

PUBLIC NOTICE

REQUEST FOR PERMISSION TO ALTER A U.S. ARMY CORPS OF ENGINEERS PROJECT UNDER SECTION 408

TITLE: Artesian Water Company, Inc. – Installation of New Water Main Utility Line via Horizontal Directional Drilling beneath the Delaware City Branch Canal Section of the Chesapeake and Delaware Canal Federal Navigation Channel at Fort Du Pont, Delaware City, New Castle County, Delaware

PUBLIC NOTICE IDENTIFICATION NUMBER: NAP-2021-00620-39

PUBLIC NOTICE COMMENT PERIOD:

Begins: **21 July 2021**

Expires: **20 August 2021**

Interested parties are hereby notified that an application has been received for a Department of the Army Section 408 permission for certain work at or near a federal project of the United States, as described below and shown on attached figures. Written comments are being solicited from anyone having an interest in the requested alteration. Comments will become part of the U.S. Army Corps of Engineers' (USACE's) administrative record and will be considered in determining whether to approve the request. Comments supporting, opposing, or identifying concerns that should be considered by the USACE in its decision process are all welcome.

This public notice is not a paid advertisement and is for public information only. Issuance of this notice does not imply USACE endorsement of the project as described.

1. REQUESTER: In compliance with 33 USC 408 (Section 14 of the Rivers and Harbors Act of 1899; hereinafter Section 408), the Artesian Water Company, Inc. has requested permission to install, via the Horizontal Directional Drilling (HDD) method, a new water main utility line beneath the Delaware City Branch Canal Section of the Chesapeake and Delaware Canal Federal Navigation Channel.

2. LOCATION: The proposed project is located at Delaware City Branch Canal Section of the Chesapeake and Delaware Canal Federal Navigation Channel at Fort Du Pont, Delaware City, New Castle County, Delaware; approximately 125.0-linear feet north of State Route 9. Approximate coordinates: 39.570564, -75.590452.

3. LOCATION MAP(S)/DRAWING(S): Please see attached Project Plans 1 through 8.

4. REQUESTER'S PROPOSED ACTION: Install, via the HDD method, one (1) new approximately 1,065.0-foot long (155.0-linear feet between the Mean High Water lines of

the canal; 121.0-linear feet between the Mean Low Water lines of the canal; 275.0-linear feet total within federally-owned property), 12.0-inch-diameter, polyvinyl chloride (PVC) water main utility line to approximately 15.0-feet beneath the existing floor of the Delaware City Branch Canal Section of the Chesapeake and Delaware Canal Federal Navigation Channel from upland entry and exit pits located outside federally-owned property.

5. REGULATORY AUTHORITY: This request will be reviewed according to the provisions of Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408). A requestor has the responsibility to acquire all other permissions or authorizations required by federal, state, and local laws or regulations, including any required permits from the USACE Regulatory Program under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403), Section 404 of the Clean Water Act (33 USC Section 1344) and/or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC 1413). Any Section 10/404/103 permit decision associated with the proposed alteration is separate from and will not be included in the Section 408 permission decision. An approval under Section 408 does not grant any property rights or exclusive privileges nor does it authorize any injury to the property or rights of others.

6. ENVIRONMENTAL COMPLIANCE: A decision on a Section 408 request is a federal action, and therefore subject to the National Environmental Policy Act (NEPA) and other environmental compliance requirements. While ensuring compliance is the responsibility of USACE, the requester is providing all information that the Philadelphia District identifies as necessary to satisfy all applicable federal laws, executive orders, regulations, policies, and ordinances. Based on information provided by the applicant to date, current Corps regulations governing NEPA implementation, and/or the contents of existing NEPA documentation if available, it is likely that the proposed action will be determined to be categorically excluded from the need to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS). This determination will be finalized following completion of agency coordination and prior to issuance of the Section 408 Permission Decision.

7. EVALUATION: As part of its evaluation, USACE will first make a determination that the submittal from the requestor is complete. The Philadelphia District is working closely with the requestor to ensure that all required technical plans, maps, drawings, and specifications are provided and are complete. Once the package is complete, a District-led review will be conducted to determine, in accordance with Engineering Circular (EC) 1165-2-216, whether the proposed alteration will impair the usefulness of the USACE Project or be injurious to the public interest, as follows:

- A. *Impair the Usefulness of the Project Determination.* The Philadelphia District's Section 408 review team will determine if the proposed alteration will limit the ability of the federally authorized project to function as authorized, or will compromise or change any authorized project conditions, purposes or outputs.
- B. *Injurious to the Public Interest Determination.* Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Evaluation of the probable impacts that the proposed alteration to the USACE project may have on the public interest requires a careful weighing of

all those factors that are relevant in each particular case. Factors that may be relevant to the public interest depend upon the type of USACE project being altered and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. The decision whether to approve an alteration will be determined by the consideration of whether benefits are commensurate with risks. If the potential detriments are found to outweigh the potential benefits, then it may be determined that the proposed alteration is injurious to the public interest.

8. SOLICITATION OF COMMENTS: The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of the proposed activity. Any comments received will be considered by USACE to determine whether to issue, modify, condition, or deny a permission for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are considered in making a final determination whether the proposed action will be categorically excluded from the need to prepare further NEPA documentation. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

- A. It should be noted that materials submitted as part of the Section 408 request become part of the public record and are thus available to the general public under the procedures of the Freedom of Information Act (FOIA). Individuals may submit a written request to the Philadelphia District Corps of Engineers, Office of Counsel to obtain copies of said materials under the FOIA.
- B. It is presumed that all parties viewing this notice will wish to respond to this public notice; therefore, a lack of response will be interpreted as meaning that there is no objection to the project as described.

9. COMMENT SUBMISSION AND ADDITIONAL INFORMATION: Written comments on the described work should reference the USACE Public Notice Identification Number found on the first page of this notice. Comments must reach this office no later than the stated expiration date of the Public Notice to become part of the record and be considered in the decision. Comments or requests for additional information should be mailed or emailed to the following address:

Email: JuanCarlos.Corona@usace.army.mil

Mailing Address:

U.S. Army Corps of Engineers

Philadelphia District

ATTN: Juan Carlos Corona

7th Floor

100 Penn Square East

Philadelphia, PA 19107-3390

WATER MAIN EXTENSION

DELAWARE CITY INTERCONNECTION

CALL BEFORE YOU DIG

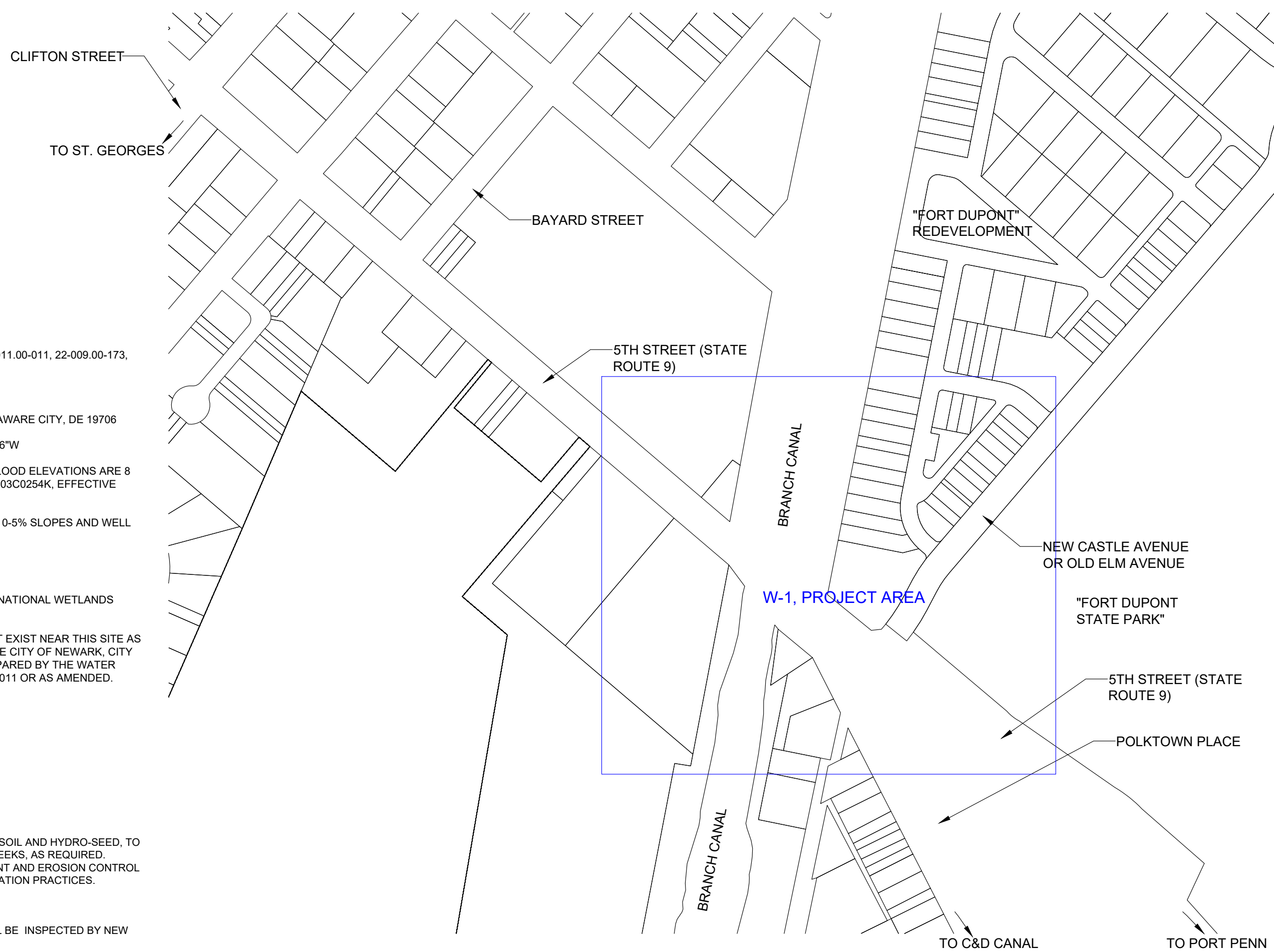
MISS UTILITY OF DELMARVA
1-800-282-8555 (IN DE.)

PLEASE GIVE TWO WORKING DAYS
ADVANCE NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY
COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH
THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970
AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

ARTESIAN WATER COMPANY, INC.
CARRIER PIPE - DUCTILE IRON, CLASS 50
JOINING METHOD - TYTON JOINT
TEST PRESSURE - 350 P.S.I. DESIGN PRESSURE
150 P.S.I. MAXIMUM WORKING TEST



NOTE:
PROPOSED WATER MAINS SHOWN ON THIS PLAN ARE
CLASSIFIED AS TRANSMISSION MAINS.



ARTESIAN WATER COMPANY NOTES:

- BIDS ARE TO BE BASED ON THE DRAWINGS PROVIDED. THIS IS TO INCLUDE ALL RESTORATION NOTED ON THE DRAWING.
- ALL MATERIAL AND INSTALLATION SHALL CONFORM TO ARTESIAN WATER COMPANY, INC. SPECIFICATIONS AND 10 STATES STANDARDS.
- DEPTH OF THE PROPOSED WATER MAIN SHALL BE A MINIMUM OF 42" FROM FINISHED GRADE TO TOP OF PIPE, INCLUDING SERVICES, UNLESS OTHERWISE SHOWN.
- DEPTH OF THE PROPOSED WATER MAIN MAY VARY DUE TO EXISTING FACILITIES.
- EXISTING GRADES ARE NOT TO BE CHANGED.
- 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES IS TO BE MAINTAINED.
- 10' HORIZONTAL SEPARATION FROM EXIST SANITARY SEWER MAINS IS TO BE MAINTAINED.
- ALL ROADWAY PATCH SHALL BE TO STATE SPEC.
- ALL CONCRETE CURB SHALL NOT BE DISTURBED UNLESS IT IS UNAVOIDABLE.
- ALL CONCRETE SIDEWALK PATCHES SHALL BE 4" THICK WITH 4" OF CRUSHER RUN.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE STATE INSPECTOR FOR STATE RELEASED CONCRETE, HOT MIX AND ETC.
- REMOVE ALL VALVE BOXES FROM ABANDONED MAINS AND SERVICES AFTER THE NEW WATER MAIN HAS BEEN CHARGED.
- ALL ABANDONED FIRE HYDRANTS SHALL BE REMOVED AND RETURNED TO THE AWC YARD BY THE CONTRACTOR.
- SET ALL CURB BOXES ON THE R.O.W. LINE.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL LONG SERVICES USING ALL METHODS, SHORT OF DIRECTIONAL BORE AND OPEN CUT, AT THE CONTRACTORS COST, UNLESS OTHERWISE NOTED.
- ALL SERVICES SHALL BE TIED OVER BY THE CONTRACTOR.
- CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH STATE SPECS.
- EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND ALLOW FOR THEIR LOCATION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT HIS EXPENSE.
- TEMPORARY SIDEWALK HAS TO BE PLACED WHERE EXISTING SIDEWALK IS REMOVED WITH BLACKTOP OR COLD PATCH. NO MORE THAN 500' CAN BE REMOVED WITHOUT PUTTING IN THE TEMPORARY SIDEWALK.
- HYDRO-SEEDING AND SIFTED TOPSOIL SHALL BE USED FOR THE RESTORATION IN GRASS AREAS/LAWNS.
- GRASS SEED SPECIFICATIONS: FULL SUNSHADE MIX, 30% MONTAUK TALL FESCUE, 20% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS, 20% CREEPING RED FESCUE, 10% KENTUCKY BLUEGRASS.
- ALL BUSHES AND SHRUBS SHALL BE REPLANTED BY THE CONTRACTOR.
- SIDEWALKS THAT GO THROUGH DRIVEWAYS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR SELECT. ALL OTHER SIDEWALK WILL BE A UNIT PRICE.
- TEMPORARY 2" BLOW OFFS ARE REQUIRED AT ALL TIE INS, ON THE DEAD END SIDE OF THE WATER VALVE. THE CONTRACTOR IS TO REMOVE BLOW OFF AFTER FLUSHING IS COMPLETE.
- VACUUM EXCAVATION METHOD IS TO BE USED FOR TEST HOLES WHERE EXISTING UTILITIES CROSS PROPOSED WATER SERVICES IN PAVING.
- EXACT LOCATIONS OF FIRE HYDRANTS ARE TO BE DETERMINED BY THE ARTESIAN WATER INSPECTOR IN THE FIELD.
- IT IS THE CONTRACTORS RESPONSIBILITY TO STAKE OUT THE LIMITS OF EASEMENTS PER AWC STANDARDS.
- FIRE MARSHAL NOTES: ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS. ALL THREADS PROVIDED FOR FIRE DEPARTMENT CONNECTIONS, TO SPRINKLER SYSTEMS, STANDPIPES, YARD HYDRANTS OR ANY OTHER FIRE HOSE CONNECTIONS SHALL BE UNIFORM TO THOSE USED BY THE FIRE DEPARTMENT IN WHOSE DISTRICT THEY ARE LOCATED.
- STORM DRAINAGE: IT IS THE CONTRACTORS RESPONSIBILITY TO REPAIR OR REPLACE ANY STORM DRAINAGE THAT IS DAMAGED DURING CONSTRUCTION.

PROJECT NOTES:

- EASEMENT TAX MAP NUMBERS: 22-009.00-120, 22-011.00-011, 22-009.00-173, 22-009.00-156
- DNREC NOI NUMBER: N/A
- SITE ADDRESS: 5TH STREET, DELAWARE CITY, DE 19706
- LATITUDE & LONGITUDE: 39°33'58"N, 75°35'56"W
- AREAS OF THIS SITE ARE LOCATED IN ZONE AE, BASE FLOOD ELEVATIONS ARE 8 FEET AND 10 FEET AS PER THE FEMA FIRM MAP PANEL 10003C0254K, EFFECTIVE 2/4/2015.
- SOILS ON-SITE ARE HAMBROOK-URBAN COMPLEX (H&B), 0-5% SLOPES AND WELL DRAINED.
- LIMITS OF DISTURBANCE IS WITHIN PRIVATE EASEMENT. DISTURBED AREA= 0.15 ACRES TOTAL.
- THERE ARE NO WETLANDS NEAR THIS SITE AS PER THE NATIONAL WETLANDS INVENTORY MAP.
- WATER RESOURCE PROTECTION AREAS (WRPA) DO NOT EXIST NEAR THIS SITE AS PER THE "WATER RESOURCE PROTECTION AREAS FOR THE CITY OF NEWARK, CITY OF WILMINGTON, NEW CASTLE COUNTY, DELAWARE" PREPARED BY THE WATER RESOURCES AGENCY FOR NEW CASTLE COUNTY DATED 2011 OR AS AMENDED.

SEDIMENT AND EROSION CONTROL:

DISTURBED GRASS AREAS ARE TO BE RESTORED WITH TOPSOIL AND HYDRO-SEED. TO INCLUDE ADEQUATE IRRIGATION FOR A PERIOD OF FOUR WEEKS, AS REQUIRED. CONTRACTOR IS TO COMPLY WITH THE DELAWARE SEDIMENT AND EROSION CONTROL HANDBOOK FOR DEVELOPMENT FOR VEGETATIVE STABILIZATION PRACTICES.

SILT FENCE SHALL BE USED WHERE NECESSARY.

SEDIMENTATION AND EROSION CONTROL PRACTICES SHALL BE INSPECTED BY NEW CASTLE COUNTY.

TRAFFIC CONTROL: CONTRACTOR IS RESPONSIBLE TO FOLLOW THE GUIDELINE SET FORTH IN THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND DIRECTIVES SET FORTH BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.

DEPTH:

TOP OF PROPOSED WATER MAIN SHALL BE A MINIMUM OF 42" COVER FROM CROWN OF ROAD IN AREAS WHERE ROAD IS LOWER THAN EXISTING GRADE.

RIGHT OF WAY:

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL RIGHT OF WAY AND EASEMENT INFORMATION SEE APPROPRIATE RIGHT OF WAY PLATS.

HOLD UTILITY POLES AS NEEDED, REMOVE & REPLACE GUY WIRES, AS NECESSARY.

DELDOT NOTES:

THE ROADWAY DITCHES WILL REMAIN IN OPERATION DURING CONSTRUCTION. WORK WILL NOT BE PERFORMED DURING RAIN OR BAD WEATHER. CONSTRUCTION WILL ONLY TAKE PLACE DURING GOOD WEATHER. AT THE END OF EACH DAY THE DITCHES WILL BE RESTORED AS CLOSE TO POSSIBLE TO THEIR ORIGINAL CONDITION, ON WEEKENDS AND DAYS OF INCLEMENT WEATHER THEY WILL BE OPEN AND IN THEIR ORIGINAL CONDITION AND THEY WILL FUNCTION AS THEY DID BEFORE CONSTRUCTION.

DURING CONSTRUCTION HALF OF THE ROADWAY WILL BE CLOSED AS WORK IS PERFORMED. AS CONSTRUCTION PROGRESSES DOWN THE ROAD DRIVEWAYS WILL BE CLOSED ONLY AS PIPE IS INSTALLED ACROSS THE DRIVEWAY. AS A DRIVEWAY IS PASSED TEMPORARY RESTORATION WILL BE MADE AND THE DRIVEWAY OPENED. FINAL RESTORATION OF ALL DRIVEWAYS WILL BE DONE AFTER THE JOB IS COMPLETE. 72-HOURS NOTIFICATION MUST BE GIVEN TO THE PROPERTY OWNERS.

PEDESTRIAN DETOURS ARE REQUIRED FOR ANY AREAS THAT SIDEWALK IS BEING REMOVED.

EARTHWORK SHALL BE RESTORED TO DELDOT STANDARDS, SEEDING SHALL BE DONE PER DELDOT SEED CHART FOR SEASONAL APPLICATION AS PER SECTION 734.

CROSSING UNDER STORM DRAINS REQUIRE EITHER REMOVAL AND REPLACEMENT OR CONCRETE CRADLE POURED UNDER THEM TO AVOID SETTLEMENT.

SITE ANALYSIS TABLE									
DISTURBED AREA (AC) OUTSIDE DELDOT ROW	DISTURBED AREA (AC) IN DELDOT ROW	DISTURBED AREA WIDTH (FT)	DISTURBED AREA LENGTH (FT)	DISTURBED AREA LENGTH (MI)	AREA FOR VEGETATIVE STABILIZATION (AC)	IMPERVIOUS AREA (AC) **	VOLUME OF CUT (FT3)	VOLUME FILL (FT3)	WOODED AREA TO BE CLEARED (AC)
0.15	0	VARIABLES	VARIABLES	<1 MI	0.15	0	4,482	3,486	0

* IN ACTIVE AGRICULTURAL FIELDS, IF WATER MAIN INSTALLATION OCCURS AT SUCH A TIME THAT CROPS WILL BE PLANTED IMMEDIATELY AFTER INSTALLATION IS COMPLETED, VEGETATIVE STABILIZATION DOES NOT NEED TO BE INSTALLED. IF WATER MAIN INSTALLATION OCCURS AT OTHER TIMES OF YEAR, USE TEMPORARY VEGETATIVE STABILIZATION TO STABILIZE AREAS.

** IMPERVIOUS AREA INCLUDES WHAT WILL BE REMOVED AND REPLACED (IN KIND) IN ASSOCIATION WITH THE OPEN CUT OF THE WATER MAIN INSTALLATION.

SEDIMENT CONTROL BMP TABLE					
SILT FENCE LENGTH (LF)	SUPER SILT FENCE LENGTH (LF)	NO. OF STABILIZED CONST. ENTRANCES (EA)	TIMBER MATT (EA)	AREA FOR PERMANENT/TEMPORARY SEEDING (AC)	INLET PROTECTION
N/A	N/A	N/A	N/A	0.15	N/A

WETLAND STATEMENT

I, Edward M. Launay, PWS, STATE THAT THE BOUNDARIES OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO THE CORPS OF ENGINEERS REGULATORY PROGRAM DELINEATED UPON THIS PLAN HAVE BEEN DETERMINED USING MY PROFESSIONAL JUDGMENT IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL AND ITS SUPPLEMENTAL GUIDANCE INCLUDING THE ATLANTIC AND GULF COAST REGIONAL SUPPLEMENT (VERSION 2.0) AND THE 2020 NAVIGABLE WATERS PROTECTION RULE. THIS DELINEATION HAS NOT BEEN CONDUCTED FOR USDA PROPOSED AGRICULTURAL PURPOSES.

IN ACCORDANCE WITH DNREC TIDAL WETLAND MAP No. DNR-344, THERE ARE NO STATE REGULATED WETLANDS ON THE SITE.

EDWARD M. LAUNAY, SENIOR PWS No. 875 Date
SOCIETY OF WETLANDS SCIENTISTS
CORPS OF ENGINEERS, CERTIFIED WETLAND
DELINEATOR WDCP93MD05100368

INDEX OF SHEETS

COVER SHEET	SHEET W-C
WATER MAIN EXTENSION PLAN & PROFILE	SHEET W-1 THRU W-2
WATER MAIN CONSTRUCTION DETAILS	SHEET W-3 THRU W-6
EROSION & SEDIMENT CONTROL NOTES AND DETAILS	SHEET ES-1 THRU ES-2

REFER TO THE ABOVE INDEX FOR THE LOCATION OF OTHER DETAILS REQUIRED FOR SITE IMPROVEMENTS.

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

- NOTIFY NEW CASTLE COUNTY SEDIMENT AND STORMWATER PROGRAM IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER, THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.
- CLEARLY MARK THE LIMITS OF DISTURBANCE AS SHOWN BY THESE PLANS. CLEAR AND GRUB AREAS NECESSARY FOR PERIMETER CONTROLS AND UTILITY INSTALLATION.
- INSTALL SILT FENCE AT THE LOCATIONS SHOWN ON THE PLAN. REFER TO THE STANDARD DETAIL FOR MINIMUM SPECIFICATIONS. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PER STANDARD DETAIL FOR MINIMUM SPECIFICATIONS.
- INSTALL WATER MAIN AND APPURTENANCES PER ARTESIAN STANDARDS AND SPECIFICATIONS. ONLY ENOUGH TRENCH SHOULD BE EXCAVATED WHICH CAN BE BACKFILLED DAILY. EXCAVATED TRENCH MATERIAL SHOULD BE PLACED ON THE HIGH SIDE OF THE TRENCH.
- IMMEDIATELY FOLLOWING UTILITY INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. FULL TRENCH COMPACTION IS REQUIRED.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON 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 REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- ANY DITCHES OR DRAINAGE WAYS DISTURBED DURING CONSTRUCTION WILL BE RESTORED TO ORIGINAL CONDITION.
- APPLY STRAW MULCH AND CRIMP STRAW AS TEMPORARY FOR STABILIZATION PRIOR TO FARMING OPERATIONS.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
- ONLY AFTER RECEIVING APPROVAL, PROCEED TO REMOVE THE TEMPORARY EROSION MEASURES.
- PRIOR TO COMMENCING A NEW PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER THAT THE PREVIOUS PHASE HAS BEEN SUFFICIENTLY STABILIZED.
- 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.

OWNER'S/DEVELOPERS CERTIFICATION

I, THE UNDERSIGNED, HEREBY CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE PURSUANT TO THE APPROVED PLAN, THAT RESPONSIBLE PERSONNEL INVOLVED WILL HAVE A CERTIFICATE OF TRAINING FROM DNREC (BLUE CARD HOLDER); AND THAT DNREC AND NEW CASTLE COUNTY PERSONNEL SHALL HAVE THE RIGHT TO CONDUCT ON-SITE INSPECTIONS. ALL LAND DISTURBING ACTIVITIES WILL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS GOVERNING LAND DISTURBING ACTIVITIES IN NEW CASTLE COUNTY.

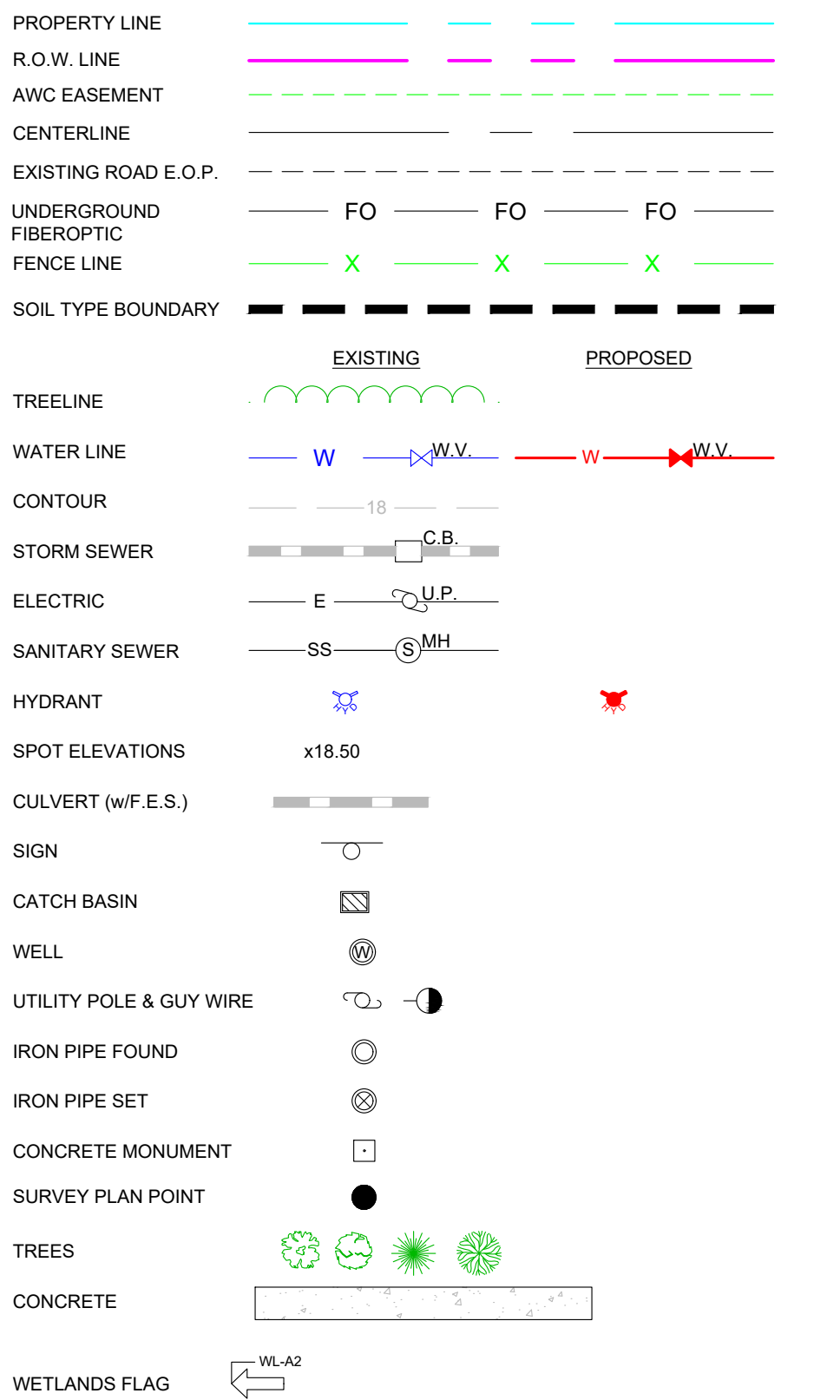
OWNER/DEVELOPER SIGNATURE _____ DATE _____
ARTESIAN WATER COMPANY, INC.
664 CHURCHMANS ROAD
NEWARK, DE 19702
PH: (302)453-6900

ENGINEER'S CERTIFICATION

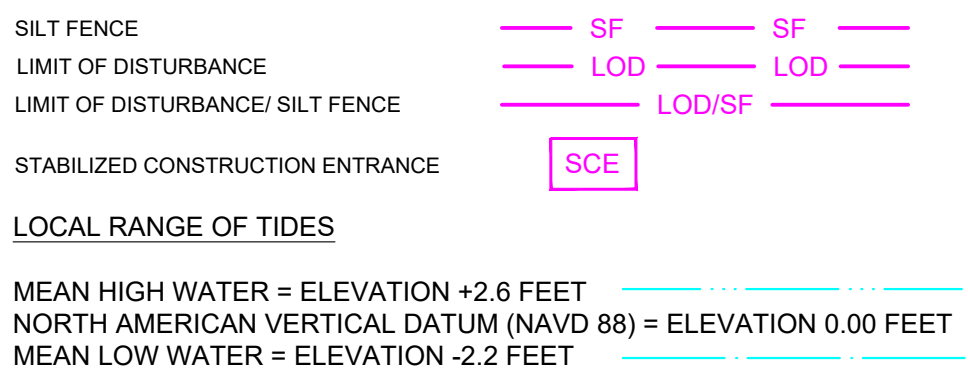
I, DANIEL W. KONSTANSKI, P.E. HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

DANIEL W. KONSTANSKI, P.E. DATE: _____
ARTESIAN WATER COMPANY, INC.
664 CHURCHMANS ROAD
NEWARK, DE 19702
PHONE: (302) 453-6900
FAX: (302) 453-5800

LEGEND



EROSION & SEDIMENT CONTROL LEGEND



NEW CASTLE COUNTY APPROVAL



664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5800

14701 Coastal Highway
Milton, Delaware 19968
Phone: (302) 453-6900 Fax: (302) 645-8233

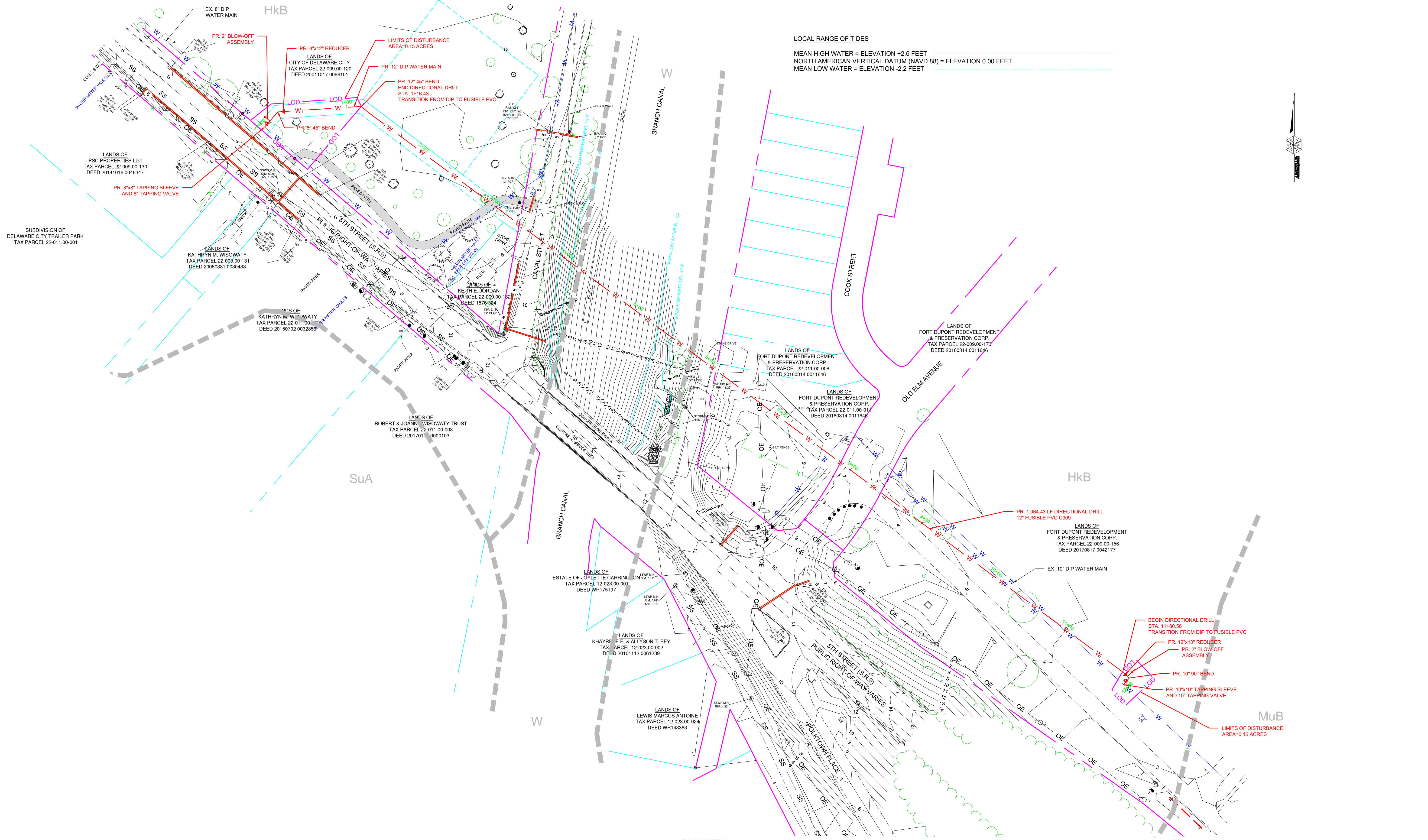
REVISIONS

NO.	DATE	DESCRIPTION	BY
6/17/21		ADD MHW AND MLW ELEV	KEG

Date:	2/11/21	Checked By:	AG	Sheet:	W-C
Scale:	1"=200'	Page & Grid:		Hundred:	ST. GEORGES
Drawn By:	KEG	CAD File:	COVER.DWG	Budget No.	3003949

**WATER MAIN EXTENSION
DELAWARE CITY INTERCONNECTION**

NEW CASTLE COUNTY DELAWARE



PLAN VIEW
SCALE: 1"=50'

NOTES:
1. CONTRACTOR SHALL NOT TRESPASS OUTSIDE OF PERMANENT EASEMENT AREA OR TEMPORARY CONSTRUCTION EASEMENT AREA.
2. CONTRACTOR SHALL COORDINATE SPECIFIC TREE REMOVAL UNDER DIRECTION OF ARTESIAN.

NOTE:
RIGHT OF WAY AND/OR PROPERTY LINES DEPICTED ON PLANS ARE NOT THE RESULT OF ANY RIGHT OF WAY AND/OR PROPERTY LINE SURVEY BY ARTESIAN WATER COMPANY, INC. RIGHT OF WAY AND/OR PROPERTY LINES ARE THE RESULT OF PHYSICAL MONUMENTS FOUND IN THE FIELD, DELAWARE DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ROAD PLANS AND THE BEST AVAILABLE INFORMATION FROM SUSSEX COUNTY MAPPING.



664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5800

14701 Coastal Highway
Milton, Delaware 19968
Phone: (302) 645-7751 Fax: (302) 645-8233

REVISIONS	DATE	DESCRIPTION	BY
	6/17/21	ADD MHW AND MLW ELEV	KEG

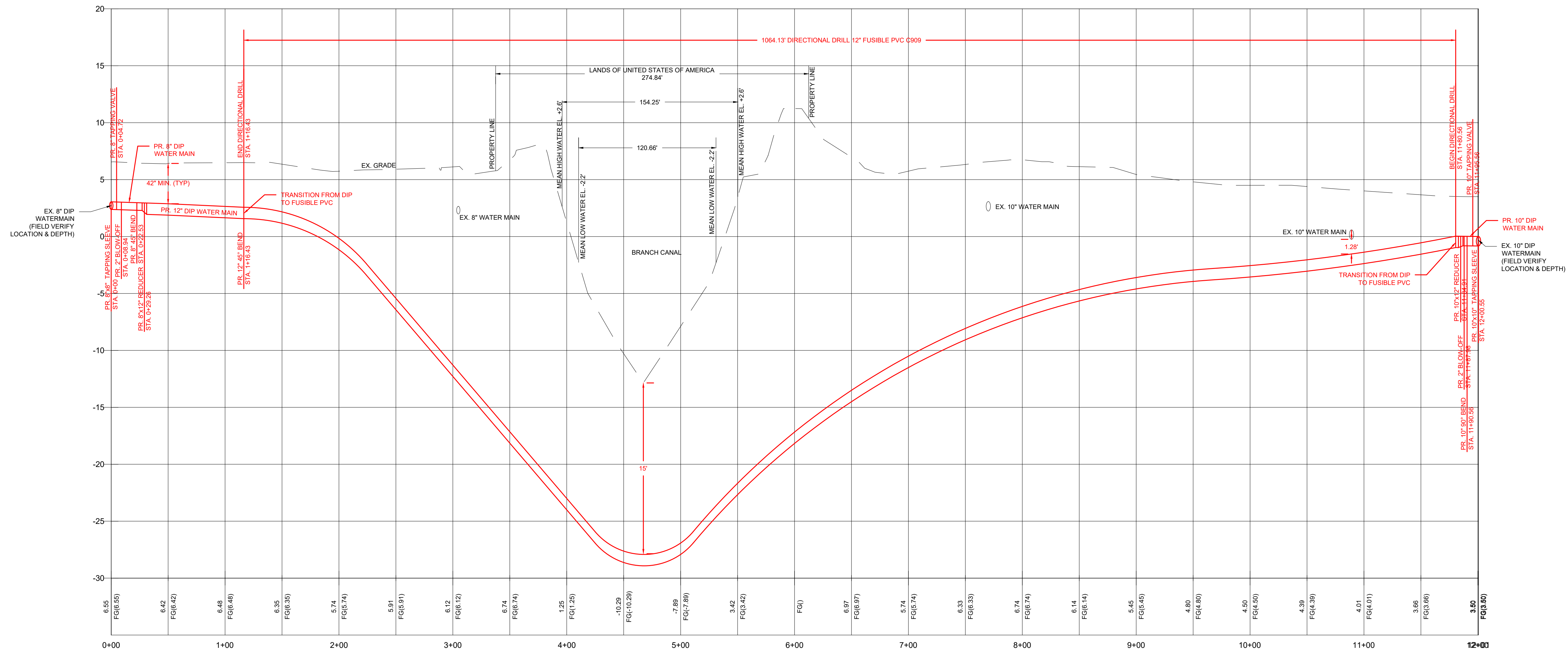
Date: 2/11/21
Scale: 1"=50'
Drawn By: KEG

Checked By: AG
Page & Grid:
CAD File: WATER PLANS.dwg

Sheet: W-1
Hundred: ST. GEORGES
Budget No. 3003949

WATER MAIN EXTENSION PLAN & PROFILE
DELAWARE CITY INTERCONNECTION

NEW CASTLE COUNTY DELAWARE



PROFILE
 PROPOSED 12-INCH WATER MAIN
 STA: 0+00.00 TO 12+00.55
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE 1" = 5'



664 Churchmans Road
 Newark, Delaware 19702
 P.O. Box 15004, Wilmington, Delaware 19850
 Phone: (302) 453-6900 Fax: (302) 453-5800

14701 Coastal Highway
 Milton, Delaware 19968
 Phone: (302) 645-7751 Fax: (302) 645-8233

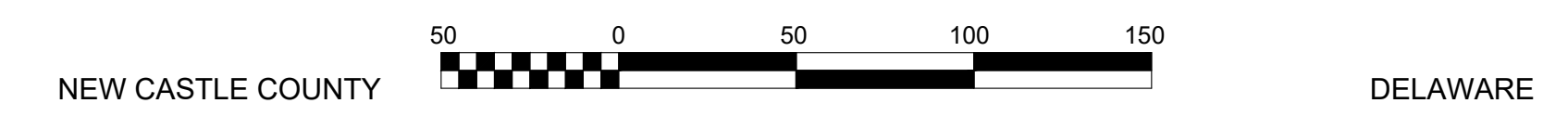
REVISIONS	DATE	DESCRIPTION	BY

Date: 2/11/21
 Scale: 1"=50'
 Drawn By: KEG

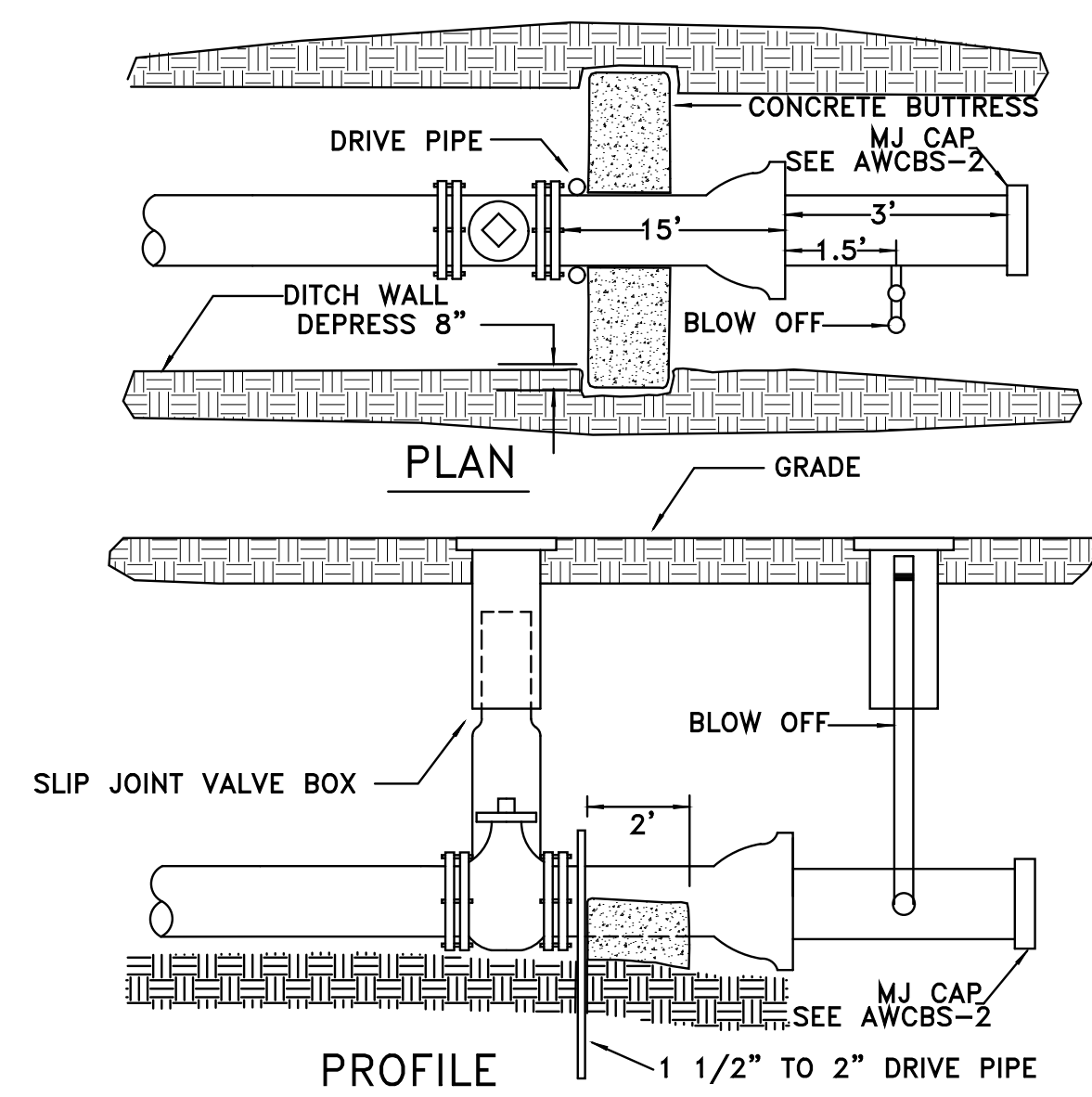
Checked By: AG
 Page & Grid:
 CAD File: WATER PLANS.dwg

Sheet: W-2
 Hundred: ST. GEORGES
 Budget No. 3003949

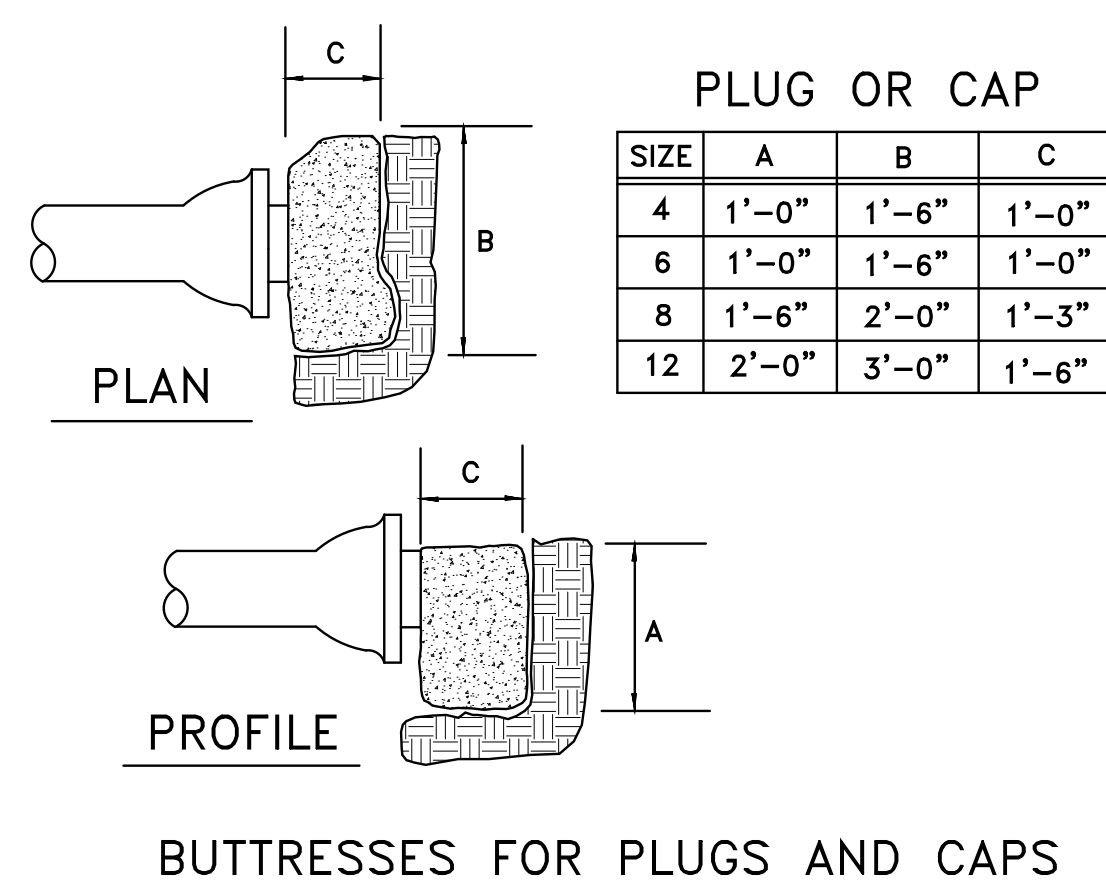
WATER MAIN EXTENSION PLAN & PROFILE
 DELAWARE CITY INTERCONNECTION



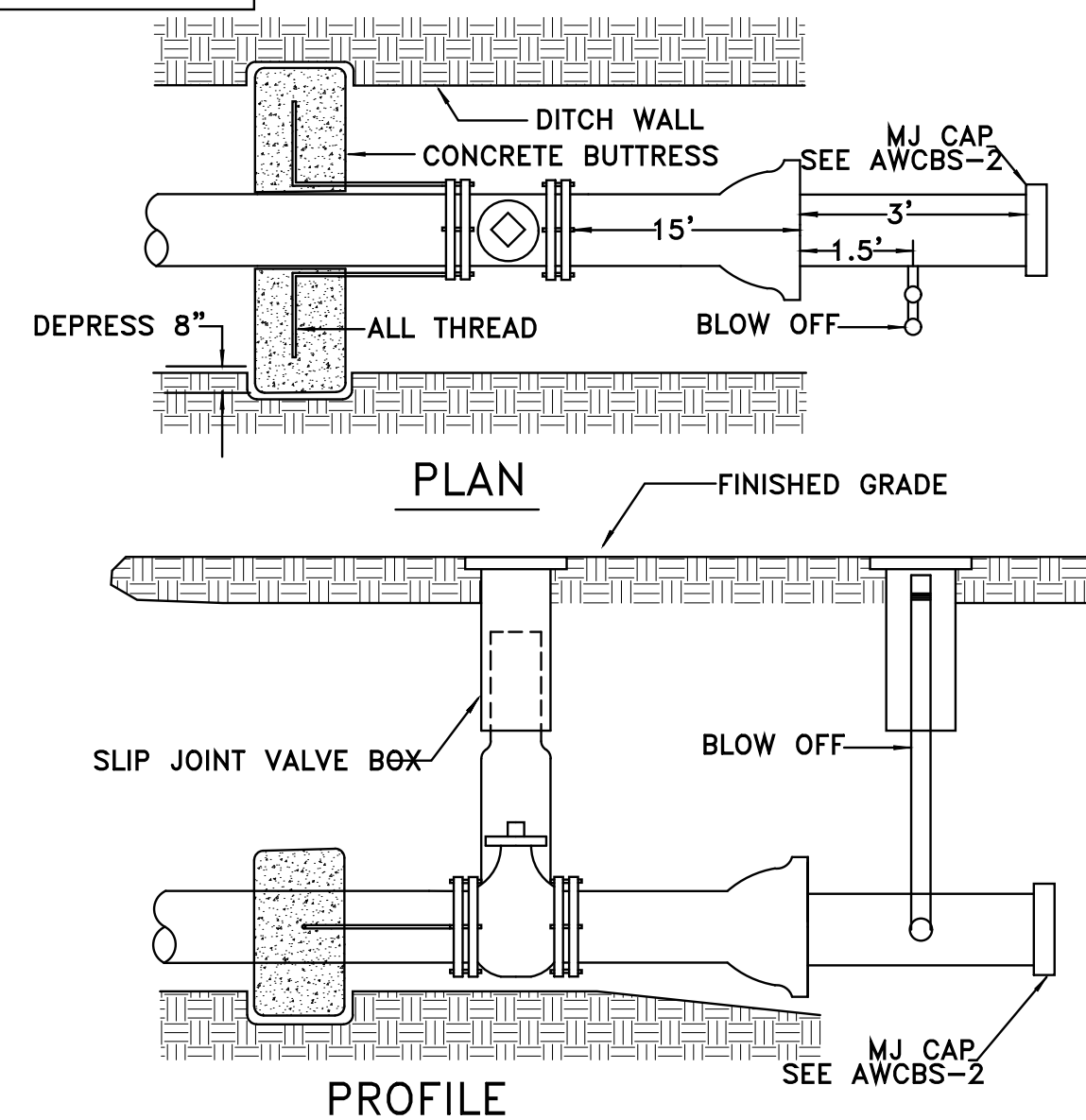
AWCBS - 1



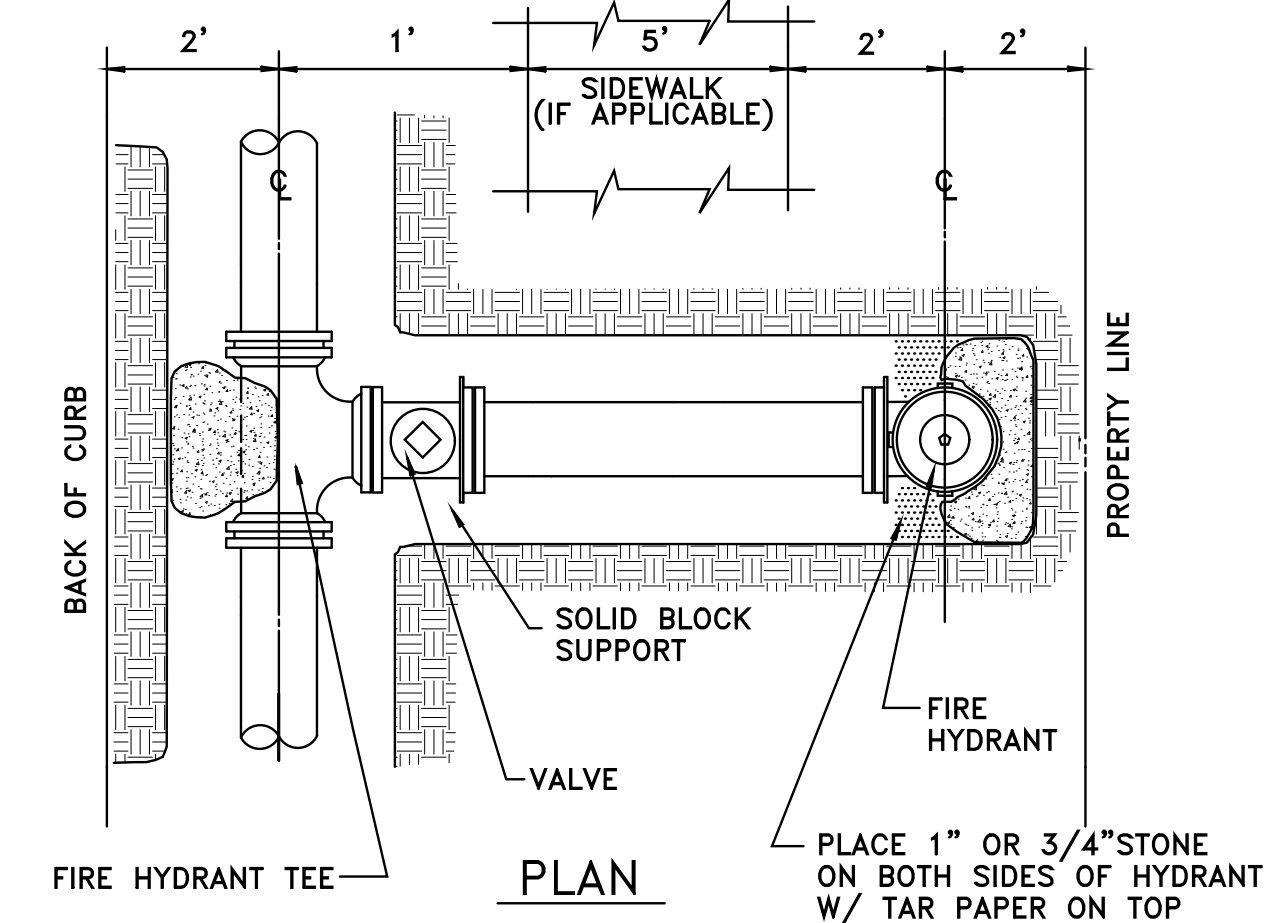
AWCBS - 2



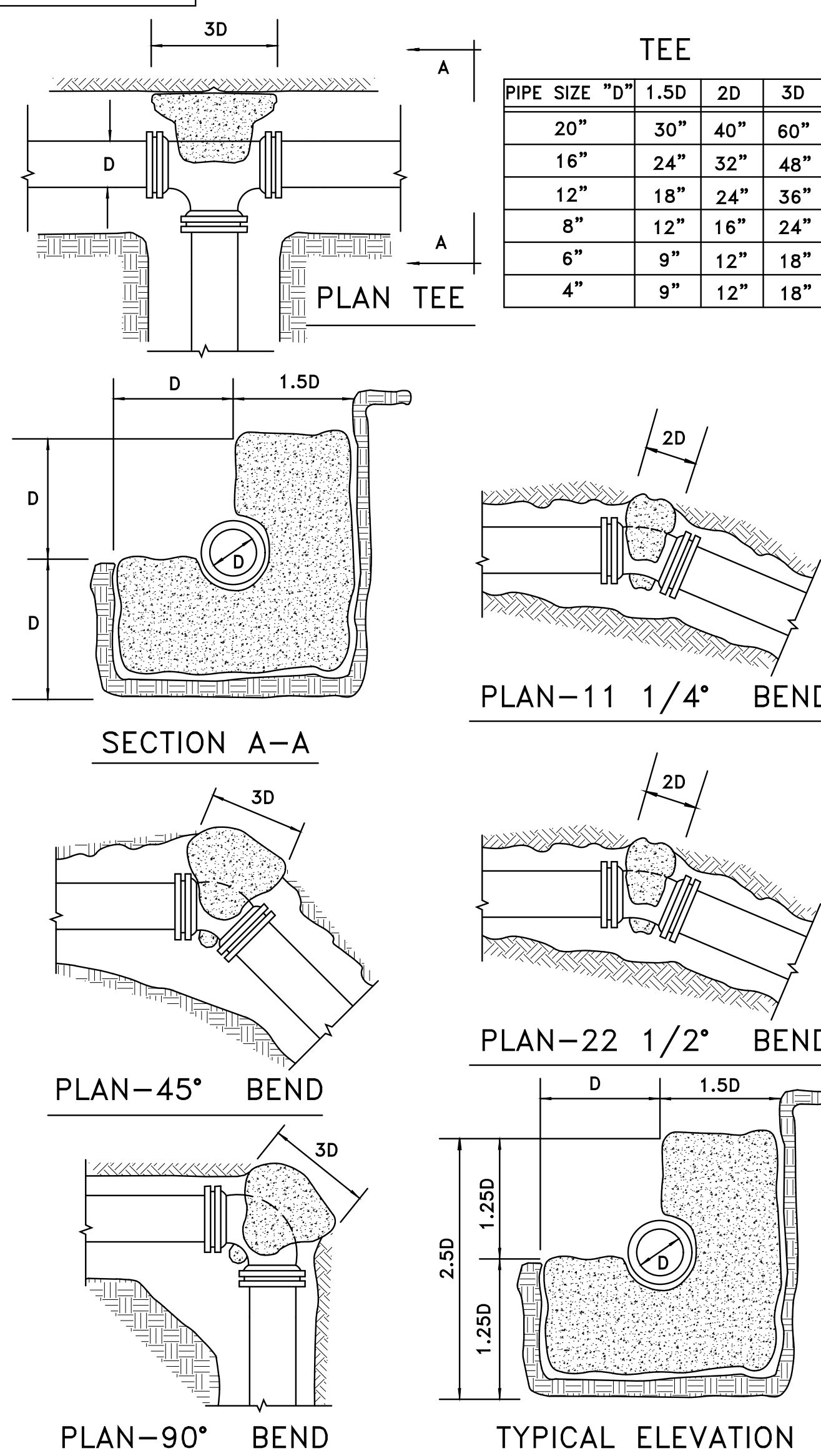
AWCBS - 3



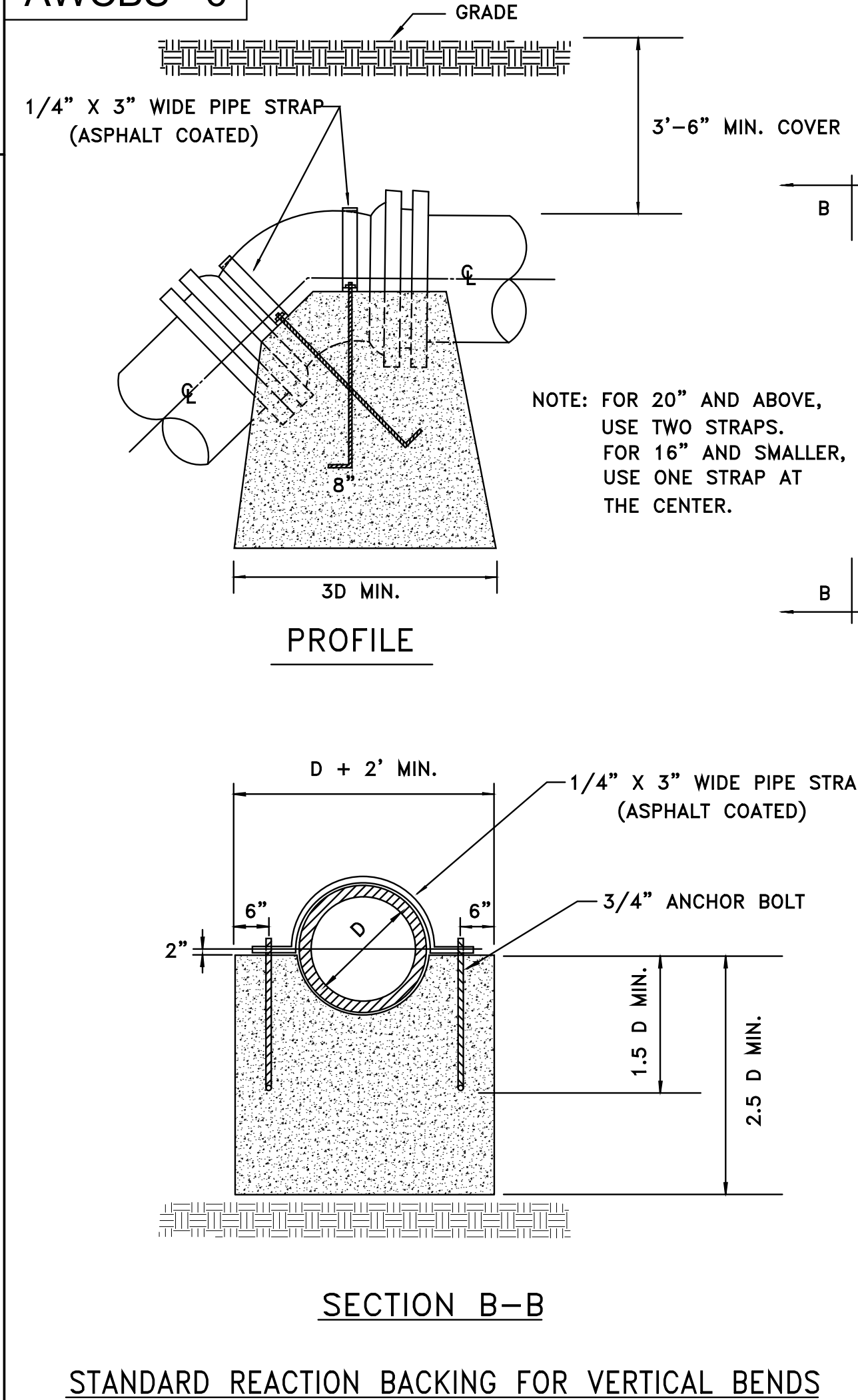
AWCBS - 4



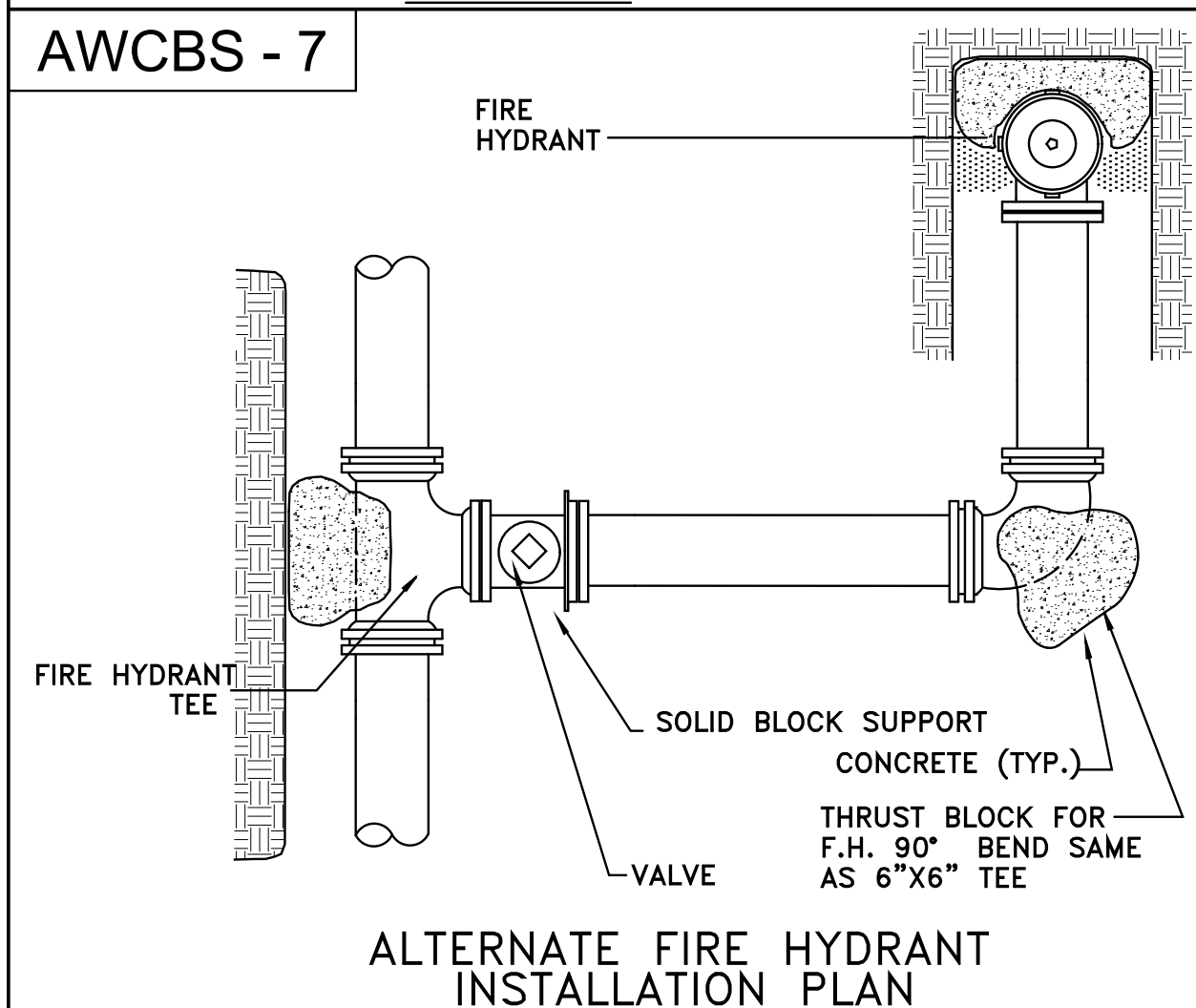
AWCBS - 5



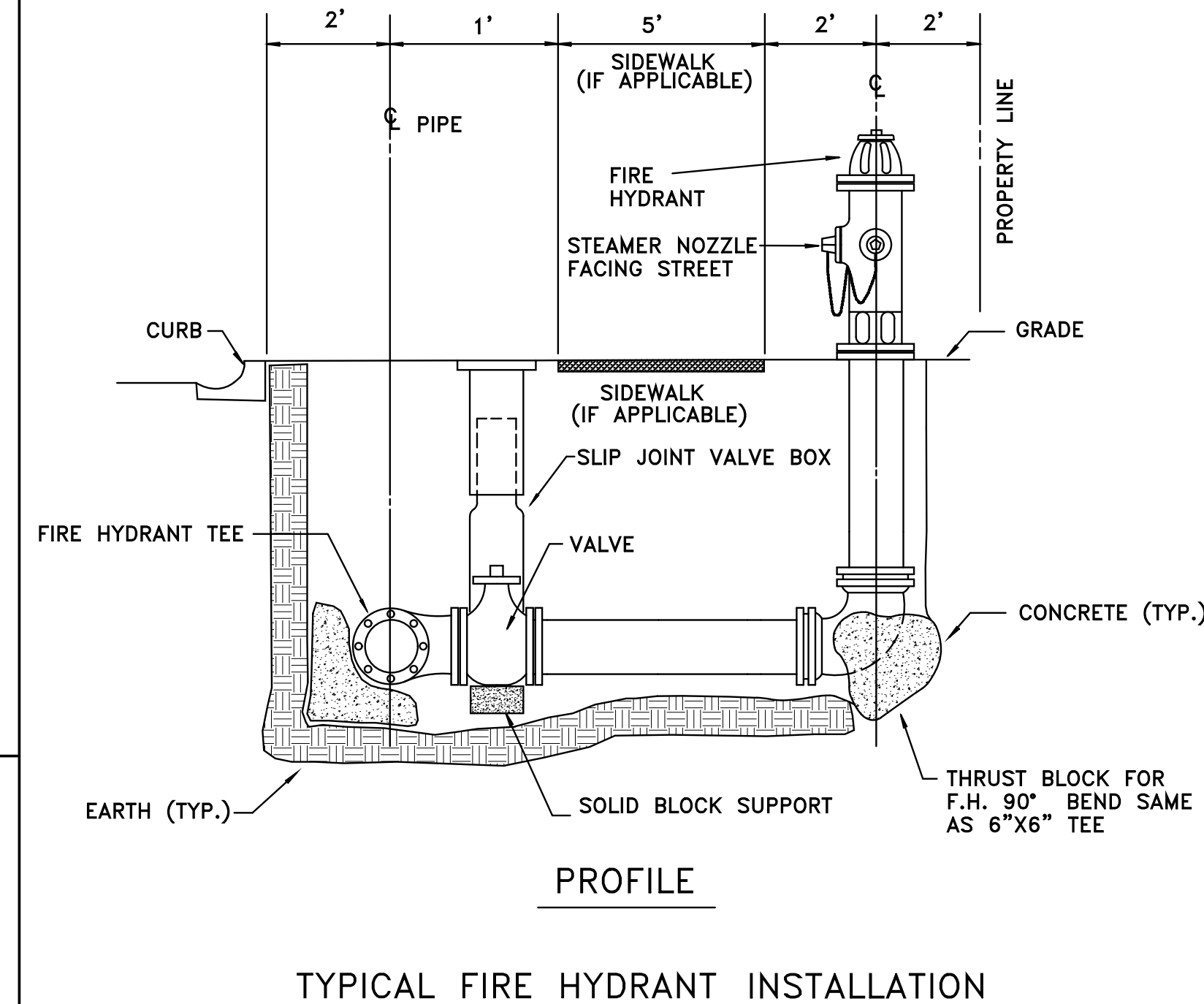
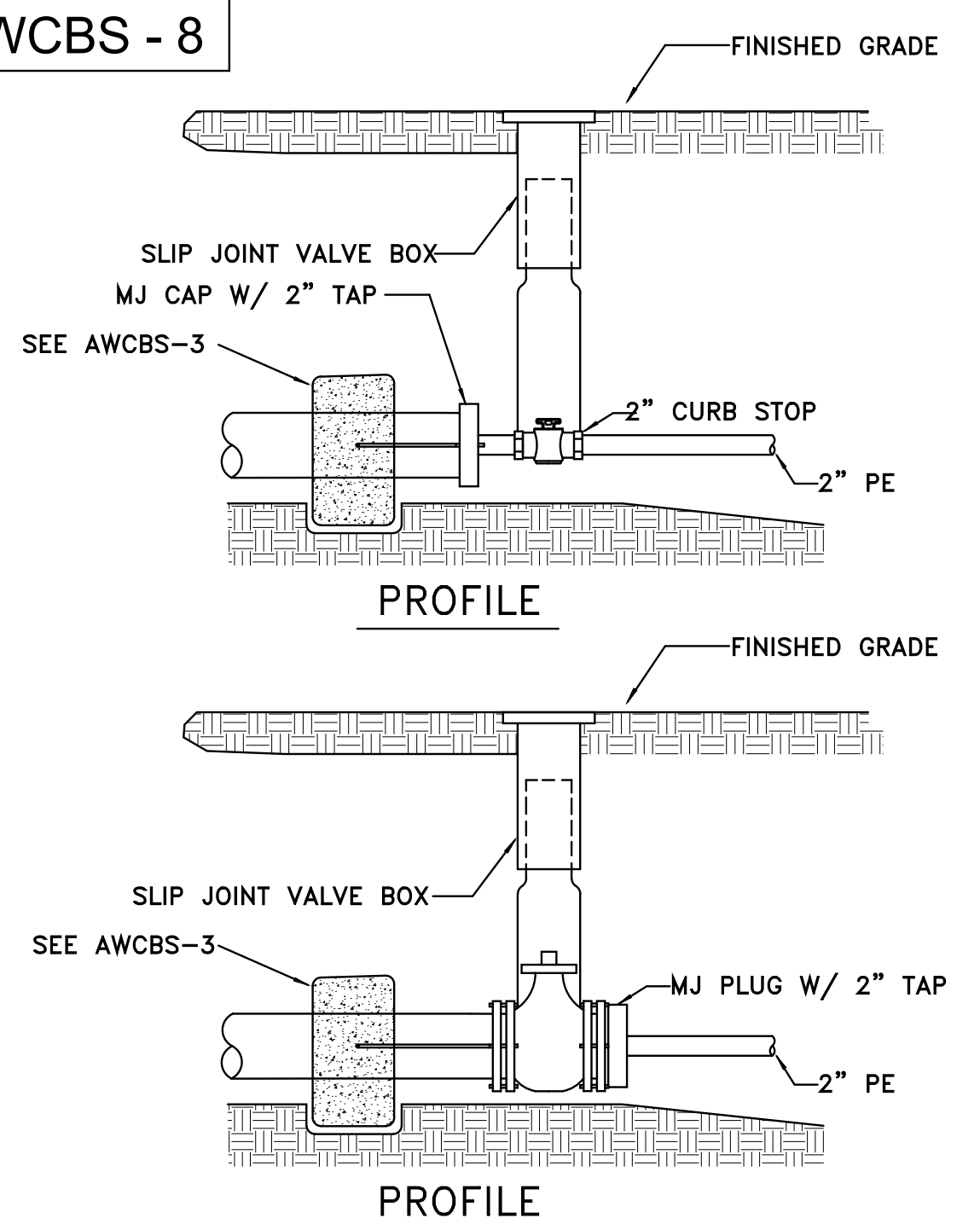
AWCBS - 6



AWCBS - 7



AWCBS - 8



SPECIFICATIONS DUE TO CHANGE WITHOUT NOTICE. CONTACT ARTESIAN WATER CO. FOR LATEST REVISIONS.

GENERAL NOTES

1. ALLOW SUFFICIENT SPACE TO HAVE AN ACCESS TO BOLTS IN THE MECHANICAL JOINT.
2. STRENGTH OF CONCRETE SHOULD BE 2500 P.S.I. (MIN.) AFTER 28 DAYS.
3. ALL REACTION BACKING TO EXTEND TO UNDISTURBED EARTH.
4. WHEN USING MECHANICAL JOINT, USE TAR PAPER BETWEEN FITTING AND CONCRETE.

NO.	DATE	DESCRIPTION

Date: 2/11/21	Checked By: AG	Sheet: W-5
Scale: NONE	Page & Grid:	Hundred: ST. GEORGES
Drawn By: KEG	CAD File: WATER DETAILS.DWG	Budget No. 3003949

**Standard Detail & Specifications
Vegetative Stabilization**



TEMPORARY SEEDING BY RATES, DEPTHS AND DATES													
Mix #	Species*	Seeding Rate	Optimum Seeding Dates ¹				Planting Depth ³	Notes	AP ⁴	Remarks			
			1	2	3	4							
1	Barley	125	4	O	A	O	O	A	O	1-2 inches 2-2" sandy soils			
2	Daif	125	4	O	A	O	O	A	O	1-2 inches 2-2" sandy soils			
3	Rye	125	4	O	A	O	O	A	O	1-2 inches 2-2" sandy soils			
4	Perennial Ryegrass	125	4	O	A	O	O	A	O	0.5 inches 1.0" sandy soils			
5	Annual Ryegrass	125	4	O	A	O	O	A	O	0.5 inches 1.0" sandy soils			
6	Winter Wheat	125	4	O	A	O	O	A	O	1-2 inches 1.0" sandy soils			
7	Foral Millet	30 FLS	0.7	O						1.0" sandy soils			
8	Peat Millet	20 FLS	0.5	O						1.0" sandy soils			

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be drilled throughout summer if soil moisture is adequate or seedbed area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Fifty pounds per acre of Annual Lespedeza may be added to 1/2 the seeding rate of any of the above species.
5. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
6. Warm season grasses such as Millet or Weeping Lovegrass may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 1 of 4

Effective February 2019

**Standard Detail & Specifications
Vegetative Stabilization**



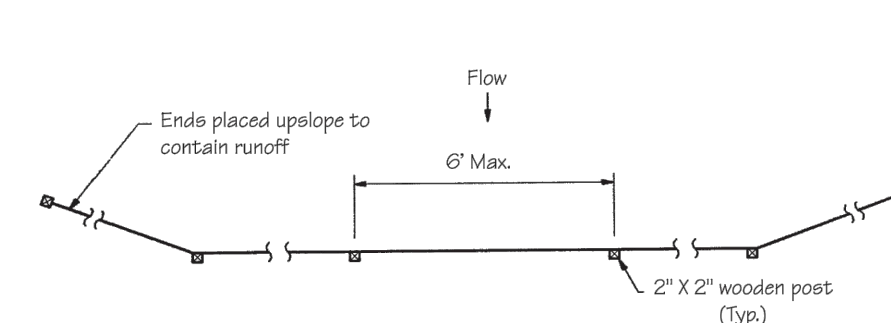
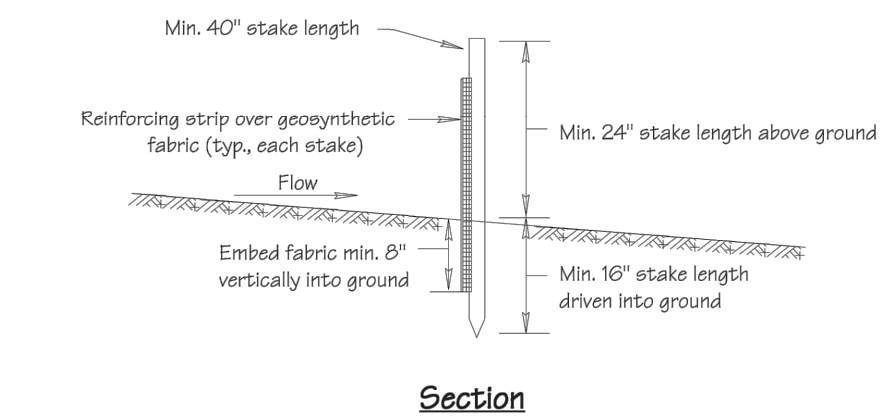
PERMANENT SEEDING AND SEEDING DATES													
Mix No.	Certified Seed*	Seeding Rate ¹	Optimum Seeding Dates ²				Planting Depth ³	Notes	AP ⁴	Remarks			
			1	2	3	4							
1	Well Drained Soils	125	4	O	A	O	O	A	O	1-2 inches 2-2" sandy soils			
2	Heavy Loam	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
3	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
4	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
5	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
6	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
7	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
8	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
9	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
10	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
11	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
12	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
13	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
14	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
15	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 2 of 4

Effective February 2019

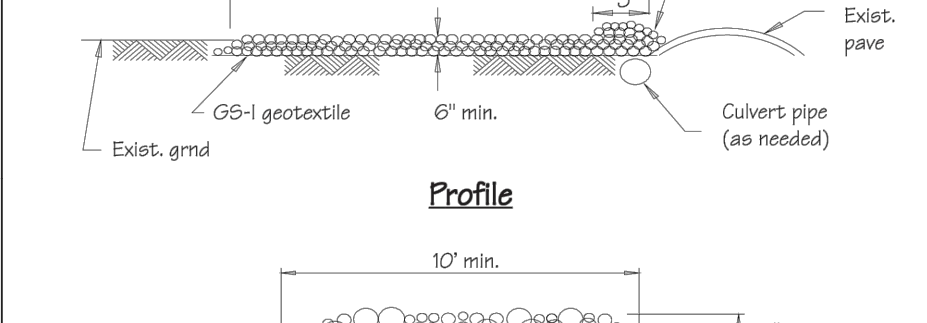
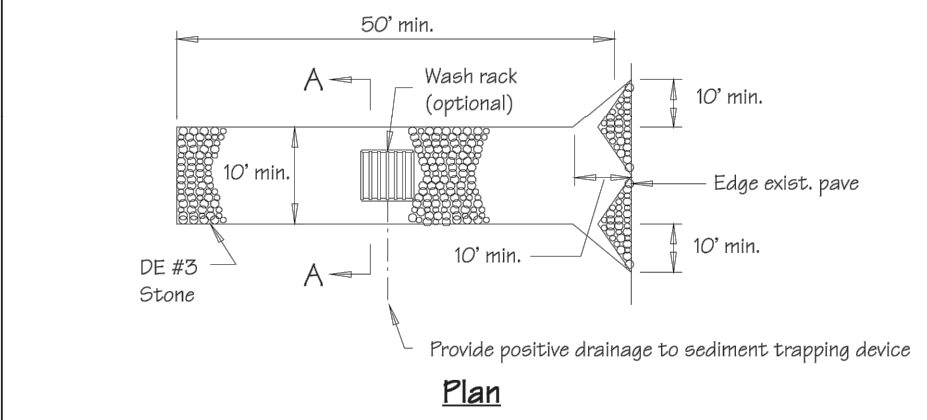
**Standard Detail & Specifications
Silt Fence**



Source:	Symbol:	Detail No.
Adapted from MD Sdks. & Specs. for ESC		DE-ESC-3.1.2.1 Sheet 1 of 2

Effective February 2019

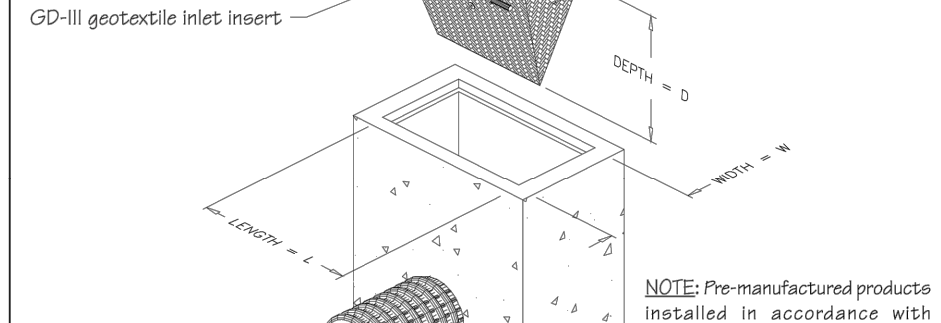
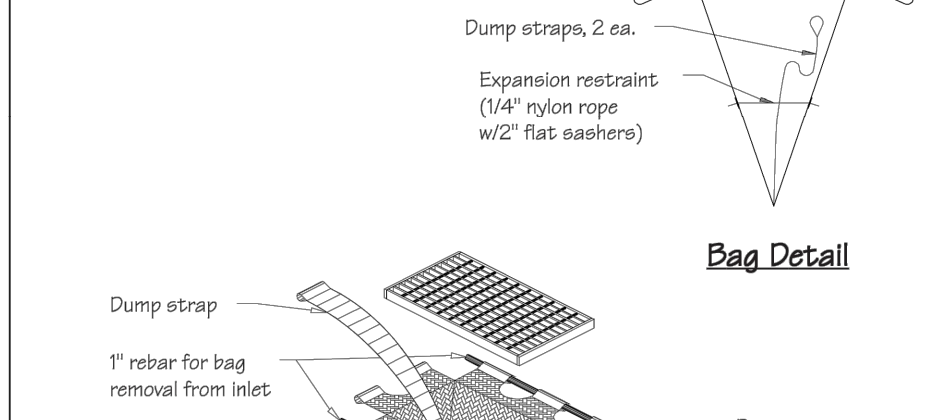
**Standard Detail & Specifications
Stabilized Construct. Entrance**



Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook		DE-ESC-3.4.7 Sheet 1 of 2

Effective February 2019

**Standard Detail & Specifications
Inlet Protection - Type 2**



Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.		DE-ESC-3.1.5.2 Sheet 1 of 2

Effective February 2019

**Standard Detail & Specifications
Vegetative Stabilization**



PERMANENT SEEDING AND SEEDING DATES (cont.)													
Mix No.	Certified Seed*	Seeding Rate ¹	Optimum Seeding Dates ²				Planting Depth ³	Notes	AP ⁴	Remarks			
			1	2	3	4							
1	Well Drained Soils	125	4	O	A	O	O	A	O	1-2 inches 2-2" sandy soils			
2	Heavy Loam	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
3	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
4	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
5	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
6	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
7	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
8	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
9	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
10	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
11	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
12	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
13	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
14	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			
15	Heavy Clay	30	0.8	A	O	A	O	A	O	0.5 inches 1.0" sandy soils			

1. When hydroseeding is the chosen method of application, the seed rate of seed should be increased to 20%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germinable percentage recommendations in the Delaware Department of Agriculture. The minimum % of weed seeds shall be in accordance with Section 7, Chapter 24, Title 3 of the Delaware Code.
4. A soil erosion/seeder may be used throughout summer if moisture is adequate or seedbed area can be irrigated.
5. An appropriate mulch shall be installed.
6. Warm season grasses such as Millet or Weeping Lovegrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate, and will require dormant soil treatments.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 3 of 4

Effective February 2019

**Standard Detail & Specifications
Vegetative Stabilization**



Construction Notes:

1. Site Preparation
 - a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
 - b. Final grading and shaping is not necessary for temporary seedings.
2. Seeded Preparation

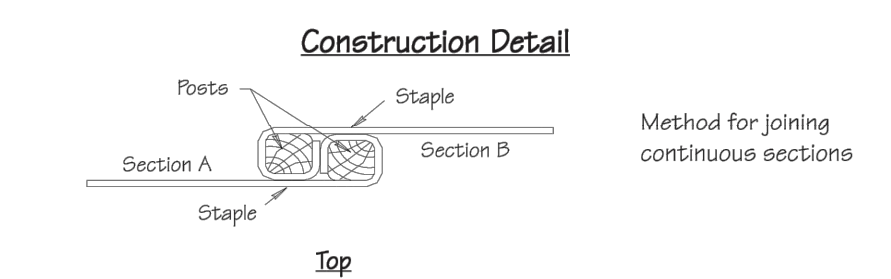
It is important to prepare a good seedbed to insure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
3. Soil Amendments
 - a. Lime- Apply liming materials based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply diatomic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
 - b. Fertilizer- Apply fertilizer based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soil.
4. Seeding
 - a. For temporary stabilization, select a mixture from Sheet 1. For a permanent stabilization, select a mixture from Sheet 2 or Sheet 3 depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
 - b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
 - c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
5. Mulching

All mulching shall be done in accordance with detail DE-ESC-3.4.5.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 4 of 4

Effective February 2019

**Standard Detail & Specifications
Silt Fence**



Construction Notes:

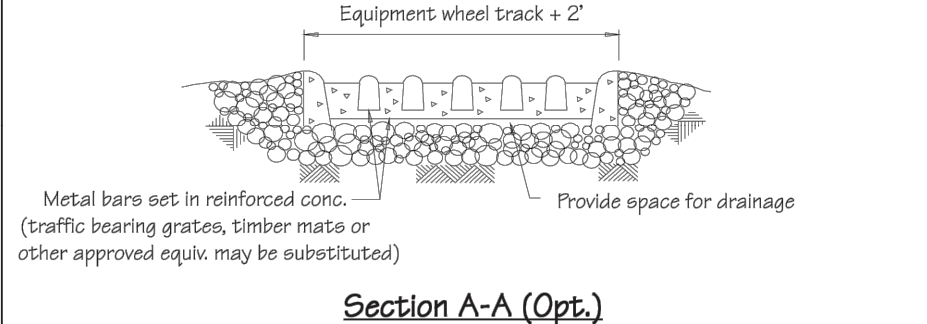
1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

- Materials:**
1. Staples: Steel leather T or U or 2" x 2" hardwood
 2. Geosynthetic fabric: Type GD-1
 3. Reinforcing strip: Wooden lath or plastic strip

Source:	Symbol:	Detail No.
Adapted from MD Sdks. & Specs. for ESC		DE-ESC-3.1.2.1 Sheet 2 of 2

Effective February 2019

**Standard Detail & Specifications
Stabilized Construct. Entrance**



- Construction Notes:**
1. Stone Size - Use DE #3 stone.
 2. Length- As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than size (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.
 5. Geotextile - Type GS-1 placed over the entire area prior to placing of stone.
 6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook		DE-ESC-3.4.7 Sheet 2 of 2

Effective February 2019

**Standard Detail & Specifications
Inlet Protection - Type 2**



- Notes:**
1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
 2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
 3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbent pillow or shall be made completely from an oil-absorbent material with a woven pillow.
- Materials:**
- The geotextile Inlet Insert shall meet or exceed the specifications of Type GD-11 geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.		DE-ESC-3.1.5.2 Sheet 2 of 2

Effective February 2019

SEDIMENT AND STORM WATER NOTES:

- 7.1 A PRE-CONSTRUCTION MEETING (UNLESS WAIVED BY NEW CASTLE COUNTY) MUST BE HELD PRIOR TO COMMENCING CONSTRUCTION. CONTACT NEW CASTLE COUNTY DEPARTMENT OF LAND USE VIA EMAIL: PERMITS@NCCDE.ORG TO SCHEDULE MEETING. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- 7.2 DNREC AND NEW CASTLE COUNTY (NCC) PERSONNEL SHALL HAVE THE RIGHT TO CONDUCT ON-SITE INSPECTIONS OF LAND DISTURBING ACTIVITIES.
- 7.3 ALL PRE-CONSTRUCTION CONTROLS MUST BE INSTALLED, STABILIZED, INSPECTED BY NCC PRIOR TO BULK GRADING, BUILDING PERMIT ISSUANCE, OR ANY UTILITY INSTALLATION ON NON-RESIDENTIAL PROJECTS. PRIOR TO THIS PRE-BULK INSPECTION NO DISTURBANCE MAY OCCUR ON-SITE OTHER THAN TO THOSE AREAS NECESSARY TO ESTABLISH THE PRE-CONSTRUCTION EROSION AND SEDIMENT CONTROLS. INSTALL THE PRE-CONSTRUCTION CONTROLS PURSUANT TO THIS PLAN. ALL PERIMETER SEDIMENT CONTROLS, INCLUDING SOIL STOCKPILES, SHALL BE VEGETATIVELY STABILIZED.
- 7.4 BULK GRADING OF ROADWAYS, INDIVIDUAL LOTS, SEWER AND STORM UTILITY INSTALLATION MUST BE COMPLETED, INSPECTED, AND APPROVED PRIOR TO ANY BUILDING PERMIT ISSUANCE, WITH THE EXCEPTION OF MODEL HOMES. PRIOR TO SCHEDULING THE POST-BULK INSPECTION, THE SITE MUST BE COMPLETELY STABILIZED AND FULLY COMPLIANT WITH THE LATEST APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- 7.5 NCC SHALL RELEASE (AFTER APPROVAL OF THE POST-BULK INSPECTION) BUILDING PERMITS FOR THOSE LOTS WHICH ARE NOT CONSTRAINED BY ANY TEMPORARY SEDIMENT CONTROL PRACTICES (WHICH PERFORM A NECESSARY FUNCTION FOR A PARTICULAR PHASE OF CONSTRUCTION) AND ON LOT EROSION AND SEDIMENT CONTROLS HAVE BEEN ESTABLISHED.

SEDIMENT AND STORM WATER NOTES:

- 7.6 AFTER THE POST-BULK INSPECTION, ADDITIONAL EROSION AND SEDIMENT CONTROLS WILL BE REQUIRED ON INDIVIDUAL LOTS UNDER CONSTRUCTION IN ORDER TO PREVENT SEDIMENT FROM ACCUMULATING ON ANY STREETS, IN STORM SEWERS OR DEVELOPED LOTS. THESE SHALL INCLUDE SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES FOR THOSE LOTS UNDER CONSTRUCTION AND ANY ADDITION CONTROLS AS DEEMED NECESSARY BY THE CCR OR NCC E&S INSPECTOR.
- 7.7 UNLESS OTHERWISE AUTHORIZED BY NCC, ALL WORK MUST BE DONE IN ACCORDANCE WITH THE LATEST APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER MANAGEMENT PRACTICES MAY BE REQUIRED AS DEEMED NECESSARY BY THE NEW CASTLE COUNTY DEPARTMENT OF LAND USE. IF NCC DETERMINES THE APPROVED PLAN TO BE DEFICIENT, THAT PLAN WILL BE VOIDED. THE SITE ISSUED A STOP WORK ORDER AND THE SUBMISSION OF A REVISED PLAN WILL BE REQUIRED FOR REVIEW AND APPROVAL BY NCC.
- 7.8 THE CCR IS RESPONSIBLE FOR INSPECTING THE CONSTRUCTION OF ANY PERMANENT STORMWATER MANAGEMENT FACILITY AND SUBMITTING AN APPROPRIATE INSPECTION CHECKLIST, SIGNED BY A P.E., FOR CERTIFICATION OF THAT WORK. IF THE SEQUENCE OF CONSTRUCTION CALLS FOR A PERMANENT STORMWATER MANAGEMENT FACILITY TO BE INSTALLED AS AN ELEMENT OF THE PERIMETER CONTROLS, THAT CHECKLIST AND STORMWATER AS-BUILT WILL BE REQUIRED PRIOR TO BUILDING PERMIT ISSUANCE.
- 7.9 ALL INSPECTION REPORTS FROM BOTH THE CCR AND THE COUNTY ENGINEER/INSPECTOR SHALL BE ELECTRONICALLY SUBMITTED WEEKLY TO ALL PARTIES INCLUDED ON THE CONSTRUCTION INFORMATION SHEET. THESE REPORTS SHALL INCLUDE A DATE BY WHICH ALL DEFICIENCIES MUST BE RESOLVED. FAILURE TO RESOLVE THE DEFICIENCIES INDICATED ON THE INSPECTION REPORT BY THE GIVEN DATE MAY RESULT IN ENFORCEMENT ACTION CONSIDERED APPROPRIATE BY THE DEPARTMENT.

SEDIMENT AND STORM WATER NOTES:

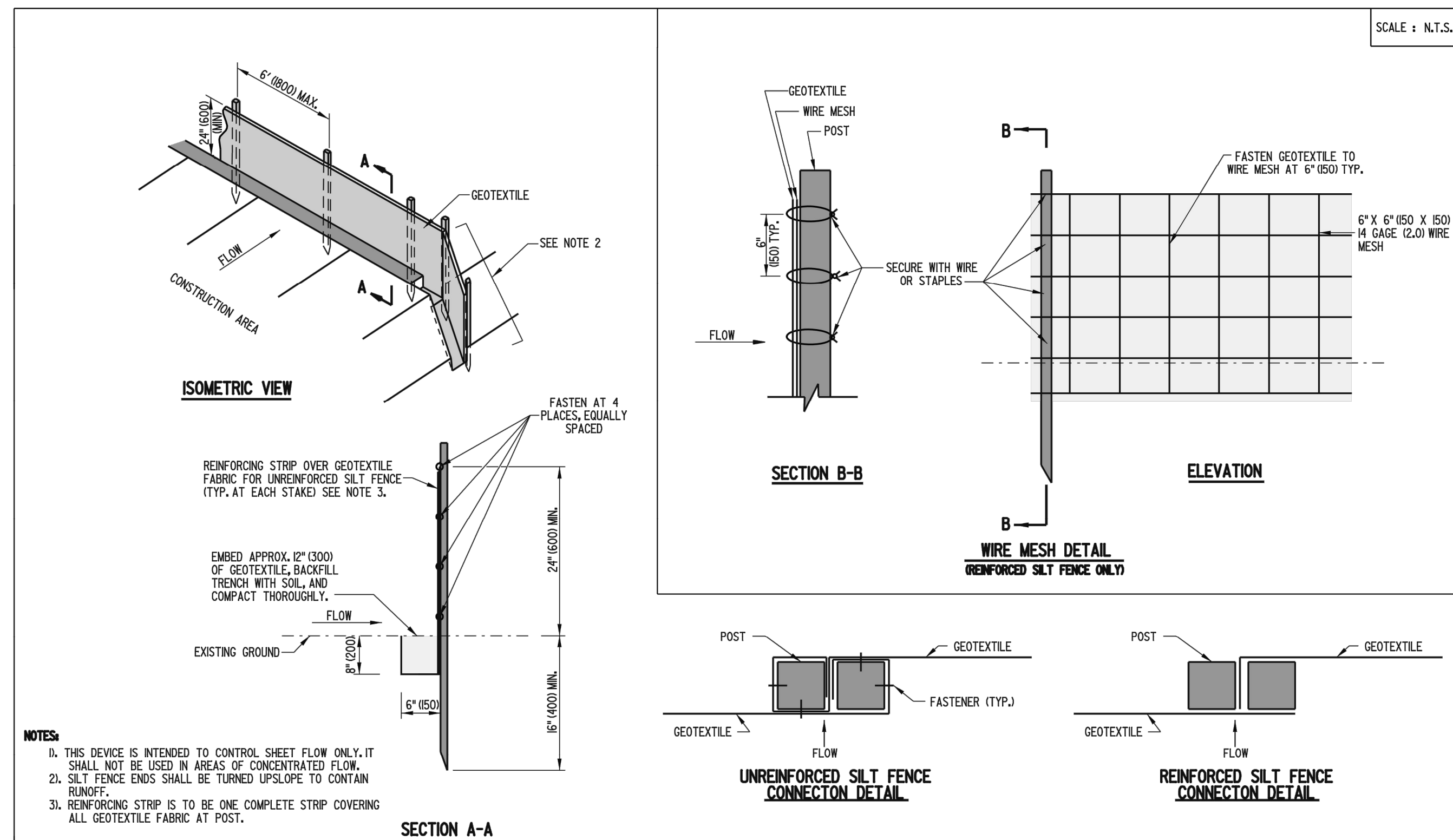
- 7.9 ALL INSPECTION REPORTS FROM BOTH THE CCR AND THE COUNTY ENGINEER/INSPECTOR SHALL BE ELECTRONICALLY SUBMITTED WEEKLY TO ALL PARTIES INCLUDED ON THE CONSTRUCTION INFORMATION SHEET. THESE REPORTS SHALL INCLUDE A DATE BY WHICH ALL DEFICIENCIES MUST BE RESOLVED. FAILURE TO RESOLVE THE DEFICIENCIES INDICATED ON THE INSPECTION REPORT BY THE GIVEN DATE MAY RESULT IN ENFORCEMENT ACTION CONSIDERED APPROPRIATE BY THE DEPARTMENT.
- 7.10 THE CCR AND NCC ENGINEER/E&S INSPECTOR MUST BE NOTIFIED 48 HOURS PRIOR TO ALL ELEMENTS OF SITE WORK WHICH REQUIRE INSPECTION. FAILURE TO PROVIDE THE APPROPRIATE NOTIFICATION MAY RESULT IN THE CONTRACTOR EXCAVATING SUFFICIENT MATERIAL TO VERIFY CONSTRUCTION IN ACCORDANCE WITH THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN. SHOULD ANY PART OF A STORMWATER MANAGEMENT BASIN EMBANKMENT NEED TO BE EXCAVATED THE ENTIRE EMBANKMENT MUST BE RECONSTRUCTED (IF APPLICABLE).
- 7.11 LIMITS OF DISTURBANCE MUST BE DELINEATED IN THE FIELD. TOTAL DISTURBED ACREAGE = AC. THE LIMITS OF DISTURBANCE SHALL BE CLEARLY DEFINED AT ALL TIMES DURING CONSTRUCTION. (BREAK DOWN PER PHASE(S), IF APPLICABLE).
- 7.12 EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAINFALL. MAINTENANCE MUST BE PERFORMED AFTER EACH INSPECTION AS NECESSARY. ANY ERODED AREAS SHALL BE STABILIZED AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF ACCORDING TO PLAN.
- 7.13 SHOULD QUESTIONS ARISE REGARDING THE MAINTENANCE OF EROSION AND SEDIMENT CONTROL PRACTICES, THE SITE CONTRACTOR SHALL CONTACT THE CONSULTING ENGINEER EXPEDITIOUSLY FOR TECHNICAL ASSISTANCE.

SEDIMENT AND STORM WATER NOTES:

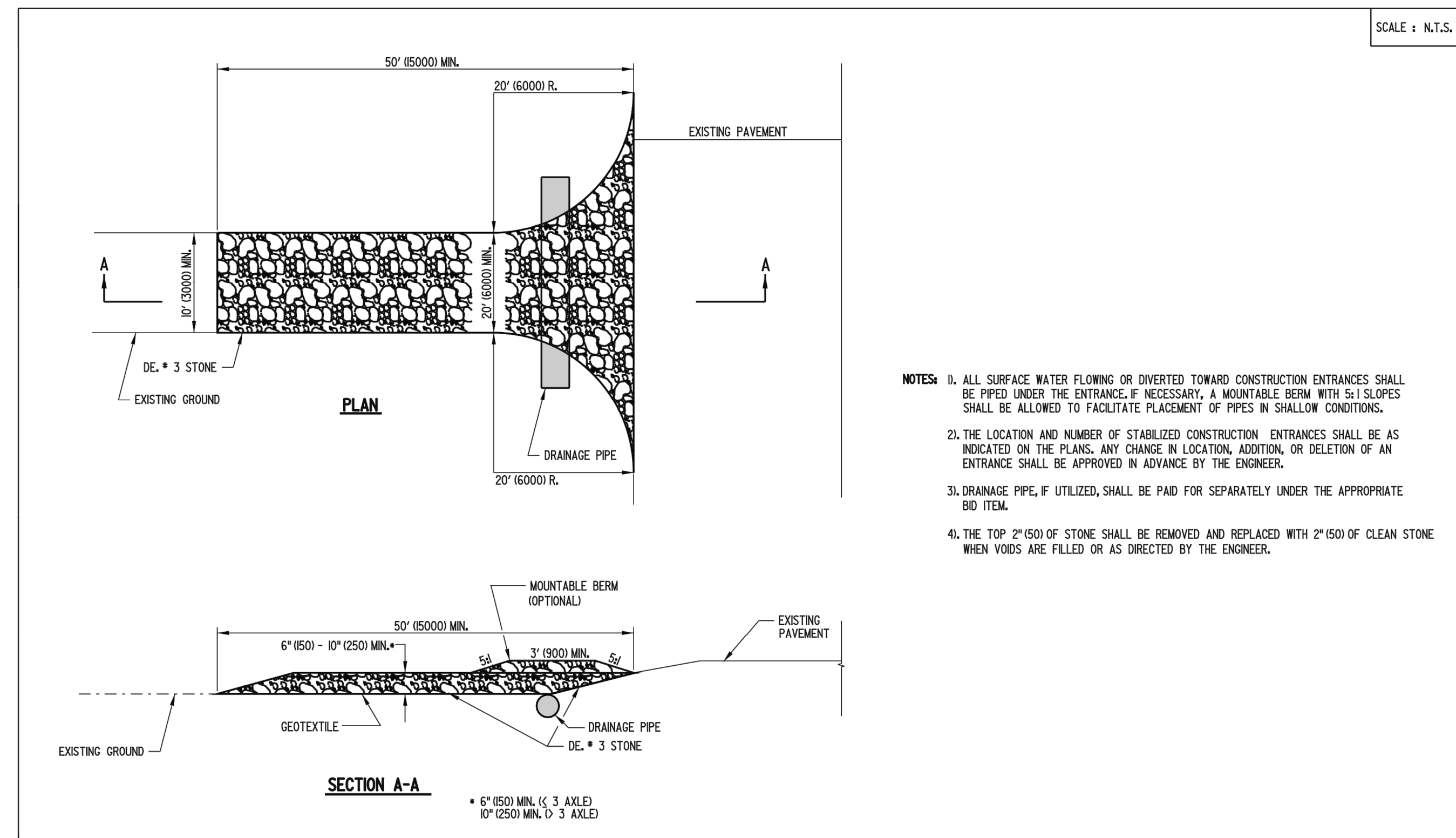
- 7.14 UPON RECEIPT OF TWO CONSECUTIVE UNSATISFACTORY CCR AND/OR NCC EROSION AND SEDIMENT CONTROL INSPECTION REPORTS, THE SITE MAY BE ISSUED A STOP WORK ORDER AND A SHOW CAUSE HEARING SCHEDULED.
- 7.15 THE APPROVED S&S PLAN INCORPORATES POLLUTION PREVENTION PRACTICES LISTED UNDER STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION SITE POLLUTION PREVENTION IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, DATED DECEMBER 2005 AND ITS REVISIONS.
- 7.16 NCC SHALL NOT RELEASE BUILDING PERMITS FOR THOSE LOTS WHICH ARE CONSTRAINED BY ANY TEMPORARY SEDIMENT CONTROL PRACTICES (I.E. SEDIMENT TRAPS) AND ON WHICH EROSION AND SEDIMENT CONTROLS HAVE NOT BEEN ESTABLISHED.



664 Churchmans Road



DELAWARE DEPARTMENT OF TRANSPORTATION	SILT FENCE		APPROVED	DATE
	STANDARD NO. E-2 (2006)	SHT. 1 OF 1	RECOMMENDED	DATE



DELAWARE DEPARTMENT OF TRANSPORTATION	STABILIZED CONSTRUCTION ENTRANCE		APPROVED	DATE
	STANDARD NO. E-21 (2005)	SHT. 1 OF 1	RECOMMENDED	DATE

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DATA TO BE PROVIDED:
Volume of Potential Pollution
Height of containment
Area of containment
Volume of containment

Source: Delaware ESC Handbook
Symbol:
Detail No. DE-ESC-3.6.1 Sheet 1 of 5
Effective February 2019

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

Pollution Prevention - Spill Prevention

- Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
- Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
- Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-on and runoff.
- Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
- Place a "Fueling Area" sign next to each fueling area.
- Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
- Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
- Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
- If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

- If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- Do not bury spills or wash them down with water.

LEAKS AND DRIPS

- Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- Have spill kits and clean up material on-site.
- Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
- Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
- Clean up oil spills and leaks. Promptly dispose of waste and spent clean up materials.

Source: Delaware ESC Handbook
Symbol:
Detail No. DE-ESC-3.6.1 Sheet 2 of 5
Effective February 2019

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

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

- Material Inventory**
Document the storage and use of the following materials:
 - Concrete
 - Detergents
 - Paints (enamel and latex)
 - Cleaning solvents
 - Pesticides
 - Wood scraps
 - Fertilizers
 - Petroleum based products
- Good housekeeping practices**
 - Store only enough product required to do the job.
 - All materials shall be stored in a neat, orderly manner in their original labeled containers and covered.
 - Substances shall not be mixed.
 - When possible, all of a product shall be used up prior to disposal of the container.
 - Manufacturers' instructions for disposal shall be strictly adhered to.
 - The site foreman shall designate someone to inspect all BMPs daily.
- Waste management practices**
 - All waste materials shall be collected and stored in securely lidded dumpsters in a location that does not drain to a waterbody.
 - Waste materials shall be salvaged and/or recycled whenever possible.
 - The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. DE-ESC-3.6.1 Sheet 3 of 5
Effective February 2019

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Trash shall be disposed of in accordance with all applicable Delaware laws.
- Trash cans shall be placed at all lunch spots and littering is strictly prohibited. Recycle bins shall be placed near the construction trailer.
- If fertilizer bags can not be stored in a weather-proof location, they shall be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.

- Equipment maintenance practices**
 - If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
 - If performed on-site, vehicles shall be washed with high-pressure water spray without detergents in an area contained by an impervious berm.
 - Drip pans shall be used for all equipment maintenance.
 - Equipment shall be inspected for leaks on a daily basis.
 - Washout from concrete trucks shall be disposed of in a temporary pit for hardening and proper disposal.
 - Fuel nozzles shall be equipped with automatic shut-off valves.
 - All used products such as oil, antifreeze, solvents and tires shall be disposed of in accordance with manufacturers' recommendations and local, state and federal laws and regulations.
- Spill prevention practices**
 - Potential spill areas shall be identified and contained in covered areas with no connection to the storm drain system.
 - Warning signs shall be posted in hazardous material storage areas.
 - Preventive maintenance shall be performed on all tanks, valves, pumps, pipes and other equipment as necessary.
 - Low or non-toxic substances shall be prioritized for use.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. DE-ESC-3.6.1 Sheet 4 of 5
Effective February 2019

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Contact information for reporting spills through the DNREC 24-Hour Toll Free Number shall be prominently posted.

- Education**
 - Best management practices for construction site pollution control shall be a part of regular progress meetings.
 - Information regarding waste management, equipment maintenance and spill prevention shall be prominently posted in the construction trailer.

CONTACT INFORMATION

DNREC 24-Hour Toll Free Number 800-662-8802
DNREC Solid & Hazardous Waste Management Section 302-739-9403

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. DE-ESC-3.6.1 Sheet 5 of 5
Effective February 2019



664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5800

14701 Coastal Highway
Milton, Delaware 19968
Phone: (302) 453-6900 Fax: (302) 645-8233

REVISIONS		

Date:	2/11/21	Checked By:	AG, DK	Sheet:	ES-2
Scale:	NTS	Page & Grid:		Hundred:	ST. GEORGES
Drawn By:	KEG	CAD File:	DETAILS-E&S.DWG	Budget No.	3003949

EROSION & SEDIMENT CONTROL NOTES AND DETAILS
DELAWARE CITY INTERCONNECTION

NEW CASTLE COUNTY STATE OF DELAWARE