

# TILDEN AVE., S. BRIDGE ST., COCHRAN RD. WATER DISTRIBUTION IMPROVEMENTS

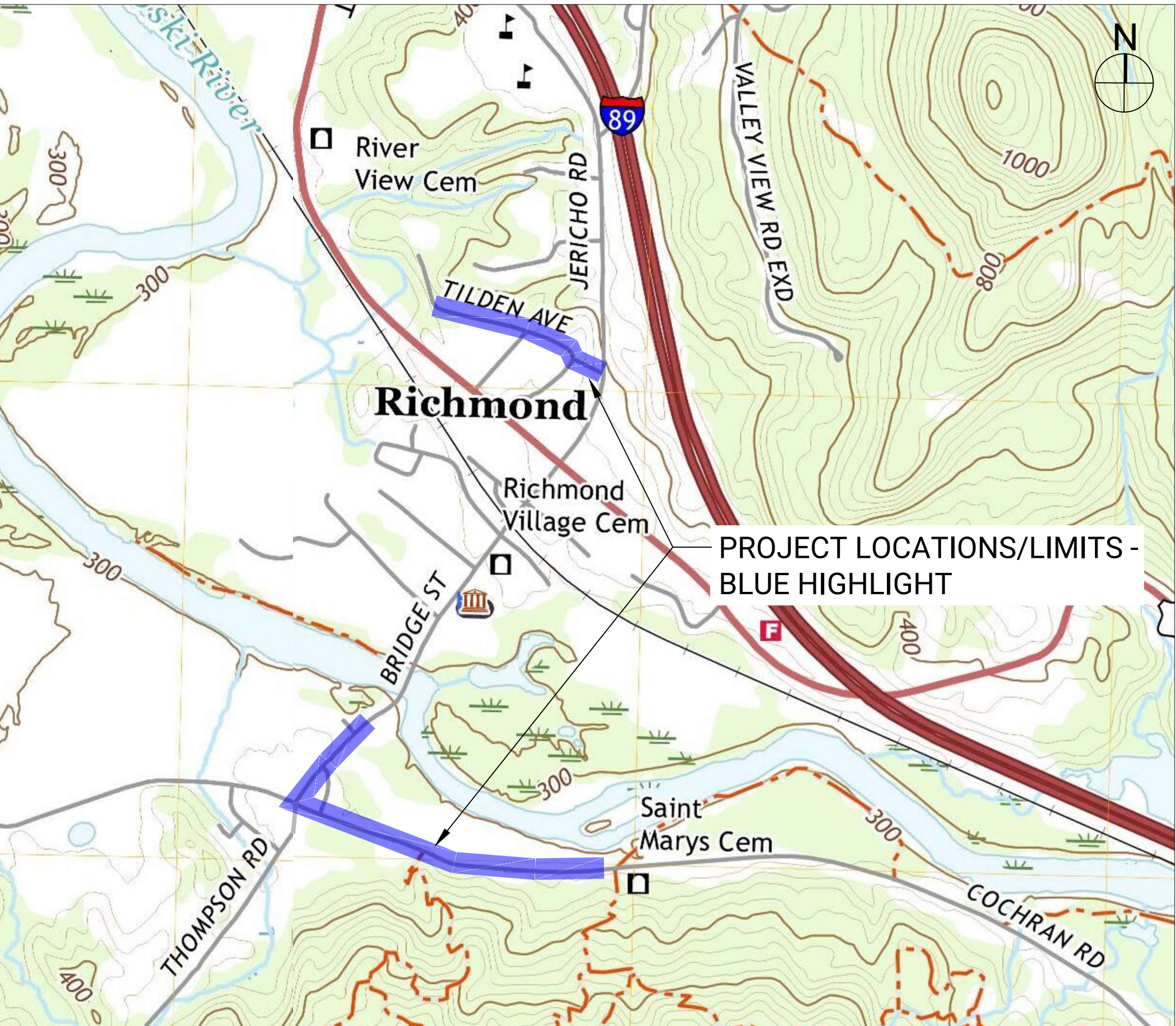
TOWN MANAGER  
JOSH ARNESON

SELECTBOARD  
DAVID SANDER, CHAIR  
LISA MILLER, VICE-CHAIR  
JAY FURR  
BARD HILL  
ADAM WOOD

WATER/SEWER COMMISSION  
MORGAN WOLAVER, CHAIR  
ERIN FARR, VICE-CHAIR  
BARD HILL  
JAY FURR  
LISA MILLER

## GENERAL & CONSTRUCTION NOTES

- TO CLARIFY THE PLANS, ALL EXISTING SITE FEATURES ARE SHOWN IN lowercase LETTERS AND ALL PROPOSED IMPROVEMENTS ARE SHOWN IN CAPITAL LETTERS.
- THIS PLAN SHOWS APPROXIMATE SITE FEATURES, UTILITIES, TAX MAP BOUNDARY LINES, BUILDINGS, AND OTHER SITE FEATURES BASED ON A SURVEY COMPLETED BY EAST ENGINEERING. ADDITIONAL DEPICTIONS ARE BASED ON INFORMATION FROM THE VERMONT GEODATA PORTAL, OWNER, AND UTILITY COMPANIES. THIS IS NOT A BOUNDARY SURVEY. WATER AND SEWER SERVICES ARE NOT SHOWN ON THE PLANS, HOWEVER, BOTH MUST BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.
- TECHNICAL SPECIFICATIONS ACCOMPANY THE PLANS AND ARE ESSENTIAL FOR CONSTRUCTION. UNLESS OTHERWISE NOTED, THE TOWN OF RICHMOND PUBLIC IMPROVEMENTS STANDARDS (2016) SHALL BE STRICTLY ADHERED TO.
- ALL TRAFFIC CONTROL EFFORTS SHALL MEET OR EXCEED MUTCD APPLICABLE STANDARDS. ONE LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING WORKING HOURS. TWO LANES OF TRAFFIC SHALL BE OPENED AT THE END OF EACH WORKING DAY. TRAFFIC ON BRIDGE STREET CANNOT BE REDUCED TO ONE LANE UNTIL 8:30 A.M. AND MUST BE RETURNED TO TWO LANES BY 4:00 P.M. ALL DRIVEWAYS SHALL MAINTAIN ACCESS AT ALL TIMES.
- JOBSITE SAFETY, SECURITY, MEANS/METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL OSHA/VOSHIA RULES AND REGULATIONS SHALL BE ADHERED TO AT ALL TIMES. AT THE END OF EACH WORKING DAY, ALL TRENCHES SHALL BE TEMPORARILY BACKFILLED OR PLATED.
- ALL DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, OR BETTER. THIS INCLUDES DRIVEWAYS, WALKWAYS, GARDENS, PLANTINGS/VEGETATION/FLOWERS, MAILBOXES, AND YARDS.
- ALL WORK, STORAGE, AND EQUIPMENT SHALL BE MAINTAINED IN THE TOWN ROAD RIGHT-OF-WAY, UNLESS OTHERWISE NOTED BY THE ENGINEER AND TOWN. IF THE CONTRACTOR REQUIRES ADDITIONAL SPACE, THEY MUST OBTAIN AT THEIR OWN COST.
- ALL WASTE ITEMS FROM CONSTRUCTION MUST BE LEGALLY DISPOSED OF - THIS INCLUDES ASBESTOS CEMENT PIPE SECTIONS THAT ARE REMOVED. ASBESTOS CEMENT DISPOSAL MUST ADHERE TO THE STATE OF VERMONT STANDARDS.
- CONTRACTOR IS REQUIRED TO MAINTAIN RECORD DRAWINGS. ALL WATERMAIN FITTINGS AND VALVES SHALL HAVE A MINIMUM OF THREE SWING TIES, CLEARLY MARKED AND MEASURED. AT THE END OF CONSTRUCTION HAND-WRITTEN RECORD DRAWINGS WILL BE GIVEN TO THE ENGINEER FOR DIGITIZING.
- UNFORESEEN SUBSURFACE CONDITIONS SHALL REPORTED TO THE ENGINEER IMMEDIATELY. ENGINEER WILL REVIEW AND PROVIDE DIRECTION TO CONTRACTOR.
- CONTRACTOR SHALL IMPLEMENT EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES IN THE DISTURBED AREAS. THIS INCLUDES CATCH BASIN INLET FILTER FABRIC ON ALL CATCH BASINS ADJACENT TO THE WORK AREA.
- NEW MAINS AND SERVICES SHALL HAVE ALL TESTING PROCEDURES PASSING (FLUSHING, PRESSURE/LEAKAGE, CHLORINATION, BACTERIOLOGICAL TESTING) PRIOR TO EXISTING WATER MAINS BEING DECOMMISSIONED. ALL WORK ON THE WATER DISTRIBUTION SYSTEM SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AND THE VERMONT WATER SUPPLY RULE.



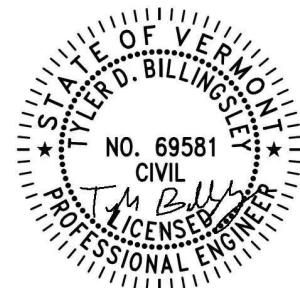
TOWN OF RICHMOND, VERMONT  
DECEMBER 2022

Sheet List Table	
Sheet	Sheet Title
G-1.0	TITLE PAGE
C-1.0	SITE PLAN/PROFILE - TILDEN AVE
C-1.1	SITE PLAN/PROFILE - TILDEN AVE
C-2.0	SITE PLAN/PROFILE - S. BRIDGE ST
C-3.0	SITE PLAN/PROFILE - COCHRAN RD (WEST)
C-3.1	SITE PLAN/PROFILE - COCHRAN RD (WEST)
C-3.2	SITE PLAN/PROFILE - COCHRAN RD (EAST)
C-4.0	DETAILS
C-4.1	DETAILS

EXISTING LEGEND :	
	underground telecom
	overhead wires
	water main
	curb stop (water shutoff)
	sewer main
	sewer manhole
	gas
	stormdrain
	catch basin
	utility pole
	fence/guardrail
	sign
	trees/vegetation
	shrub/bush
	conc. sidewalk/pavers
	mailbox
	road right-of-way / tax map
	elevation contour
PROPOSED LEGEND :	
	WATER MAIN
	VALVE
	NEW SERVICE W/ SIZE*
	HYDRANT
	EASEMENT
*EXACT LOCATION OF EXISTING CURB STOPS TO BE FIELD LOCATED BY CONTRACTOR. NEW CURB STOP TO BE LOCATED ADJACENT TO EXISTING*	

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PROJECT:  
TILDEN AVE, S. BRIDGE ST.,  
COCHRAN RD.  
WATER DISTRIBUTION  
IMPROVEMENTS

ISSUED FOR:  
BID & CONSTRUCTION

ISSUED DATE:  
2022-12-14

PROJ. #: 006-27

## REVISIONS

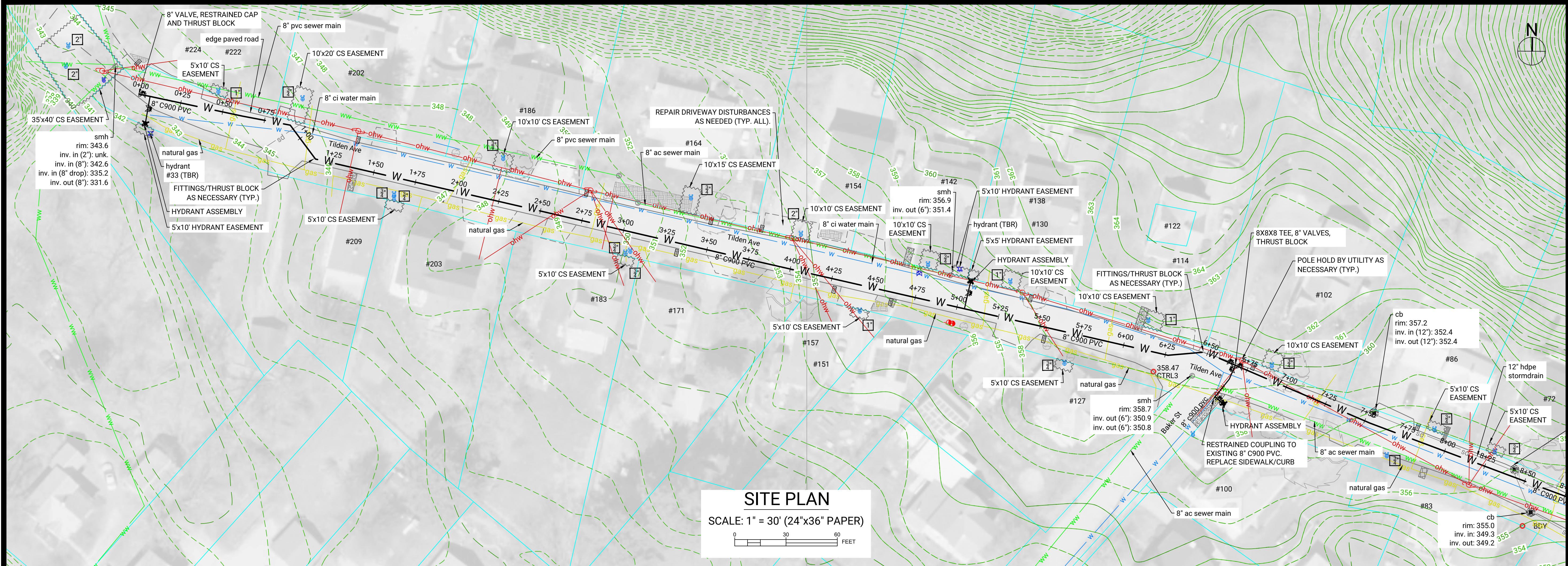
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1	TB	2025-02-04

TITLE SHEET

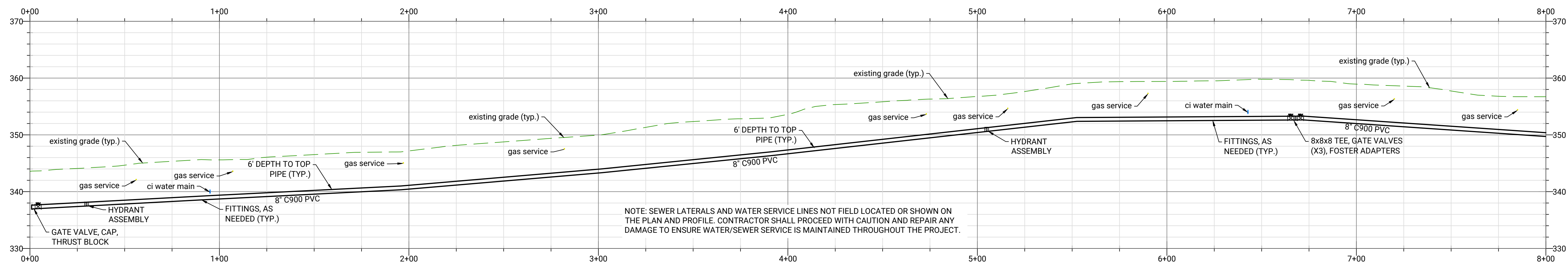
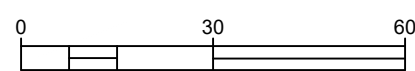
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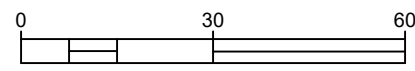




**SITE PLAN**  
SCALE: 1" = 30' (24"x36" PAPER)



**SITE PROFILE**  
HOR. SCALE: 1" = 30' (24"x36" PAPER)  
VERT. SCALE: 1" = 10' (24"x26" PAPER)



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JAMES B. BILLINGSLEY  
NO. 69581  
CIVIL  
LICENSED PROFESSIONAL ENGINEER

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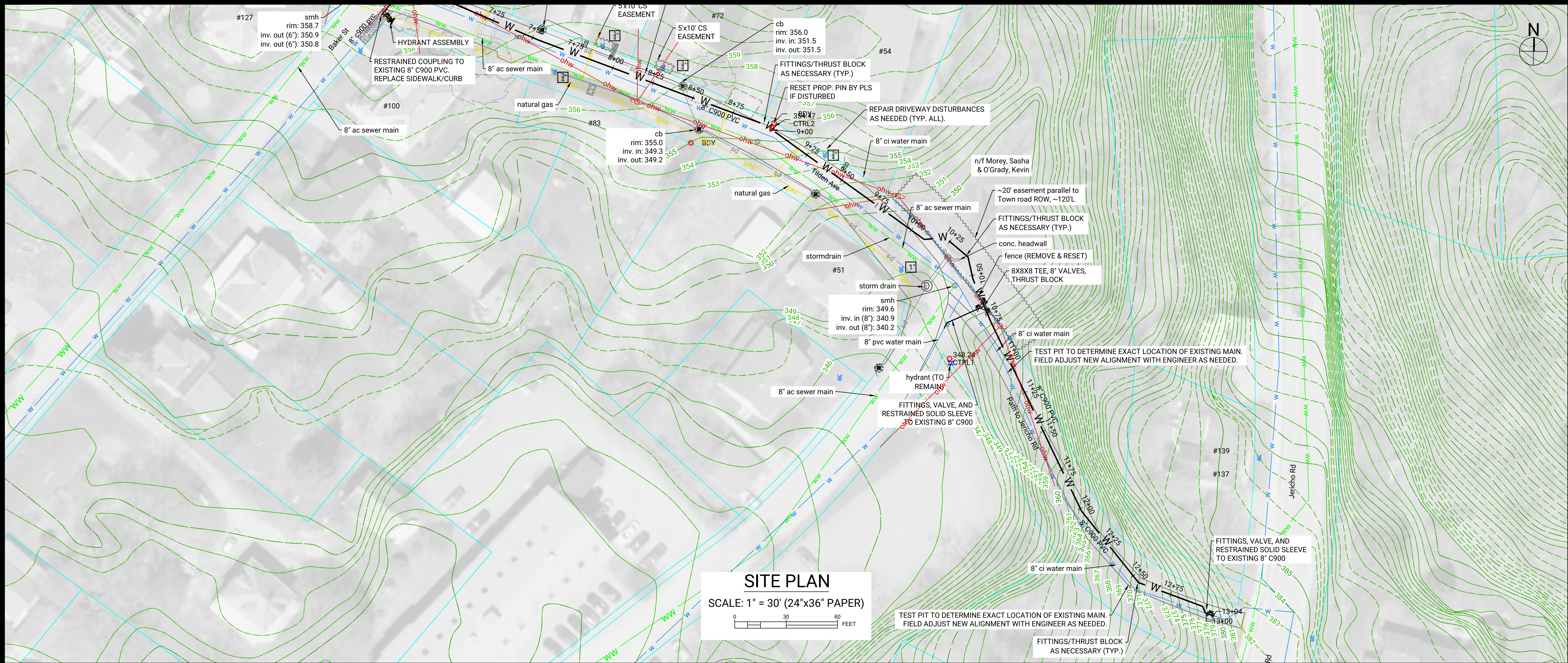
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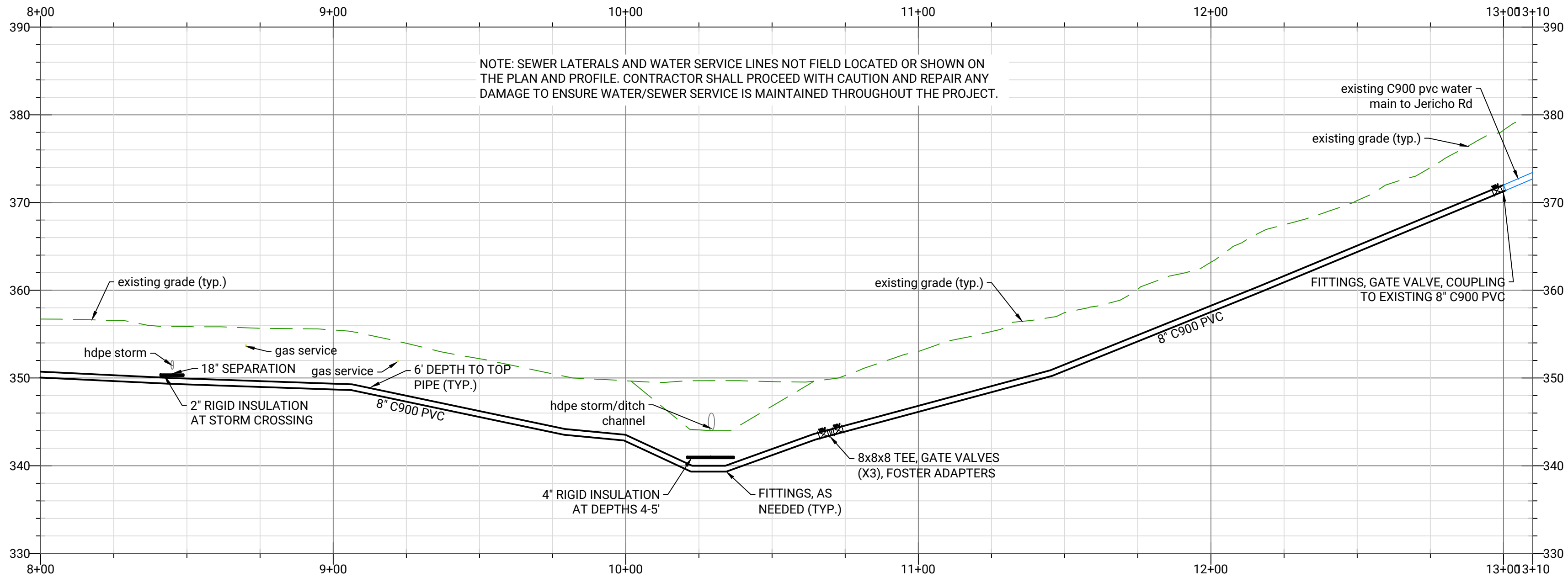
**TILDEN AVE. SITE PLAN AND PROFILE**

**DRAWING NO:**  
**C-1.0**





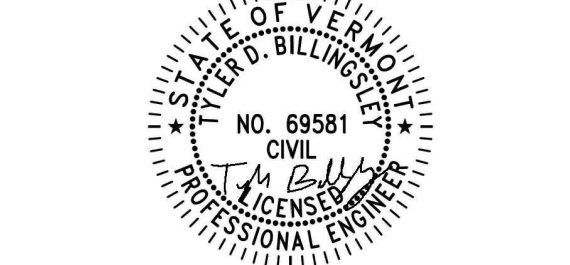
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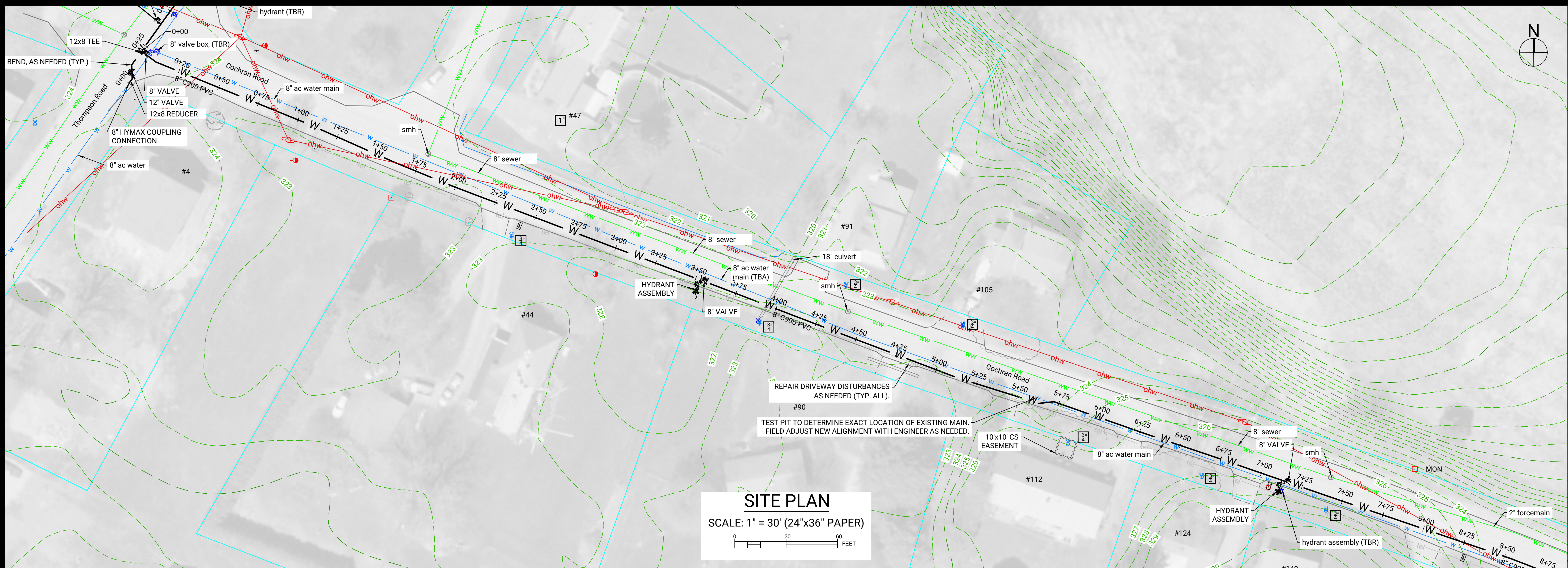
**TILDEN AVE. SITE PLAN AND PROFILE**

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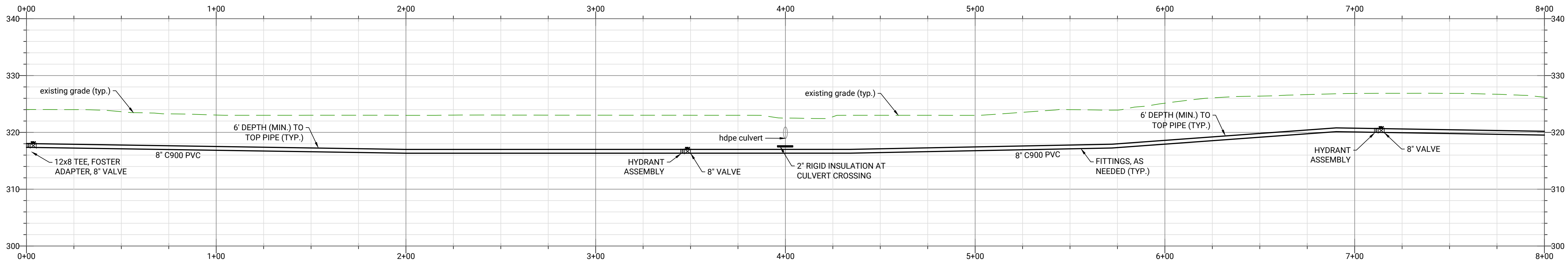






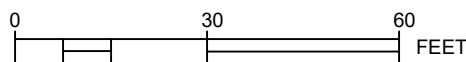


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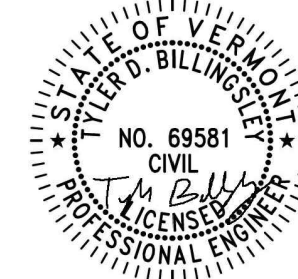
NOTE: SEWER LATERALS AND WATER SERVICE LINES NOT FIELD LOCATED OR SHOWN ON THE PLAN AND PROFILE. CONTRACTOR SHALL PROCEED WITH CAUTION AND REPAIR ANY DAMAGE TO ENSURE WATER/SEWER SERVICE IS MAINTAINED THROUGHOUT THE PROJECT.

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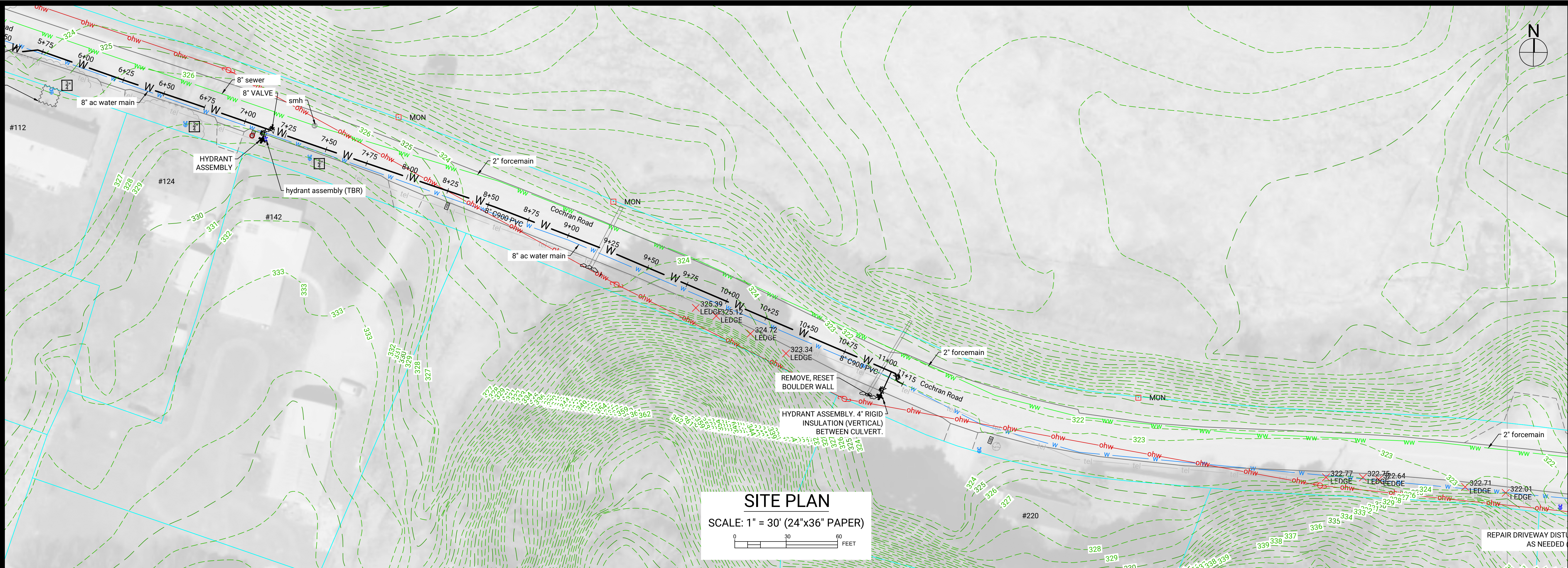
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**COCHRAN RD WEST**  
**SITE PLAN AND PROFILE**

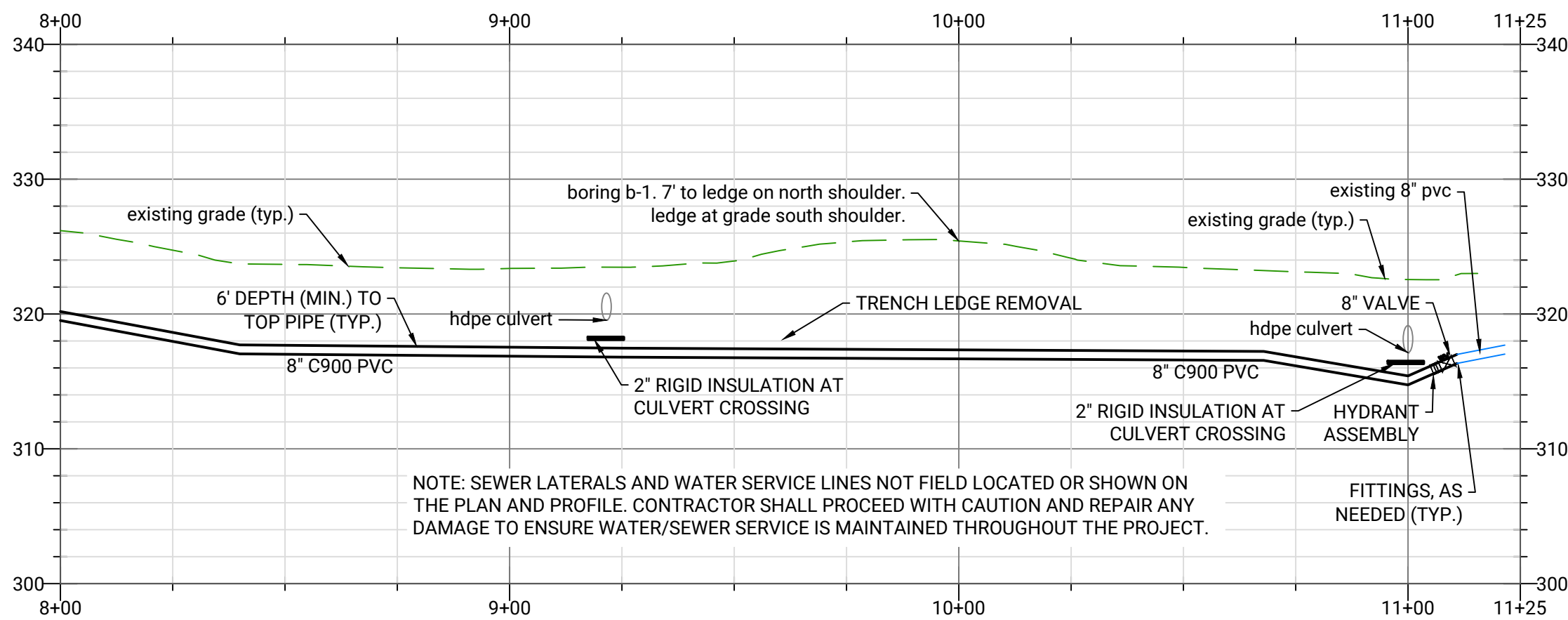
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**C-3.0**





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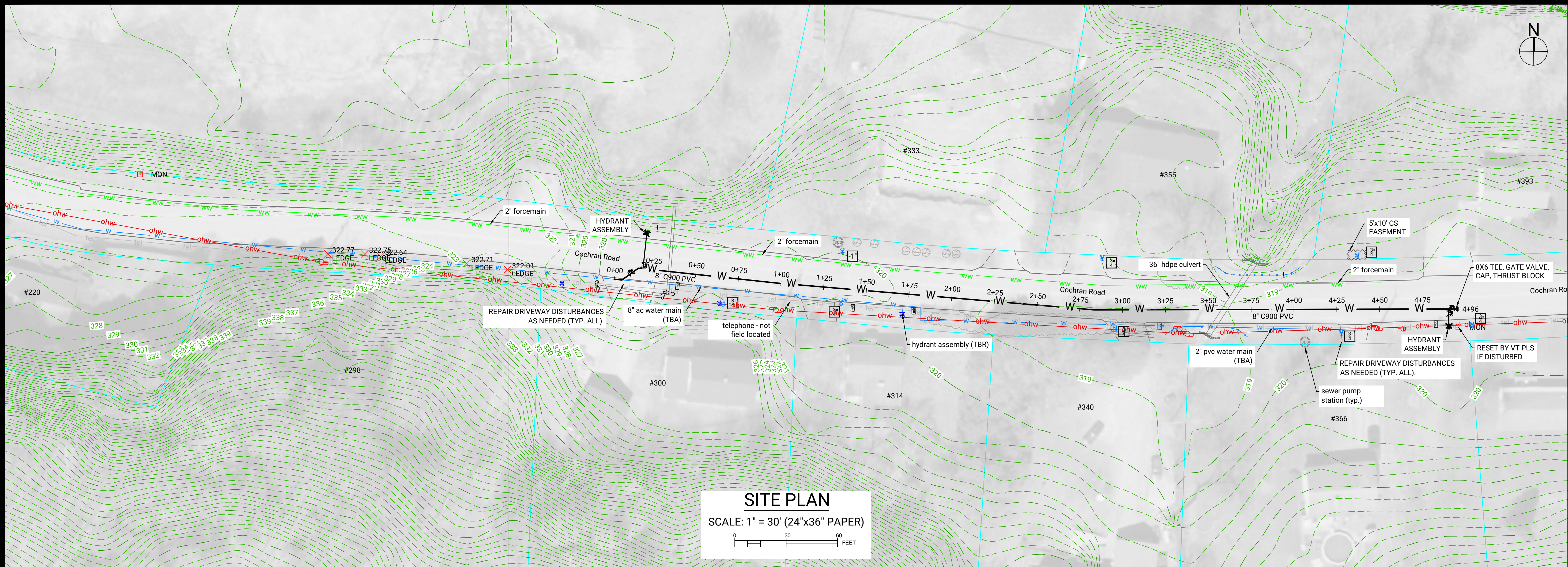
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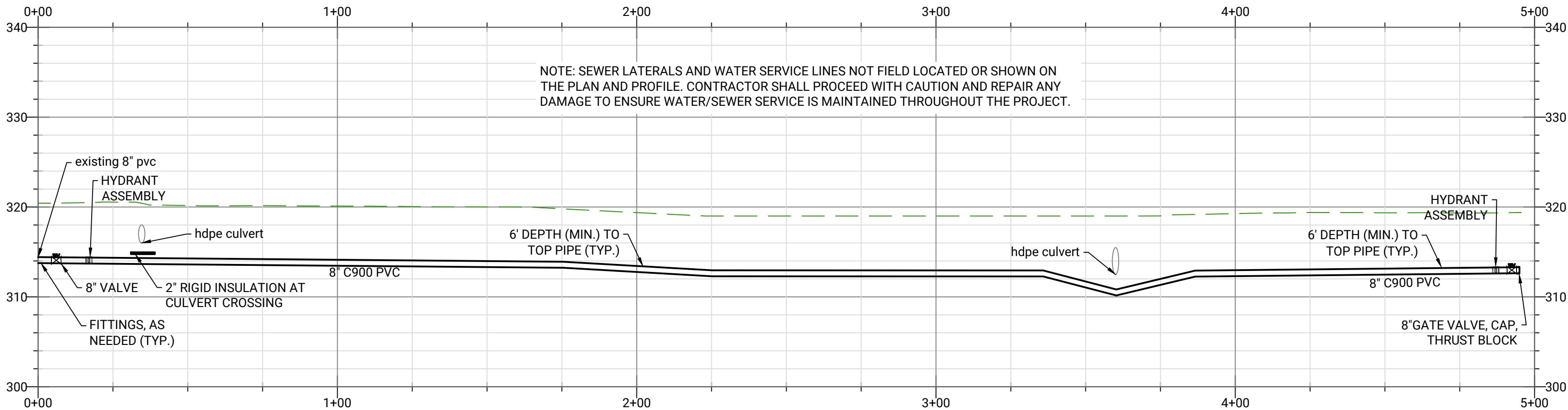
**COCHRAN RD WEST**  
**SITE PLAN AND PROFILE**

**DRAWING NO:**  
**C-3.1**





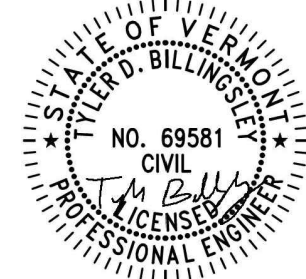
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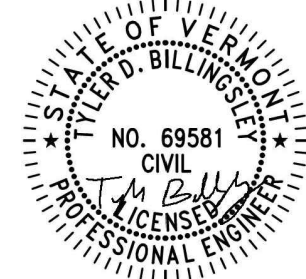
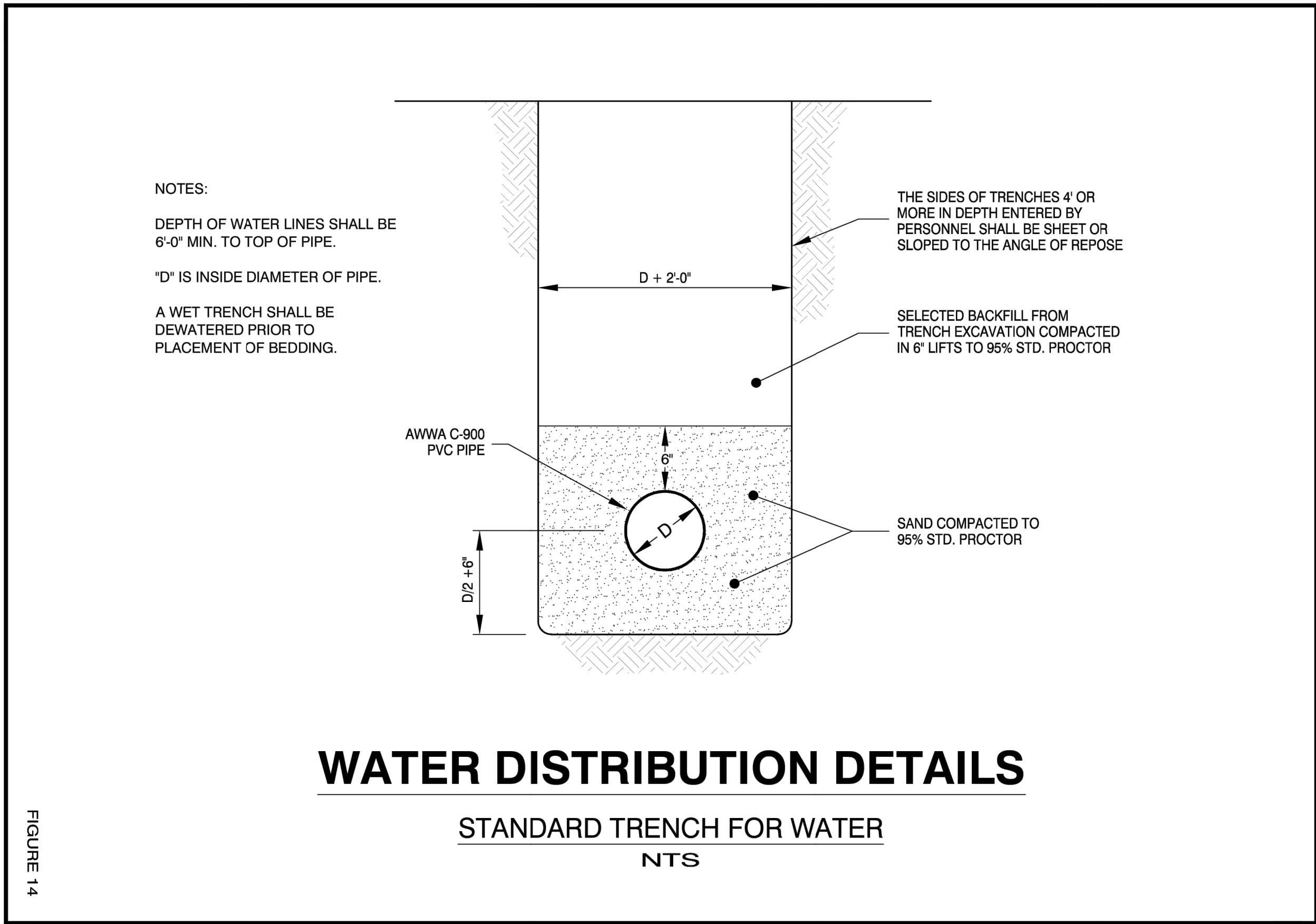
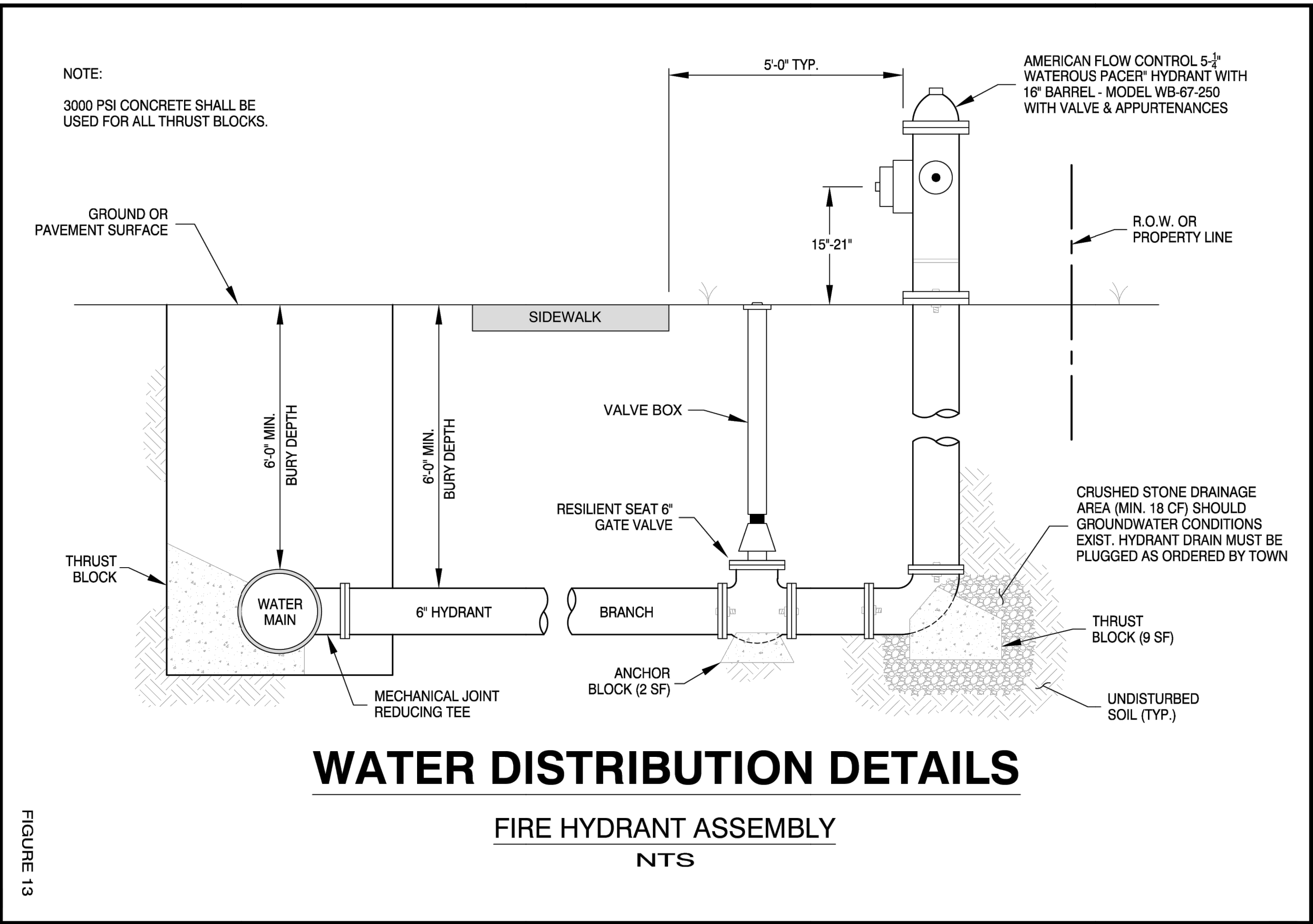
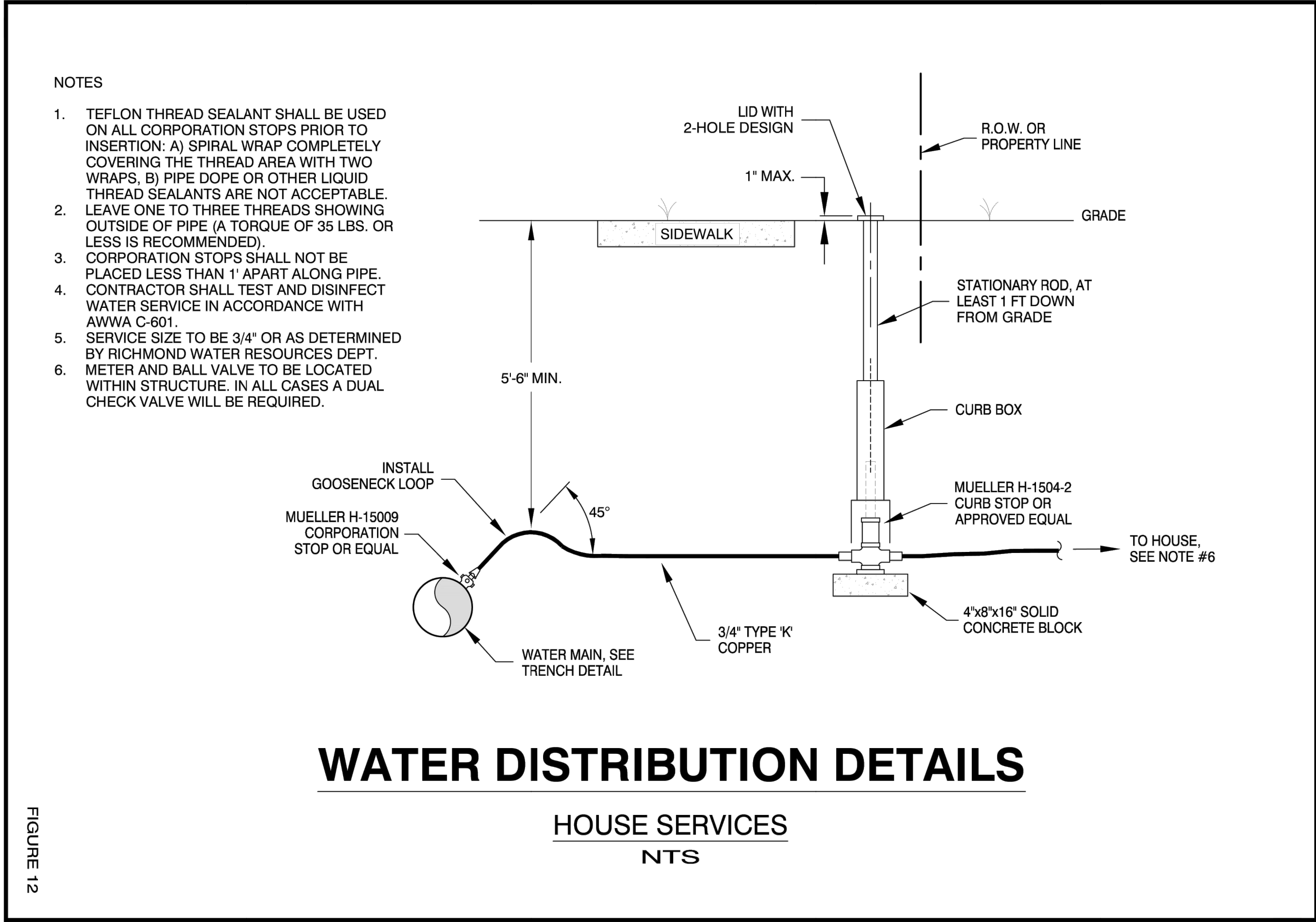
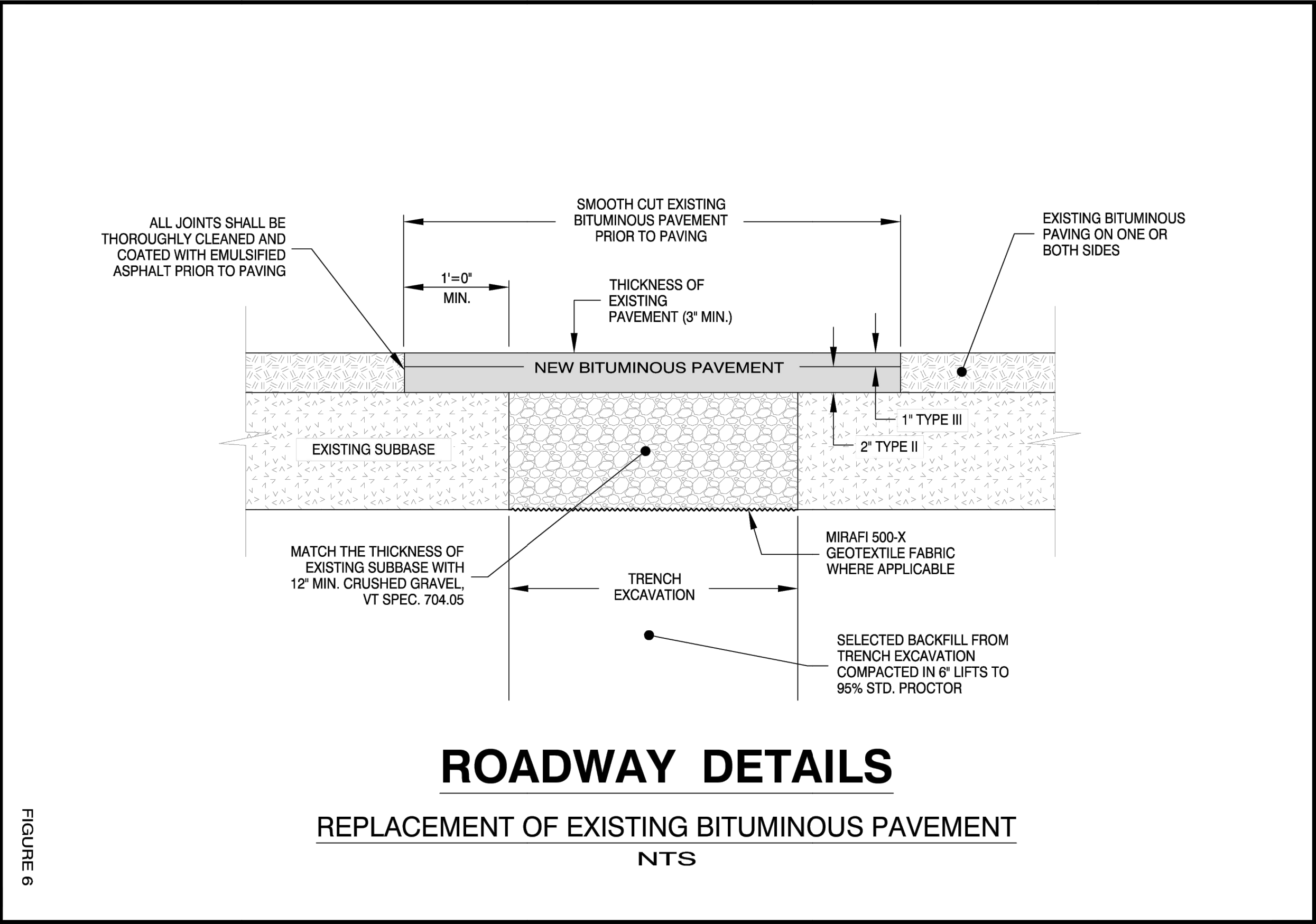
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**COCHRAN RD EAST**  
**SITE PLAN AND**  
**PROFILE**

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**C-3.2**





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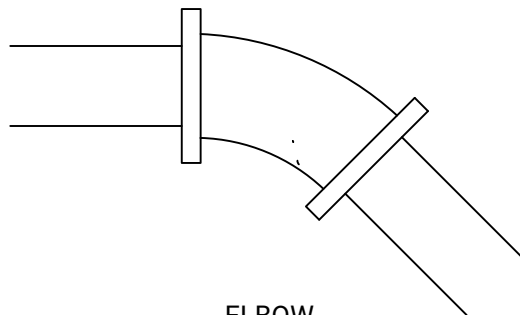
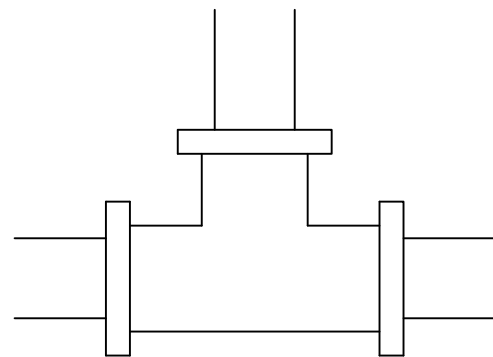
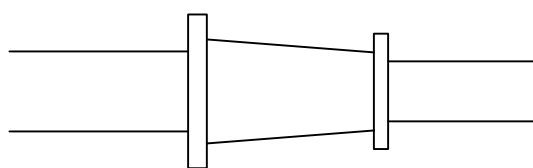
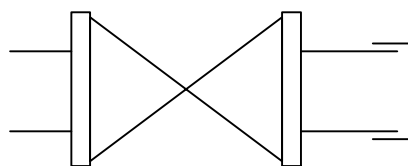
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**DETAILS**

**DRAWING NO:**

**C-4.0**



 <u>ELBOW</u>	ANGLE/DIA.	LENGTH OF JOINT RESTRAINT (MIN.)				
		4"	6"	8"	10"	12"
 <u>TEE</u>	22°	5	5	5	10	10
	45°	5	10	10	15	15
	90°	15	20	25	30	35
	NOTE:THESE LENGTHS ARE FOR HORIZONTAL AND UP-ELBOWS. FOR DOWN-TURNED ELBOWS, TRIPLE THE LENGTHS ABOVE.					
	SIZE	BRANCH (FEET)		RUN (FEET)		
	4" x 4"	15		10		
 <u>REDUCER</u>	6" x 4"	10		10		
	6" x 6"	30		10		
	8" x 4"	10		10		
	8" x 6"	25		10		
	8" x 8"	40		10		
	12" x 4"	10		10		
	12" x 6"	15		10		
	12" x 8"	35		10		
	12" x 10"	50		10		
	12" x 12"	65		10		
 <u>END OF LINE (CAP AND/OR VALVE)</u>	SIZE	LARGER DIA SIDE (FEET)				
	6" x 4"	20				
	8" x 4"	40				
	8" x 6"	25				
	10" x 4"	50				
	10" x 6"	40				
	10" x 8"	25				
	12" x 4"	65				
	12" x 6"	55				
	12" x 8"	40				
	12" x 10"	25				
	DIA	LENGTH OF JOINT RESTRAINT (MIN.)				
	3"	25				
	4"	30				
	6"	40				
	8"	55				
	10"	65				
	12"	75				

NOTE:  
1. LENGTHS ABOVE ARE BASED ON DIPRA CALCULATIONS IN GRANULAR SOILS AT 5'+ DEPTH. FOR SIZES/TYPES NOT LISTED ABOVE, CONSULT WITH THE ENGINEER.  
2. CONTRACTOR SHALL USE JOINT RESTRAINT IN CONJUNCTION WITH CONCRETE THRUST BLOCKS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

PIPE JOINT RESTRAINT DETAIL

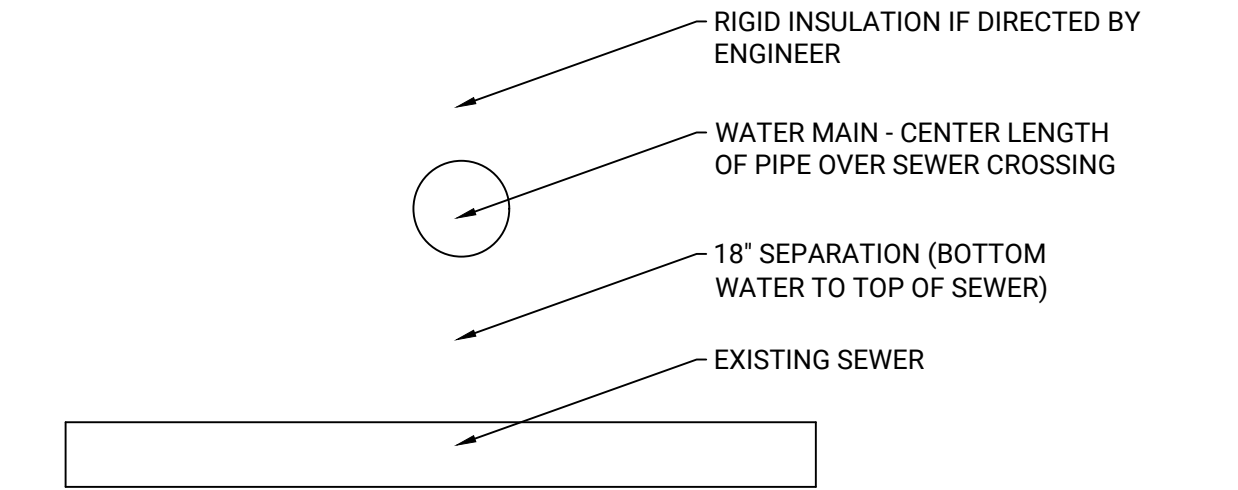
NOT TO SCALE

FITTING DIA.	WELL GRADED GRANULAR MATERIAL - SQUARE FOOTAGE OF BEARING	
22 ELBOW		
4 - 8	4	
10	4	
12	6	
45 ELBOW		
4 - 8	4	
10	6	
12	12	
90 ELBOW		
4 - 8	10	
10	15	
12	20	
TEE OR CAP		
4 - 8	8	
10	10	
12	15	
REDUCER		
8 X 6	6	
10 X 8	6	
12 X 8	12	
12 X 10	15	

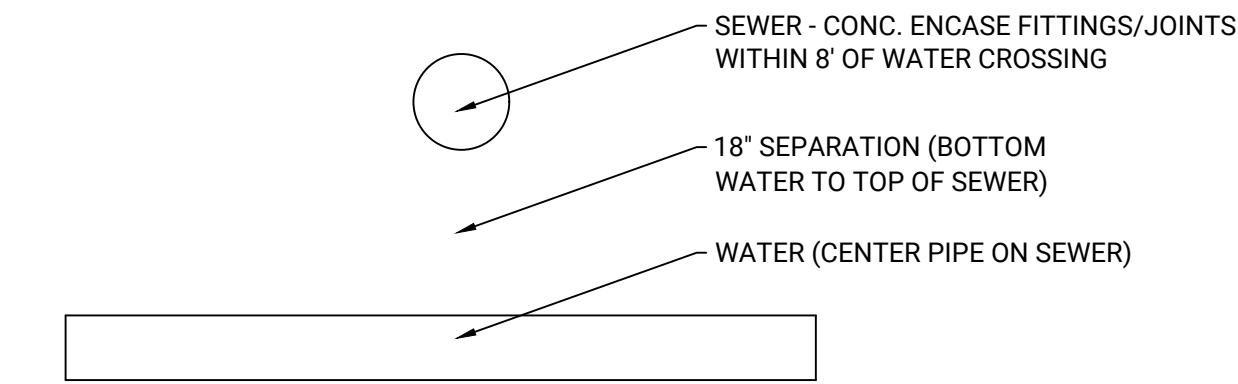
NOTES:  
1. FITTING SHALL BE WRAPPED IN POLY SHEETING. DO NOT COVER BOLTS WITH CONCRETE TO ALLOW FOR FUTURE REMOVAL.  
2. FOR TRENCH MATERIALS THAT ARE NOT LISTED IN THIS TABLE, CONSULT WITH ENGINEER FOR MIN. BEARING SQUARE FOOTAGE.  
3. PRECAST CONCRETE THRUST BLOCKS MAY BE UTILIZED, PENDING REVIEW FROM ENGINEER AND OWNER.

THRUST BLOCK DETAIL

NOT TO SCALE



PREFERRED CROSSING - WATER OVER SEWER

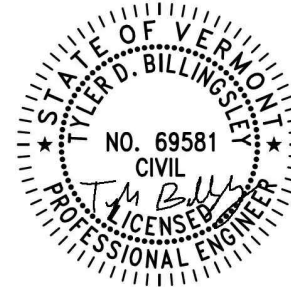


OPTIONAL CROSSING - SEWER OVER WATER

NOTES:  
1. HORIZONTAL SEPARATION BETWEEN SEWER AND WATER SHALL BE 10' MIN.  
HORIZONTAL SEPARATION BETWEEN STORM AND WATER SHALL BE 5' MIN.  
2. CONTRACTOR SHALL REVIEW CROSSINGS WITH ENGINEER PRIOR TO ANY DEVIATIONS FROM THIS DETAIL.

WATER/SEWER CROSSING DETAIL

NOT TO SCALE



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