

HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR

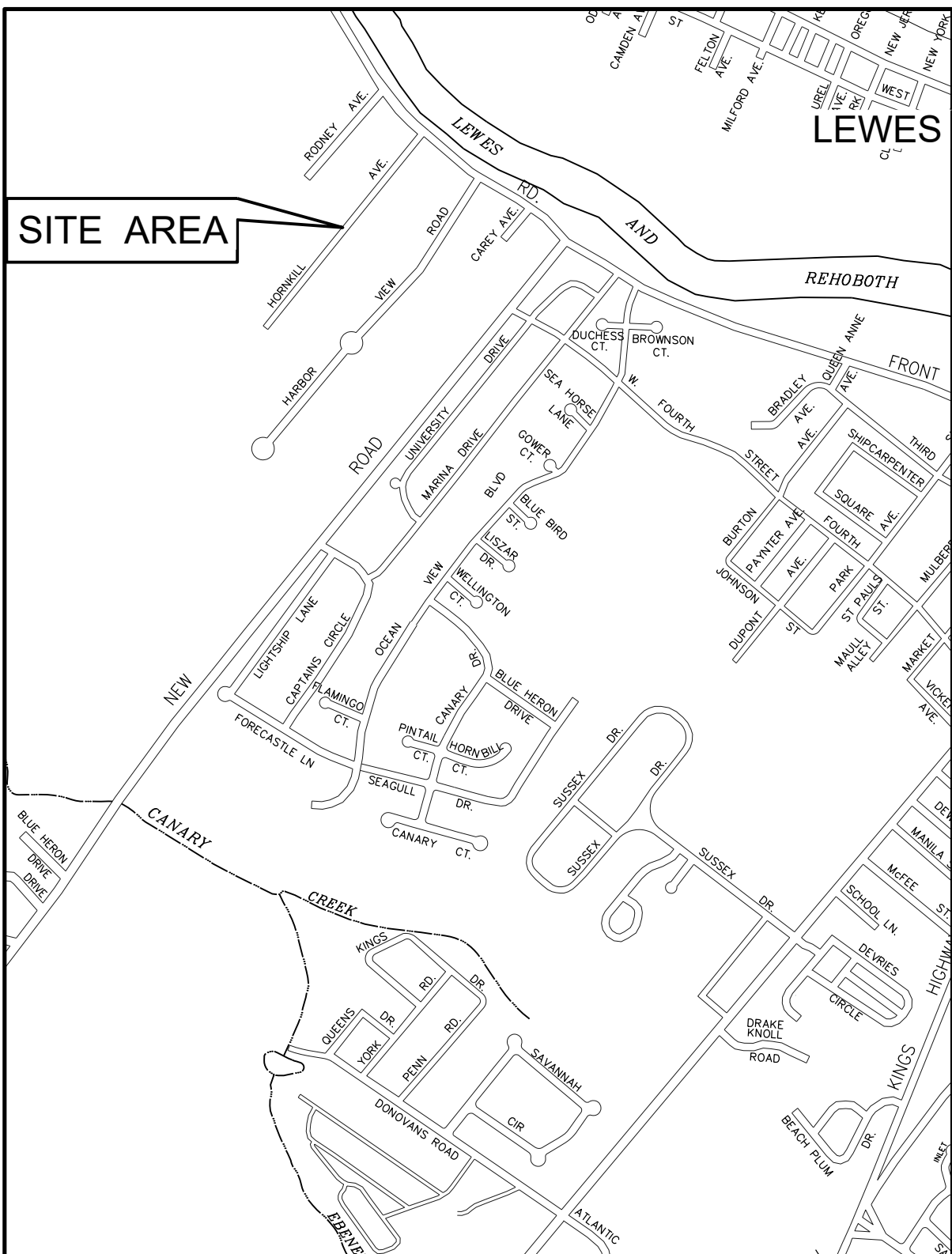
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



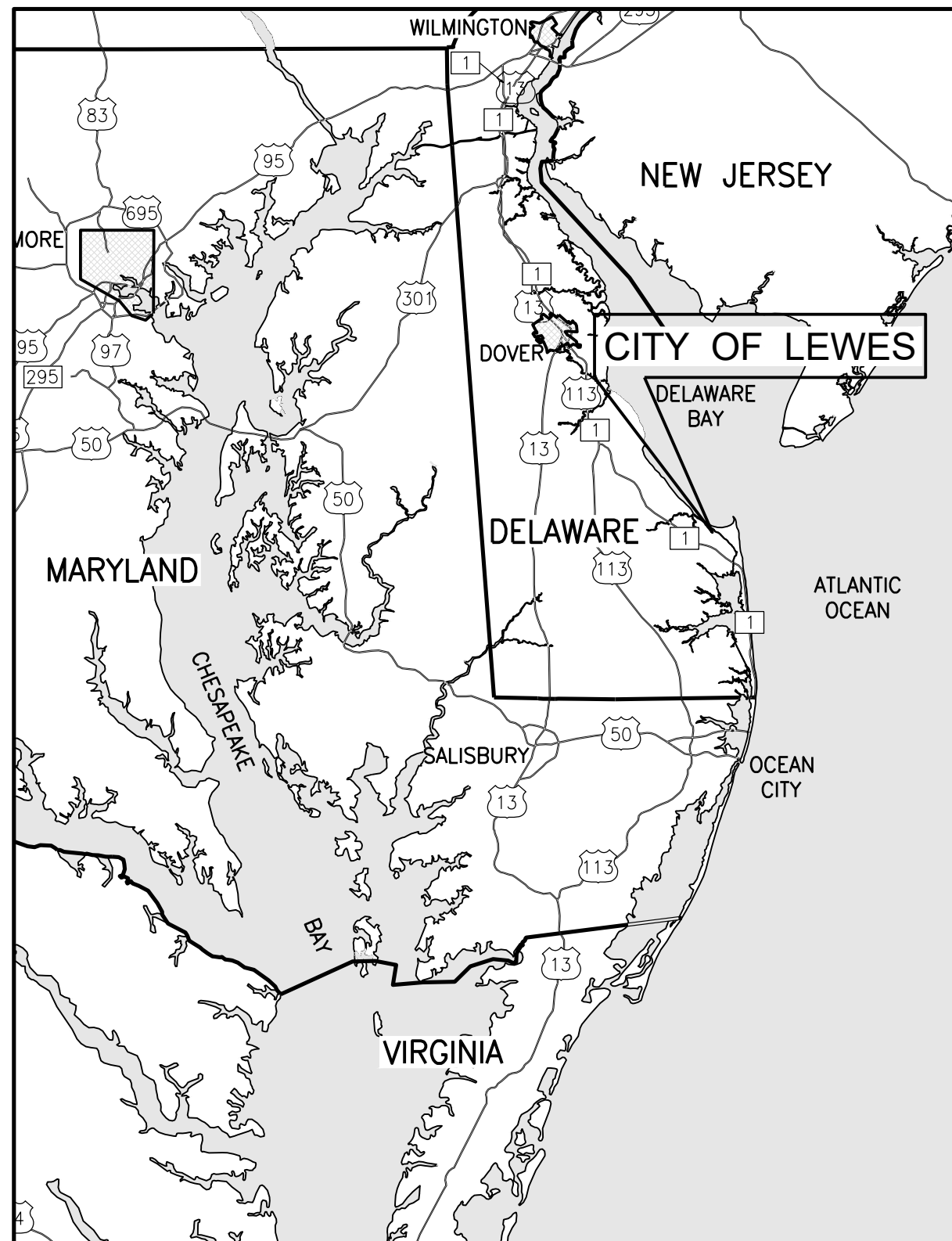
GMB FILE NO. 240226

GENERAL NOTES

1. DRAWINGS ARE BASED ON FIELD SURVEYS BY GEORGE, MILES & BUHR, LLC. CONSTRUCTION DURING MARCH, MAY, AND JUNE OF 2025. A SURVEY TO LOCATE ALL OF THE EXISTING FEATURES AROUND THE HOMES WAS NOT PERFORMED. HORIZONTAL CONTROL IS NAD83. VERTICAL CONTROL IS NAVD88.
2. PROPERTY AND RIGHT-OF-WAY LINES WERE DERIVED FROM SUSSEX COUNTY TAX MAPS, RECORDED LAND RECORDS, AND PROPERTY CORNERS FOUND AND ARE APPROXIMATE ONLY.
3. THE PROJECT SITE IS INSIDE THE 100 YEAR FLOOD ZONE AE WITH A BASE FLOOD ELEVATION OF 7 AND INSIDE ZONE X, AS SHOWN ON FEMA FIRM MAP NO. 10005C0193K, PANEL 193 OF 660, DATED MARCH 16, 2015.
4. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY LOCATION, SIZE AND INVERT OF EXISTING UTILITIES BEFORE BEGINNING ANY EXCAVATION OR PIPE LAYING TO GIVE TIMELY ADVANCE NOTICE TO ENGINEERS OF ANY CONFLICT BETWEEN EXISTING AND NEW WORK.
5. BEFORE ANY EXCAVATION IS PERFORMED, CONTRACTOR SHALL CALL "MISS UTILITY" (1-800-282-8555) AND CITY OF LEWES BOARD OF PUBLIC WORKS (302-645-6228) 48 HOURS PRIOR TO EXCAVATION TO HAVE UNDERGROUND UTILITIES LOCATED AND MARKED. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS PRIOR TO ANY EXCAVATION.
6. ALL EXISTING WATER MAINS, HYDRANTS AND SERVICE CONNECTIONS SHALL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION TO THE EXTENT POSSIBLE UNTIL NEW WATER SERVICES AND MAIN IS INSTALLED, TESTED, AND APPROVED FOR CUT-IN. ALL CUT-INS SHALL BE PERFORMED IN THE PRESENCE OF THE INSPECTOR OR HIS AUTHORIZED REPRESENTATIVE. NECESSARY INTERRUPTIONS IN SERVICE SHALL BE KEPT TO A MINIMUM, AND AFFECTED CUSTOMERS AND EMERGENCY SERVICES SHALL BE NOTIFIED BY THE CONTRACTOR NOT LESS THAN 24 HOURS PRIOR TO INTERRUPTION. HYDRANT RELOCATION SHALL BE ACCOMPLISHED EXPEDITIOUSLY IN ORDER TO MINIMIZE INTERRUPTION TO FIRE SERVICE. THE CONTRACTOR SHALL SEQUENCE DAILY CONSTRUCTION TO MAINTAIN WATER AND SEWER SERVICE TO EACH RESIDENT TO THE EXTENT POSSIBLE. KEEP OTHER EXISTING UTILITIES IN SERVICE TO THE EXTENT POSSIBLE.
7. THE FAILURE TO SHOW ON THE CONTRACT DOCUMENTS ANY EXISTING UTILITIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES OF DETERMINING THE LOCATION OF THESE UTILITIES. INTERRUPTION OF SERVICE SHALL BE REPAIRED BY THE CONTRACTOR ACCORDING TO THE CITY OR UTILITY COMPANY SPECIFICATIONS. THE CITY SHALL BE NOTIFIED OF ANY DAMAGE TO ANY UTILITIES.
8. PROVIDE A MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAINS OF 10'-0". UNLESS OTHERWISE INDICATED, ALLOW 18" VERTICAL SEPARATION ON PERPENDICULAR CROSSINGS. WHERE WATER MAINS CROSS SEWER MAIN OR SEWER SERVICE LATERALS, WITH LESS THAN 18" SEPARATION, CONCRETE ENCASE THE WATER MAIN A DISTANCE OF 10'-0" ON BOTH SIDES OF THE SEWER. WHERE MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED, THE OFFICE OF DRINKING WATER MUST SPECIFICALLY APPROVE ANY VARIANCE, SUPPORTED BY DATA FROM THE DESIGN ENGINEER. PROVIDE A MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SERVICES OF 5'-0".
9. WATER SERVICE CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE 1" DIA. SDR-9 POLYETHYLENE TUBING, AND PROVIDED TO EACH DWELLING ON HOORNKILL AVENUE WHETHER INDICATED ON THE PLANS OR NOT.
10. MINIMUM COVER FOR ALL WATER MAINS SHALL BE 3'-6".
11. CONTRACTOR SHALL EXTEND WATER MAIN BELOW ANY CONFLICTS OR OBSTRUCTIONS, TO PROVIDE REQUIRED CLEARANCES AND COVER. COST SHALL BE INCLUDED IN THE UNIT PRICES OF THE PROPOSAL.
12. WHERE CONNECTIONS OF NEW WATER MAIN AND WATER SERVICES, TO EXISTING MAINS ARE REQUIRED, CONTRACTOR SHALL DIG TEST PITS, PRIOR TO ANY CONSTRUCTION, TO VERIFY LOCATION, SIZE AND MATERIAL OF EXISTING MAINS AND TO ESTABLISH REQUIREMENT FOR SIZE AND TYPE OF NEW FITTINGS NECESSARY TO MAKE THE CONNECTIONS.
13. PROVIDE CONCRETE BUTTRESSES FOR ALL TEES, BENDS, AND PLUGS ON PROPOSED WATER MAINS PER DETAILS ON SHEET C3.1.
14. THE CONTRACTOR SHALL INSTALL TEMPORARY CONNECTIONS FOR PRESSURIZATION AT LOCATIONS AS NECESSARY FOR TESTING, DISINFECTION AND FLUSHING OF NEW WATER MAIN.
15. CONTRACTOR SHALL ADJUST TO FINISHED GRADE AS REQUIRED, ANY VALVE BOXES, MANHOLES, ETC. PRIOR TO RESURFACING THE STREET.
16. CONTRACTOR SHALL INSTALL 6" DIA. PVC LATERALS, INCLUDING ALL NECESSARY FITTINGS AND ADAPTERS BETWEEN CLEANOUT AND DWELLINGS.
17. CUTTING OF EXISTING SEWER LATERALS SHALL BE AVOIDED.
18. CONTRACTOR SHALL EXCAVATE ALL TRENCHES IN ADVANCE OF PIPE LAYING SO WATER PIPE DEPTH AND LENGTH CAN BE ADJUSTED.
19. THE CONTRACTOR MAY REALIGN THE PROPOSED WATER AND SEWER SERVICES IN ORDER TO MINIMIZE DISTURBANCE OF PAVED DRIVEWAYS, TREES, SHRUBS AND HOMEOWNER-OWNED IMPROVEMENTS. THE CONTRACTOR SHALL REPAIR OR REPLACE IN-KIND ANY EXISTING FEATURES DAMAGED OR DESTROYED DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ACCESS TO HOME'S CRAWLSPACE TO A CONDITION EQUAL TO OR BETTER THAN THAT FOUND. ALL DEVIATIONS FROM THE PLANS MUST BE APPROVED BY THE ENGINEER.
20. WATER AND SANITARY SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH LEWES B.P.W. STANDARDS AND SPECIFICATIONS AND DETAILS.
21. THE CONTRACTOR SHALL REPAIR OR REPLACE IN-KIND ANY EXISTING FEATURES DAMAGED OR DESTROYED DURING CONSTRUCTION.
22. ANY DISTURBED AREAS OUTSIDE THE RIGHT-OF-WAY SHALL BE RESTORED TO THEIR ORIGINAL CONDITION IMMEDIATELY.
23. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY RELOCATE/RESET/RECONSTRUCT ALL FENCES, SIGNS, PLANTERS, HOUSE LAMPS, STREET SIGNS, DRIVEWAYS, PARKING LOTS, AND ANY OTHER TYPE OF OBSTRUCTIONS WHETHER NATURAL OR MANMADE, ETC. WHENEVER REQUIRED AS DIRECTED BY THE ENGINEER.
24. THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING DRIVEWAYS, PARKING LOTS AND OTHER ENTRANCES AT ALL TIMES.
25. ALL BACKFILLED AND DISTURBED AREAS ARE TO BE SEEDDED AND MULCHED, WITH 4" MINIMUM OF TOPSOIL TO BE PLACED IN FILL AREAS. REFER TO THE NOTES AND DETAILS ON SHEETS C8.6 FOR VEGETATIVE STABILIZATION.
26. UTILITY TRENCHES WITHIN THE ROAD RIGHT-OF-WAYS SHALL BE RESTORED USING THE DETAILS SHOWN ON SHEET C3.3.
27. NO GREATER THAN 1.0 ACRE WILL BE DISTURBED AT ANY ONE TIME THROUGHOUT THE COURSE OF CONSTRUCTION.
28. NO WORK WILL BE ALLOWED BETWEEN 5:00 PM AND 7:00 AM.
29. CONTRACTOR SHALL PROVIDE ALL NECESSARY STAKEOUT OF LINE AND GRADE FOR ALL CONSTRUCTION.
30. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL PERMITS SECURED WHICH TAKE PRECEDENCE OVER SPECIFICATIONS.
31. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT, LATEST EDITION, AND ALL RULES AND REGULATIONS THERETO.
32. TRAFFIC CONTROL SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES. THE COST OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE PRICES BID.



VICINITY MAP
SCALE: 1" = 1000'



LOCATION MAP

SCALE: 1" = 20 MILES

DRAWING LIST

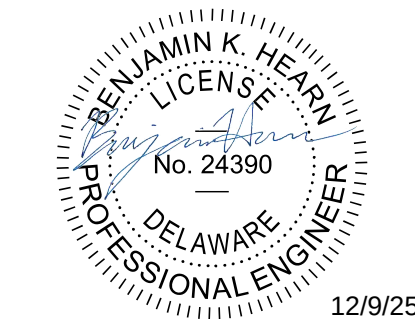
C1.0	COVER SHEET
C1.0	KEY PLAN
C1.1–C1.3	EXISTING CONDITIONS AND DEMOLITION PLANS
C2.1–C2.3	UTILITY PLANS
C3.1	WATER MAIN DETAILS
C3.2	WATER SERVICE AND SEWER MAIN DETAILS
C3.3	SEWER LATERAL AND TRENCH RESTORATION DETAILS
C4.1–C4.3	SEWER MAIN PROFILES
C5.1–C5.2	WATER MAIN PROFILES
C6.1	PUMP STATION SITE PLAN AND DETAILS
E–0.1	LEGEND – ELECTRICAL
E–1.0	SITE AND ENLARGED PLAN – ELECTRICAL
E–5.0	DETAIL AND SCHEDULES – ELECTRICAL
E–6.0	SINGLE LINE AND INTERCONNECT DIAGRAM – ELECTRICAL
C8.1–8.3	EROSION AND SEDIMENT CONTROL PLANS
C8.4–C8.6	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C9.1–C9.4	ROAD GRADING PLAN AND PROFILE

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HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

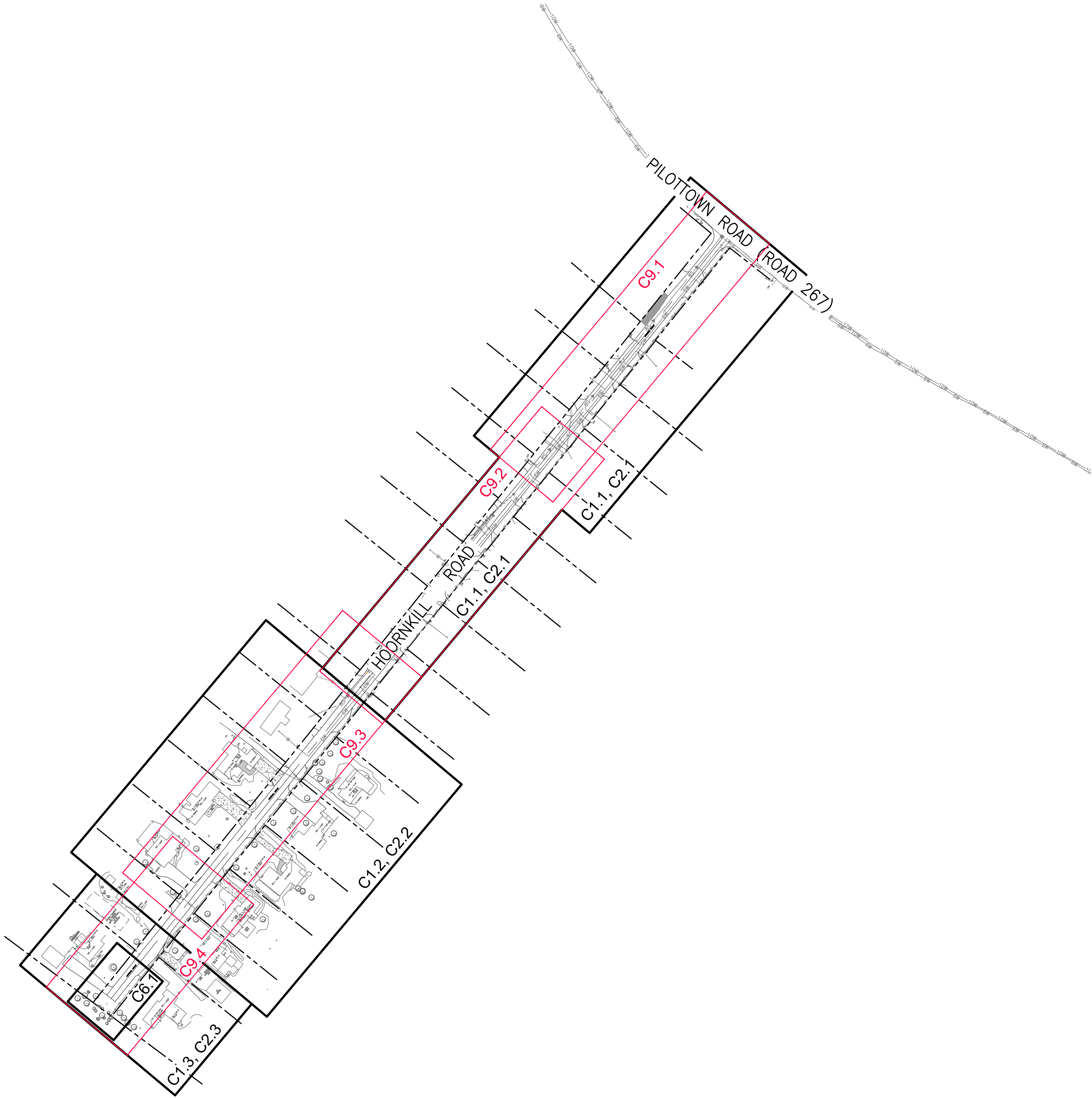


COVER SHEET

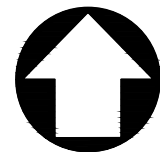
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GMB FILE : 240226	
DATE : DEC 2025	DRAWING 1 OF 31

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PEN1=RED .006 INCHES (.15mm) PEN2=YELLOW .007 INCHES (.18mm) PEN3=GREEN .010 INCHES (.25mm) PEN4=ORANGE .014 INCHES (.35mm) PEN5=BLUE .020 INCHES (.50mm) PEN6=MAGENTA .027 INCHES (.70mm) PEN7=WHITE .039 INCHES (1.00mm)



0 50 100 200 300
SCALE: 1" = 100'



DESIGN / DEVELOPMENT PLANS
PRINTS ISSUED FOR:
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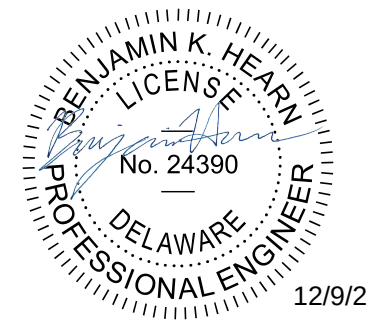
DATE

REVISIONS

NO.

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY • BALTIMORE • SEAFORD
www.gmbnet.com

**HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS**
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



**KEY
PLAN**

SCALE: 1" = 100'	SHEET NO.
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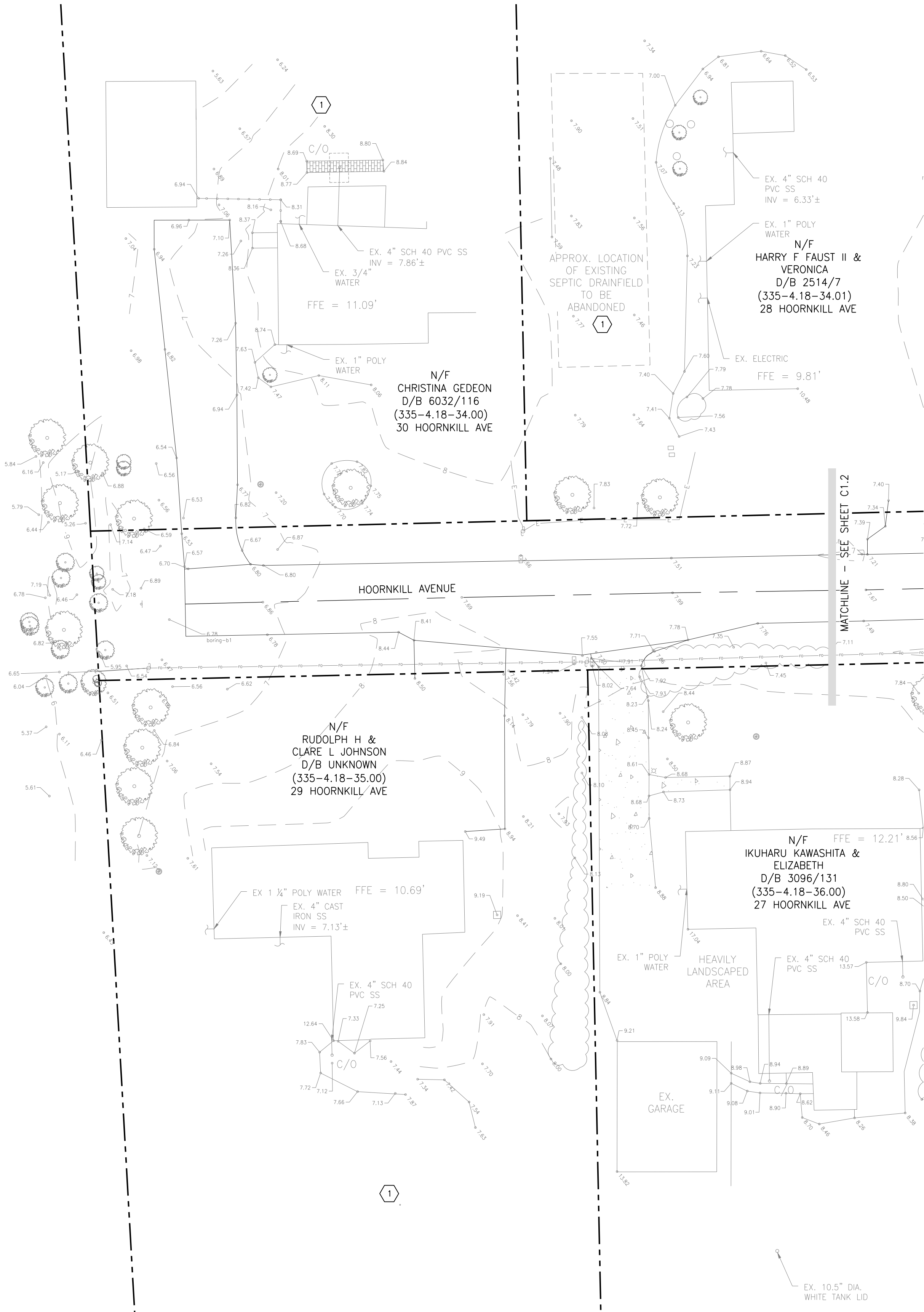
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PENK=RED 006 INCHES (15mm) PENL=GREEN 010 INCHES (25mm) PENY=BLUE 007 INCHES (18mm) PENM=MASTIC 007 INCHES (18mm) PENW=WHITE 009 INCHES (20mm)

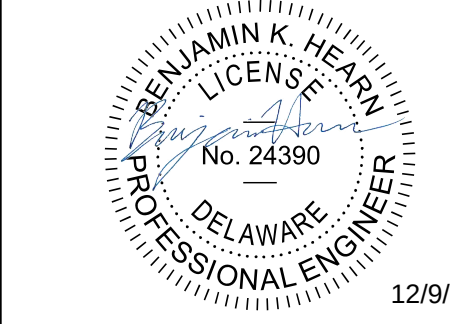
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DEMOLITION NOTES

1 CONTRACTOR SHALL ABANDON EXISTING SEPTIC TANK IN ACCORDANCE WITH DNREC REGULATIONS, AT COMPLETION OF SEWER MAIN INSTALLATION. CUT AND CAP THE ABANDONED SANITARY SEWER LINES. REMOVE TANK LIDS, PUMPS, PIPING, AND PLACE TOPSOIL. STABILIZE GROUND IN ACCORDANCE WITH SHEET 08.3.



HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



EXISTING
CONDITIONS AND
DEMOLITION
PLAN

SCALE: 1" = 20'	SHEET NO.
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DATE: DEC 2025	DRAWING 5 OF 31

1) FURNISH AND INSTALL PRECAST CONCRETE MANHOLE. SEE TYPICAL MANHOLE DETAILS ON SHEET C3.2

2) FURNISH AND INSTALL 8" DIA. SDR-35 PVC SEWER MAIN. RESTORE PIPE TRENCH PER TYPICAL TEMPORARY TRENCH RESTORATION DETAIL ON SHEET C3.3. SEE SEWER MAIN PROFILE ON SHEET C4.1.

3 MAKE CONNECTION TO 8" SANITARY SEWER MAIN PER STANDARD HOUSE CONNECTION DETAIL ON SHEET C3.3

4 FURNISH AND INSTALL 8" DIA. C900 PVC PIPE WATER MAIN AND APPURTENANCES. RESTORE PIPE TRENCH PER TRENCH RESTORATION DETAIL ON SHEET C3.3.

5 FURNISH AND INSTALL 6" DIA. PVC SANITARY SEWER LATERAL (MINIMUM 2%) AND CLEANOUT PER STANDARD LATERAL CLEANOUT DETAIL ON SHEET C3.3.

6 INSTALL 1.5" HDPE SDR 11 SEWER FORCEMAIN $\pm 42"$ BELOW EXISTING GRADE FROM SEWER MH 2-14 TO PROPOSED PUMP STATION. SEE PROFILE ON SHEETS C4.2-C4.3.

7 PROTECT EXISTING MAILBOXES AGAINST DAMAGE. CONTRACTOR SHALL REINSTALL MAILBOX(ES) AS SOON AS POSSIBLE IF MAILBOX(ES) NEED TO BE TEMPORARILY REMOVED FOR CONSTRUCTION PURPOSES

8) EXISTING SEPTIC TANK TO BE ABANDONED IN A MANNER COMPLIANT AND PERMITTED AS APPLICABLE THROUGH DNREC IN ORDER TO INSTALL PROPOSED SEWER PIPE CONNECTION TO HOME.

9 CONNECT NEW P.E. SERVICE PIPE (1" DIA. MINIMUM) TO EXISTING OR PROPOSED WITH THE PROPER FITTINGS AND ADAPTERS. CONTRACTOR SHALL FIELD VERIFY LOCATION, DEPTH, DIAMETER AND PIPE MATERIAL OF EXISTING WATER SERVICE AND SHALL PROVIDE THE SAME DIAMETER SERVICE PIPE. FURNISH AND INSTALL CURB STOP WITH 1" DIA. P.E. SERVICE PIPE. REFER TO "TYPICAL HOUSE SERVICE CONNECTION DETAIL" ON SHEET C3.2. INSTALL SINGLE WATER METER, WATER METER PIT, METER FRAME, METER SETTER AND 1" P.E. PIPE.

10 WATER MAIN / SEWER MAIN CROSSING. CONTRACTOR SHALL SEEK TO MAINTAIN AT LEAST 10' HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN WATER AND SANITARY SEWER MAINS. ENCASUREMENT IN CONCRETE OF WATER MAINS IS REQUIRED WITHIN 10' OF CROSSING BETWEEN WATER AND SEWER MAINS WHERE VERTICAL SEPARATION IS LESS THAN 18". WHERE MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED PROVIDE A MINIMUM SIX INCH PIPE SEPARATION WHERE CONCRETE ENCASEMENT IS UTILIZED. SEE PROFILE ON SHEET C5.2.

11 TEST PIT UTILITY CROSSINGS TO VERIFY DEPTH PRIOR TO INSTALLATION OF SANITARY SEWER OR WATER PIPING. REPORT FINDINGS TO THE ENGINEER.

12 ASSUMED INVERT ELEVATION AT GREY WATER TANK TO BE 5.0'. CONTRACTOR TO CONFIRM PRIOR TO INSTALLATION OF LATERAL AND REPORT FINDINGS TO ENGINEER WHICH MAY RESULT IN RE-DESIGN OF PROPOSED SEWER LATERAL AND/OR INDOOR PLUMBING FOR 23 HOORNKILL AVENUE.

13) CONTRACTOR SHALL RE-PLUMB EXISTING WATER SUPPLY PIPING INSIDE THE CRAWL SPACE/BASEMENT TO BYPASS WATER PUMP AND HYDRO-PNEUMATIC TANK. PROVIDE PHYSICAL SEPARATION BETWEEN PUBLIC AND REMAINING WATER SERVICE PIPING.

14 PROPOSED FULL DEPTH ROAD RECONSTRUCTION. SEE PAVEMENT SECTION ON SHEET C3.3.

15 ABANDON IN PLACE 6" WATER MAIN

16 DRIVEWAY/SIDEWALK REPLACEMENT PER DETAIL ON SHEET C3.3

17 WATER SERVICE TO BE ABANDONED. NEW WATER SERVICE IS BEING INSTALLED FOR THIS PROPERTY AT ANOTHER LOCATION AND SHALL BE RUN FROM THE CURB STOP TO THE HOME.

18) SEWER LATERAL TO BE ABANDONED. NEW SEWER LATERAL IS BEING INSTALLED FOR THIS PROPERTY AT ANOTHER LOCATION

19) SOIL BORING LOCATION. SEE GEOTECHNICAL REPORT IN BID DOCUMENTS FOR MORE INFORMATION

20) EXISTING WELL TO BE ABANDONED IN ACCORDANCE WITH PROPER PROCEDURES. COORDINATE WITH PROPERTY OWNER TO DETERMINE IF WELL IS TO REMAIN.

21 CONTRACTOR TO REMOVE EXISTING METER PIT. TIE TOGETHER EXISTING ENDS OF WATER SERVICE. COORDINATE REMOVAL WITH HOMEOWNER AND LEWIS BOARD OF PUBLIC WORKS.



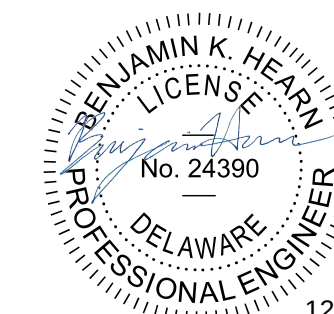
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REVIEW

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HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



UTILITY PLAN

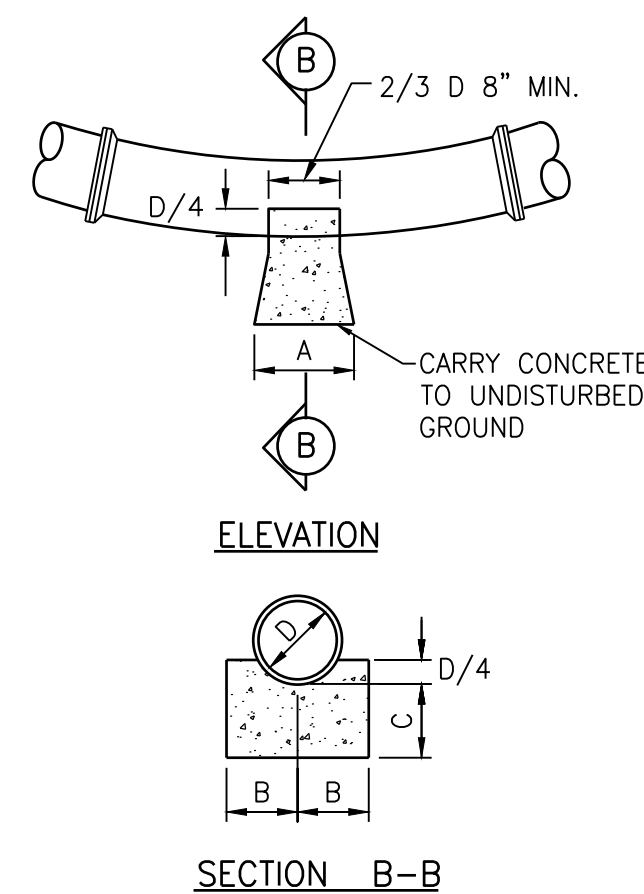
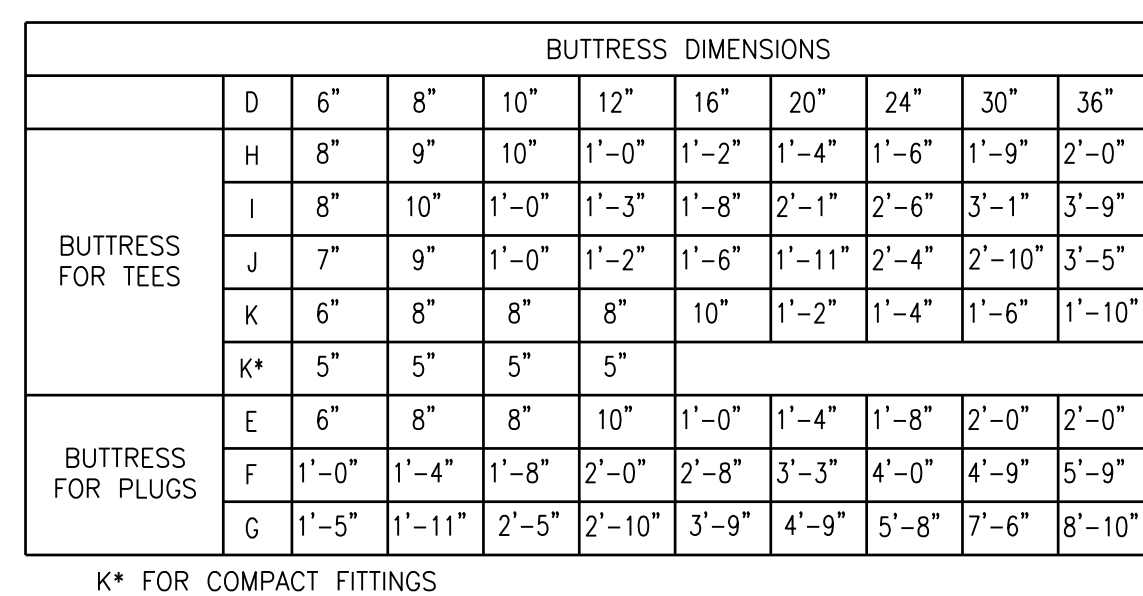
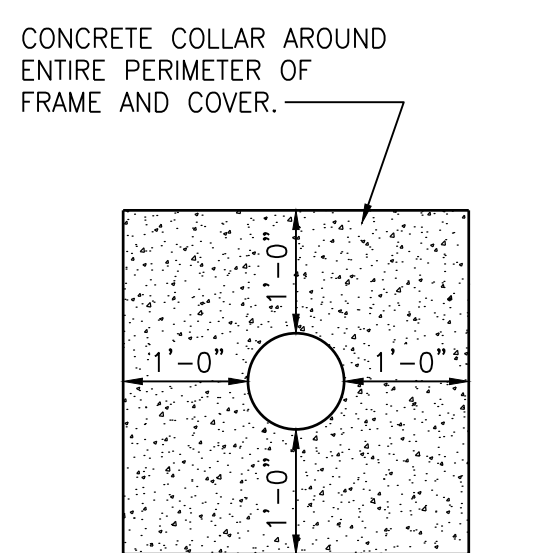
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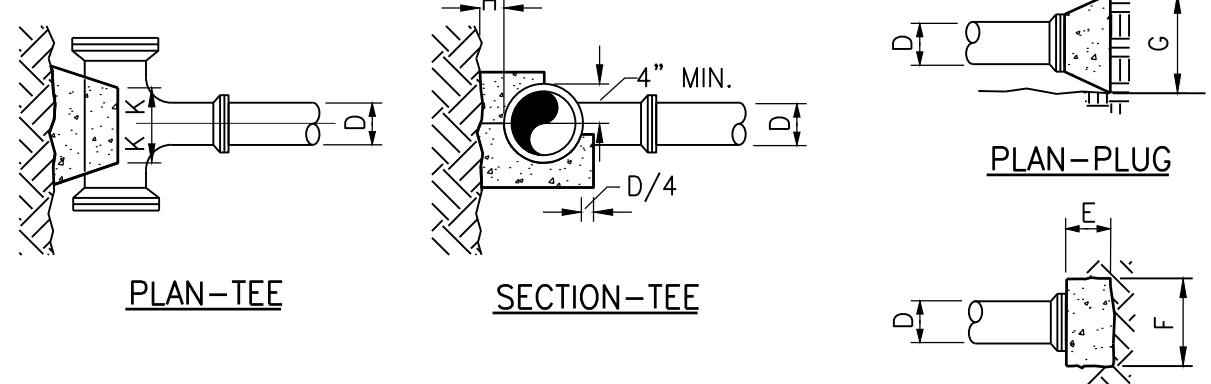
CONSTRUCTION NOTES

- | | | | |
|---|---|----|--|
| 1 | FURNISH AND INSTALL PRECAST CONCRETE MANHOLE. SEE TYPICAL MANHOLE DETAILS ON SHEET C3.2. | 8 | EXISTING SEPTIC TANK TO BE ABANDONED IN A MANNER COMPLIANT AND PERMITTED AS APPLICABLE THROUGH DNREC IN ORDER TO INSTALL PROPOSED SEWER PIPE CONNECTION TO HOME. |
| 2 | FURNISH AND INSTALL 8" DIA. SDR-35 PVC SEWER MAIN. RESTORE PIPE TRENCH PER TYPICAL TEMPORARY PATCH DETAIL ON SHEET C3.3. SEE SEWER MAIN PROFILE ON SHEET C4.1. | 9 | CONNECT NEW P.E. SERVICE PIPE (1" DIA. MINIMUM) TO EXISTING OR PROPOSED WITH THE PROPER FITTINGS AND ADAPTERS. CONTRACTOR SHALL FIELD VERIFY LOCATION, DEPTH, DIAMETER AND PIPE MATERIAL OF EXISTING WATER SERVICE AND SHALL PROVIDE THE SAME DIAMETER SERVICE PIPE. CURB STOP WITH 1" DIA. SERVICE PIPE. SEE TYPICAL CURB STOP SERVICE PIPE CONNECTION DETAIL ON SHEET C3.2. INSTALL SINGLE WATER METER, WATER METER PIT, METER FRAME, METER SETTER AND 1" P.E. PIPE. |
| 3 | PROPOSED PUMP STATION. SEE DETAILS ON SHEET C6.1. | 10 | WATER MAIN / SEWER MAIN CROSSING. CONTRACTOR SHALL SEEK TO MAINTAIN AT LEAST 10' HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN WATER AND SANITARY SEWER MAINS. ENCASEMENT IN CONCRETE OF WATER MAINS IS REQUIRED WITHIN 10' OF CROSSING BETWEEN WATER AND SEWER MAINS WHERE VERTICAL SEPARATION IS LESS THAN 18". WHERE MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED PROVIDE A MINIMUM SIX INCH PIPE SEPARATION WHERE CONCRETE ENCASEMENT IS UTILIZED. SEE PROFILE ON SHEET C5.2. |
| 4 | FURNISH AND INSTALL 8" DIA. C900 PVC PIPE WATER MAIN AND APPURTENANCES. RESTORE PIPE TRENCH PER TRENCH RESTORATION DETAILS ON SHEET C3.3. | 11 | TEST PIT UTILITY CROSSINGS TO VERIFY DEPTH PRIOR TO INSTALLATION OF SANITARY SEWER OR WATER PIPING. REPORT FINDINGS TO THE ENGINEER. |
| 5 | FURNISH AND INSTALL 6" DIA. PVC SANITARY SEWER LATERAL (MINIMUM 2%) AND CLEANOUT PER STANDARD LATERAL CLEANOUT DETAIL ON SHEET C3.3. | 12 | FURNISH AND INSTALL FIRE HYDRANT WITH 6" LEAD AND GATE VALVE PER DETAIL ON SHEET C3.1. |
| 6 | INSTALL 1.5" HDPE SDR 11 SEWER FORCEMAIN $\pm 42"$ BELOW EXISTING GRADE FROM SEWER MH 2-14 TO PROPOSED PUMP STATION. SEE PROFILE ON SHEETS C4.2-C4.3. | 13 | CONTRACTOR SHALL RE-PLUMB EXISTING WATER SUPPLY PIPING INSIDE THE CRAWL SPACE/BASEMENT TO BYPASS WATER PUMP AND HYDRO-PNEUMATIC TANK. PROVIDE PHYSICAL SEPARATION BETWEEN PUBLIC AND REMAINING WATER SERVICE PIPING. |
| 7 | PROTECT EXISTING MAILBOXES AGAINST DAMAGE. CONTRACTOR SHALL REINSTALL MAILBOX(ES) AS SOON AS POSSIBLE IF MAILBOX(ES) NEED TO BE TEMPORARILY REMOVED FOR CONSTRUCTION PURPOSES | | |

- 14 FURNISH AND INSTALL 8" x 6" REDUCER.
- 15 MAKE CONNECTION TO 8" SANITARY SEWER MAIN PER STANDARD HOUSE CONNECTION DETAIL ON SHEET C3.3.
- 16 PROPOSED FULL DEPTH ROAD RECONSTRUCTION. SEE PAVEMENT SECTION ON SHEET C3.3.
- 17 EXISTING WATER SERVICE TO BE ROUTED THROUGH BASEMENT TO A DIFFERENT EXTERIOR EXITING POINT IN THE FRONT OF THE HOME.
- 18 FURNISH AND INSTALL CURB STOP WITH 1" DIA. P.E. SERVICE PIPE AND YARD HYDRANT. REFER TO "YARD HYDRANT AND CONNECTION DETAIL" ON SHEET C3.1.
- 19 DRIVEWAY REPLACEMENT PER DETAIL ON SHEET C3.3.
- 20 SOIL BORING LOCATION. SEE GEOTECHNICAL REPORT IN BID DOCUMENTS FOR MORE INFORMATION.

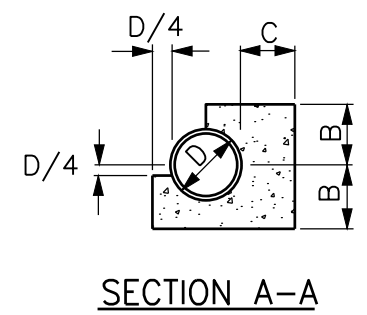
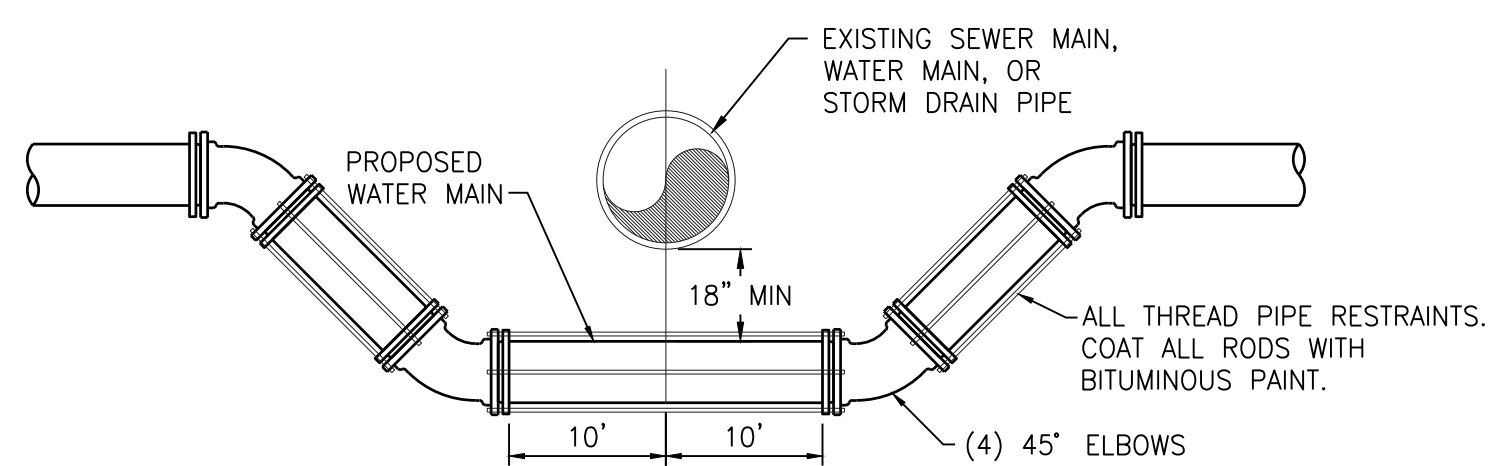


BUTTRESS DIMENSIONS FOR VERTICAL BENDS										
BEND	D	6"	8"	10"	12"	16"	20"	24"	30"	36"
1 1/4"	A						1'-8"	2'-0"	2'-6"	3'-0"
	B						1'-0"	1'-3"	1'-6"	
	C						10"	1'-0"	1'-1"	1'-2"
2 1/2"	A	6"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-10"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2"
45°	A	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4"
	B	7"	7"	8"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2"
90°	A	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-2"	5'-0"	6'-3"	7'-6"
	B	7"	8"	9"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-6"
	C	7"	8"	10"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-8"

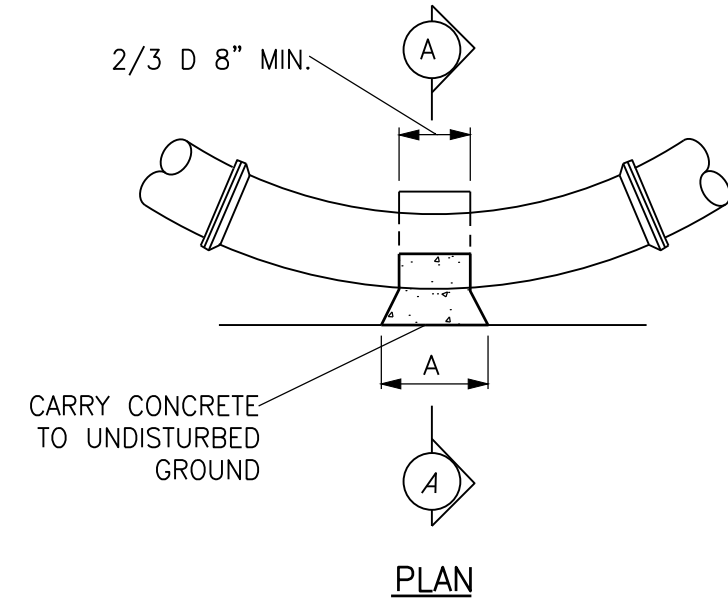


- NOTES:
1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
 3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.

BUTTRESS DETAILS FOR TEES AND PLUGS

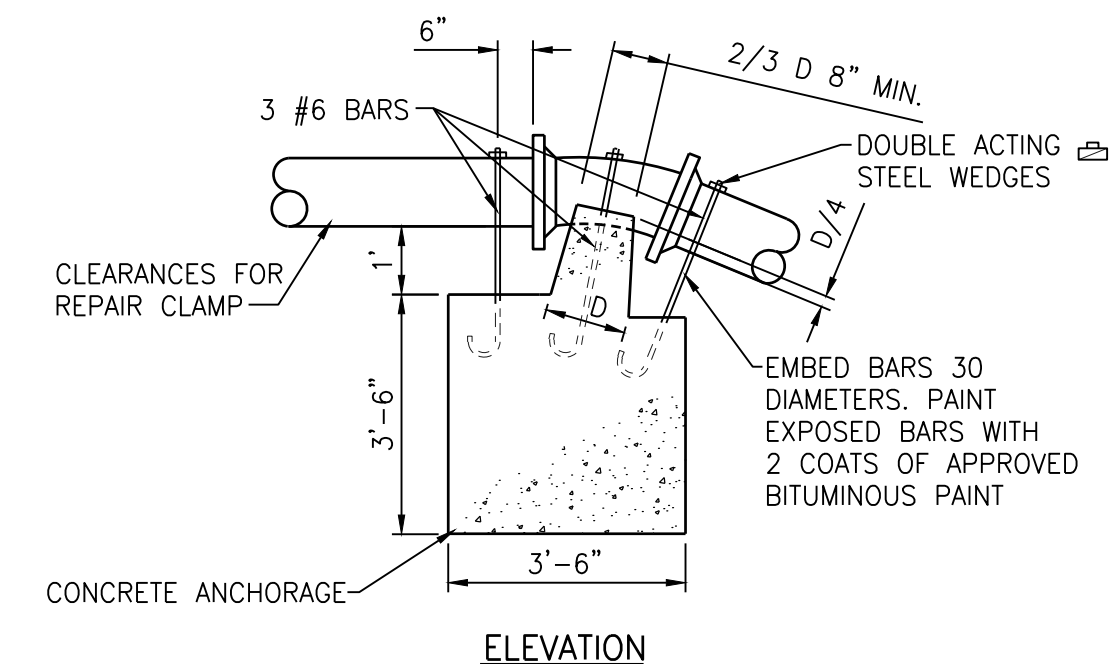
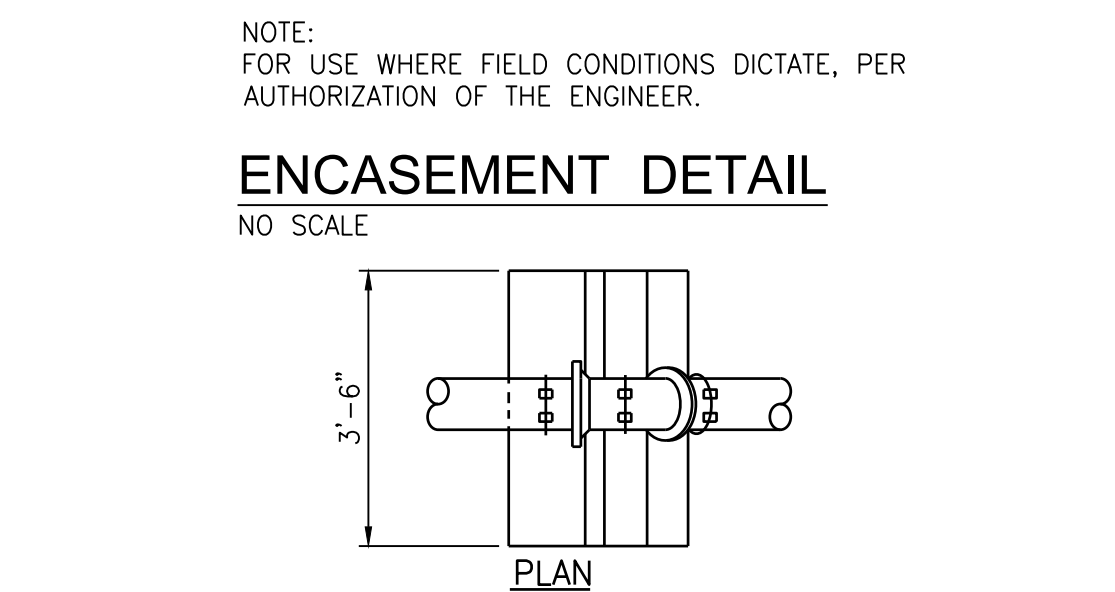


BUTTRISS DIMENSIONS FOR HORIZONTAL BENDS										
BEND	D	6"	8"	10"	12"	16"	20"	24"	30"	36"
5%	A						1'-8"	2'-0"	2'-6"	3'-0"
	B						10"	1'-0"	1'-3"	1'-6"
	C						10"	1'-0"	1'-1"	1'-2"
11¼%	A	6"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-11"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-1"
22½%	A	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0"
	C	8"	9"	10"	11"	1'-2"	1'-4"	1'-6"	1'-9"	2'-0"
45°	A	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-2"	5'-0"	6'-3"	7'-6"
	B	7"	8"	9"	11"	1'-3"	1'-6"	1'-8"	2'-0"	2'-6"
	C	8"	9"	10"	11"	1'-2"	1'-4"	1'-9"	2'-3"	2'-8"
90°	A	2'-0"	2'-6"	3'-0"	3'-6"	5'-0"	SPECIAL DESIGN			
	B	6"	9"	1'-0"	1'-3"	1'-6"				
	C	1'-10"	1'-9"	1'-8"	1'-7"	1'-5"				



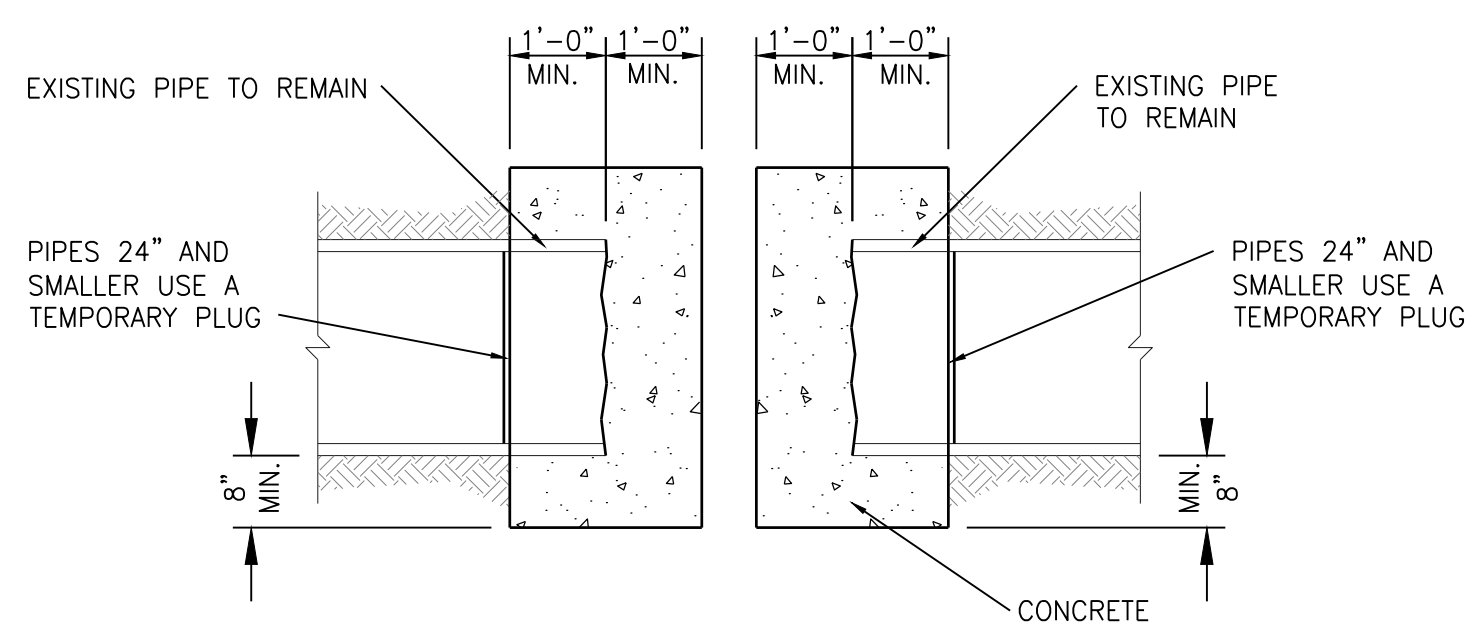
- NOTES:
1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSION STRENGTH OF 3000 PSI.
 2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
 3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.
 4. NO DRY MIX TO BE USED.

BUTTRESS DETAIL FOR HORIZONTAL BENDS

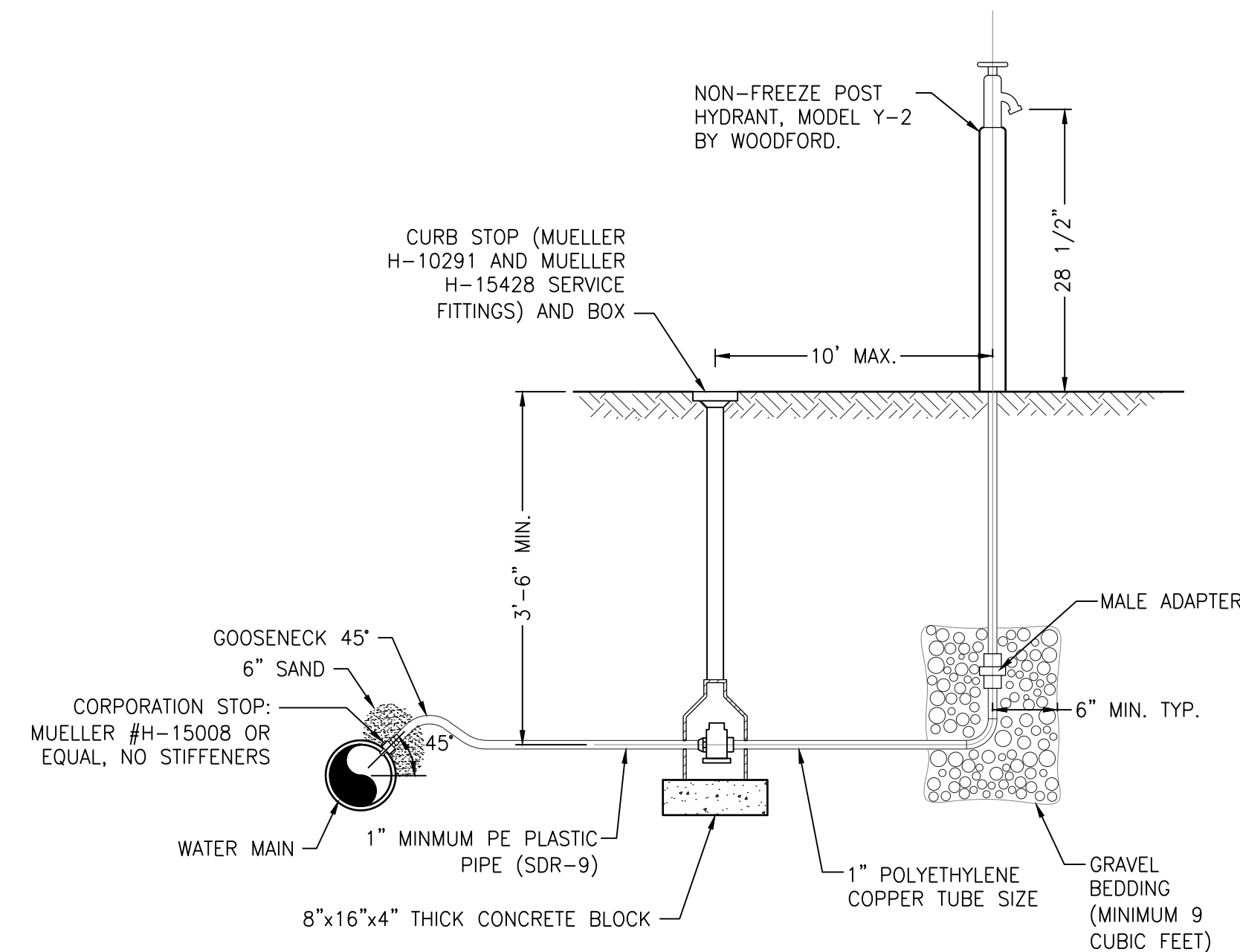
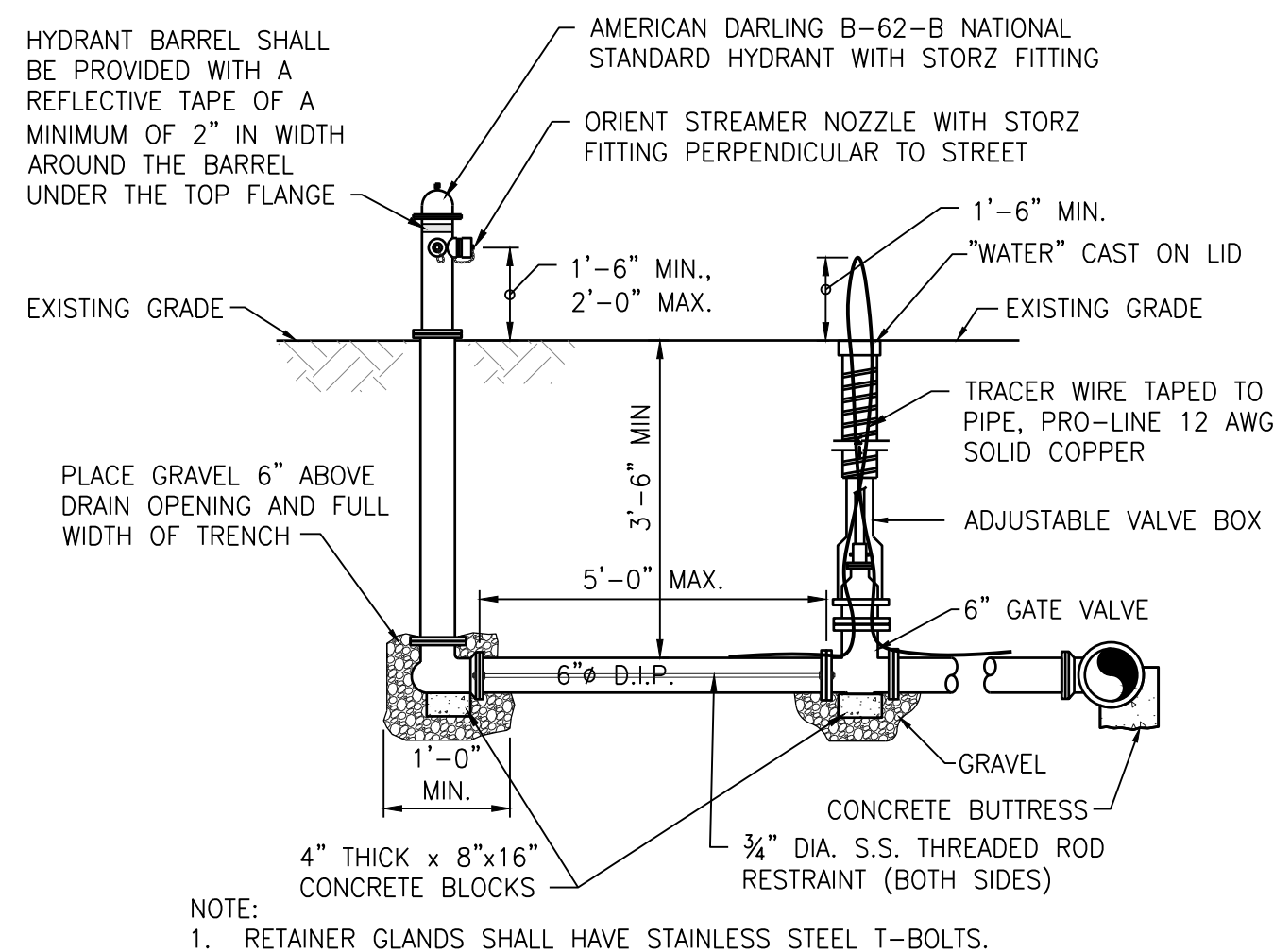


- NOTES:
1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
 3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.

ANCHORAGE DETAIL FOR VERTICAL BENDS

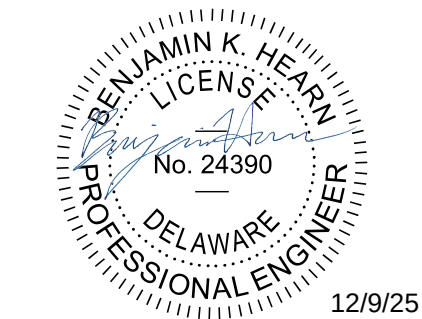


PLUGGING ABANDONED LINES DETAIL

[illegible]

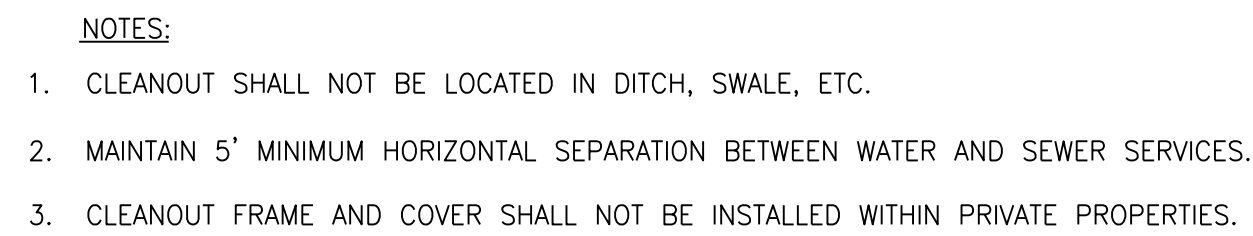
HOORKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



WATER MAIN DETAILS

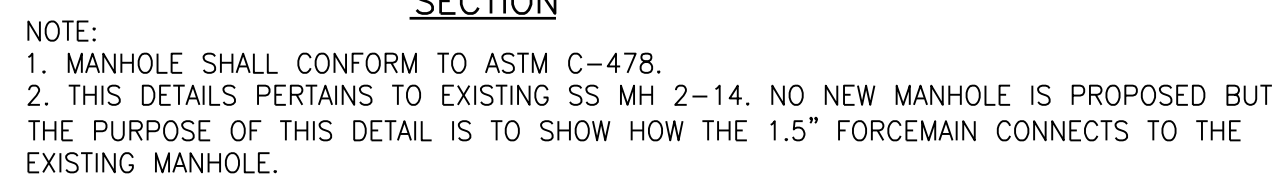
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DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	
DRAWING 9 OF 10	



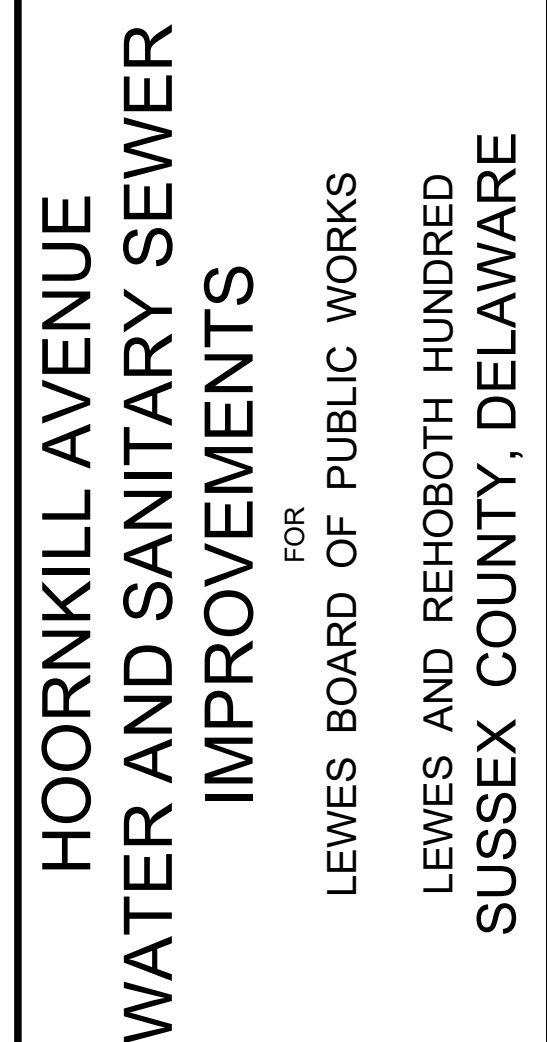
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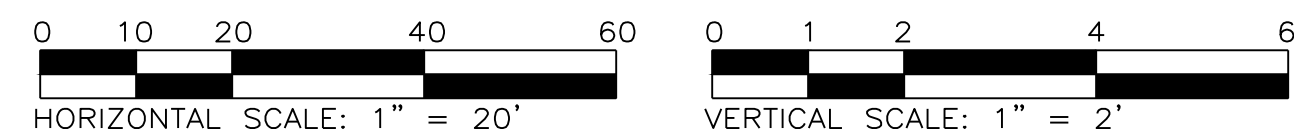
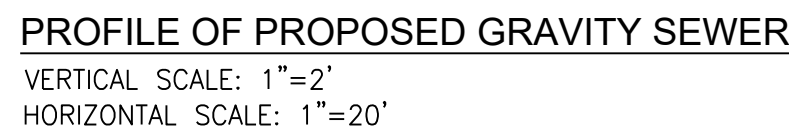
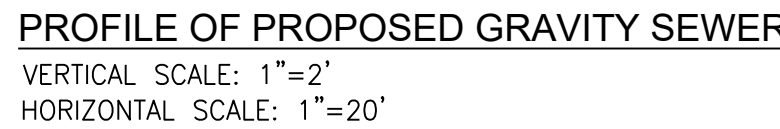
NO SCALE



NO SCALE

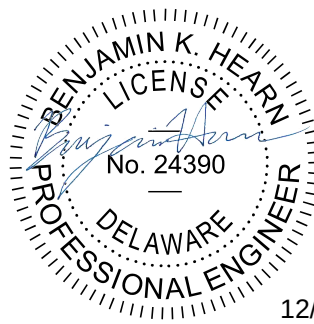
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SCALE : NONE	SHEET NO. C3.3
DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	DRAWING 11 OF 31



HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

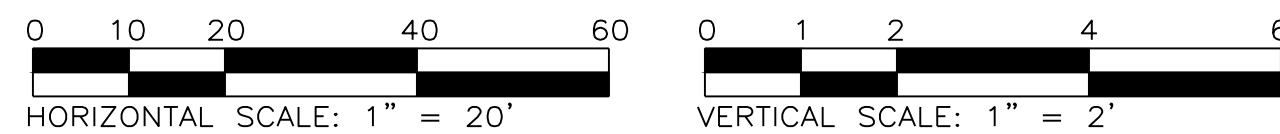
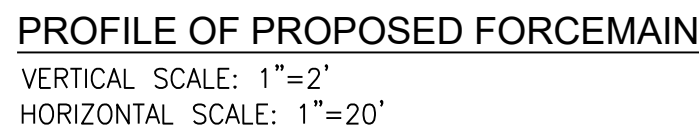
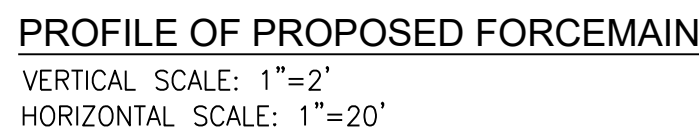
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



SEWER MAIN PROFILE

SCALE : AS SHOWN	SHEET NO. C4.1
DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	DRAWING 12 OF 31

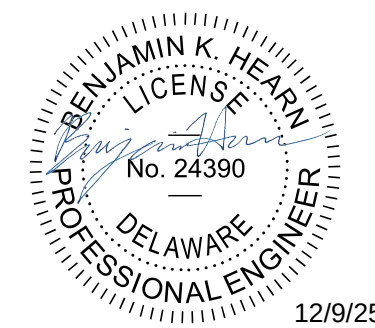
PLOT CODE	
PEN1-RED	.007 INCHES (.19mm)
PEN2-YELLOW	.007 INCHES (.19mm)
PEN3-GREEN	.010 INCHES (.25mm)
PEN4-CYAN	.014 INCHES (.35mm)
PEN5-BLUE	.020 INCHES (.50mm)
PEN6-MAGENTA	.027 INCHES (.70mm)
PEN7-WHITE	.039 INCHES (1.00mm)

[illegible]

HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

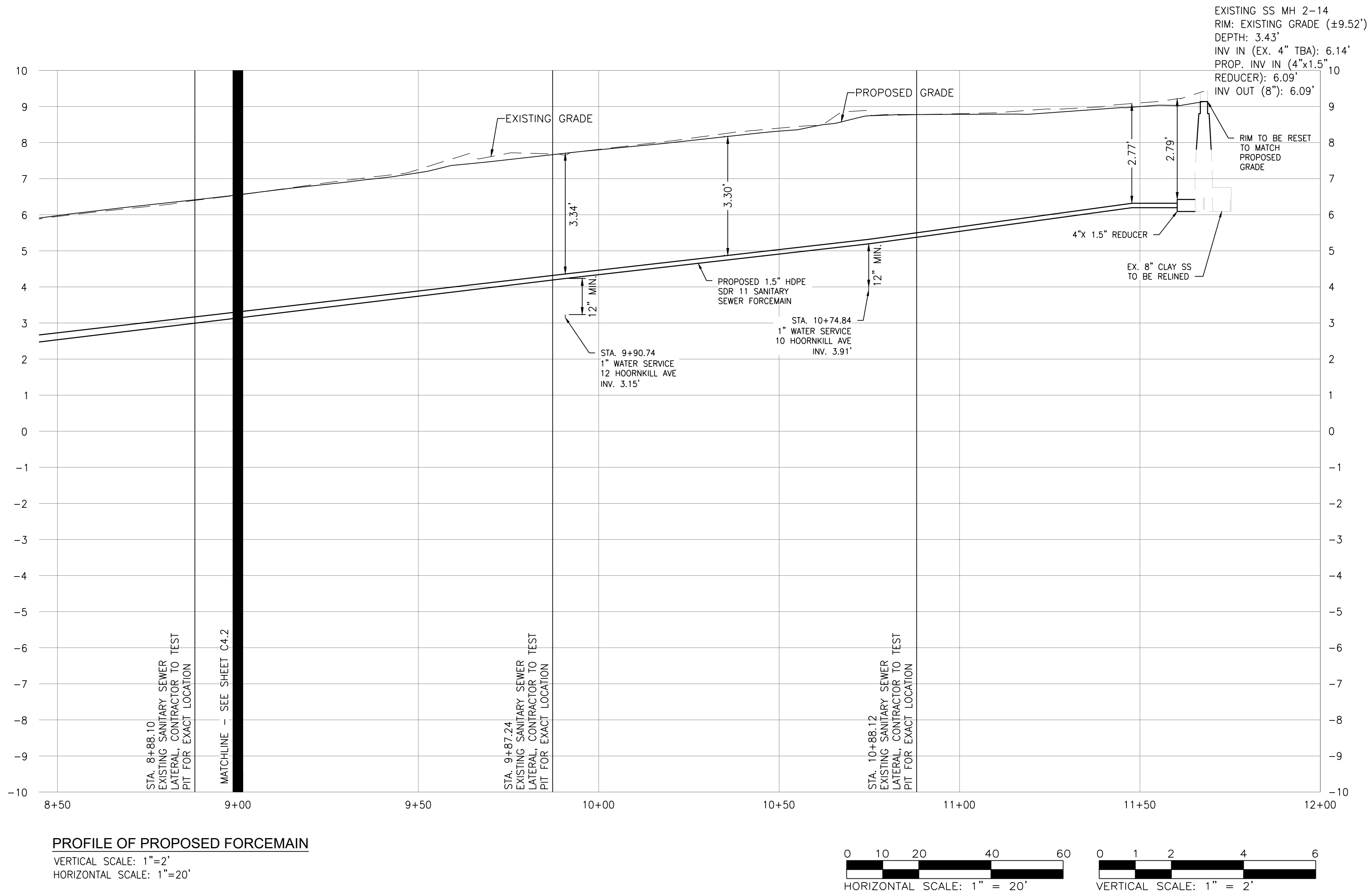


SEWER MAIN PROFILE

SCALE : AS SHOWN	SHEET NO. C4.2
DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	
DRAWING 13 OF 31	

H:\Projects\2024\240226 Hoornkill Avenue Water Improvements\Drawings\Working Sets\Preliminary Plan Set\C4.1-3 Sewer Profiles.dwg, 12/9/2025 9:00 AM, Cheri R. Hochstetler
 PLOT CODE

K:\Projects\302A\240226 Hoornkill Avenue Water Improvements\Drawings\Sanitary Sewer\CA-1-3 Sewer Profiles.dwg, 12/9/2025 9:00 AM, Chen R. Hochstetler
PLOT CODE
PEN=RED 006 INCHES (1.0mm) PEN=GREEN 010 INCHES (25mm) PEN=BLUE 020 INCHES (50mm) PEN=MAGENTA 027 INCHES (70mm) PEN=WHITE 029 INCHES (1.00mm)



DESIGN / DEVELOPMENT PLANS PRINTS ISSUED FOR: REVIEW	
DATE	
REVISIONS	
NO.	

EMB

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WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

BENJAMIN K. HEARN
LICENSE
No. 24390
DELAWARE
PROFESSIONAL ENGINEER
12/9/25

SEWER MAIN
PROFILE

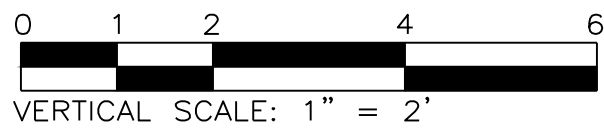
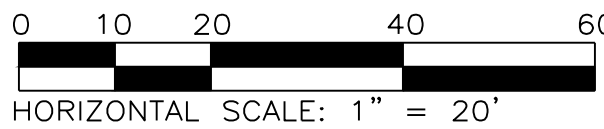
SCALE: AS SHOWN
DESIGN BY: CRH
DRAWN BY: CRH
CHECKED BY: BKH
GWB FILE: 240226
DATE: DEC 2025

SHEET NO.
C4.3
DRAWING 14 OF 31

0 10 20 40 60
HORIZONTAL SCALE: 1" = 20'

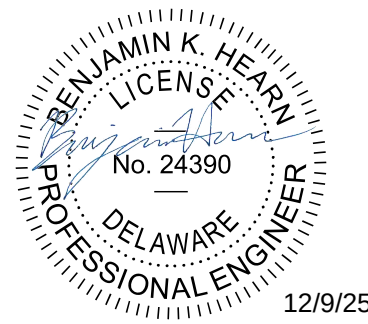
0 1 2 4 6
VERTICAL SCALE: 1" = 2'

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PROFILE OF PROPOSED WATER
 VERTICAL SCALE: 1"=2'
 HORIZONTAL SCALE: 1"=20'

HOORKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



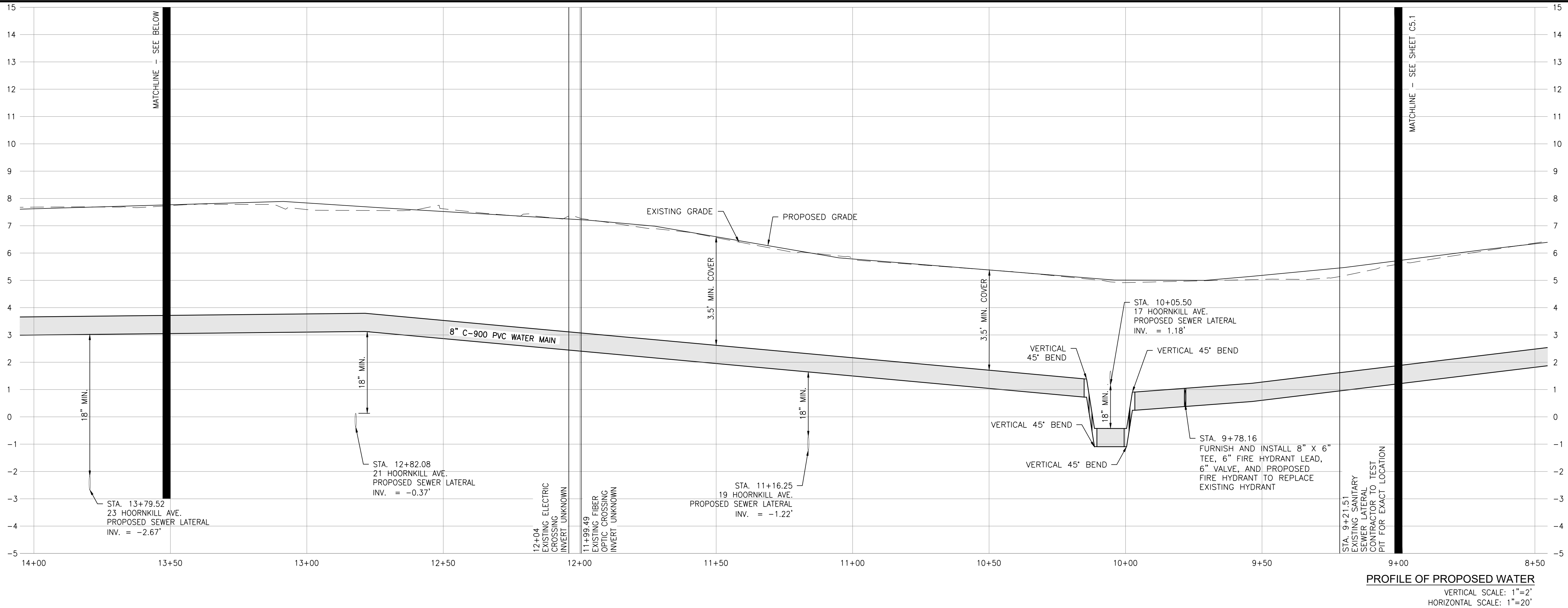
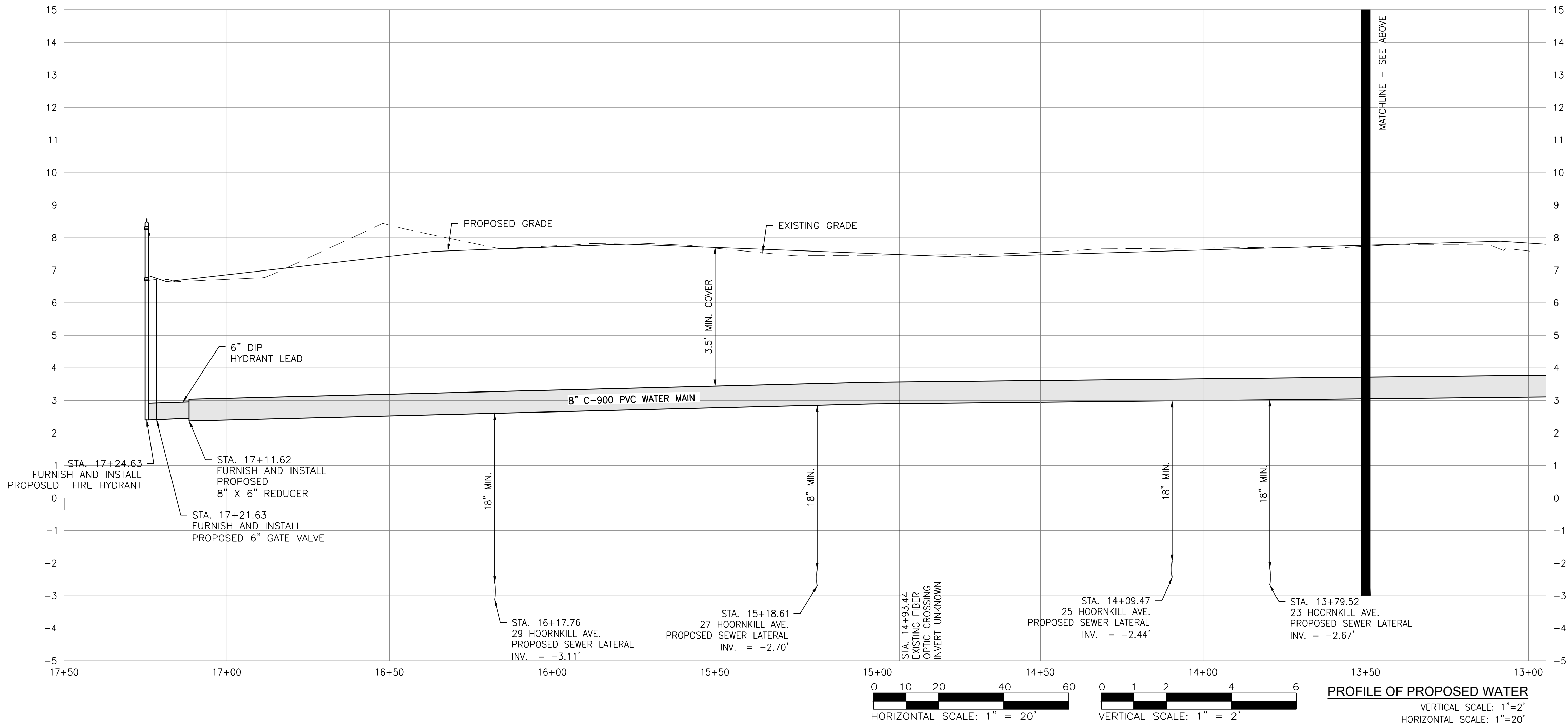
WATER MAIN PROFILES

SCALE : AS SHOWN	SHEET NO. C5.1
DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	DRAWING 15 OF 31

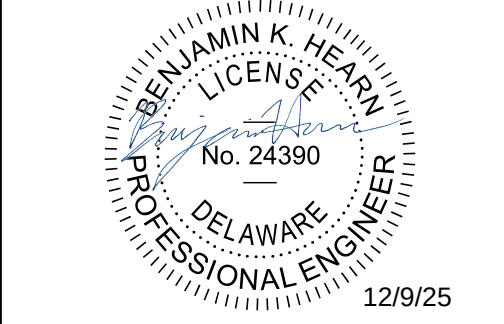
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K:\Projects\2024\240226 Hoornkill Avenue Water Improvements\Drawings\Sheet\Ordinary Plan Set\CS-1-2 Water Profiles.dwg, 12/9/2025 11:29 AM, Chris R. Hochstetler

PEN-RED 0.06 INCHES (1.6mm) PEN-YELLOW 0.07 INCHES (1.8mm) PEN-GREEN 0.10 INCHES (2.5mm) PEN-CYAN 0.14 INCHES (3.5mm) PEN-COLOR 0.27 INCHES (7.0mm) PEN-MAGENTA 0.27 INCHES (7.0mm) PEN-BLUE 0.27 INCHES (7.0mm) PEN-WHITE 0.29 INCHES (7.6mm)



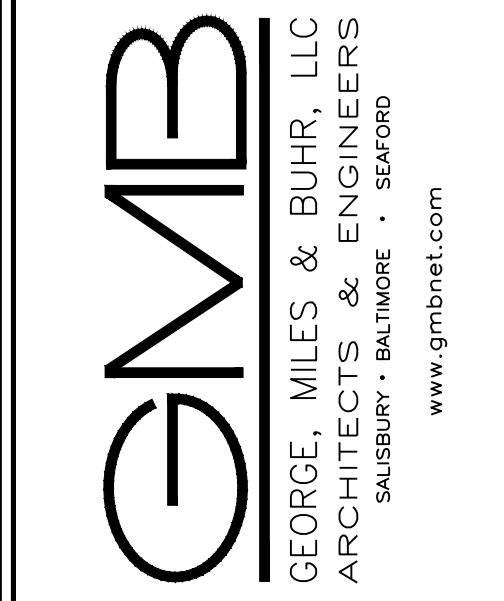
HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



WATER MAIN
PROFILES

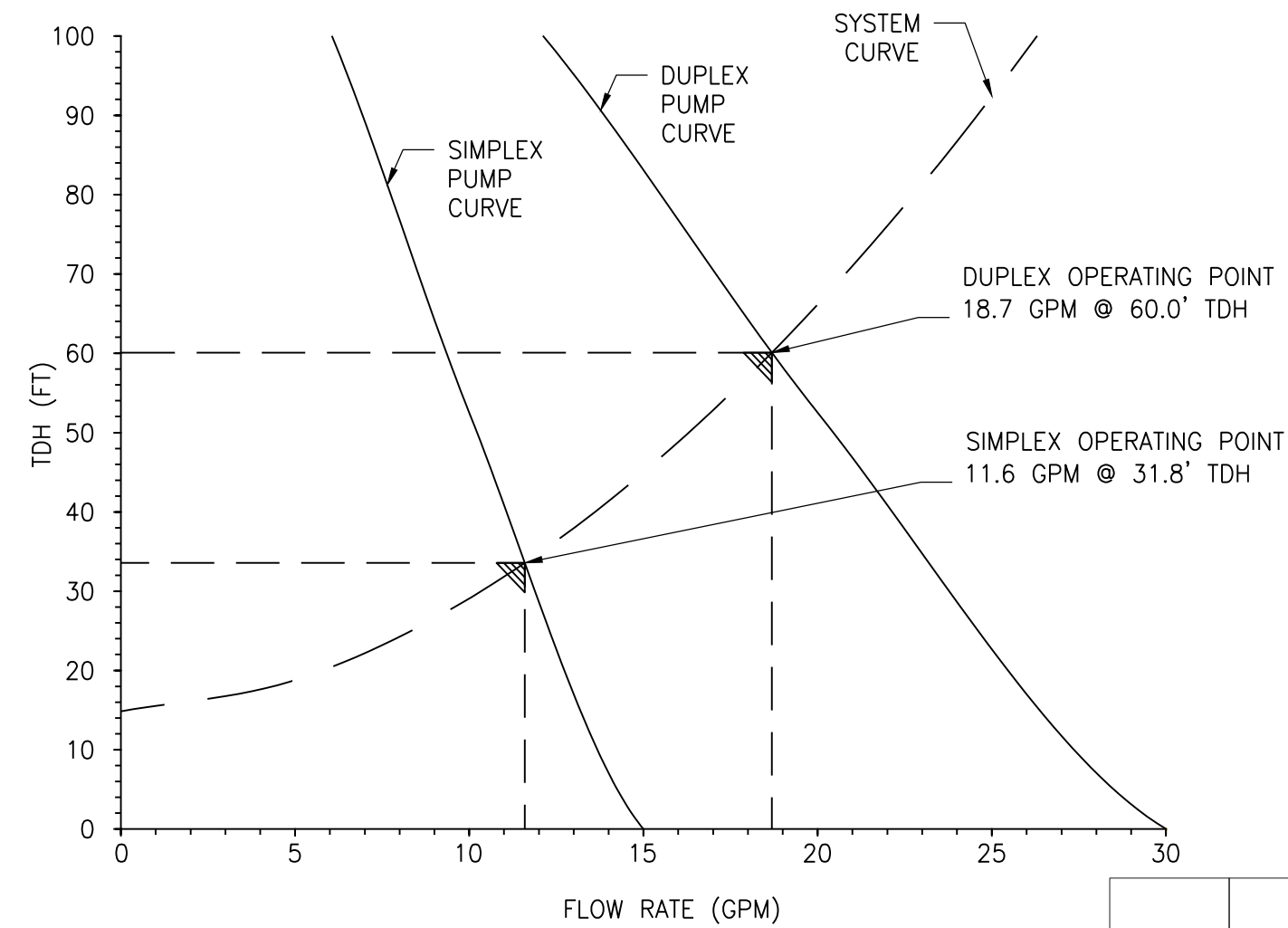
SCALE	AS SHOWN	SHEET NO.
DESIGN BY	CRH	C5.2
DRAWN BY	CRH	
CHECKED BY	BKH	
GWB FILE	240226	
DATE	DEC 2025	DRAWING 16 OF 31

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DESIGN / DEVELOPMENT PLANS PRINTS ISSUED FOR: REVIEW	
DATE	
REVISIONS	
NO.	

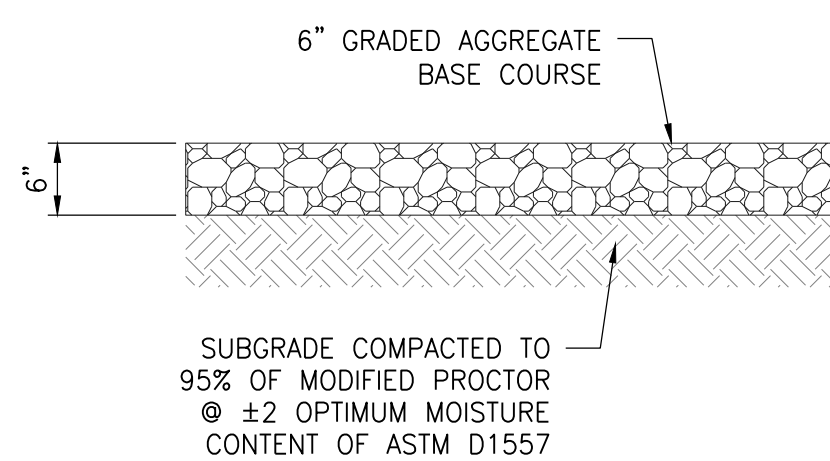
1. CONTRACTOR SHALL MAINTAIN AT LEAST 10' OF HORIZONTAL CLEARANCE BETWEEN DOMESTIC/POTABLE WATER AND SEWER MAINS. ENCASEMENT IN CONCRETE OF WATER MAINS IS REQUIRED WITHIN 10' OF CROSSING BETWEEN WATER AND SEWER MAINS WHERE VERTICAL SEPARATION IS LESS THAN 18".
2. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING PIPE INVERTS, MANHOLE INVERTS, AND LOCATIONS PRIOR TO CONNECTION WITH PROPOSED PIPING.
4. FINAL LOCATION OF ALL PIPING TO BE SUBJECT TO FIELD DETERMINATION BY THE ENGINEER.
5. THE CONTRACTOR SHALL PROVIDE FITTINGS AS SHOWN ON THE PLAN OR AS REQUIRED TO CONFORM TO FINAL LOCATION AND GRADE.
6. ALL PIPING FOR WHICH ELEVATIONS ARE NOT SHOWN SHALL HAVE 4 MINIMUM COVERAGE.
7. PROVIDE BUTTRESSES AT ALL BENDS, TEES, CAPS, OR PLUGS FOR ALL PRESSURE LINES. EXCAVATION AGAINST WHICH BUTTRESSES WILL BEAR SHALL BE FIRM BEARING, FLAT, AND AT PROPER ANGLE TO THE PIPE CONNECTION.
8. ALL EXPOSED STATION PIPES, VALVES, FITTING, AND ADAPTORS SHALL BE FURNISHED WITH FLANGED JOINT CONNECTIONS.
9. ALL NUTS, BOLTS, WASHERS, SCREWS, ANCHOR BOLTS, AND OTHER FASTENERS OUTSIDE AND INSIDE WET WELL AND VAULT SHALL BE TYPE 316 STAINLESS STEEL.



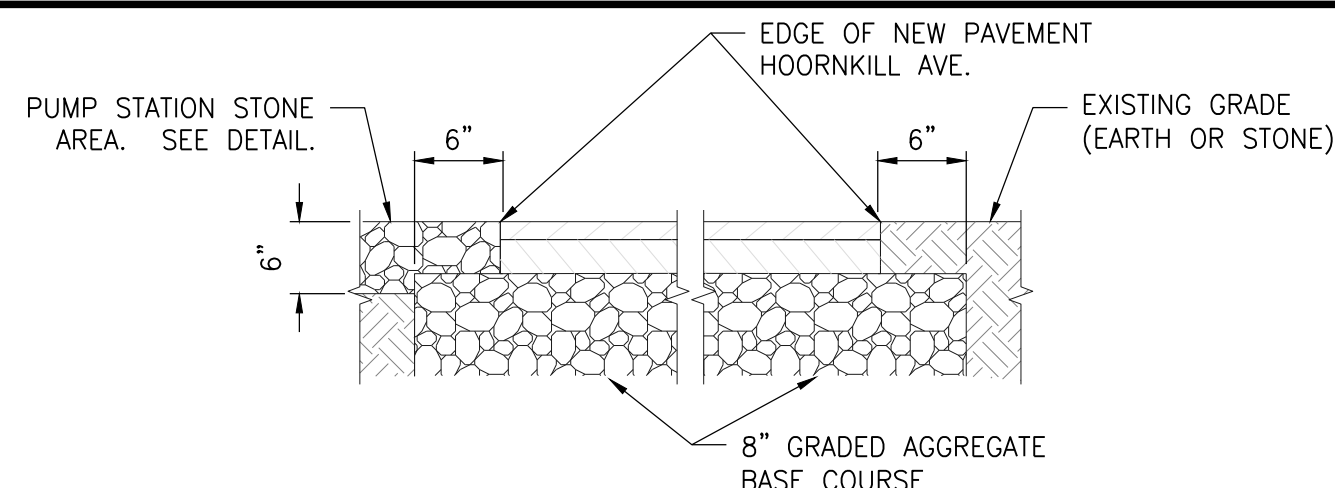
PUMP STATION DESIGN CALCULATIONS

DESIGN DATA	
EDU's	21
AVE. DAILY FLOW: Q _a = EDU x 250	5,250 GPD
PEAK FACTOR:	4
PEAK DAILY FLOW REQUIRED: Q _p = (Q _a X 4)/1440	14.6 GPM
PEAK DAILY FLOW REQUIRED (2.64FPS)	14.6 GPM
PEAK DAILY FLOW (OPERATING CONDITION):	15 GPM
WET WELL VOLUME:	
V _{min} = (T _{min} x Q _{pump})/4	47 GALLONS
T _{min} = 13	(© OPERATING CONDITION, 13 MINUTES)

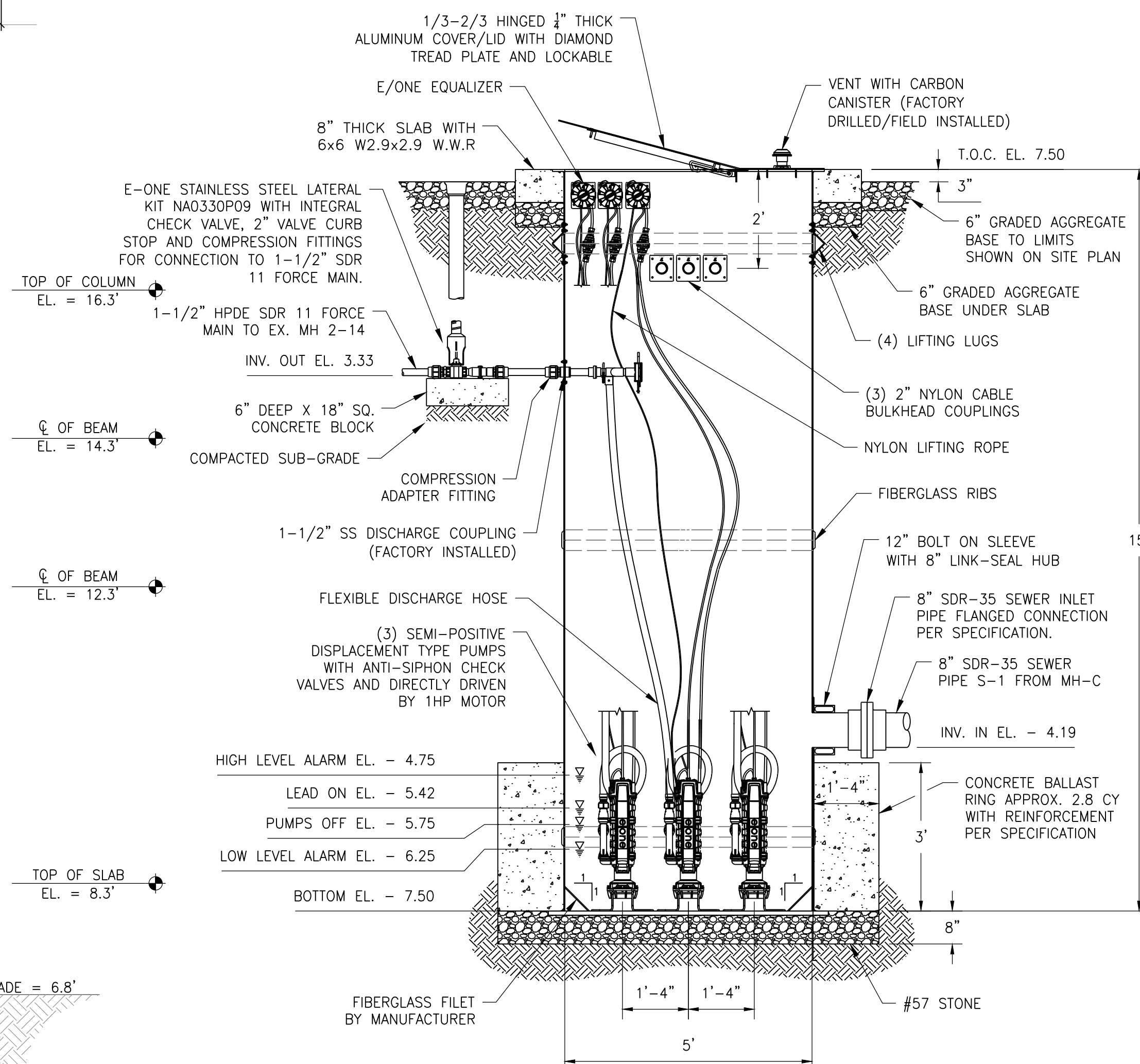
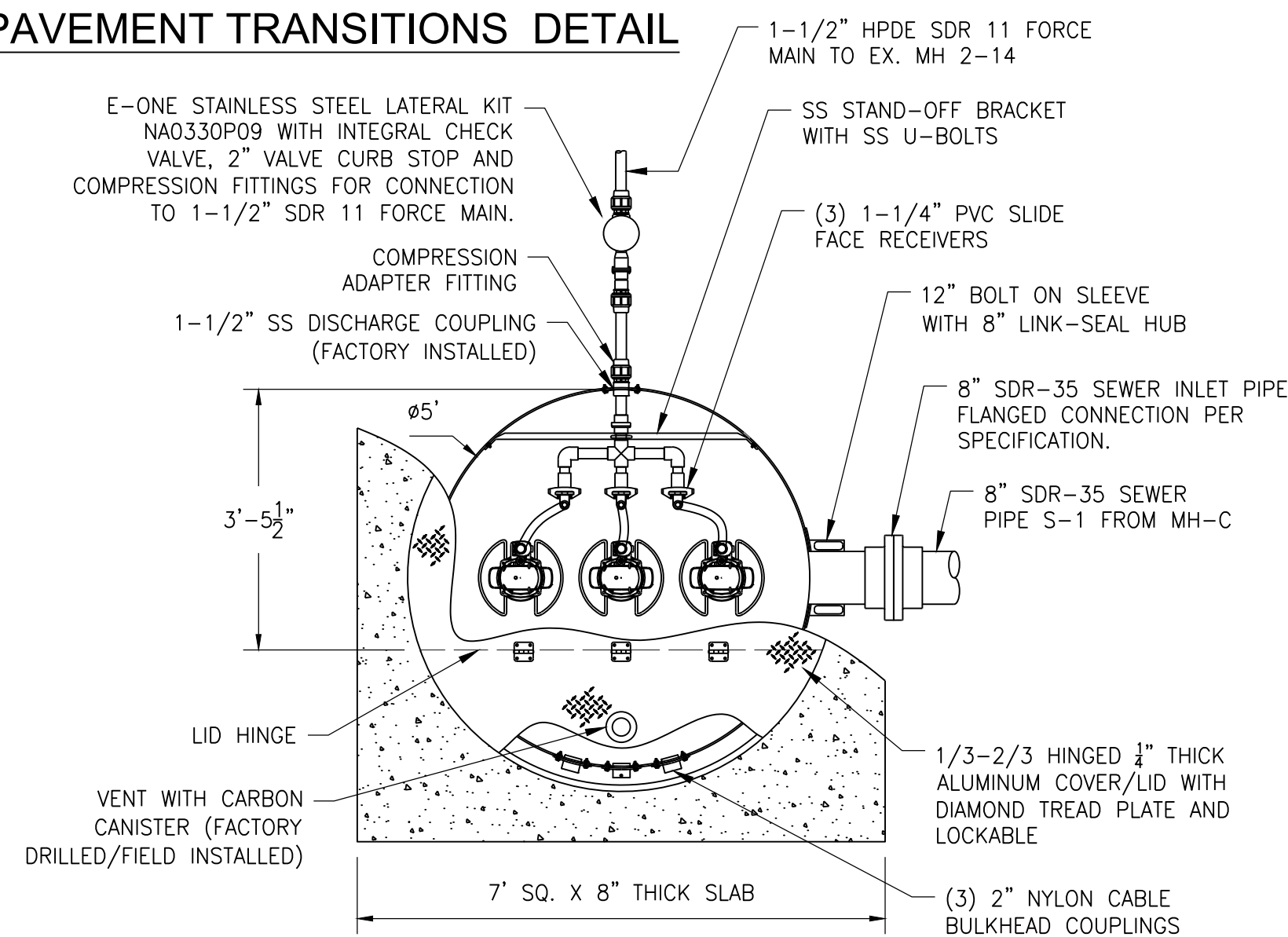
1	FURNISH AND INSTALL FIBERGLASS WET WELL TRIPLEX E-ONE PUMP STATION WITH CONCRETE BALLAST RING AND TOP SLAB. SEE DETAILS THIS SHEET.
2	FURNISH AND INSTALL E-ONE STAINLESS STEEL LATERAL KIT NA0330P09. SEE DETAIL THIS SHEET.
3	FURNISH AND INSTALL 1-1/2" WYE.
4	FURNISH AND INSTALL 2" BYPASS CONNECTION. SEE DETAIL ON SHEET C3.3.
5	FURNISH AND INSTALL ELEVATED PLATFORM ELECTRICAL PANEL. SEE DETAIL THIS SHEET.
6	FURNISH AND INSTALL STONE TO LIMITS SHOWN. SEE DETAIL THIS SHEET.
7	FURNISH AND INSTALL PERIMETER FENCE WITH 16' ROLLING GATE.
8	PROPOSED FULL DEPTH ROAD RECONSTRUCTION. SEE PAVEMENT SECTION ON SHEET C3.3.
9	SEE SHEET C2.3 UTILITY PLANS FOR WATER AND SEWER FORCEMAIN INSTALLATION DETAILS.



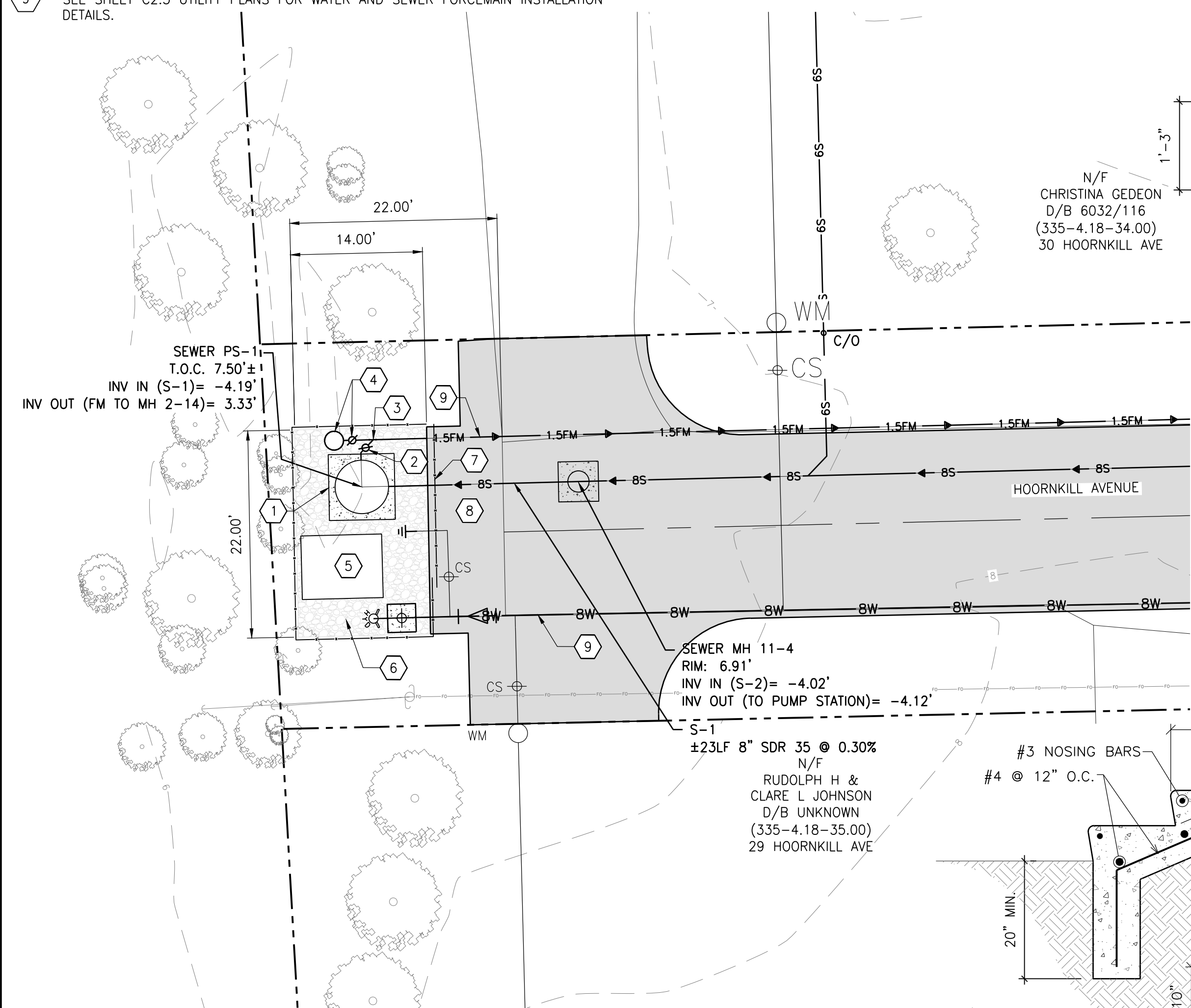
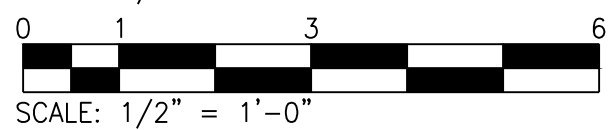
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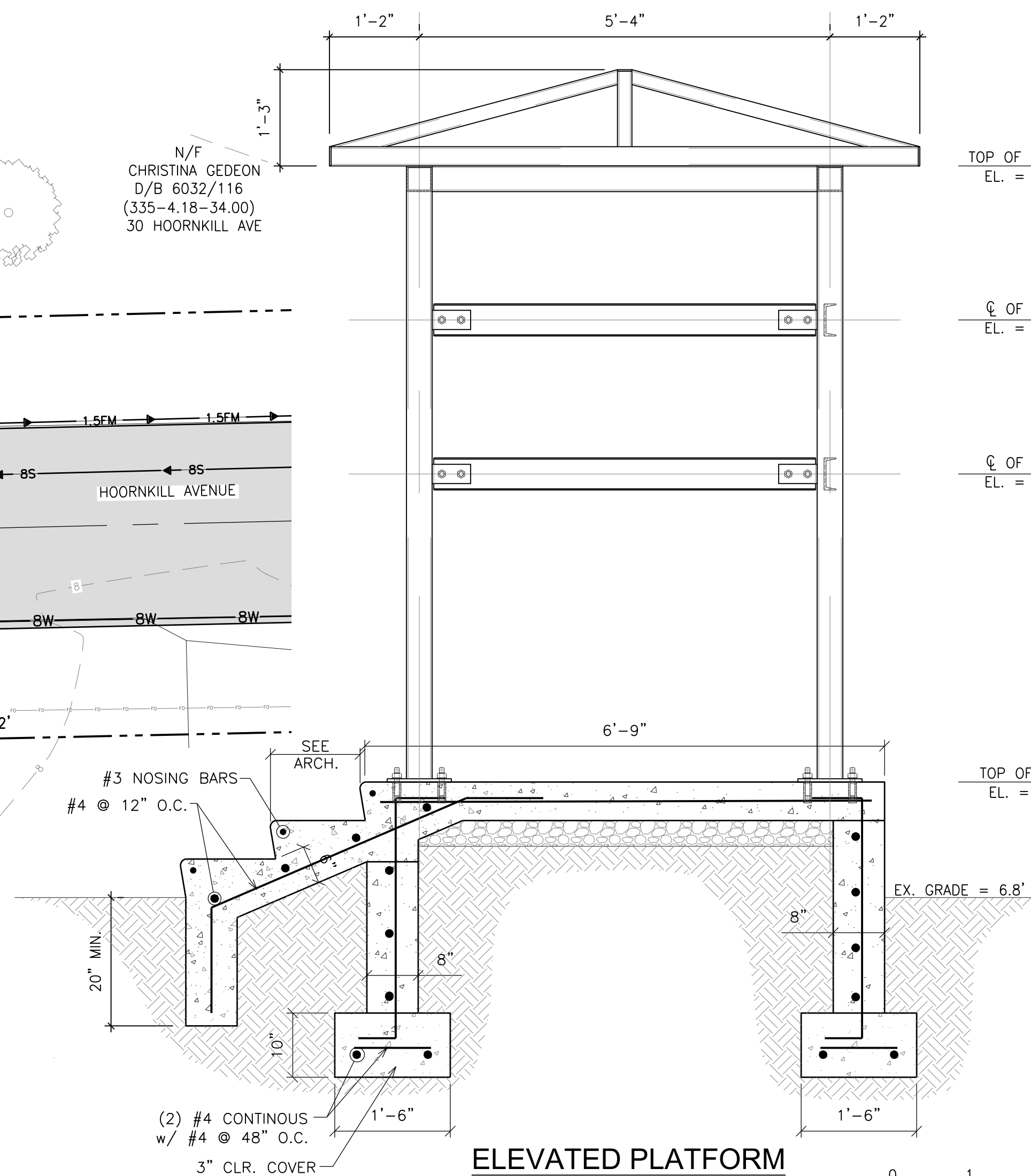
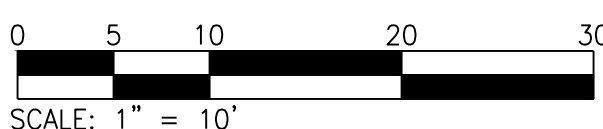
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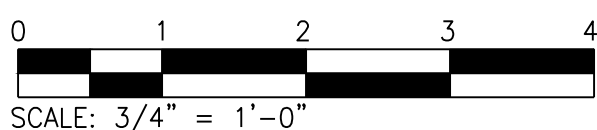
SCALE: $1/2" = 1'-0"$



SCALE: 1" = 10'



ELECTRICAL PANEL DETAIL



DESIGN / DEVELOPMENT PLANS
PRINTS ISSUED FOR:
REVIEW

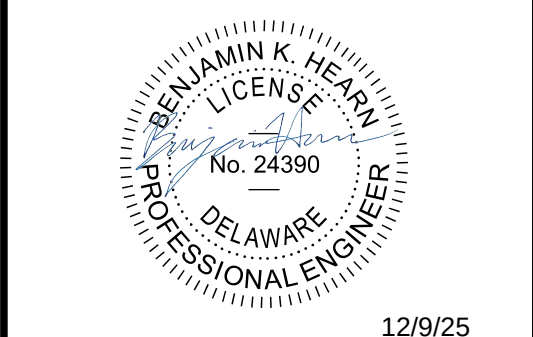
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HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



PUMP STATION SITE PLAN AND DETAILS

SCALE : AS SHOWN	SHEET NO. C6.1
DESIGN BY : JTH	
DRAWN BY : CRH/MDM	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	DRAWING 17 OF 31

[illegible]

HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

N:\Projects\2024\240226 Hoornkill Avenue Water Improvements\Drawings\Plan Set\01-1-1 ESD Plan.dwg, 12/9/2025 9:03 AM, Chen R. Hochstetler

PEN-RED (0.06 INCHES (1.5mm))

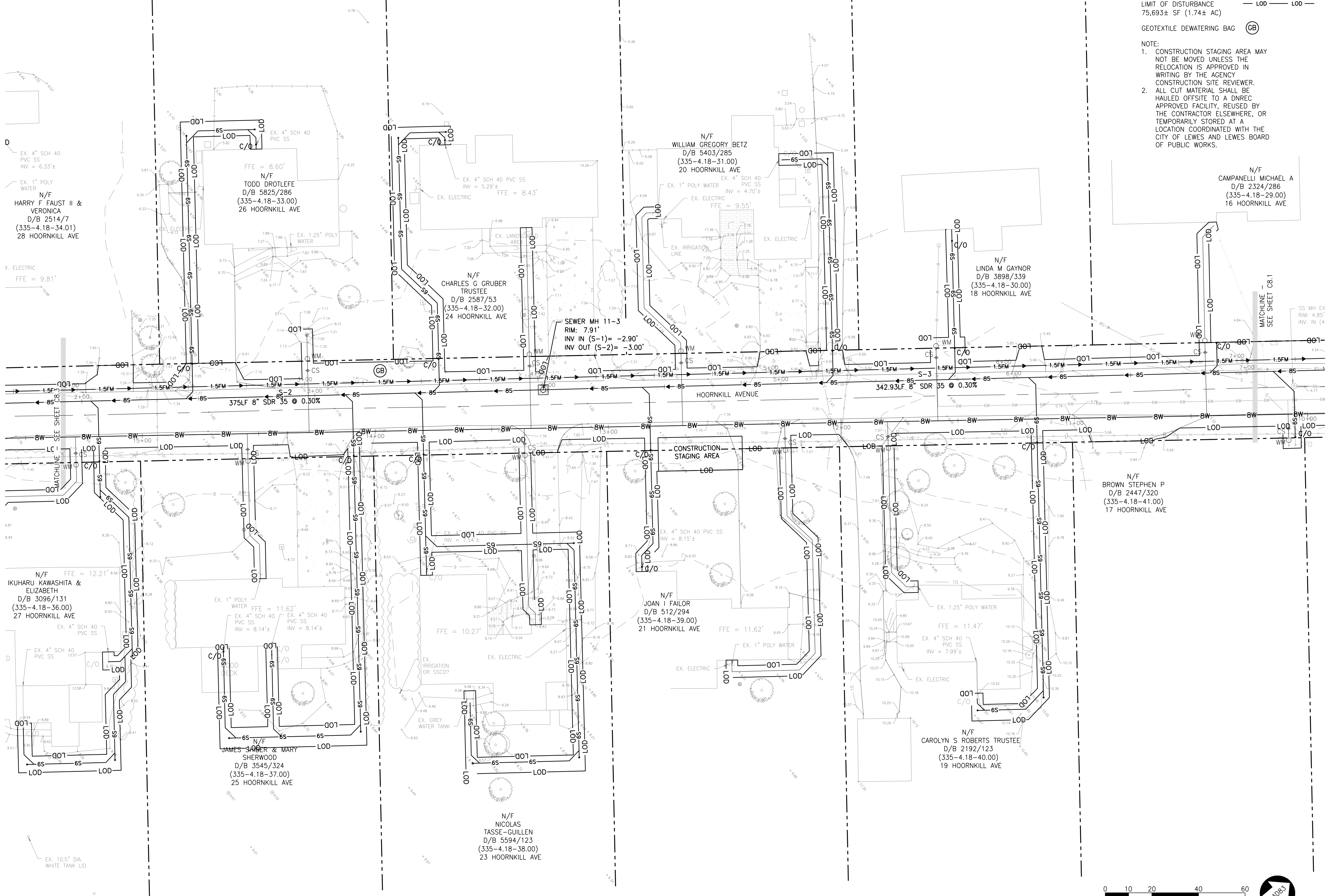
PEN-YELLOW (0.07 INCHES (1.8mm))

PEN-GREEN (0.10 INCHES (2.5mm))

PEN-BLUE (0.12 INCHES (3.0mm))

PEN-MAGENTA (0.14 INCHES (3.5mm))

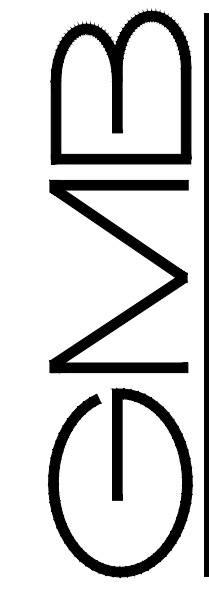
PEN-WHITE (0.20 INCHES (5.0mm))



LEGEND

- EXISTING PROPERTY LINE — — — — —
- EXISTING CONTOUR — 29 — — — — —
- LIMIT OF DISTURBANCE — LOD — LOD —
- 75,693± SF (1.74± AC)
- GEOTEXTILE DEWATERING BAG (GB)

NOTE:
1. CONSTRUCTION STAGING AREA MAY NOT BE MOVED UNLESS THE RELOCATION IS APPROVED IN WRITING BY THE AGENCY.
2. ALL CUT MATERIAL SHALL BE HAULED OFFSITE TO A DNREC APPROVED FACILITY, REUSED BY THE CONTRACTOR ELSEWHERE, OR TEMPORARILY STORED AT A LOCATION COORDINATED WITH THE CITY OF LEWES AND LEWES BOARD OF PUBLIC WORKS.



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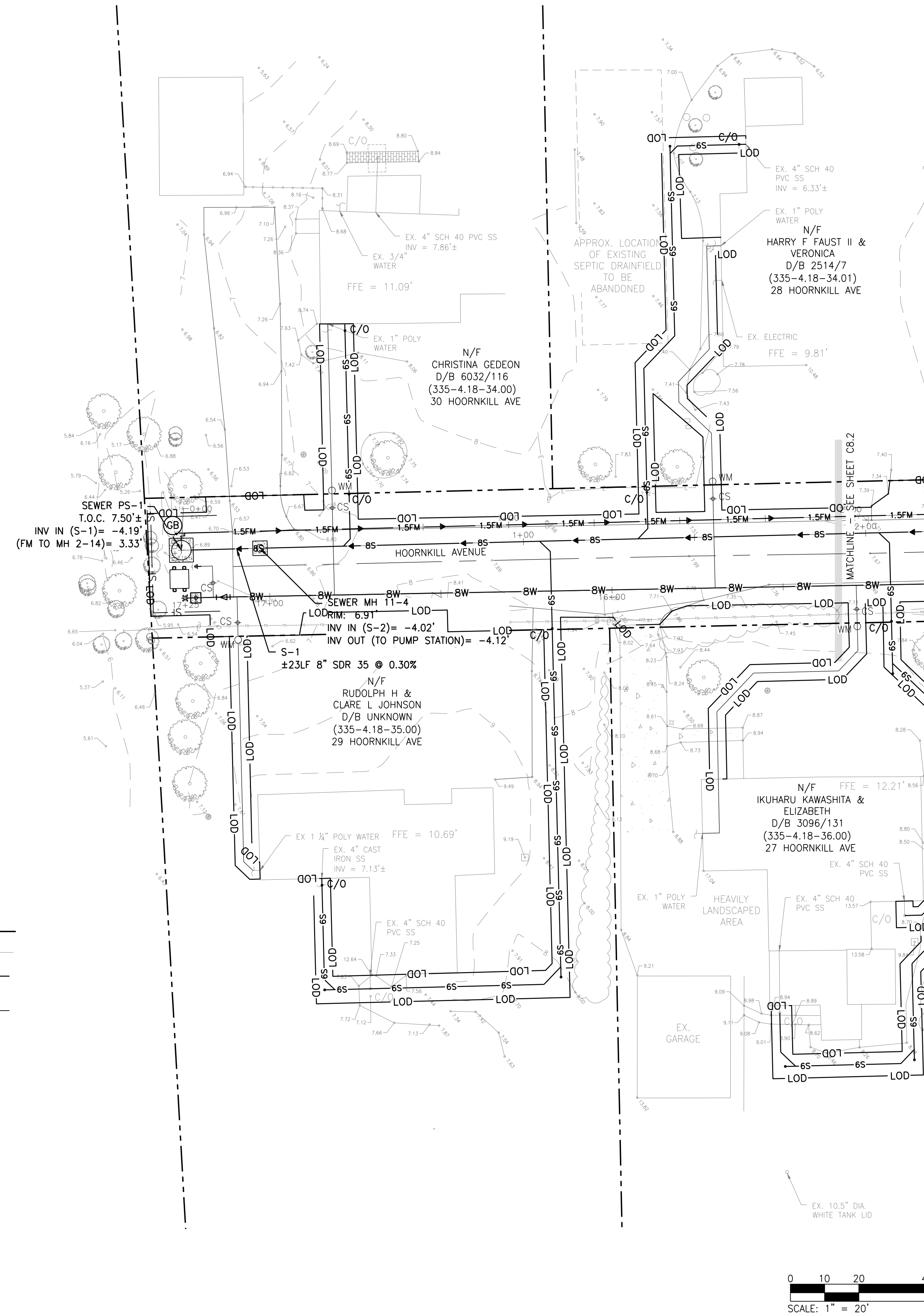
HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS FOR LEWES BOARD OF PUBLIC WORKS LEWES AND REHOBOTH HUNDRED SUSSEX COUNTY, DELAWARE



BENJAMIN K. HEARN
No. 24390
DELAWARE
PROFESSIONAL ENGINEER
12/9/25

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'	SHEET NO.
DESIGN BY: CRH	C8.2
DRAWN BY: CRH	
CHECKED BY: BKH	
GMB FILE: 240226	
DATE: DEC 2025	DRAWING: 23 OF 31



LEGEND

EXISTING PROPERTY LINE ——— ——— ———

EXISTING CONTOUR ——— —29— ——— ———

LIMIT OF DISTURBANCE ——— LOD ——— LOD ———

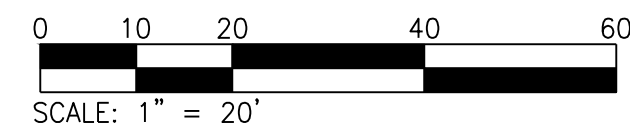
75,693± SF (1.74± AC)

SILT FENCE ——— SF ——— SF ———

GEOTEXTILE DEWATERING BAG (GB)

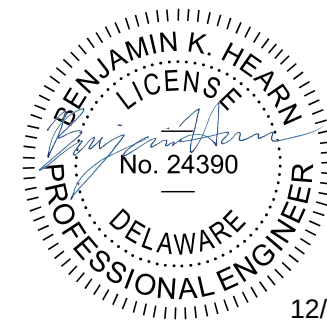
NOTE:

1. CONSTRUCTION STAGING AREA MAY NOT BE MOVED UNLESS THE RELOCATION IS APPROVED IN WRITING BY THE AGENCY CONSTRUCTION SITE REVIEWER.
2. ALL CUT MATERIAL SHALL BE HAULED OFFSITE TO A DNREC APPROVED FACILITY, REUSED BY THE CONTRACTOR ELSEWHERE, OR TEMPORARILY STORED AT A LOCATION COORDINATED WITH THE CITY OF LEWES AND LEWES BOARD OF PUBLIC WORKS.



HOORNKILL AVENUE WATER AND SANITARY SEWER IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



12/9/25

EROSION AND SEDIMENT CONTROL PLAN

SCALE : 1" = 20'	SHEET NO. C8.3
DESIGN BY : CRH	
DRAWN BY : CRH	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	
DRAWING 24 OF 31	

K:\Projects\2024\240226 Hoornkill Avenue Water Improvements\Drawings\Working Set\04-4-4 ESC Details.dwg, 12/9/2025 3:04 AM, Chen, R. Hochstetler
PLOT: RED (200 INCHES (50mm))
PLOT: BLUE (200 INCHES (50mm))
PLOT: GREEN (200 INCHES (50mm))
PLOT: YELLOW (200 INCHES (50mm))
PLOT: WHITE (200 INCHES (50mm))

ESC STANDARD PLAN FOR MINOR LINEAR UTILITY DISTURBANCES 5AC OR LESS OF DISTURBANCE WITH ONLY 1AC OF DISTURBANCE AT A TIME SEDIMENT CONTROL GENERAL NOTES

- SUSSEX CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE *DELAWARE SEDIMENT AND STORMWATER REGULATIONS*, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE SUSSEX CONSERVATION DISTRICT.
- FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE *DELAWARE EROSION AND SEDIMENT HANDBOOK*, LATEST EDITION.
- AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
- APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60, *REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION*, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.

PARCEL INFORMATION

SITE ADDRESS / LOCATIONS OF PARCELS WITH PROPOSED SURFACE DISTURBANCE:
HOORNKILL AVENUE (CITY RIGHT-OF-WAY)
TAX MAP 335-4.18-49.00 (570 PILOTTOWN RD)
TAX MAP 335-4.18-48.01 (1 HOORNKILL AVE)
TAX MAP 335-4.18-22.00 (2 HOORNKILL AVE)
TAX MAP 335-4.18-48.00 (3 HOORNKILL AVE)
TAX MAP 335-4.18-23.00 (4 HOORNKILL AVE)
TAX MAP 335-4.18-47.00 (5 HOORNKILL AVE)
TAX MAP 335-4.18-24.00 (6 HOORNKILL AVE)
TAX MAP 335-4.18-46.00 (7 HOORNKILL AVE)
TAX MAP 335-4.18-25.00 (8 HOORNKILL AVE)
TAX MAP 335-4.18-45.00 (9 HOORNKILL AVE)
TAX MAP 335-4.18-26.00 (10 HOORNKILL AVE)
TAX MAP 335-4.18-44.00 (11 HOORNKILL AVE)
TAX MAP 335-4.18-27.00 (12 HOORNKILL AVE)
TAX MAP 335-4.18-43.00 (13 HOORNKILL AVE)
TAX MAP 335-4.18-28.01 (14 HOORNKILL AVE)
TAX MAP 335-4.18-42.00 (15 HOORNKILL AVE)
TAX MAP 335-4.18-29.00 (16 HOORNKILL AVE)
TAX MAP 335-4.18-41.00 (17 HOORNKILL AVE)
TAX MAP 335-4.18-30.00 (18 HOORNKILL AVE)
TAX MAP 335-4.18-40.00 (19 HOORNKILL AVE)
TAX MAP 335-4.18-21.00 (20 HOORNKILL AVE)
TAX MAP 335-4.18-39.00 (21 HOORNKILL AVE)
TAX MAP 335-4.18-38.00 (23 HOORNKILL AVE)
TAX MAP 335-4.18-32.00 (24 HOORNKILL AVE)
TAX MAP 335-4.18-37.00 (25 HOORNKILL AVE)
TAX MAP 335-4.18-33.00 (26 HOORNKILL AVE)
TAX MAP 335-4.18-36.00 (27 HOORNKILL AVE)
TAX MAP 335-4.18-34.01 (28 HOORNKILL AVE)
TAX MAP 335-4.18-35.00 (29 HOORNKILL AVE)
TAX MAP 335-4.18-34.00 (30 HOORNKILL AVE)

PROJECT INFORMATION

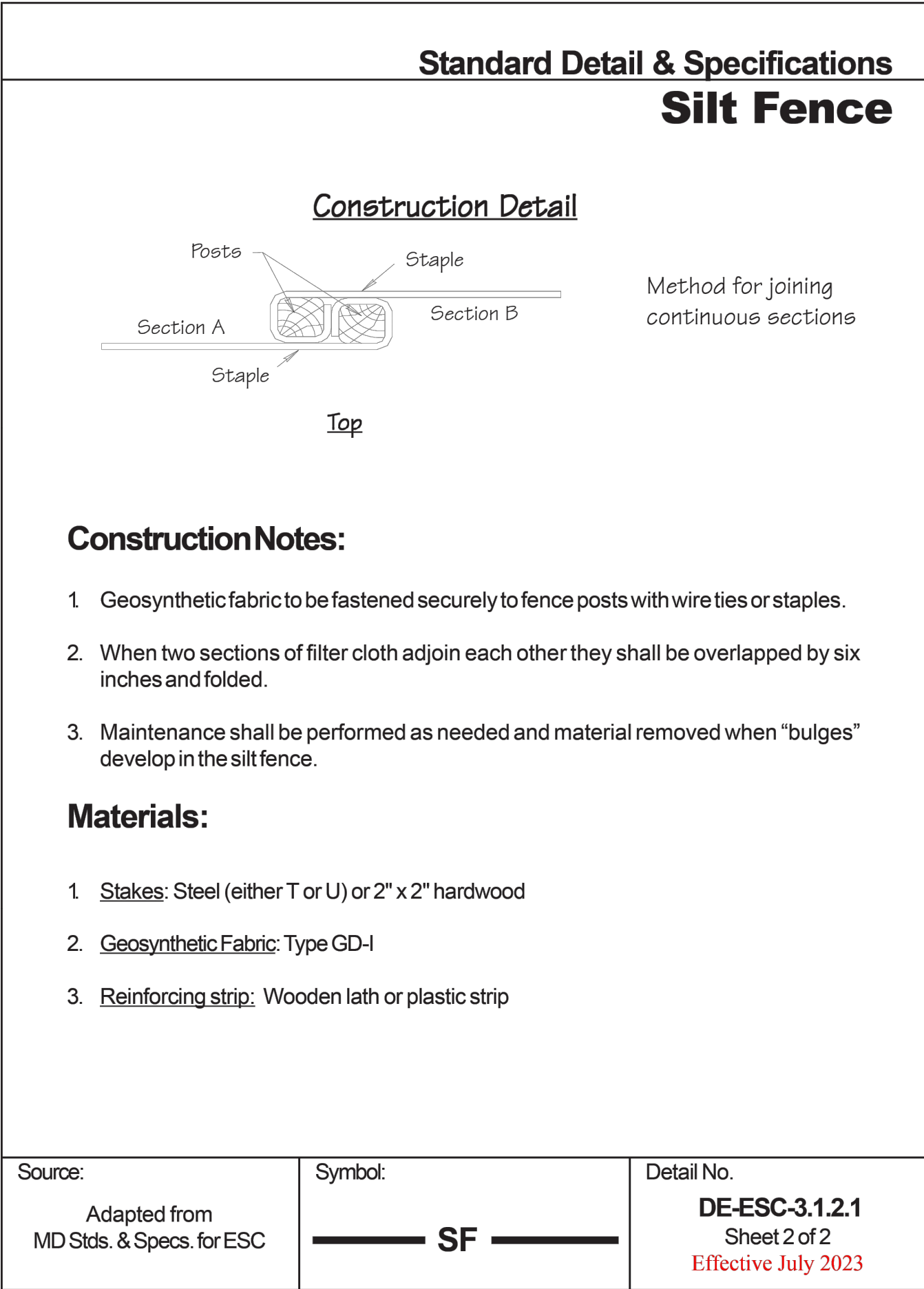
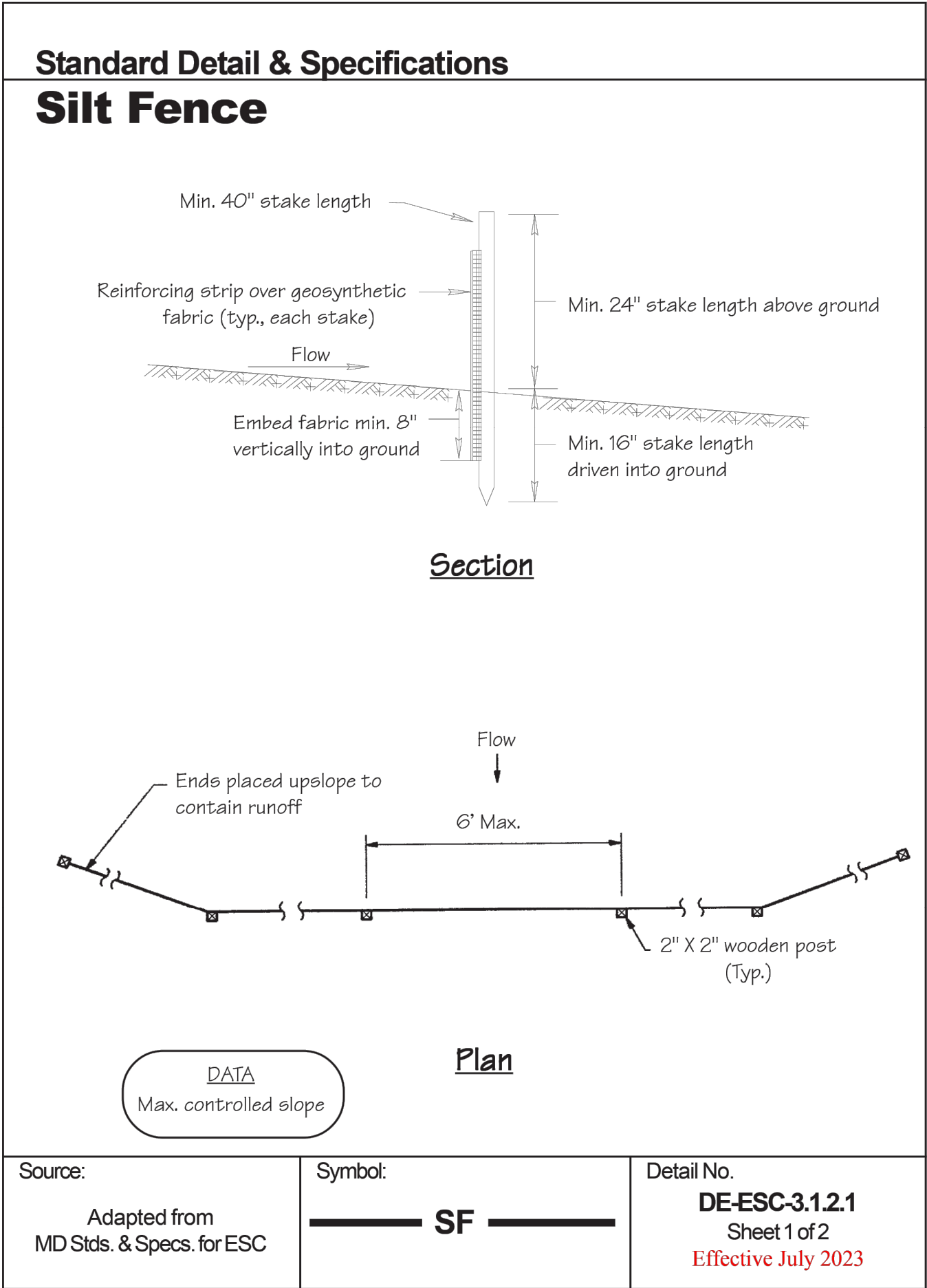
AREA TO BE DISTURBED: 75,693± SF (1.74± AC)
EXISTING IMPERVIOUS AREA WITHIN L.O.D.: 43,789 SF
PROPOSED IMPERVIOUS AREA WITHIN L.O.D.: 44,735 SF
(ACCOUNTS FOR REPAVING OF HOORNKILL AVE AND IMPROVEMENTS RELATED TO PROPOSED PUMP STATION)

PROJECT INFORMATION

PROJECT OWNER: LEWES BOARD OF PUBLIC WORKS
107 FRANKLIN AVENUE
LEWES, DE 19958
CONTACT: ROBIN DAVIS
(302) 645-6228 (PHONE)
rdavis@lewesbpwde.gov (EMAIL)
ENGINEER: GEORGE, MILES & BUHR, LLC
400 HIGH STREET
SEAFORD, DE 19973
CONTACT: BENJAMIN K. HEARN, P.E.
(302) 628-1421 x3107 (PHONE)
BHearn@gmbnet.com (EMAIL)

SEQUENCE OF OPERATIONS

- A PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION. ALSO, THE SUSSEX CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORM WATER MANAGEMENT PLAN.
- WORK SHALL PROCEED SUCH THAT EACH AREA TO BE DISTURBED IS NO MORE THAN ONE ACRE.
- INSTALL PERIMETER CONTROLS AS NECESSARY SURROUNDING THE SITE.
- EXCAVATE TRENCHES AND INSTALL PROPOSED SANITARY SEWER MAIN (SANITARY SEWER MANHOLE MH11-4 TO MH11-2), PUMP STATION, FORCEMAIN, AND MANHOLES AS SHOWN ON PLAN SHEETS. BACKFILL AND COMPACT TO LEVEL BELOW GABC LAYER (ROADWAY AREAS). INSTALL TEMPORARY PAVEMENT RESTORATION.
- EXCAVATE TRENCHES AND INSTALL PROPOSED WATER MAIN AND HYDRANTS AS SHOWN ON PLAN SHEETS. BACKFILL AND COMPACT TO LEVEL BELOW GABC LAYER.
- START UP OF PROPOSED PUMP STATION.
- INSTALL PROPOSED SANITARY SEWER BYPASSING EXISTING WET WELL TO MH11-2.
- ABANDON EXISTING WET WELL AND SS MH EX-HA AND MH EX-HB.
- CLEAN AND LINE EXISTING SANITARY SEWER AND MANHOLES AS SHOWN ON THESE PLANS.
- INSTALL WATER SERVICES AND SEWER LATERALS AS SHOWN FOR RESIDENTS ALONG HOORNKILL AVENUE, INCLUDING THE CURB STOPS AND CLEANOUTS AT RIGHT-OF-WAY LINES.
- PLUG AND ABANDON IN PLACE EXISTING 6" WATERLINE WITHIN HOORNKILL AVENUE AS SHOWN ON THESE PLANS.
- ABANDON EXISTING SEPTIC TANKS AND SYSTEMS FOR 19 HOORNKILL AVE. THROUGH 30 HOORNKILL AVENUE.
- GRADE DISTURBED GRASS AREAS. TOPSOIL, SEED AND MULCH.
- REMOVE SEDIMENT CONTROL MEASURES AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR.



Standard Detail & Specifications

Dust Control

Temporary Methods:

- Mulches - See **DE-ESC-3.4.5**, Standard Detail and Specifications for Mulching.
- Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
- Adhesives - Use on mineral soils only (not effective on muck soils). Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal/Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4:1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

- Tillage - For emergency temporary treatment, scarify the soil surface to prevent or reduce the amount of blowing dust until a more appropriate solution can be implemented. Begin the tillage operation on the windward side of the site using a chisel-type plow for best results.
- Sprinkling - Sprinkle site with water until the surface is moist . Repeat as needed.
- Calcium Chloride - Apply as flakes or granular material with a spreader at a rate that will keep the soil surface moist. Re-apply as necessary.
- Barriers - Place barriers such as solid board fences, snow fences, hay bales, etc. at right angles to the prevailing air currents at intervals of approx. 10X their height.

Permanent Methods:

- Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
- Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

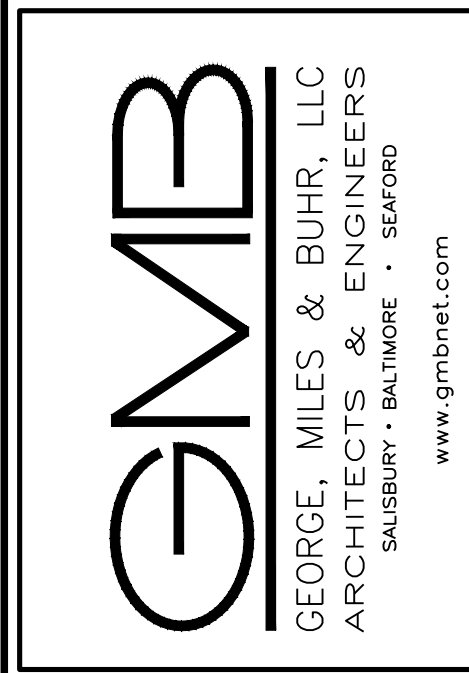
Source: Adapted from VA ESC Handbook	Symbol:	Detail No. DE-ESC-3.4.8 Sheet 1 of 1 Effective July 2023
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DESIGN / DEVELOPMENT PLANS
PRINTS ISSUED FOR:
REVIEW

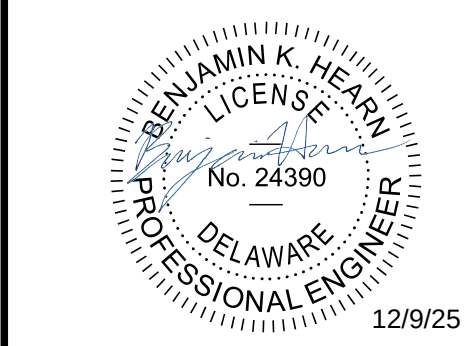
DATE

REVISIONS

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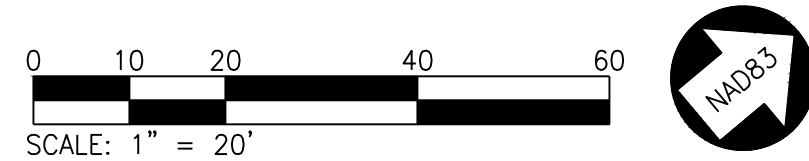


HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

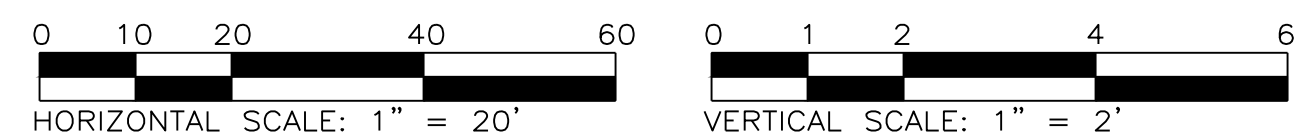


EROSION AND
SEDIMENT
CONTROL NOTES
AND DETAILS

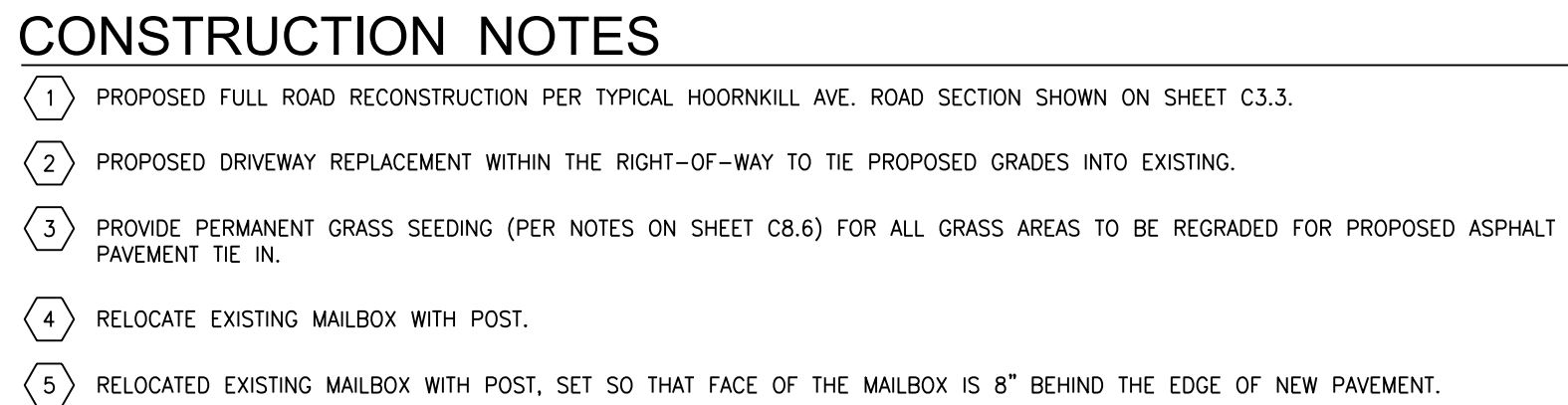
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DESIGN BY: CRH	
DRAWN BY: CRH	
CHECKED BY: BKH	
GMB FILE: 240226	
DATE: DEC 2025	DRAWING 25 OF 31



1	PROPOSED FULL ROAD RECONSTRUCTION PER TYPICAL HOORNKILL AVE. ROAD SECTION SHOWN ON SHEET C3.3.
2	PROPOSED DRIVEWAY REPLACEMENT WITHIN THE RIGHT-OF-WAY TO TIE PROPOSED GRADES INTO EXISTING.
3	PROVIDE PERMANENT GRASS SEEDING (PER NOTES ON SHEET C8.6) FOR ALL GRASS AREAS TO BE REGRADED FOR PROPOSED ASPHALT PAVEMENT TIE IN.
4	REMOVE PORTION OF GRAVEL DRIVEWAY FOR PROPOSED HOORNKILL AVENUE PAVEMENT. REGRADE GRAVEL AS NEEDED TO TIE-IN TO HOORNKILL AVENUE PROPOSED GRADES.
5	RELOCATE EXISTING MAILBOX WITH POST.
6	RELOCATED EXISTING MAILBOX WITH POST, SET SO THAT FACE OF THE MAILBOX IS 8" BEHIND THE EDGE OF NEW PAVEMENT.



HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"= 2'

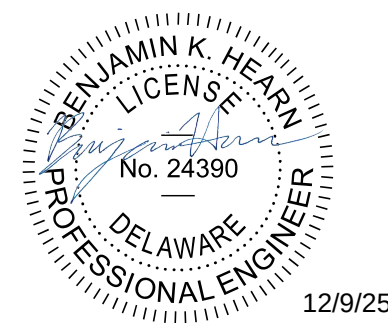


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HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS

FOR
LEWES BOARD OF PUBLIC WORKS

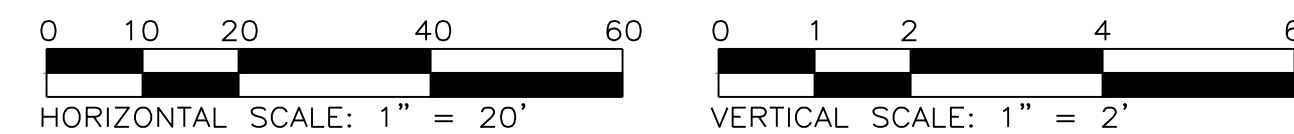
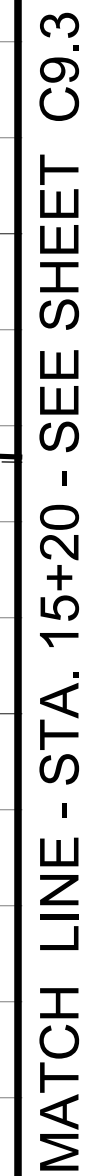
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE

ROAD GRADING
PLAN & PROFILE

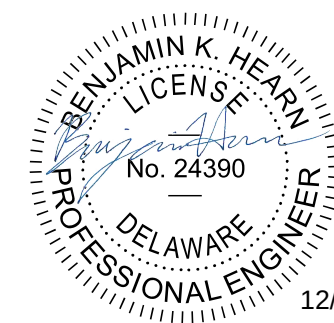
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DESIGN BY : CRH, JWK	
DRAWN BY : CRH, JWK	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	DRAWING 29 OF 31

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1	PROPOSED FULL ROAD RECONSTRUCTION PER TYPICAL HOORNKILL AVE. ROAD SECTION SHOWN ON SHEET C3.3.
2	PROPOSED DRIVEWAY REPLACEMENT WITHIN THE RIGHT-OF-WAY TO TIE PROPOSED GRADES INTO EXISTING.
3	PROVIDE PERMANENT GRASS SEEDING (PER NOTES ON SHEET C8.6) FOR ALL GRASS AREAS TO BE REGRADED FOR PROPOSED ASPHALT PAVEMENT TIE IN.
4	RELOCATE EXISTING MAILBOX WITH POST.
5	RELOCATED EXISTING MAILBOX WITH POST, SET SO THAT FACE OF THE MAILBOX IS 8" BEHIND THE EDGE OF NEW PAVEMENT.



HOORNKILL AVENUE
WATER AND SANITARY SEWER
IMPROVEMENTS
FOR
LEWES BOARD OF PUBLIC WORKS
LEWES AND REHOBOTH HUNDRED
SUSSEX COUNTY, DELAWARE



SCALE : 1" = 20'	SHEET NO. C9.4
DESIGN BY : CRH,JWK	
DRAWN BY : CRH,JWK	
CHECKED BY : BKH	
GMB FILE : 240226	
DATE : DEC 2025	
DRAWING 31 OF 31	