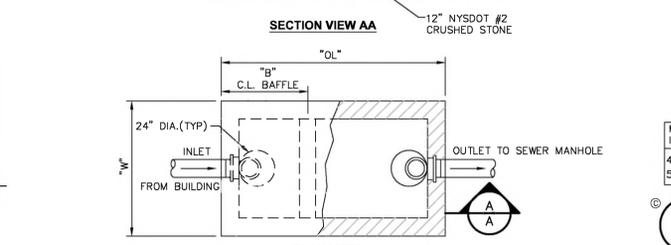
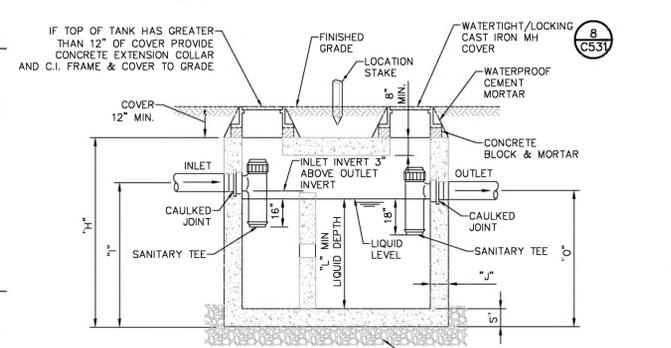


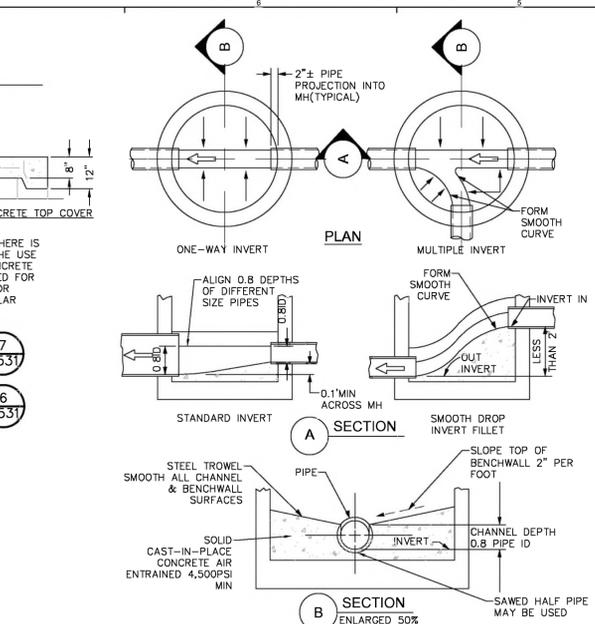
- NOTES:**
- USE ONLY WET-CAST UNITS. DRY-CAST NOT ACCEPTABLE.
 - INVERT SHALL BE FILLETED.
 - REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING PLUS 25% IMPACT.
 - CONCRETE TO TEST 4,500 PSI AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478.
 - BENCH SHALL BE BUILT FOR FLOW BETWEEN INLET AND OUTLET.
 - EACH MANHOLE EXTERIOR SHALL RECEIVE TWO BITUMINOUS COATS.

1 PRECAST CONCRETE MANHOLE
SCALE: NOT TO SCALE

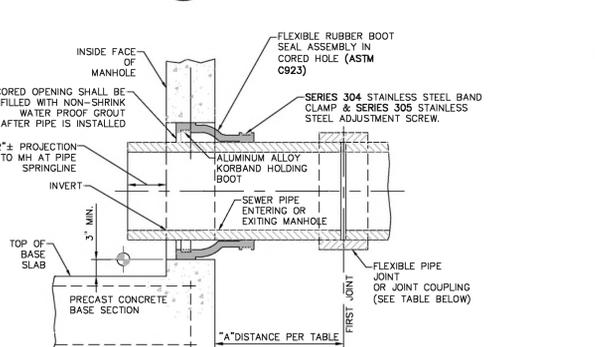


- NOTE:**
- SEPTIC TANKS SHALL BE AS MANUFACTURED BY THE FORT MILLER CO. OR APPROVED EQUIVALENT.
 - DIMENSIONS SHOWN ARE PER STRUCTURES MANUFACTURED BY FORT MILLER CO.
- | SIZE GALLONS | OVERALL HEIGHT "H" | OVERALL WIDTH "W" | OVERALL LENGTH "OL" | SLAB THICKNESS "S" | WALL THICKNESS "T" | LIQUID LEVEL "L" | INLET HEIGHT "I" | OUTLET HEIGHT "O" | BAFFLE "B" |
|--------------|--------------------|-------------------|---------------------|--------------------|--------------------|------------------|------------------|-------------------|------------|
| 1000 | 6'-10" | 4'-3" | 8'-2" | 5" | 4" | 5'-0" | 5'-10" | 5'-7" | - |

5 CONCRETE SEPTIC TANK
SCALE: NOT TO SCALE



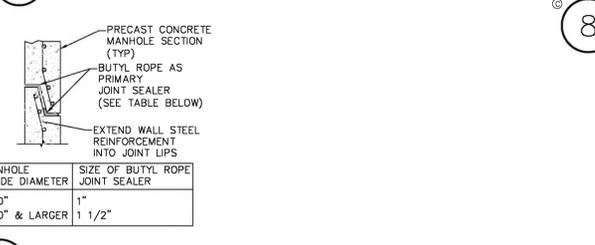
2 INVERT, CHANNEL AND BENCHWALLS
SCALE: NOT TO SCALE



FLEXIBLE JOINT REQUIREMENTS

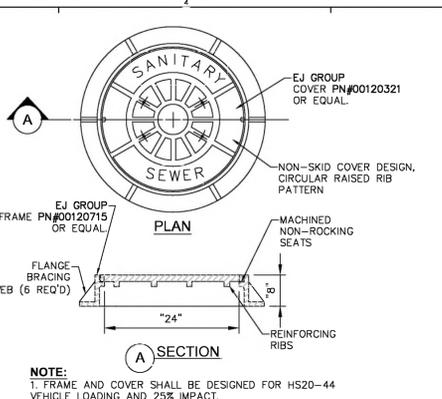
SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A" DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

NOTE: REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.



7 MANHOLE JOINT
SCALE: NOT TO SCALE

MANHOLE INSIDE DIAMETER	SIZE OF BUTYL ROPE JOINT SEALER
4'-0"	1"
5'-0" & LARGER	1 1/2"

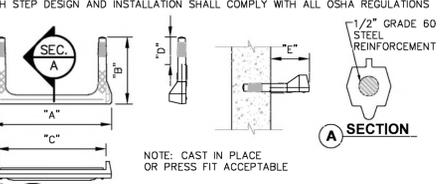


3 HEAVY DUTY STANDARD CAST IRON MH COVER
SCALE: NOT TO SCALE

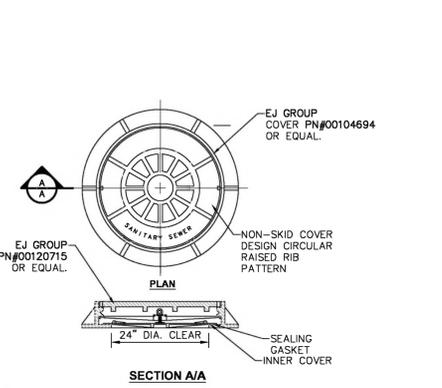
ACCEPTABLE MANHOLE STEPS

MANUFACTURER	PATTERN NUMBER	"A" STEP WIDTH	"B" LEG LENGTH	"C" RUNG CLEAR	"D" EMBEDMENT	"E" RUNG CLEAR
M.A. INDUSTRIES INC*	PS2-PF	14 3/4	9 1/4	13 3/4	3 3/8	5 7/8
M.A. INDUSTRIES INC*	PS2-PFS	14 3/4	8 1/4	13 3/4	3 3/8	4 7/8

* OR EQUIVALENT



4 COPOLYMER POLYPROPYLENE MH STEP
SCALE: NOT TO SCALE



8 WATERTIGHT/LOCKING CAST IRON MH COVER
SCALE: NOT TO SCALE

TESTING GRAVITY SEWER SYSTEM:

- LOW PRESSURE AIR TESTING MAY BE ALLOWED IN LIEU OF EXFILTRATION TESTS ONLY, WHEN SO ALLOWED, TEST SHALL BE PERFORMED UNDER DIRECTION OF ENGINEER ACCORDING TO ASTM F1417. LOW PRESSURE AIR TEST IS A COMPARISON OF THE MEASURED TIME NECESSARY FOR ONE (1) PSIG PRESSURE DROP TO OCCUR, IF AT ALL, WITH MINIMUM ALLOWABLE TIME FOR THAT PRESSURE DROP TO OCCUR DETERMINED BY METHODS INDICATED IN ASTM F1417. IF THE ONE (1) PSIG PRESSURE DROP OCCURS FASTER THAN ALLOWABLE TIME, SECTION IS UNACCEPTABLE.
- AN AIR TEST SHALL NOT BE RUN UNTIL SECTION OF LINE TO BE TESTED HAS BEEN CLEANED OF ALL FOREIGN MATERIAL BY FLUSHING AND HAS BEEN VISUALLY INSPECTED AND APPROVED BY THE ENGINEER. CERTAIN PIPE MATERIALS PRODUCE MORE CONSISTENT RESULTS WHEN INTERIOR OF PIPE IS WETTED PRIOR TO TESTING.
- WHERE AIR-TESTING IS TO BE USED FOR LINE ACCEPTANCE, CORROBORATIVE HYDROSTATIC TESTING SHALL BE PERFORMED ON SEWER INSTALLATION OF THE SAME PIPE SIZE, MATERIAL AND CONDITIONS OF INSTALLATION. SEWER SECTIONS WHICH INDICATE RATES OF AIR LOSS PER UNIT OF SURFACE AREA WHICH MOST NEARLY APPROXIMATE RATE FOR PIPELINE ACCEPTANCE SHOULD BE SELECTED FOR CORROBORATIVE TESTS. AT LEAST 3 SECTIONS ARE TO BE SO TESTED. THE PURPOSE OF THESE CORROBORATIVE TESTS IS TO PERMIT A REASONABLE ASSUMPTION THAT, IF THESE 3 TEST SECTIONS MEET THE HYDROSTATIC TEST, THE BALANCE OF PROJECT ALSO MEETS OR EXCEEDS THESE REQUIREMENTS. IF AIR TEST IS NOT SUPPORTED BY ACCEPTABLE CORROBORATIVE HYDROSTATIC TESTS, COMPLETE HYDRO-STATIC TESTING OF SEWER LINES SHALL BE REQUIRED.
- SEWERS SHALL BE LAID WITH STRAIGHT ALIGNMENT BETWEEN MANHOLES. STRAIGHT ALIGNMENT SHALL BE CHECKED EITHER USING A LASER BEAM OR LAMPING. TESTING SHALL COMPLY WITH REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- MANHOLES, WHICH CANNOT BE PROPERLY AIR TESTED, SHOULD BE VISUALLY INSPECTED AND LEAKAGE-TESTED USING INTERNAL OR EXTERNAL HYDROSTATIC PRESSURE. LEAKAGE TESTING SHALL COMPLY WITH REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- IN AREAS WHERE CONVENTIONAL TESTING IS IMPRACTICAL (I.E. AREAS DESIGNATED BY ENGINEER WHERE EXISTING SERVICES ARE TIED INTO NEW LINE IMMEDIATELY AND ANY BLOCKAGE COULD RESULT IN HEALTH PROBLEMS) NO LINES SHALL BE BACKFILLED UNTIL EACH PIPE SECTION AND CONNECTION IS INSPECTED AND APPROVED.
- WHERE SEWERS ARE CONSTRUCTED OF PRESSURE-RATED PIPE AND INSTALLED WITH LESS THAN 18 INCHES VERTICAL SEPARATION FROM EXISTING OR PROPOSED WATER MAINS, SEWERS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS. HYDROSTATIC ACCEPTANCE TESTS SHALL BE CONDUCTED AS SPECIFIED FOR TESTING WATER MAINS, EXCEPT THAT TESTING MAY BE PERFORMED WITH THE PIPE SECTION PARTIALLY BACK-FILLED.
- IF THE ALLOWABLE RATE OF INFILTRATION, EXFILTRATION, OR AIR LEAKAGE IS EXCEEDED, THE CONTRACTOR SHALL LOCATE POINTS OF EXCESSIVE LEAKAGE AND SHALL PROMPTLY CORRECT, REPAIR, AND BRING SYSTEM UP TO THE STANDARD. COSTS OF ALL SUCH REPAIRS AND CORRECTIVE MEASURES, INCLUDING COSTS OF REPEATED TESTS, SHALL BE BORN BY CONTRACTOR. THE SEWER LINE SECTION (INCLUDING MANHOLES AND BUILDING SERVICES) UNDER TEST SHALL NOT BE ACCEPTED UNTIL THESE TEST CRITERIA ARE MET.
- SEPTIC TANK SHALL BE TESTED FOR LEAKAGE USING THE HYDROSTATIC TEST METHOD IN ACCORDANCE WITH ASTM C1227. ENGINEER TO WITNESS LEAKAGE TEST.

New York State Parks, Recreation and Historic Preservation
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Capital Facilities Mngr: Michael Tesik

Project Title:
Camp Junior - Phase 3
Campground Rehabilitation
Contract No. D005876

Project Location:
Harriman State Park
Tiorati Brook Road
Tuxedo, NY 10987

REVISIONS

Rev No	Description	Date

Drawn By: CAR
Design By: SMF
Checked By: REK
Approved By: DMS
Date: 03/16/2023



Sheet Title:
SEWER DETAILS

Drawing Number:
C531

BID DOCUMENTS SET

Project Number: 2021-059.23
Sheet: 5 of

Drawing Name: Vashia/Projects/Saratoga Associates/222163-05 - Harriman State Park Camp Junior Ph. 3/05 Drawings/CA/001_C530_222163-05_DET.dwg
 Xref's Attached: X-BORDER, 222163-05_2468; ROGER E. KEATING SEAL
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