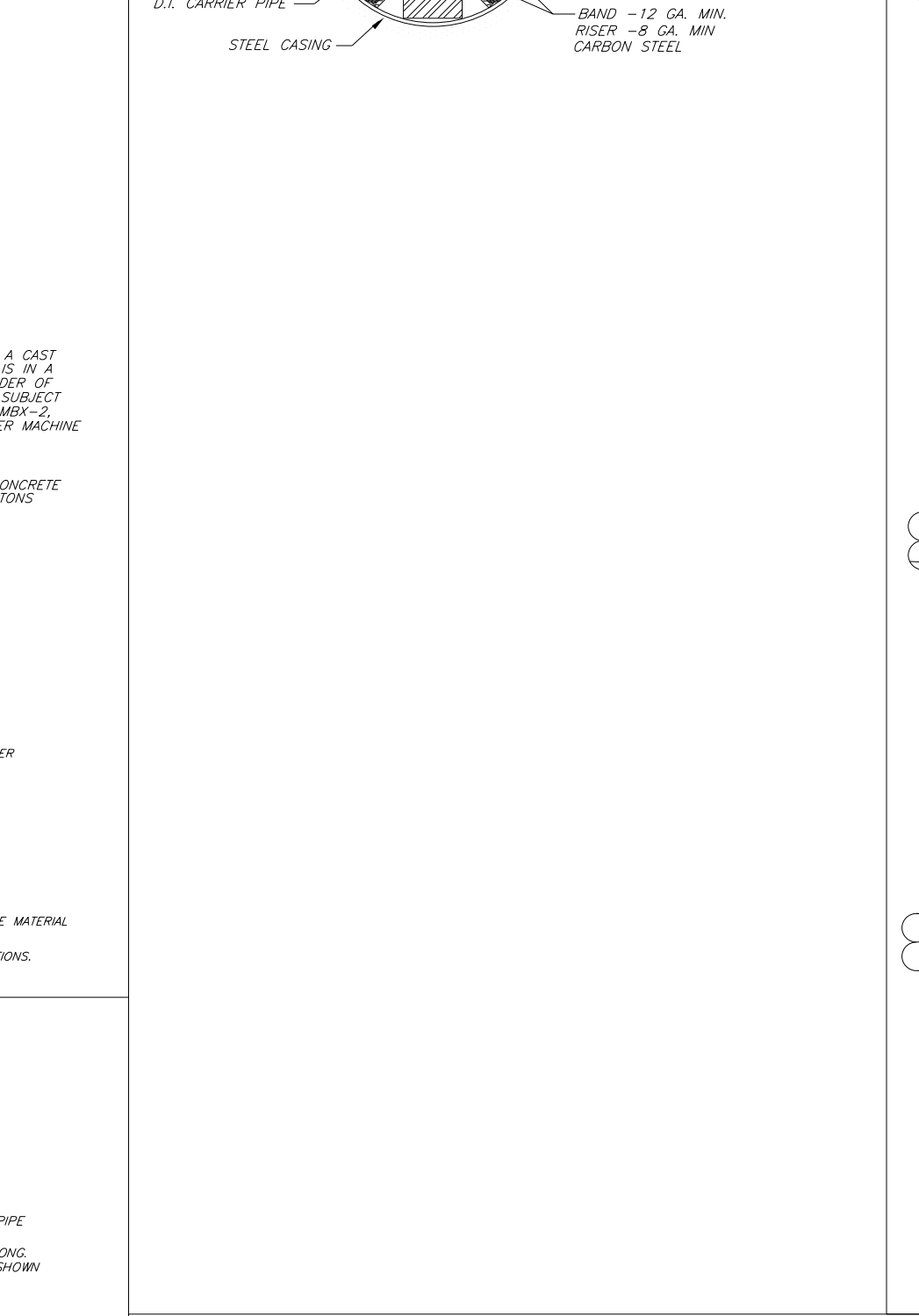
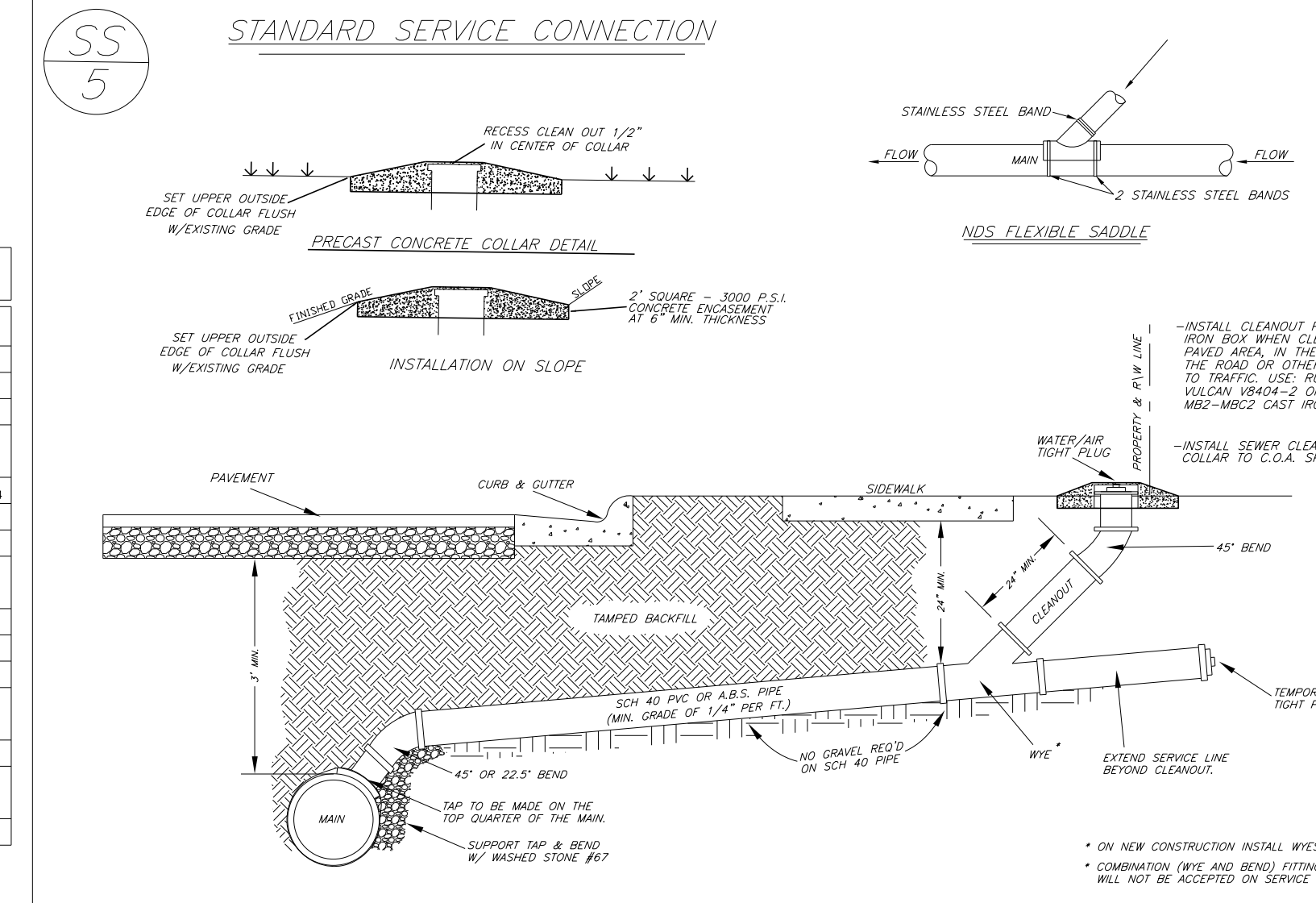
UTILITY CONSTRUCTION



SS 4 AIR TEST TABLE

TIME (MIN-SEC) REQUIRED FOR PRESSURE DROP FROM 3 1/2 TO 2 1/2 PSIG WHEN TESTING ONE PIPE DIAMETER ONLY. INCREASE PRESSURE AS REQUIRED BY ENGINEER IF GROUNDWATER IS PRESENT.

LENGTH OF LINE, FEET	PIPE DIAMETER, INCHES								
	4	6	8	10	12	15	18	21	24
25	0:05	0:11	0:18	0:23	0:27	:32	0:36	0:45	0:54
50	0:09	0:21	0:36	0:45	0:54	1:03	1:12	1:30	1:48
75	0:14	0:32	0:54	1:23	1:21	1:35	1:48	2:15	2:42
100	0:18	0:42	1:12	1:30	1:48	2:06	2:24	3:00	3:36
125	0:23	0:53	1:30	1:53	2:15	2:38	3:00	3:45	4:30
150	0:27	1:03	1:48	2:15	2:42	3:09	3:36	4:30	5:24
175	0:32	1:14	2:06	2:38	3:09	3:41	4:18	5:15	6:18
200	0:36	1:24	2:24	3:00	3:36	4:12	4:48	6:00	7:12
225	0:41	1:35	2:42	3:23	4:03	4:44	5:24	6:45	8:06
250	0:45	1:45	3:00	3:45	4:30	5:15	6:00	7:30	9:00
275	0:50	1:56	3:18	4:08	4:57	5:47	6:36	8:15	9:54
300	0:54	2:06	3:36	4:30	5:24	6:18	7:12	9:00	10:48
350	1:03	2:27	4:12	5:15	6:18	7:21	8:24	10:30	12:36
400	1:12	2:48	4:48	6:00	7:12	8:24	9:36	12:00	14:24
450	1:21	3:09	5:24	6:45	8:06	9:27	10:48	13:30	16:12
500	1:30	3:30	6:00	7:30	9:00	10:30	12:00	15:00	18:00



CITY OF ASHEBORO
ENGINEERING DEPARTMENT
146 NORTH CHURCH STREET
ASHEBORO, NORTH CAROLINA

DETAILS
STANDARD
SANITARY SEWER

Revisions

Revisions	Date	By

Date

Revisions

Mark

Scale

Scale

Horiz. 1" = NONE

Vert. 1" = NONE

Date 9/15

Drawn By: MLL

Checked By:

Disc No.

Drawing No. SANITARY

JOB No. SANITARY

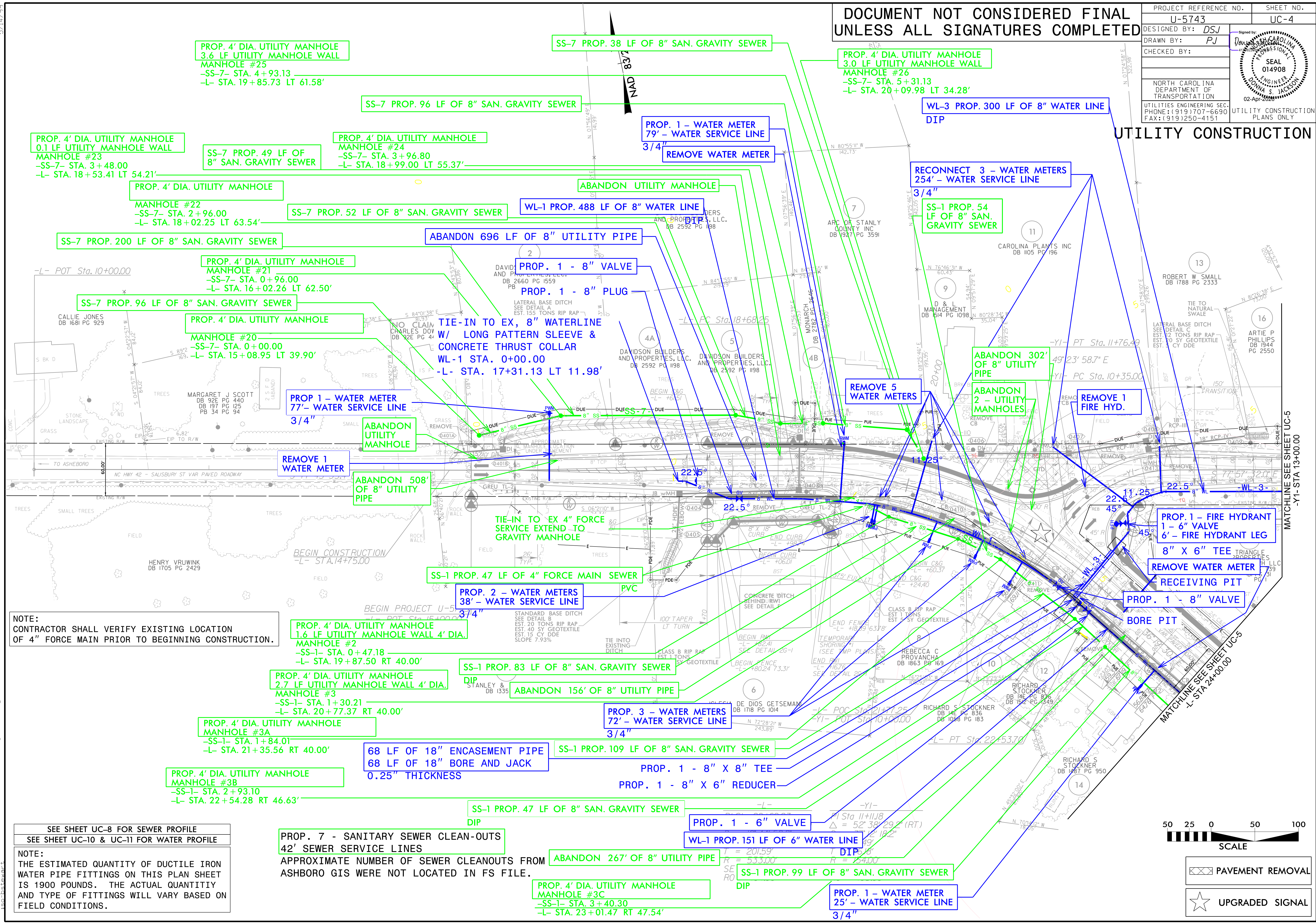
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5/14/99

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DESIGNED BY: DSJ	
DRAWN BY: PJ	
CHECKED BY:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



NOTE:
CONTRACTOR SHALL VERIFY EXISTING LOCATION OF 4" FORCE MAIN PRIOR TO BEGINNING CONSTRUCTION.

SEE SHEET UC-8 FOR SEWER PROFILE
SEE SHEET UC-10 & UC-11 FOR WATER PROFILE

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1900 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROP. 7 - SANITARY SEWER CLEAN-OUTS
42' SEWER SERVICE LINES
APPROXIMATE NUMBER OF SEWER CLEANOUTS FROM ASHBORO GIS WERE NOT LOCATED IN FS FILE.

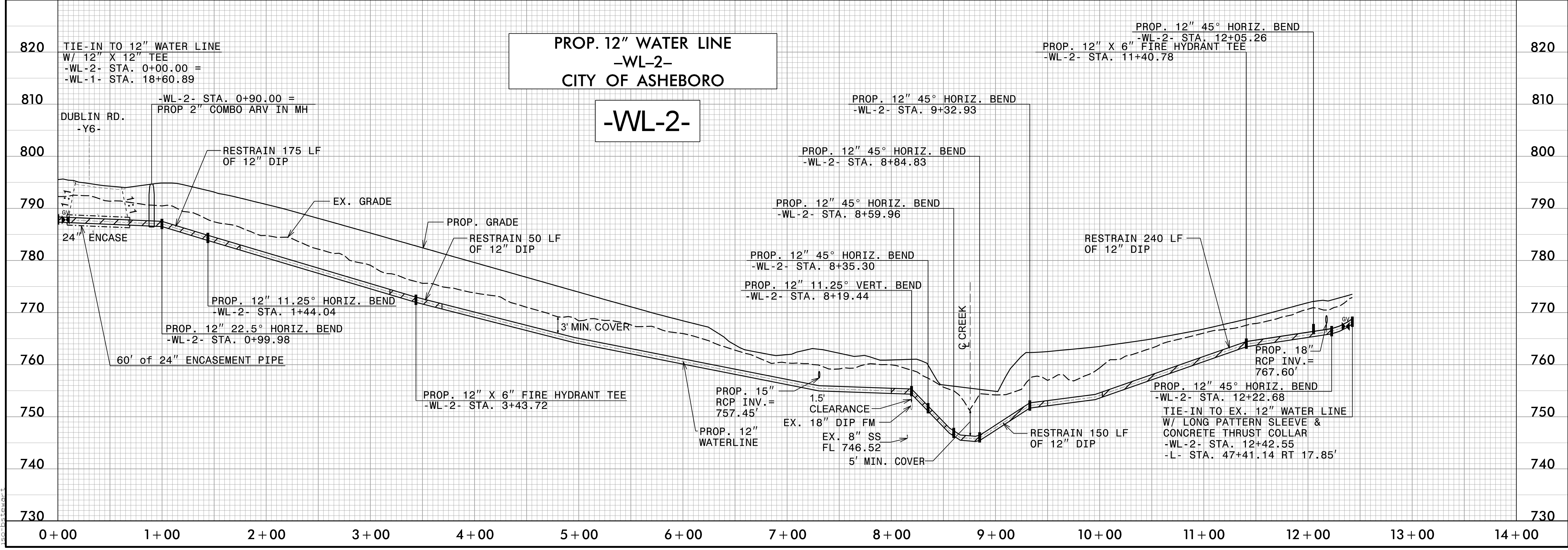
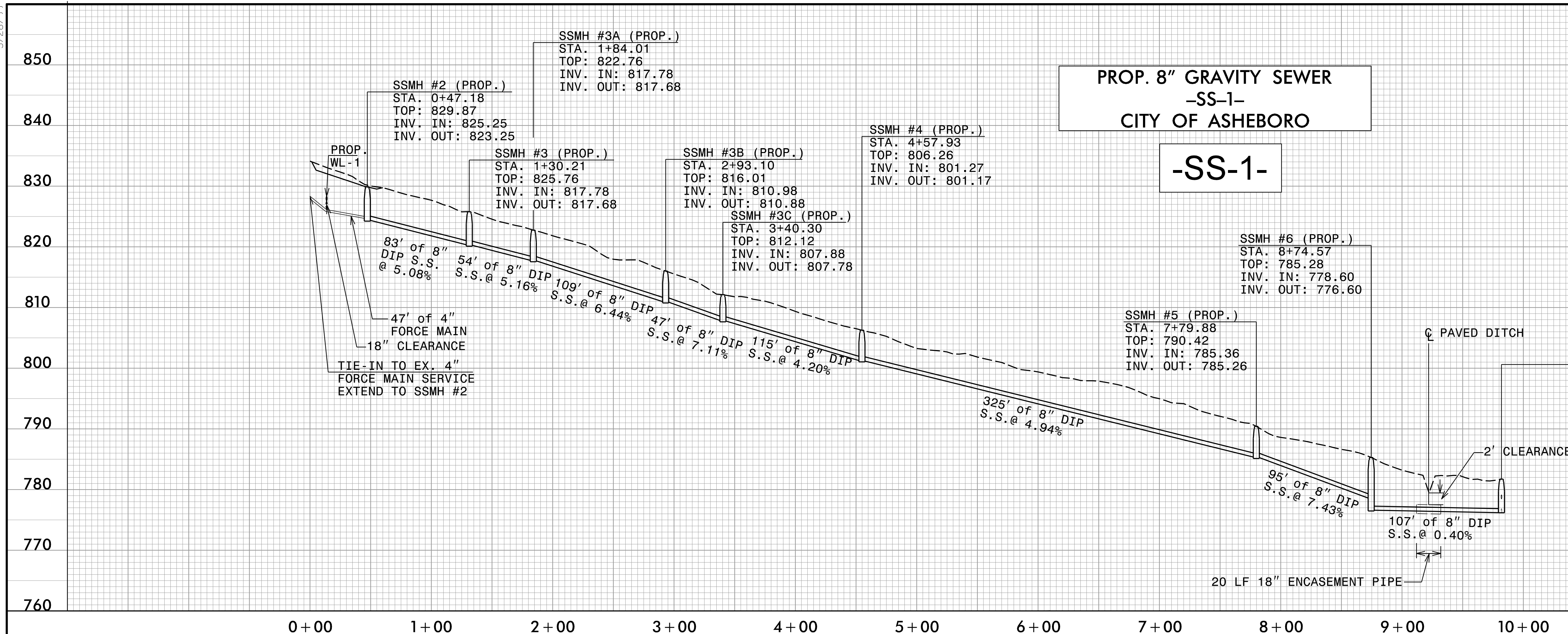


- PAVEMENT REMOVAL
- UPGRADED SIGNAL

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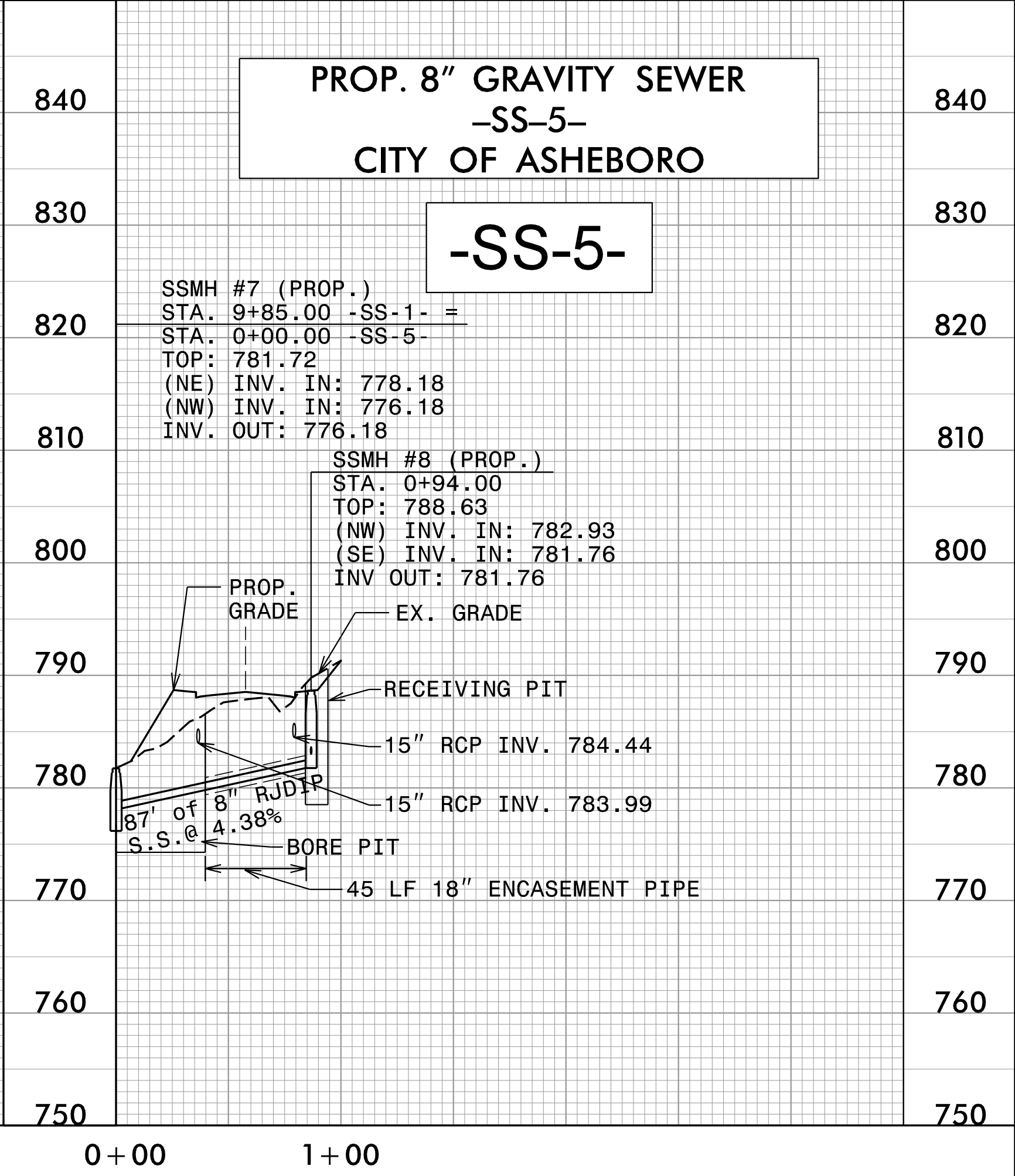
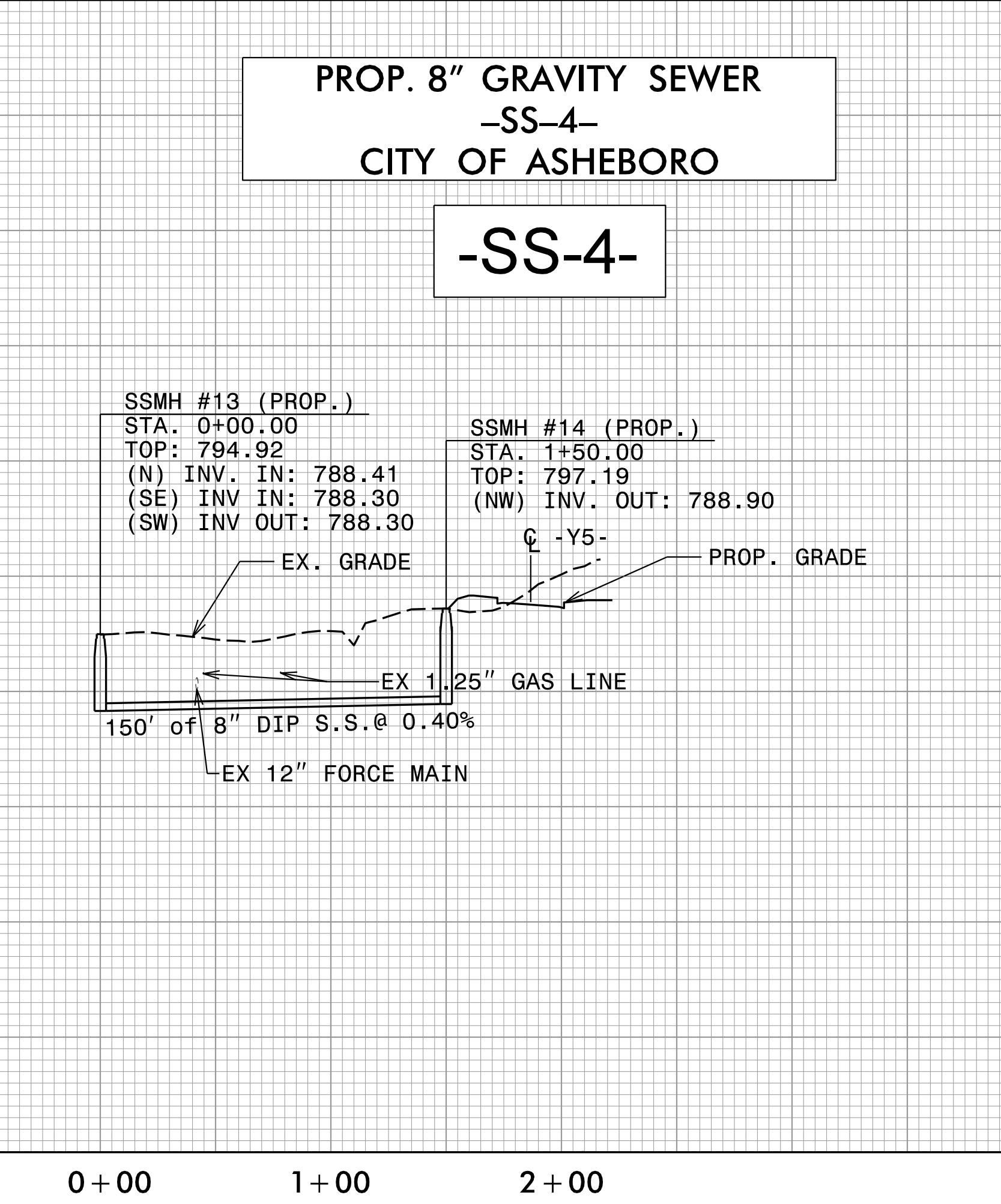
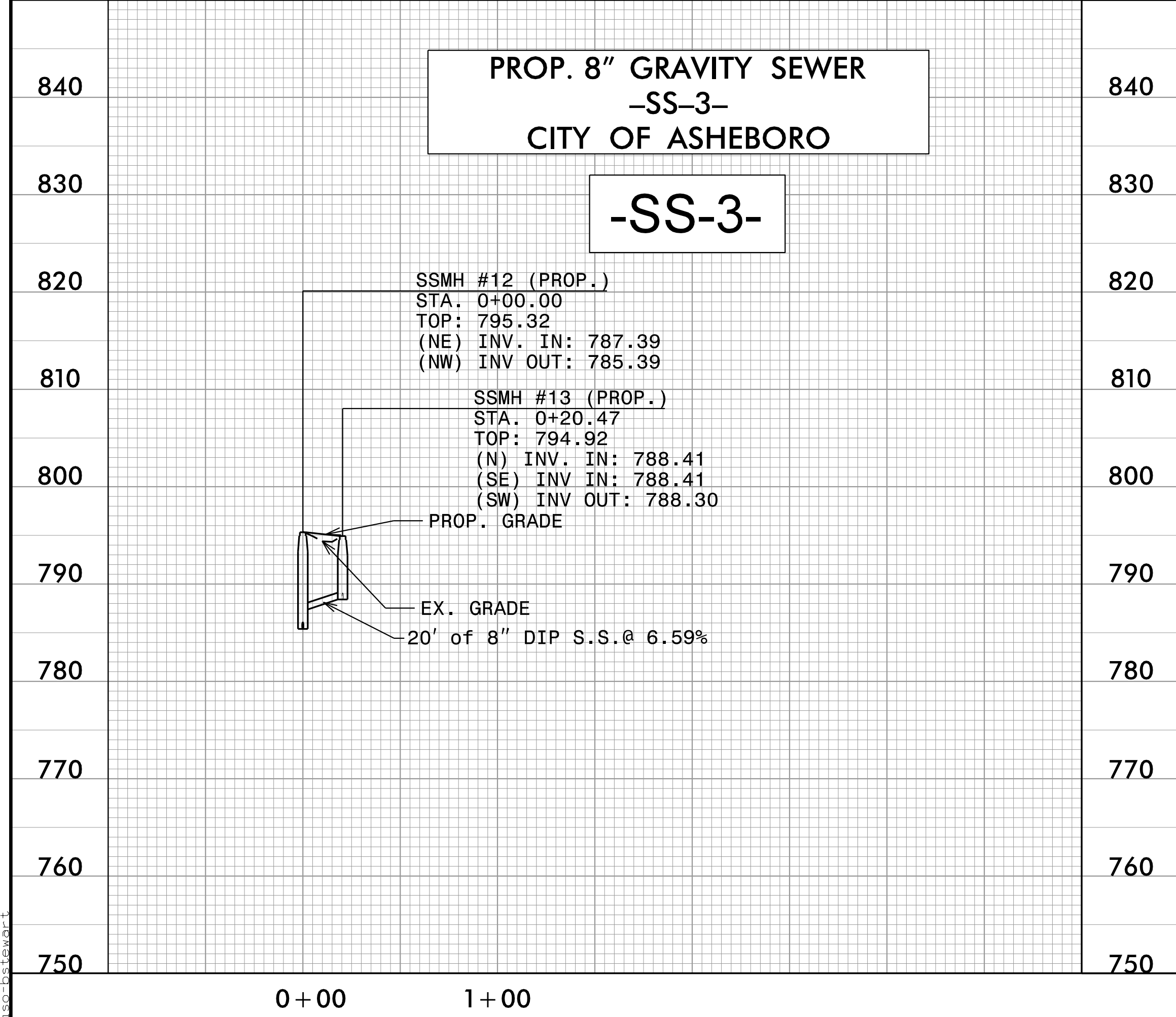
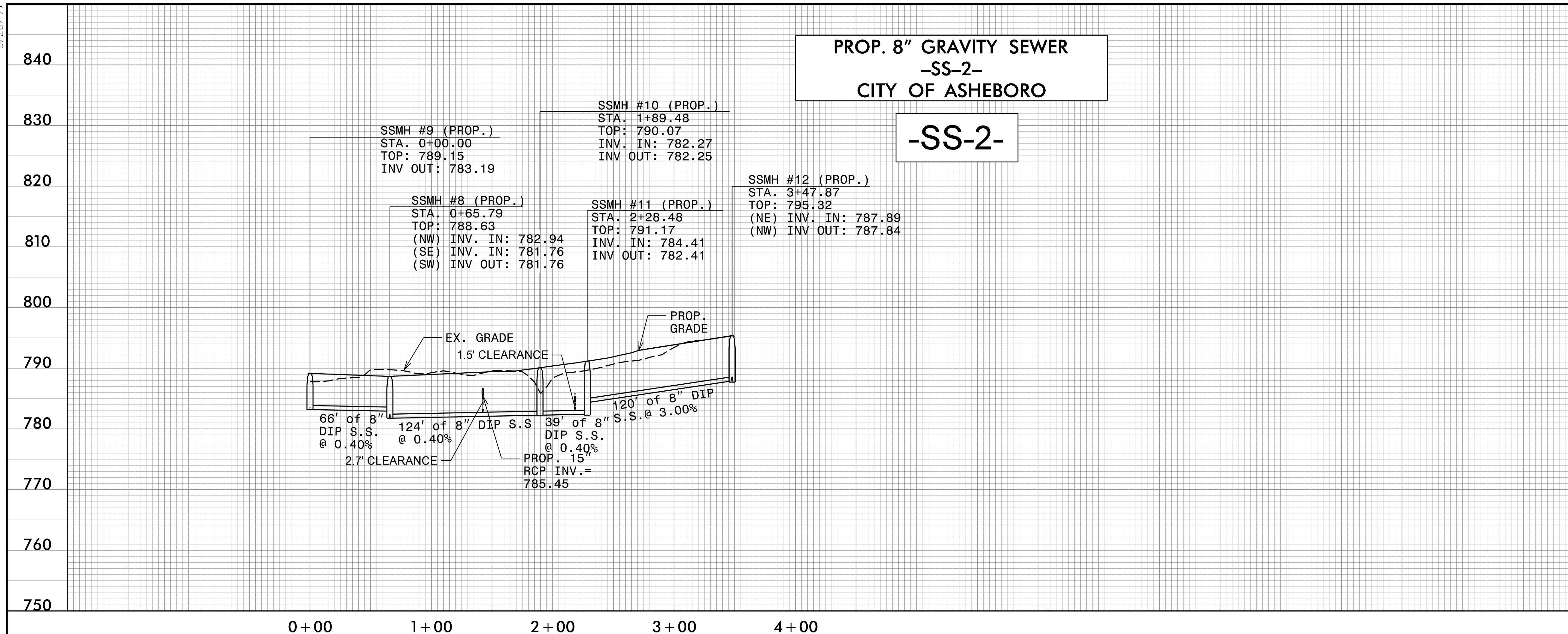
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REVISED:	02-Apr-2026
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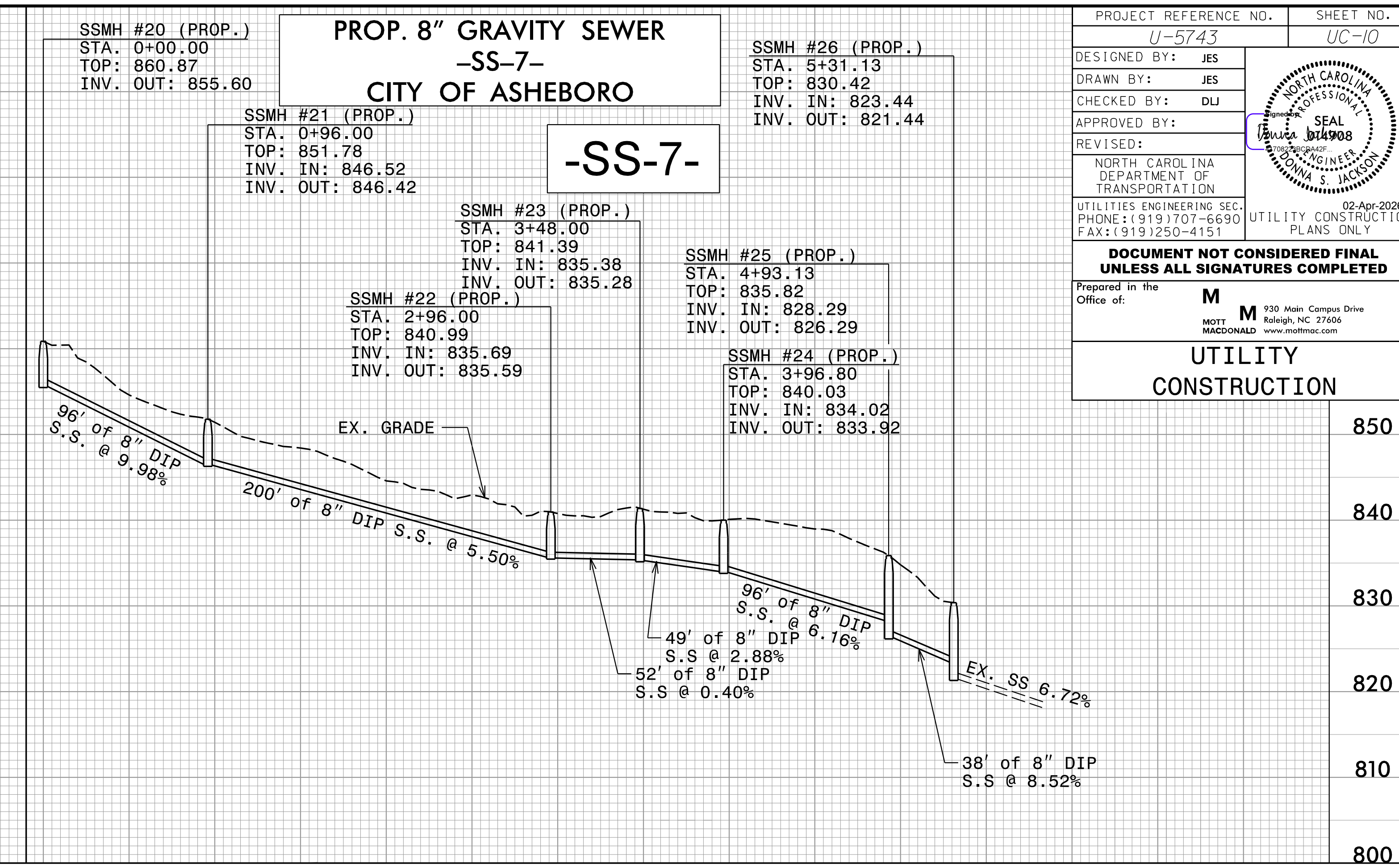
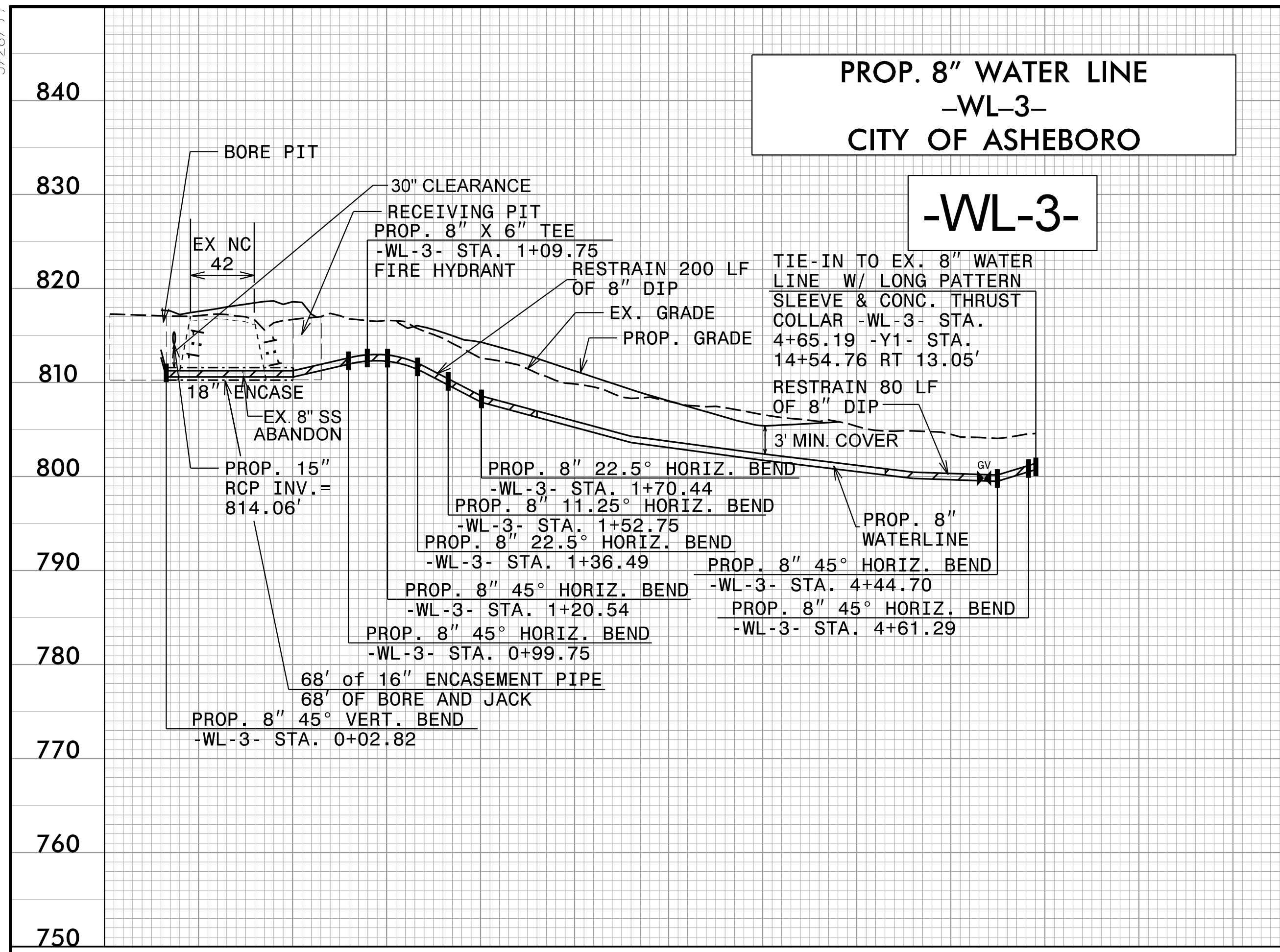
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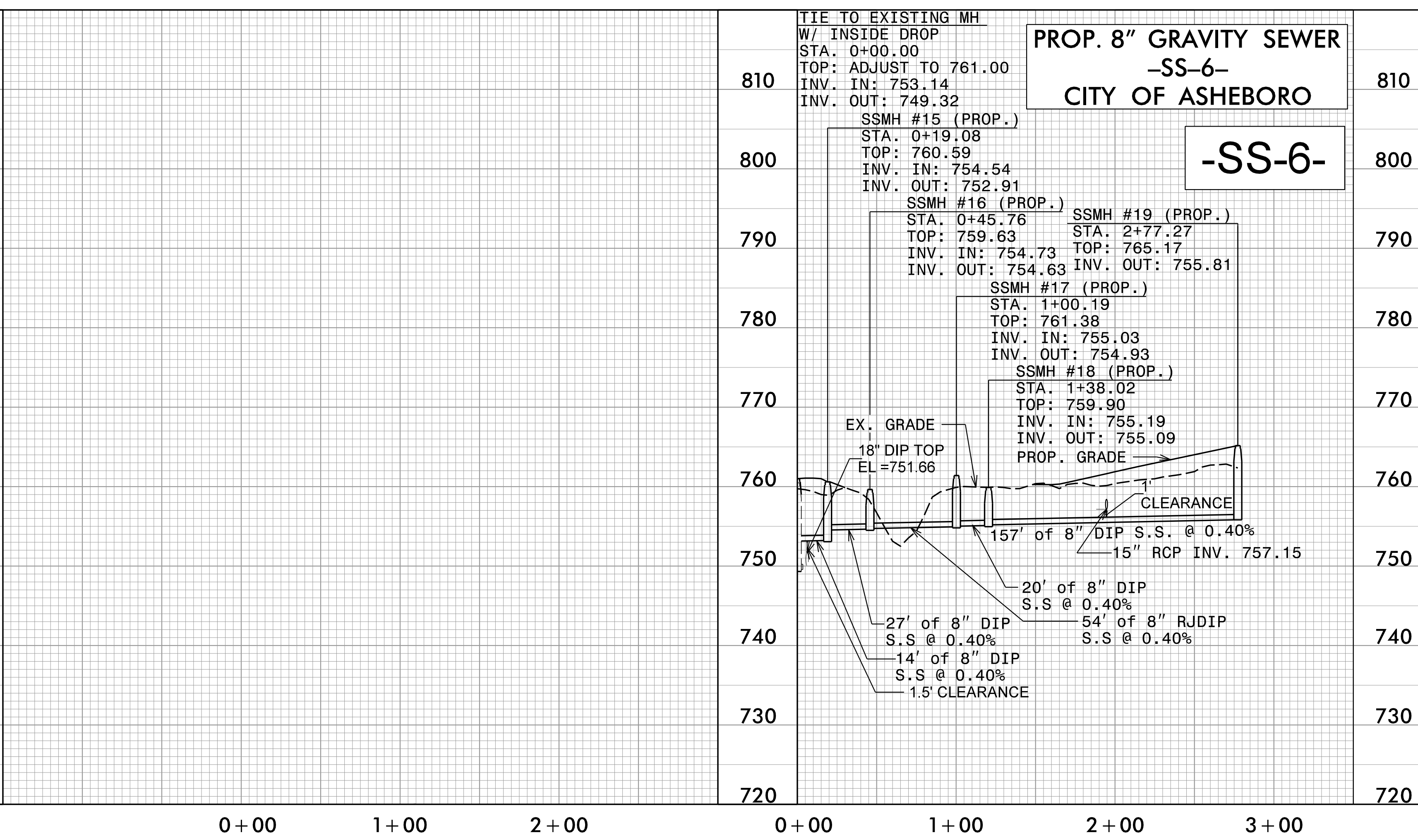
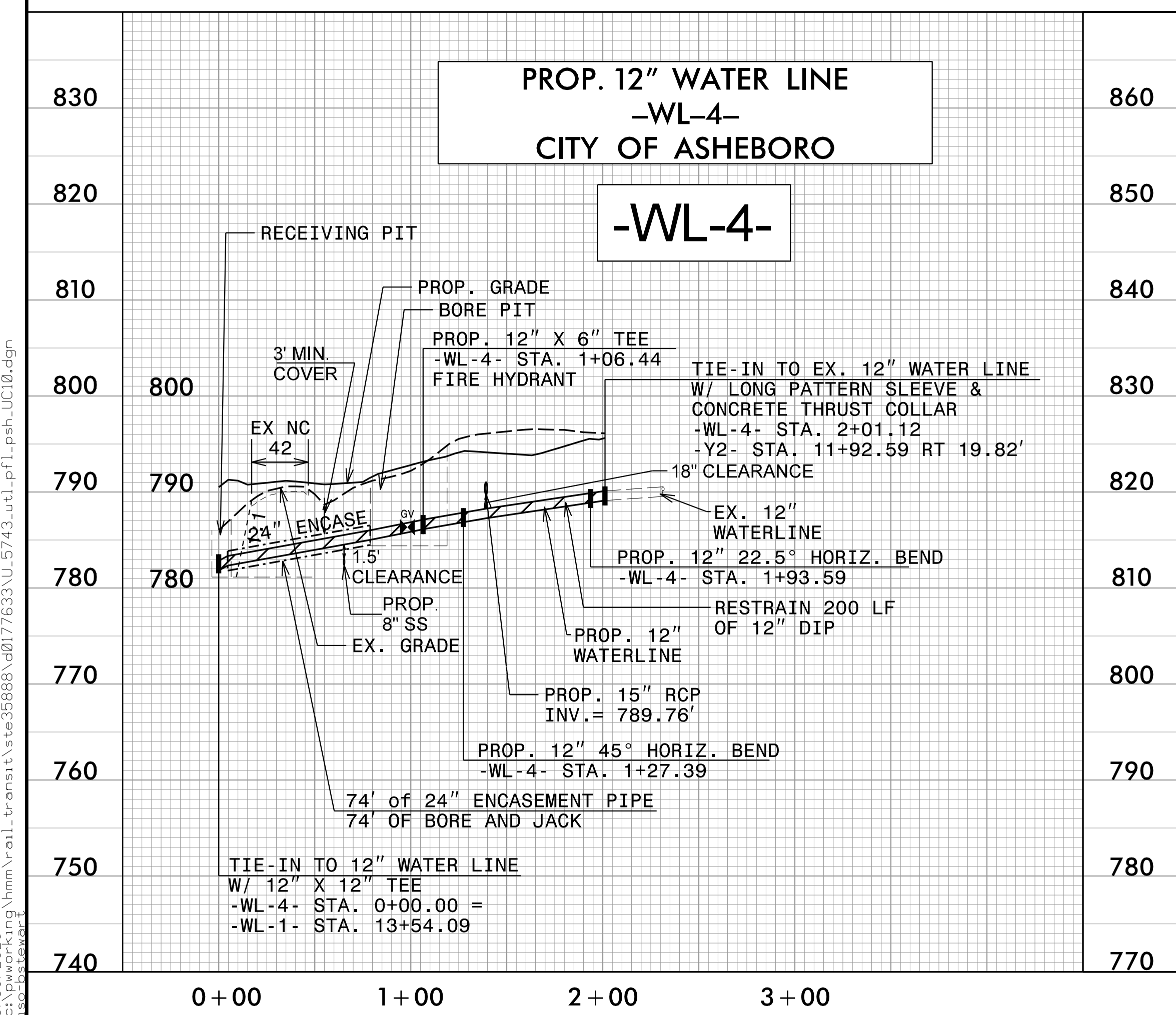


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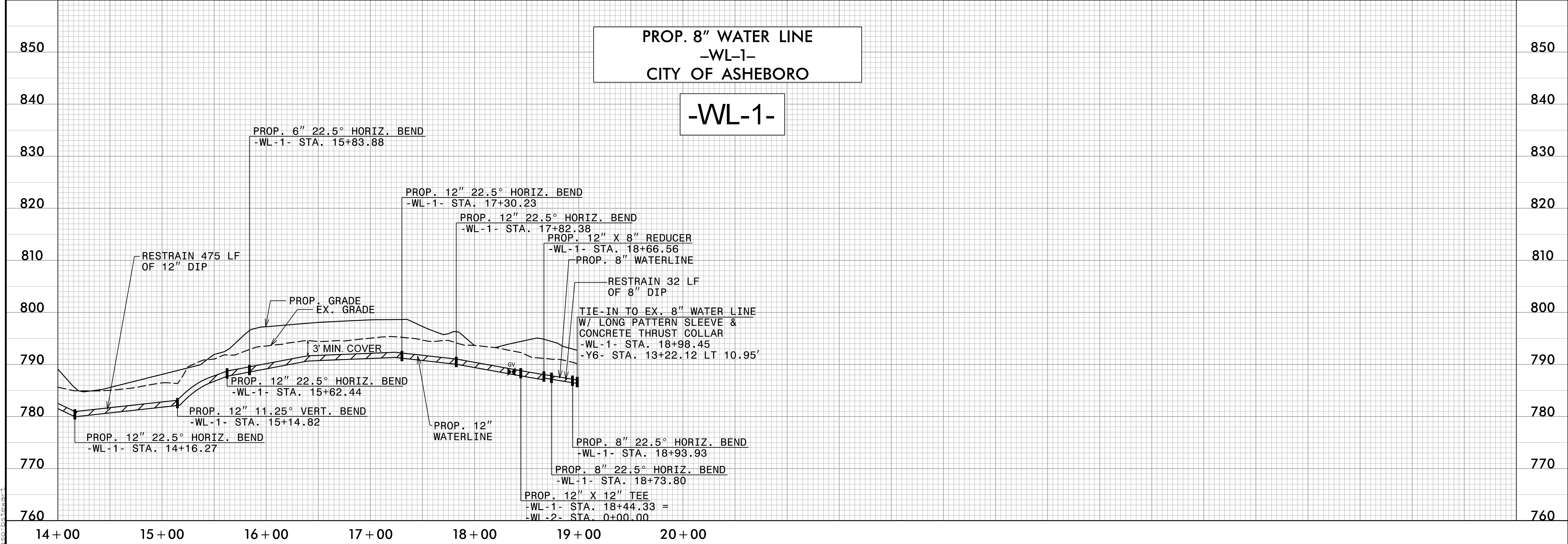
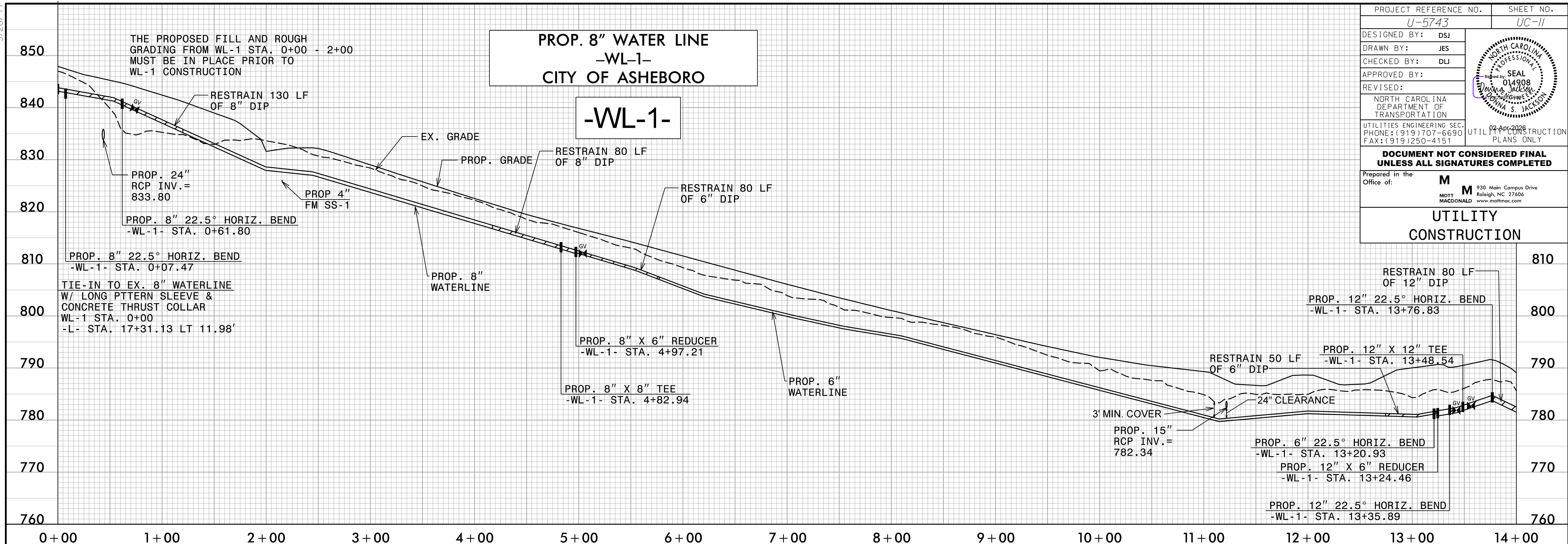
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CHECKED BY: DLJ	
APPROVED BY:	
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