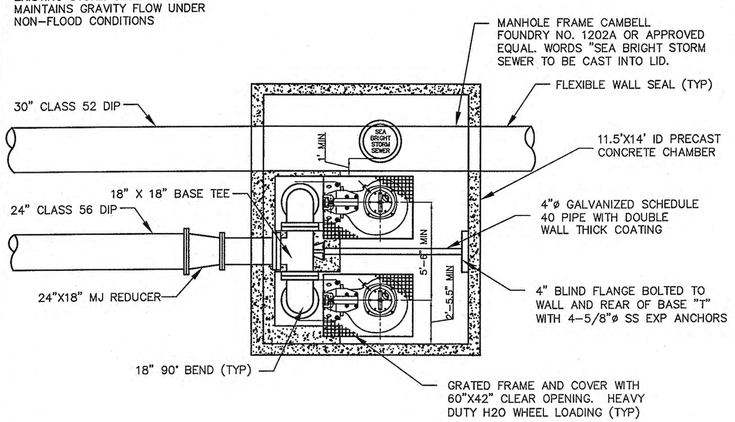
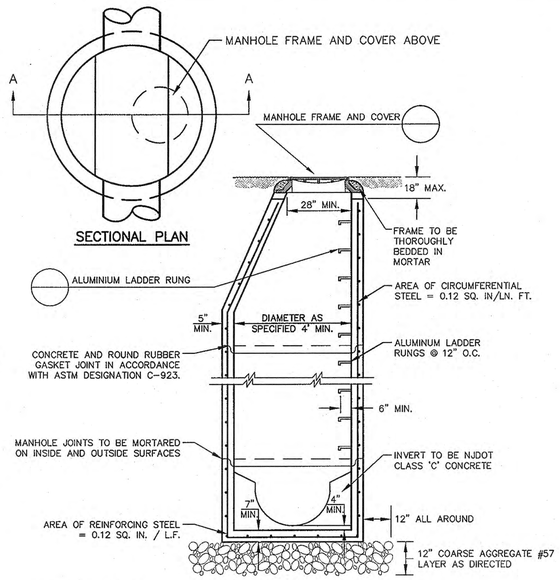
NOTE:
EXISTING STORM SEWER SYSTEM MAINTAINS GRAVITY FLOW UNDER NON-FLOOD CONDITIONS



PUMP STATION PLAN VIEW
1/4"=1'



SECTION A-A

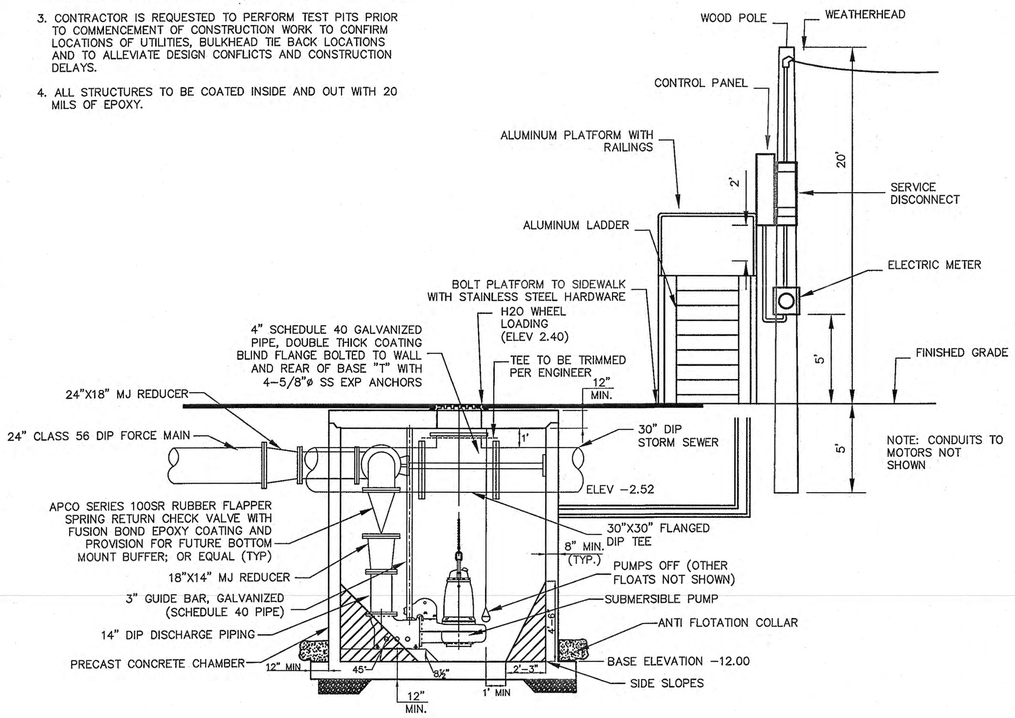
CONSTRUCTION NOTES:

1. PRECAST MANHOLE SECTIONS TO BE ON ACCORDANCE WITH LATEST ASTM SPECIFICATION ASTM C-473 WITH RUBBER GASKET JOINTS, CONFORMING TO ASTM SPECIFICATION C-923. MAXIMUM ADSORPTION TO BE 8% IN ACCORDANCE WITH ASTM SPECIFICATION C-478.
2. MINIMUM COMPRESSION STRENGTH TO BE 4000 PSI.

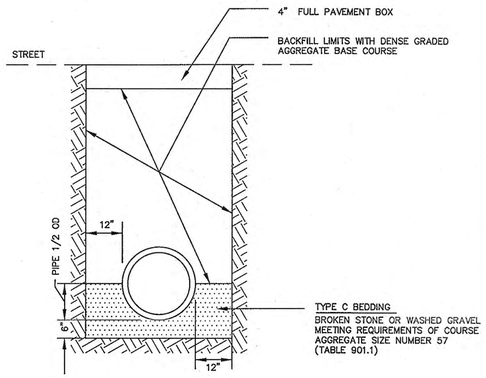
PRECAST DRAINAGE MANHOLE
NOT TO SCALE

NOTES:

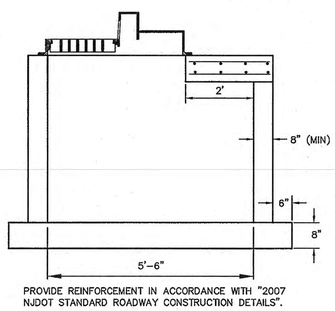
1. DEWATERING WILL BE REQUIRED DURING CONSTRUCTION. A CRITICAL TYPE MUFFLER MUST BE PLACED ON THE PUMP(S) DRIVE. IF POWERED BY INTERNAL COMBUSTION ENGINE(S) OR GENERATOR(S). COST FOR DEWATERING TO BE INCLUDED IN THE VARIOUS BID ITEMS SCHEDULED IN THE PROPOSAL.
2. AREA IS UNDER TIDAL INFLUENCE. CONSTRUCTION SCHEDULING SHOULD BE COORDINATED WITH TIDE SCHEDULE.
3. CONTRACTOR IS REQUESTED TO PERFORM TEST PITS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK TO CONFIRM LOCATIONS OF UTILITIES, BULKHEAD TIE BACK LOCATIONS AND TO ALLEVIATE DESIGN CONFLICTS AND CONSTRUCTION DELAYS.
4. ALL STRUCTURES TO BE COATED INSIDE AND OUT WITH 20 MILS OF EPOXY.



PUMP STATION PROFILE VIEW
1/4"=1'

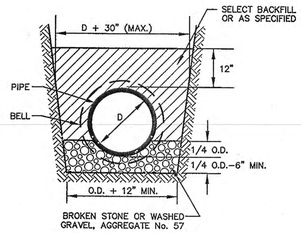


CIRCULAR AND ELLIPTICAL RCP PIPE BEDDING DETAIL
NOT TO SCALE



PROVIDE REINFORCEMENT IN ACCORDANCE WITH "2007 NJDOT STANDARD ROADWAY CONSTRUCTION DETAILS".

INLET TYPE B2
NOT TO SCALE



CLASS 'C' BEDDING

DIP BEDDING DETAIL
NOT TO SCALE

GENERAL NOTES

1. DESIGN SPECIFICATIONS
   2002 (17TH EDITION) AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES WITH INTERIMS AS MODIFIED BY SECTION 3A OF NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES.
2. CONSTRUCTION SPECIFICATIONS
   2007 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH CURRENT SUPPLEMENTAL SPECIFICATIONS AS MODIFIED BY THE SPECIAL PROVISIONS.
3. LIVE LOAD
   AASHTO HS 20 + 25% (HS25) OR TANDEM 24 KIP AXLES AT 4 FOOT CENTERS, WHICHEVER GOVERNS.
4. CONCRETE DESIGN STRESSES
   (A) SPECIFIED DESIGN COMPRESSIVE STRENGTH (f'c) (IN ACCORDANCE WITH THE RETEST LIMIT AS SPECIFIED IN SECTION 903 OF THE NJDOT STANDARD SPECIFICATIONS)
   CLASS P (STRUCTURE) ..... 5,000 PSI
   CLASS A ..... 4,000 PSI
   CLASS B ..... 3,000 PSI
   CLASS S ..... 2,000 PSI

   (B) CLASS DESIGN STRENGTHS (IN ACCORDANCE WITH SECTION 903 OF THE NJDOT STANDARD SPECIFICATIONS)
   CLASS P (STRUCTURE) ..... 5,500 PSI
   CLASS A ..... 4,600 PSI
   CLASS B ..... 3,700 PSI
   CLASS S ..... 2,000 PSI

   (C) ALLOWABLE STRESSES, EXTREME FIBER IN COMPRESSION (fc)
   CLASS P (STRUCTURE) ..... 2,000 PSI
   CLASS A ..... 1,600 PSI
   CLASS B ..... 1,200 PSI

   (D) CONCRETE PROVIDED FOR FOOTINGS AND RETAINING WALLS SHALL BE CLASS B. CONCRETE IN PRECAST STRUCTURES SHALL BE CLASS P.
5. REINFORCEMENT STEEL
   (A) ASTM A615 (GRADE 60) fs = 24,000 PSI.
   (B) ALL REINFORCEMENT STEEL SHALL BE EPOXY COATED AFTER FABRICATION.
6. FOUNDATION DESIGN CRITERIA
   (A) MAX. ALLOWABLE BEARING CAPACITY: 1500 PSF
   (B) UNIT WEIGHT OF SOIL: 110 PCF
   (C) FRICTION ANGLE: 30°
   (D) REFER TO GEOTECHNICAL REPORT PREPARED BY "GENTECH", LAST REVISED MAY 14, 2013 FOR MORE INFORMATION.
7. REINFORCED CONCRETE STRUCTURE, PRECAST
   THE INLET TYPE B2, MANHOLE AND THE PUMP STATION SHALL BE DESIGNED BY THE CONTRACTOR. SERVICE LOAD DESIGN METHOD (ALLOWABLE STRESS DESIGN) SHALL BE USED FOR THE DESIGN. ALL REINFORCEMENT CONSTRUCTION DETAILS AND PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER. ALL DIMENSIONS SHOWN AND REINFORCEMENT DESIGNATIONS ARE MINIMUM REQUIREMENTS TO BE MET BY THE CONTRACTOR. REDUCTIONS TO THESE DIMENSIONS AND DESIGNATIONS SHALL NOT BE PERMITTED.

   THE MANUFACTURING PLANT SHALL BE CERTIFIED BY EITHER THE NATIONAL PRECAST CONCRETE ASSOCIATION OR BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE PLAN CERTIFICATION PROGRAM. CERTIFICATIONS SHALL LIST THE PROPER PRODUCT BEING SUPPLIED. WRITTEN PLAN CERTIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL APPROVAL.

   THE FABRICATOR CHOSEN TO SUPPLY THE PRECAST STRUCTURES IS REQUIRED TO SUPPLY SIX (6) COPIES OF STRUCTURAL CALCULATIONS AND DETAILED SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER. CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.
8. FOOTER AND INVERTS SHALL BE CONSTRUCTED WITH NJDOT CLASS "C" CONCRETE.
9. IF WALL CONSTRUCTION OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH ½" THICK CEMENT PLASTER.
10. A MINIMUM OF 12" COARSE AGGREGATE SHALL BE PLACED BENEATH ALL STRUCTURES. COST SHALL BE INCLUDED IN THE COST OF THE STRUCTURE.
11. THE CONTRACTOR SHALL VERIFY EXISTING AND PROPOSED PIPE INVERTS, INLETS AND MANHOLE DIAMETER AND SIZES PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY DRAINAGE STRUCTURES.

PUMP STATION REINFORCING & CLEAR COVER			
LOCATION		REINFORCING	CLEAR COVER
TOP SLAB	TOP BAR	#4 @12" O.C. BOTHWAYS	1.5"
	BOTTOM BAR	#6 @6" O.C. BOTHWAYS	1.5"
BOTTOM SLAB	TOP BAR	#5 @12" O.C. BOTHWAYS	1.5"
	BOTTOM BAR	#5 @12" O.C. BOTHWAYS	3.0"
SIDE WALLS	INTERIOR BAR	#5 @12" O.C. BOTHWAYS	1.5"
	EXTERIOR BAR	#5 @12" O.C. BOTHWAYS	1.5"

PERMIT PLANS

NO.	DATE	REVISIONS	BY	CHECKED

BOROUGH OF SEA BRIGHT

FLOOD MITIGATION PROJECT:
RECONSTRUCTION OF SIX BULKHEADS AND NEW STORMWATER PUMP STATION
BOROUGH OF SEA BRIGHT, MONMOUTH COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

T&M ASSOCIATES
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS CERTIFICATE OF AUTHORIZATION 24GA 27987500

JACLYN J. FLOR, P.E., P.P. C.M.E.
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LICENSE No. 24GE04542600

4/4/14
DATE

DESIGNED BY	DRAWN BY	CHECKED BY
SB	APP	?
PROJECT NO. SBRT-00861	CADD FILE SBRT00861-CD.dwg	FIELD BK. # N/A

DRAWING CD-1
SHEET 16 OF 19