PUBLIC NOTICE

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

TITLE: Borough of Avalon – Stormwater Outfall Improvements within the Townsends Inlet Seawall at the Townsends Inlet to Cape May Inlet Coastal Storm Risk Management Federal Civil Works Project, Cape May County, New Jersey

PUBLIC NOTICE IDENTIFICATION NUMBER: NAP-2023-00029-95

PUBLIC NOTICE COMMENT PERIOD:

Begins: **06 January 2023**

Expires: **06 February 2023**

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 Borough of Avalon has requested permission to construct stormwater outfall improvements within the Townsends Inlet seawall at the Townsends Inlet to Cape May Inlet Coastal Storm Risk Management Federal Civil Works Project in Cape May County, New Jersey.

2. LOCATION: The proposed project is located at Townsends Inlet at the corner of Avalon Avenue and 8th Street West in the Borough of Avalon, Cape May County, New Jersey; coordinates 39.108247, -74.706975.

3. LOCATION MAP(S)/DRAWING(S): Please see attached Project Plan Sheets 1 through 15.

4. REQUESTER'S PROPOSED ACTION: The proposed action entails the permanent removal of one (1) existing 18.0-inch diameter stormwater outfall pipe, installation of one (1) new 42.0-inch diameter outfall pipe in its place, and abandonment-in-place of one (1)

existing 12.0-inch diameter outfall pipe with flowable fill. The proposed work will require disassembly and reassembly of a portion of the Townsends Inlet seawall.

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
100 South Independence Mall West, 2nd Floor
Philadelphia, PA 19106-3400

BOROUGH OF AVALON
CAPE MAY COUNTY, NEW JERSEY

AVALON AVENUE DRAINAGE IMPROVEMENTS

CONTRACT NO. M-XXX

DECEMBER 2022

MAYOR

MARTIN L. PAGLIUGHI

BOROUGH COUNCIL

BARBARA JUZAITIS, PRESIDENT

SAM WIERMAN, VICE PRESIDENT

JOHN McCORRISTIN

MARI COSKEY

JAMIE McDERMOTT

BOROUGH ADMINISTRATOR

SCOTT J. WAHL

BOROUGH CLERK

DANIELLE NOLLETT, RMC/CMR

LOCATION MAP
No Scale

PUBLIC UTILITIES

SANITARY SEWER & WATER	UTILITY SERVICE AFFILIATES 1401 DUNE DRIVE AVALON, NJ 08202 732.754.0285 – BUSINESS HOURS 609.602.5443 – AFTER HOURS CAPE MAY COUNTY M.U.A. P.O. BOX 610 CAPE MAY COURT HOUSE, NJ 08210 609.465.9026 ATTN: THOMAS J. LAROCCO, P.E.
GAS	SOUTH JERSEY GAS COMPANY 1708 ROUTE 9 NORTH CAPE MAY COURT HOUSE, NJ 08210 609.465.2900 ATTN: WILLIAM WENGERT
ELECTRIC	ATLANTIC CITY ELECTRIC COMPANY 420 ROUTE 9 NORTH CAPE MAY COURT HOUSE, NJ 08210 609.463.3817 ATTN: THOMAS C. RINCK
TELEPHONE	VERIZON ENGINEERING DEPARTMENT 10 TANSBORO ROAD FLOOR 2 BERLIN, NJ 08009 609.407.5115 ATTN: ELLIOT BATTERMAN
CABLE TV	COMCAST CABLE SERVICES 609.677.7332 ATTN: BOB MAYEUX
CAPE MAY COUNTY ROADS	CAPE MAY COUNTY DEPARTMENT OF PUBLIC WORKS 4 MOORE ROAD CAPE MAY COURT HOUSE, NJ 08210 609.465.1035 ATTN: ROBERT CHURCH, P.E.

INDEX OF DRAWINGS

B/O	SHEET	DESCRIPTION	DATE	REVISED
1	G-001	TITLE SHEET, DRAWING SHEET INDEX AND PUBLIC UTILITIES	12-01-22	
2	G-002	LEGEND, GENERAL NOTES AND ESTIMATE OF QUANTITIES	12-01-22	
3	C-101	SANITARY SEWER PLAN & PROFILE (1 OF 3)	12-01-22	
4	C-102	SANITARY SEWER PLAN & PROFILE (2 OF 3)	12-01-22	
5	C-103	SANITARY SEWER PLAN & PROFILE (3 OF 3)	12-01-22	
6	C-104	STORM SEWER AND WATER PLAN & PROFILE (1 OF 3)	12-01-22	
7	C-105	STORM SEWER AND WATER PLAN & PROFILE (2 OF 3)	12-01-22	
8	C-106	STORM SEWER AND WATER PLAN & PROFILE (3 OF 3)	12-01-22	
9	C-107	STORM SEWER BRANCH PROFILES	12-01-22	
10	D-101	CONSTRUCTION DETAILS	12-01-22	
11	D-102	CONSTRUCTION DETAILS	12-01-22	
12	D-103	CONSTRUCTION DETAILS	12-01-22	
13	D-104	CONSTRUCTION DETAILS	12-01-22	
14	D-105	CONSTRUCTION DETAILS	12-01-22	
15	SESC-101	SOIL EROSION AND SEDIMENT CONTROL DETAILS AND NOTES	12-01-22	

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LEGEND

⊗	SURVEY BENCHMARK	▭	PROP. "A" INLET
⊡	SURVEY MONUMENT	Ⓓ	PROP. STORM SEWER MANHOLE
▭	EX "A" INLET	Ⓢ	PROP. SANITARY SEWER MANHOLE
Ⓓ	EX STORM SEWER MANHOLE	O_{SO}	PROP. SANITARY CLEAN OUT
O_{SO}	EX SANITARY CLEAN OUT	■	PROP. PIPE COUPLING
Ⓢ	EX SANITARY MANHOLE	⟶	PROP. FLOW DIRECTION
$\times^{O}$	EX GAS SERVICE MARKOUT	——S——	PROP. SANITARY SEWER MAIN
O_{GV}	EX GAS VALVE	——	PROP. SANITARY SEWER LATERAL
	EX FIRE HYDRANT	⊢⊣	PROP. UTILITY BYPASS
O_{WM}	EX WATER METER	▭	PROP. STORM SEWER PIPE
●	EX WATER SERVICE VALVE		
⋈	EX WATER VALVE		
◇	EX UTILITY POLE		
	EX GUY WIRE		
——S——	EX. SEWER MAIN		
——W——	EX. WATER MAIN		
——G——	EX. GAS MAIN		
- - - - - -	EX. STORM PIPE		
——E——	EX. ELECTRIC CROSSING		
——C——	EX. COMCAST CROSSING		
——	EX. SEWER LATERAL		
——W——	EX. WATER SERVICE		
	EX. SIDEWALK		
	EX. CURB		
	EX. DRIVEWAY		
	EX. GUTTER		

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON THE DRAWINGS ARE BASED UPON NAVD 1988 UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT IN AN APPROVED MANNER ALL EXISTING THRUST BLOCKS WHICH ARE RESTRAINING EXISTING UTILITIES. EXISTING THRUST BLOCKS SHALL NOT BE UNDERMINED.
3. THE CONTRACTOR SHALL ADEQUATELY PROTECT ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGE TO EXISTING STRUCTURES OR UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ALL COSTS FOR REPAIRS SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "UNDERGROUND FACILITY PROTECTION ACT" (P.L. 1994 CH. 118) AND PROVIDE THE ENGINEER WITH THE NOTIFICATION CONFIRMATION NUMBER PRIOR TO ANY EXCAVATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY MARKOUTS AND FORWARDING CONFIRMATION NUMBERS TO THE OWNER AND ENGINEER.
5. AVAILABLE INFORMATION AS TO THE LOCATION OF EXISTING SUBSTRUCTURES AND UTILITIES HAS BEEN COLLECTED FROM VARIOUS SOURCES. THE RESULTS OF SUCH INVESTIGATIONS AS MAY BE SHOWN ON THE CONTRACT DRAWINGS, ARE NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. ALL EXISTING UTILITIES ARE SHOWN FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL DIG TEST PITS TO VERIFY TRUE AND EXACT LOCATIONS OF UNDERGROUND LINES, AS HE DEEMS NECESSARY TO COMPLETE THE CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY AND ALL NECESSARY PERMITS FROM THE AFFECTED UTILITY COMPANIES AND FOR SCHEDULING OF INSPECTIONS BY UTILITY COMPANY PERSONNEL, IF REQUIRED, DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ROAD OPENING PERMITS FROM THE MUNICIPALITY AND/OR COUNTY AND COMPLY WITH THE REQUIREMENTS OF THE MUNICIPALITY AND/OR COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL BOROUGH CONSTRUCTION AND DEMOLITION PERMITS, IF REQUIRED, AND FOR SCHEDULING OF INSPECTIONS WITH THE BOROUGH CONSTRUCTION OFFICE DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE AND FEDERAL LAWS, ORDINANCES, ETC. IN THE EXECUTION OF THIS WORK.
9. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS OF THE "HIGH VOLTAGE PROXIMITY ACT". EXCAVATIONS OR TRENCHING WITHIN CLOSE PROXIMITY TO UNDERGROUND FACILITIES OR UTILITY POLES WILL REQUIRE PROTECTION IN AN APPROVED MANNER TO PREVENT DAMAGE OR INTERRUPTION OF SERVICE TO OVERHEAD OR UNDERGROUND FACILITIES. THE COST TO PROVIDE THIS PROTECTION WILL BE BORNE BY THE CONTRACTOR.
10. PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE, AND CERTIFICATES OF INSURANCE (FOR GENERAL AND SUBCONTRACTORS) TO THE OWNER AND ENGINEER FOR APPROVAL.
11. ALL EXCESS RECYCLABLE DEMOLITION MATERIAL SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED RECYCLING FACILITY AT NO ADDITIONAL COST TO THE OWNER.
12. ALL RUN-OFF SHALL BE SCREENED BY APPROPRIATE SILT FENCING, HAY BALES, ETC., IN ACCORDANCE WITH SOIL EROSION PLANS TO PREVENT DISRUPTION OF MUNICIPAL FACILITIES AND STREETS.
13. THE CONTRACTOR IS ADVISED THAT ALL MUNICIPAL PUBLIC NUISANCE LAWS AND NOISE ORDINANCES SHALL BE OBSERVED DURING THE COURSE OF CONSTRUCTION.
14. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN APPROPRIATE SIGNAGE FOR TRAFFIC CONTROL AND PEDESTRIAN SAFETY DURING CONSTRUCTION.
15. CONTRACTOR ACKNOWLEDGES THAT HE HAS UNDERTAKEN WHATEVER PRE-BID INVESTIGATIONS HE DEEMS NECESSARY TO ASCERTAIN THE COMPOSITION, SIZE, SHAPE, LOCATION, AND DEPTH OF MATERIALS THAT WILL BE DEMOLISHED AND REMOVED THAT PRESENTLY EXIST ABOVE OR BELOW GRADE, WITHIN THE LIMIT OF CONSTRUCTION.
16. WITHIN THE LIMIT OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE, REPLACE, RESET EXISTING VALVE BOX COVERS AND CASTINGS AS REQUIRED AND DIRECTED BY THE ENGINEER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING THE CONSTRUCTION PERIOD.
18. TIME IS OF THE ESSENCE FOR FINAL COMPLETION OF ALL WORK WITHIN THE TIME LIMIT ESTABLISHED AND FOR INTERMEDIATE COMPLETION OF THE WORK COVERED BY THE INTERMEDIATE TIMES ESTABLISHED IN SECTION 0.21 - "TIME LIMIT" OF THE INFORMATION FOR BIDDERS SECTION OF THE CONTRACT DOCUMENTS.
19. THE CONTRACTOR SHALL MAINTAIN THE FLOW OF ALL STREAMS, DRAINAGE DITCHES, STORM SEWERS AND SANITARY SEWERS AT ALL TIMES BY A MEANS ACCEPTABLE TO THE ENGINEER AND ALL RESPONSIBLE AGENCIES.
20. ALL AREAS ADJACENT TO NEWLY INSTALLED CONCRETE CURBING, SIDEWALK, ETC. SHALL BE BACKFILLED TO FINISHED GRADE PRIOR TO THE END OF THE DAY TO ELIMINATE ANY POTENTIAL HAZARDS. ALL AREAS OF DISTURBANCE SHALL BE GRADED SO AS TO ELIMINATE ANY MOUNDS AND/OR DEPRESSIONS PRIOR TO THE END OF EACH DAY TO ELIMINATE ANY POTENTIAL HAZARDS.
21. ALL SHOP DRAWINGS, MATERIALS AND EQUIPMENT TO BE INSTALLED AND ALL OTHER REQUIRED SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
22. CONTRACTOR SHALL REPLACE ALL LANDSCAPE STONE IN AREAS REQUIRED TO BE DISTURBED OR DESTROYED DURING CONSTRUCTION OF CONCRETE VERTICAL CURB, CONCRETE GUTTER, CONCRETE SIDEWALK, AND CONCRETE DRIVEWAY APRONS WITH LANDSCAPE STONE OF SAME SIZE, SHAPE, DEPTH, TEXTURE AND COLOR. CONTRACTOR SHALL NOT BE COMPENSATED FOR REPLACEMENT OF LANDSCAPE STONE DISTURBED OR DESTROYED OUTSIDE OF THOSE AREAS WHERE DISTURBANCE OF EXISTING STONE IS NECESSARY.
23. THE CONTRACTOR OR HIS REPRESENTATIVE IS TO DESIGNATE AN INDIVIDUAL FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21(E) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE AND C.F.R. 1926.32(F) (OSHA COMPETENT PERSON).
24. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES, FLOW AND PRESSURES UNLESS WRITTEN APPROVAL BY THE RESPONSIBLE UTILITY PERMITS HIM TO DO OTHERWISE.
25. ALL WORK WHICH MAY HAVE AN INFLUENCE, OR EFFECT THE OPERATIONS OF THE UTILITY FACILITIES SHALL BE SCHEDULED IN CONJUNCTION WITH THE UTILITY SUPERINTENDENT AND THE CONTRACTOR SHALL COOPERATE AT ALL TIMES TO MAINTAIN SATISFACTORY OPERATION OF THE UTILITIES.
26. PRIOR TO ANY CONNECTION TO EXISTING FACILITIES, THE CONTRACTOR SHALL NOTIFY THE OWNER. ALL CONNECTIONS TO EXISTING FACILITIES WILL BE DONE AT THE CONVENIENCE OF THE OWNER.
27. EXCAVATIONS OR TRENCHING WITHIN CLOSE PROXIMITY TO UNDERGROUND FACILITIES OR UTILITY POLES WILL REQUIRE PROTECTION IN AN APPROVED MANNER TO PREVENT DAMAGE OR INTERRUPTION OF SERVICE TO UNDERGROUND FACILITIES. THE COST TO PROVIDE THIS PROTECTION WILL BE BORNE BY THE CONTRACTOR.
28. THE CONTRACTOR SHALL BROOM SWEEP STREETS, USE APPROVED METHOD TO CONTROL DUST AND HOSE DOWN THE PAVEMENT TO KEEP SURFACE CLEAN.
29. DETOURING OF TRAFFIC, IN ACCORDANCE WITH THE TRAFFIC CONTROL PLAN, SHALL BE COORDINATED WITH LOCAL OFFICIALS (FIRE, POLICE, FIRST AID, BOARD OF EDUCATION BUS COORDINATOR, ETC.) REFER TO SPECIFICATIONS AND TRAFFIC CONTROL PLAN FOR SPECIFIC REQUIREMENTS.
30. ALL TRENCHES SHALL BE BACKFILLED WITHOUT DELAY. OPEN TRENCHES SHALL BE KEPT TO A MINIMUM. OPEN TRENCHES SHALL BE STEEL PLATED WHEN WORK IS NOT IN PROGRESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL UTILITY TRENCHES FOR SAFETY AND RIDEABILITY THROUGHOUT THE COURSE OF THE PROJECT.
31. UNLESS OTHERWISE PERMITTED, NO WORK SHALL BE DONE BETWEEN THE HOURS OF 6:00 PM AND 7:00 AM PREVAILING TIME; NO EQUIPMENT SHALL BE STARTED PRIOR TO 7:30 AM, PREVAILING TIME. IF IT SHALL BECOME ABSOLUTELY NECESSARY TO PERFORM WORK AT NIGHT, THE ENGINEER SHALL BE INFORMED IN ADVANCE. GOOD LIGHTING AND ALL OTHER NECESSARY FACILITIES FOR PROPER CARRYING OUT AND INSPECTING THE WORK SHALL BE PROVIDED.
32. PAVING LIMITS SHALL BE SAW-CUT. VERTICAL FACES OF SAW-CUT SHALL BE MAINTAINED IN GOOD CONDITION DURING THE PERIOD OF TIME PRIOR TO APPLICATION OF SURFACE COURSE, IN ORDER TO PROVIDE A CLEAN, SMOOTH JOINT WHEN SURFACE COURSE IS APPLIED. ALL NEW TO EXISTING PAVEMENT CONNECTIONS SHALL INCLUDE THE LIBERAL APPLICATION OF AN APPROVED BINDING AGENT AT THE JOINT AREA.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE AREAS OF DISTURBANCE TO THEIR ORIGINAL CONDITIONS. MATERIALS AND EQUIPMENT NEEDED TO BE PAID FOR ITEM FOR SITE RESTORATION.
34. ACCESS TO THE SITE IS AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL MAINTAIN THIS ACCESS IN A NEAT MANNER AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT A PLAN OF THE STORAGE AREA LAYOUT TO THE BOROUGH ENGINEER FOR APPROVAL.
35. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING OR WORK WITH THE PREVAILING TIDE FOR THE CONSTRUCTION SITE AS REQUIRED TO PROPERLY CONSTRUCT ALL IMPROVEMENTS IN THE DRY WITH THE EXCEPTION OF SEAWALL RECONSTRUCTION WORK BELOW THE MLLWL.
36. ALL CONSTRUCTION SHALL BE WITHIN PROJECT LIMITS. CONSTRUCTION ACTIVITY, STORAGE, STOCKPILING AND ACCESS SHALL NOT TAKE PLACE ON PRIVATE PROPERTY UNLESS SUCH ARRANGEMENTS HAVE BEEN MADE BY CONTRACTOR AND WRITTEN PROOF OF AGREEMENTS ARE PROVIDED TO THE OWNER.
37. THE CONTRACTOR SHALL CONDUCT WORK OPERATIONS AS TO MINIMIZE DISTURBANCE OF AREAS OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS. DAMAGE TO PROPERTY BEYOND THE CONSTRUCTION LIMITS, WHICH OCCURS AS A RESULT OF THE CONTRACTOR'S OPERATIONS, WILL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO ORIGINAL CONDITIONS.
38. BIDDERS ARE EXPECTED TO READ AND BECOME FAMILIAR WITH THE CONTRACT DOCUMENTS, INCLUDING ALL ADDENDA; TO VISIT THE SITE OF THE WORK; TO MAKE THEIR OWN ESTIMATES OF THE PLANT, LABOR, MATERIAL, EQUIPMENT, FACILITIES AND SERVICES NEEDED TO PERFORM THE WORK; TO MAKE ANY REQUIRED TESTS AND INSPECTIONS AND TO EVALUATE THE DIFFICULTIES ATTENDING THE EXECUTION OF THE PROPOSED CONTRACT, INCLUDING LOCAL CONDITIONS, SITE CONDITIONS, LOCATION AND AVAILABILITY OF UTILITIES, LABOR, TRANSPORTATION AND UNCERTAINTIES OF WEATHER, TIDES, SUBSURFACE CONDITIONS AND OTHER CONTINGENCIES.
39. CONTRACTOR ACKNOWLEDGES THAT HE HAS UNDERTAKEN WHATEVER PRE-BID INVESTIGATIONS HE DEEMS NECESSARY TO ASCERTAIN THE COMPOSITION, SIZE, SHAPE, LOCATION, AND DEPTH OF MATERIALS THAT WILL BE UTILIZED IN THE PROJECT THAT PRESENTLY EXIST ABOVE OR BELOW THE WATER LINE, WITHIN THE LIMIT OF CONSTRUCTION.
40. CONTRACTOR IS ADVISED THAT VARIOUS FEATURES AND COMPONENTS OF THE EXISTING STRUCTURES AND WORK TO BE COMPLETED ARE INFLUENCED BY TIDAL CONDITIONS AND HE MUST COORDINATE HIS ACTIVITIES IN A COORDINATED MANNER TO PROPERLY EFFECT HIS WORK AND REQUIRED OWNERS INSPECTIONS.
41. THE CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS AND SHALL BE RESPONSIBLE FOR ALL CHARGES AND FEES OTHER THAN NJDEP AND USACE PERMITS; AS WELL AS GIVE NOTICES NECESSARY FOR ALL INCIDENTALS FOR THE PROJECT UNLESS OTHERWISE EXCLUDED IN THE CONTRACT SPECIFICATIONS.
42. THE CONTRACTOR SHALL CONDUCT DEMOLITION AND CONSTRUCTION WORK IN A MANNER TO PRECLUDE THE RELEASE OF MATERIALS, FUELS AND DEBRIS INTO THE WATERS ADJACENT TO THE WORK.
43. EXISTING USACE SEAWALL CONTOURS ARE BASED ON A SURVEY PERFORMED IN NOVEMBER 2016. CONTRACTOR SHALL BE ADVISED THAT THE GRADES AND MHW LINE ESTABLISHED AT THAT TIME ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE DUE TO THE DYNAMIC NATURE OF THE COASTAL ZONE. CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BID TO ASSESS EXACT CONDITIONS AT TIME OF BID. ALL ELEVATIONS ARE REFERENCED AT NAVD 1988.
44. THE PROJECT SITE AND STAGING AREA MUST BE RETURNED TO ITS PRE-EXISTING CONDITIONS AFTER COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED BY THE PROJECT OWNER. THE CONTRACTOR SHALL ANTICIPATE THE COSTS TO REMOVE ANY WASTE OR DEBRIS CREATED AS A RESULT OF CONSTRUCTION ACTIVITIES FROM THE SITE WITHIN HIS RESTORATION AND CLEANUP ESTIMATE. MATERIAL MUST BE PROPERLY DISPOSED OF AT AN APPROVED LOCATION OR LANDFILL. THE CONTRACTOR SHALL CONTACT THE PROJECT OWNER TO SCHEDULE FINAL INSPECTION BEFORE DEMOBILIZATION.
45. CONTRACTOR MAY CONSIDER CONSTRUCTION FROM EITHER LAND, SEA OR BOTH. ANTICIPATED CONSTRUCTION MEANS AND METHODS SHOULD BE REFLECTED IN HIS UNIT AND LUMP SUM BID PRICES. LOCATIONS OF VESSELS OR BARGES UTILIZED FOR CONSTRUCTION SHALL BE COORDINATED AND APPROVED BY THE COAST GUARD TO ASSURE SAFE NAVIGATION IN WATERS ADJACENT TO THE SITE.
46. CONTRACTOR IS RESPONSIBLE FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
47. REUSED OR REHANDLED STONE SHOULD BE STOCKPILED ACCORDING TO SIZE.
48. RIGHT OF WAY LINES AND PROPERTY LINES ARE APPROXIMATE AND HAVE BEEN SHOWN UTILIZING FOUND MONUMENTS AND TAX MAP INFORMATION ONLY.
49. NJDOT STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION TO GOVERN. NJDOT STANDARD CONSTRUCTION DETAILS TO GOVERN OVER ALL MATERIALS, EQUIPMENT AND PROCEDURES.
50. GAS MAIN INFORMATION AS SHOWN ON THE PLANS IS BASED ON UTILITY MARKOUTS WHICH WERE PRESENT DURING FIELD SURVEYS CONDUCTED BY MOTT MACDONALD IN OCTOBER 2021 AS WELL AS MARKUPS PROVIDED BY SOUTH JERSEY GAS IN DECEMBER 2021 .
51. WATER MAIN INFORMATION AS SHOWN ON THE PLANS IS BASED ON UTILITY MARKOUTS WHICH WERE PRESENT DURING FIELD SURVEYS CONDUCTED BY MOTT MACDONALD IN OCTOBER 2021 AS WELL AS BOROUGH OF AVALON GIS INFORMATION.
52. STORM SEWER INFORMATION AS SHOWN ON THE PLANS IS BASED UPON A LIMITED FIELD SURVEY CONDUCTED BY MOTT MACDONALD IN OCTOBER & FEBRUARY 2022.
53. SANITARY SEWER INFORMATION AS SHOWN ON THE PLANS IS BASED UPON A FIELD SURVEY CONDUCTED BY MOTT MACDONALD IN NOVEMBER 2021.
54. THIS PLAN IS BASED UPON A FIELD SURVEY CONDUCTED ON OCTOBER 16, 2021 BY MOTT MACDONALD. SUPPLEMENTAL SURVEY INFORMATION WAS ADDED ON AUGUST 19 AND AUGUST 23, 2021 BY MOTT MACDONALD.

SANITARY SEWER NOTES

1. CLEANOUTS FOR VARIOUS HOUSES COULD NOT BE LOCATED. CLEANOUTS SHOWN AT THE LOCATIONS DENOTED ON THE PLANS ARE FOR DISPLAY PURPOSES ONLY. LOCATIONS OF SEWER LATERALS AND CLEANOUTS SHOULD BE VERIFIED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF THE LATERALS ON ALL LOTS, WITH THE ASSISTANCE OF THE ENGINEER AND WATER AND SEWER DEPARTMENT, AND CONNECTING ACCORDINGLY.
2. AT THE END OF EACH DAY THE SEWER MAIN AND ALL SEWER LATERALS SHALL BE TIED INTO THE SYSTEM AND NO LATERALS SHALL BE LEFT DISCONNECTED OVERNIGHT.
3. ALL SEWER MANHOLES SHALL HAVE WATERTIGHT CASTINGS.
4. UPON COMPLETION OF THE PROJECT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ENGINEER WITH ONE (1) COPY OF AN AS-BUILT DRAWING OF THE ENTIRE SEWER SYSTEM, INCLUDING LOCATION OF MANHOLES, SEWER MAIN, SEWER LATERALS, DEPTHS OF LATERALS, INVERT ELEVATIONS AND MANHOLE RIM ELEVATIONS.
5. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SEWER MAIN, LATERALS, MANHOLES AND CLEANOUTS UNLESS OTHERWISE STATED ON THE PLAN. PAYMENT WILL BE MADE UNDER THE VARIOUS BID ITEMS.
6. PRIOR TO ORDERING ANY CONSTRUCTION MATERIALS, THE CONTRACTOR SHALL VERIFY THE SIZE, MATERIAL, INVERTS AND LOCATION OF ALL UNDERGROUND UTILITIES. IF ANY CONFLICTS SHOULD ARISE FROM THE INVESTIGATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR FURTHER INSTRUCTION.
7. FOR CONNECTIONS OF SANITARY SEWER MAIN TO EXISTING MANHOLES, KOR-N-SEAL CONNECTORS MEETING ASTM C-923 OR APPROVED EQUAL SHALL BE USED TO ENSURE A WATERTIGHT CONNECTION. IF MANHOLE CONDITIONS CANNOT WARRANT A CORE AND SEAL CONNECTION, THE MANHOLE CONNECTION SHOULD BE MADE USING PRESS-SEAL GASKET CORPORATION WS-30 WATER STOP GROUTING RING OR APPROVED EQUAL. CONNECTION SHALL BE MADE UNDER THE BID ITEM FOR SANITARY SEWER MAIN.
8. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF EXISTING ASBESTOS-CEMENT PIPE (ACP) AS SHOWN ON THE PLANS. ALL ASBESTOS-CEMENT PIPE REMOVAL OPERATIONS SHALL BE IN ACCORDANCE WITH USEPA REGULATIONS (40 CFR PART 61 SUBPART M) AND THE USEPA APPLICABILITY DETERMINATION DETAIL CONTROL NUMBER C99. THE REMOVED ASBESTOS-CEMENT PIPE SHALL BE PROPERLY PACKAGED IN ACCORDANCE WITH 40 CFR 61.150. THE ASBESTOS-CEMENT PIPE SHALL BE TRANSPORTED IN ACCORDANCE WITH N.J.A.C. 7:26-3.5(D) AND DISPOSED OF AT A LANDFILL AUTHORIZED TO ACCEPT ASBESTOS CONTAINING MATERIAL.
9. AT CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SANITARY SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). WHERE THE REQUIRED VERTICAL SEPARATION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL INSTALL DUCTILE IRON SEWER MAIN FOR THE LENGTH OF THE AREA OF INADEQUATE SEPARATION, PLUS TEN (10) ADDITIONAL LINEAR FEET BEYOND EACH SIDE OF SUCH AREAS, AND CONNECT DUCTILE IRON INTO SEWER MAIN WITH A SMITH-BLAIR OMNI COUPLING SYSTEM, OR APPROVED EQUAL.
10. PRIOR TO FABRICATION OF PROPOSED MANHOLES, THE CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATIONS TO ENSURE EXISTING PIPES ARE ENTERING THE MANHOLE AT THE CORRECT INVERT ELEVATIONS.
11. PRIOR TO INSTALLATION OF SEWER MAIN, THE CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AT THE LOCATIONS WHERE PROPOSED SEWER MAIN IS CONNECTING INTO EXISTING MANHOLE INVERTS, TO ENSURE THE MAIN IS BEING CONSTRUCTED AT THE CORRECT SLOPE.
12. THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL TAKE INTO ACCOUNT VARIOUS IMPACTS TO RESIDENTS SUCH AS NOISE LEVELS, WELL POINTS PROHIBITING ACCESS TO DRIVEWAYS, ETC. AND KEEP THIS DISTURBANCE TO A MINIMUM.

WATER NOTES

1. LOCATIONS OF WATER MAIN AND SERVICES AS SHOWN ON THE PLAN ARE APPROXIMATE, ARE BASED ON THE LOCATIONS OF METERS, LIMITED UTILITY MARKOUTS, INFORMATION FROM UTILITY SERVICE AFFILIATES AND SHOULD BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
2. AFTER COMPLETION OF TEST PITS AND PRIOR TO ORDERING ANY MATERIALS, THE CONTRACTOR SHALL COORDINATE HIS FINDINGS WITH THE ENGINEER. IN LOCATIONS WHERE THE EXISTING WATER MAINS ARE IN CONFLICT WITH ANY PROPOSED UTILITIES. THE CONTRACTOR SHALL PERFORM UTILITY BYPASSES IF AND WHERE DIRECTED UNDER ITEM NO. 18.
3. THE CONTRACTOR SHALL ENSURE THAT THE WATER SYSTEM IS FUNCTIONING AT THE END OF EACH WORKING DAY. NO SERVICES SHALL BE LEFT DISCONNECTED OVERNIGHT.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE ENGINEER AN AS-BUILT OF ALL UTILITY BYPASSES CONSTRUCTED UNDER THIS PROJECT INCLUDING THE LOCATIONS, SIZE, LENGTH, DEPTHS, AND FITTINGS USED FOR EACH BYPASS.
5. WATER MAIN ACTIVATION, DEACTIVATION, TESTING, AND ALL OTHER ACTIVITIES RELATED TO THE WATER MAIN REPLACEMENT SHALL BE COORDINATED WITH THE ENGINEER AND UTILITY SERVICE AFFILIATES.
6. CONTRACTOR SHALL NOTIFY ALL AFFECTED PROPERTY OWNERS OF OVERALL WORK AND SCHEDULED SHUTDOWNS OF WATER SERVICE.

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Client

BOROUGH OF AVALON
CAPE MAY COUNTY, NJ 08202

Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000
Digitally signed by: Thomas R. Thornton
12

STATE OF NEW JERSEY — PROFESSIONAL ENGINEER — No. GE41770

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

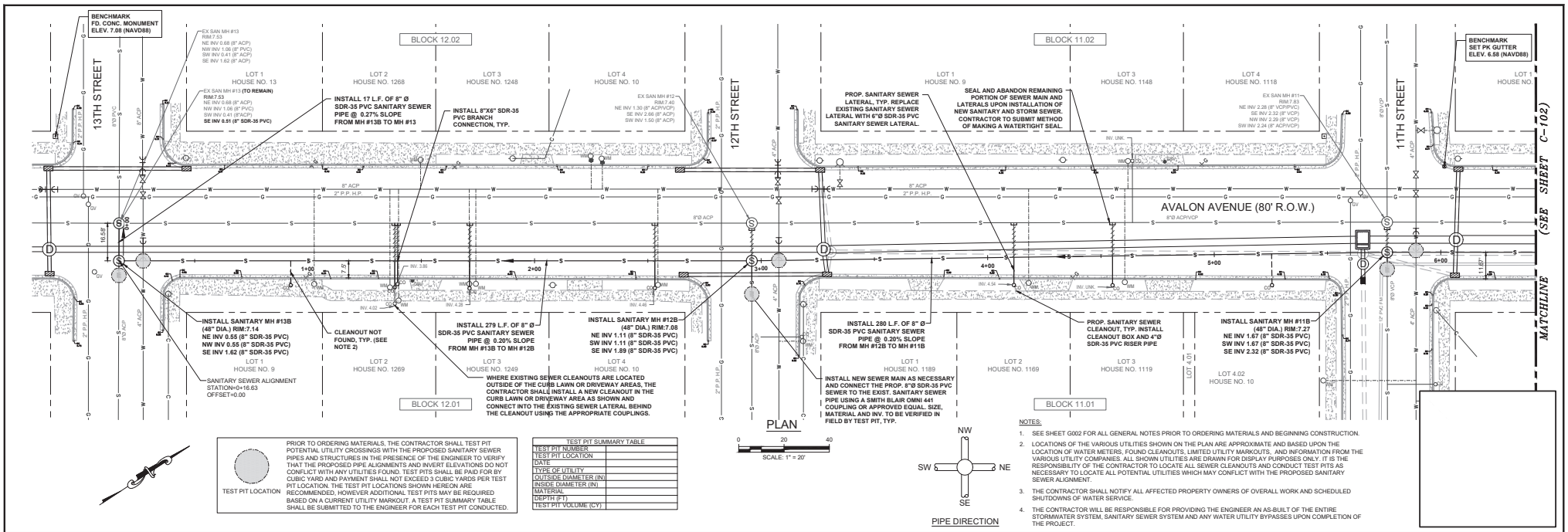
Project Number	B/O	Total
507103996-017	2	15

Drawing Number: G-002

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

LEGEND, GENERAL NOTES AND ESTIMATE OF QUANTITIES



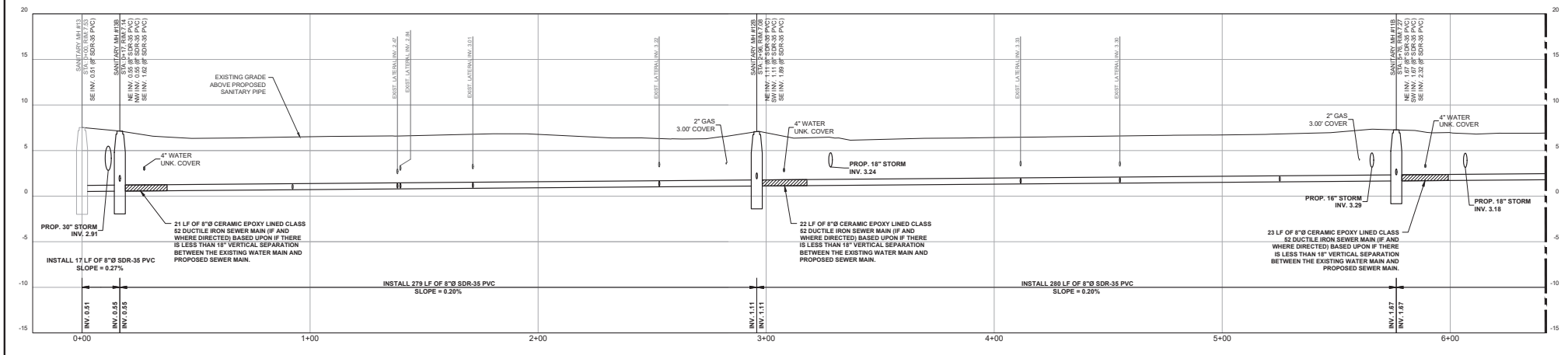
TEST PIT LOCATION

PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL TEST PIT POTENTIAL UTILITY CROSSINGS WITH THE PROPOSED SANITARY SEWER PIPES AND STRUCTURES IN THE PRESENCE OF THE ENGINEER TO VERIFY THAT THE PROPOSED PIPE ALIGNMENTS AND INVERT ELEVATIONS DO NOT CONFLICT WITH ANY UTILITIES FOUND. TEST PITS SHALL BE PAID FOR BY CUBIC YARD AND PAYMENT SHALL NOT EXCEED 3 CUBIC YARDS PER TEST PIT LOCATION. THE TEST PIT LOCATIONS SHOWN HEREON ARE RECOMMENDED, HOWEVER ADDITIONAL TEST PITS MAY BE REQUIRED BASED ON A CURRENT UTILITY MARKOUT. A TEST PIT SUMMARY TABLE SHALL BE SUBMITTED TO THE ENGINEER FOR EACH TEST PIT CONDUCTED.

TEST PIT SUMMARY TABLE	
TEST PIT NUMBER	
TEST PIT LOCATION	
DATE	
TYPE OF UTILITY	
OUTSIDE DIAMETER (IN)	
INSIDE DIAMETER (IN)	
MATERIAL	
DEPTH (FT)	
TEST PIT VOLUME (CY)	

NOTES:

1. SEE SHEET G002 FOR ALL GENERAL NOTES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. LOCATIONS OF THE VARIOUS UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE AND BASED UPON THE LOCATIONS OF WATER METERS, FOUND CLEANOUTS, LIMITED UTILITY MARKOUTS, AND INFORMATION FROM THE VARIOUS UTILITY COMPANIES. ALL SHOWN UTILITIES ARE DRAWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SEWER CLEANOUTS AND CONDUCT TEST PITS AS NECESSARY TO LOCATE ALL POTENTIAL UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED SANITARY SEWER ALIGNMENT.
3. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED PROPERTY OWNERS OF OVERALL WORK AND SCHEDULED SHUTDOWNS OF WATER SERVICE.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE ENGINEER AN AS-BUILT OF THE ENTIRE STORMWATER SYSTEM, SANITARY SEWER SYSTEM AND ANY WATER UTILITY BYPASSES UPON COMPLETION OF THE PROJECT.



PROFILE

SCALE: 1" = 20' HORIZONTAL

SCALE: 1" = 5' VERTICAL

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Avalon ...cooler by a mile.

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Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

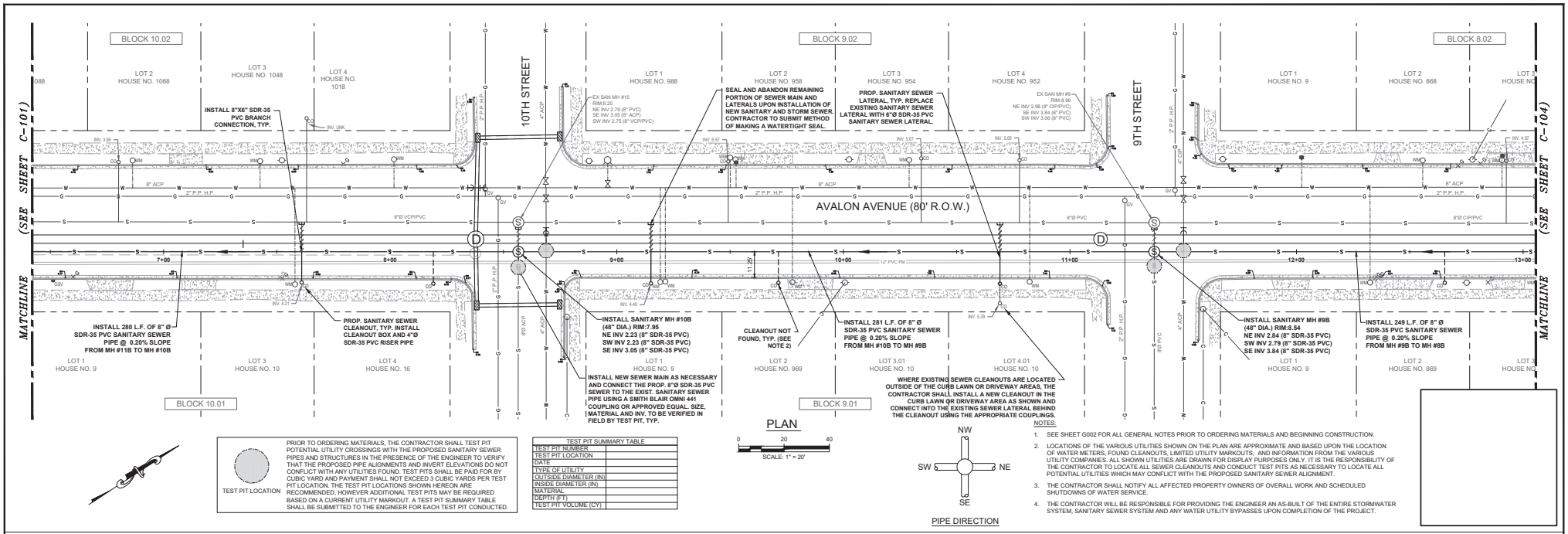
Project Number	B/O	Total
507103996-017	3	15

Drawing Number: C-101

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

SANITARY SEWER
PLAN & PROFILE (1 OF 3)



PLAN

0 20 40

SCALE: 1" = 20'

NW NE SW SE

PIPE DIRECTION

TEST PIT LOCATION

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TEST PIT SUMMARY TABLE	
TEST PIT NUMBER	
TEST PIT LOCATION	
DATE	
TYPE OF UTILITY	
OUTSIDE DIAMETER (IN)	
INSIDE DIAMETER (IN)	
MATERIAL	
DEPTH (FT)	
TEST PIT VOLUME (CY)	

NOTES:

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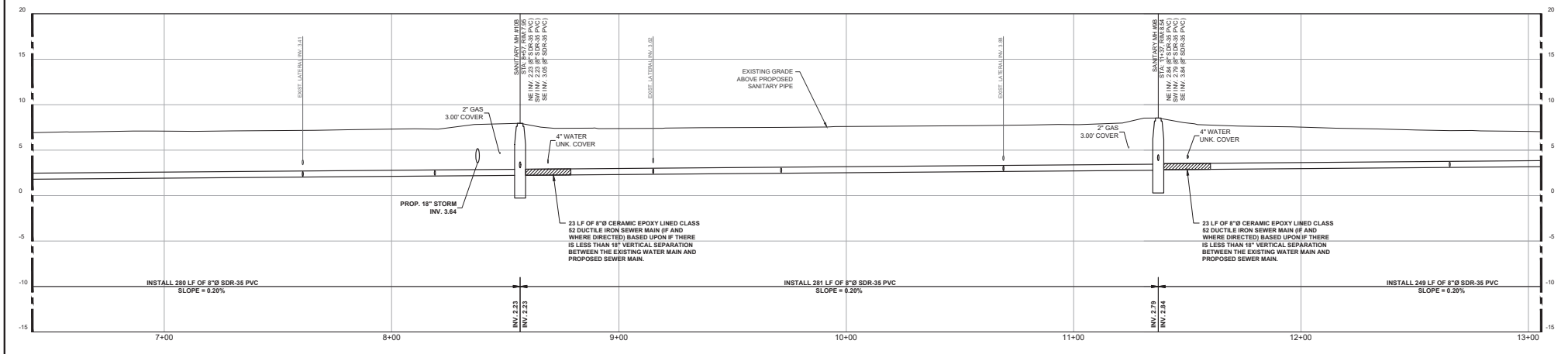

0 20 40

SCALE: 1" = 20' HORIZONTAL

PROFILE

0 5 10

SCALE: 1" = 5' VERTICAL

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000
DocuSigned by:
12

STATE OF NEW JERSEY No. GE41770 PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	4	15

Drawing Number: C-102

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

SANITARY SEWER
PLAN & PROFILE (2 OF 3)

C:\PW\WORKING\HMM\WATER_WASTEWATER\MOTTMAC_LEVB27937\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
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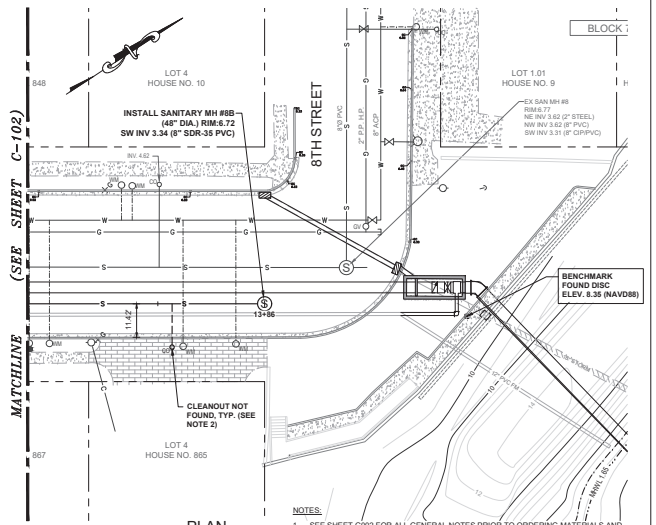

PLAN

SCALE: 1" = 20'

NOTES:

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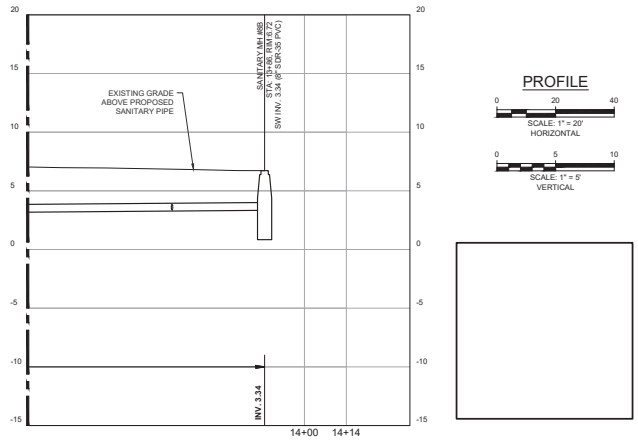
NW / SW / NE / SE

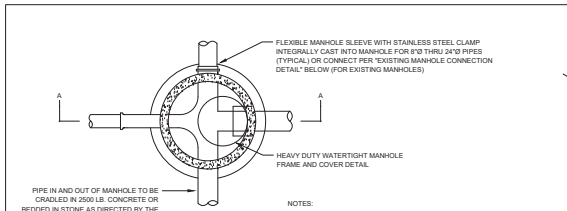
PIPE DIRECTION



PROFILE

SCALE: 1" = 20' HORIZONTAL

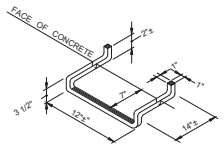
SCALE: 1" = 5' VERTICAL



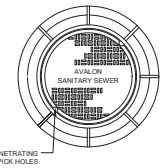
PLAN VIEW

NOTES:

1. DROP CONNECTION TO BE USED IN ALL CASES WHERE DIFFERENCES IN INLET & OUTLET INVERTS IS GREATER THAN 2 FEET.
2. ENTIRE EXTERIOR TO RECEIVE COATING OF BITUMINOUS SEALER.



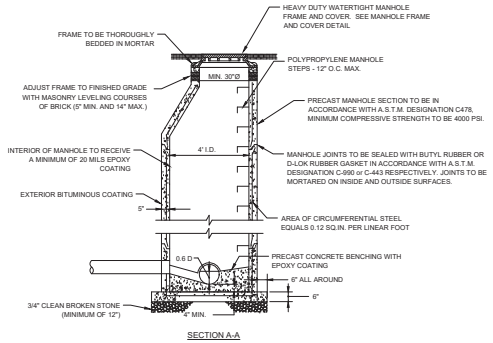
MANHOLE STEPS



1. SANITARY SEWER COVERS TO HAVE NON-PENETRATING PICK HOLES, TWO EACH COVER.
2. SANITARY SEWER MANHOLE FRAME AND COVER FOR SHALL BE HEAVY DUTY WATERTIGHT NEENAH FOUNDRY NO. R-1755-E1 OR APPROVED EQUAL.
3. WORDS "AVALON SANITARY SEWER" SHALL BE CAST INTO ALL LIDS.
4. FRAME TO BE THOROUGHLY BEDDED IN MORTAR.
5. FRAME TO BE ADJUSTED TO FINISHED GRADE WITH MASONRY LEVELING COURSES OF BRICK (5" MIN. AND 14" MAX.)

SANITARY MANHOLE FRAME AND COVER DETAIL

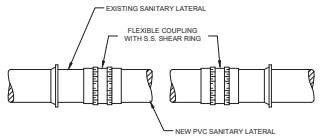
NOT TO SCALE



SECTION A-A

PRECAST SANITARY SEWER MANHOLE DETAIL

NOT TO SCALE

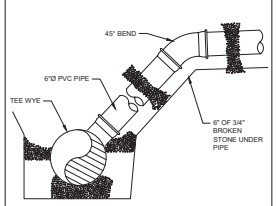


FLEXIBLE COUPLING FOR VARIOUS PIPE MATERIALS

VCP TO PVC:	FERNCO SERIES 1002
CONCRETE TO PVC:	FERNCO SERIES 1006
ACP TO PVC:	FERNCO SERIES 1051
ALL OTHERS:	FERNCO SERIES 1056

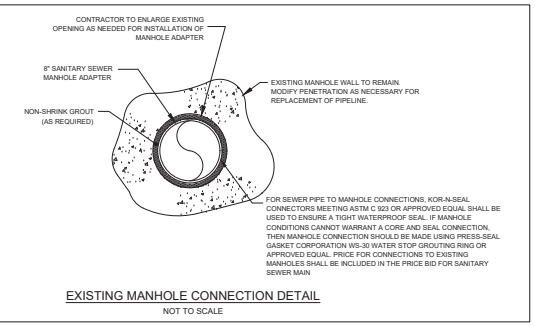
SANITARY LATERAL REPLACEMENT DETAIL

NOT TO SCALE



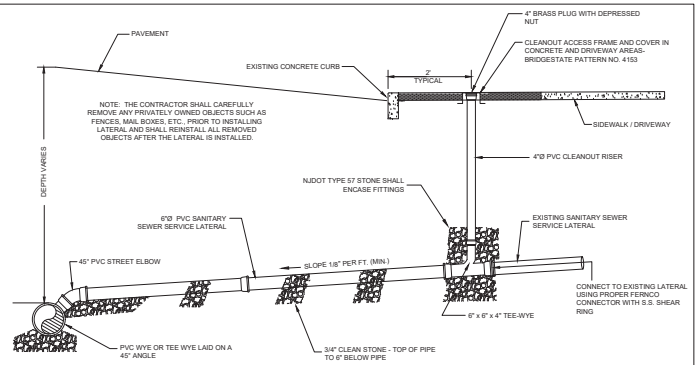
45° RISER DETAIL

NOT TO SCALE



EXISTING MANHOLE CONNECTION DETAIL

NOT TO SCALE



SANITARY SEWER SERVICE LATERAL AND CLEANOUT DETAIL

NOT TO SCALE

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

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Digitally signed by: Thomas R. Thornton

NJ No. GE41770 PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	5	15

Drawing Number: C-103

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

SANITARY SEWER
PLAN & PROFILE (3 OF 3)

C:\PWWORKING\HMM\WATER_WASTEWATER\MOTTMAC_LEVB27937\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
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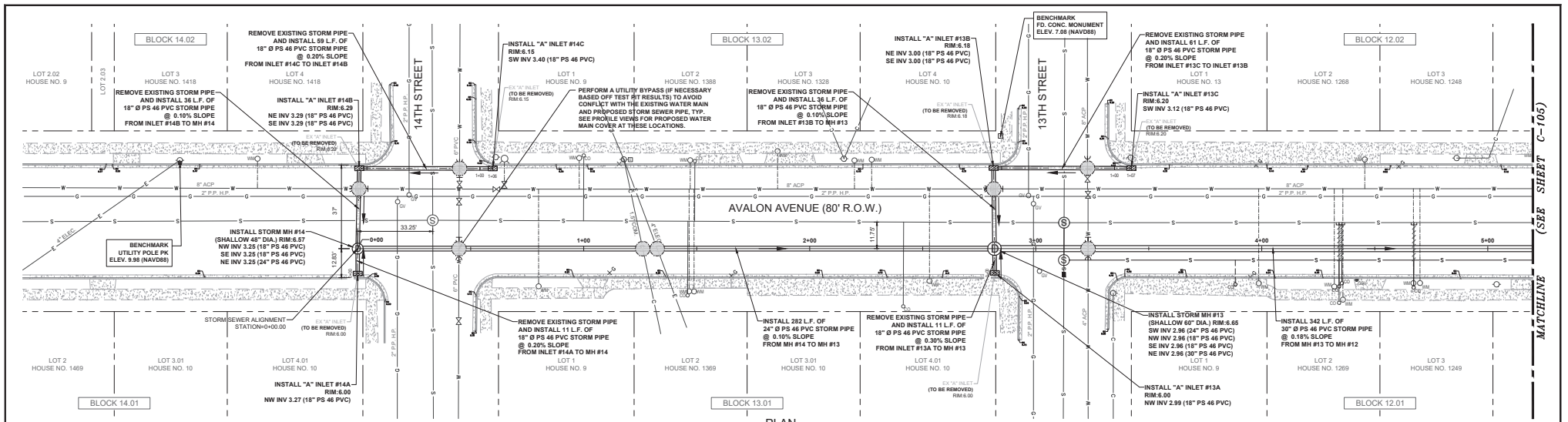


PLAN

SCALE: 1" = 20'

TEST PIT LOCATION

PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL TEST PIT POTENTIAL UTILITY CROSSINGS WITH THE PROPOSED STORM SEWER PIPES AND STRUCTURES IN THE PRESENCE OF THE ENGINEER TO VERIFY THAT THE PROPOSED PIPE ALIGNMENTS AND INVERT ELEVATIONS DO NOT CONFLICT WITH ANY UTILITIES FOUND. TEST PITS SHALL BE PAID FOR BY CUBIC YARD AND PAYMENT SHALL NOT EXCEED 3 CUBIC YARDS PER TEST PIT LOCATION. THE TEST PIT LOCATIONS SHOWN HEREON ARE RECOMMENDED, HOWEVER ADDITIONAL TEST PITS MAY BE REQUIRED BASED ON A CURRENT UTILITY MARKOUT. A TEST PIT SUMMARY TABLE SHALL BE SUBMITTED TO THE ENGINEER FOR EACH TEST PIT CONDUCTED.

TEST PIT SUMMARY TABLE	
TEST PIT NUMBER	
TEST PIT LOCATION	
DATE	
TYPE OF UTILITY	
OUTSIDE DIAMETER (IN)	
INSIDE DIAMETER (IN)	
MATERIAL	
DEPTH (FT)	
TEST PIT VOLUME (CY)	

NW / SW / NE / SE

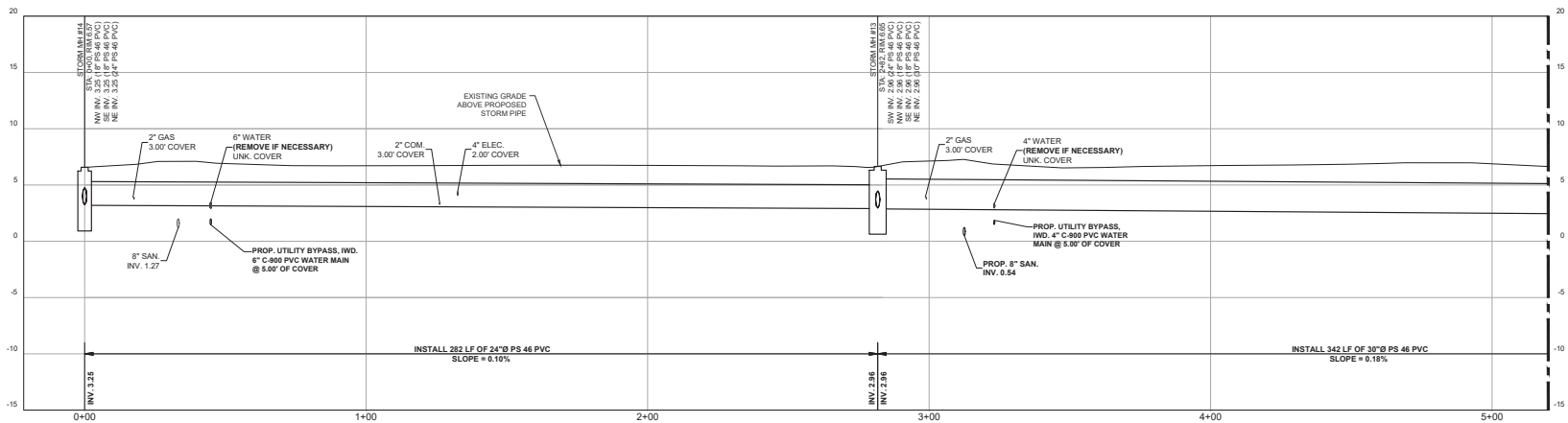
PIPE DIRECTION

NOTES:

1. SEE SHEET G002 FOR ALL GENERAL NOTES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. LOCATIONS OF THE VARIOUS UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE AND BASED UPON THE LOCATION OF WATER METERS, FOUND CLEANOUTS, LIMITED UTILITY MARKOUTS, AND INFORMATION FROM THE VARIOUS UTILITY COMPANIES. ALL SHOWN UTILITIES ARE DRAWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT TEST PITS AS NECESSARY TO LOCATE ALL POTENTIAL UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED STORM SEWER ALIGNMENT.
3. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED PROPERTY OWNERS OF OVERALL WORK AND SCHEDULED SHUTDOWNS OF WATER SERVICE.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE ENGINEER AN AS-BUILT OF THE ENTIRE STORMWATER SYSTEM, SANITARY SEWER SYSTEM AND ANY WATER UTILITY BYPASSES UPON COMPLETION OF THE PROJECT.

NOTES:

1. DEPTHS OF WATER MAIN, GAS MAIN, ELECTRIC AND COMCAST LINES ARE UNKNOWN AND ARE SHOWN BASED UPON TYPICAL DEPTHS. THE LOCATION OF THESE UTILITIES IN THE PROFILE VIEW ARE SHOWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DIG TEST PITS TO DETERMINE THE ACTUAL DEPTHS OF ANY CONFLICTING UTILITIES PRIOR TO ORDERING ANY MATERIALS.
2. ALL GAS, ELECTRIC AND COMCAST LINES THAT CONFLICT WITH THE PROPOSED UTILITIES ARE BEING COORDINATED TO BE RELOCATED WITH SOUTH JERSEY GAS, ATLANTIC CITY ELECTRIC AND COMCAST.



PROFILE

SCALE: 1" = 20' HORIZONTAL

SCALE: 1" = 5' VERTICAL

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Avalon ...cooler by a mile.

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Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

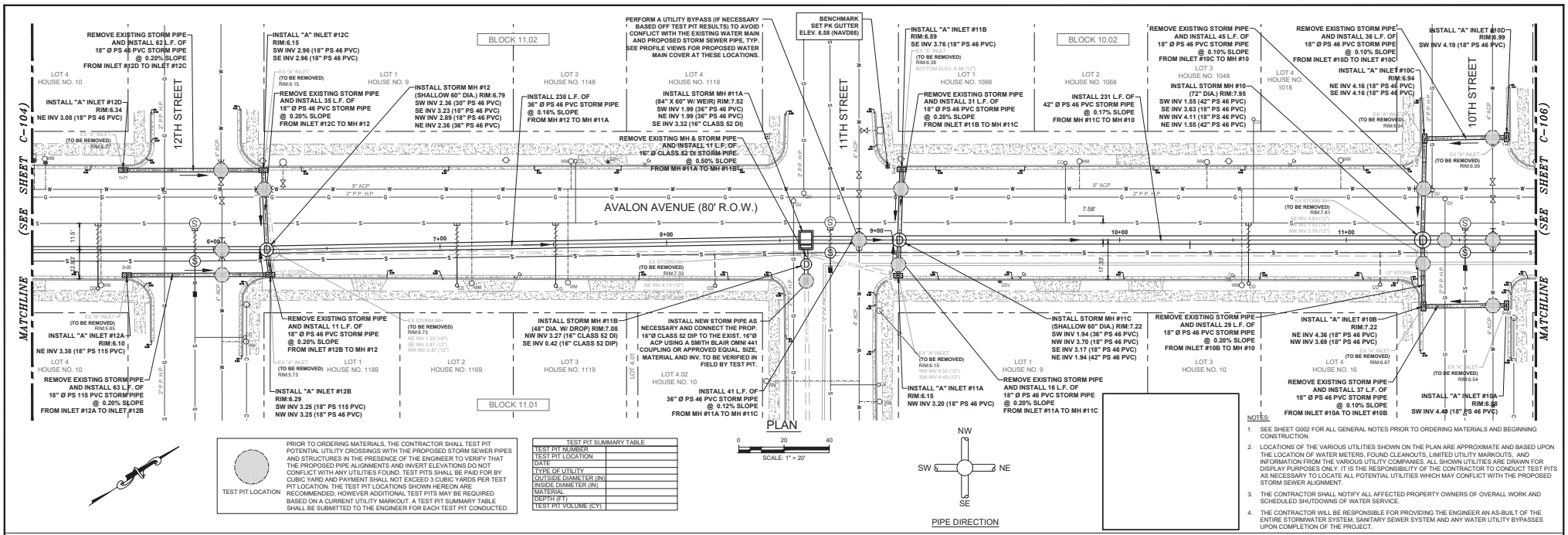
Project Number	B/O	Total
507103996-017	6	15

Drawing Number: C-104

Title: AVALON AVENUE DRAINAGE IMPROVEMENTS

STORM SEWER AND WATER PLAN & PROFILE (SHEET 1 OF 3)

C:\PW\ORKING\HMM\WATER_WASTEWATER\MOTT\MAC_LEVB27935\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
SAVE DATE/TIME: 1/3/2023 11:30:05 AM



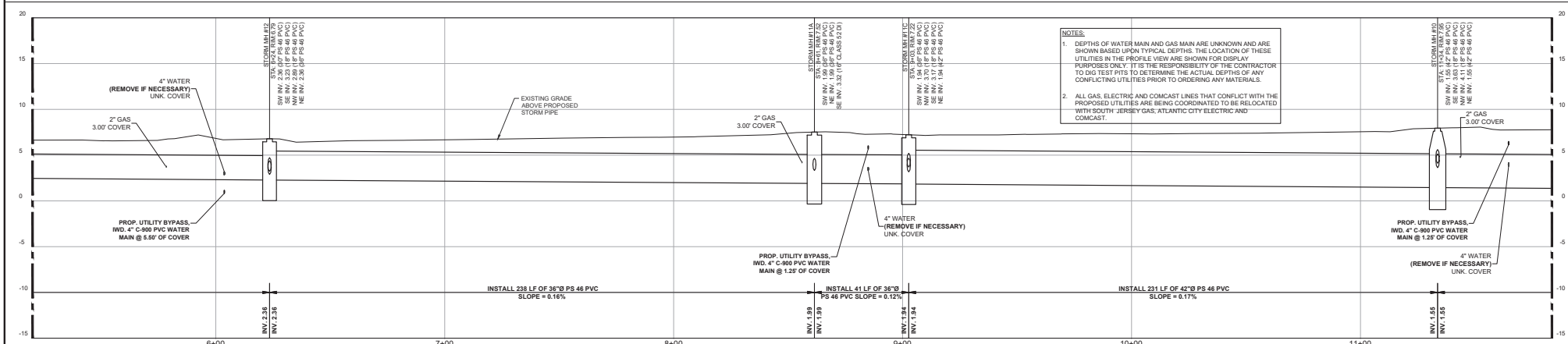
TEST PIT LOCATION

PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL TEST PIT POTENTIAL UTILITY CROSSINGS WITH THE PROPOSED STORM SEWER PIPES AND STRUCTURES IN THE PRESENCE OF THE ENGINEER TO VERIFY THAT THE PROPOSED PIPE ALIGNMENTS AND INVERT ELEVATIONS DO NOT CONFLICT WITH ANY UTILITIES FOUND. TEST PITS SHALL BE PAID FOR BY CUBIC YARD AND PAYMENT SHALL NOT EXCEED 3 CUBIC YARDS PER TEST PIT LOCATION. THE TEST PIT LOCATIONS SHOWN HEREON ARE RECOMMENDED, HOWEVER ADDITIONAL TEST PITS MAY BE REQUIRED BASED ON A CURRENT UTILITY MARKOUT. A TEST PIT SUMMARY TABLE SHALL BE SUBMITTED TO THE ENGINEER FOR EACH TEST PIT CONDUCTED.

TEST PIT SUMMARY TABLE	
TEST PIT NUMBER	
TEST PIT LOCATION	
DATE	
TYPE OF UTILITY	
OUTSIDE DIAMETER (IN)	
INSIDE DIAMETER (IN)	
MATERIAL	
DEPTH (FT)	
TEST PIT VOLUME (CY)	

NOTES:

1. SEE SHEET G002 FOR ALL GENERAL NOTES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. LOCATIONS OF THE VARIOUS UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE AND BASED UPON THE LOCATION OF WATER METERS, FOUND CLEANOUTS, LIMITED UTILITY MARKOUTS, AND INFORMATION FROM THE VARIOUS UTILITY COMPANIES. ALL SHOWN UTILITIES ARE DRAWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT TEST PITS AS NECESSARY TO LOCATE ALL POTENTIAL UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED STORM SEWER ALIGNMENT.
3. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED PROPERTY OWNERS OF OVERALL WORK AND SCHEDULED SHUTDOWNS OF WATER SERVICE.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE ENGINEER AN AS-BUILT OF THE ENTIRE STORMWATER SYSTEM, SANITARY SEWER SYSTEM AND ANY WATER UTILITY BYPASSES UPON COMPLETION OF THE PROJECT.



NOTES:

1. DEPTHS OF WATER MAIN AND GAS MAIN ARE UNKNOWN AND ARE SHOWN BASED UPON TYPICAL DEPTHS. THE LOCATION OF THESE UTILITIES IN THE PROFILE VIEW ARE SHOWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DIG TEST PITS TO DETERMINE THE ACTUAL DEPTHS OF ANY CONFLICTING UTILITIES PRIOR TO ORDERING ANY MATERIALS.
2. ALL GAS, ELECTRIC AND COMCAST LINES THAT CONFLICT WITH THE PROPOSED UTILITIES ARE BEING COORDINATED TO BE RELOCATED WITH SOUTH JERSEY GAS, ATLANTIC CITY ELECTRIC AND COMCAST.

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Client

BOROUGH OF AVALON
CAPE MAY COUNTY, NJ 08202

Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	
Scale at ARCH D	Status		Rev	Security	
As Shown	PERMIT		Rev0	STD	

Project Number	B/O	Total
507103996-017	7	15

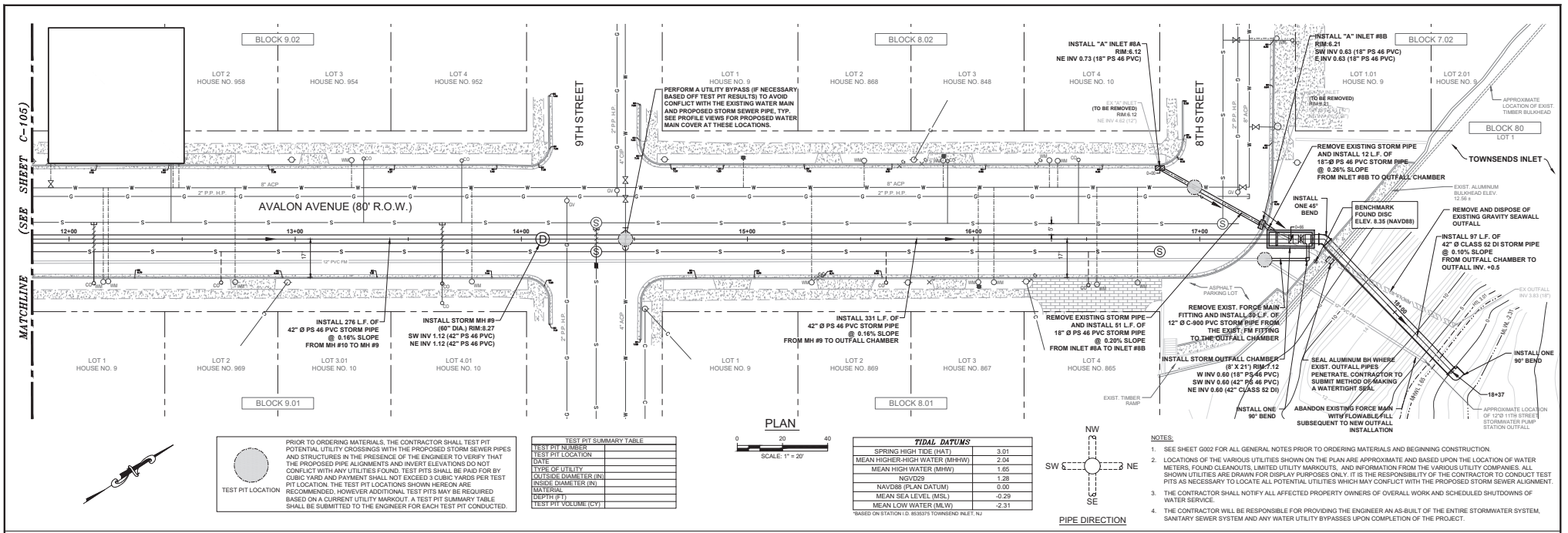
Drawing Number: C-105

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

STORM SEWER AND WATER
PLAN & PROFILE (SHEET 2 OF 3)

C:\PWWORKING\HMM\WATER_WASTEWATER\MOTTMAC_LEVB27935\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
SAVE DATE/TIME: 1/3/2023 11:30:05 AM



PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL TEST PIT POTENTIAL UTILITY CROSSINGS WITH THE PROPOSED STORM SEWER PIPES AND STRUCTURES IN THE PRESENCE OF THE ENGINEER TO VERIFY THAT THE PROPOSED PIPE ALIGNMENTS AND INVERT ELEVATIONS DO NOT CONFLICT WITH ANY UTILITIES FOUND. TEST PITS SHALL BE PAID FOR BY CUBIC YARD AND PAYMENT SHALL NOT EXCEED 3 CUBIC YARDS PER TEST PIT LOCATION. THE TEST PIT LOCATIONS SHOWN HEREON ARE RECOMMENDED, HOWEVER ADDITIONAL TEST PITS MAY BE REQUIRED BASED ON A CURRENT UTILITY MARKOUT. A TEST PIT SUMMARY TABLE SHALL BE SUBMITTED TO THE ENGINEER FOR EACH TEST PIT CONDUCTED.

TEST PIT SUMMARY TABLE	
TEST PIT NUMBER	
TEST PIT LOCATION	
DATE	
TYPE OF UTILITY	
OUTSIDE DIAMETER (IN)	
INSIDE DIAMETER (IN)	
MATERIAL	
DEPTH (FT)	
TEST PIT VOLUME (CY)	

PLAN

0 20 40
SCALE: 1" = 20'

TIDAL DATUMS	
SPRING HIGH TIDE (HAT)	3.01
MEAN HIGHER-HIGH WATER (MHHW)	2.04
MEAN HIGH WATER (MHW)	1.65
NGVD29	1.28
NAVD88 (PLAN DATUM)	0.00
MEAN SEA LEVEL (MSL)	-0.29
MEAN LOW WATER (MLW)	-2.31

*BASED ON STATION I.D. 8535375 TOWNSEND INLET, NJ

NW SW NE SE
PIPE DIRECTION

NOTES:
1. SEE SHEET G002 FOR ALL GENERAL NOTES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. LOCATIONS OF THE VARIOUS UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE AND BASED UPON THE LOCATION OF WATER METERS, FOUND CLEANOUTS, LIMITED UTILITY MARKOUTS, AND INFORMATION FROM THE VARIOUS UTILITY COMPANIES. ALL SHOWN UTILITIES ARE DRAWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT TEST PITS AS NECESSARY TO LOCATE ALL POTENTIAL UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED STORM SEWER ALIGNMENT.
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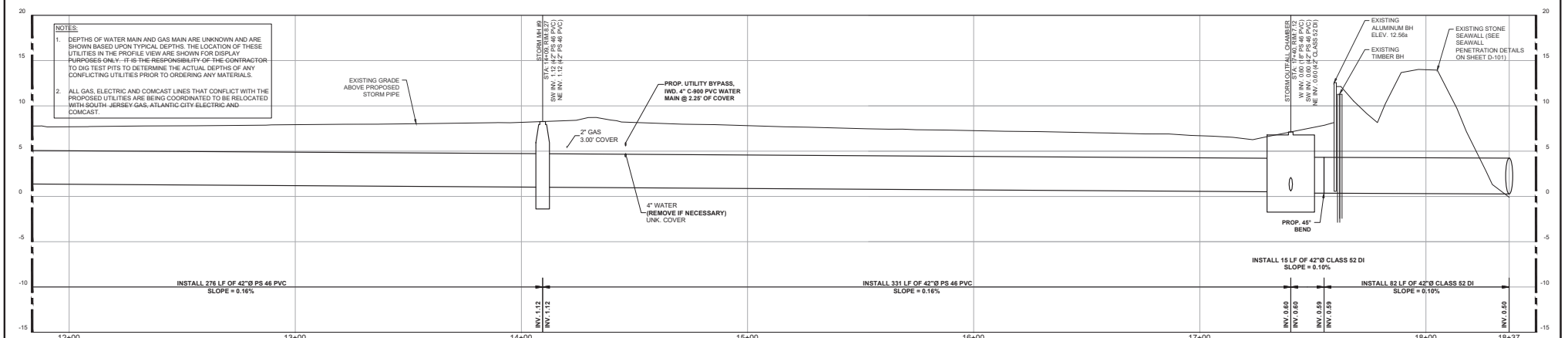

0 20 40
SCALE: 1" = 20'
HORIZONTAL

PROFILE

0 5 10
SCALE: 1" = 5'
VERTICAL

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CAPE MAY COUNTY, NJ 08202

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000
DocuSigned by:
12

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

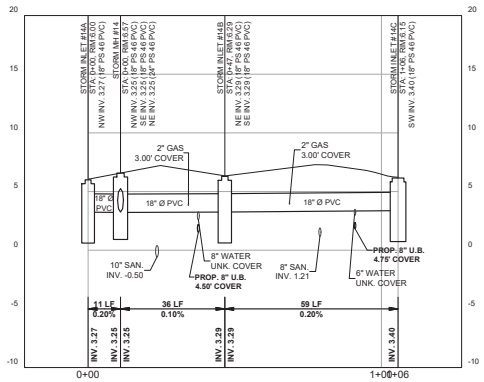
Project Number	B/O	Total
507103996-017	8	15

Drawing Number C-106

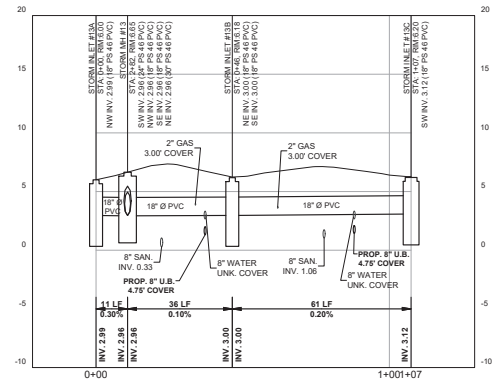
Title
AVALON AVENUE
DRAINAGE IMPROVEMENTS

STORM SEWER AND WATER
PLAN & PROFILE (SHEET 3 OF 3)

C:\PWWORKING\HMM\WATER_WASTEWATER\MOTT\MAC_LEVB27993\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
SAVE DATE/TIME: 1/3/2023 11:30:05 AM



14TH STREET ALIGNMENT



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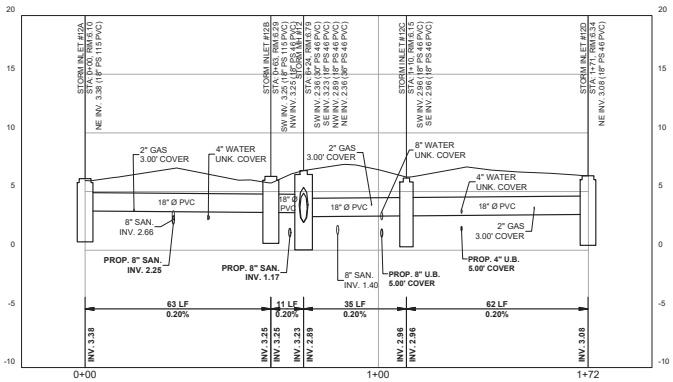
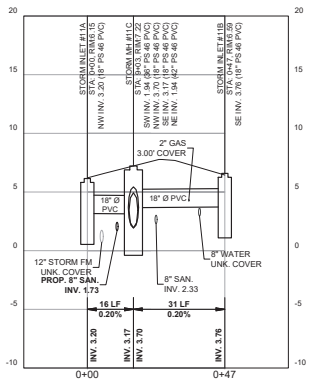


12TH STREET ALIGNMENT

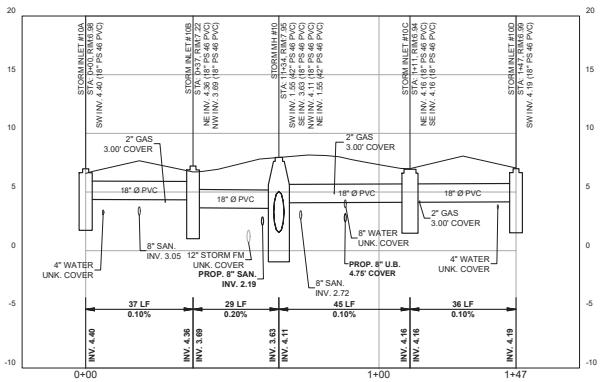
NOTE:
DEPTHS OF WATER MAIN AND GAS MAIN ARE UNKNOWN AND ARE SHOWN BASED UPON TYPICAL DEPTHS. THE LOCATION OF THESE UTILITIES IN THE PROFILE VIEW ARE SHOWN FOR DISPLAY PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DIG TEST PITS TO DETERMINE THE ACTUAL DEPTHS OF ANY CONFLICTING UTILITIES PRIOR TO ORDERING ANY MATERIALS.

NOTE:
ALL GAS, ELECTRIC AND COMCAST LINES THAT CONFLICT WITH THE PROPOSED UTILITIES ARE BEING COORDINATED TO BE RELOCATED WITH SOUTH JERSEY GAS, ATLANTIC CITY ELECTRIC AND COMCAST.

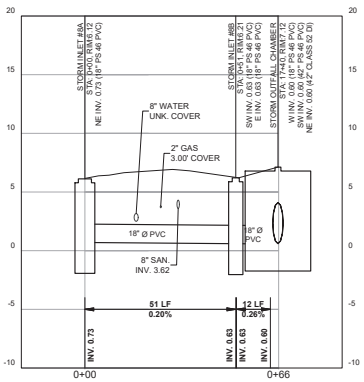
NOTE:
THE PROPOSED UTILITY BYPASSES (U.B.) SHOWN ARE NECESSARY BASED ON TYPICAL WATER MAIN DEPTHS AND ARE FOR DISPLAY PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEST PITTING ALL WATER MAIN CROSSINGS WITH PROPOSED UTILITIES TO DETERMINE IF A UTILITY BYPASS IS NECESSARY ON AN IF AND WHERE DIRECTED BASIS WITH THE ENGINEER. THE BID QUANTITY ACCOUNTS FOR A UTILITY BYPASS AT EVERY CROSSING.



11TH STREET ALIGNMENT

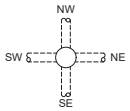


10TH STREET ALIGNMENT



8TH STREET ALIGNMENT

PROFILE



PIPE DIRECTION

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000
DocuSigned by:
22

STATE OF NEW JERSEY
No. GE41770
PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number: 507103996-017
B/O: 9
Total: 15
Drawing Number: C-107

Title
AVALON AVENUE
DRAINAGE IMPROVEMENTS

STORM SEWER
BRANCH PROFILES

1. ORDER AND STOCKPILE ALL PIPE AND SEAWALL MATERIALS AT SITE PRIOR TO ANY SEAWALL DISTURBANCE.
2. CONSTRUCT VALVE CHAMBER WITHIN PARKING AREA LANDWARD OF THE BULKHEAD TO OPERATIONAL CONDITION OTHER THAN THE CONNECTION OF THE GRAVITY PIPE AND FORCE MAIN CONNECTION.
3. MOBILIZE AND ASSEMBLE TEMPORARY STORMWATER BYPASS SYSTEM TO BE PREPARED TO BYPASS STORMWATER RUNOFF FROM EXISTING GRAVITY SYSTEM AT 8TH STREET.
4. MAINTAIN EXISTING 12" FORCE MAIN OUTFALL FROM 11TH STREET PUMP STATION.
5. MONITOR WEATHER FORECAST AND TIDAL PREDICTIONS TO DETERMINE OPTIMAL TIME TO BEGIN SEAWALL DISASSEMBLY AND OUTFALL CONSTRUCTION.
6. UPON CONFIRMATION OF SUITABLE WEATHER FORECAST, DISASSEMBLE SEAWALL WITHIN THE LIMITS INDICATED ON THE PLANS, STOCKPILING STONES OF LIKE SIZE WITHIN STOCKPILE AREA.
7. REMOVE EXISTING 18" GRAVITY STORM PIPE WITHIN SEAWALL AND SEAL ALUMINUM BULKHEAD SEAL.
8. CONTINUE TO MONITOR WEATHER FORECAST TO BE PREPARED TO REPLACE STONE REMOVED FROM SEAWALL SHOULD FORECAST REQUIRE IT.
9. INSTALL MARINE MATTRESS AND STONE BELOW OUTFALL PIPE.
10. CONSTRUCT OUTFALL PIPE, INCLUDING CONCRETE ENCASEMENT AND ALUMINUM AND TIMBER BULKHEAD PENETRATIONS AND SEALS.
11. RECONSTRUCT SEAWALL AROUND AND ABOVE OUTFALL PIPE PER PLAN.
12. CONTINUE TO MAINTAIN 12" FORCE MAIN FLOWS AND BYPASS 8TH STREET GRAVITY FLOWS AS NECESSARY.
13. COMPLETE GRAVITY DRAINAGE IMPROVEMENTS AT 8TH STREET AND CONNECT TO VALVE CHAMBER.
14. CONNECT 12" FORCE MAIN TO VALVE CHAMBER.
15. PRESSURE-GROUT 12" FORCE MAIN.

CONSTRUCTION SEQUENCE

SEAWALL PLAN

0 20 40

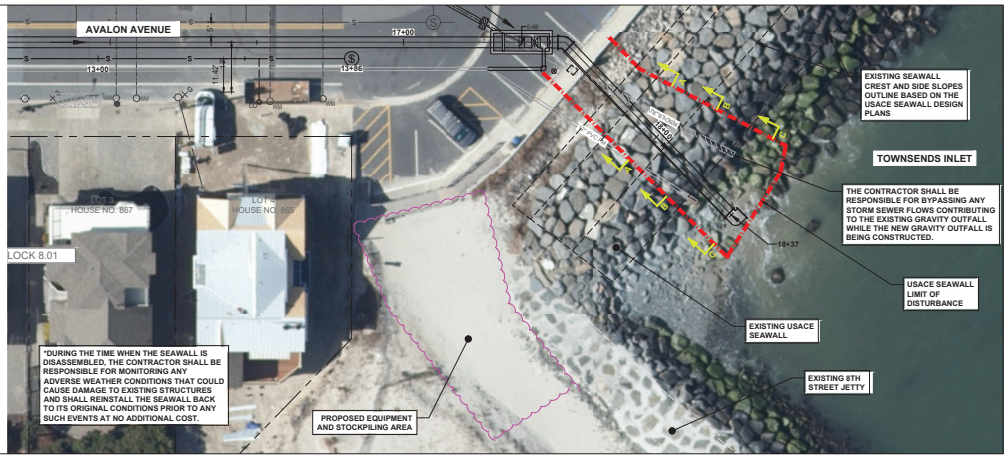
SCALE: 1" = 20'

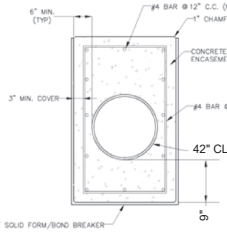
STRUCTURAL MONITORING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEISMIC MONITORING OF CONSTRUCTION OF ALL STRUCTURES WITHIN THE VICINITY OF THE PROJECT FOR POTENTIAL EFFECTS OF THE CONTRACTED WORK. THE PERSON RESPONSIBLE FOR IMPLEMENTING THE MONITORING PROGRAM SHALL BE A NEW JERSEY LICENSED P.E. WITH A MINIMUM OF 5 YEARS OF EXPERIENCE IN SEISMIC MONITORING OF SIMILAR TYPE AND SCOPE OF THIS PROJECT. PRE AND POST CONSTRUCTION SURVEYS AS APPROVED BY THE BOROUGH ENGINEER OF THE MONITORED STRUCTURES SHALL BE SUBMITTED ALONG WITH REPORTS INCLUDING DETAILS OF THE MONITORING ACTIVITIES.

SUBMITTALS REQUIRED FOR STRUCTURAL MONITORING INCLUDE:

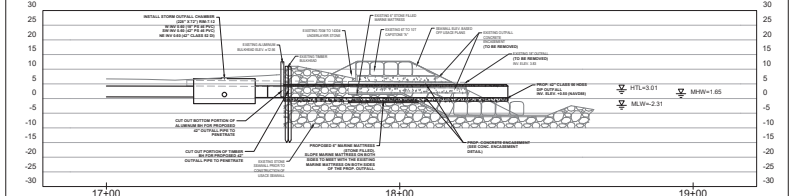
1. QUALIFICATIONS OF P.E.
2. LETTER TO OWNER OF MONITORED STRUCTURES
3. PLAN FOR PRE & POST CONSTRUCTION SURVEYS
4. STRUCTURAL MONITORING PLAN
5. PRE-CONSTRUCTION SURVEY
6. MONITORING REPORTS
7. POST CONSTRUCTION SURVEY





CONCRETE ENCASEMENT DETAIL (FROM USACE SEAWALL CONSTRUCTION PANS)

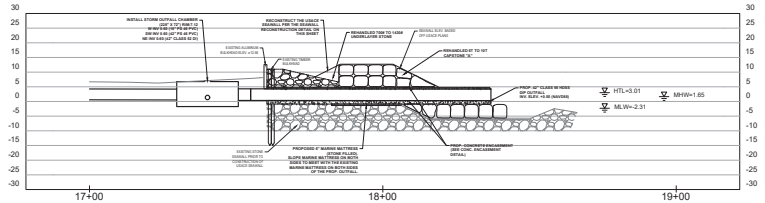
NOT TO SCALE



EXISTING SEAWALL OUTFALL PENETRATION DETAIL

0 20 40

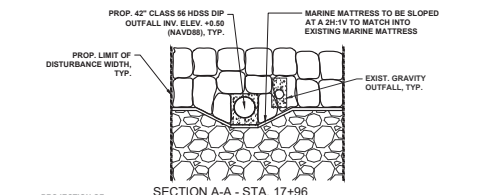
SCALE: 1" = 20'



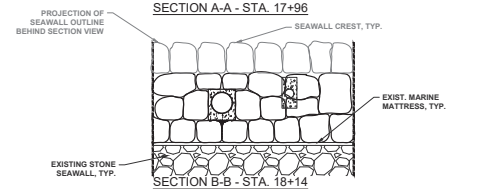
FINAL SECTION OUTFALL PENETRATION DETAIL

0 20 40

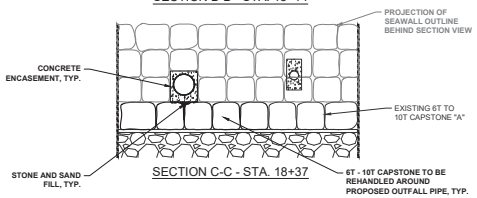
SCALE: 1" = 20'



SECTION A-A - STA. 17+96



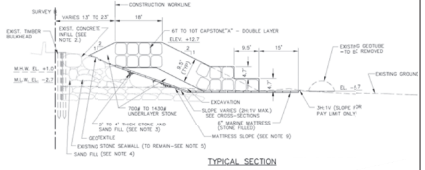
SECTION B-B - STA. 18+14



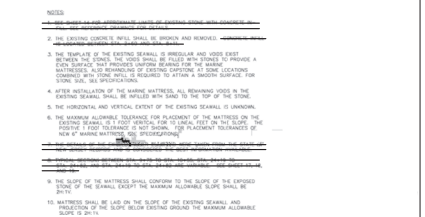
SECTION C-C - STA. 18+37

SEAWALL SECTION DETAILS

SCALE = 1"=10'



TYPICAL SECTION



NOTES

1. SEE SHEET X-XX FOR APPROXIMATE LIMITS OF EXISTING STONE WITH CONCRETE INFILL.
2. THE EXISTING CONCRETE INFILL SHALL BE BROKEN AND REMOVED.
3. THE TEMPLATE OF THE EXISTING SEAWALL IS IRREGULAR AND VOIDS EXIST BETWEEN THE STONES. THE VOIDS SHALL BE FILLED WITH STONES TO PROVIDE A SMOOTH SURFACE FOR THE PLACEMENT OF THE 6" MARINE MATTRESS. ALSO REVANGLING OF EXISTING CAPSTONE AT SOME LOCATIONS COMBINED WITH STONE INFILL IS REQUIRED TO ATTAIN A SMOOTH SURFACE. FOR STONE SIZE, SEE SPECIFICATIONS.
4. AFTER INSTALLATION OF THE MARINE MATTRESS, ALL REMAINING VOIDS IN THE EXISTING SEAWALL SHALL BE INFILLED WITH SAND TO THE TOP OF THE STONE.
5. THE HORIZONTAL AND VERTICAL EXTENT OF THE EXISTING SEAWALL IS UNKNOWN.
6. THE MAXIMUM ALLOWABLE TOLERANCE FOR PLACEMENT OF THE MATTRESS ON THE EXISTING SEAWALL IS 1 FOOT VERTICAL FOR 10 LINEAL FEET ON THE SLOPE. THE POSITIVE 1 FOOT TOLERANCE IS NOT SHOWN. FOR PLACEMENT TOLERANCES OF NEW 6" MARINE MATTRESS, SEE SPECIFICATIONS.
7. [illegible]
8. [illegible]
9. THE SLOPE OF THE MATTRESS SHALL CONFORM TO THE SLOPE OF THE EXPOSED STONE OF THE SEAWALL EXCEPT THE MAXIMUM ALLOWABLE SLOPE SHALL BE 2H:1V.
10. MATTRESS SHALL BE LAID ON THE SLOPE OF THE EXISTING SEAWALL AND PROJECTION OF THE SLOPE BELOW EXISTING GROUND THE MAXIMUM ALLOWABLE SLOPE IS 2H:1V.

SEAWALL RECONSTRUCTION DETAIL (FROM USACE SEAWALL CONSTRUCTION PLANS)

NOT TO SCALE

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

DocuSigned by:

22

NJ NEW JERSEY No. GE41770 PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	10	15

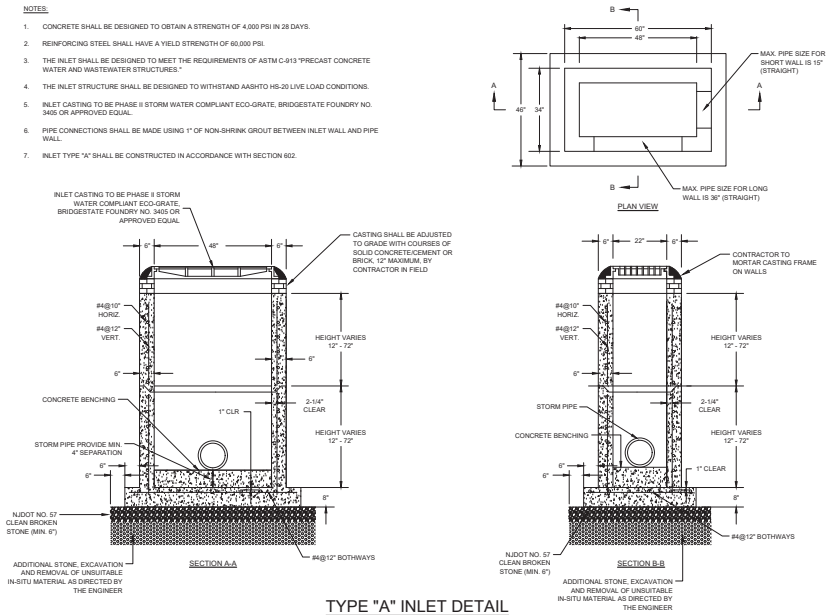
Drawing Number: D-101

Title: AVALON AVENUE DRAINAGE IMPROVEMENTS

CONSTRUCTION DETAILS

NOTES:

1. CONCRETE SHALL BE DESIGNED TO OBTAIN A STRENGTH OF 4,000 PSI IN 28 DAYS.
2. REINFORCING STEEL SHALL HAVE A YIELD STRENGTH OF 60,000 PSI.
3. THE INLET SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF ASTM C-913 "PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES."
4. THE INLET STRUCTURE SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20 LIVE LOAD CONDITIONS.
5. INLET CASTING TO BE PHASE II STORM WATER COMPLIANT ECO-GRATE, BRIDGESTATE FOUNDRY NO. 3405 OR APPROVED EQUAL.
6. PIPE CONNECTIONS SHALL BE MADE USING 1" OF NON-SHRINK GROUT BETWEEN INLET WALL AND PIPE WALL.
7. INLET TYPE "A" SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602.

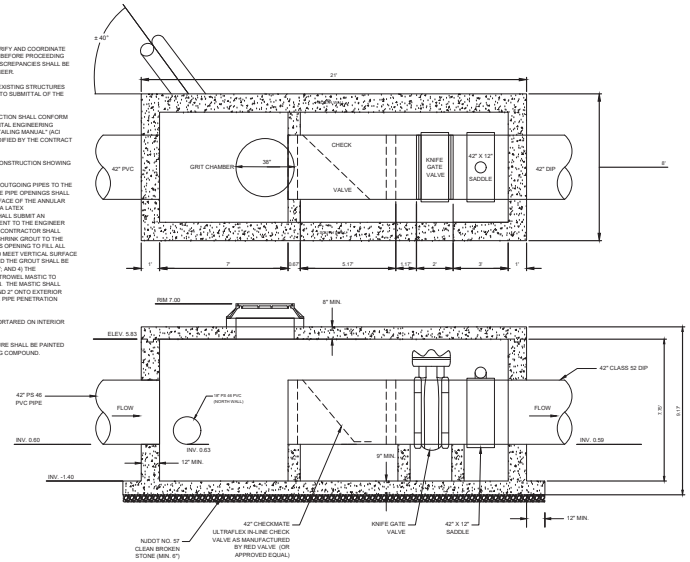


TYPE "A" INLET DETAIL

NOT TO SCALE

NOTES:

1. ALL ELEVATIONS SHOWN IN NAVD88.
2. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS CONCERNING HIS WORK BEFORE PROCEEDING WITH SAID WORK OR ORDERING OF MATERIALS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
3. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF EXISTING STRUCTURES AND CLEARANCES TO THE NEW CONSTRUCTION PRIOR TO SUBMITTAL OF THE GRIT CHAMBER SHOP DRAWING.
4. ALL REINFORCED CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 350-06 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY". "ACI DETAILING MANUAL" (ACI PUBLICATION SP-66-(04)), EXCEPT AS SPECIFICALLY MODIFIED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
5. CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO CONSTRUCTION SHOWING FABRICATION DETAILS AND DIMENSIONS.
6. THE WATERTIGHT CONNECTION OF THE INCOMING AND OUTGOING PIPES TO THE OUTFALL CHAMBER SHALL BE MADE AS FOLLOWS: 1) THE PIPE OPENINGS SHALL BE OVERSIZED BY 3" ANNULARLY; 2) THE INTERIOR SURFACE OF THE ANNULAR SPACE OF THE GRIT CHAMBER SHALL BE COATED WITH A LATEX CONCRETE/MORTAR BONDING AGENT (CONTRACTOR SHALL SUBMIT AN APPROPRIATE LATEX CONCRETE/MORTAR BONDING AGENT TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ITS USE); 3) THE CONTRACTOR SHALL APPLY (VIA HAND PACKING) A WATERPROOF AND NON-SHRINK GROUT TO THE ANNULAR VOID BETWEEN THE PIPE AND THE CHAMBER'S OPENING TO FILL ALL VOIDS COMPLETELY. THE GROUT SHALL BE APPLIED TO MEET VERTICAL SURFACE OF THE CHAMBER'S INTERIOR AND EXTERIOR WALLS AND THE GROUT SHALL BE SMOOTHED OUT AND PERMITTED TO DRY SUFFICIENTLY; AND 4) THE CONTRACTOR SHALL APPLY A GENEROUS COATING OF TROWEL MASTIC TO COVER THE EXTERIOR AREA OF THE PIPE PENETRATION. THE MASTIC SHALL OVERLAP 2" ONTO THE PIPE'S FULL CIRCUMFERENCE AND 2" ONTO EXTERIOR WALL OF THE CHAMBER, FULL CIRCUMFERENCE OF THE PIPE PENETRATION POINT.
7. ALL JOINTS BETWEEN PRECAST SECTIONS SHALL BE MORTARED ON INTERIOR AND EXTERIOR FACES OF STRUCTURE.
8. EXTERIOR SURFACE OF THE ENTIRE PRECAST STRUCTURE SHALL BE PAINTED WITH ONE COAT OF AN APPROVED BITUMINOUS SEALING COMPOUND.



STORMWATER OUTFALL CHAMBER DETAIL

NOT TO SCALE

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BOROUGH OF AVALON
CAPE MAY COUNTY, NJ 08202

Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

DocuSigned by:
Thomas R. Thornton
9/2...

STATE OF NEW JERSEY No. GE41770 PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	11	15

Drawing Number: D-102

Title: AVALON AVENUE DRAINAGE IMPROVEMENTS

CONSTRUCTION DETAILS

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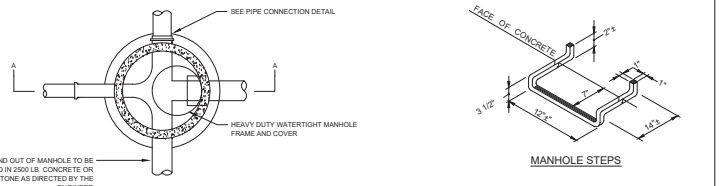
SAVE DATE/TIME: 1/3/2023 11:30:05 AM

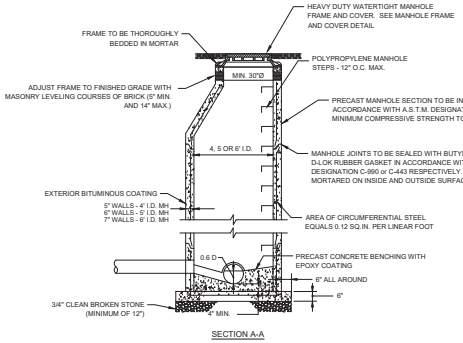


PLAN VIEW

NOTES:
1. DROP CONNECTION TO BE USED IN ALL CASES WHERE DIFFERENCE IN INLET & OUTLET INVERTS IS GREATER THAN 2 FEET.
2. ENTIRE EXTERIOR TO RECEIVE COATING OF BITUMINOUS SEALER.
3. FLAT TOP TO BE USED ONLY WHERE SHALLOW CONDITIONS DO NOT PERMIT USE OF CONE SECTION.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS.
5. WHEN A MANHOLE BASE I.D. OF GREATER THAN 48"Ø IS REQUIRED, THE CONTRACTOR SHALL PROVIDE TRANSITION SECTION(S), STARTING AT A MINIMUM 6" ABOVE THE INLET PIPE O.D., BEFORE TRANSITION TO THE 30"Ø MANHOLE OPENING

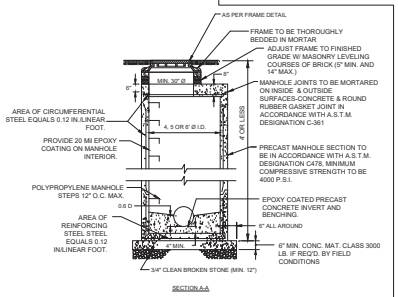
MANHOLE STEPS

MH BASE I.D. "A"	MAXIMUM NOMINAL PIPE SIZE (REGARDLESS OF MATERIAL)		MH WALL THICKNESS "T"
	STRAIGHT THRU TO 45° DEFLECTION	90° DEFLECTION	
4-0"†	24"Ø	18"Ø	5"
5-0"†	36"Ø	27"Ø	6"
6-0"†	42"Ø	30"Ø	7"
7-0"†	48"Ø	36"Ø	8"
8-0"†	60"Ø	42"Ø	9"



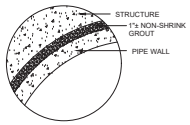
SECTION A-A

PRECAST STORM SEWER MANHOLE DETAIL
NOT TO SCALE

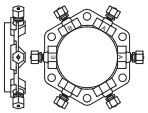


SECTION A-A

SHALLOW PRECAST STORM SEWER MANHOLE DETAIL
NOT TO SCALE

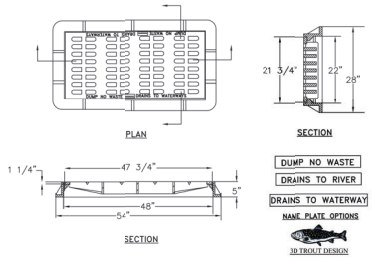


STORM MANHOLE & INLET PIPE CONNECTION DETAIL
NOT TO SCALE



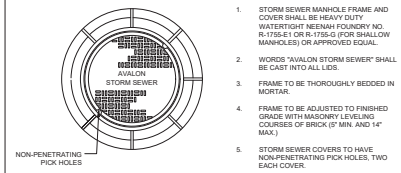
EBAA IRON
SERIES 2000PV OR APPROVED EQUAL
PRESSURE RATINGS FOR ORDINARY WATER WORKS:
DR14 200 PSI SDR17 250 PSI
DR18 150 PSI SDR21 200 PSI
DR25 100 PSI SDR26 160 PSI
NSF-61 RATED 150 PSI ON DR18
EXCEEDS UNI-B-13 OR 92
FOR USE ON PVC PIPE
MADE IN THE USA

MECHANICAL JOINT RESTRAINT DETAIL
NOT TO SCALE



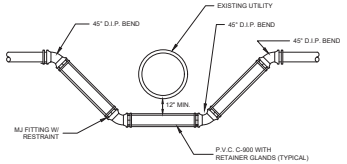
INLET CASTING TO BE PHASE II STORM WATER COMPLIANT ECO-GRATE, BRIDGESTATE FOUNDRY NO. 3405 OR APPROVED EQUAL.

TYPE "A" INLET FRAME AND GRATE DETAIL
NOT TO SCALE



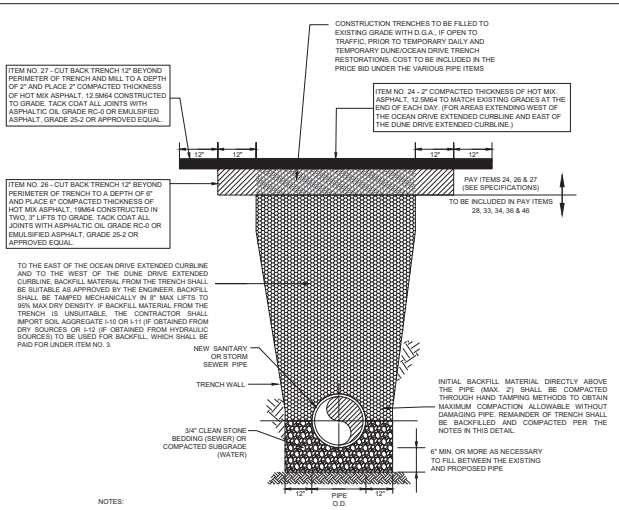
1. STORM SEWER MANHOLE FRAME AND COVER SHALL BE HEAVY DUTY WATERTIGHT NEENAH FOUNDRY NO. R-1755-E1 OR R-1755-G (FOR SHALLOW MANHOLES) OR APPROVED EQUAL.
2. WORDS "AVALON STORM SEWER" SHALL BE CAST INTO ALL LIDS.
3. FRAME TO BE THOROUGHLY BEDDED IN MORTAR.
4. FRAME TO BE ADJUSTED TO FINISHED GRADE WITH MASONRY LEVELING COURSES OF BRICK (5" MIN. AND 14" MAX.)
5. STORM SEWER COVERS TO HAVE NON-PENETRATING PICK HOLES, TWO EACH COVER.

STORM MANHOLE FRAME AND COVER DETAIL
NOT TO SCALE



NOTES:
1. WATER MAIN SHALL BE PVC C-900 PIPE SIZE INDICATED ON DRAWINGS. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON WITH RETAINER GLANDS.
2. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS AND OTHER POINTS OF PIPE DIRECTION CHANGE.
3. MINIMUM CLEARANCE BETWEEN WATER MAIN AND SEWER MAIN SHALL BE 18".
4. CONTRACTOR SHALL TEST PIT TO DETERMINE DEPTH AND LOCATION OF PROPOSED WATER MAIN CROSSINGS TO DETERMINE POTENTIAL CONFLICTS.

UTILITY BYPASS DETAIL
NOT TO SCALE



NOTES:
1. ALL ROADWAY CONSTRUCTION TO BE IN ACCORDANCE WITH THE 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 8 INCHES THICK IN A LOOSE STATE.
3. DENSE GRADED AGGREGATE BASE COURSE SHALL BE PROVIDED IN ACCORDANCE WITH NJDOT SECTION 302.
4. HOT MIX ASPHALT OF THE ABOVE REFERENCED MIX DESIGNATIONS SHALL BE PROVIDED AND CONSTRUCTED IN ACCORDANCE WITH NJDOT SECTION 401.

PIPE LAYING, TEMPORARY AND PERMANENT TRENCH RESTORATION DETAIL
NOT TO SCALE

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000
Digitally signed by Thomas R. Thornton
12

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	12	15

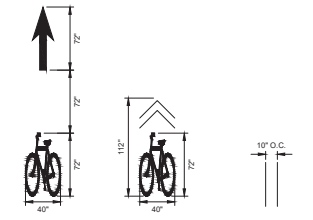
Drawing Number: D-103

Title
AVALON AVENUE
DRAINAGE IMPROVEMENTS

CONSTRUCTION DETAILS

C:\PWWORKING\HMM\WATER_WASTEWATER\MOTTMAC_LEVB27935\D0585770\507103996-017_MMD_PERMIT PLANS.DWG
SAVE DATE/TIME: 1/3/2023 11:30:05 AM

ALL STRIPING DETAILS AND NOTES SHOWN ON THIS PLAN ARE FOR RESTORATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE NOTE OF THE EXISTING LAYOUT OF THE STRIPING THAT WILL BE DISTURBED ALONG AVALON AVENUE AND UP ANY SIDE STREETS AND REPLACE BACK TO ITS ORIGINAL CONDITIONS. STRIPING NOTES AND DETAILS SHOWN ON THIS PLAN SHEET ARE TAKEN FROM THE BICYCLE ROUTE EXTENSION SIGNAGE AND STRIPING IMPROVEMENTS PROJECT.



BIKE LANE SYMBOL MARKING DETAIL
NOT TO SCALE

SHARED LANE MARKING DETAIL
NOT TO SCALE

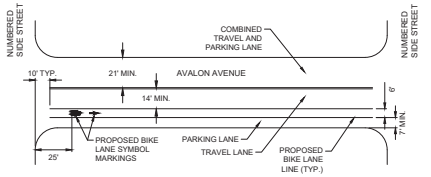
CENTERLINE STRIPING DETAIL
NOT TO SCALE

STRIPING MARKINGS DETAILS

NOT TO SCALE

STRIPING NOTES:

1. THE DIRECTION CONVENTION IS NORTHBOUND (NB) AND SOUTHBOUND (SB) FOR DUNE DRIVE AND FIRST AND AVALON AVENUES AND EASTBOUND (EB) AND WESTBOUND (WB) FOR ALL NUMBERED SIDE STREETS.
2. IF LOCATION OF PROPOSED STRIPING OR MARKINGS CONFLICTS WITH EXISTING STRIPING OR MARKINGS, INCLUDING BUT NOT LIMITED TO CROSSWALKS, PARKING SPOTS, STOP BARS, AND NO PARKING MARKINGS/LINES, OR IF PROPOSED MARKINGS ARE LONGITUDINALLY WITHIN TEN (10) FEET OF A DRIVEWAY APRON OR 50 FEET OF A STOP BAR, NOTIFY AND COORDINATE WITH THE ENGINEER TO DETERMINE A SUITABLE LOCATION.
3. NO STRIPING OR MARKINGS ARE TO BE PLACED WITHIN ANY INTERSECTION OR WITHIN TEN (10) FEET OF THE CURB LINE EXTENSIONS OF ANY INTERSECTION UNLESS OTHERWISE NOTED.
4. PROPOSED TRAFFIC MARKINGS TO BE WHITE THERMOPLASTIC. PROPOSED BIKE LANE LINES TO BE WHITE THERMOPLASTIC, 6"-WIDE. PROPOSED CENTERLINE STRIPING TO BE YELLOW LONG-LIFE EPOXY RESIN, 4"-WIDE.
5. ALL BIKE LANE SYMBOL MARKINGS ARE TO BE CENTERED BETWEEN THE BIKE LANE LINES. CENTERLINE STRIPING TO BE SPACED 10" ON-CENTERS.
6. DIMENSIONS ARE MEASURED FROM FACE OF CURBS, CENTER OR EDGE OF MARKINGS AS INDICATED, CENTER OF BIKE LANE LINES, AND MIDDLE OF DOUBLE YELLOW CENTER LINES. BIKE AND TRAVEL LANE WIDTHS ARE TO MATCH THE DIMENSIONS PROVIDED IN THE DETAILS AS CLOSELY AS POSSIBLE UNLESS OTHERWISE NOTED.
7. EXISTING CURB LINES ARE APPROXIMATELY PARALLEL ALONG EXISTING STREETS FOR MOST OF THE PROJECT AREA. CENTERLINE STRIPING AND BIKE LANE LINES ARE TO BE PLACED TO MINIMIZE VARIABILITY IN THE BIKE LANE AND TRAVEL LANE ALIGNMENTS ALONG THE PROJECT LENGTH AND BE APPROXIMATELY PARALLEL TO EXISTING CURB LINES. THE LATERAL OFFSET FROM THE END OF ONE BIKE LANE OR TRAVEL LANE LINE TO THE START OF ANOTHER (ON CENTERS) ACROSS AN INTERSECTION IS TO VARY BY NO MORE THAN 0.25 FEET.
8. CONTRACTOR TO VERIFY THAT THE ALIGNMENT AND WIDTHS OF THE ROADWAY SEGMENTS ARE ADEQUATE TO PROVIDE FOR THE BIKE LANE, PARKING LANE, AND TRAVEL LANE WIDTHS SHOWN IN THE VARIOUS BIKE LANE DETAILS PRIOR TO PLACEMENT OF ANY MARKINGS OR STRIPING. NOTIFY THE ENGINEER OF ANY ROADWAY SEGMENT MEASUREMENTS WHICH ARE TOO NARROW TO MEET THE REQUIRED DIMENSIONS.
9. THE LOCATION PLAN IS AN APPROXIMATION OF WHERE PROPOSED IMPROVEMENTS ARE TO BE PLACED. ACTUAL LOCATION OF PROPOSED IMPROVEMENTS TO BE DETERMINED BY FIELD CONDITIONS AND IN ACCORDANCE WITH THE DETAILS AND NOTES ON THIS SHEET.
10. TRAFFIC MARKINGS AND STRIPING TO COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND THE STANDARD HIGHWAY SIGNS PUBLICATION, LATEST REVISIONS AND SUPPLEMENTS.
11. EXISTING CURB LINES ARE DIAGRAMMATIC ONLY AND INTENDED TO CONVEY THE LOCATION, OFFSET, SPACING, ORIENTATION, ETC. OF PROPOSED STRIPING AND MARKINGS.



NOTES:

1. THIS DETAIL APPLIES TO THE FOLLOWING ROADWAY SEGMENTS:
   - AVALON AVENUE FROM 8TH STREET TO 32ND STREET
2. FIELD MEASUREMENTS OF THE WIDTH OF THE ABOVE ROADWAY SEGMENTS VARY FROM 48.1 FEET TO 49.7 FEET, TO PROVIDE FOR ONE (1) 6'-WIDE BIKE LANE, ONE (1) 7'-WIDE PARKING LANE, ONE (1) 14'-WIDE TRAVEL LANE, AND THE 21'-WIDE COMBINED TRAVEL AND PARKING LANE, ONLY 48 FEET OF ROADWAY WIDTH IS NEEDED. ANY EXTRA ROADWAY WIDTH TO BE ALLOCATED TO THE PARKING LANE, TRAVEL LANE, AND/OR THE COMBINED TRAVEL AND PARKING LANE (SEE STRIPING NOTE 7).
3. ALONG AVALON AVENUE, THE PROPOSED BIKE LANE IS TO BE IN THE NB DIRECTION OF TRAVEL ONLY.

BIKE LANE STRIPING AND MARKINGS LAYOUT DETAIL

NOT TO SCALE

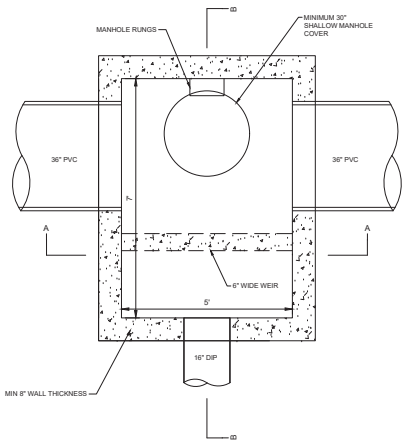
2. A PROPOSED SHARED LANE MARKING POINTING IN THE WB DIRECTION OF TRAVEL AND OFFSET 11 FEET FROM THE NORTHERLY CURB LINE TO THE CENTER OF THE MARKING IS TO BE PLACED ON THE FOLLOWING ROADWAY SEGMENTS:
   - FROM FIRST AVENUE TO AVALON AVENUE ON 8TH

SHARED LANE MARKINGS LAYOUT DETAIL

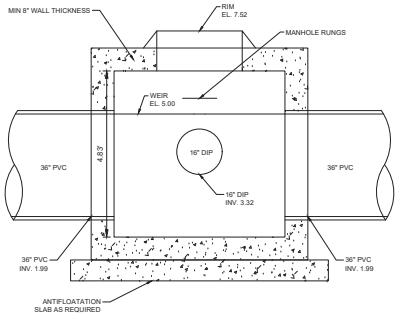
NOT TO SCALE

NOTES:

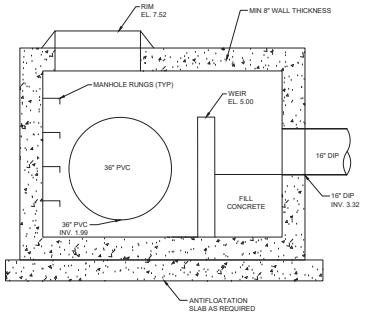
1. CONCRETE IS TO OBTAIN A STRENGTH OF 4,500 PSI IN 28 DAYS.
2. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60,000 PSI
3. W.W.F. HAS A YIELD STRENGTH OF 75,000 PSI.
4. THE MANHOLE IS TO MEET THE REQUIREMENTS OF ASTM C-913 3. "PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES"
5. THE WALLS AND BASE SLAB TO BE DESIGNED FOR A MINIMUM EARTH COVER OF 20 FT. (EARTH COVER = FINISHED GRADE TO TOP OF BASE SLAB).
6. MANHOLE FRAME AND COVER TO BE NEENAH FOUNDRY NO. R-1755-G OR APPROVED EQUAL. SEE STORM MANHOLE FRAME AND COVER DETAIL ON PREVIOUS SHEET.
7. PROVIDE POLYPROPYLENE LADDER RUNGS @ 12" CENTER TO CENTER.
8. STRUCTURE SHALL HAVE CONCRETE BENCHING RAISED TO THE SPRING LINE OF THE LARGEST PIPE UNLESS SHOWN OTHERWISE.



PLAN VIEW



SECTION A-A



SECTION B-B

WEIR MANHOLE DETAIL

NOT TO SCALE

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Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

Digitally signed by:

22

THOMAS R. THORNTON No. GE41770 STATE OF NEW JERSEY

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

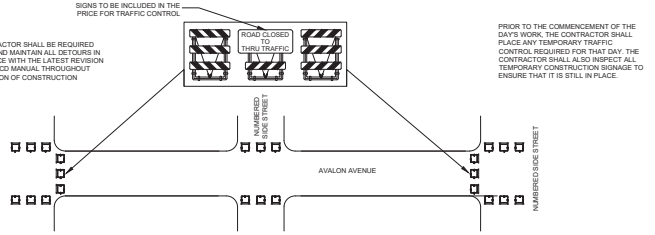
Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	13	15

Drawing Number: D-104

Title: AVALON AVENUE DRAINAGE IMPROVEMENTS

CONSTRUCTION DETAILS



TEMPORARY SIGNAGE

NOT TO SCALE

THE CONTRACTOR SHALL FURNISH AND ERECT TEMPORARY SIGNS TO BE INSTALLED AT THE LIMITS OF CONSTRUCTION THROUGHOUT THE DURATION OF THE PROJECT. SIGNS HAVE BEEN ACCOUNTED FOR IN THE QUANTITIES FOR EVERY INTERSECTION, BUT THE CONTRACTOR MAY MOVE AND REUSE SIGNS AS NECESSARY DEPENDING WHERE THE CREWS ARE WORKING. THE SIGN SHALL READ:

CAUTION!
CONSTRUCTION IN PROGRESS
PLEASE BE CAREFUL WALKING AND DRIVING IN THIS AREA.
THANK YOU FOR YOUR PATIENCE.
MAYOR AND COUNCIL, BOROUGH OF AVALON

CONTRACTOR SHALL SUBMIT DETAIL OF THE SIGNS FOR APPROVAL BY THE ENGINEER. SIGNS SHALL BE PAID FOR UNDER BID ITEM NO. 6, CONSTRUCTION SIGNS.

CONSTRUCTION SIGN

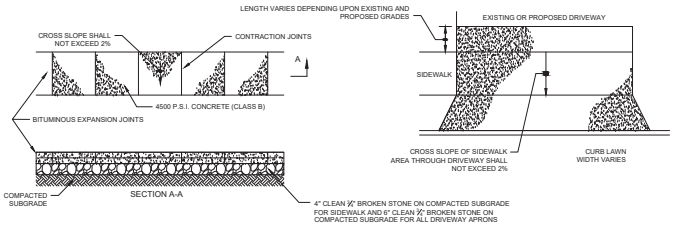
NOT TO SCALE

GENERAL TRAFFIC NOTES

1. UNLESS OTHERWISE SPECIFIED LATEX TRAFFIC PAINT SHALL BE USED WHEN TRAFFIC STRIPES OR TRAFFIC MARKINGS ARE REQUIRED ON INTERMEDIATE PAVEMENT LAYERS THAT NEED TO BE OPENED TO TRAFFIC DUE TO STAGE CONSTRUCTION.
2. EXISTING STREET AND ROAD SIGNS SHALL BE RESET IN ACCORDANCE WITH THE LATEST REVISED NJDOT STANDARD ROADWAY CONSTRUCTION - TRAFFIC CONTROL DETAILS IN THE LOCATIONS DEEMED APPROPRIATE BY THE ENGINEER. PAYMENT SHALL BE MADE UNDER ITEM NO. 40, SITE RESTORATION.
3. PRIOR TO THE COMMENCEMENT OF THE DAY'S WORK, THE CONTRACTOR SHALL PLACE ANY TEMPORARY TRAFFIC CONTROL REQUIRED FOR THAT DAY. THE CONTRACTOR SHALL ALSO INSPECT ALL PERMANENT TRAFFIC CONTROL TO ENSURE THAT IT IS STILL IN PLACE.
4. TRAFFIC CONTROL DEVICES WHICH ARE NOT MAINTAINED IN GOOD WORKING CONDITION SHALL RESULT IN LIQUIDATED DAMAGES TO THE CONTRACTOR. ONCE THE CONTRACTOR IS NOTIFIED OF AN OFFENDING TRAFFIC CONTROL DEVICE HE/SHE WILL HAVE UNTIL THE END OF WORK ON THE FOLLOWING DAY TO BRING THE DEVICE INTO COMPLIANCE. FAILURE TO BRING THE DEVICE INTO COMPLIANCE IN THE ALLOTTED TIME WILL RESULT IN THE CONTRACTOR BEING ASSESSED LIQUIDATED DAMAGES OF $500 PER DAY. THE SUM OF $500 AS LIQUIDATED DAMAGES HAS BEEN DETERMINED TO BE REASONABLE FORECAST OF COMPENSATION FOR THE HARM THAT WILL BE CAUSED BY DELAYS.

NOTES:

1. DRIVEWAY APRON - UNREINFORCED DRIVEWAY APRONS SHALL BE 6" THICK. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 6" WIDE, AND EXTENDING UNBROKEN THE FULL WIDTH OF THE WALK SHALL BE INSTALLED BETWEEN THE CONCRETE SIDEWALK AND DRIVEWAY APRON. CONTRACTION JOINTS SHALL BE INSTALLED EVERY 4 FEET THE FULL WALK WIDTH. THERE SHALL BE A BROOM FINISH WITH EDGES FINISHED WITH A SUITABLE TOOL.
2. SIDEWALKS - SIDEWALKS SHALL BE 4" THICK, CONSTRUCTED IN EIGHT FOOT SECTIONS WITH CLEAR SPACE OF 3/16 INCH BETWEEN ADJACENT SECTIONS AND A FALSE JOINT ACROSS THE MIDDLE OF EACH SECTION. EXPANSION JOINT 1/2" THICK, 4" WIDE, AND EXTENDING UNBROKEN THE FULL WIDTH OF THE WALK SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20'. CONTRACTION JOINTS SHALL BE INSTALLED EVERY 4 FEET THE FULL WALK WIDTH.
3. ALL CONCRETE SIDEWALK AND DRIVEWAY APRON SHALL BE CURED IN ACCORDANCE WITH SECTION 606.03.02. CONTRACTOR SHALL SUBMIT A CURING COMPOUND TO THE ENGINEER FOR APPROVAL..
4. CONCRETE SIDEWALK AND DRIVEWAY APRON SHALL BE CLASS "B", 4500 PSI AND CONSTRUCTED IN ACCORDANCE WITH SECTION 606.



CONCRETE DRIVEWAY AND SIDEWALK

NOT TO SCALE

TEMPORARY SIGN NOTES

INSTALLATION, DIMENSIONS, COLORS AND DETAILS OF VARIOUS SIZE SIGNS AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (M.U.T.C.D.)

LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL "STANDARD ALPHABETS FOR HIGHWAY SIGNS" US DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

BACKING MATERIAL:

ALUMINUM SHALL BE FLAT SHEET OF 6061-T6 ALLOW, 0.100" GAUGE.

TEMPORARY SIGN SUPPORT:

SIGN SUPPORTS SHALL BE WELL SEASONED LUMBER, S4S, FREE OF SPLITS, KNOTS AND WARPS OR, OF STEEL OR ALUMINUM COMPONENTS.

WOOD POSTS SHALL HAVE A UNIFORM CROSS SECTION AND SHALL NOT EXCEED THE FOLLOWING DIMENSIONS FOR:

SINGLE POST: 4" x 6"
TWO POST: 3" x 6" OR 4" x 5"
THREE POSTS: 3" x 5" OR 4" x 4"

NO BRACING IS PERMITTED. VERTICAL CLEARANCE FOR SIGNS MOUNTED ON WOOD SUPPORTS SHALL BE 7'-0" DESIRABLE, 6'-0" MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST SHALL NOT EXCEED 3'-6".

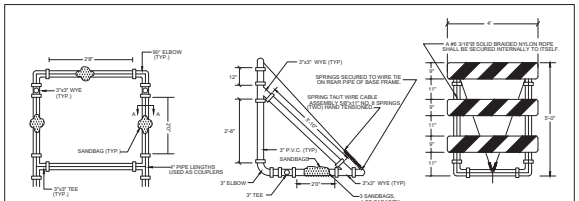
STEEL OR ALUMINUM POSTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL FOR SELECTIVE DIRECTIONAL SIGNS, CONSTRUCTION AND "M", "W" AND "R" BENDWAY SIGN SUPPORTS.

TEMPORARY SIGN SUPPORTS NOT MEETING CRITERIA SHALL BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHION.

SIGN NOTES:

SIGN FACES SHALL BE RETROREFLECTIVE SHEETING CONFORMING TO SUBSECTION 916.04 TYPE II SHEETING. ALL ADVANCE WARNING SIGNS ("W" PREFIX) ARE TO BE FABRICATED USING TYPE IV-B (FLUORESCENT ORANGE 3M "V.I.P. DIAMOND GRADE" SHEETING) REFLECTIVE SHEETING. ALL SUCH SIGNS SHALL BE NEW OR IN LIKE-NEW CONDITION, IN THE OPINION OF THE INSPECTOR, AT THE COMMENCEMENT OF WORK.

ALL SIGNS SHALL BE SECURELY FASTENED TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS OF ALUMINUM (2024-T4 ALLOY) OR HOT-DIP GALVANIZED STEEL (ASTM 153).

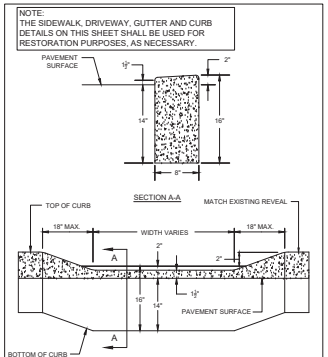


1. ORANGE AND WHITE STRIPES SHALL BE REFLECTIVE SHEETING TYPE II AS SHOWN FOR CONSTRUCTION SIGNS. ALTERNATE ORANGE AND WHITE STRIPES 6" WIDE SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION OF TRAFFIC IS TO PASS.
2. THE 6" x 48" BARRICADE RAILS SHALL BE FABRICATED FROM 0.024" ANODIZED ALUMINUM OR 0.125" MAX. PLASTIC SHEETING AND SHALL BE ATTACHED, 4 PER RAIL, WITH 1" NO. 14 PAN HEAD METAL SCREWS OR PLASTIC RIVETS. ALL CORNERS SHALL BE ROUNDED.
3. PIPE SHALL BE WHITE PVC SCHEDULE 40 ASTM 1785 OR PVC, SDR-26 ASTM 2241. FITTINGS SHALL BE WHITE PVC OR ABS OF MATCHING WALL THICKNESS AND INSIDE DIAMETER AND MEETING THE MATERIAL REQUIREMENTS AND TESTING SECTIONS OF ASTM D-2466 FOR PVC AND ASTM D-2468 FOR ABS. ALL JOINTS SHALL BE SLIP FIT AND NOT THREADED OR CEMENTED. PVC FITTINGS MEETING ASTM D-2665 WILL ALSO BE ACCEPTABLE.
4. SANDBAG PLACEMENT MAY BE ADJUSTED AT THE DIRECTION OF THE ENGINEER. ALL DIMENSIONS ON FULL PIPE LENGTH.
5. MINOR MANUFACTURER'S VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER.

TYPE III BREAKAWAY BARRICADES

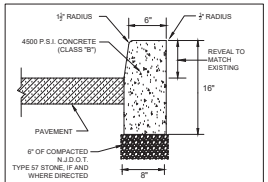
NOT TO SCALE

NOTE:
THE SIDEWALK, DRIVEWAY, GUTTER AND CURB DETAILS ON THIS SHEET SHALL BE USED FOR RESTORATION PURPOSES, AS NECESSARY.



DEPRESSED CURB DETAIL

NOT TO SCALE

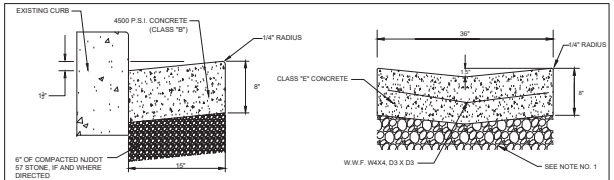


NOTES.

1. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.
2. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN THE PRICE BID FOR SITE RESTORATION.
3. THE CONTRACTOR SHALL INSTALL FALSE JOINTS IN THE CURB AT INTERVALS NOT EXCEEDING 10 FEET.
4. ALL CONCRETE CURB SHALL BE CURED IN ACCORDANCE WITH SECTION 607.03.02. CONTRACTOR SHALL SUBMIT A CURING COMPOUND TO THE ENGINEER FOR APPROVAL.
5. CONCRETE VERTICAL CURB SHALL BE CLASS "B", 4500 PSI AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 607.

CONCRETE VERTICAL CURB

NOT TO SCALE

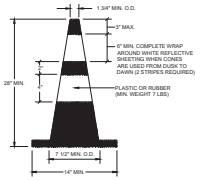


NOTES.

1. 6" OF COMPACTED NJDOT NO. 57 STONE TO BE INSTALLED BELOW GUTTER, IF AND WHERE DIRECTED BY THE ENGINEER.
2. EXPANSION JOINTS, 1/2" THICK, EXTENDING UNBROKEN THE FULL WIDTH OF THE GUTTER SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20'. THE CONTRACTOR SHALL INSTALL FALSE JOINTS IN THE GUTTER AT INTERVALS NOT EXCEEDING 10 FEET.
3. ALL CONCRETE GUTTER SHALL BE CURED IN ACCORDANCE WITH SECTION 606.03.02. CONTRACTOR SHALL SUBMIT A CURING COMPOUND TO THE ENGINEER FOR APPROVAL.
4. CONCRETE GUTTER SHALL BE NJDOT CLASS "B" AND CONSTRUCTED IN ACCORDANCE WITH SECTION 603.
5. RESTORATION OF CONCRETE GUTTER AND ROCKER GUTTER DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE INCLUDED IN THE PRICE BID FOR SITE RESTORATION.

CONCRETE GUTTER & CONCRETE ROCKER GUTTER

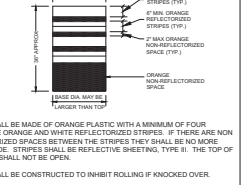
NOT TO SCALE



1. MINOR MANUFACTURERS VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER.
2. BASE MAY BE OF THE BREAKAWAY BALLASTED TYPE.

TRAFFIC CONE DETAIL

NOT TO SCALE



1. DRUMS SHALL BE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE ORANGE AND WHITE REFLECTORIZED STRIPES. IF THERE ARE NON REFLECTORIZED SPACES BETWEEN THE STRIPES THEY SHALL BE NO MORE THAN 2" WIDE. STRIPES SHALL BE REFLECTIVE SHEETING, TYPE III. THE TOP OF THE DRUM SHALL NOT BE OPEN.
2. DRUMS SHALL BE CONSTRUCTED TO INHIBIT ROLLING IF KNOCKED OVER.
3. THE REFLECTORIZED AREA OF DRUMS SHALL BE ROUND EXCEPT THAT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY OF AN 18" DIAM. ROUND DRUM REGARDLESS OF ORIENTATION, MAY BE USED IF APPROVED BY THE ENGINEER.
4. WHEN BALLAST IS REQUIRED BY THE ENGINEER, SAND SHALL BE USED. THE MAXIMUM WEIGHT OF THE BALLAST SHALL BE 50 LBS AND LOCATED APPROXIMATELY AT GROUND LEVEL.

DRUM DETAIL

NOT TO SCALE

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Client

BOROUGH OF AVALON
CAPE MAY COUNTY, NJ 08202

Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

DocuSigned by:
[signature]

12

STATE OF NEW JERSEY
No. GE41770
PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

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Project Number	B/O	Total
507103996-017	14	15

Drawing Number: D-105

Title: AVALON AVENUE DRAINAGE IMPROVEMENTS

CONSTRUCTION DETAILS

STANDARD FOR TOPSOILING

DEFINITION : TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.
PURPOSE : TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.
WHERE APPLICABLE : TOPSOIL SHOULD BE USED WHERE SOILS ARE: SANDS, GRAVELLY SOILS, CLAYS, SILTY CLAYS, VERY SHALLOW, OR WHERE THEY ARE EXTREMELY ACID (LESS THAN Ph 4.0) OR SALTY (CONDUCTIVITY GREATER THAN 1.0 MILLIMHOS PER CENTIMETER); OR WHERE TOPSOIL IS AVAILABLE ON SITE AND ASSURANCE OF IMPROVED VEGETATIVE GROWTH IS DESIRED.

METHODS AND MATERIALS :

MATERIALS - TOPSOIL SHOULD BE FRIABLE AND LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLAN GROWTH. A Ph RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER). TOPSOIL HAULED IN FROM OFF SITE SHOULD HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

STRIPPING AND STOCKPILING - FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING. STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL pH TO 6.5. IN LIEU OF SOIL TESTS, SEE LIME RATE GUIDE IN SEEDBED PREPARATION FOR PERMANENT VEGETATIVE COVER, PAGE 4-1. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG. 7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

SITE PREPARATION - GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE STANDARD FOR LAND GRADING (PG. 19-1). SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT AND LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOILS pH TO 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES. IMMEDIATELY PRIOR TO TOPSOIL DISTRIBUTION, THE SURFACE SHOULD BE SCARIFIED TO PROVIDE A GOOD BOND WITH THE TOPSOIL. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

APPLYING TOPSOIL - TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY). A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES, FIRMED IN PLACE IS REQUIRED. SOILS WITH A pH OF 4.0 OF LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A pH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1).

DUST CONTROL STANDARDS

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR DUST CONTROL AT THE REQUEST OF MUNICIPAL CONSTRUCTION CODE OFFICIAL, OR UPON INSPECTION BY A S.C.S. OFFICIAL. SEE STANDARDS PG. 16-1 AND 16-2.

SPRAY-ON ADHESIVE - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

ANIONIC ASPHALT EMULSION (WATER DILUTION : 7:1, COARSE SPRAY NOZZLE, 1200 GAL. PER ACRE)
LATEX EMULSION (WATER DILUTION : 12.5:1, FINE SPRAY NOZZLE, 235 GAL. PER ACRE)
RESIN IN WATER (WATER DILUTION : 4:1, FINE SPRAY NOZZLE, 300 GAL. PER ACRE)

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE SUED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.

STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

STANDARD FOR STABILIZATION WITH MULCH ONLY

DEFINITION : STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS.
PURPOSE : TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.
WHERE APPLICABLE : THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION-RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED. SEE STANDARDS PG. 5-1 AND 5-2.

METHODS AND MATERIALS :

SITE PREPARATION - GRADE AS NEEDED AND FEASIBLE, TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR APPLYING AND ANCHORING MULCH. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING, P. 19-1. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

PROTECTIVE MATERIALS :

UNROTTED SMALL-GRAIN STRAW, HAY, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIEDOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. ASPHALT EMULSION OR CUTBACK ASPHALT IS RECOMMENDED AT THE RATE OF 600 TO 1,200 GALLONS PER ACRE. THIS IS SUITABLE FOR A LIMITED PERIOD OF TIME WHERE TRAVEL BY PEOPLE, ANIMALS, OR MACHINES IS NOT A PROBLEM. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN SUFFICIENT QUANTITIES. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEEDER OR HYDROMULCHER. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED. WOOD CHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOOD CHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,0 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.

MULCH ANCHORING :

SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER HAY OR STRAW MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

MULCH ANCHORING TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED T PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. TOOL PENETRATION SHOULD BE DONE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE DONE ON THE CONTOUR.

LIQUID MULCH-BINDERS - APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

USE ONE OF THE FOLLOWING:

CUTBACK ASPHALT - RAPID CURING (RC-70, RC-250, AND RC-800) OR MEDIUM CURING (MC-250 OR MC-800). APPLY 0.04 GAL./SQ. YD. OR 194 GAL./ACRE ON FLAT AREAS AND ON SLOPES LESS THAN 8 FEET HIGH. ON SLOPES 8 FEET OR MORE HIGH, USE 0.075 GAL./SQ YD. OR 363 GAL./ACRE.

SYNTHETIC OR ORGANIC BINDERS - SEE STANDARDS PG. 5-2.

GENERAL NOTES

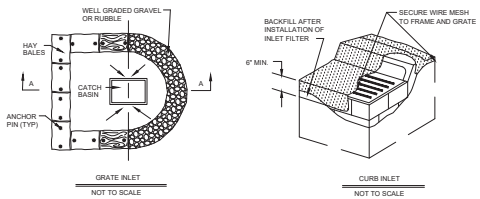
1. ALL SEDIMENT SPILLED, DROPPED, WASTED, TRACKED, OR BLOWN ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

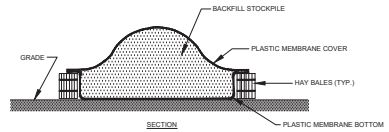
GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL:

1. All erosion and sediment control practices to be installed prior to any major soil disturbance, or in their proper sequence, and maintained until permanent protection is established.
2. Any disturbed areas that will be left exposed more than 30 days, and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to State Standards.
3. Permanent vegetation to be seeded or sodded on all exposes areas within ten (10) days after grading. Mulch to be used as necessary for protection until seeding is established.
4. All work to be done in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey", 7th Edition, January 2014, Revised July 2017.
5. A bituminous concrete sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilized streets, roads, driveways and parking areas. In areas where no utilities are present, the bituminous concrete sub-base shall be installed within 15 days of the preliminary grading.
6. Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes and roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to State Standards.
7. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e. slopes greater than 3:1).
8. Traffic control standards require the installation of a 50' x 20' x 6" pad of 1" to 2" stone, at all construction driveways, immediately after initial site disturbance.
9. In accordance with the standard for permanent vegetative cover for soil stabilization, any soil having a Ph of 4 or less or containing iron sulfides shall be covered with a minimum of 12 inches of soil having a Ph of 5 or more prior to seedbed preparation.
10. The Cape Atlantic Soil Conservation District shall be notified 72 hours in advance of any land disturbing activity.
11. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover.
12. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed.
13. In that N.J.S.A. 4:24-39 et. seq. requires that no certificate of occupancy be issued before the provisions of the certified plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the District issuing a report of compliance for the issuance of a certificate of occupancy by the municipality.
14. Conduit outlet protection must be installed at all required outfalls prior to the drainage system becoming operational.
15. Any changes to the certified Soil Erosion and Sediment Control Plans will require the submission of revised Soil Erosion and Sediment Control Plans to the District for recertification. The revised plans must meet all current State Soil Erosion and Sediment Control Standards.
16. Unfiltered dewatering is not permitted. Take all necessary precautions during all dewatering operations to minimize sediment transfer.
17. Should the control of dust at the site be necessary, the site will be sprinkled until the surface is wet, temporary vegetation cover shall be established or mulch shall be applied in accordance with State Standards for Erosion Control.
18. All soil washed, dropped, spilled or tracked outside the limit of disturbance or onto public rights-of-way will be removed immediately.
19. Stockpile and staging locations determined in the field, shall be placed within the limit of disturbance according to the certified plan. Staging and stockpiles not located within the limit of disturbance will require certification of a revised Soil Erosion and Sediment Control Plan. The district reserves the right to determine when certification of a new and separate soil erosion and sediment control plan will be required for these activities.
20. All soil stockpiles are to be temporarily stabilized in accordance with Soil Erosion and Sediment Control Note Number 2.
21. All excess materials must be stockpiled in accordance with the standards of Soil Erosion and Sediment Control in New Jersey.
22. The contractor shall take all necessary precautions during all dewatering operations in order to minimize sediment transfer.
23. The site shall at all times be graded and maintained such that all storm water runoff is diverted to Soil Erosion and Sediment Control Facilities.
24. All sedimentation structures will be inspected and maintained regularly.
25. All catch basin inlets will be protected with crushed stone and filter fabric as shown on detail.
26. Any areas used for the contractor's staging, including but not limited to, temporary storage of stockpiled materials (E.G. crushed stone, quarry process stone, select fill, excavated materials, etc.), shall be entirely protected by a silt fence along the low elevation side to control sediment runoff.
27. Prior to construction, the contractor shall be responsible for notifying the Cape Atlantic Soil Conservation District of any staging and/or stockpile location areas and for obtaining a Soil Erosion and Sediment Control Certification for these areas.
28. A crushed stone, vehicle wheel-cleaning blanket shall be installed at the contractor's staging yard and/or stockpile areas to prevent off-site tracking of sediment by construction vehicles onto public roads. Blanket shall be 20' x 50' x 6" (minimum), 1" to 2" crushed stone inches in diameter. Said blanket shall be underlain with a suitable synthetic filter fabric and maintained in good order.

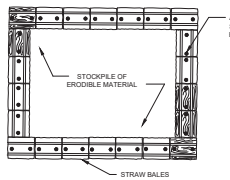
* Where Applicable

ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY", 7TH EDITION, JANUARY 2014, REVISED JULY 2017

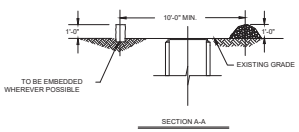


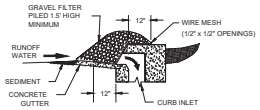


SOIL STOCKPILE DETAIL



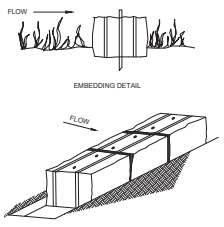
MATERIAL STOCKPILE DETAIL
NOT TO SCALE



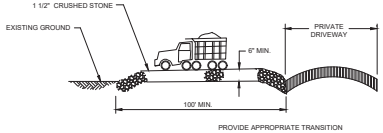


1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE WIRE MESH JUST PRIOR TO PAVING.
3. ALL INLETS TO BE PROTECTED WITH WIRE MESH AND CRUSHED STONE.
4. FILTER FABRIC IS NOT TO BE UTILIZED.

CATCH BASIN FILTER DETAIL
NOT TO SCALE

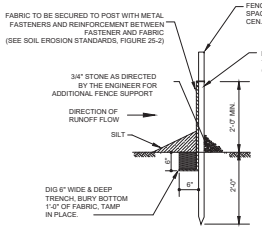


STRAW BALE FILTER DETAIL



PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



* CELANESE "MIRAFI" 140 OR CARTHAGE MILL'S POLY FILTER-X

AT THE COMPLETION OF THE PROJECT AND AFTER SOIL STABILIZATION AND VEGETATIVE GROWTH HAVE BEEN ASSURED, THE SILT FENCE MUST BE COMPLETELY REMOVED AND THE EMBEDMENT TRENCH RESTORED TO A NATURAL CONDITION.

SILT FENCE DETAIL
NOT TO SCALE

MOTT MACDONALD

211 Bayberry Drive, Suite 1A
Cape May Court House, NJ 08210
United States of America
Certificate No. 24GA28016600

F +1 (609) 465 9377
F +1 (609) 465 5270
www.mottmacamericas.com

Client

BOROUGH OF AVALON
CAPE MAY COUNTY, NJ 08202

Avalon ...cooler by a mile.

Rev	Date	Drawn	Description	Ch'k'd	App'd

THOMAS R. THORNTON
NJ PROFESSIONAL ENGINEER LIC. No. 24GE04177000

Designed by: Thomas R. Thornton 12

STATE OF NEW JERSEY No. GE41770 PROFESSIONAL ENGINEER

Designed	RML		Eng check	SAC	
Drawn	RML		Coordination	-	
Dwg check	RML		Approved	TRT	

Scale at ARCH D	Status	Rev	Security
As Shown	PERMIT	Rev0	STD

Project Number	B/O	Total
507103996-017	15	15

Drawing Number: SESC-101

Title

AVALON AVENUE
DRAINAGE IMPROVEMENTS

AVALON AVENUE STORMWATER
BRANCH PROFILES

C:\PWWORKING\HMM\WATER_WASTEWATER\MOTTMAC_LEVB2793\D0058577\I507103996-017_MMD_PERMIT PLANS.DWG
SAVE DATE/TIME: 1/3/2023 11:30:05 AM