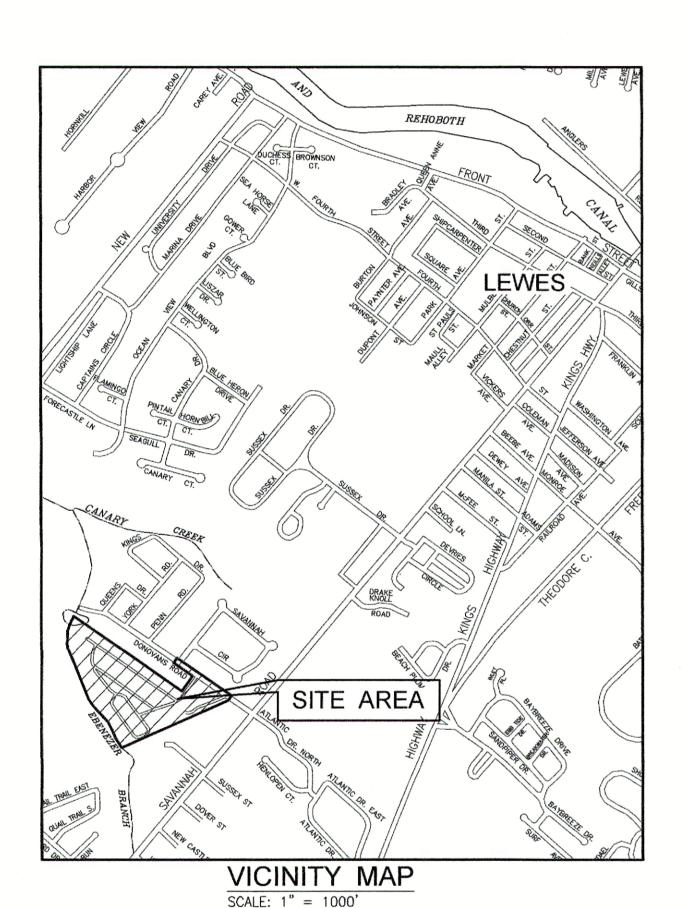
SEDIMENT AND STORMWATER MANAGEMENT PLANS CITY OF LEWES

SUSSEX COUNTY, DELAWARE



GMB FILE NOS. 170196 & 190117

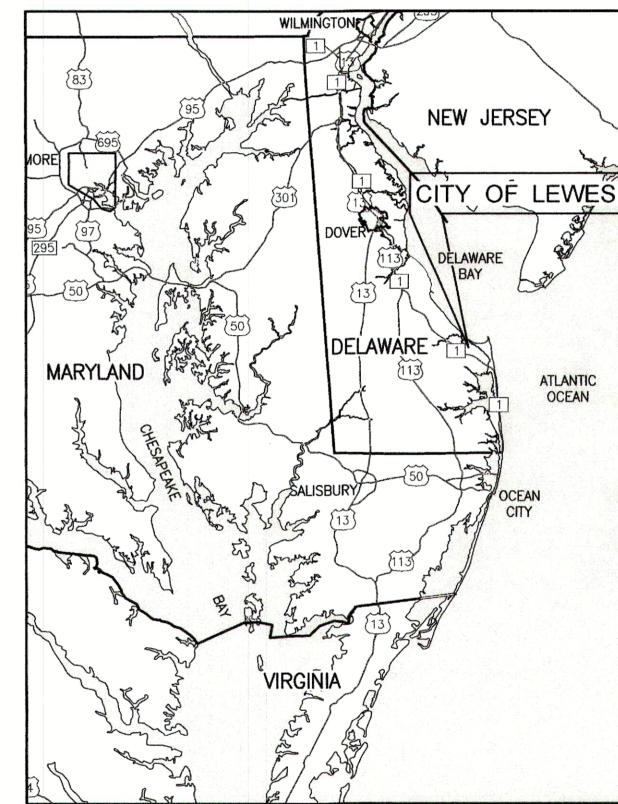


GENERAL NOTES

- DRAWINGS ARE BASED ON FIELD SURVEYS BY GEORGE, MILES AND BUHR, LLC. PERFORMED DURING FEBRUARY 2018. HORIZONTAL CONTROL IS NAD83. VERTICAL CONTROL IS NAVD88.
- LOCATIONS OF SEPTIC/SEWAGE CLEANOUTS AND EXPOSED SEPTIC/SEWAGE AND WATER SERVICE (USUALLY 1" DIA. PVC) PIPING UNDER OR IMMEDIATELY ADJACENT TO THE MOBILE HOME PARK WAS DETERMINED IN THE FIELD BY GEORGE, MILES AND BUHR, LLC. DURING DECEMBER 2021 AND
- PROPERTY AND RIGHT-OF-WAY LINES INDICATED ON THE DRAWING WERE DERIVED FROM THE RECORDED LAND RECORDS, SUSSEX COUNTY TAX MAPS, AND AN UNRECORDED DRAWING PREPARED BY MILLER-LEWIS, INC. ENTITLED "A.L.T..A. SURVEY OF DONOVAN-SMITH MHP, LLC" DATED JUNE 1, 2006. LOCATIONS ARE APPROXIMATE ONLY. CERTAIN COMMUNITY WELL AND SEPTIC/SEWAGE HOLDING
- LOT AND RIGHT-OF-WAY LINES WITHIN DONOVAN-SMITH MOBILE HOME PARK WERE TAKEN FROM A SKETCH PROVIDED BY THE OWNER AND AERIAL/STREET VIEW PHOTOGRAPHY. LOCATIONS ARE
- A PORTION OF THE PROJECT SITE IS WITHIN FLOOD ZONE "AE", ELEVATION 7, AS SHOWN ON FEMA
- 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
- 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.
- KEEP EXISTING UTILITIES IN SERVICE TO THE EXTENT POSSIBLE, COORDINATE ISOLATION OF EXISTING WATER MAIN AND SEWER WITH DONOVAN - SMITH MOBILE HOME PARK AND NOTIFY AFFECTED RESIDENTS AT LEAST 48 HOURS IN ADVANCE.
- 9. 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 MUNICIPAL OR UTILITY COMPANY SPECIFICATIONS. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY DAMAGE TO ANY UTILITIES.
- 10. 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". PROVIDE A MINIMUM VERTICAL SEPARATION BETWEEN WATER AND SEWER SERVICES OF 12".
- 11. WATER SERVICE CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE 1" DIA. SDR-9 POLYETHYLENE TUBING, AND PROVIDED TO EACH MHP LOT WHETHER INDICATED ON THE PLANS OR NOT.
- 12. MINIMUM COVER FOR ALL WATER MAINS AND WATER SERVICES SHALL BE 3'-6".
- 13. 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.
- 14. CONTRACTOR SHALL ADJUST TO FINISH GRADE AS REQUIRED, ANY VALVE BOXES, MANHOLES, ETC., PRIOR TO RESURFACING THE STREET.
- 15. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS TO PROTECT EXISTING UTILITY POLES AND GUY ANCHORS AS REQUIRED. SEE SPECIAL PROVISIONS OF SPECIFICATIONS.
- 16. THE CONTRACTOR SHALL SEQUENCE DAILY CONSTRUCTION TO MAINTAIN WATER AND SEWER SERVICE TO EACH RESIDENT TO THE EXTENT POSSIBLE.
- 17. CONTRACTOR SHALL INSTALL 6" DIA. PVC LATERALS, INCLUDING ALL NECESSARY FITTINGS AND ADAPTERS BETWEEN CLEANOUT AND DWELLINGS.

- 18. CONTRACTOR SHALL EXTEND WATER MAIN BELOW ANY CONFLICTS OR OBSTRUCTIONS, TO PROVIDE

- 21. PROVIDE CONCRETE BUTTRESSES FOR ALL TEES, BENDS, AND PLUGS ON PROPOSED WATER MAINS PER DETAILS ON SHEET C6.1.
- 22. THE CONTRACTOR SHALL INSTALL TEMPORARY CONNECTIONS FOR PRESSURIZATION AT LOCATIONS AS NECESSARY FOR TESTING, DISINFECTION AND FLUSHING OF NEW WATER MAIN.
- 23. CONTRACTOR SHALL PROVIDE ALL NECESSARY STAKEOUT OF LINE AND GRADE FOR PIPE INSTALLATION
- 24. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL PERMITS SECURED WHICH TAKE
- 25. 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.
- 26. ANY DISTURBED AREAS OUTSIDE THE RIGHT-OF-WAY SHALL BE RESTORED TO THEIR ORIGINAL CONDITION IMMEDIATELY.
- 27. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY RELOCATE/RESET/RECONSTRUCT ALL MAILBOXES, SIGNS, PLANTERS, HOUSE LAMPS, STREET SIGNS, DRIVEWAYS, PARKING LOTS, AND ANY OTHER TYPES OF OBSTRUCTIONS WHETHER NATURAL OR MANMADE, ETC. WHENEVER REQUIRED AS DIRECTED BY
- 28. THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING DRIVEWAYS, PARKING LOTS AND OTHER ENTRANCES AT ALL TIMES.
- 29. WITHIN THE DELDOT RIGHT-OF-WAY, ALL BACKFILLED AND DISTURBED AREAS ARE TO BE SEEDED AND MULCHED, WITH 6" OF TOPSOIL TO BE PLACED IN FILL AREAS. OUTSIDE OF THE DELDOT RIGHT-OF-WAY. ALL BACKFILLED AND DISTURBED AREAS ARE TO BE SEEDED AND MULCHED, WITH 4" MINIMUM OF TOPSOIL TO BE PLACED IN FILL AREAS. REFER TO THE NOTES AND DETAILS ON SHEETS C2.1 THROUGH C2.3 FOR VEGETATIVE STABILIZATION.
- 30. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT, LATEST EDITION, AND ALL RULES AND REGULATIONS THERETO.
- 31. 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. CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL WITH THE APPROPRIATE AGENCY.
- 32. NO GREATER THAN 1.0 ACRE WILL BE DISTURBED AT ANY ONE TIME THROUGHOUT THE COURSE OF CONSTRUCTION.
- 33. UTILITY TRENCHES WITHIN THE DONOVANS ROAD RIGHT-OF-WAY SHALL INITIALLY BE RESTORED USING THE FIGURE 2-3, TEMPORAY PATCH DETAIL FROM THE DELDOT UTILITIES MANUAL AS SHOWN ON
- 34. NO WORK WILL BE ALLOWED ALONG DONOVANS ROAD BETWEEN 5:00 PM AND 7:00 AM.
- 35. SANITARY SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH LEWES BPW STANDARDS AND SPECIFICATIONS AND DETAILS.





LOCATION MAP

SCALE: 1" = 20 MILES

DRAWING LIST

COVER SHEET AND GENERAL NOTES G1.0 G1.1 DELDOT UTILITY PLAN NOTES KEY PLAN AND LEGEND C1.1 THRU C1.3 UTILITY PLANS C2.1 THRU C2.3 CONSTRUCTION SITE NOTES AND DETAILS

C3.1 THRU C3.4 SANITARY SEWER PROFILES SANITARY SEWER DETAILS C4.1 AND C4.2 WATER MAIN CROSSING PROFILES

WATER MAIN DETAILS

C7.1 THRU C7.3 ROAD AND EROSION AND SEDIMENT CONTROL PLANS C8.1 THRU C8.4 ROAD PROFILES

ROAD ALIGNMENTS FINISHED GRADE SCHEDULES C9.2 AND C9.3

C10.1 ROAD DETAILS C11.1 DONOVANS ROAD TEMPORARY TRAFFIC CONTROL PLAN

BENCH MARK #1 (SEE SHEETS C1.1 AND C7.1) LOCATION: LATITUDE AND LONGITUDE: N38.762899', W75.153513' STATE PLANE COORDINATES: N 277,942.591', E 731,205.288'

GEORGE, MILES & BUHR, LLC ARCHITECTS & ENGINEERS SALISBURY · BALTIMORE · SEAFORD 400 HIGH STREET SEAFORD, DELAWARE 19973 302-628-1421, FAX 302-628-8350 www.gmbnet.com

JULY 2022

: AS NOTED DESIGN BY : JWK DRAWN BY : JWK : JULY 2022

FINAL PLANS

PRINTS ISSUED FOR:

GENERAL NOTES

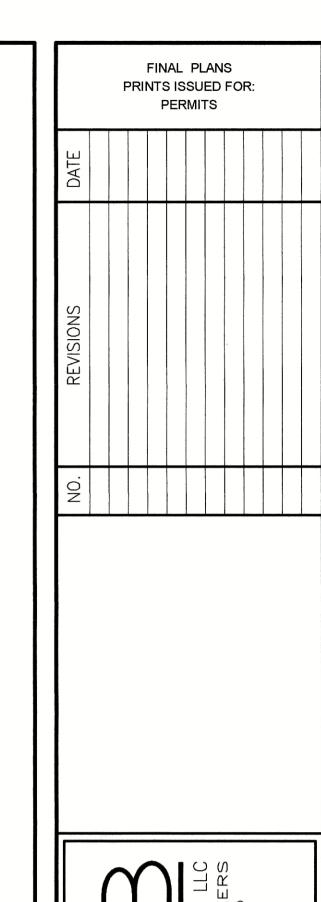
COVER SHEET

CHECKED BY : VAL, COD GMB FILE : 170196

DELDOT UTILITY PLAN NOTES

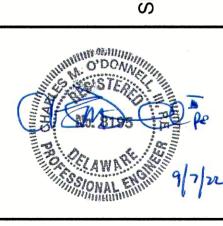
- 1. PLANS ARE REVIEWED FOR GENERAL CONFORMITY. DELDOT IS NOT RESPONSIBLE FOR ERRORS OR OMISSIONS WITHIN THE PLAN SET. THE UTILITY OWNER IS RESPONSIBLE TO ENSURE ACCURACY OF PLANS AND CONFORMANCE WITH DELDOT STANDARDS.
- 2. MANHOLE TOP SECTIONS WILL BE OFF SET CONE STYLE. ANY MANHOLE LIDS THAT ARE DETERMINED BY DELDOT TO NOT BE IN THE CENTER OF THE LANE SHALL BE ADJUSTED PRIOR TO FINAL PAVEMENT PLACEMENT.
- 3. MANHOLE FRAME AND LIDS SHALL BE INITIALLY SET ½" LOW AND ADJUSTED TO FINISH GRADE WITH CONCRETE COLLAR AFTER FINAL PAVEMENT HAS BEEN PLACED.
- 4. CONCRETE COLLARS SHALL BE POURED AROUND MANHOLE FRAME AND LIDS/VALVE BOXES TO FINISH GRADE USING CLASS "A" CONCRETE.
- 5. ALL BACKFILL MATERIAL IN EXISTING/PROPOSED ROADWAY SHALL CONFORM TO TYPE "C" BORROW. ALL BORROW BACKFILL SHALL BE COMPACTED TO 95% USING AASHTO T99 STANDARD FOR TESTING.
- 6. GABC PLACED SHALL BE COMPACTED TO 98%.
- 7. COMPACTION TESTING SHALL BE PERFORMED EVERY 100' AND TESTING SHALL BE TAKEN ON EACH LIFT OF MATERIAL PLACED.
- 8. TAR CHIP/HOT MIXES ROADS: TRAVEL WAY PAVEMENT DISTURBED SHALL BE RESTORED AT THE END OF THE DAY PRIOR TO REOPENING TO TRAFFIC. HOT MIX SHALL BE PLACE PER TEMP PATCHING DETAIL 6"GABC AND 2"TYPE "C" HOT MIX.
- 9. TAR CHIP/HOT MIXES SHOULDERS: SHOULDERS DISTURBED MAY BE LEFT IN GABC TO FINISH GRADE OVERNIGHT BUT SHALL BE CLOSED USING APPROPRIATE SIGNING AND DRUMS. TEMP PAVEMENT SHALL BE PLACED FOR SHOULDERS AT THE END OF EACH WORK WEEK.
- 10. IF THE REMAINING PORTION OF HOTMIX BETWEEN THE PIPE TRENCH EXCAVATION AND EDGE OF PAVEMENT IS LESS THAN 3' THE REMAINING SECTION SHALL BE REMOVED AND REPAVED AS PART OF THE FULL DEPTH PAVING RESTORATION.
- 11. ALL AREAS DISTURBED OUTSIDE OF THE PAVEMENT SHALL BE GRADED EACH DAY TO ENSURE POSITIVE DRAINAGE AND SHALL BE PERMANENTLY RESTORED AT THE END OF EACH WEEK.
- 12. ALL TEMPORARY HOT MIX SHALL BE PLACED TO PROVIDE A SMOOTH RIDABLE SURFACE TO DELDOT STANDARDS.
- 13. A SAFETY EDGE IS REQUIRED ON ALL HOT MIX PLACED.
- 14. ANY STRIPING DISTURBED SHALL BE PLACED AT THE END OF THE DAY PRIOR TO OPENING TO TRAFFIC.
- 15. PROOF ROLL OF GABC SHALL BE PERFORMED USING A LOADED 10 WHEELER PRIOR TO PLACEMENT OF HOT MIX.
- 16. ALL MATERIALS AND WORKMANSHIP WITHIN THE STATE R/W SHALL BE COMPLETED IN ACCORDANCE WITH CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, UTILITY MANUAL, SPECIAL PROVISIONS AND DESIGN MEMORANDUMS.
- 17. THERE IS A ONE YEAR WARRANTY ON ALL EARTH WORK AND CONCRETE. A THREE YEAR WARRANTY ON ALL HOT MIX INCLUDING SUBBASE/SUBGRADE ISSUES WITHIN THE PAVEMENT AREAS. WARRANTY DOES NOT START UNTIL ALL WORK IS COMPLETED AND A STAND OF GRASS HAS BEEN ESTABLISHED TO DELDOT STANDARDS AND A ACCEPTANCE LETTER HAS BEEN ISSUED.
- 18. ALL DISTURBED AREAS WITHIN THE STATE RIGHT-OF-WAY, BUT NOT IN THE PAVEMENT, SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. IF SOD IS USED NEXT TO SIDEWALK OR SHARED-USE PATH, CONTRACTOR SHALL GRADE TOPSOIL ADJACENT TO THE SIDEWALK OR SHARED-USE PATH PRIOR TO PLACEMENT OF SOD TO ENSURE THAT SOD IS PLACED FLUSH OR JUST BELOW EDGE OF SIDEWALK OR SHARED-USE PATH.
- 19. A 72-HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DELDOT DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING UTILITY CONSTRUCTION.
- 20. A 48 HOUR NOTICE IS REQUIRED TO BE GIVEN TO THE DELDOT INSPECTOR PRIOR TO MATERIAL RELEASES.
- 21. ALL CONCRETE /HOT MIX MATERIALS SHALL BE RELEASED BY THE INSPECTOR PRIOR TO PLACEMENT
- 22. MISS UTILITY OF DELAWARE SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
- 23. ALL SIGNING, STRIPING AND MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION). THE OWNER OR MAINTENANCE CORPORATION SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS INSTALLED AS PART OF THIS PROJECT.
- 24. A COPY OF THE UP TO DATE APPROVED CONSTRUCTION DOCUMENTS AND DELDOT APPROVAL LETTERS SHALL BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES AND BE AVAILABLE FOR INSPECTION BY DELDOT PERSONNEL
- 25. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48—HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELAWARE (SEE NOTE #22).
- 26. SHOULD UTILITY RELOCATION BE REQUIRED, THE DEVELOPER MUST SUBMIT A UTILITY RELOCATION PLAN FOR DELDOT REVIEW, ALONG WITH CORRESPONDENCE FROM THE UTILITY COMPANIES STATING PRELIMINARY APPROVAL TO THE RELOCATION AND DESIGN OF THE UTILITIES PRIOR TO THE DELDOT PRE—CONSTRUCTION MEETING. NO PHYSICAL CONSTRUCTION CAN OCCUR UNTIL THE UTILITY PLANS ARE APPROVED, THE INDIVIDUAL UTILITY COMPANIES ISSUE FINAL APPROVAL, AND A DELDOT UTILITY PERMIT IS ISSUED TO THE UTILITY COMPANY.
- 27. DESIGN AND INSTALLATION OF ALL PAVEMENT MARKINGS AND STRIPING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD. FOR FINAL PERMANENT PAVEMENT MARKINGS EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING. THERMO PLASTIC (EXTRUDED OR PREFORMED MATERIAL) WILL BE REQUIRED ON ASPHALT SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS. PERMANENT PAVEMENT MARKING TAPE (PER DELDOT APPROVED MATERIALS LIST) WILL BE REQUIRED ON CONCRETE SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
- 28. BREAKAWAY POSTS SHALL BE USED WHEN INSTALLING ALL SIGNS. REFERENCE DELDOT STANDARD CONSTRUCTION DETAIL T-15.
- 29. ALL PROPOSED CLOSED STORM DRAIN SYSTEMS SHALL BE VIDEO INSPECTED, REPAIRED AS NECESSARY AND APPROVED PRIOR TO THE INSTALLATION OF FINAL PAVING. IF REPAIRS ARE NEEDED, THE REPAIRED PIPE SECTIONS WILL NEED TO BE VIDEO INSPECTED AGAIN BEFORE THE REPAIR CAN BE APPROVED.
- 30. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PAVING WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY IS INSTALLED TO THE ELEVATIONS SHOWN AND THAT NO PONDING OF WATER EXISTS AFTER PAVING IS COMPLETE.
- 31. THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE.
- 32. ALL ROADWAY CLOSURES OR LANE CLOSURES BEYOND THOSE SPECIFIED AND APPROVED IN THE PLANS SHALL BE APPROVED BY THE DISTRICT SAFETY OFFICER A MINIMUM OF TWO WEEKS IN ADVANCE OF THE PROPOSED RESTRICTION.

- 33. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOOD CONDITION IN ACCORDANCE WITH THE BROCHURE ENTITLED "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES", PUBLISHED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). ANY TEMPORARY TRAFFIC CONTROL DEVICES THAT DO NOT MEET THE QUALITY GUIDELINES SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE DEVICES. FAILURE TO COMPLY WILL RESULT IN WORK STOPPAGE.
- 34. THE CONTRACTOR SHALL PROVIDE ALL PROPERTY OWNERS AND RESIDENTS WHO LIVE ADJACENT TO THE WORK ZONE WITH WRITTEN NOTICE, 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES; A SUMMARY OF CONSTRUCTION ACTIVITIES WHICH MAY INTERFERE WITH ACCESS TO THE PROPERTY INCLUDING A SCHEDULE AND ACCESS COORDINATION PLAN, CONTRACTOR'S NAME AND ADDRESS AND A DELDOT CONTACT PHONE NUMBER. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF THE WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. THE CONTRACTOR SHALL PROVIDE WRITTEN VERIFICATION TO THE ENGINEER THAT THE PROPERTY OWNERS AND RESIDENTS WERE NOTIFIED.
- 35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS AND THE DELDOT PUBLIC INFORMATION CENTER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN CALENDAR DAYS BEFORE THE CLOSURE.
- 36. THE CONTRACTOR SHALL NOTIFY THE LOCAL 911 CENTER IF ACCESS TO A FIRE HYDRANT IS TEMPORARILY RESTRICTED.
- 37. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TRANSPORTATION MANAGEMENT CENTER IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED IN STATE RIGHT—OF—WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDERS CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED, CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATION MANAGEMENT CENTER CAN BE REACHED AT (302) 659—4600.
- 38. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL CORRECT ALL VERTICAL DIFFERENCES IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.
- 39. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURNED TO UNRESTRICTED ROADWAY USE, TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DELAWARE MUTCD AND DELDOT'S TEMPORARY PAVEMENT MARKINGS POLICY.
- 40. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS.
- 41. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH SECTION 6G.21 OF THE DELAWARE MUTCO.
- 42. ALL FLAGGERS SHALL COMPLY WITH CHAPTER 6E OF THE DELAWARE MUTCD.
- 43. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH OTHER CONTRACTORS IN THE AREA.
- 44. ALL PERSONS WORKING WITHIN THE STATE RIGHT-OF-WAY SHALL WEAR A MINIMUM OF AN ANSI CLASS II SAFETY VEST MEETING OR EXCEEDING THE ANSI 107-2004 REQUIREMENTS, AS SPECIFIED IN THE DELAWARE MUTCD.
- 45. ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED AND COMPLETELY OBLITERATED BY A METHOD APPROVED BY THE ENGINEER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
- 46. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK 1500 FT, ROAD WORK 1000 FT AND ROAD WORK 500 FT SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA AND AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP—350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION.



GEORGE, MILES & BUHR, LL

DONOVAN - SMITH
OBILE HOME PARK
RY SEWER AND WATER
EXTENSIONS
ND STORMWATER MANAGEMNT PL



DELDOT UTILITY PLAN NOTES

SCALE : NONE

DESIGN BY : JWK

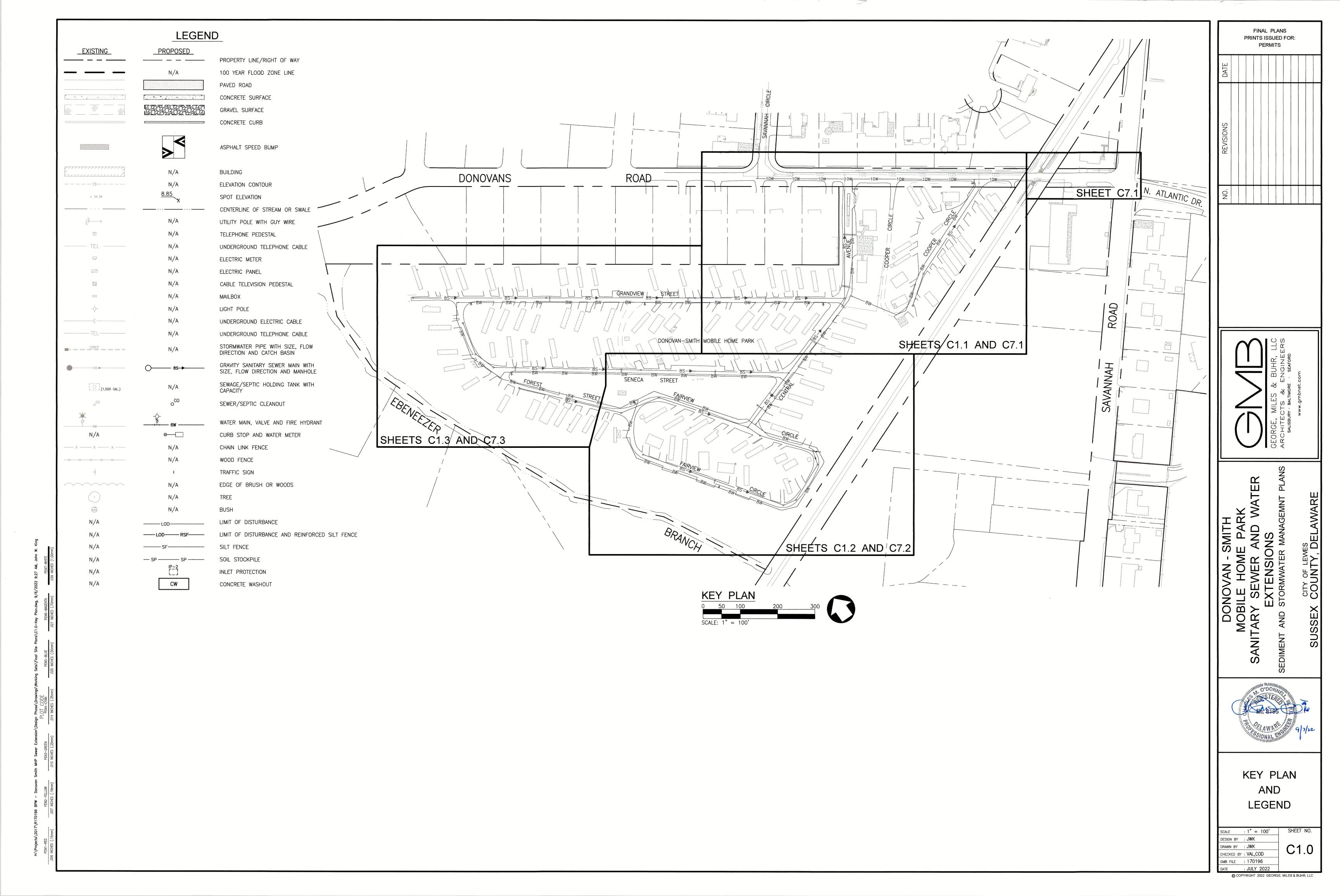
DRAWN BY : JWK

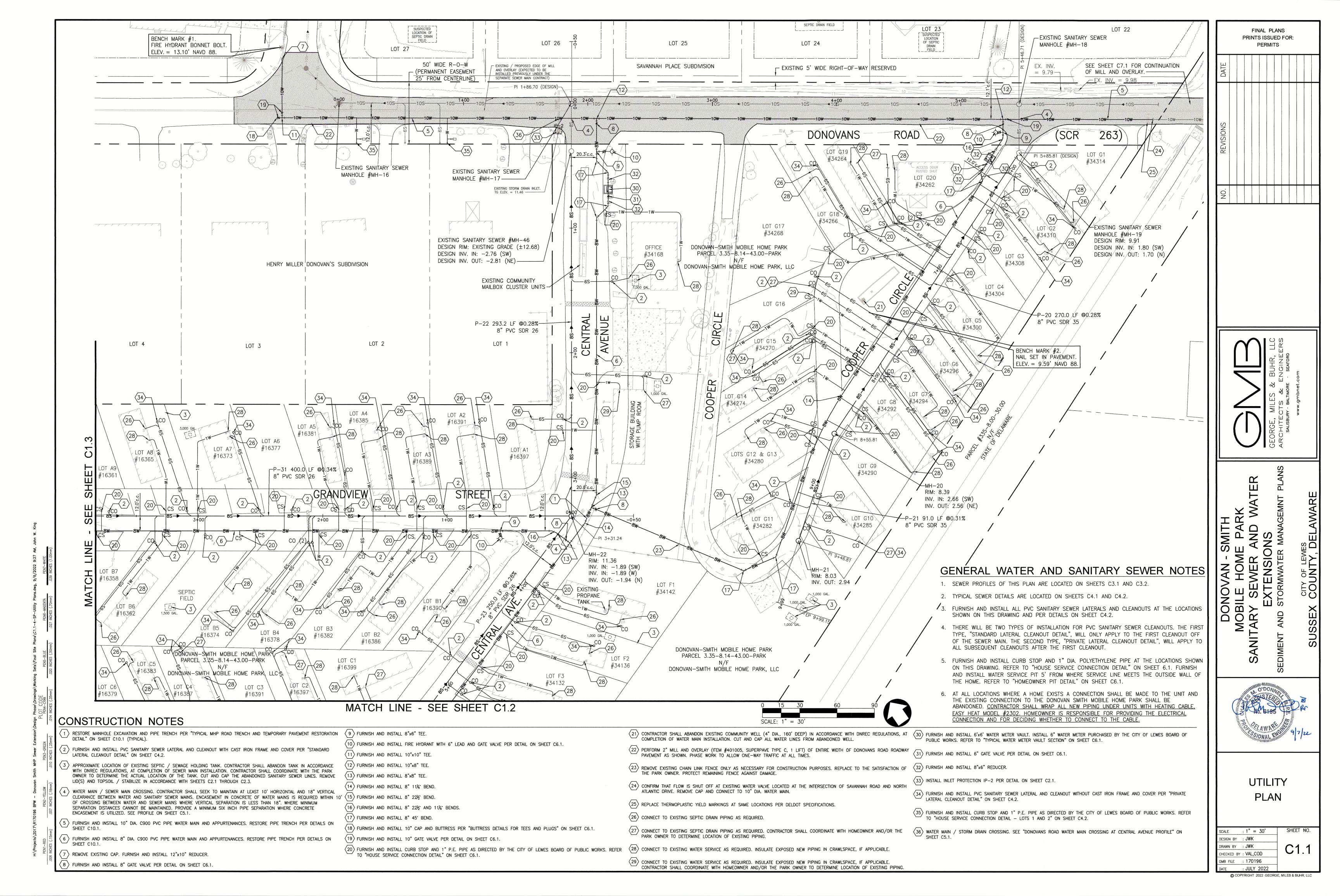
CHECKED BY : VAL,COD

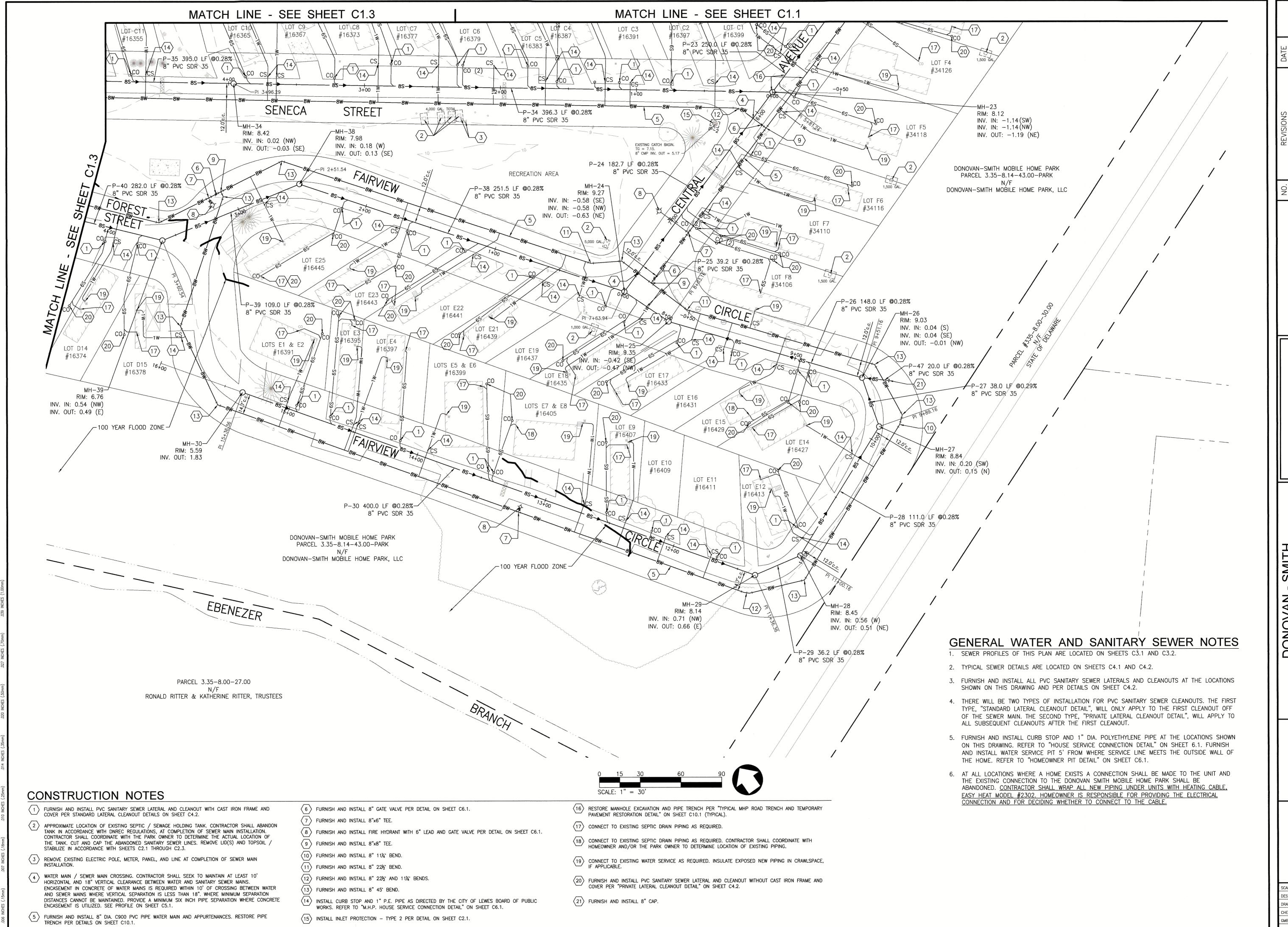
GMB FILE : 170196

: JULY 2022

© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

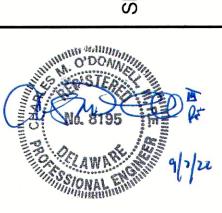






GEORGE, MILES & BUHR, LI
ARCHITECTS & ENGINEER
SALISBURY · BALTIMORE · SEAFORD

DONOVAN - SMITH
MOBILE HOME PARK
NITARY SEWER AND WATE
EXTENSIONS
ENT AND STORMWATER MANAGEMNT F



UTILITY PLAN

SCALE : 1" = 30' SHEET NO.

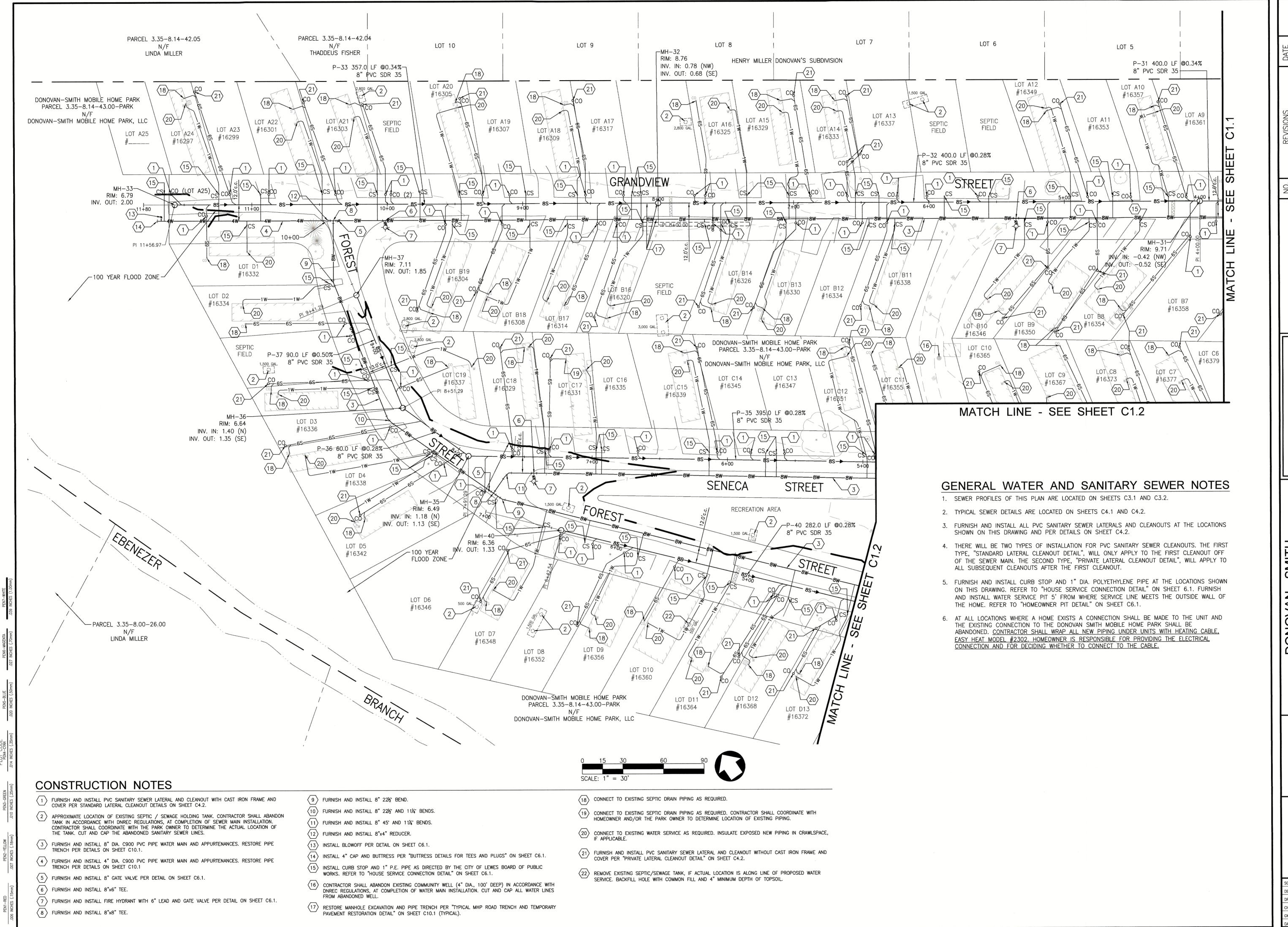
DESIGN BY : JWK

DRAWN BY : JWK

CHECKED BY : VAL,COD

GMB FILE : 170196

: JULY 2022 © COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC



FINAL PLANS
PRINTS ISSUED FOR:
PERMITS

ON

ON

GEORGE, MILES & BUHR, LL
ARCHITECTS & ENGINEERS
SALISBURY BALTIMORE · SEAFORD
www.gmbnet.com

DONOVAN - SMITH
OBILE HOME PARK
RY SEWER AND WATER
EXTENSIONS
ND STORMWATER MANAGEMNT PLAN

WARRE 9/7/2

UTILITY PLAN

SCALE : 1" = 30'

DESIGN BY : JWK

DRAWN BY : JWK

CHECKED BY : VAL,COD

GMB FILE : 170196

DATE : JULY 2022

TE: JULY 2022

© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

ERRORS OR OMISSIONS IN THE APPROVED PLAN.

3. 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.

4. 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.

5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE *DELAWARE EROSION AND SEDIMENT HANDBOOK*, LATEST EDITION.

5. 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.

7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.

B. POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO THE SUSSEX CONSERVATION DISTRICT WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.

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.

O. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS #______(TO BE FILLED IN ONCE RECEIVED). AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.

11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING, BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.

12. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1.800.282.8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.

13. 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.

14. 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.

15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE DEPARTMENT OR DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN. THE DEPARTMENT OR DELEGATED AGENCY MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH SPECIFICATIONS PROVIDED IN THE DELAWARE EROSION AND SEDIMENT HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

6. EXCAVATED MATERIAL SHALL BE DIRECTLY PLACED IN A TRUCK AND HAULED OFF—SITE. STOCKPILING OF EXCAVATED MATERIAL OUTSIDE OF THE CONTRACT AREA SHALL REQUIRE AN ADDITIONAL EROSION AND SEDIMENT CONTROL PLAN FOR THAT LOCATION. PLAN MUST BE SUBMITTED AND APPROVED BY THE SUSSEX CONSERVATION DISTRICT.

17. A PUMPED-SILT CONTROL SYSTEM SHALL BE USED TO REMOVE SEDIMENT FROM WATER RESULTING FROM DEWATERING OPERATIONS. ALL SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED MANNER. DIRECT DISCHARGE INTO TIDAL WATERS OR WETLANDS IS STRICTLY PROHIBITED.

18. AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL DEVICES SHALL BE INSPECTED AND LEFT IN FUNCTIONAL CONDITION.

19. SEDIMENT CONTROL FOR UTILITY TRENCH:

a. EXCAVATED MATERIAL SHALL BE DIRECTLY PLACED IN A TRUCK AND HAULED OFF-SITE.

b. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY.

c. STABILIZATION WILL BE COMPLETED AS WORK PROGRESSES.

d. PAVED AREAS WILL BE SWEPT AT THE END OF EACH WORKING DAY.e. TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED

TO REMAIN DISTURBED FOR MORE THAN ONE DAY.

20. PRE-CONSTRUCTION MEETING. NOTE: PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER. THE LANDOWNER/DEVELOPER, CONTRACTOR, AND THIRD PARTY CERTIFIED CONSTRUCTION REVIEWER (CCR) ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.

21. PERIMETER CONTROL REVIEW. NOTE: ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR

 REMOVAL OF SEDIMENT CONTROL PRACTICES. NOTE: EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.

23. PROJECT CLOSEOUT. NOTE: THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

PERMANENT SEEDING NOTES

LOOSEN UPPER 4 INCHES OF SOIL BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

APPLY 1-2 TONS PER ACRE (46-92 LBS/1000 SQ. FT.) OF DOLOMITIC LIMESTONE AND 600 LBS PER ACRE (14 LBS/1000 SQ. FT.) OF 10-10-10 FERTILIZER.

SEEDING:
FOR PERIODS OF SEPTEMBER 1 THROUGH NOVEMBER 15 AND MARCH 1 THROUGH MAY SEED WITH 210-230 LBS
PER ACRE (5 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR PERIODS OF NOVEMBER 15 THROUGH
FEBRUARY, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS
SOON AS POSSIBLE IN THE SPRING.

MULCHING:

APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING A SYNTHETIC BINDER SUCH AS ACRYLIC DLR (AGRI-TAC) DCA-70. PETROSET OR TERRA TACK AT RATES RECOMMENDED BY THE

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDINGS.

SITE INFORMATION

TOTAL AREA OF MHP PARCEL AND AFFECTED RIGHT-OF-WAYS: 22.6 ACRES AREA WITHIN LIMIT OF DISTURBANCE: ±13.5 ACRES VOLUME OF SPOIL MATERIAL: 0 CU. YDS. VOLUME OF BORROW MATERIAL: ±75 CU. YDS.

UTILITY OWNER: LEWES BOARD OF PUBLIC WORKS 107 FRANKLIN AVENUE LEWES, DE 19958

CONTACT: AUSTIN CALAMAN (302) 645-6228 (PHONE) (302) 645-6358 (FAX)

LANDOWNER: DONOVAN-SMITH MOBILE HOME PARK, LLC
c/o KDM DEVELOPMENT CORPORATION
1080 PITTSFORD VICTOR ROAD, SUITE 202
PITTSFORD, NEW YORK 14534

CONTACT: PHIL CANNON
(302) 519-0872 (PHONE)
Phillipc@kdmdevelopment.com

ENGINEER: GEORGE, MILES & BUHR, LLC
400 HIGH STREET
SEAFORD DE 19973

CONTACT: CHARLES M. O'DONNELL, P.E. (302) 628-1421 (PHONE) (302) 628-8350 (FAX)

TEMPORARY SEEDING NOTES

<u>SEEDBED PREPARATION:</u>
LOOSEN UPPER 4 INCHES OF SOIL BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:

APPLY 1-2 TONS PER ACRE (46-92 LBS/1000 SQ. FT.) OF DOLOMITIC LIMESTONE AND 600 LBS PER ACRE (14 LBS/1000 SQ. FT.) OF 10-10-10 FERTILIZER.

SEEDING:
FOR PERIODS OF SEPTEMBER 1 THROUGH NOVEMBER 15 AND MARCH 1 THROUGH MAY SEED WITH 40
LBS/ACRE OF PERENNIAL RYE (1.0 LBS/1000 SQ. FT.). PERIODS OF NOVEMBER 15 THROUGH FEBRUARY,
PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON
AS POSSIBLE IN THE SPRING.

MULCHING:

APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING A SYNTHETIC BINDER SUCH AS ACRYLIC DLR (AGRI-TAC) DCA-70. PETROSET OR TERRA TACK AT RATES RECOMMENDED BY THE MANUFACTURER.

SEQUENCE OF OPERATIONS

1. 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.

DONOVANS ROAD

2. INSTALL INLET PROTECTION PRIOR TO EXCAVATION ACTIVITIES.

3. SAW CUT AND REMOVE EXISTING PAVEMENT AT UTILITY TRENCHES AND MANHOLE PITS

4. EXCAVATE TRENCHES AND MANHOLE PITS.

5. INSTALL MANHOLES AND SEWER PIPES AND LATERALS. BACKFILL AND COMPACT TO LEVEL BELOW GABC LAYER (ROADWAY AREAS).

6. INSTALL PAVEMENT AND OVERLAY.

. GRADE DISTURBED GRASS AREAS WITHIN THE DONOVANS ROAD RIGHT-OF-WAY, TOPSOIL, SEED AND MULCH.

DONOVAN-SMITH MOBILE HOME PARK

PHASE WORK ONE STREET AT A TIME. NO GREATER THAN 1.0 ACRE WILL BE DISTURBED AT ANY ONE TIME THROUGHOUT THE COURSE OF CONSTRUCTION.

8. INSTALL INLET PROTECTION AND PERIMETER CONTROLS PRIOR TO EXCAVATION ACTIVITIES.

SAW CUT AND REMOVE EXISTING PAVEMENT AT SEWER MAIN TRENCHES AND MANHOLE PITS.

10. EXCAVATE SEWER MAIN AND LATERAL (TO FIRST CLEANOUT) TRENCHES, AND

11. INSTALL MANHOLES AND SEWER MAINS AND LATERALS (TO FIRST CLEANOUT).

12. BACKFILL AND INSTALL TEMPORARY PAVEMENT RESTORATION (ROADWAY AREAS).

13. SAW CUT AND REMOVE EXISTING PAVEMENT AT WATER MAIN TRENCHES.

14. EXCAVATE WATER MAIN AND SERVICE (TO METER PIT) TRENCHES.

15. INSTALL WATER MAIN PIPES AND SERVICES (TO METER PIT). BACKFILL AND INSTALL TEMPORARY PAVEMENT RESTORATION (ROADWAY AREAS).

16. INSTALL REMAINDER OF SEWER LATERALS AND WATER MAIN SERVICES TO HOMES.

17. REMOVE EXISTING ROADWAY PAVEMENT BOX.

18. GRADE AREAS TO BE PAVED.

16. INSTALL NEW PAVEMENT ROAD SECTION. INSTALL TRANSITIONS TO EXISTING DRIVEWAYS WITHIN 24 HOURS OF FINAL PAVEMENT INSTALLATION.

17. GRADE DISTURBED GRASS AREAS. TOPSOIL, SEED AND MULCH.

18. INSTALL ASPHALT SPEED HUMPS.

19. REMOVE SEDIMENT CONTROL MEASURES AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR.

ENGINEER'S CERTIFICATION

"I <u>CHARLES M. O'DONNELL</u>, <u>P.E.</u> HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HERE ON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE."

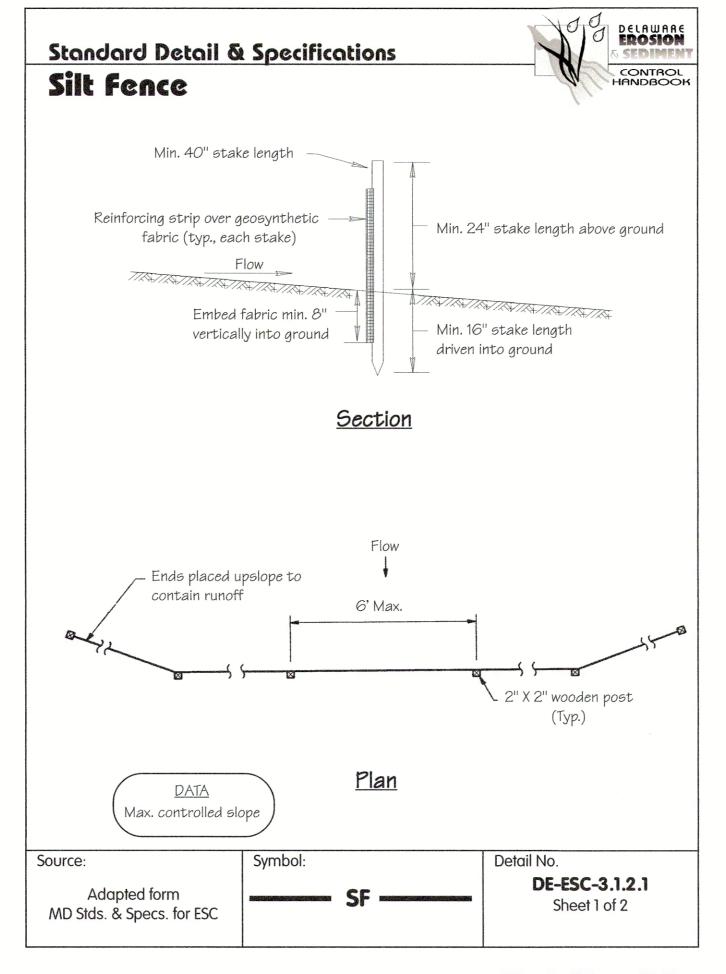


9/2/22 DATE

OWNER'S CERTIFICATION

I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (i.e., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON—SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

AUSTIN CALAMAN, GENERAL MANAGER LEWES BOARD OF PUBLIC WORKS 9/7/22 DATE

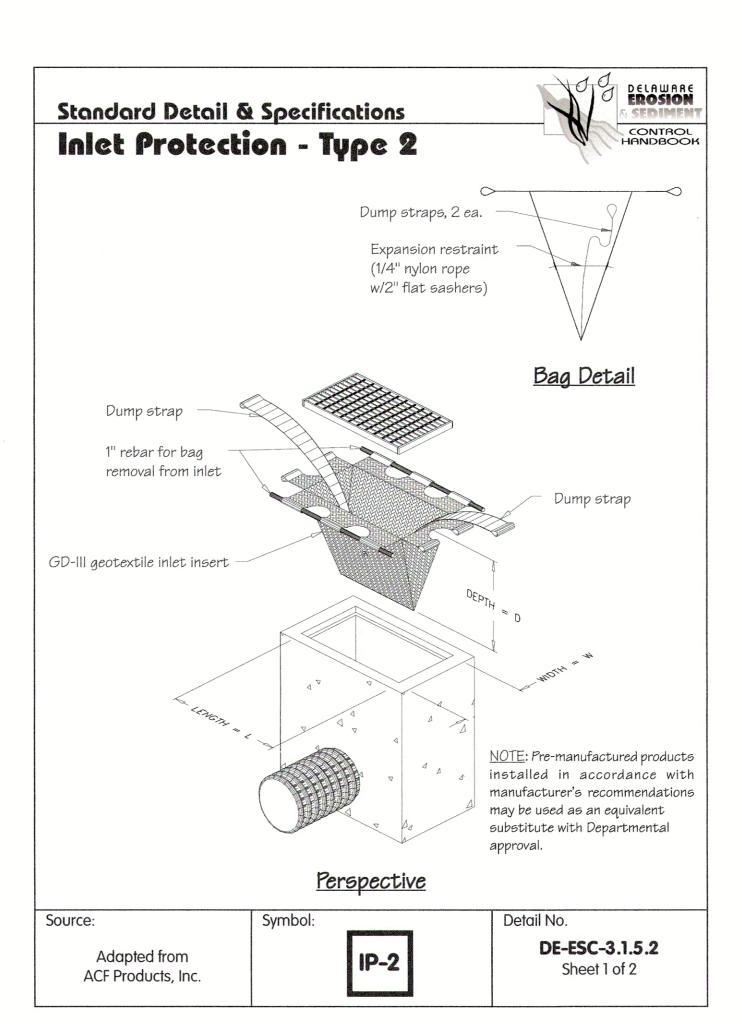


Effective February 2019

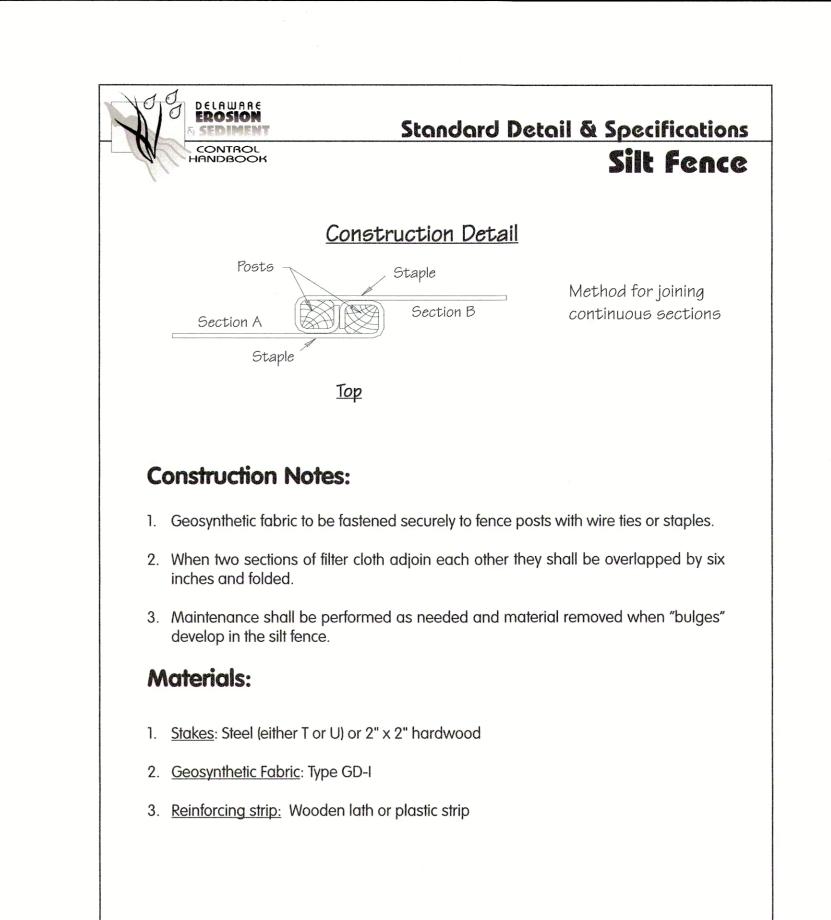
Source:

Adapted from

MD Stds. & Specs. for ESC



Effective February 2019

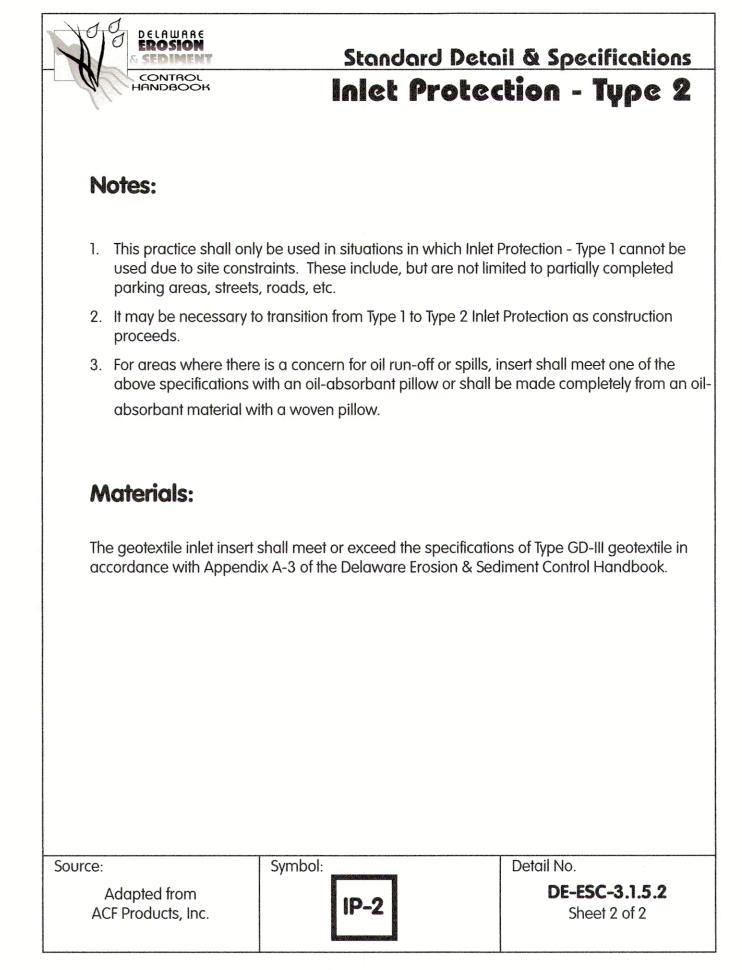


Symbol:

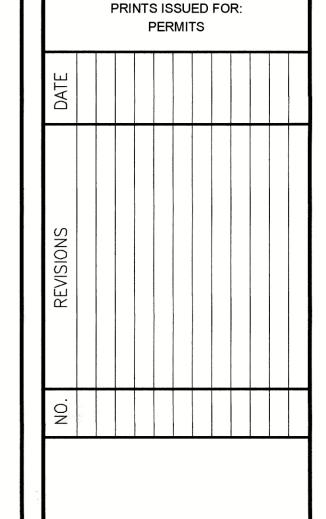
Effective February 2019

DE-ESC-3.1.2.1

Sheet 2 of 2



Effective February 2019



FINAL PLANS

GEORGE, MILES & BUHR, 1
ARCHITECTS & ENGINEE
SALISBURY - BALTIMORE - SEAFORD
www.gmbnet.com

DVAN - SMITH
E HOME PARK
SEWER AND WATER
TENSIONS
DRMWATER MANAGEMNT PLAN

DONOV.
MOBILE I
SANITARY SEV
EXTE



CONSTRUCTION
SITE
NOTES AND
DETAILS

SCALE : AS NOTED

DESIGN BY : JWK

DRAWN BY : JWK

CHECKED BY : VAL,COD

GMB FILE : 170196

DATE : JULY 2022

TE: JULY 2022

© COPYRIGHT 2022 GEORGE MILES & BUHR LLC

Construction Notes:

- 1. Pit dimensions are variable
- 2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center.
- 3. A base of DE #57 aggregate should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with DE #57 aggregate.
- 4. The standpipe should extend 12" to 18" above the lip of the pit or riser crest elevation (basin dewatering).

NOTE: If discharge will be pumped directly to a storm drainage system, the standpipe must be wrapped with Type GD-II geotextile fabric before installation. If desired, 1/2" hardware cloth may be placed around the standpipe, prior to attaching the geotextile fabric. This will increase the rate of water seepage into the pipe.

Source: Adapted from MD Stds. & Specs. for ESC	Symbol: PP-1	Detail No. DE-ESC-3.2.2.1 Sheet 1 of 1
MD Sids. & Speed. for Ese		

Effective February 2019

Standard Detail & Specifications Topsoiling

Construction Notes (cont.)

a. Materials - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragment, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content. pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH value is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Note: No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.

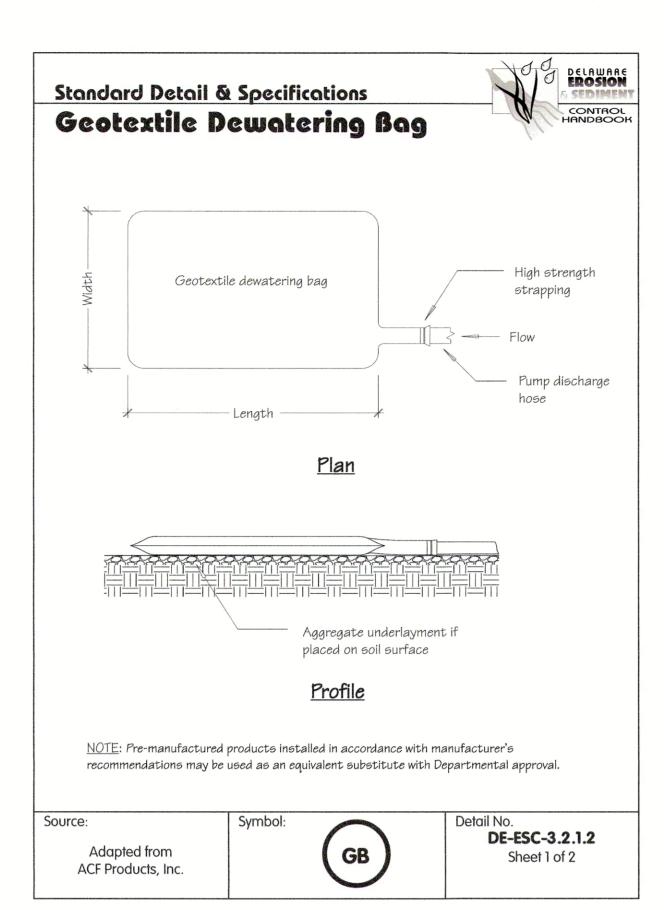
b. Grading - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note: Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.

Source:	Symbol:	Detail No.
		DE-ESC-3.4.1
USDA - NRCS		Sheet 2 of 2

Effective February 2019



Effective February 2019

Standard Detail & Specifications **Dust Control**

Temporary Methods:

- Mulches See DE-ESC-3.4.5, Standard Detail and Specifications for Mulching.
- 2. Vegetative cover See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
- 3. 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 <u>Dilution</u>	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-trafffic)	7:1	Coarse spray	450	
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350	

- 4. 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.
- 5. Sprinkling Sprinkle site with water until the surface is moist. Repeat as needed.
- 6. 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.
- 7. Barriers Place barriers such as soild board fences, snow fences, hay bales, etc. at right angles to the prevailing air currents at intervals of approx. 10X their height.

Permanent Methods:

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

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook		DE-ESC-3.4. i Sheet 1 of 1

Effective February 2019



- . The dewatering bag should be placed so the incoming water flows into and through the bag, and then flow off the site without creating more erosion. The neck should be tied off tightly to stop the water from flowing out of the bag without going through the walls. The dewatering bag should be placed on a gravel bed to allow water to flow in all directions.
- 2. The dewatering bag is considered full and should be disposed when it is impractical for the bag to filter the sediment out at a reasonable flow rate. At this point, it should be replaced with a new bag.
- B. Disposal may be accomplished as directed by the construction reviewer. If the site allows, the bag may be buried on site and seeded, visible fabric removed and seeded or removed from site to a proper disposal area.

Materials:

- The geotextile fabric shall be a Type GD-IV.
- 2. The dewatering bag shall be sewn with a double needle machine using high strength thread. All structural seams will be sewn with high strength, double stitched "J" type. Seam strength test will have the following minimum average roll values:

100 lb / in Heavy duty

3. The dewatering bag shall have an opening large enough to accommodate a four (4) inch discharge hose with attached strap to tie off the hose to prevent the pumped water from escaping from the bag without being filtered.

Adapted from ACF Products, Inc.

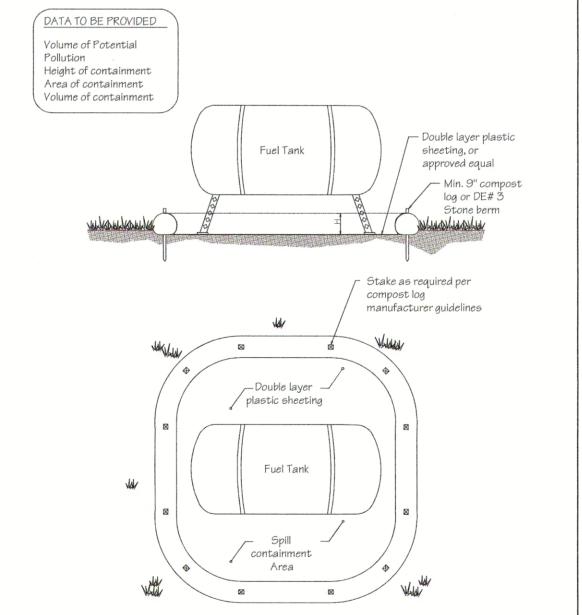
Source:

GB

DE-ESC-3.2.1.2 Sheet 2 of 2

Effective February 2019





Symbol: **DE-ESC-3.6.1** Delaware ESC Handbook Sheet 1 of 5

Effective February 2019

Standard Detail & Specifications Topsoiling



Construction Notes:

1. Site Preparation (Where Topsoil is to be added)

Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

- a. Grading Grades on the areas to be topsoiled which have been previously established
- b. Liming Where the topsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- c. Tilling After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of a least 3 inches to permit bonding of the topsoil to the subsoil. Pack by passing a bulldozer up and down over the entire surface area of the slope to create horizontal erosion check slots to prevent topsoil from sliding down the slope.

2. Topsoil Material and Application

Note: Topsoil salvaged from the existing site may often be used but it should meet the same standards as set forth in these specifications. The depth of topsoil to be salvaged shall be no more than the depth described as a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experimental Station.

Source: Symbol: DE-ESC-3.4.1 USDA - NRCS Sheet 1 of 2

Effective February 2019



Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Pollution Prevention - Spill Prevention

from storm water run-on and runoff.

- 1. Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
- 2. Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off. 3. Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked
- 4. Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
- 5. Place a "Fueling Area" sign next to each fueling area.
- 6. Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
- 7. Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks 8. Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel
- 9. If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- 10. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- CLEAN UP SPILLS
- 1. If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material
- 2. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- 3. Do not bury spills or wash them down with water.
- LEAKS AND DRIPS
- 1. Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- 2. Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- 3. Have spill kits and clean up material on-site.
- 4. Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
- 5. Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.

6. Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source: Symbol: **DE-ESC-3.6.1** Delaware ESC Handbook Sheet 2 of 5

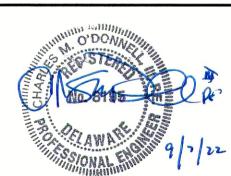
Effective February 2019

FINAL PLANS PRINTS ISSUED FOR: PERMITS



ONOVAN - SMITH
SBILE HOME PAF
RY SEWER AND
EXTENSIONS
ID STORMWATER MANAG

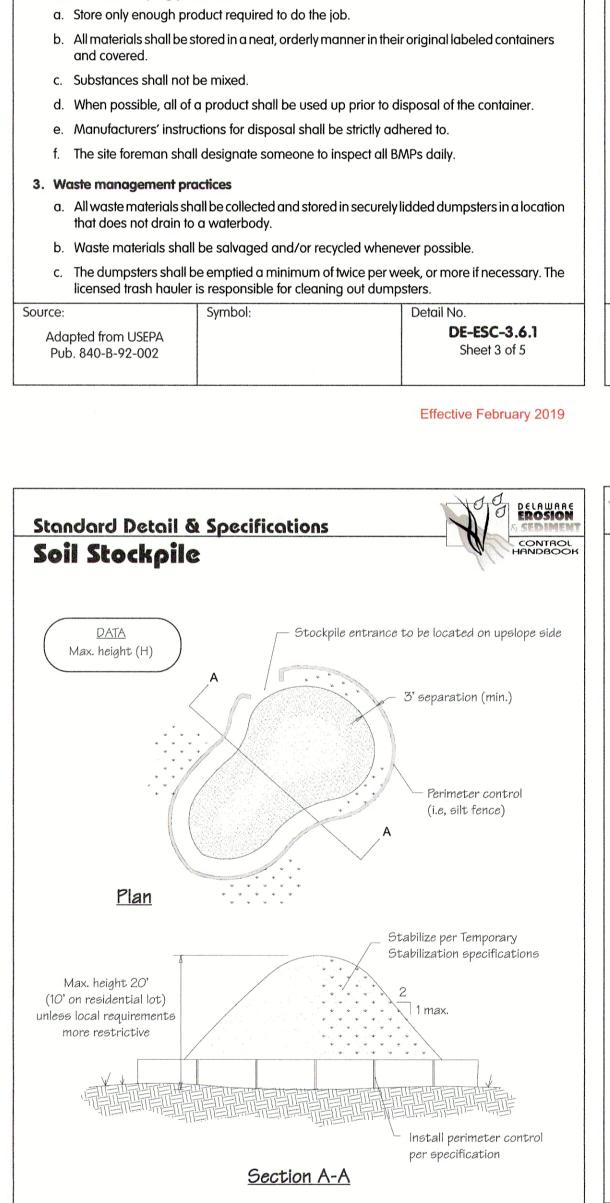
MO W

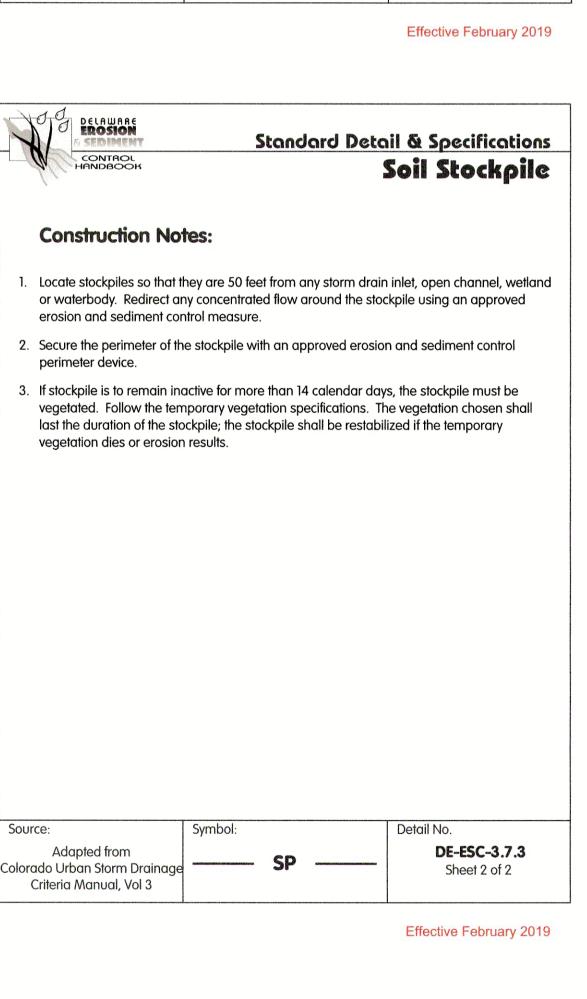


CONSTRUCTION SITE **DETAILS**

: AS NOTED DESIGN BY : JWK DRAWN BY : JWK CHECKED BY : VAL,COD : 170196

: JULY 2022 © COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC





Standard Detail & Specifications

Spill Control

DE-ESC-3.6.1

Sheet 4 of 5

Construction Site Waste Mgt &

d. Trash shall be disposed of in accordance with all applicable Delaware laws.

and covered with plastic sheeting which is overlapped and anchored.

detergents in an area contained by an impervious berm.

f. Fuel nozzles shall be equipped with automatic shut-off valves.

b. Warning signs shall be posted in hazardous material storage areas.

d. Low or non-toxic substances shall be prioritized for use.

c. Drip pans shall be used for all equipment maintenance.

d. Equipment shall be inspected for leaks on a daily basis.

shall be placed near the construction trailer.

4. Equipment maintenance practices

proper disposal.

5. Spill prevention practices

Adapted from USEPA

Pub. 840-B-92-002

to the storm drain system.

equipment as necessary.

e. Trash cans shall be placed at all lunch spots and littering is strictly prohibited. Recycle bins

f. If fertilizer bags can not be stored in a weather-proof location, they shall be kept on a pallet

a. If possible, equipment should be taken to off-site commercial facilities for washing and

b. If performed on-site, vehicles shall be washed with high-pressure water spray without

e. Washout from concrete trucks shall be disposed of in a temporary pit for hardening and

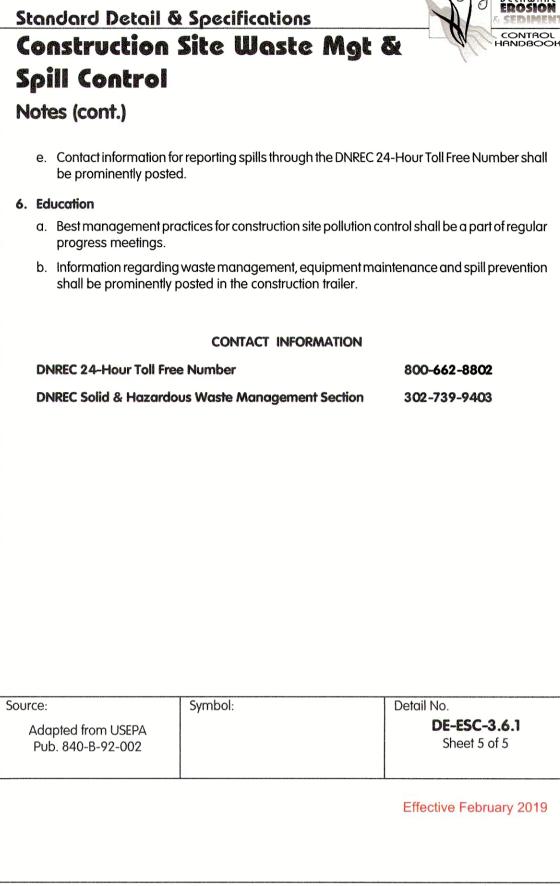
g. All used products such as oil, antifreeze, solvents and tires shall be disposed of in

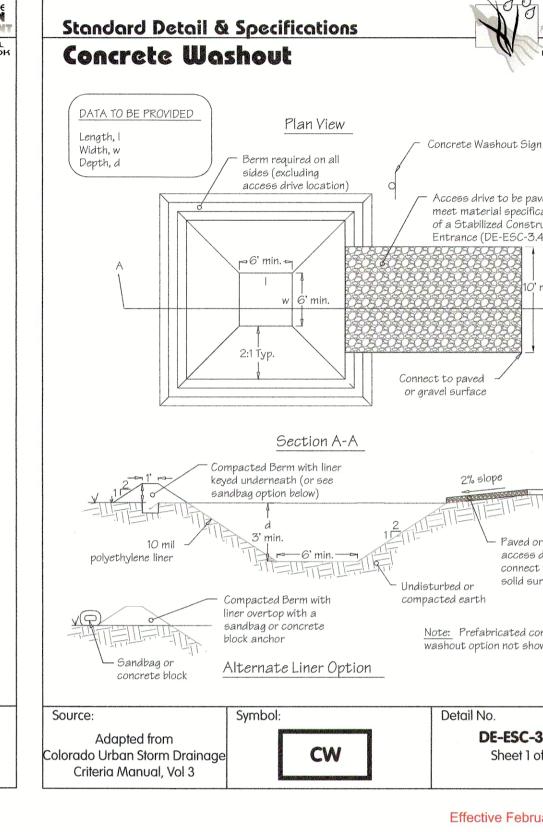
a. Potential spill areas shall be identified and contained in covered areas with no connection

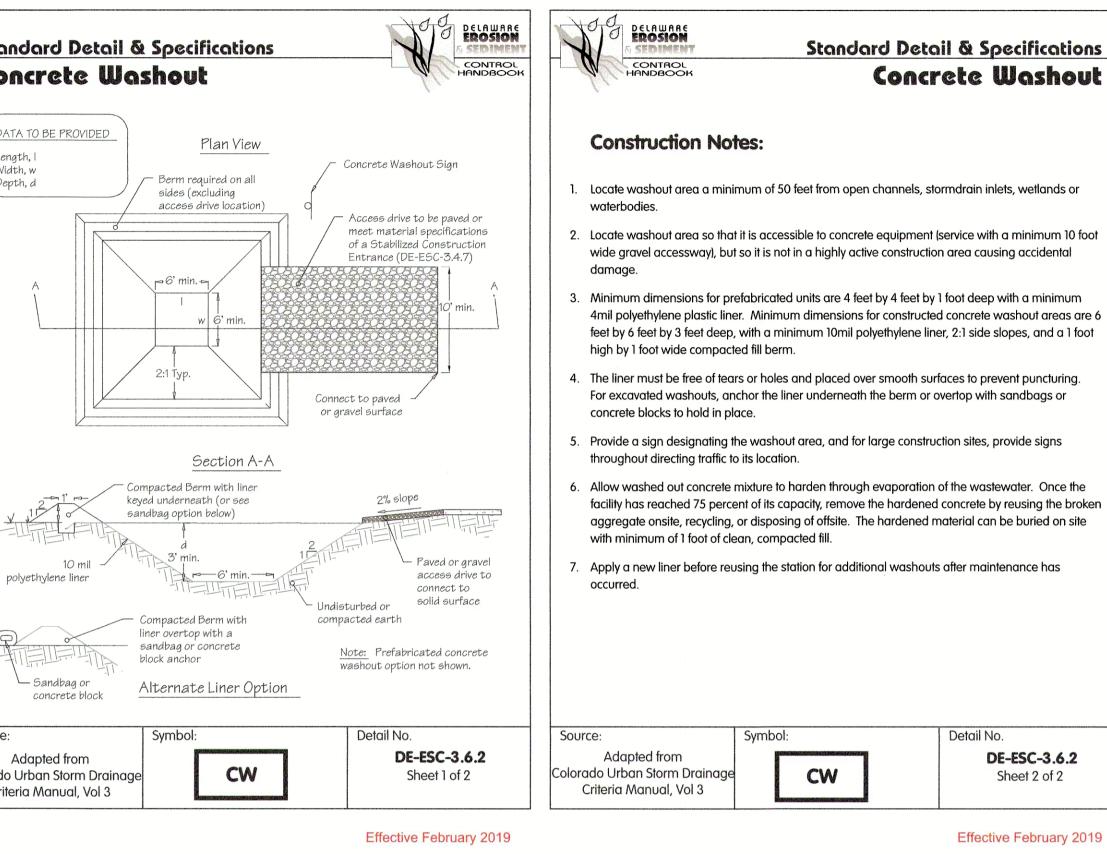
c. Preventive maintenance shall be performed on all tanks, valves, pumps, pipes and other

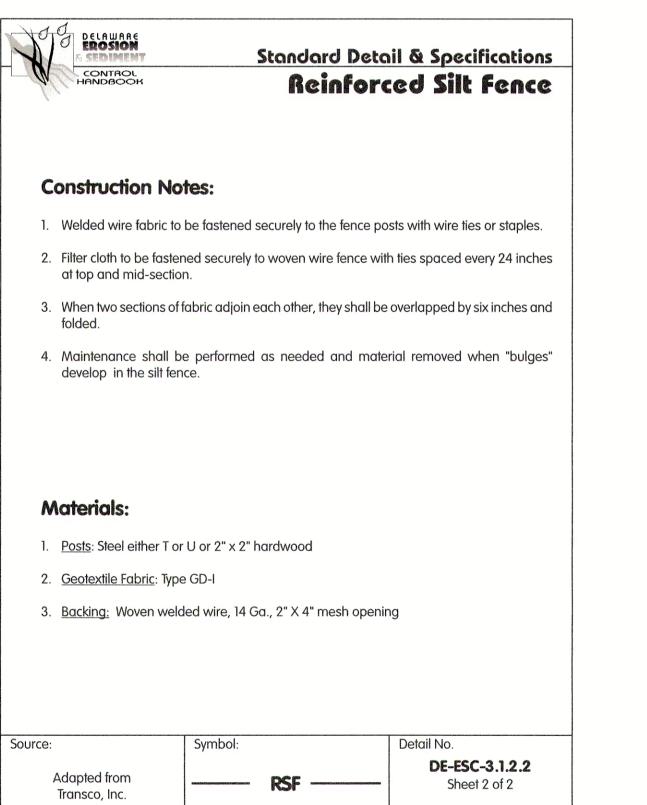
accordance with manufacturers' recommendations and local, state and federal laws and

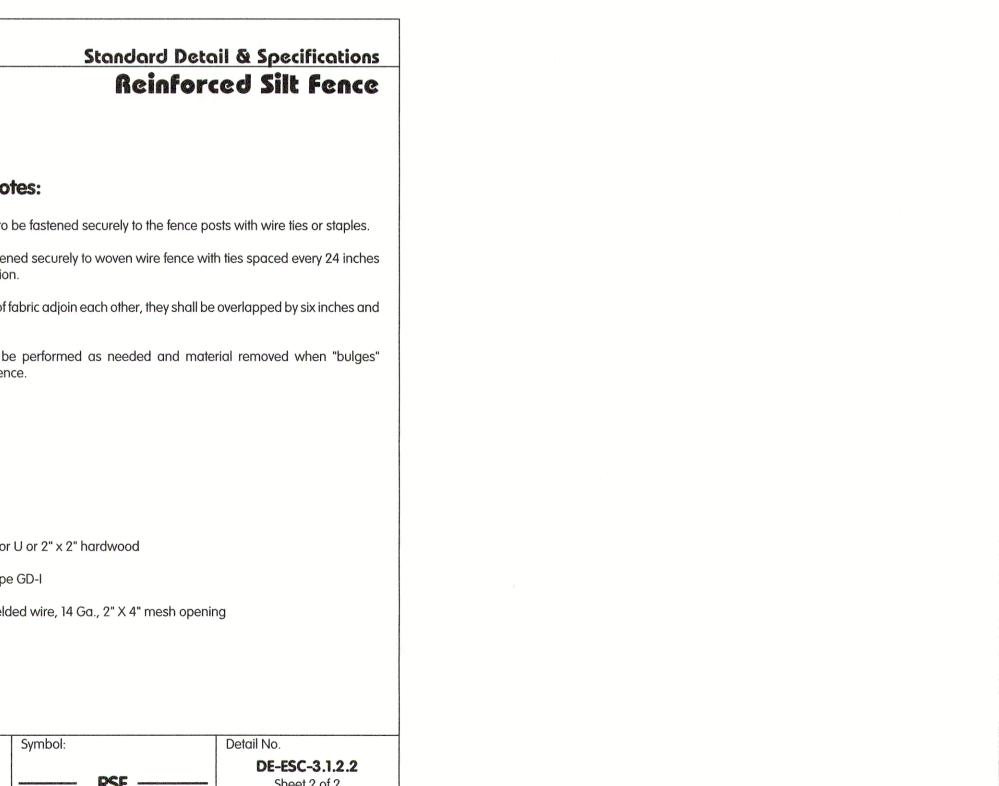
Notes (cont.)











00 %

FINAL PLANS PRINTS ISSUED FOR: PERMITS

CONSTRUCTION SITE DETAILS

: AS NOTED DESIGN BY : JWK CHECKED BY : VAL, COD GMB FILE : 170196

: JULY 2022

Standard Detail & Specifications

Spill Control

Material Inventory

a. Concrete

b. Detergents

e. Pesticides

g. Fertilizers

f. Wood scraps

d. Cleaning solvents

c. Paints (enamel and latex)

h. Petroleum based products

2. Good housekeeping practices

Notes:

Construction Site Waste Mgt &

Document the storage and use of the following materials:

The Construction Site Pollution Prevention Plan should include the following elements:

Symbol: Detail No. Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3

Sheet 1 of 2

RSF ----Adapted from Transco, Inc.

Effective February 2019

DE-ESC-3.7.3

Effective February 2019

Effective February 2019

Welded wire fabric backing

(Min. 14 Ga., Max. 2" X 4" mesh) Max. 6' O.C. 24" Min. - Min. 10 Ga. wire (as needed) (as needed)

____ 1"x1"x12" Stake DATA Max. controlled slope

Standard Detail & Specifications

Min. 40"post driven

min. 16" into ground

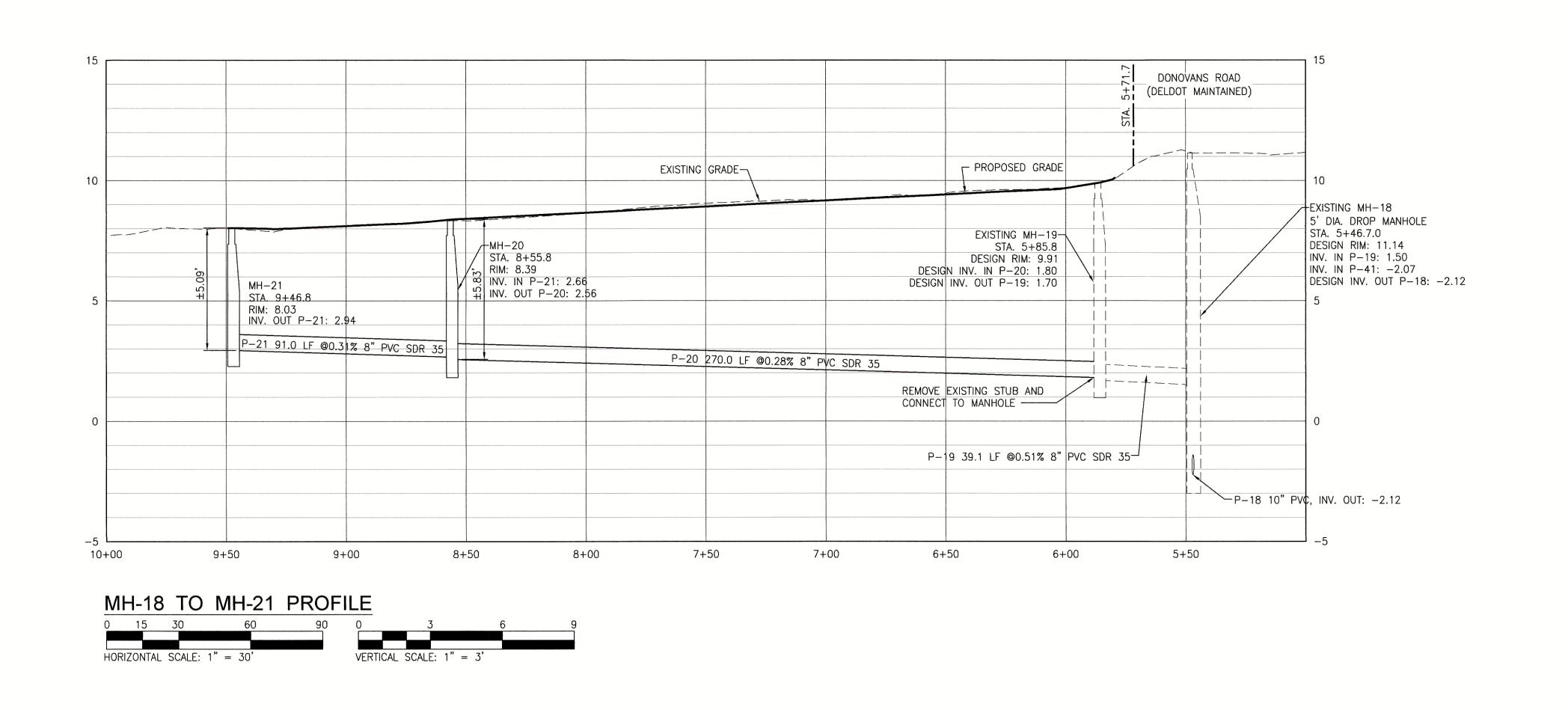
Reinforced Silt Fence

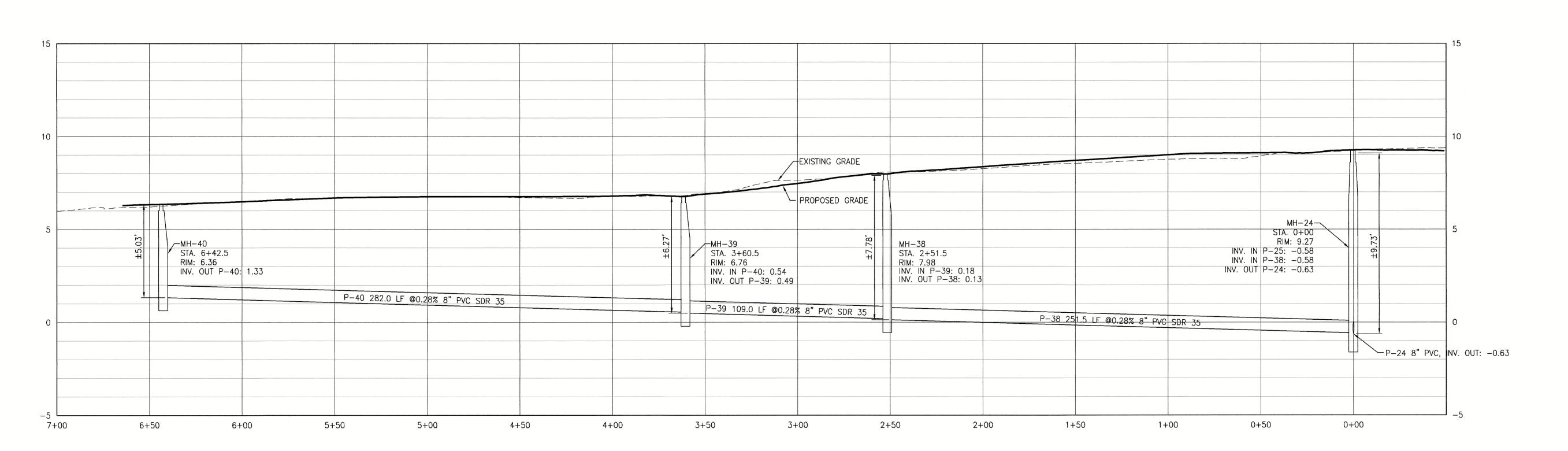
- Min. 40" post Welded wire fabric backing -Geotextile fabric 18" Min.

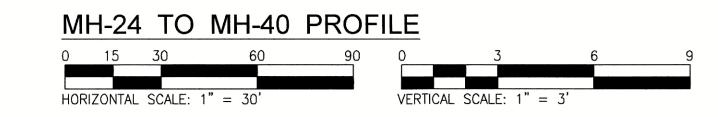
Embed geosynthetic fabric min. 8" into ground Cross-section

DE-ESC-3.1.2.2 Sheet 1 of 2

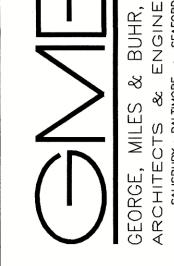
Source:





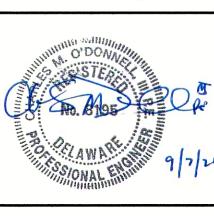


FINAL PLANS PRINTS ISSUED FOR: PERMITS



DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
EDIMENT AND STORMWATER MANAGEMNT PLANS

COUNTY, DEL



SANITARY **SEWER PROFILES**

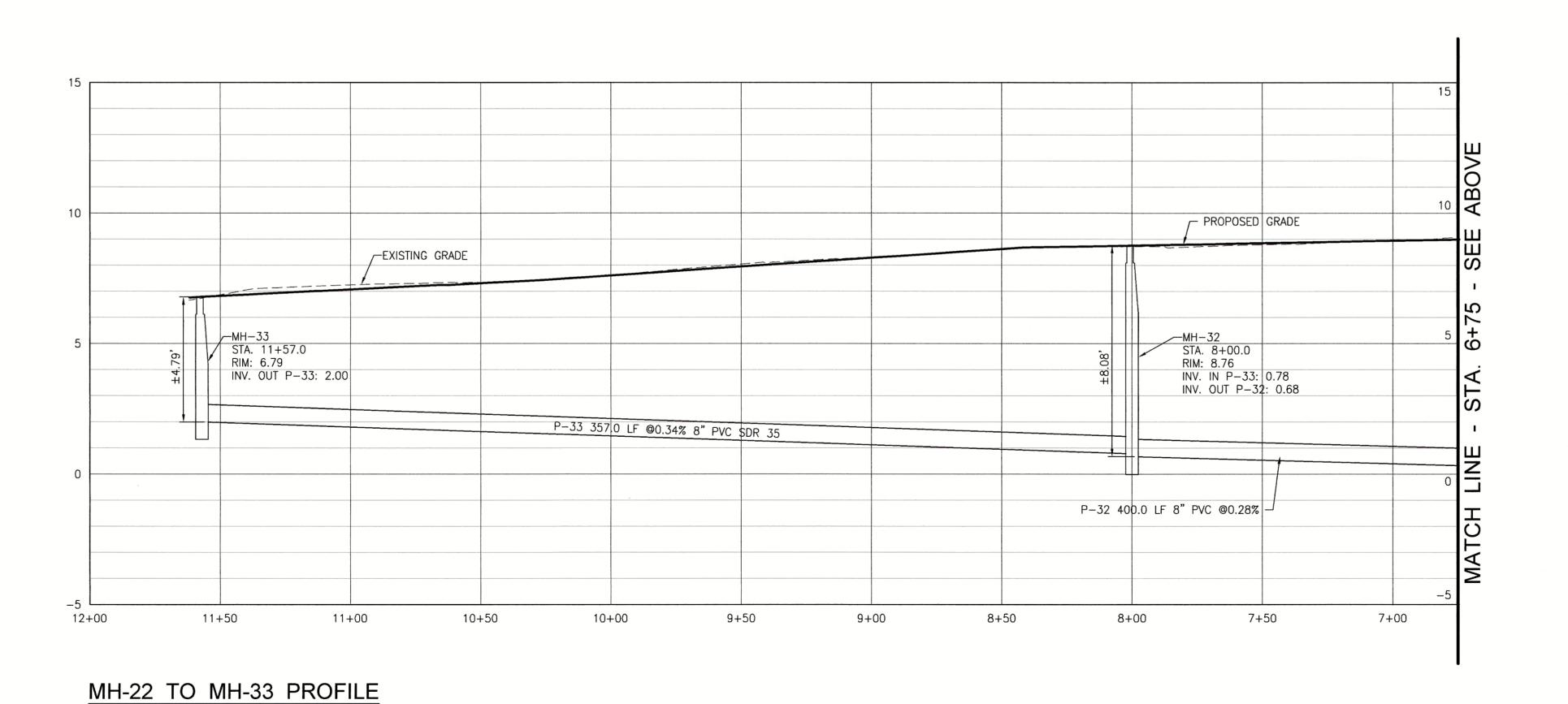
SHEET NO. : AS SHOWN DESIGN BY : JWK DRAWN BY : JWK C3.1 CHECKED BY : VAL,COD GMB FILE : 170196 DATE : JULY 2022

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 3"

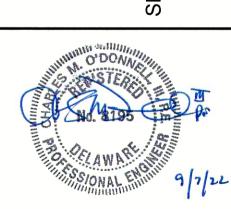
HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 3'



FINAL PLANS PRINTS ISSUED FOR: **PERMITS**

DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATEI
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PL

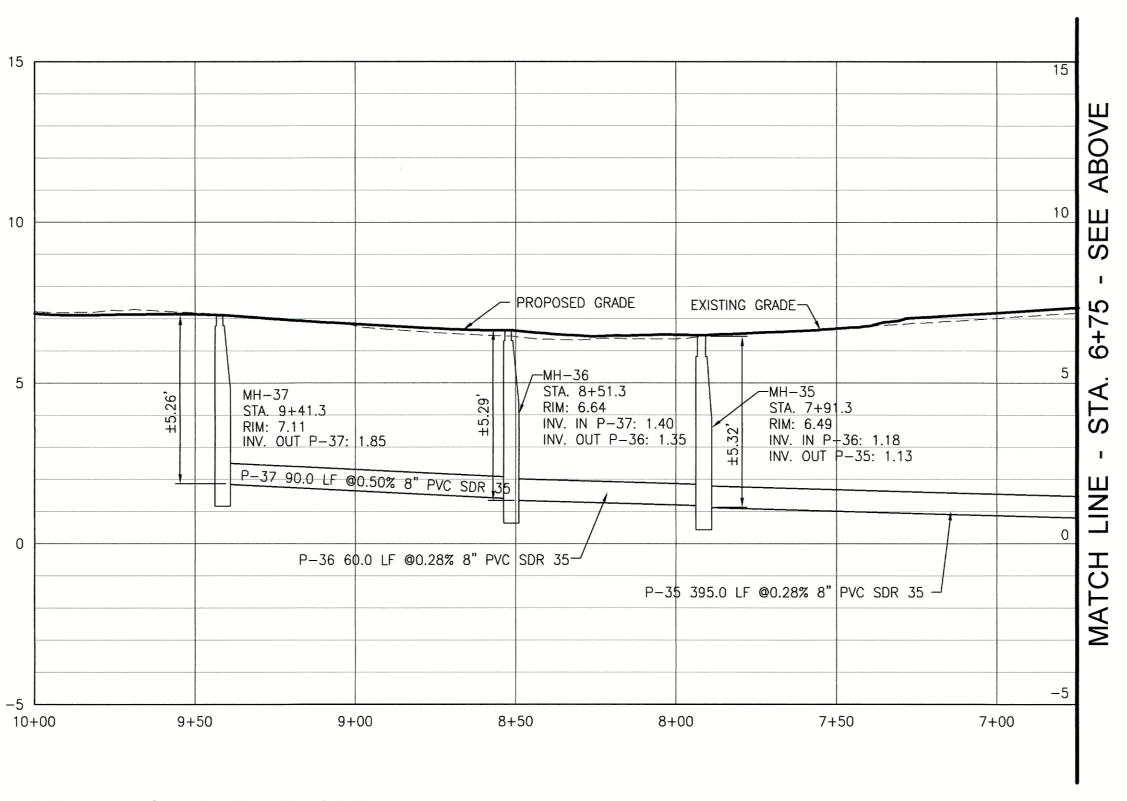


SUSSEX

SANITARY **SEWER PROFILES**

DESIGN BY : JWK DRAWN BY : JWK CHECKED BY : VAL,COD GMB FILE : 170196

: AS SHOWN SHEET NO. C3.3



DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PLANS

COUNTY, DELAWARE

SUSSEX

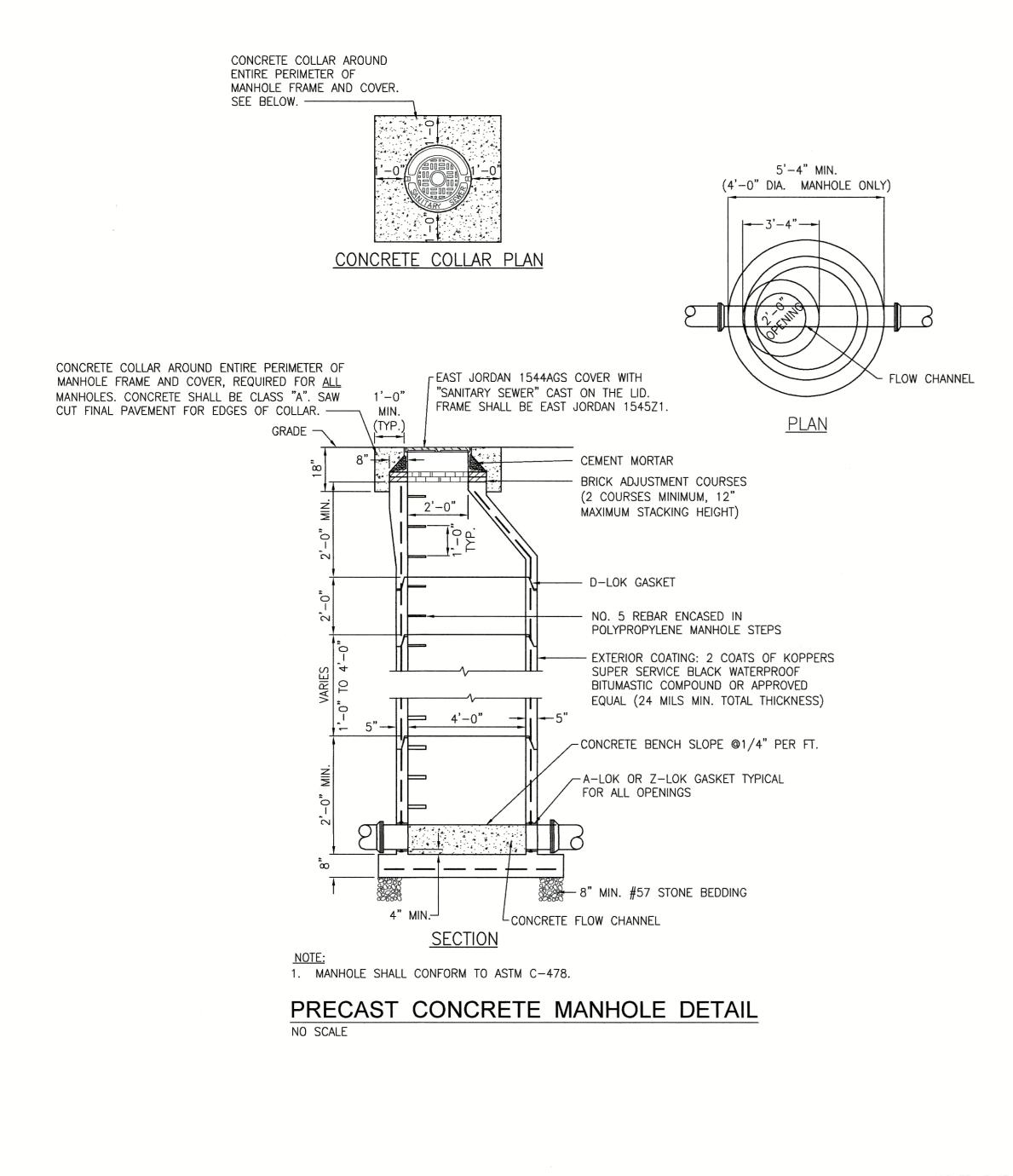
PRINTS ISSUED FOR: **PERMITS**

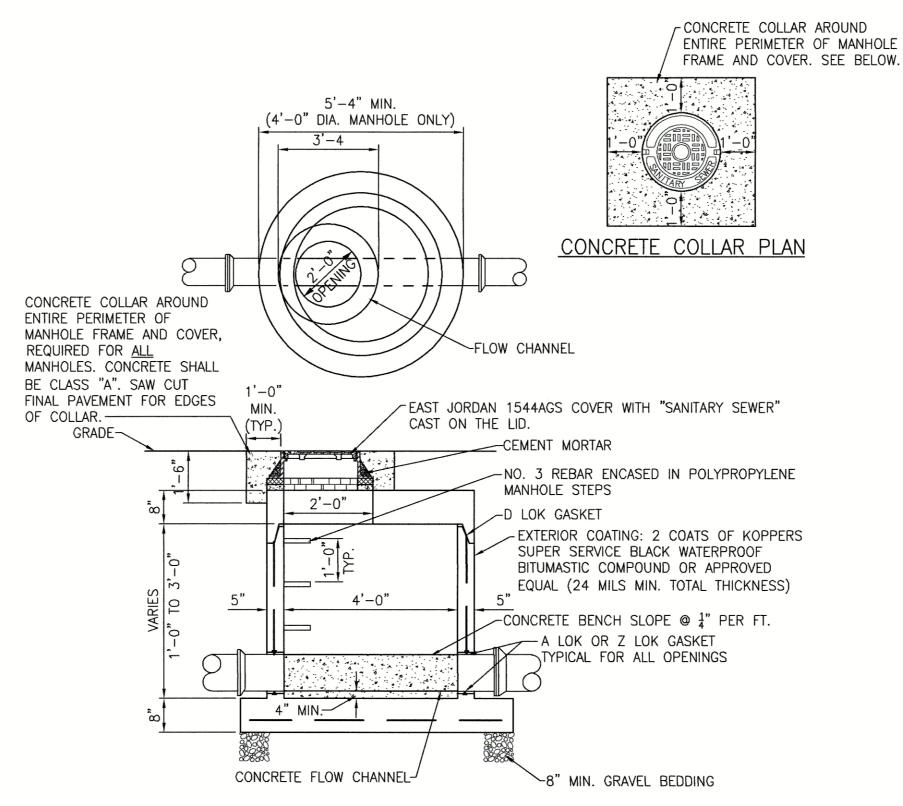
SANITARY **SEWER PROFILES**

SCALE : AS SHOWN DRAWN BY : JWK CHECKED BY : VAL,COD GMB FILE : 170196

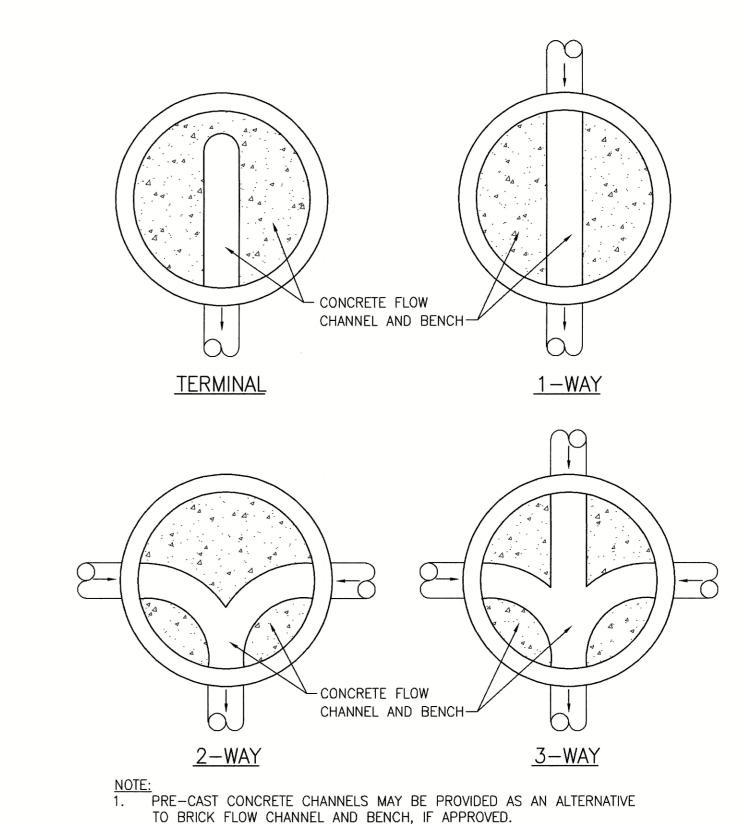
MH-23 TO MH-37 PROFILE VERTICAL SCALE: 1" = 3' HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 3'





SHALLOW PRECAST CONCRETE MANHOLE DETAIL



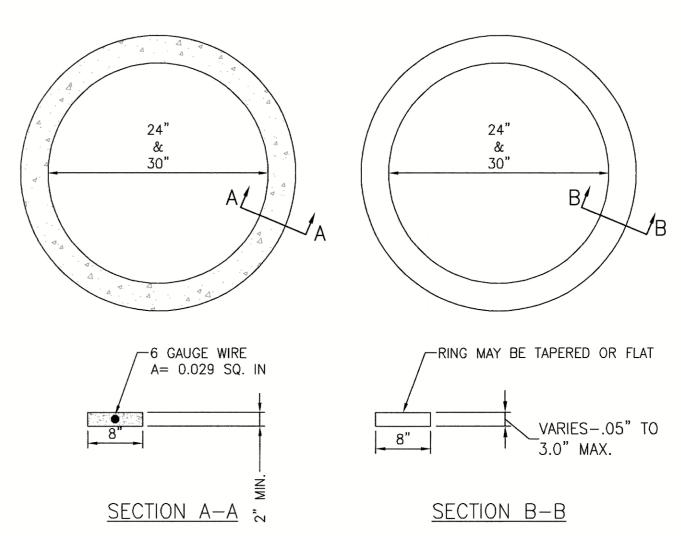
FLOW CHANNEL DETAIL NO SCALE

COVER: EAST JORDAN IRON WORKS #1544AGS -"SANITARY SEWER" CAST ON COVER, 1½" HIGH, SHARP FACE GOTHIC FONT FRAME SHALL BE EAST JORDAN 1545Z1. -¼" NEOPRENE GASKET 24" DIA. 28 3/16" DIA. 34" DIA.

1. MANHOLE SHALL CONFORM TO ASTM C-478.

NO SCALE

MANHOLE FRAME AND COVER DETAIL



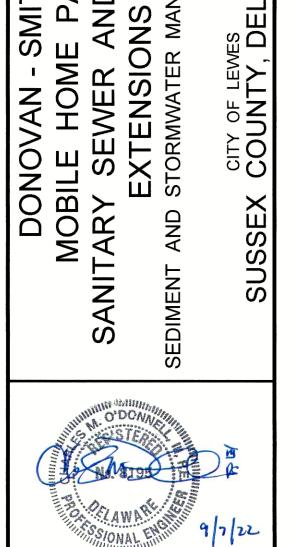
REINFORCED CONCRETE RISER RUBBER ADJUSTMENT RISER

- 1. CONCRETE SHOULD ATTAIN A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
- 2. DESIGN MEETS REQUIREMENTS OF A.S.T.M. STANDARD C-478.
- 3. APPROXIMATE WEIGHT OF ONE REINFORCED CONCRETE RISER: 24"ø - 145 LBS 30"ø - 165 LBS

NOTES:

- 1. USE GNR INFRA-RISER RUBBER GRADE RINGS AS DISTRIBUTED BY EAST JORDAN IRON WORKS, INC. EAST JORDAN, MICHIGAN OR APPROVED EQUAL.
- 2. POLYURETHANE ADHESIVE SEALANT, CONFORMING TO ASTM-D 1850. OR EQUIVALENT, TO BE USED BETWEEN ALL CONTACT SURFACES. SEALANT TO BE APPLIED ON A DIAMETER 1" SMALLER THAN THE OUTSIDE DIAMETER OR THE

MANHOLE COVER ADJUSTMENT RING DETAIL



FINAL PLANS PRINTS ISSUED FOR: PERMITS

SEWER DETAILS

DESIGN BY : JWK DRAWN BY : JWK CHECKED BY : VAL,COD GMB FILE : 170196 : JULY 2022

COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

REINFORCED CONCRETE WALL-

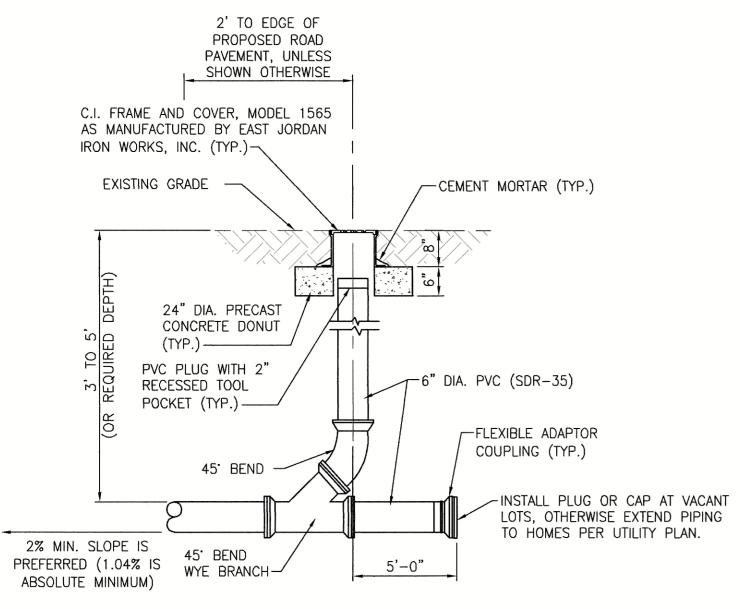
1'-0"

-NO. 3 REBAR ENCASED IN POLYPROPYLENE. PLACE IN VERTICAL ALIGNMENT

MANHOLE STEP DETAIL

NO SCALE

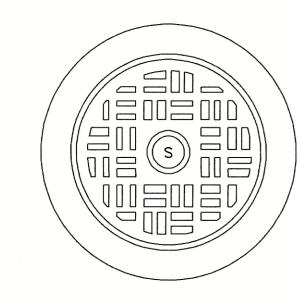
STANDARD HOUSE CONNECTIONS DETAIL NO SCALE



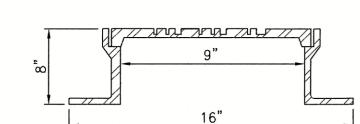
1. CLEANOUT SHALL NOT BE LOCATED IN DITCH, SWALE, ETC.

2. MAINTAIN 5' MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SERVICES.

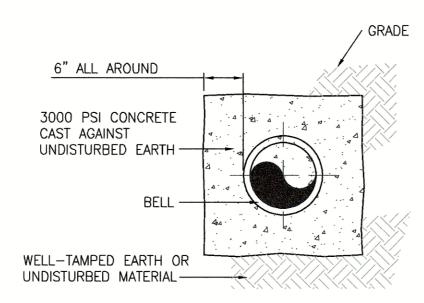
STANDARD LATERAL CLEANOUT DETAIL NO SCALE



WEIGHT - APPROX. 85 LBS. EAST JORDAN #1565

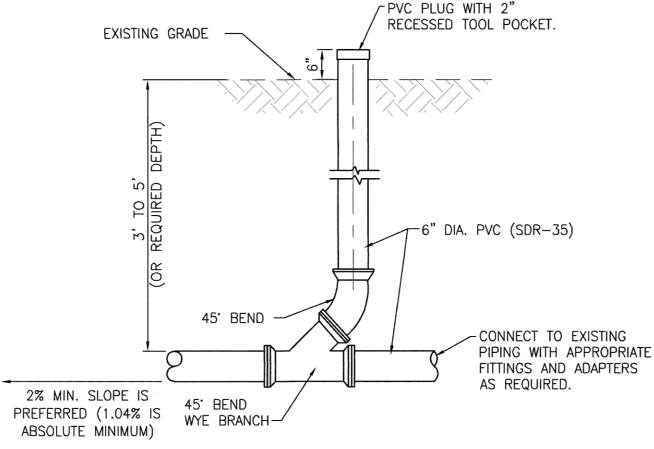


CLEANOUT FRAME AND COVER DETAIL



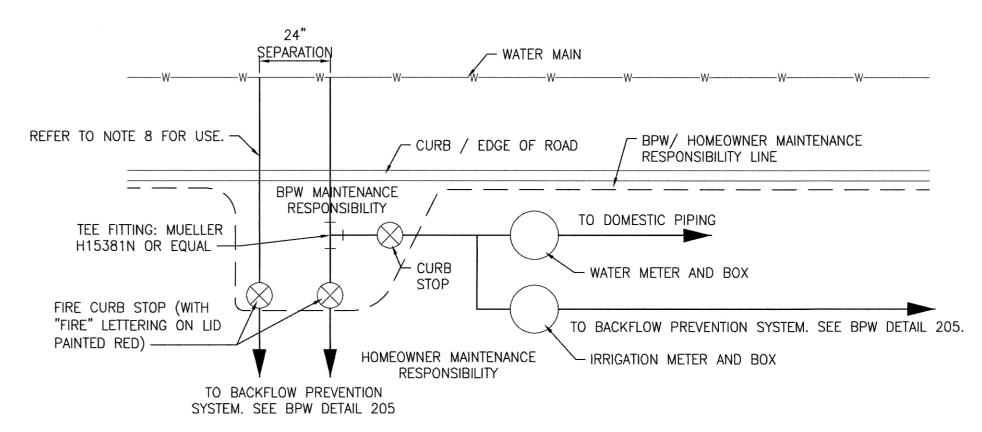
- 1. ENCASEMENT SHALL BE A MINIMUM OF 10 FEET IN LENGTH IN EACH DIRECTION, OR AS DIRECTED BY THE ENGINEER.
- 2. THE CROSSINGS SHALL BE ARRANGED SUCH THAT THE SEWER JOINTS WILL BE EQUAL DISTANCE AND AS FAR AS POSSIBLE FROM WATER MAIN JOINTS.

CONCRETE ENCASEMENT DETAIL NO SCALE

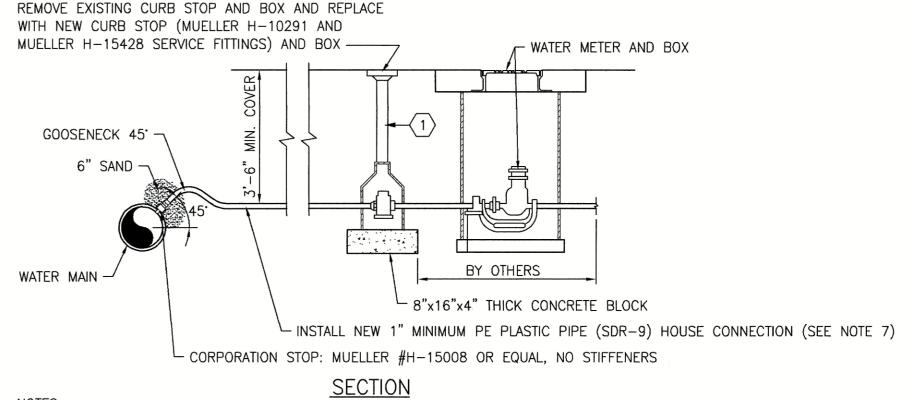


- 1. CLEANOUT SHALL NOT BE LOCATED IN DITCH, SWALE, ETC.
- 2. MAINTAIN 5' MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SERVICES.

PRIVATE LATERAL CLEANOUT DETAIL NO SCALE

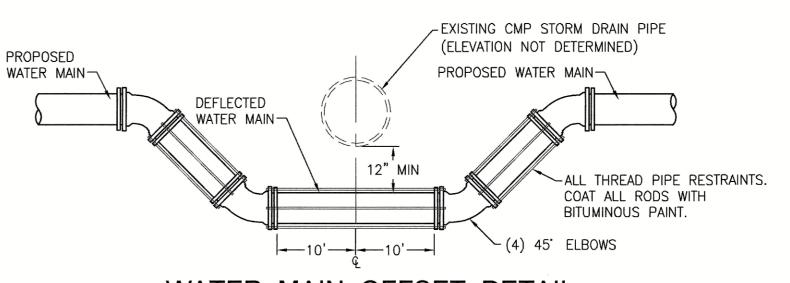


SCHEMATIC PLAN



- (1.) THE CONTRACTOR SHALL ADJUST CURB STOP DEPTH AS NECESSARY TO MAINTAIN MINIMUM COVER OVER SERVICE PIPE AT SIDEWALK.
- 2. PVC WATER MAIN REQUIRES SERVICE SADDLE MANUFACTURED BY POWER SEAL, MODEL 3411 OR 3412.
- 3. CORPORATION STOP SHALL BE ORIENTED AT 45' TO HORIZONTAL AXIS OF PIPE.
- 4. SPECIAL CARE SHALL BE TAKEN DURING BACKFILL OPERATION TO PREVENT DAMAGE TO PIPE AT CORPORATION STOP.
- 5. ADJACENT CORPORATION STOP LOCATIONS WITHIN 24" MUST BE STAGGERED ALONG THE PIPE AXIS BY 5".
- 6. CORPORATION STOPS SHALL BE LOCATED A MINIMUM OF 24" FROM BELL OF PIPE (START AND END OF BELL) AT JOINT.
- 7. SERVICE IS TO BE SIZED TO ADEQUATELY PROVIDE FIRE FLOW TO THE SPRINKLER SYSTEM. SERVICE SIZE SHALL BE PROVIDED BY A FIRE
- 8. WHERE AN EXISTING SERVICE IS PRESENTLY INSTALLED, OWNER SHALL INSTALL NEW FIRE SERVICE AT OWNER'S EXPENSE. ALL WORK IS SUBJECT TO INSPECTION BY LEWES BOARD OF PUBLIC WORKS. ANY DEVIATION WILL BE EVALUATED ON A CASE-BY-CASE BASIS.

HOUSE SERVICE CONNECTION DETAIL - LOTS 1 AND 2



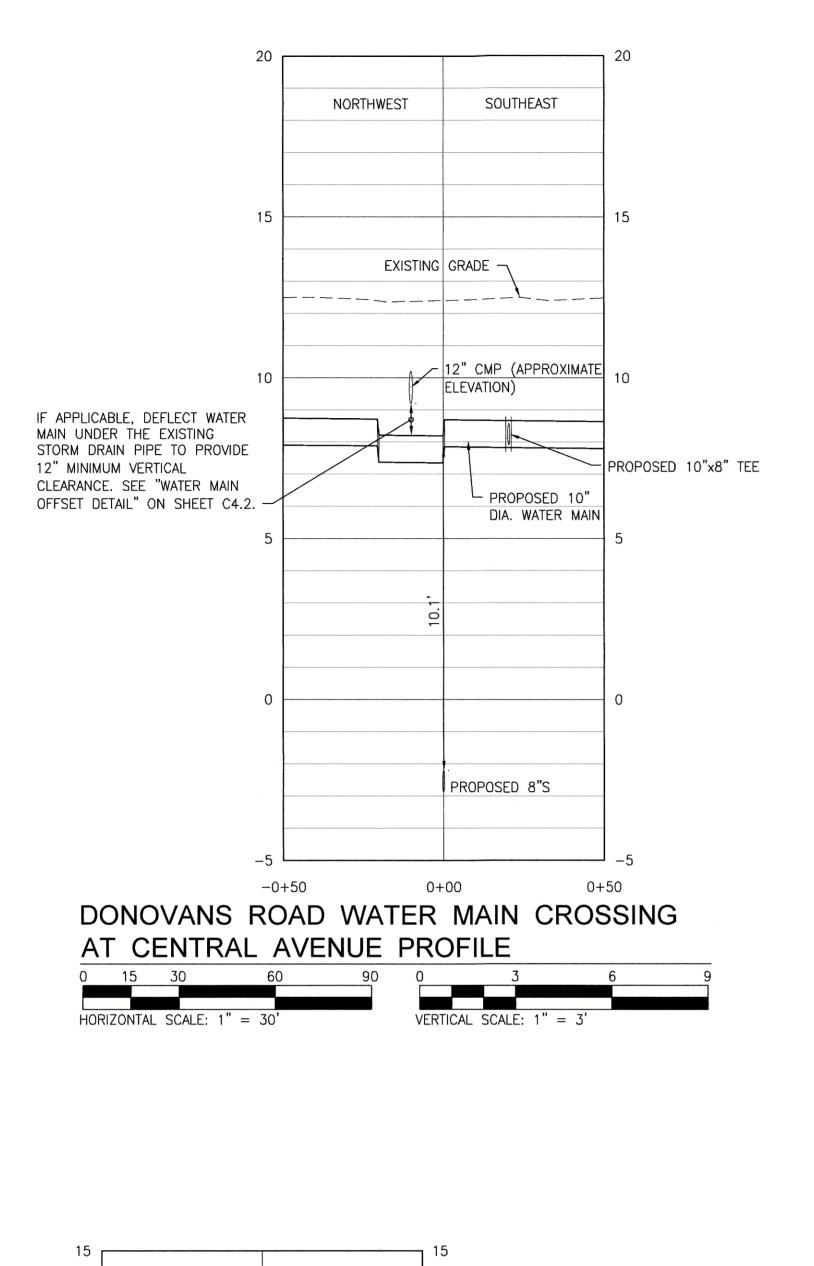
WATER MAIN OFFSET DETAIL NO SCALE

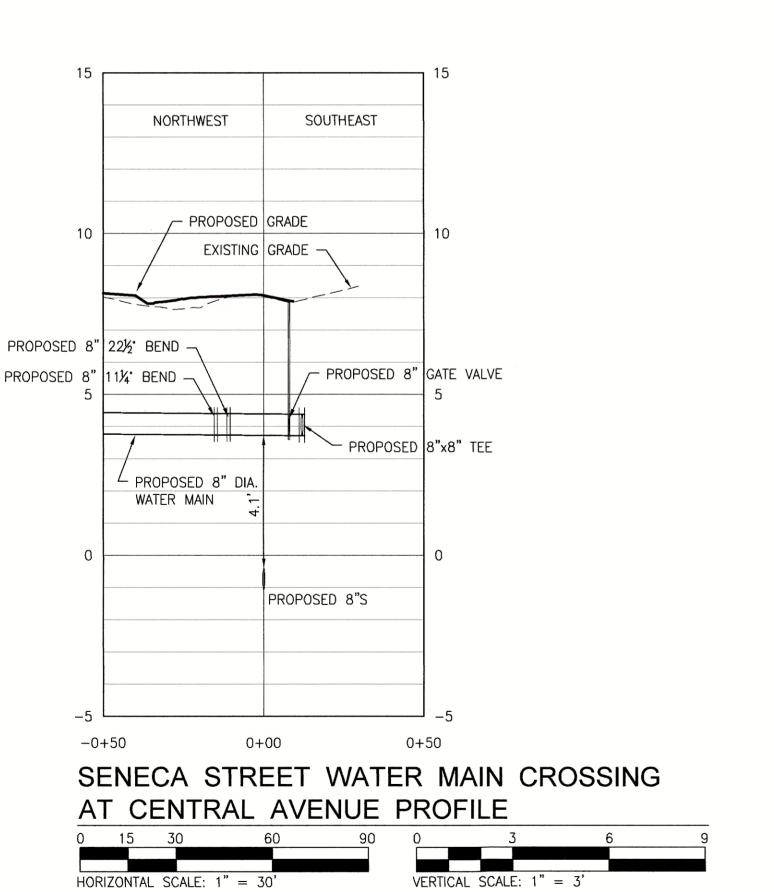
FINAL PLANS PRINTS ISSUED FOR: PERMITS

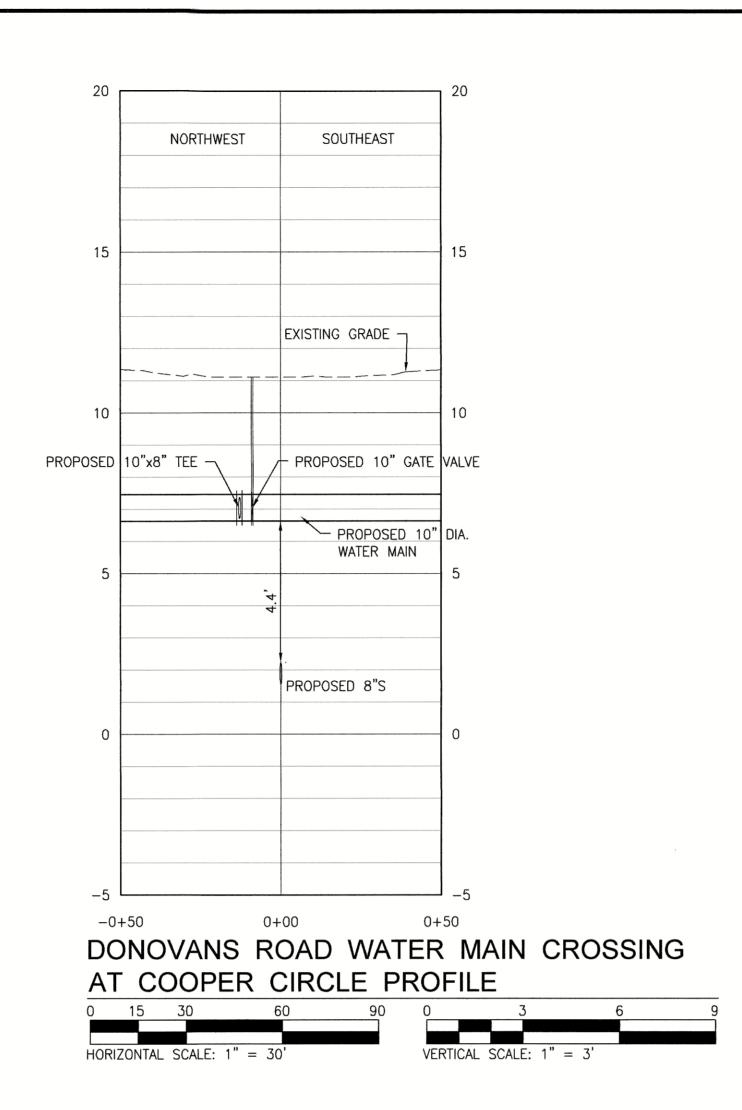
COUNTY, DONOVAN MOBILE HON ITARY SEWER

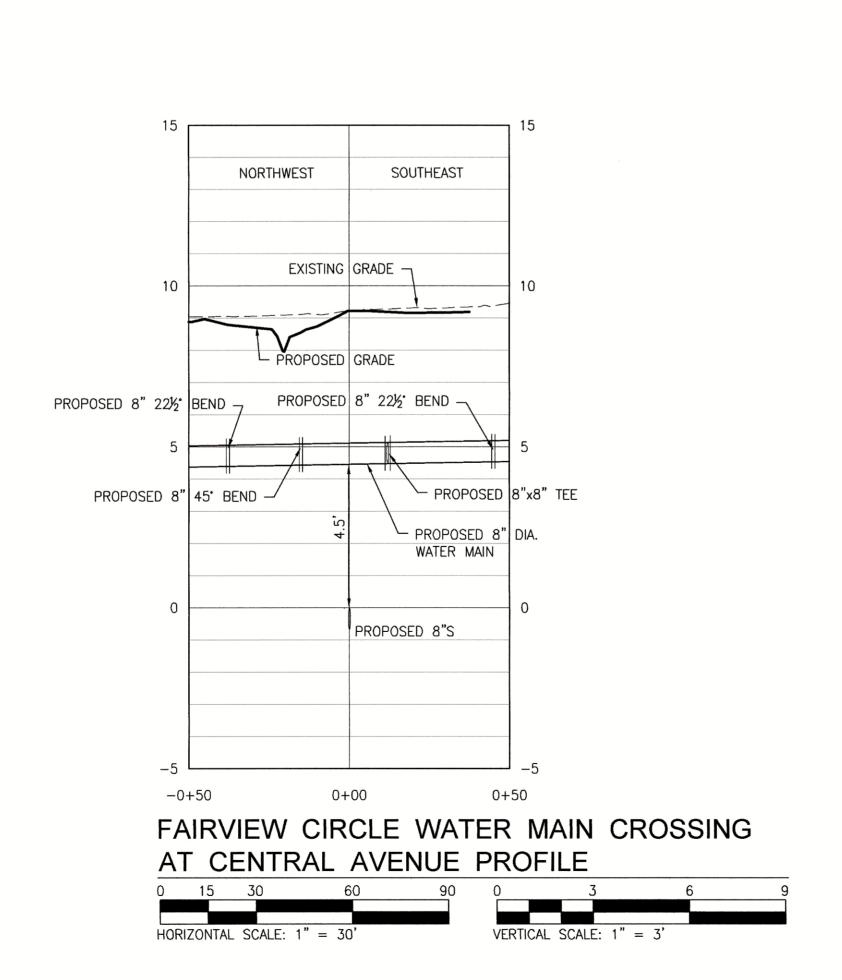
SEWER AND WATER **DETAILS**

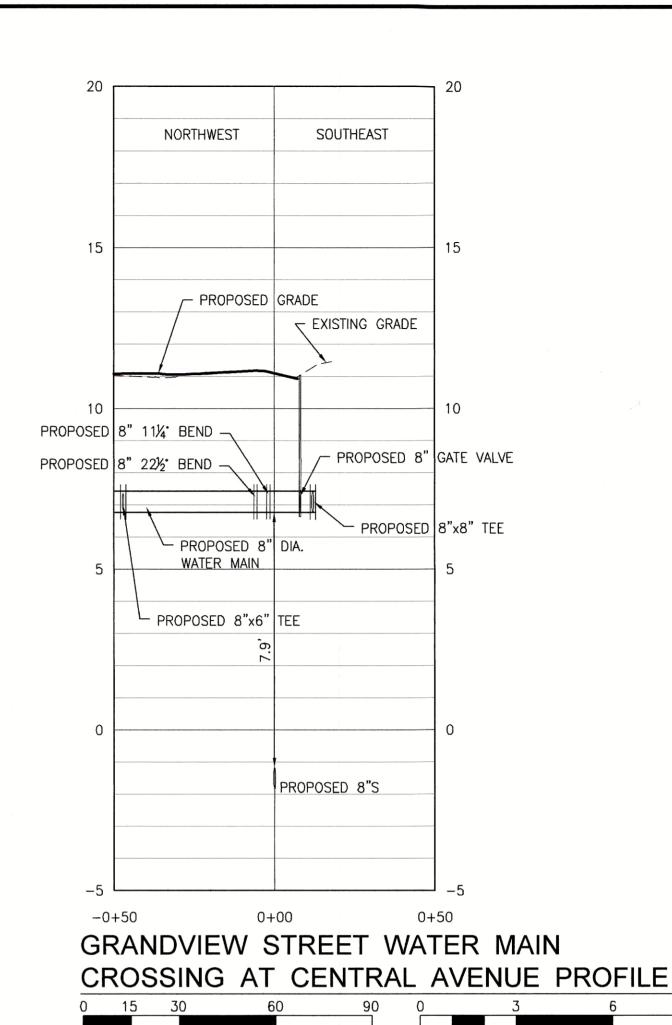
: NONE ESIGN BY : JWK DRAWN BY : JWK C4.2 HECKED BY : VAL,COD GMB FILE : 170196



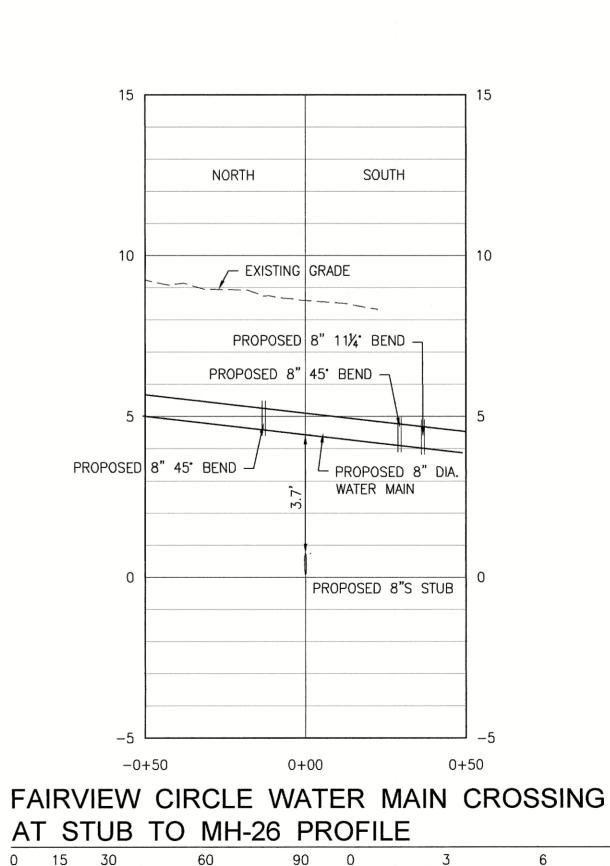








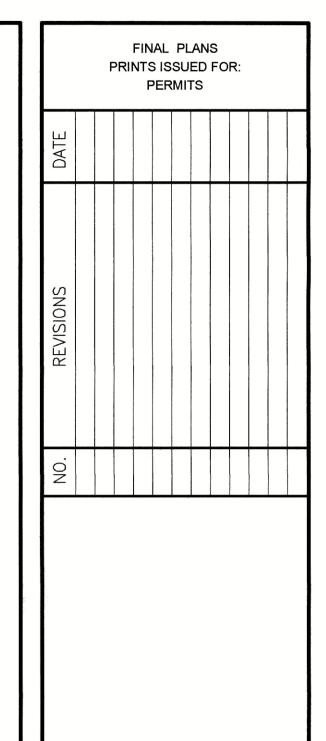
VERTICAL SCALE: 1" = 3'



VERTICAL SCALE: 1" = 3"

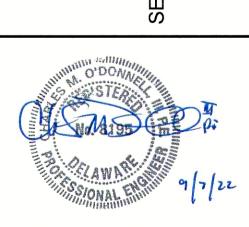
HORIZONTAL SCALE: 1" = 30'

HORIZONTAL SCALE: 1" = 30'





MOBILE HOME PARK
ANITARY SEWER AND WAT
EXTENSIONS
MENT AND STORMWATER MANAGEMINT
SUSSEX COUNTY, DELAWARE



WATER MAIN CROSSING PROFILES

SCALE : AS SHOWN

DESIGN BY : JWK

DRAWN BY : JWK

CHECKED BY : VAL,COD

GMB FILE : 170196

: JULY 2022 © COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

FIRE HYDRANT DETAIL

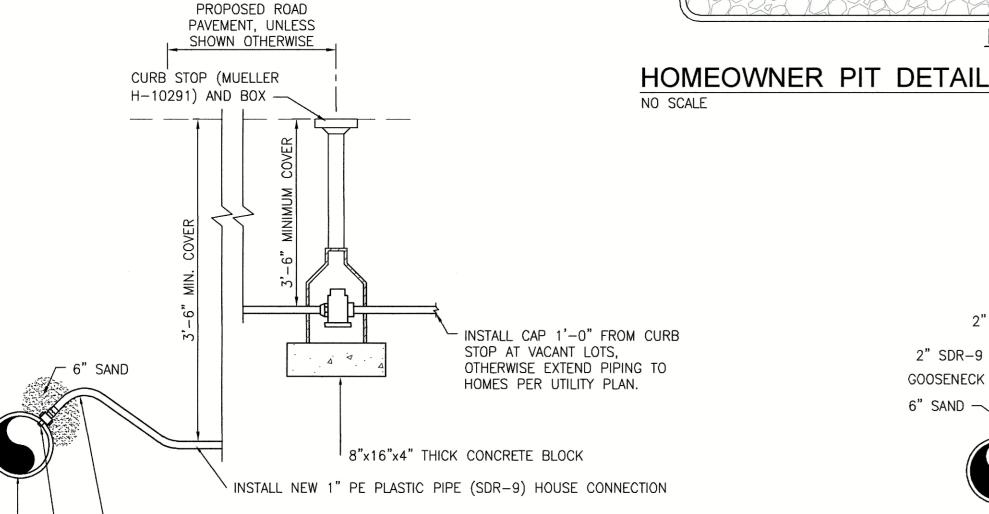
-"WATER" CAST ON LID FINISHED GRADE TRACER WIRE TAPED TO PIPE, PRO-LINE 12 AWG SOLID COPPER -2 PIECE SCREW TYPE VALVE BOX - GATE VALVE: AMERICAN FLOW CONTROL SERIES 2500 MUELLER OR EQUAL

NO SCALE

-4" THICK x 8"x16" CONCRETE BLOCK RETAINER GLANDS SHALL HAVE STAINLESS STEEL T-BOLTS. 2. ALL MJ FITTINGS SHALL HAVE STAINLESS STEEL BOLTS AND NUTS.

GATE VALVE DETAIL

2' TO EDGE OF



P.V.C. WATER MAIN

1. PVC WATER MAIN REQUIRES SERVICE SADDLE MANUFACTURED BY POWER SEAL, MODEL 3411 OR 3412.

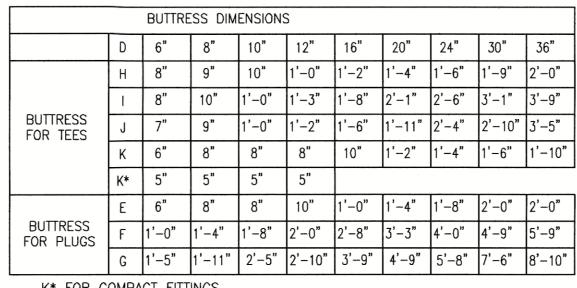
CORPORATION STOP, MUELLER #H-15008 OR EQUAL, NO STIFFENERS

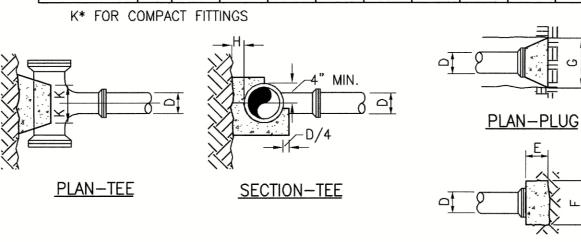
2. CORPORATION STOP SHALL BE ORIENTED AT 45° TO HORIZONTAL AXIS OF PIPE.

GOOSENECK 45

- 3. SPECIAL CARE SHALL BE TAKEN DURING BACKFILL OPERATION TO PREVENT DAMAGE TO PIPE AT CORPORATION STOP
- 4. ADJACENT CORPORATION STOP LOCATIONS WITHIN 24" MUST BE STAGGERED ALONG THE PIPE AXIS BY 5".
- 5. CORPORATION STOPS SHALL BE LOCATED A MINIMUM OF 24" FROM BELL OF PIPE (START AND END OF BELL) AT JOINT.

HOUSE SERVICE CONNECTION DETAIL



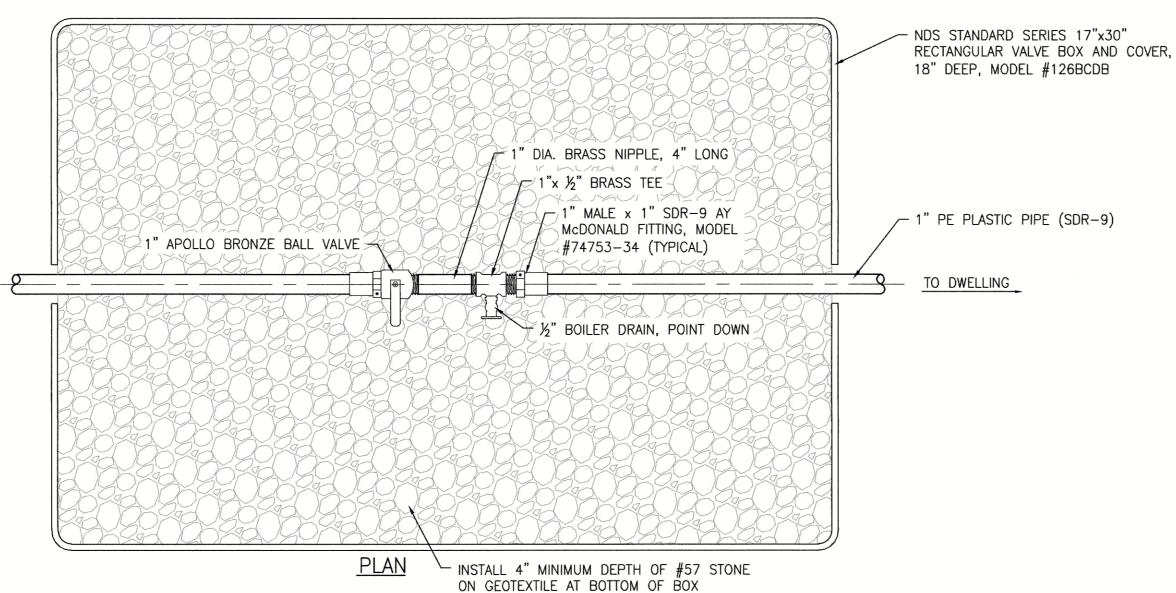


- 1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
- 2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.

SECTION-PLUG

3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.

BUTTRESS DETAILS FOR TEES AND PLUGS NO SCALE



CEMENT MORTAR (TYP.) - SEWER CLEANOUT FRAME AND COVER WITH WATER LID **VARIES** - EXISTING GRADE ¹24" DIA. PRECAST CONCRETE DONUT (TYP.) CURB BOX-- 2" MALE CAM AND GROOVE ADAPTER 2" CURB STOP -TO F.I.P. (CAMLOCK A200-SS) 2" SDR-9 PE TUBING → 2" DIA. SDR-9 PE TUBING GOOSENECK 45' -2" DIA. STAINLESS STEEL PIPE. 6" SAND → BACKFILL WITH #57 STONE A MINIMUM OF 1' ON ALL SIDES OF 2" DIA. PE COMPRESSION FITTING TO F.I.P. (MUELLER H-15533N) - 8"x16"x4" THICK CONCRETE BLOCKS

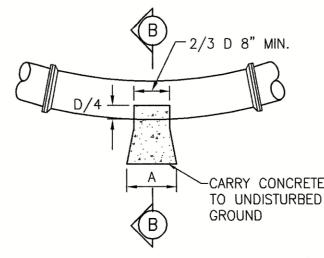
1. THE CONTRACTOR SHALL ADJUST CURB STOP DEPTH AS NECESSARY TO MAINTAIN MINIMUM COVER OVER SERVICE PIPE AT SIDEWALK.

SERVICE SADDLE (TYPICAL)

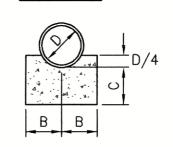
CORPORATION STOP: MUELLER #H-15008 OR EQUAL, NO STIFFENERS

- 2. PVC WATER MAIN REQUIRES SERVICE SADDLE MANUFACTURED BY POWER SEAL, MODEL 3411
- 3. SPECIAL CARE SHALL BE TAKEN DURING BACKFILL OPERATION TO PREVENT DAMAGE TO PIPE AT CORPORATION STOP.

BLOWOFF DETAIL NO SCALE



ELEVATION



SECTION B-B

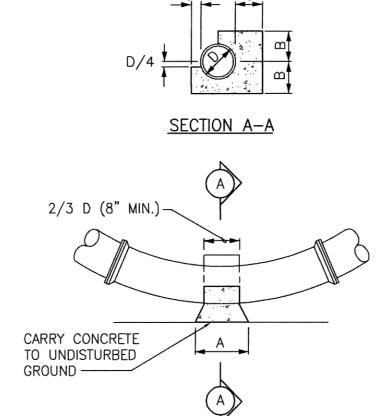
- 1											
	BEND	D	6"	8"	10"	12"	16"	20"	24"	30"	36"
		Α						1'-8"	2'-0"	2'-6"	3'-0
	111/4	В						10"	1'-0"	1'-3"	1'-6
		С						10"	1'-0"	1'-1"	1'-2
		Α	6"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0
	221/2	В	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-1
		С	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2
		Α	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4
	45	В	7"	7"	8"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0
		С	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2
		Α	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-2"	5'-0"	6'-3"	7'-6
	90.	В	7"	8"	9"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-6
		С	7"	8"	10"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-8

BUTTRESS DIMENSIONS FOR VERTICAL BENDS

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 VERTICAL BENDS NO SCALE

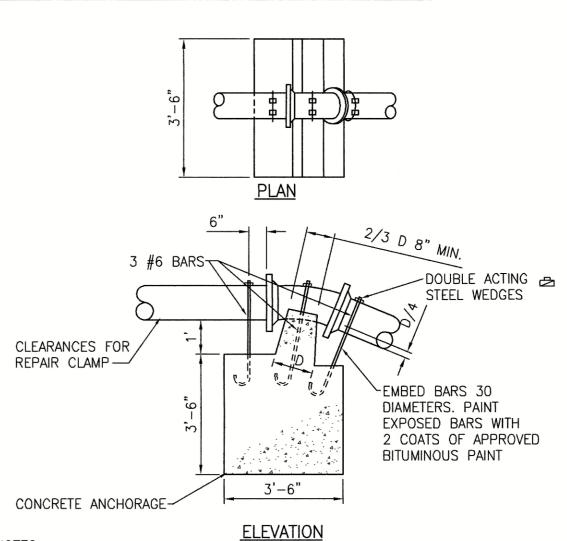


BUTTRESS DIMENSIONS FOR HORIZONTAL BENDS												
BEND	D	6"	8"	10"	12"	16"	20"	24"	30"	36"		
	Α						1'-8"	2'-0"	2'-6"	3'-0"		
5%*	В						10"	1'-0"	1'-3"	1'-6"		
	С						10"	1'-0"	1'-1"	1'-2"		
	Α	6"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0"		
11¼.	В	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-11"		
	С	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2"		
	Α	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4"		
221/2	В	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0"		
	С	8"	9"	10"	11"	1'-2"	1'-4"	1'-6"	1'-9"	2'-0"		
	Α	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-2"	5'-0"	6'-3"	7'-6"		
45*	В	7"	8"	9"	11"	1'-3"	1'-6"	1'-8"	2'-0"	2'-6"		
	С	8"	9"	10"	11"	1'-2"	1'-4"	1'-9"	2'-3"	2'-8"		
	Α	2'-0"	2'-6"	3'-0"	3'-6"	5'-0"						
90.	В	6"	9"	1'-0"	1'-3"	1'-6"	- SI	PECIAL	DESIGN	1		
	С	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

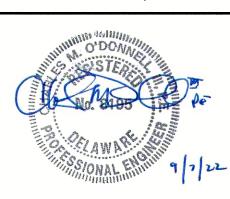


- 1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
- 2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
- 3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.

ANCHORAGE DETAIL FOR VERTICAL BENDS

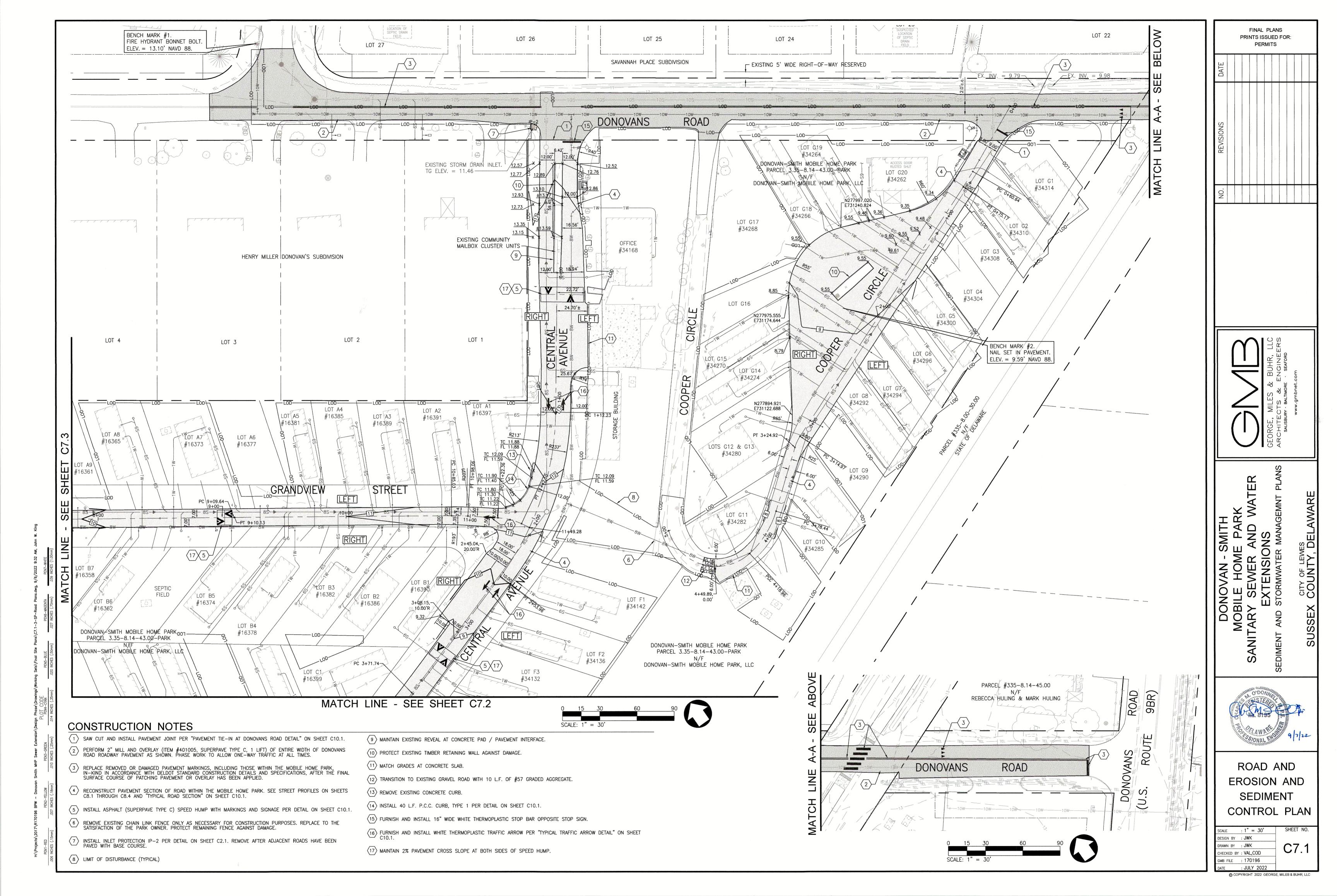
FINAL PLANS PRINTS ISSUED FOR: **PERMITS**

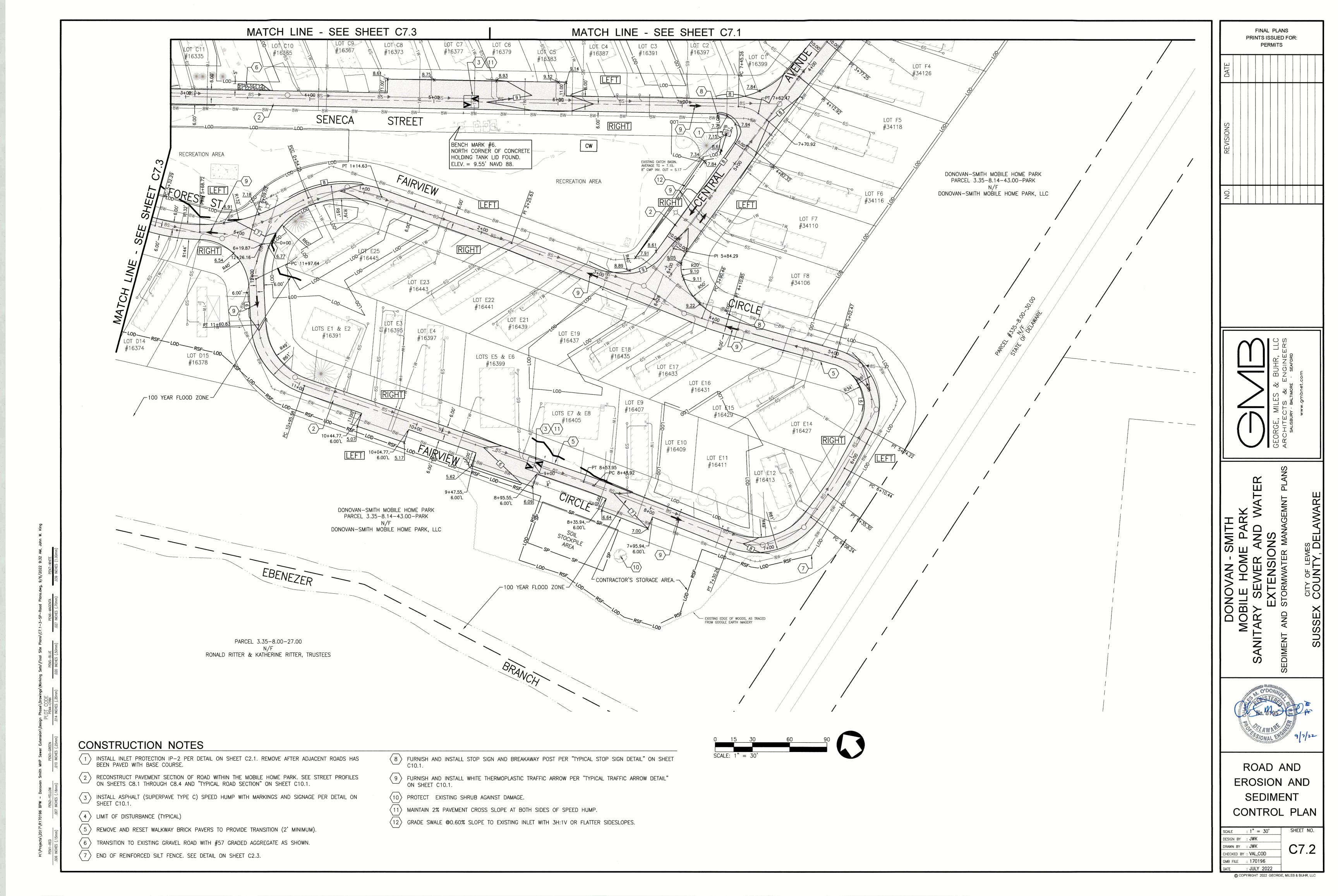
DONOVAN - SN MOBILE HOME TARY SEWER A COUNTY,

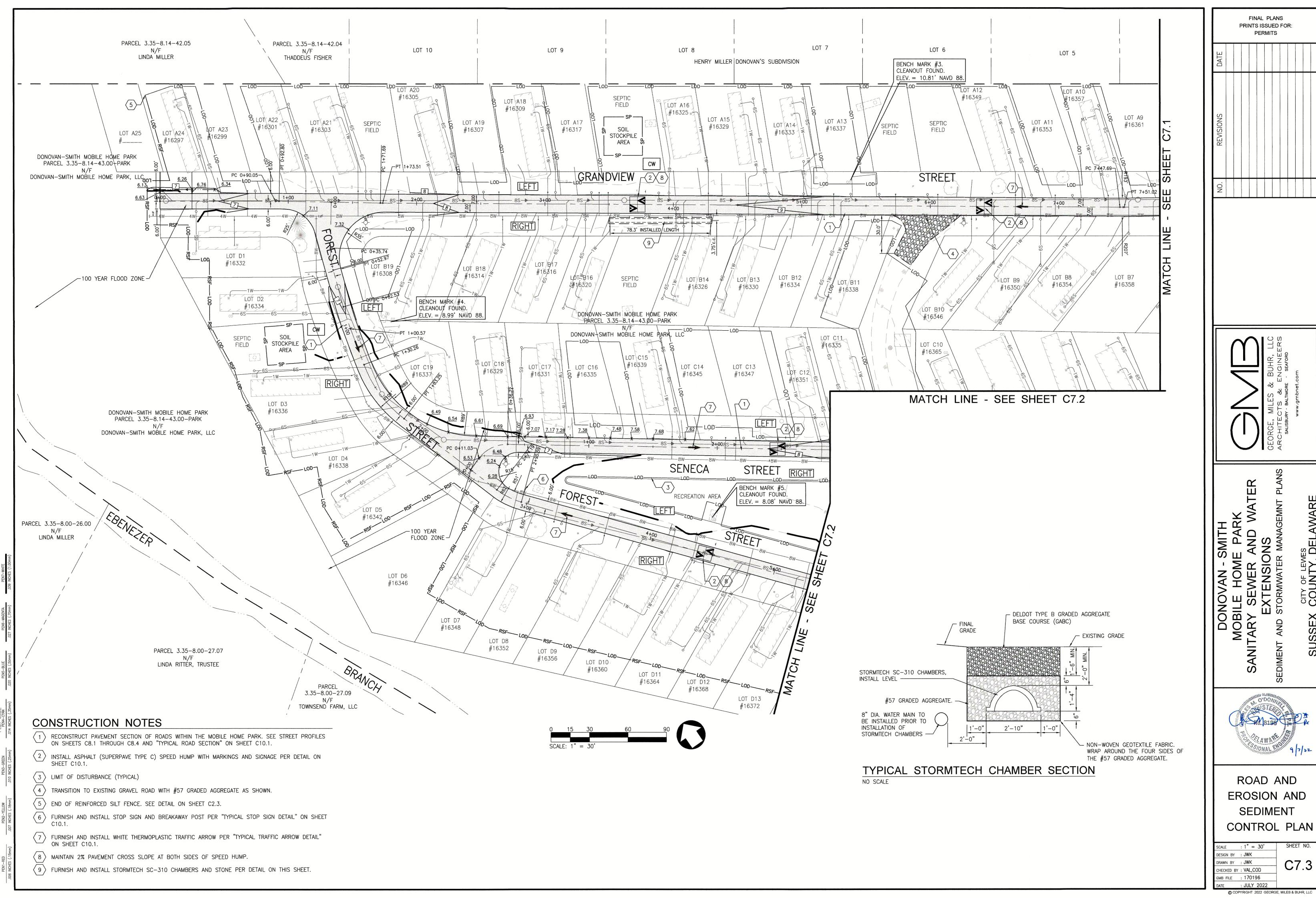


WATER MAIN **DETAILS**

DESIGN BY : JWK DRAWN BY : JWK C6.1 CHECKED BY : VAL,COD



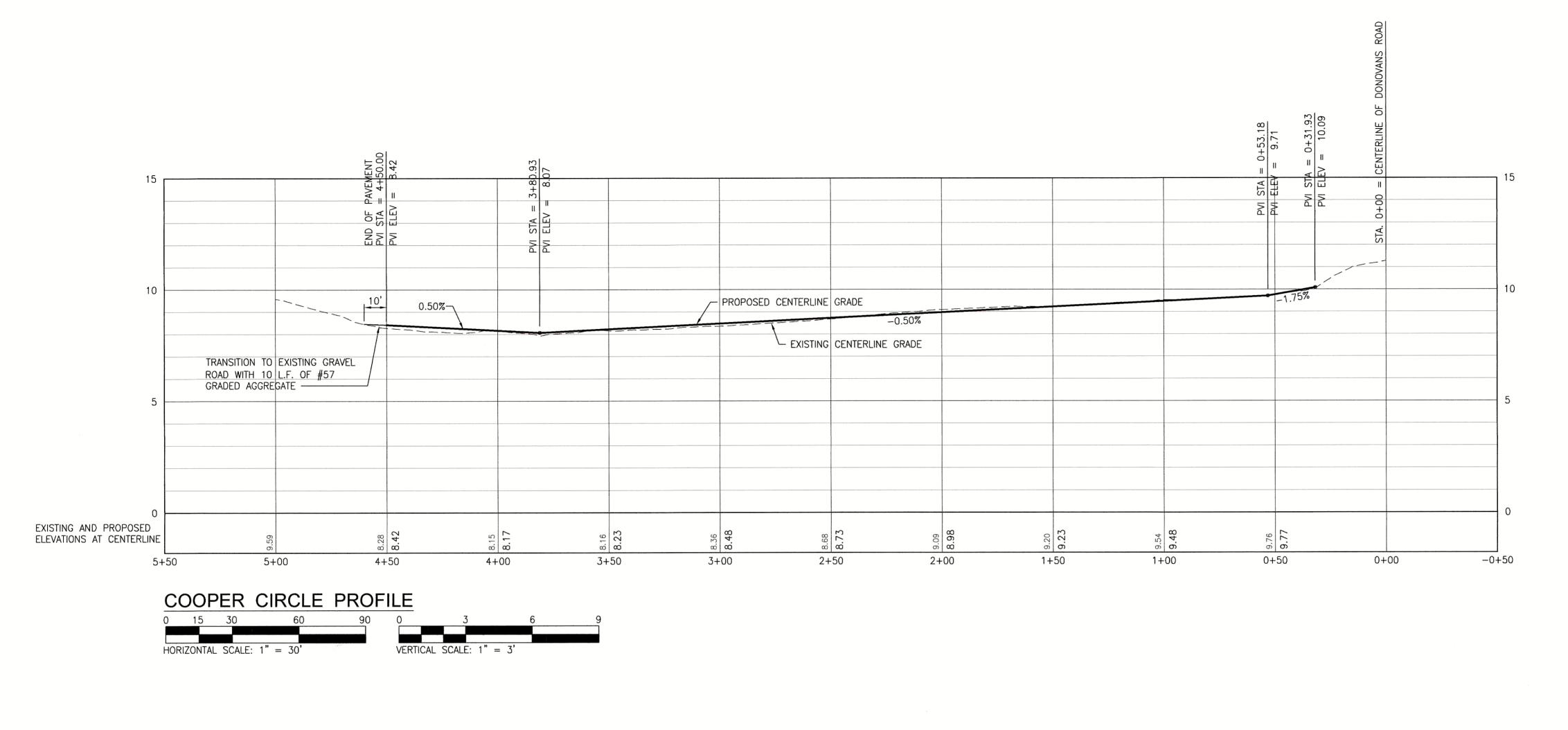


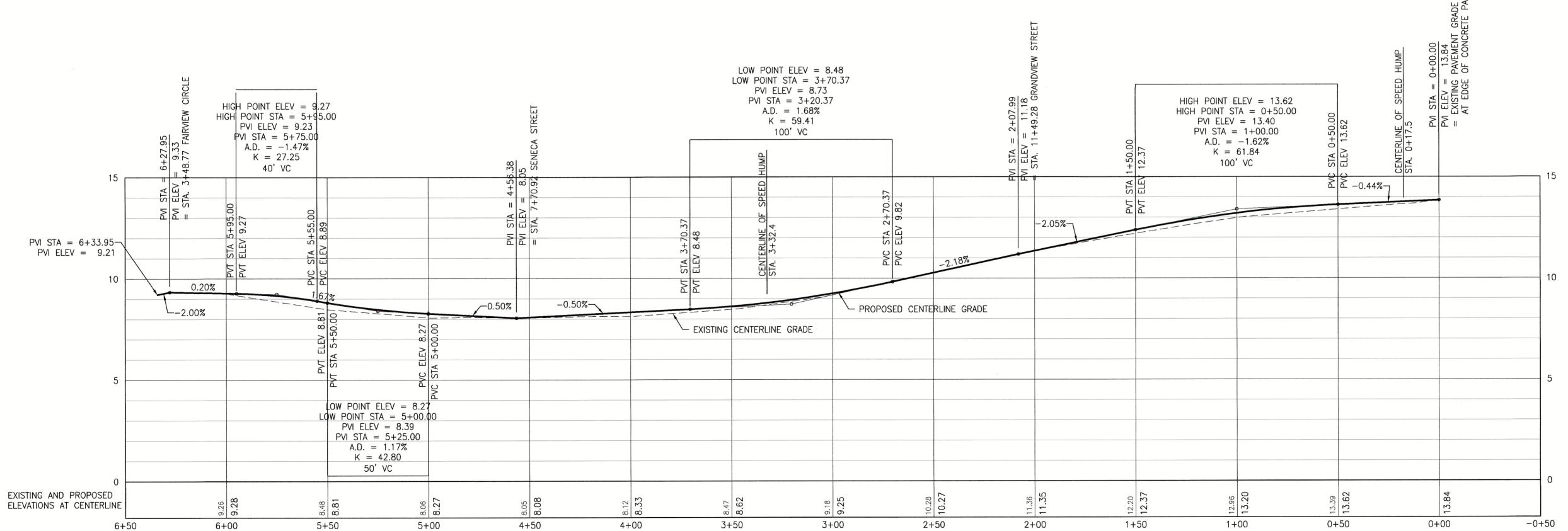


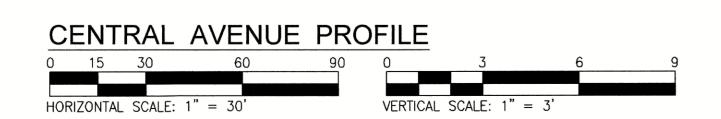
FINAL PLANS PRINTS ISSUED FOR: PERMITS

ROAD AND **EROSION AND** SEDIMENT CONTROL PLAN

: 1'' = 30'DRAWN BY : JWK CHECKED BY : VAL,COD



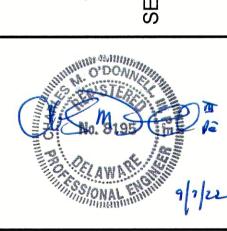




CITY OF LEWES COUNTY, DELAWARE

FINAL PLANS PRINTS ISSUED FOR: PERMITS

DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PLANS

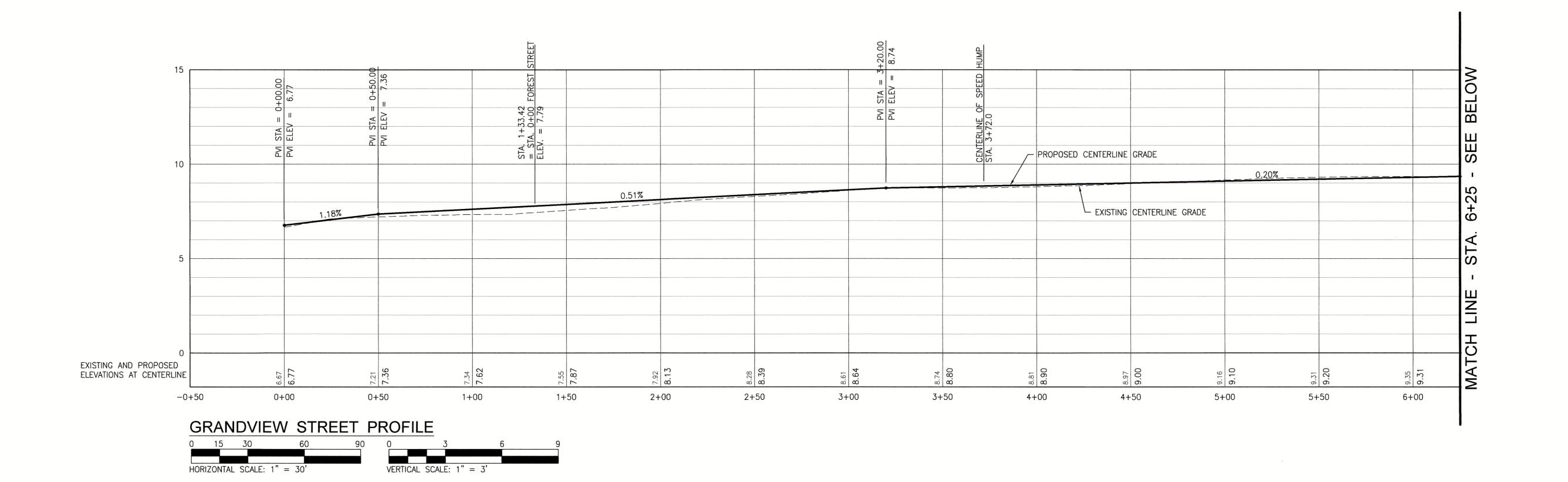


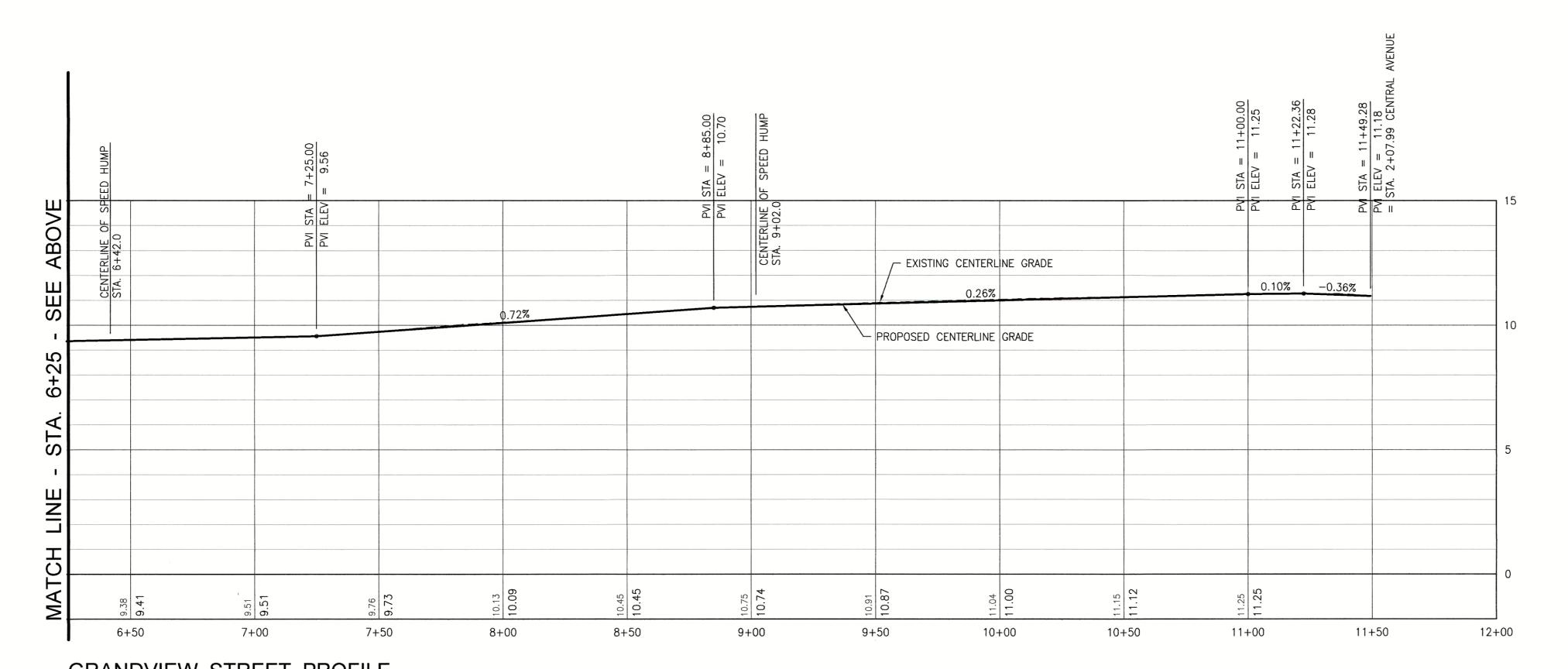
SUSSEX

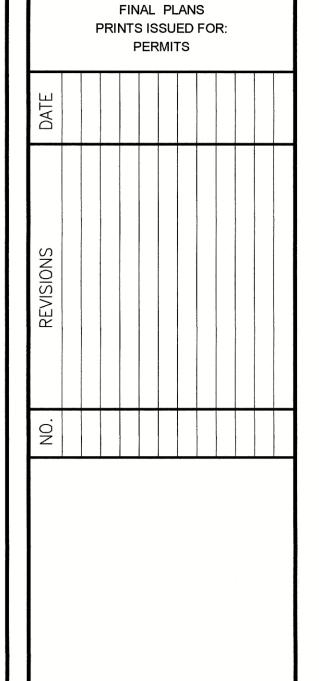
ROAD PROFILES

SHEET NO. : AS SHOWN DESIGN BY : JWK DRAWN BY : JWK C8.1 CHECKED BY : VAL,COD GMB FILE : 170196

: JULY 2022 COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC





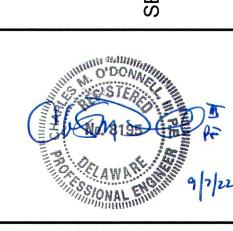




DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PLANS

COUNTY, DELAWARE

SUSSEX



ROAD PROFILES

SCALE : AS SHOWN SHE
DESIGN BY : JWK

DRAWN BY : JWK

CHECKED BY : VAL,COD

GMR FILE : 170196

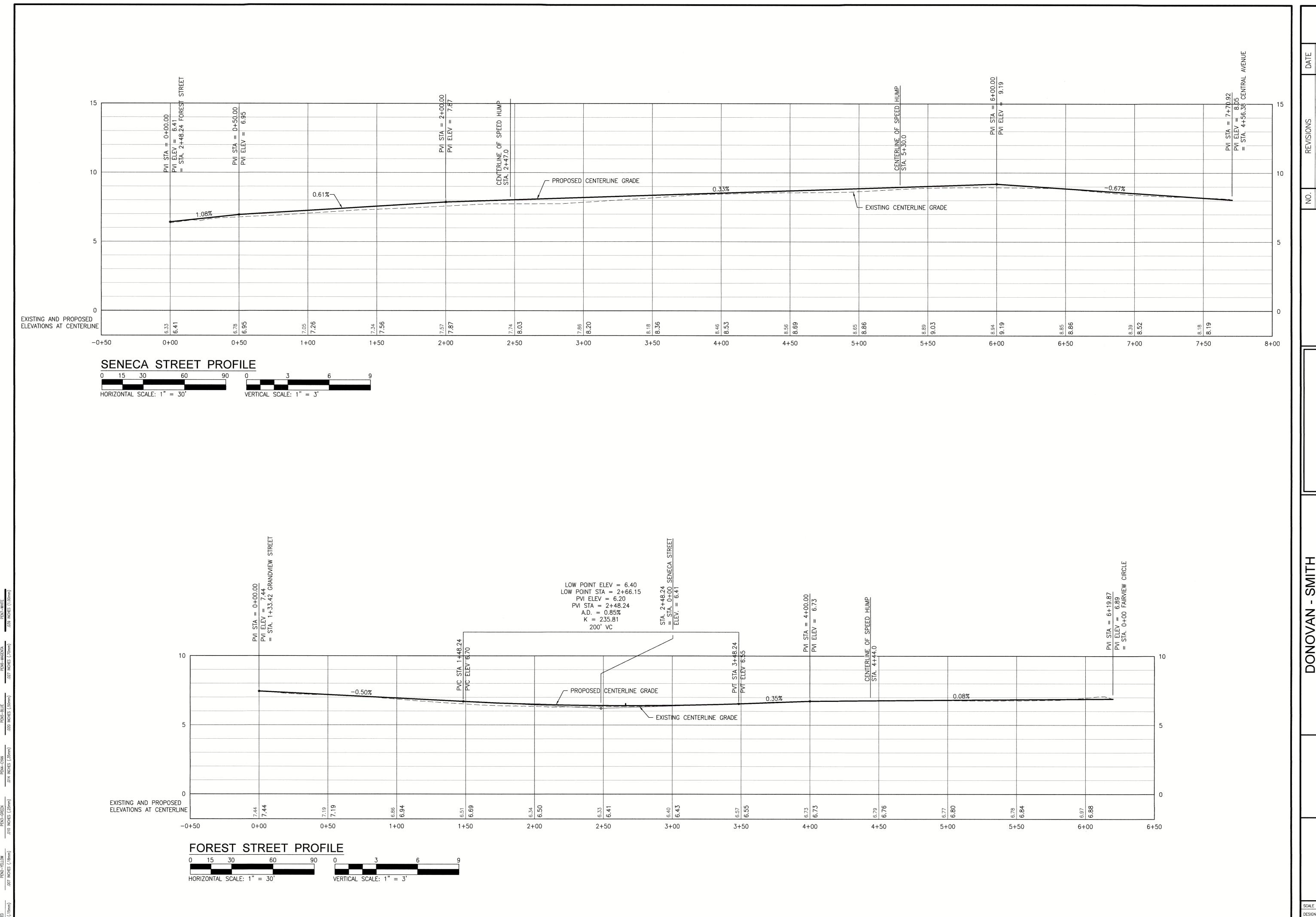
© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

H:\Projects\2017\R170196 BPW — Donovan Smith MHP Sewer Extension

 GRANDVIEW
 STREET
 PROFILE

 0 15 30 60 90 0 3 6

 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 3'



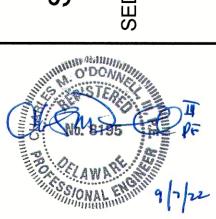
NO. REVISIONS DATE

FINAL PLANS
PRINTS ISSUED FOR:
PERMITS

GEORGE, MILES & BUHR,

DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PLANS

COUNTY, DELAWARE



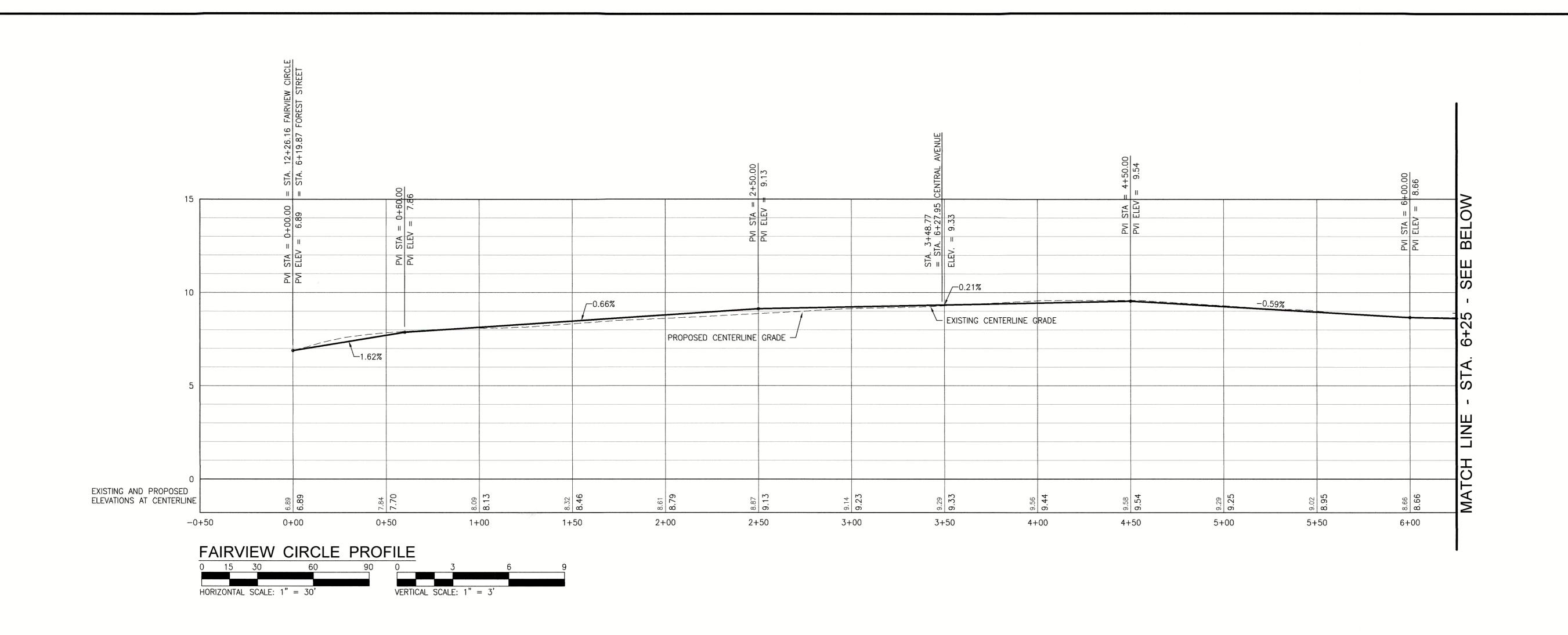
ROAD PROFILES

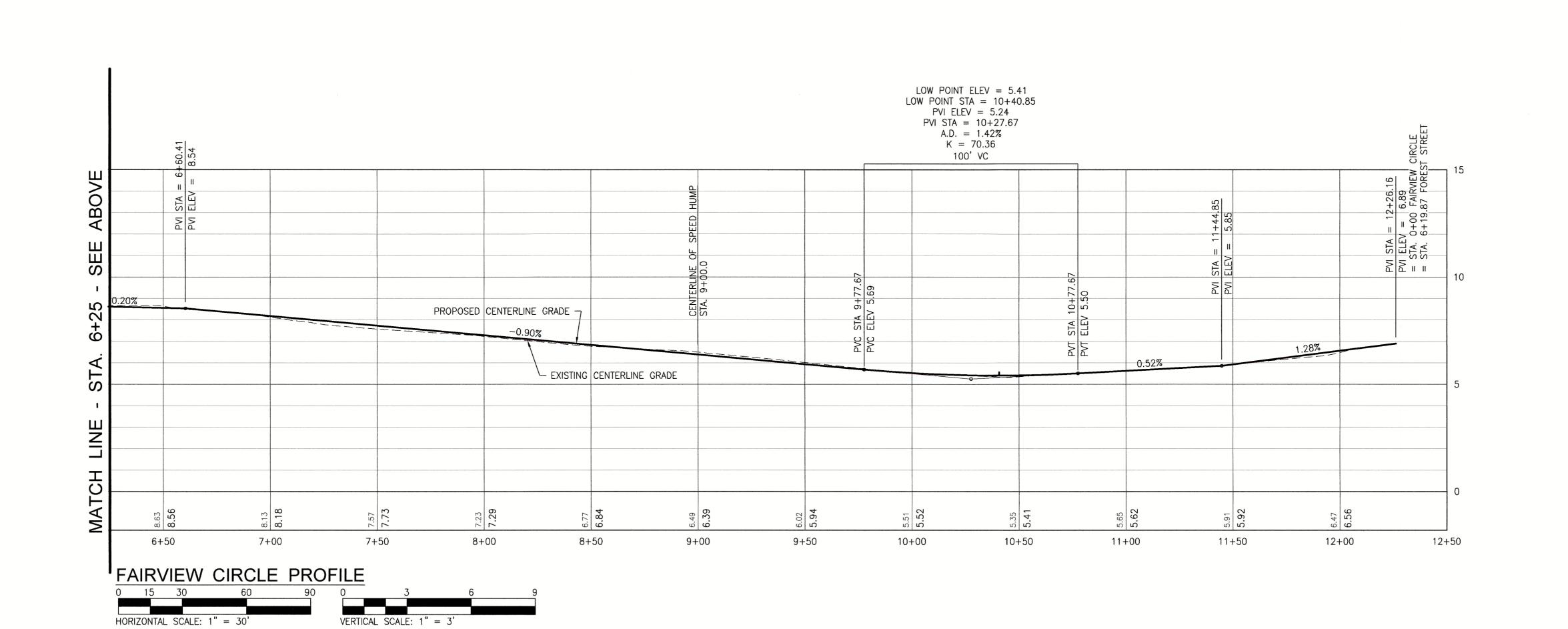
SCALE : AS SHOWN S
DESIGN BY : JWK
DRAWN BY : JWK
CHECKED BY : VAL,COD

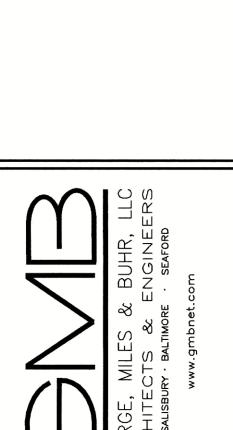
GMB FILE : 170196

DATE : JULY 2022

© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC







FINAL PLANS PRINTS ISSUED FOR: PERMITS

DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND W
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEM

COUNTY, DEL

SUSSEX

ROAD **PROFILES**

SHEET NO. DRAWN BY : JWK CHECKED BY : VAL, COD GMB FILE : 170196

: JULY 2022 COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

CENTRAL AVENUE CENTER	LINE ALIGNM
Begin CENTRAL AVENUE N 278,096.8579 E 731,031.7190	0+00.00
Line (1) S35' 13' 48"W 112.232' N 278,005.1818 E 730,966.9765 Line (1)	1+12.23
Curve (2) BC N 278,005.1818 E 730,966.9765 CTR N 278,134.9755 E 730,783.1870 PI N 277,945.3050 E 730,924.6911	1+12.23
Direction Back S35 13' 48"W Radius 225.000' Delta 36'05'25"(RT) Length 141.726' Tangent 73.303'	
Tangent 73.303' Chord Direction S53* 16' 30"W Distance Direction Ahead S71* 19' 13"W	: 139.394'
EC N 277,921.8277 E 730,855.2498 Curve (2)	2+53.96
Line (3) S71' 19' 13"W 117.784' N 277,884.1040 E 730,743.6702 Line (3)	3+71.74
Curve (4) BC N 277,884.1040 E 730,743.6702 CTR N 278,002.5194 E 730,703.6353 PI N 277,883.2213 E 730,741.0594	3+71.74
Direction Back S71° 19′ 13″W Radius 125.000° Delta 2°31'34"(RT) Length 5.511' Tangent 2.756' Chord Direction S72° 35′ 00″W Distance	5 510'
Direction Ahead S73 50 46 W	3+77.25
Line (5) \$73' 50' 46"W 35.667' N 277,872.5314 E 730,704.1535 Line (5)	4+12.92
Line (6) **Non-Tangent** Radial Bearing S16* 09' 14"E S71' 24' 59"W 69.401' N 277,850.4142 E 730,638.3711 Line (6)	4+82.32
Line (7) **Non-Tangent** Radial Bearing S16 09 14 E S70 12 15 W 101.973 N 277,815.8788 E 730,542.4242 Line (7)	5+84.29
Line (8) **Non-Tangent** Radial Bearing S16 09 14 E S56 01 03"W 43.660' N 277,791.4753 E 730,506.2207	6+27.95
Line (8) N 277,791.4753 E 730,506.2207 End CENTRAL AVENUE	6+27.95
SENECA STREET CENTERLI	NE ALIGNMEI
Begin SENECA STREET N 278,292.7698 E 730,038.8427	0+00.00
Line (1) N72° 01' 43"E 11.026' N 278,296.1717 E 730,049.3305 Line (1)	0+11.03
Curve (2) BC N 278,296.1717 E 730,049.3305 CTR N 278,270.0134 E 730,057.8153 PI N 278,300.4516 E 730,062.5251	0+11.03

End SENECA STREET

		Delta 0°08'27"(RT) Length 0.492' Tangent 0.246' Chord Direction S55° 58' 04"E Distance Direction Ahead S55° 53' 51"E	0.492'
SENECA STREET CENTER	LINE ALIGNMENT	EC N 278,082.4242 E 730,705.8429 Curve (8)	9+10.13
Begin SENECA STREET N 278,292.7698 E 730,038.8427	0+00.00	Line (9) S55' 53' 51"E 174.894'	10:05.07
Line (1) N72' 01' 43"E 11.026' N 278,296.1717 E 730,049.3305	0+11.03	N 277,984.3652 E 730,850.6613 Line (9) Curve (10)	10+85.03
Line (1) Curve (2) BC N 278,296.1717 E 730,049.3305	0+11.03	BC N 277,984.3652 E 730,850.6613 CTR N 277,818.7582 E 730,738.5260 PI N 277,980.7089 E 730,856.0611	10+85.03
CTR N 278,270.0134 E 730,057.8153 PI N 278,300.4516 E 730,062.5251		Direction Back S55* 53' 51"E Radius 200.000' Delta 3*44'06"(RT)	
Direction Back N72° 01′ 43″E Radius 27.500′ Delta 53°32′03″(RT) Length 25.695′		Length 13.038' Tangent 6.521' Chord Direction S54' 01' 48"E Distance	13.036'
Tangent 13.871' Chord Direction S81° 12' 15"E Distar Direction Ahead S54° 26' 14"E	nce 24.770'	Direction Ahead S52 09 44 E EC N 277,976.7086 E 730,861.2112 Curve (10)	10+98.06
EC N 278,292.3840 E 730,073.8092 Curve (2)	0+36.72	Line (11) S52' 09' 44"E 24.295'	
Line (3) S54' 26' 14"E 708.538' N 277,880.3008 E 730,650.1888	7+45.26	N 277,961.8056 E 730,880.3981 Line (11)	11+22.36
Line (3) Curve (4)	7 1 10.120	**Non—Tangent** Radial Bearing N37' 40' 23"E Curve (12) BC N 277,961.8056 E 730,880.3981	11+22.36
BC N 277,880.3008 E 730,650.1888 CTR N 277,857.9301 E 730,634.1949 PI N 277,875.1266 E 730,657.4259	7+45.26	CTR N 277,921.0027 E 730,848.8927 PI N 277,955.6983 E 730,888.3077	
Direction Back S54 26 14"E Radius 27.500' Delta 35.51'12"(RT) Length 17.208'		Direction Back S52° 19′ 37″E Radius 51.551′ Delta 21°56′29″(RT) Length 19.741′ Tangent 9.993′	
Tangent 8.896' Chord Direction S36' 30' 37"E Distant	nce 16.929'	Chord Direction S41° 21' 23"E Distance Direction Ahead S30° 23' 08"E	19.621'
EC N 277,866.6941 E 730,660.2611 Curve (4)	7+62.47	EC N 277,947.0779 E 730,893.3623 Curve (12)	11+42.10
Line (5) S18' 35' 01"E 8.455'		Line (13) S30° 23' 08"E 7.183' N 277,940.8812 E 730,896.9958	11+49.28
N 277,858.6799 E 730,662.9556 Line (5)	7+70.92	Line (13) N 277,940.8812 E 730,896.9958	11+49.28
N 277,858.6799 E 730,662.9556	7+70.92	End GRANDVIEW STREET	

GRANDVIEW STREET CENTERLINE ALIGNMENT

0+00.00

0+90.05

0+90.05

0+92.80

1+71.69

1+71.69

1+73.51

7+47.69

7+47.69

7+51.02

9+09.64

9+09.64

Begin GRANDVIEW STREET

S55° 26' 18"E 90.053'

Line (1)

Curve (2)

Line (3)

Line (3)

Curve (4)

Line (5)

Line (5)

Curve (6)

Line (7)

Line (7)

N 278,601.4985 E 729,958.2773

N 278,550.4122 E 730,032.4371

Curve (2)
BC N 278,550.4122 E 730,032.4371
CTR N 278,426.8848 E 729,947.3431
PI N 278,549.6318 E 730,033.5700

Direction Back S55° 26' 18"E Radius 150.000' Delta 1'03'03"(RT)

Direction Ahead S54° 23' 14"E

S54* 23' 14"E 78.885' N 278,502.8956 E 730,098.8200

Curve (4)

BC N 278,502.8956 E 730,098.8200

CTR N 278,624.8415 E 730,186.1653

PI N 278,502.3649 E 730,099.5609

Direction Back S54° 23' 14"E

Direction Ahead S55 05 01 E

S55' 05' 01"E 574.178' N 278,173.1948 E 730,571.1267

Curve (6) BC N 278,173.1948 E 730,571.1267 CTR N 278,337.1924 E 730,685.6030 PI N 278,172.2411 E 730,572.4930

Direction Back S55' 05' 01"E

Direction Ahead S56' 02' 18"E

S56* 02' 18"E 158.619' N 278,082.6993 E 730,705.4355

Curve (8) BC N 278,082.6993 E 730,705.4355 CTR N 277,916.8170 E 730,593.7075 PI N 278,082.5620 E 730,705.6394

Direction Back S56' 02' 18"E

Radius 200.000'

Delta 0°08'27"(RT)

EC N 278,171.3103 E 730,573.8750

Radius 200.000' Delta 0°57'17"(LT) Length 3.332' Tangent 1.666'

EC N 278,501.8433 E 730,100.3082

Radius 150.000' Delta 0°41'46"(LT) Length 1.823' Tangent 0.911'

EC N 278,548.8307 E 730,034.6885

Chord Direction S54' 54' 46"E Distance 2.751'

Chord Direction S54' 44' 08"E Distance 1.823'

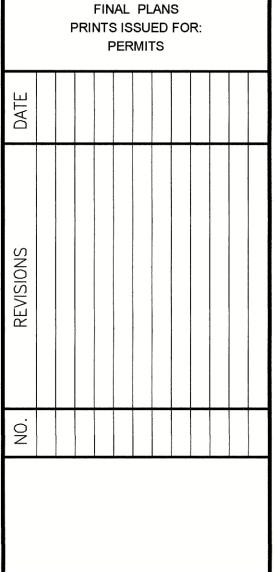
Chord Direction S55* 33' 39"E Distance 3.332'

Length 2.751' Tangent 1.376'

Begin FOREST STREET N 278,525.1780 E 730,067.7108	0+00.00
Line (1) S35° 36' 46"W 35.743' N 278,496.1200 E 730,046.8977 Line (1)	0+35.74
Curve (2) BC N 278,496.1200 E 730,046.8977 CTR N 278,461.1818 E 730,095.6760 PI N 278,489.0681 E 730,041.8466	0+35.74
Direction Back S35° 36′ 46″W Radius 60.000′ Delta 16°27′09″(LT) Length 17.229′ Tangent 8.674′	
Chord Direction S27 23 11"W Direction Ahead S19 09 36"W	Distance 17.170'
EC N 278,480.8744 E 730,038.9997 Curve (2)	0+52.97
S19' 09' 36"W 29.557' N 278,452.9545 E 730,029.2988 Line (3)	0+82.53
Curve (4) BC N 278,452.9545 E 730,029.2988 CTR N 278,387.3128 E 730,218.2198 PI N 278,444.4269 E 730,026.3358	0+82.53
Direction Back S19° 09' 36"W Radius 200.000' Delta 5°10'08"(LT) Length 18.043' Tangent 9.028'	
Chord Direction S16' 34' 32"W Direction Ahead S13' 59' 28"W	Distance 18.037'
EC N 278,435.6670 E 730,024.1531 Curve (4) Line (5)	1+00.57
S13* 59' 28"W 29.685' N 278,406.8623 E 730,016.9761 Line (5)	1+30.26
Curve (6) BC N 278,406.8623 E 730,016.9761 CTR N 278,383.8941 E 730,109.1578 PI N 278,380.4625 E 730,010.3982	1+30.26
Direction Back \$13° 59' 28"W Radius 95.000' Delta 31°57'44"(LT) Length 52.996' Tangent 27.207'	
Chord Direction S1* 59' 24"E D Direction Ahead S17* 58' 17"E	istance 52.311'
EC N 278,354.5828 E 730,018.7927 Curve (6)	1+83.25
S17 58' 17"E 90.935' N 278,268.0844 E 730,046.8498 Line (7)	2+74.19
BC N 278,268.0844 E 730,046.8498 CTR N 278,285.3626 E 730,100.1176 PI N 278,257.7774 E 730,050.1930 Direction Back S17* 58' 17"E	2+74.19
Radius 56.000' Delta 21.54'07"(LT) Length 21.407' Tangent 10.836'	
Chord Direction S28* 55' 20"E Direction Ahead S39* 52' 24"E	
EC N 278,249.4615 E 730,057.1396 Curve (8) Line (9) S39° 52' 24"E 236.699'	2+95.59
N 278,067.8036 E 730,208.8852 Line (9)	5+32.29
BC N 278,067.8036 E 730,208.8852 CTR N 278,156.2743 E 730,314.7953 PI N 278,053.7452 E 730,220.6287 Direction Back S39* 52' 24"E	5+32.29
Radius 138.000' Delta 15'07'21"(LT) Length 36.423' Tangent 18.318'	
Chord Direction S47* 26' 04"E Direction Ahead S54* 59' 44"E	Distance 36.317'
EC N 278,043.2373 E 730,235.6331 Curve (10) Reversing Curve	5+68.72
Curve (11) BC N 278,043.2373 E 730,235.6331 CTR N 277,921.2308 E 730,150.1894 PI N 278,031.6055 E 730,252.2424	5+68.72
Direction Back S54* 59' 44"E Radius 148.950' Delta 15*30'16"(RT) Length 40.307' Tangent 20.277'	
Chord Direction S47* 14' 36"E Direction Ahead S39* 29' 28"E	Distance 40.184'
EC N 278,015.9571 E 730,265.1379 Curve (11)	6+09.02
Line (12) **Non-Tangent** Radial Bearing N50* 30' S33* 44' 01"E 10.846' N 278,006.9376 E 730,271.1608	32"E 6+19.87
Line (12) N 278,006.9376 E 730,271.1608	6+19.87

N 278,006.9376 E 730,271.1608	0+00.00	
Curve (1) BC N 278,006.9376 E 730,271.1608	0+00.00	
CTR N 277,952.0502 E 730,307.8128 PI N 278,022.9104 E 730,295.0805		
Direction Back N56' 15' 59"E Radius 66.000'		
Delta 47°05′41″(RT) Length 54.249′ Tangent 28.763′		
Chord Direction N79* 48' 49"E Direction Ahead S76* 38' 20"E	Distance 52.735'	
EC N 278,016.2638 E 730,323.0645	0+54.25	
Curve (1) Compound Curve		
Curve (2)		
BC N 278,016.2638 E 730,323.0645 CTR N 277,933.5645 E 730,303.4222 PI N 278,008.9787 E 730,353.7368	0+54.25	
Direction Back S76* 38' 20"E		
Radius 85.000' Delta 40'41'55"(RT)		
Length 60.378' Tangent 31.526'		
Chord Direction S56* 17' 23"E Direction Ahead S35* 56' 25"E	Distance 59.116	
EC N 277,983.4547 E 730,372.2406 Curve (2)	1+14.63	
Line (3)		
S35' 56' 25"E 111.004' N 277,893.5824 E 730,437.3939	2+25.63	
Line (3)		
Line (4) **Non—Tangent** Radial Bearing N54* 03 \$33* 58' 57"E	3' 35"E	
N 277,756.9046 E 730,529.5236 Line (4)	3+90.46	
Curve (5)	7+00.40	
BC N 277,756.9046 E 730,529.5236 CTR N 277,868.6926 E 730,695.3652 PI N 277,748.4431 E 730,535.2272	3+90.46	
Direction Back S33 58 57"E		
Radius 200.000' Delta 5*50'30"(LT) Length 20.391'		
Tangent 10.204'	Distance 20 792'	
Chord Direction S36* 54' 12"E Direction Ahead S39* 49' 27"E	Distance 20.362	
EC N 277,740.6060 E 730,541.7624 Curve (5)	4+10.85	
Line (6)		
S39' 49' 27"E 91.620' N 277,670.2404 E 730,600.4390 Line (6)	5+02.47	
Curve (7)		
BC N 277,670.2404 E 730,600.4390 CTR N 277,644.6231 E 730,569.7184	5+02.47	
PI N 277,631.7777 E 730,632.5123 Direction Back S39* 49* 27"E		
Radius 40.000'		
Delta 102°46'14"(RT) Length 71.747' Tangent 50.081'		
Chord Direction S11 33 40"W Direction Ahead S62 56 47"W	Distance 62.509'	
EC N 277,608.9998 E 730,587.9114 Curve (7)	5+74.22	
Line (8)		
S62' 56' 47"W 36.223' N 277,592.5248 E 730,555.6520 Line (8)	6+10.44	
Curve (9)		
BC N 277,592.5248 E 730,555.6520 CTR N 277,748.3766 E 730,476.0578 PI N 277,586.8626 E 730,544.5650	6+10.44	
Direction Back S62° 56′ 47″W		
Radius 175.000' Delta 8'08'17"(RT)		
Length 24.856' Tangent 12.449'		
Chord Direction S67' 00' 56"W Direction Ahead S71' 05' 04"W	Distance 24.835	
EC N 277,582.8270 E 730,532.7882 Curve (9)	6+35.30	
Line (10)		
S71 05' 04"W 22.943' N 277,575.3896 E 730,511.0844	6+58.24	
Line (10) Curve (11)		
BC N 277,575.3896 E 730,511.0844 CTR N 277,627.4194 E 730,493.2549	6+58.24	
PI N 277,561.7014 E 730,471.1400		
Direction Back S71°05'04"W Radius 55.000' Delta 75°01'42"(RT)		
Length 72.022' Tangent 42.225'		
Chord Direction N71° 24′ 05″W Direction Ahead N33° 53′ 14″W	Distance 66.985'	
EC N 277,596.7537 E 730,447.5973	7+30.26	
Curve (11) Line (12)		
N33' 53' 14"W 118.654' N 277,695.2532 E 730,381.4405	8+48.92	
Line (12)	- : / 	
Curve (13) BC N 277,695.2532 E 730,381.4405 CTR N 277.583.7415 E 730.215.4130	8+48.92	
CTR N 277,583.7415 E 730,215.4130 PI N 277,699.0020 E 730,378.9226		
Direction Back N33' 53' 14"W Radius 200.000'		
Delta 2'35'13"(LT) Length 9.030' Tangent 4.516'		
Ignoent 4516		
Chord Direction N35° 10' 50"W Direction Ahead N36° 28' 27"W	Distance 9.030'	

Line (14)	
N36' 28' 27"W 237.633' N 277,893.7205 E 730,234.9746 Line (14)	10+95.58
Curve (15) BC N 277,893.7205 E 730,234.9746 CTR N 277,926.4158 E 730,279.2015 PI N 277,923.5385 E 730,212.9312	10+95.58
Direction Back N36° 28′ 27″W Radius 55.000′ Delta 67°58′34″(RT) Length 65.252′ Tangent 37.081′ Chord Direction N2° 29′ 10″W Distance Direction Ahead N31° 30′ 07″E	61.492'
EC N 277,955.1548 E 730,232.3072 Curve (15)	11+60.83
Line (16) N31° 30' 07"E 36.807' N 277,986.5371 E 730,251.5398 Line (16)	11+97.64
Curve (17) BC N 277,986.5371 E 730,251.5398 CTR N 277,952.0502 E 730,307.8128 PI N 277,998.8899 E 730,259.1102	11+97.64
Direction Back N31° 30′ 07″E Radius 66.000′ Delta 24°45′43″(RT) Length 28.524′ Tangent 14.488′ Chord Direction N43° 52′ 59″E Distance	28 302'
Direction Ahead N56° 15′ 50″E EC N 278,006.9361 E 730,271.1585	
Curve (17) N 278,006.9361 E 730,271.1585	12+26.16





COUNTY, DELAWARE

ROAD ALIGNMENTS

CHECKED BY : VAL,COD : JULY 2022

				COOPER C	RCLE AVENUE F	INISHED GRA	DE SCHEDULE					
	Co	ntrol		Left Side			Co	ontrol	Right Side			
	Left	Side		Left Olde			Righ	nt Side		ragin oldo		
Station	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	
0+37.09	0.0200	9.00	9.85	9.81	-0.04	9.99	0.0100	9.00	10.04	9.90	-0.14	
0+50	0.0200	9.00	9.69	9.59	-0.10	9.77	0.0156	9.00	9.72	9.63	-0.09	
0+53.18	0.0200	9.00	9.66	9.53	-0.13	9.71	0.0200	9.00	9.54	9.53	-0.01	
0+60.64	0.0200	9.00	9.59	9.50	-0.09	9.68	0.0200	9.00	9.51	9.50	-0.01	
0+69.77	0.0200	9.00	9.45	9.45	0.00	9.63	0.0200	9.00	9.47	9.45	-0.02	
0+75.17	0.0200	9.00	9.41	9.42	0.01	9.60	0.0188	9.02	9.45	9.43	-0.02	
1+00	0.0200	9.00	9.37	9.30	-0.07	9.48	0.0093	15.02	9.38	9.34	-0.04	
1+50	0.0200	9.00	9.12	9.05	-0.07	9.23	-0.0053	58.44	9.52	9.54	0.02	
2+00	0.0200	9.00	8.98	8.80	-0.18	8.98	-0.0033	79.27	9.26	9.24	-0.02	
2+50	0.0200	9.00	8.62	8.55	-0.07	8.73	-0.0013	52.61	8.75	8.80	0.05	
3+00	0.0200	9.00	8.38	8.30	-0.08	8.48	-0.0017	17.47	8.54	8.51	-0.03	
3+14.97	0.0200	9.00	8.34	8.22	-0.12	8.40	0.0024	8.36	8.34	8.38	0.04	
3+24.92	0.0177	7.89	8.25	8.21	-0.04	8.35	0.0133	6.00	8.23	8.27	0.04	
3+34.87	0.0200	6.00	8.18	8.18	0.00	8.30	0.0200	6.00	8.23	8.18	-0.05	
3+50	0.0200	6.00	8.08	8.11	0.03	8.23	0.0200	6.00	8.16	8.11	-0.05	
3+78.44	0.0200	6.00	7.94	7.97	0.03	8.09	0.0183	6.00	8.03	7.98	-0.05	
4+00	0.0200	6.00	8.05	8.05	0.00	8.17	0.0200	6.00	8.20	8.05	-0.15	
4+18.96	0.0200	6.00	7.94	8.14	0.20	8.26	0.0200	6.00	8.20	8.14	-0.06	
4+50	0.0200	6.00	8.35	8.30	-0.05	8.42	0.0200	6.00	8.29	8.30	0.01	

				CENTRA	AL AVENUE FINIS	HED GRADE	SCHEDULE				
	Со	ntrol		Left Side				ontrol		Right Side	
	Left	Side		r			Righ	nt Side			
Station	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)
0+00	0.0203	21.67	13.41	13.40	-0.01	13.84	0.0203	14.76	13.46	13.54	0.08
0+50	0.0075	25.17	13.43	13.43	0.00	13.62	0.0201	12.92	13.27	13.36	0.09
1+00	0.0200	12.00	12.97	12.96	-0.01	13.20	0.0200	12.00	12.67	12.96	0.29
1+12.23	0.0200	12.00	12.83	12.79	-0.04	13.03	0.0200	12.00	12.46	12.79	0.33
1+50	0.0202	11.41	12.12	12.14	0.02	12.37	0.0200	12.00	11.97	12.13	0.16
1+62.43	0.0196	11.24	11.86	11.90	0.04	12.12	0.0200	12.00	11.82	11.88	0.06
1+76.40	0.0200	11.02	11.53	11.61	0.08	11.83	0.0200	12.00	11.90	11.59	-0.31
2+00	0.0196	10.69	11.10	11.14	0.04	11.35	N/A	N/A	N/A	N/A	N/A
2+07.99	0.0198	10.58	11.00	10.97	-0.03	11.18	N/A	N/A	N/A	N/A	N/A
2+31.41	0.0195	10.27	10.54	10.48	-0.06	10.68	-0.0072	18.00	10.82	10.81	-0.01
2+37.79	0.0196	10.20	10.43	10.33	-0.10	10.53	N/A	18.00	10.71	10.70	-0.01
2+45.11	0.0198	10.09	10.20	10.18	-0.02	10.38	N/A	20.00	10.69	10.58	-0.11
2+53.96	0.0200	10.00	10.03	9.98	-0.05	10.18	N/A	20.00	10.54	10.66	0.12
2+70.37	0.0200	10.00	9.85	9.62	-0.23	9.82	N/A	20.00	10.29	10.02	-0.27
3+00	0.0200	10.00	8.97	9.05	0.08	9.25	-0.0110	20.00	9.79	9.47	-0.32
3+08.21	0.0200	10.00	8.84	8.92	0.08	9.12	0.0200	10.00	9.17	8.92	-0.25
3+50	0.0200	10.00	8.30	8.42	0.12	8.62	0.0200	10.00	8.49	8.42	-0.07
3+70.37	0.0200	10.00	8.18	8.28	0.10	8.48	0.0200	10.00	8.34	8.28	-0.06
3+71.74	0.0200	10.00	8.18	8.27	0.09	8.47	0.0200	10.00	8.32	8.27	-0.05
3+77.25	0.0200	10.00	8.16	8.25	0.09	8.45	0.0200	10.00	8.26	8.25	-0.01
4+00	0.0200	10.00	7.95	8.13	0.18	8.33	0.0200	10.00	7.96	8.13	0.17
4+12.92	0.0200	10.00	8.04	8.07	0.03	8.27	0.0199	10.03	7.80	8.07	0.27
4+50	0.0200	10.00	7.84	7.88	0.04	8.08	N/A	N/A	N/A	N/A	N/A
4+56.38	0.0200	10.00	7.82	7.85	0.03	8.05	N/A	N/A	N/A	N/A	N/A
4+82.32	0.0200	10.00	7.89	7.98	0.09	8.18	0.0202	10.90	7.68	7.96	0.28
4+87.32	0.0200	10.00	7.80	8.00	0.20	8.20	0.0200	10.00	7.71	8.00	0.29
5+00	0.0200	10.00	7.87	8.07	0.20	8.27	0.0200	10.00	7.81	8.07	0.26
5+29.07	0.0200	10.00	8.01	8.31	0.30	8.51	0.0200	10.00	8.02	8.31	0.29
5+50	0.0200	10.00	8.13	8.61	0.48	8.81	0.0200	10.00	8.18	8.61	0.43
5+81.45	0.0200	10.00	8.92	9.01	0.09	9.21	0.0200	10.00	8.78	9.01	0.23

,	Co	ntrol					C	ontrol			
		Side		Left Side				ht Side	Right Side		
Station	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)
0+00	0.0200	6.00	±6.65	6.65	0.00	6.77	0.0200	6.00	6.65	6.65	0.00
0+50	0.0200	6.00	7.21	7.24	0.03	7.36	0.0200	6.00	6.97	7.24	0.27
0+90.05	0.0217	6.00	7.40	7.44	0.04	7.57	0.0217	6.00	7.14	7.44	0.30
0+92.80	0.0200	6.00	7.42	7.46	0.04	7.58	0.0200	6.00	7.15	7.46	0.31
0+96.65	0.0200	6.00	7.46	7.48	0.02	7.60	0.0200	6.00	7.16	7.48	0.32
1+33.42	0.0200	6.51	7.53	7.66	0.13	7.79	N/A	N/A	N/A	N/A	N/A
1+50	0.0193	6.73	7.57	7.74	0.17	7.87	N/A	N/A	N/A	N/A	N/A
1+71.69	0.0200	6.99	7.71	7.85	0.14	7.99	0.0195	7.17	7.34	7.85	0.51
1+73.51	0.0186	7.00	7.73	7.86	0.13	7.99	0.0185	7.03	7.34	7.86	0.52
2+00	0.0200	7.00	7.98	7.99	0.01	8.13	0.0200	7.00	7.72	7.99	0.27
2+50	0.0214	7.00	8.19	8.24	0.05	8.39	0.0214	7.00	8.30	8.24	-0.06
3+00	0.0200	7.00	8.40	8.50	0.10	8.64	0.0200	7.00	8.55	8.50	-0.05
3+20	0.0200	7.00	8.55	8.60	0.05	8.74	0.0200	7.00	8.74	8.60	-0.14
3+50	0.0200	7.00	8.67	8.66	-0.01	8.80	0.0200	7.00	8.69	8.66	-0.03
4+00	0.0200	7.00	8.73	8.76	0.03	8.90	0.0200	7.00	8.63	8.76	0.13
4+50	0.0200	7.00	8.89	8.86	-0.03	9.00	0.0200	7.00	8.74	8.86	0.12
5+00	0.0200	7.00	9.06	8.96	-0.10	9.10	0.0200	7.00	8.94	8.96	0.02
5+50	0.0200	7.00	9.25	9.07	-0.18	9.21	0.0200	7.00	9.16	9.07	-0.09
6+00	0.0200	7.00	9.22	9.17	-0.05	9.31	0.0200	7.00	9.09	9.17	0.08
6+50	0.0200	7.00	9.25	9.27	0.02	9.41	0.0200	7.00	9.30	9.27	-0.03
7+00	0.0200	7.00	9.37	9.37	0.00	9.51	0.0200	7.00	9.44	9.37	-0.07
7+25	0.0200	7.00	9.42	9.42	0.00	9.56	0.0200	7.00	9.47	9.42	-0.05
7+47.69	0.0200	7.00	9.60	9.58	-0.02	9.72	0.0200	7.00	9.50	9.58	0.08
7+51.02	0.0186	7.00	9.66	9.61	-0.05	9.74	0.0200	7.00	9.48	9.60	0.12
8+00	0.0186	7.00	10.01	9.96	-0.05	10.09	0.0200	7.00	10.01	9.95	-0.06
8+50	0.0200	7.00	10.29	10.31	0.02	10.45	0.0200	7.00	10.22	10.31	0.09
8+85	0.0200	7.00	10.63	10.56	-0.07	10.70	0.0200	7.00	10.49	10.56	0.07
9+00	0.0200	7.00	10.71	10.60*	-0.11	10.74*	0.0200	7.00	10.56	10.60*	0.04
9+10.13	0.0186	7.00	10.76	10.63	-0.13	10.76	0.0186	7.00	10.61	10.63	0.02
9+50	0.0200	7.00	10.82	10.73	-0.09	10.87	0.0200	7.00	10.73	10.73	0.00
10+00	0.0200	7.00	11.06	10.86	-0.20	11.00	0.0200	7.00	10.77	10.86	0.09
10+50	0.0200	7.00	11.02	10.98	-0.04	11.12	0.0200	7.00	10.99	10.98	-0.01
10+77.35	0.0200	7.00	11.08	11.05	-0.03	11.19	0.0200	7.00	11.07	11.05	-0.02
10+85.03	0.0200	7.00	11.10	11.07	-0.03	11.21	0.0196	7.15	11.05	11.07	0.02
10+90.11	0.0198	7.07	11.11	11.08	-0.03	11.22	0.0190	7.35	11.03	11.08	0.05
10+98.06	0.0203	7.40	11.13	11.10	-0.03	11.25	0.0200	7.50	11.01	11.10	0.09
11+05.72	0.0200	7.50	11.15	11.11	-0.04	11.26	0.0200	7.50	10.99	11.11	0.12
11+15.49	0.0200	7.50	11.12	11.12	0.00	11.27	0.0227	7.50	10.96	11.10	0.14
11+22.36	0.0200	7.50	11.11	11.13	0.02	11.28	N/A	N/A	N/A	N/A	N/A

Station		ntrol Side		Left Side			·	ontrol ht Side	Right Side		
	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)
0+36.72	0.0200	6.00	6.79	6.69	-0.10	6.81	N/A	N/A	N/A	N/A	N/A
0+45.23	0.0200	6.00	6.85	6.78	-0.07	6.90	0.0200	6.00	6.28	6.78	0.50
0+50	0.0200	6.00	6.89	6.83	-0.06	6.95	0.0200	6.00	6.33	6.83	0.50
1+00	0.0200	6.00	7.27	7.21	-0.06	7.33	0.0200	6.00	6.70	7.21	0.51
1+50	0.0200	6.00	7.60	7.58	-0.02	7.70	0.0200	6.00	7.04	7.58	0.54
2+00	0.0200	6.00	7.76	7.75	-0.01	7.87	0.0200	6.00	7.30	7.75	0.45
2+50	0.0200	6.00	7.78	7.91*	0.40	8.03*	0.0200	6.00	7.46	7.91*	0.72
3+00	0.0300	6.00	7.87	8.02	0.15	8.20	0.0300	6.00	7.69	8.02	0.33
3+50	0.0200	6.00	8.24	8.24	0.00	8.36	0.0200	6.00	8.07	8.24	0.17
4+00	0.0200	6.00	8.50	8.41	-0.09	8.53	0.0200	6.00	8.33	8.41	0.08
4+50	0.0200	6.00	8.56	8.57	0.01	8.69	0.0200	6.00	8.38	8.57	0.19
4+62.38	N/A	17.00	8.62	8.61	-0.01	8.73	0.0200	6.00	8.42	8.61	0.19
5+00	N/A	17.00	8.76	8.75	-0.01	8.86	0.0200	6.00	8.56	8.74	0.18
5+50	N/A	17.00	9.01	8.93	-0.08	9.03	0.0200	6.00	8.81	8.91	0.10
6+00	N/A	17.00	9.14	9.12	-0.02	9.19	0.0200	6.00	8.85	9.07	0.22
6+06.38	N/A	17.00	9.11	9.14	0.03	9.15	0.0200	6.00	8.84	9.03	0.19
6+50	0.0200	6.00	8.72	8.74	0.02	8.86	0.0200	6.00	8.74	8.74	0.00
7+00	0.0200	6.00	8.29	8.40	0.11	8.52	0.0200	6.00	8.26	8.40	0.14
7+29.68	0.0200	6.00	7.92	8.21	0.29	8.33	0.0700	6.00	7.79	7.91	0.12
7+31.96	0.0200	6.00	7.90	8.19	0.29	8.31	0.0632	6.17	7.79	7.92	0.13
7+36.45	0.0212	6.14	7.84	8.15	0.31	8.28	0.0460	7.61	7.75	7.93	0.18



LE HOME PARK
SEWER AND WATER
XTENSIONS
TORMWATER MANAGEMNT PLANS

O'DONNAL STEAM 9 7 22

FINISHED GRADE SCHEDULES

SCALE : NONE S
DESIGN BY : JWK
DRAWN BY : JWK
CHECKED BY : VAL,COD
GMB FILE : 170196

E: JULY 2022 |

© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

				FORES	ST STREET FINIS	HED GRADE S	CHEDULE					
		ntrol	Left Side					entrol	Right Side			
	Left	Side					Righ	nt Side		r		
Station	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	
0+23.92	N/A	N/A	N/A	N/A	N/A	7.32	0.0187	12.31	7.18	7.09	-0.09	
0+35.74	0.0092	7.59	7.13	7.19	0.06	7.26	0.0204	8.82	7.25	7.08	-0.17	
0+52.97	0.0200	6.00	7.11	7.06	-0.05	7.18	0.0200	6.00	7.25	7.06	-0.19	
0+82.53	0.0200	6.00	7.01	6.91	-0.10	7.03	0.0200	6.00	6.91	6.91	0.00	
1+00.57	0.0200	6.00	6.93	6.82	-0.11	6.94	0.0200	6.00	6.84	6.82	-0.02	
1+30.26	0.0200	6.00	6.55	6.67	0.12	6.79	0.0200	6.00	6.59	6.67	0.08	
1+48.24	0.0200	6.00	6.44	6.58	0.14	6.70	0.0200	6.00	6.50	6.58	0.08	
1+83.25	0.0200	6.00	6.49	6.43	-0.06	6.55	0.0200	6.00	6.29	6.43	0.14	
2+00	0.0132	7.59	6.48	6.40	-0.08	6.50	0.0200	6.00	6.24	6.38	0.14	
2+50	N/A	N/A	N/A	N/A	N/A	6.41	0.0200	6.00	6.22	6.29	0.07	
2+66.15	N/A	N/A	N/A	N/A	N/A	6.40	0.0200	6.00	6.24	6.28	0.04	
2+74.19	0.0200	6.00	6.29	6.29	0.00	6.41	0.0200	6.00	6.24	6.29	0.05	
2+81.49	0.0200	6.00	6.29	6.29	0.00	6.41	0.0200	6.00	6.21	6.29	0.08	
2+95.59	0.0200	6.00	6.34	6.31	-0.03	6.43	0.0200	6.00	6.14	6.31	0.17	
3+48.24	0.0200	6.00	6.51	6.43	-0.08	6.55	0.0200	6.00	6.50	6.43	-0.07	
4+00	0.0200	6.00	6.72	6.61	-0.11	6.73	0.0200	6.00	6.65	6.61	-0.04	
4+50	0.0200	6.00	6.76	6.65	-0.11	6.77	0.0200	6.00	6.75	6.65	-0.10	
5+00	0.0200	6.00	6.61	6.69	0.08	6.81	0.0200	6.00	6.89	6.69	-0.20	
5+32.29	0.0200	6.00	6.65	6.71	0.06	6.83	0.0200	6.00	6.84	6.71	-0.13	
5+50	0.0200	6.00	6.80	6.72	-0.08	6.84	0.0200	6.00	6.78	6.72	-0.06	
5+68.72	0.0200	6.00	6.76	6.74	-0.02	6.86	0.0200	6.00	6.77	6.74	-0.03	

	_	mt-al					_	ntral			
		Control Left Side		Left Side				ontrol nt Side	Right Side		
Station	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)	Proposed Elevation at Road Centerline	Slope Used (feet/foot)	Road Centerline to Edge of Proposed Pavement (feet)	Existing Grade at Edge of Proposed Pavement	Proposed Elevation of Edge of Proposed Pavement	Edge of Proposed Pavement Elevation Difference (feet)
0+39.09	0.0203	6.40	7.88	7.40	-0.48	7.53	0.0200	6.00	7.53	7.41	-0.12
0+50	0.0199	6.03	7.99	7.58	-0.41	7.70	0.0200	6.00	7.61	7.58	-0.03
0+54.25	0.0200	6.00	8.00	7.65	-0.35	7.77	0.0200	6.00	7.64	7.65	0.01
0+60	0.0200	6.00	8.06	7.74	-0.32	7.86	0.0200	6.00	8.01	7.74	-0.27
1+00	0.0200	6.00	8.06	8.01	0.05	8.13	0.0200	6.00	8.01	8.01	0.00
1+14.63	0.0200	6.00	8.01	8.11	0.33	8.23	0.0200	6.00	8.10	8.11	0.01
1+50	0.0200	6.00	8.10	8.34	0.57	8.46	0.0200	6.00	8.41	8.34	-0.07
2+00	0.0200	6.00	8.45	8.67	0.39	8.79	0.0200	6.00	8.68	8.67	-0.01
2+25.63	0.0200	6.00	8.66	8.84	0.35	8.96	0.0200	6.00	8.76	8.84	0.08
2+50	0.0200	6.00	8.67	9.01	0.43	9.13	0.0200	6.00	9.01	9.01	0.00
2+97.79	0.0200	6.00	9.12	9.10	-0.01	9.22	0.0200	6.00	9.11	9.10	-0.01
3+00	0.0200	6.00	9.14	9.11	-0.03	9.23	0.0200	6.00	9.11	9.11	0.00
3+50	N/A	N/A	N/A	N/A	N/A	9.33	0.0200	6.00	9.05	9.21	0.16
3+90.46	0.0208	8.16	9.41	9.25	-0.16	9.42	0.0200	6.00	9.34	9.30	-0.04
4+00	0.0233	6.44	9.49	9.29	-0.20	9.44	0.0200	6.00	9.39	9.32	-0.07
4+08.76	0.0200	6.00	9.49	9.33	-0.16	9.45	0.0200	6.00	9.46	9.33	-0.13
4+10.85	0.0200	6.00	9.49	9.34	-0.15	9.46	0.0200	6.00	9.47	9.34	-0.13
4+50			9.44	9.42	-0.02	9.54			9.60	9.42	-0.18
5+00	0.0200	6.00	9.44	9.13	-0.02	9.25	0.0200	6.00	9.18	9.42	-0.18
5+02.47	0.0200	6.00	9.17	9.13	-0.04		0.0200	6.00	9.17	9.13	-0.05
	0.0200	6.00				9.24	0.0200	6.00			-0.05
5+50	0.0200	6.00	8.82	8.84	0.02	8.96	0.0200	6.00	9.10	8.84	
5+74.22	0.0200	6.00	8.48	8.69	0.21	8.81	0.0200	6.00	8.81	8.69	-0.12
6+00	0.0200	6.00	8.33	8.54	0.21	8.66	-0.0200	6.00	8.79	8.78	-0.01
6+10.44	0.0200	6.00	8.30	8.52	0.22	8.64	-0.0200	6.00	8.81	8.76	-0.05
6+35.30	0.0200	6.00	8.26	8.47	0.21	8.59	-0.0200	6.00	8.76	8.71	-0.05
6+50	0.0200	6.00	8.23	8.44	0.21	8.56	-0.0200	6.00	8.75	8.68	-0.07
6+58.24	0.0200	6.00	8.11	8.42	0.31	8.54	-0.0200	6.00	8.64	8.66	0.02
7+00	0.0200	6.00	8.04	8.06	0.02	8.18	0.0200	6.00	8.09	8.06	-0.03
7+30.26	0.0200	6.00	7.48	7.79	0.31	7.91	0.0200	6.00	7.75	7.79	0.04
7+50	0.0200	6.00	7.36	7.61	0.25	7.73	0.0200	6.00	7.36	7.61	0.25
7+95.94	0.0200	16.00	7.05	7.00	-0.05	7.32	0.0200	6.00	7.28	7.20	-0.08
8+35.94	0.0200	16.00	6.47	6.64	0.17	6.96	0.0200	6.00	7.00	6.84	-0.16
8+48.92	0.0200	6.00	6.50	6.73	0.23	6.85	0.0200	6.00	6.50	6.73	0.23
8+95.55	0.0200	17.00	6.20	6.09	-0.11	6.43	0.0200	6.00	6.53	6.31	-0.22
9+47.55	0.0200	17.00	6.12	5.62	-0.50	5.96	0.0200	6.00	6.11	5.84	-0.27
9+77.67	0.0200	6.00	5.59	5.57	-0.02	5.69	0.0200	6.00	5.78	5.57	-0.21
10+04.77	0.0200	17.00	5.5	5.17	-0.33	5.51	0.0200	6.00	5.55	5.39	-0.16
10+40.85	0.0200	17.00	5.19	5.07	-0.12	5.41	0.0200	6.00	5.40	5.29	-0.11
10+44.77	0.0200	17.00	5.15	5.07	-0.08	5.41	0.0200	6.00	5.46	5.29	-0.17
10+77.67	0.0200	6.00	5.28	5.38	0.10	5.50	0.0200	6.00	5.64	5.38	-0.26
10+95.58	0.0200	6.00	5.34	5.48	0.14	5.60	0.0200	6.00	5.71	5.48	-0.23
11+44.85	0.0200	6.00	5.80	5.73	-0.07	5.85	0.0200	6.00	5.74	5.73	-0.01
11+60.83	0.0200	6.00	5.87	5.94	0.07	6.06	0.0200	6.00	5.95	5.94	-0.01
11+91.76	0.0200	6.00	6.04	6.33	0.29	6.45	0.0200	6.00	6.30	6.33	0.03
11+97.64	0.0249	6.43	6.15	6.37	0.22	6.53	0.0200	6.00	6.35	6.41	0.06
12+26.16	N/A	N/A	N/A	N/A	N/A	6.89	0.0200	6.00	6.71	6.77	0.06

FINAL PLANS PRINTS ISSUED FOR: PERMITS



DONOVAN - SMITH
MOBILE HOME PARK
SANITARY SEWER AND WATER
EXTENSIONS
SEDIMENT AND STORMWATER MANAGEMNT PLANS

SUSSEX COUNTY, DELAWARE

FINISHED GRADE SCHEDULES

SHEET NO. DESIGN BY : JWK

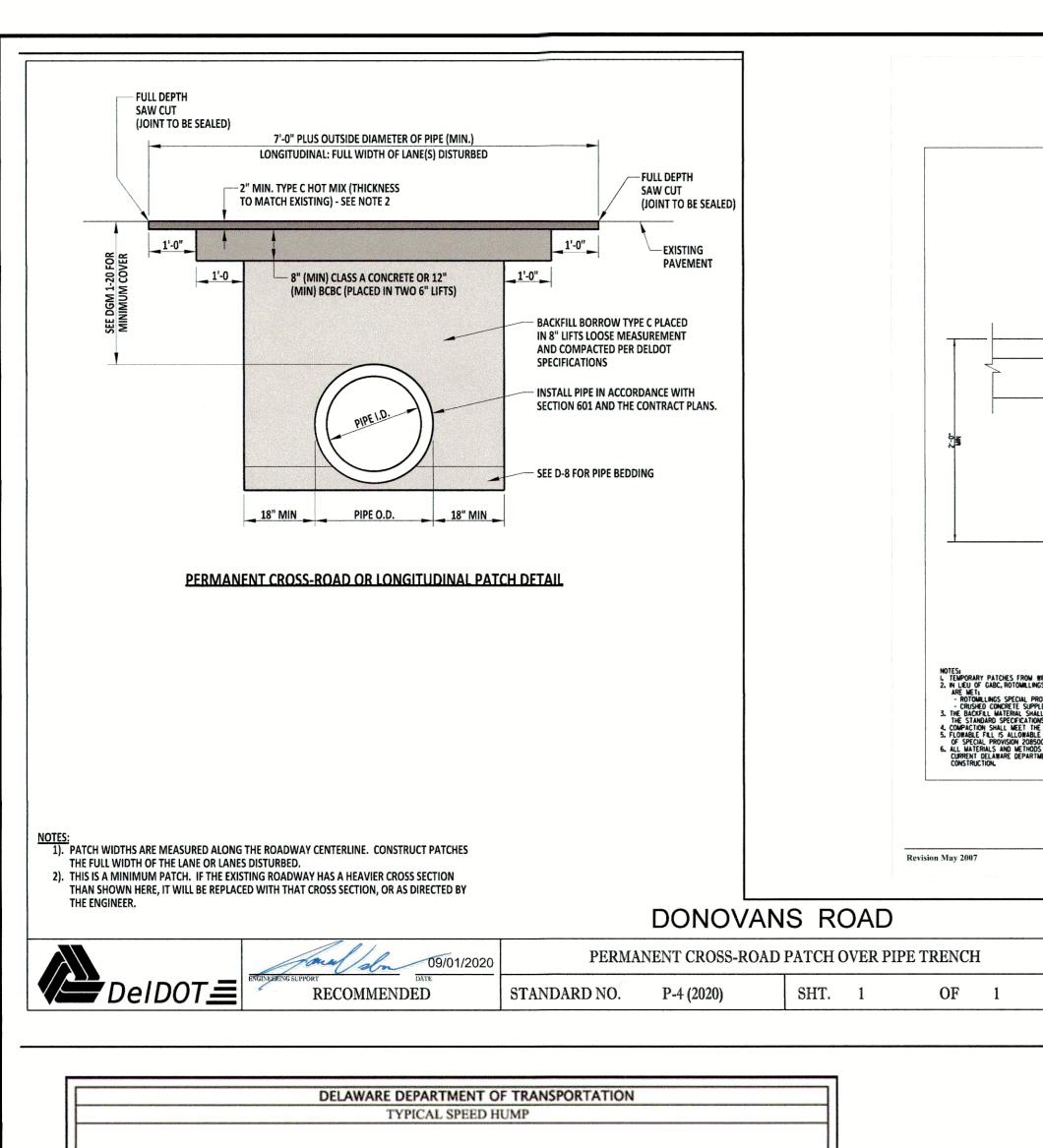
DRAWN BY : JWK

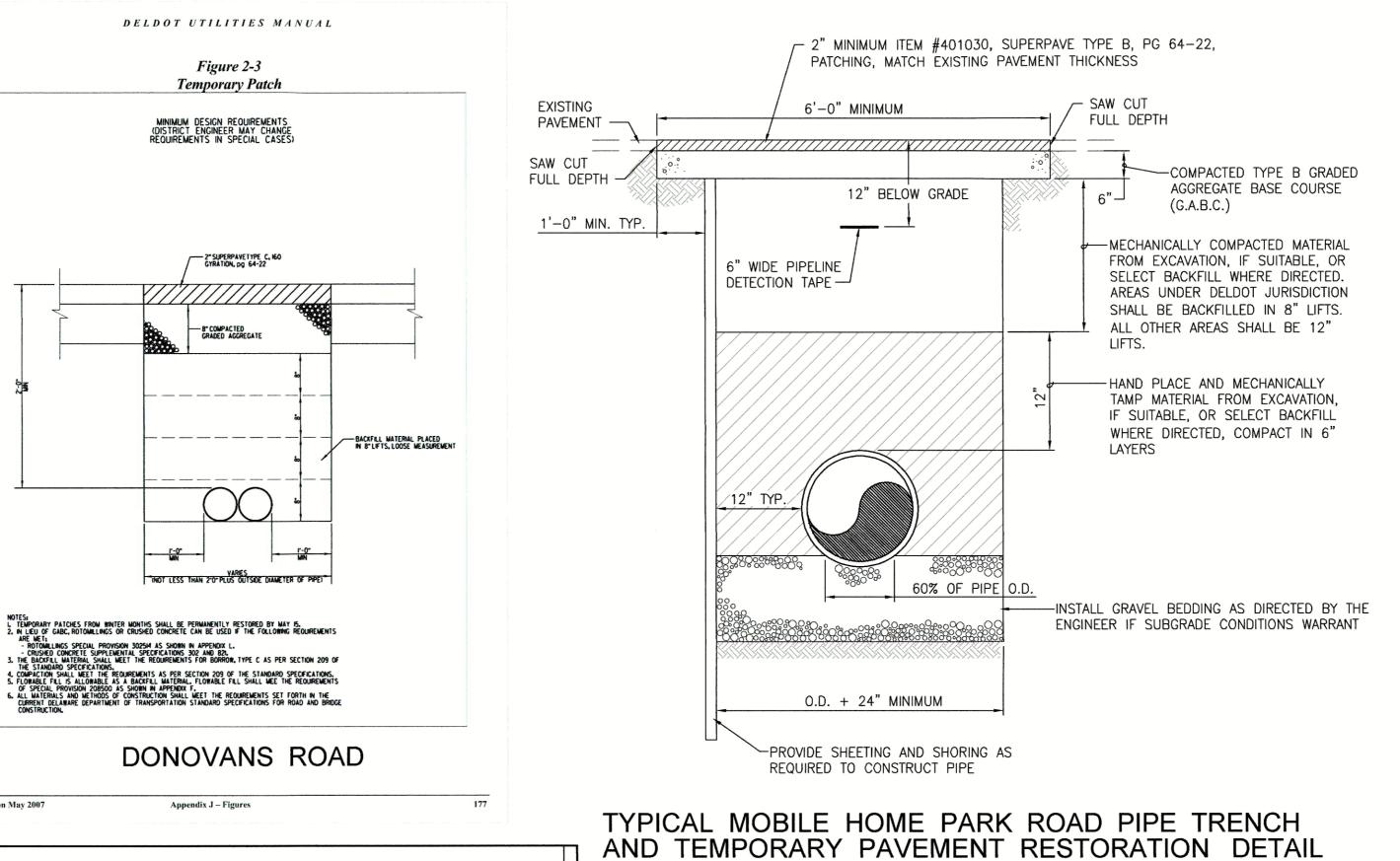
CHECKED BY : VAL,COD

GMB FILE : 170196

DATE : JULY 2022

© COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC



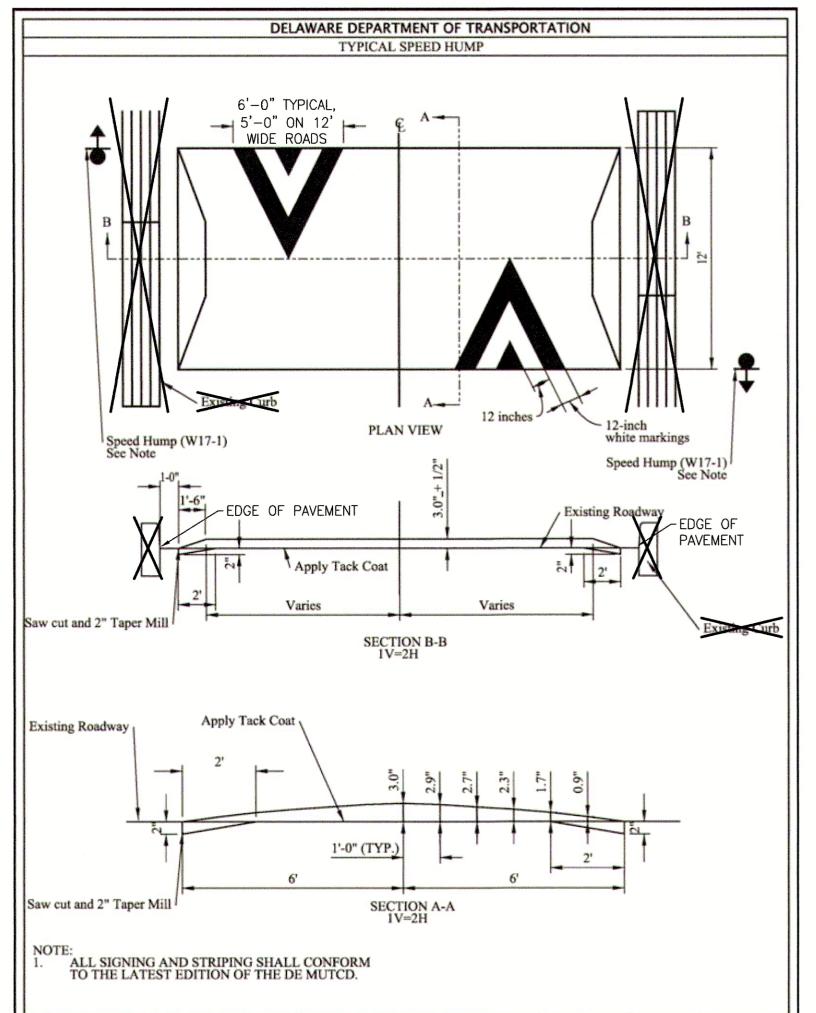


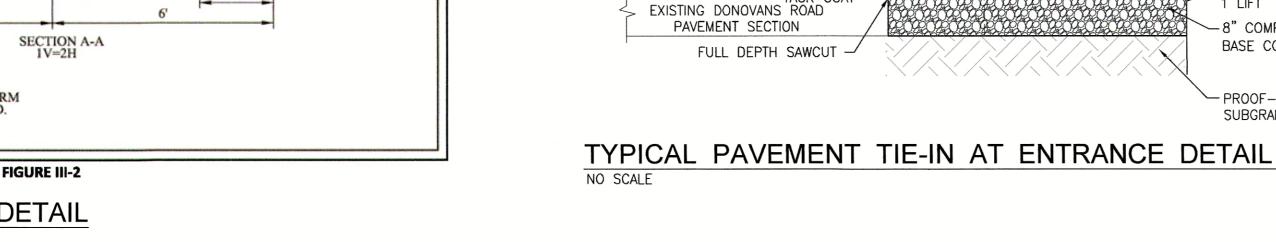
8 1/4" 3/4" BATTER -HOT MIX SURFACE. SEE "TYPICAL ROAD SECTION" ON THIS SHEET. CONCRETE, 3,000 PSI MINIMUM ~DELDOT TYPE B GRADED AGGREGATE BASE * STANDARD DISTANCE. SEE GRADING PLAN FOR GRADES AT NOSE DOWNS.

P.C.C. CURB DETAIL TYPE 1 NO SCALE

A - Through Lane-Use Arrow

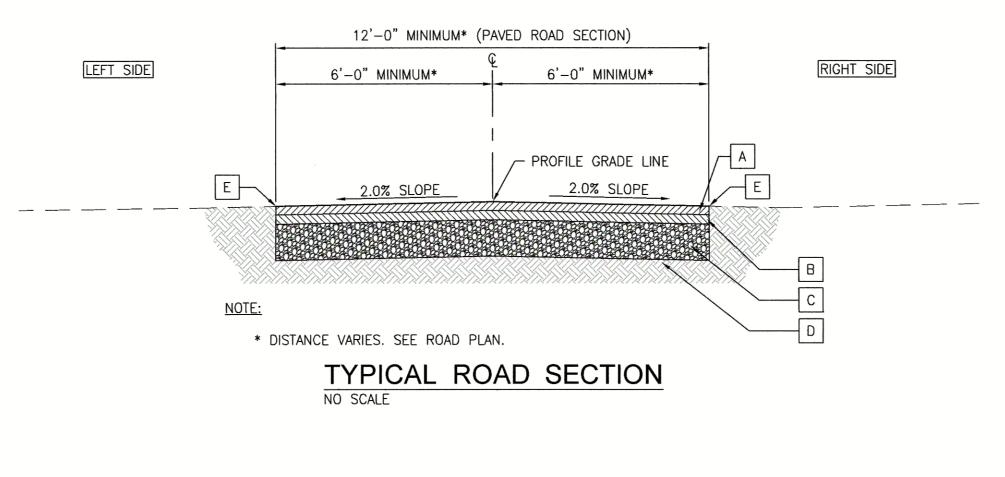
TYPICAL TRAFFIC ARROW DETAIL





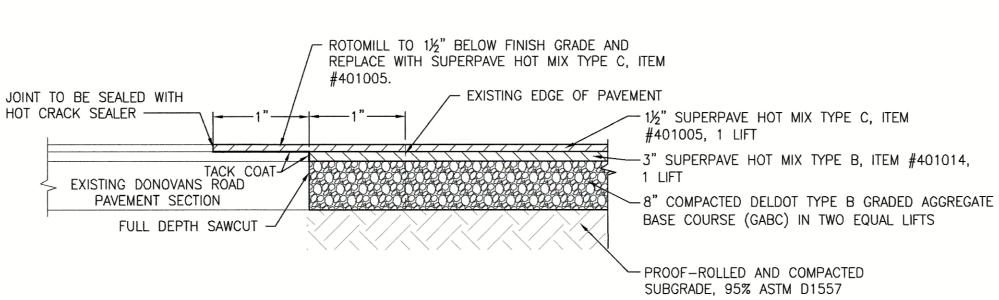
REVIEWED

APPROVED



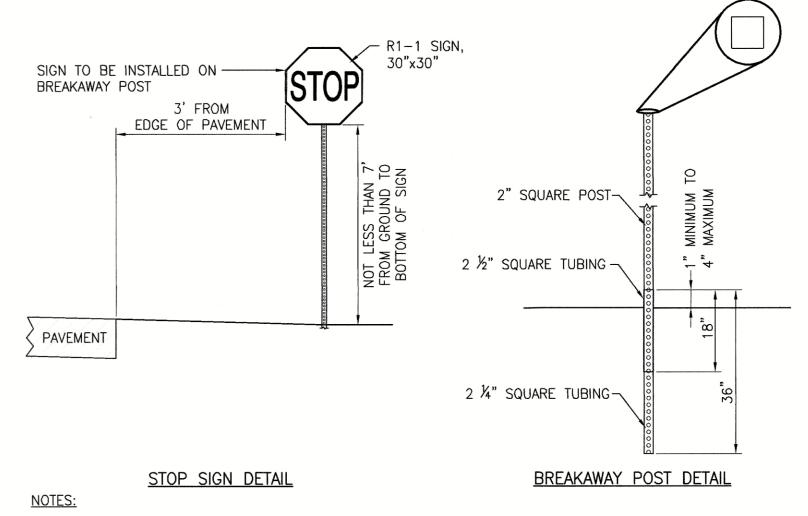
08/20/2020

NO SCALE





- A 1½" MINIMUM ITEM #401005, SUPERPAVE TYPE C, 1 LIFT
- B 3" ITEM #401014, SUPERPAVE TYPE B, 1 LIFT
- 8" COMPACTED DELDOT TYPE B GRADED AGGREGATE BASE COURSE (GABC)
- PROOF-ROLLED AND COMPACTED SUBGRADE, 95% ASTM D1557
- SAW CUT CONCRETE AND PAVED SURFACES. EDGE OF NEW PAVEMENT SHALL MEET EXISTING GRADE. PREVENT WATER FROM PONDING ON ROADWAY BY: CONTINUING CROSS-SLOPE 3' FROM EDGE IN GRASS AREAS, AND EXTENDING PAVEMENT SECTION AS NECESSARY TO PROVIDE A GOOD TRANSITION TO EXISTING PAVED DRIVEWAYS 5'-0" MAXIMUM FROM STANDARD EDGE OF PAVEMENT, AS APPROVED BY THE ENGINEER.



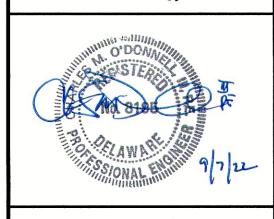
1. DESIGN FABRICATION AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE "GUIDE FOR FABRICATION AND INSTALLATION OF TRAFFIC CONTROL DEVICES" (LATEST EDITION).

2. BREAKAWAY SIGN POST AND FASTENERS SHALL BE IN ACCORDANCE WITH THE LATEST DELDOT STANDARD

TYPICAL STOP SIGN DETAIL NO SCALE

FINAL PLANS PRINTS ISSUED FOR: **PERMITS**

DONO\ MOBILE FARY SE



ROAD DETAILS

: NONE DESIGN BY : VAL,JWK C10.1 DRAWN BY : JWK CHECKED BY : VAL,COD

: JULY 2022 © COPYRIGHT 2022 GEORGE, MILES & BUHR, LLC

TYPICAL SPEED HUMP DETAIL NO SCALE

GMB FILE : 170196

TEMPORARY TRAFFIC CONTROL NOTES - DONOVANS ROAD

- 1. ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH: THE CONTRACT DOCUMENTS, THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (HEREINAFTER REFERRED TO AS THE "DELAWARE MUTCD"), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS, INCLUDING ALL REVISIONS AS OF THE DATE OF THE ENTRANCE PERMIT APPROVAL.
- CONTRACTOR SHALL SUPPLY MESSAGE BOARDS THAT ARE TO BE PLACED TEN (10) DAYS PRIOR TO CONSTRUCTION AND/OR TRAFFIC PATTERN CHANGES. THE MESSAGE BOARDS MUST REMAIN IN PLACE FIVE (5) DAYS AFTER WORK HAS STARTED AND/OR AFTER TRAFFIC PATTERN CHANGES. THE NUMBER OF MESSAGE BOARDS, LOCATIONS, AND WORDING ON THE MESSAGE BOARDS SHALL BE COORDINATED WITH THE DISTRICT SAFETY OFFICER.
- THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTORS' OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS AND DELDOT COMMUNITY RELATIONS OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN (7) CALENDAR DAYS BEFORE THE CLOSURE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TRANSPORTATION MANAGEMENT CENTER IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED IN STATE RIGHT-OF-WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDER(S) CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED, CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATION MANAGEMENT CENTER CAN BE REACHED AT (302) 659-4600.
- WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS.
- 7. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH THE DELAWARE MUTCD, SECTION 6G.21.
- ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED AND COMPLETELY OBLITERATED BY A METHOD APPROVED BY THE ENGINEER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.
- 10. TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE DELDOT DISTRICT SAFETY OFFICER: TYPICAL APPLICATION 1: "WORK BEYOND THE SHOULDER >10 FEET FROM THE EDGE OF THE TRAVELED WAY" (TA-1), TYPICAL APPLICATION 3: "WORK ON THE SHOULDER OF A TWO-LANE ROAD" (TA-3), TYPICAL APPLICATION 6: "SHOULDER WORK WITH MINOR ENCROACHMENT" (TA-6), TYPICAL APPLICATION 10: "LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS" (TA-10)
- 11. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK AHEAD SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE DISTRICT SAFETY OFFICER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION.
- 12. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH. BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER.

MILLINGS OR GARC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS. RESIDENCE, OR EDGE DROP OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:

 a. DRIVEWAYS b. ENTRANCES

TABLE 6G-1 AND SHALL BE COMPACTED.

- c. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
- d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION e. EDGE OF ROADWAY DROP-OFF

THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN THE DELAWARE MUTCD,

VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH THE DELAWARE MUTCD, TABLE 6G-1.

ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX, COMPACTED MILLINGS OR PLYWOOD WALKWAY STRUCTURE. PLYWOOD WALKWAY STRUCTURES SHALL ALSO INCLUDE DETECTABLE EDGING AND RAILINGS IN ACCORDANCE WITH ADA GUIDELINES AND THE DELAWARE MUTCD. STONE OR GRADED AGGREGATE BASE COURSE SHALL NOT BE USED FOR TEMPORARY PEDESTRIAN PATHS.

TEMPORARY TRAFFIC CONTROL NOTES -DONOVAN - SMITH MOBILE HOME PARK ROADS

- ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (HEREINAFTER REFFERED TO AS THE "DELAWARE MUTCD").
- THE OWNER RESERVES THE RIGHT TO STOP THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER AND LOCAL SCHOOLS OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN (7) CALENDAR DAYS BEFORE THE CLOSURE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENACE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.
- TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE ENGINEER: TYPICAL APPLICATION 10: "LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS".
- ROAD CLOSURES WILL BE NECESSARY ON ALL ONE-WAY ROADS INSIDE OF DONOVAN SMITH MANUFACTURED HOME COMMUNITY. ALL OTHER ROAD CLOSURES WITHIN DONOVAN SMITH MANUFACTURED HOME COMMUNITY MUST BE APPROVED BY THE ENGINEER PRIOR TO SUBMITTING A DETOUR PLAN FOR APPROVAL.
- 7. A DETOUR PLAN MUST BE SUBMITTED BY THE CONTRACTOR FOR ALL ROAD CLOSURES WITHIN DONOVAN SMITH MANUFACTURED HOME COMMUNITY. THE PLAN MUST SHOW, AT A MINIMUM, THE DETOUR PATH, DETOUR SIGNAGE CONSISTANT WITH THE DELAWARE MUTCD, BARRICADES ON EITHER SIDE OF THE ROAD CLOSURE, AND ADVANCE WARNING SIGNS. MESSAGE BOARDS WILL NOT BE REQUIRED INSIDE OF DONOVAN SMITH MANUFACTURED HOME COMMUNITY.

TRAFFIC CONTROL SEQUENCE OF CONSTRUCTION - DONOVANS ROAD

CONTRACTOR MOBILIZATION (APPROX. 10 WORKING DAYS) 1. MOBILIZE SITE (INCLUDING BUT NOT LIMITED TO):

- 2.1 PLACE CONSTRUCTION TRAILERS AS NECESSARY
- 2.2 MOBILIZE AND ACQUIRE EQUIPMENT NEEDED FOR CONTRACT.
- 2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON CONTRACT CONSTRUCTION
- 3. DONOVANS ROAD PORTION (APPROX. 30 WORKING DAYS)
 - 3.1 USING TA-10 OF DELAWARE MUTCD
 - 3.1.1 INSTALL WATER MAINS. 3.2 USING TA-3 AND TA-6 OF DELAWARE MUTCD
 - 3.2.1 INSTALL UTILITIES FROM 6' FROM PAVEMENT TO RIGHT-OF-WAY LINE.
- 3.3 USING TA-10 OF DELAWARE MUTCD
- 3.3.1 MILL AND OVERLAY OF DONOVANS ROAD AS SHOWN ON ROAD PLANS. 3.4 USING TA-17A AND/OR TA-17B OF DELAWARE MUTCD
- 3.4.1 INSTALL PAVEMENT STRIPING.
- 3.5 USING TA-10 OF DELAWARE MUTCD 3.5.1 REPLACE THERMOPLASTIC YIELD MARKINGS.

**NOTE: DAILY OPERATIONS SHOULD BE LIMITED TO THOSE THAT CAN BE INSTALLED AND CLOSED BY THE END OF EACH BUSINESS DAY. REFER TO TEMPORARY PAVEMENT RESTORATION DETAIL. AFTER COMPLETION OF UTILITY MAIN INSTALLATION COMPLETE PAVING RESTORATION BY REFERRING TO PERMANENT PAVEMENT RESTORATION DETAILS FOUND IN THESE CONTRACT DRAWINGS.

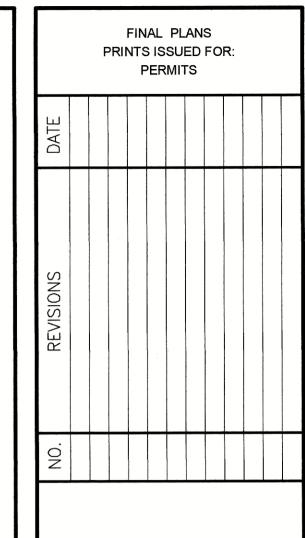
4. CONTRACT CLOSEOUT (APPROX. 20 WORKING DAYS)

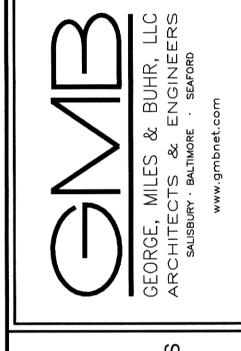
BICYCLE MAINTENANCE OF TRAFFIC NOTES

- 1. DONOVANS ROAD HAS NOT BEEN DESIGNATED AS A BICYCLE ROUTE, ACCORDING TO THE STATE BICYCLE MAP FOR SUSSEX COUNTY.
- 2. AT ALL TIMES, THE CONTRACTOR SHALL PROVIDE MAXIMUM WIDTH LANES TO THE EXTENT POSSIBLE TO FACILITATE BICYCLE USAGE.

PEDESTRIAN MAINTENANCE OF TRAFFIC

- THERE ARE NO EXISTING SIDEWALKS OR CROSSWALKS IN THIS PROJECT AREA.
- THE CONTRACTOR SHALL FOLLOW TYPICAL APPLICATIONS 28 AND 29 IN THE DELAWARE MUTCO IF APPLICABLE.





NOVAN - SMITH LE HOME PAF SEWER AND EXTENSIONS DON OBIL

DONOVANS ROAD **TEMPORARY** TRAFFIC CONTROL PLAN

DESIGN BY : JTE,JWK DRAWN BY : JWK C11.1 CHECKED BY : VAL,COD GMB FILE : 170196