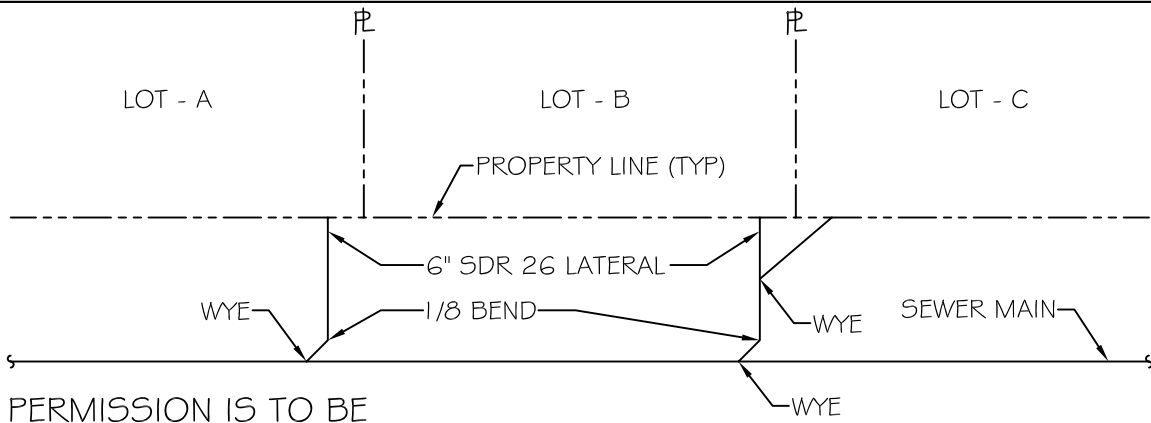


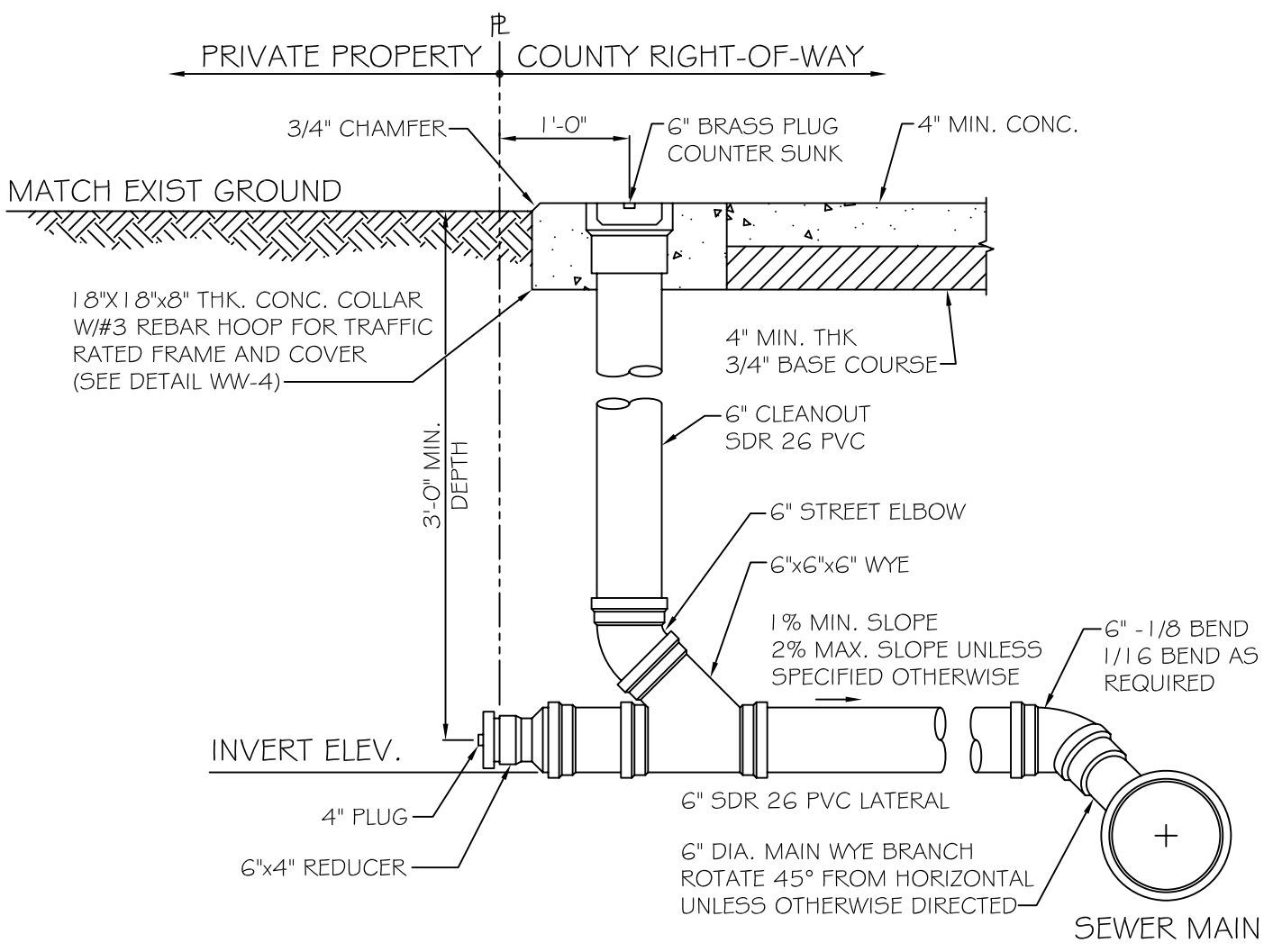
PIPE SIZE	TRENCH WIDTH	"Y"
6"	24"	4"
8"	24"	4"
10"	24"	4"
12"	30"	5"

NOTE: TRENCH RESTORATION WITHIN STATE RIGHT-OF-WAYS SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION.



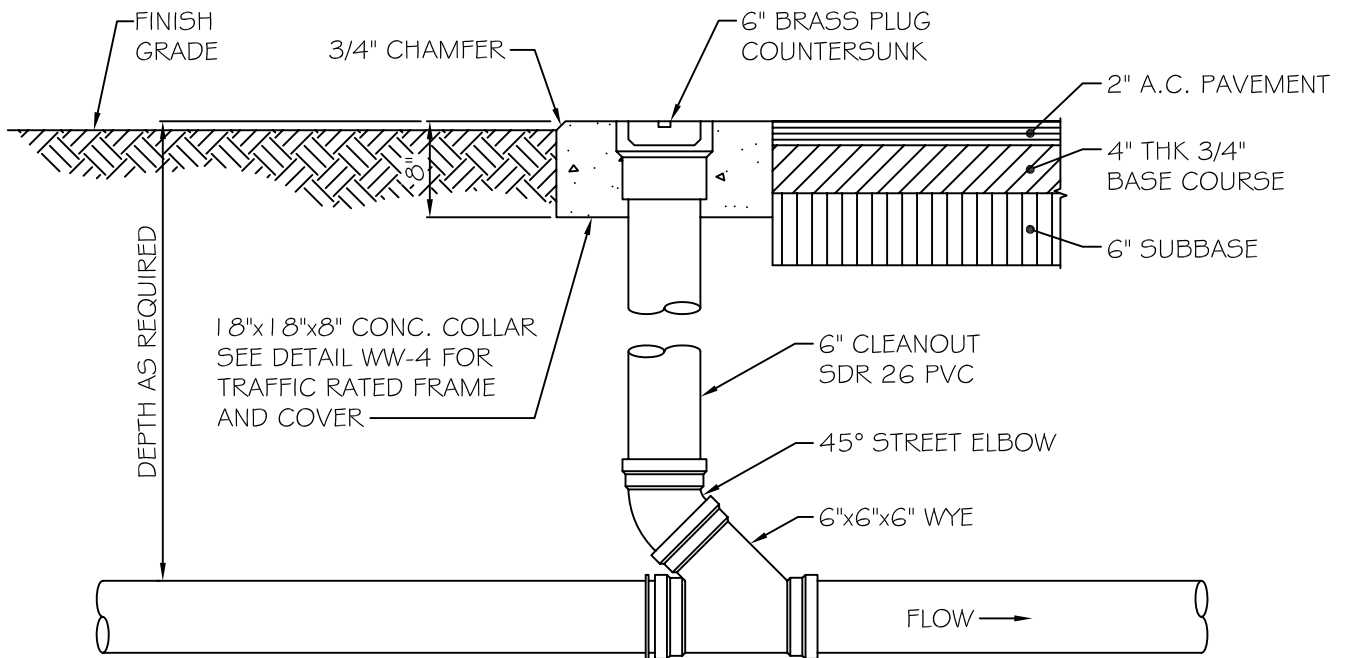
NOTE: PERMISSION IS TO BE SECURED FROM PROPERTY OWNER BEFORE CONSTRUCTION @ PROPERTY LINE IS STARTED.

LAYOUT
NTS



NOTE: SEE SEWER CONSTRUCTION PLANS FOR LENGTH AND ELEVATION OF LATERAL.

COUNTY OF HAWAII ENVIRONMENTAL MANAGEMENT WASTE WATER DIVISION	<u>SEWER LATERAL</u> SCALE: 3/4" = 1'-0" JULY 2010	STANDARD DETAILS WW-2
--	--	------------------------------------



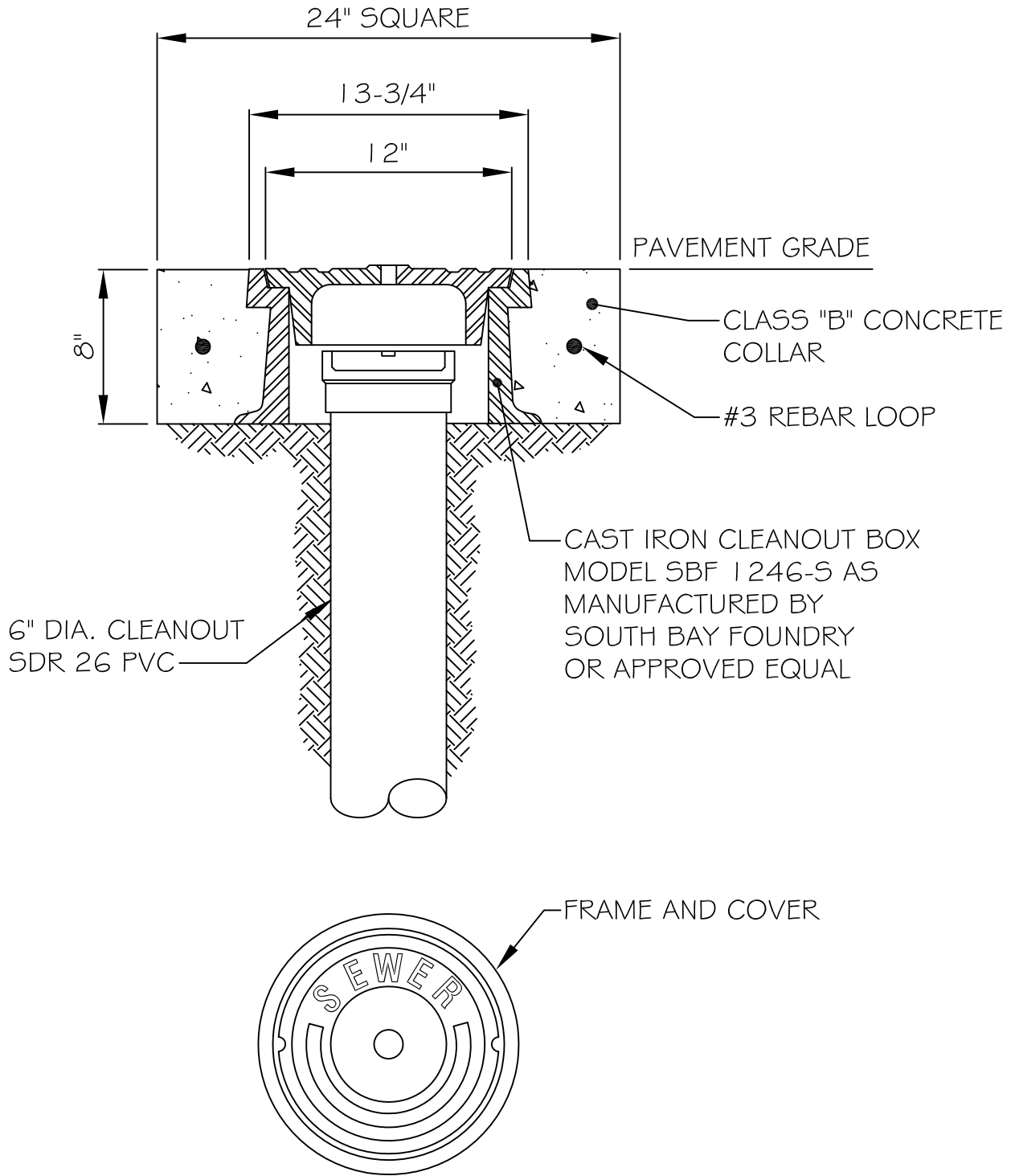
COUNTY OF HAWAII
 ENVIRONMENTAL MANAGEMENT
 WASTE WATER DIVISION

IN-LINE CLEANOUT
TO GRADE

SCALE: 3/4" = 1'-0"

JULY 2010

STANDARD
 DETAILS
 WW-3



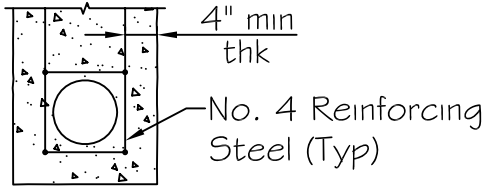
COUNTY OF HAWAII
ENVIRONMENTAL MANAGEMENT
WASTE WATER DIVISION

TRAFFIC RATED
FRAME AND COVER

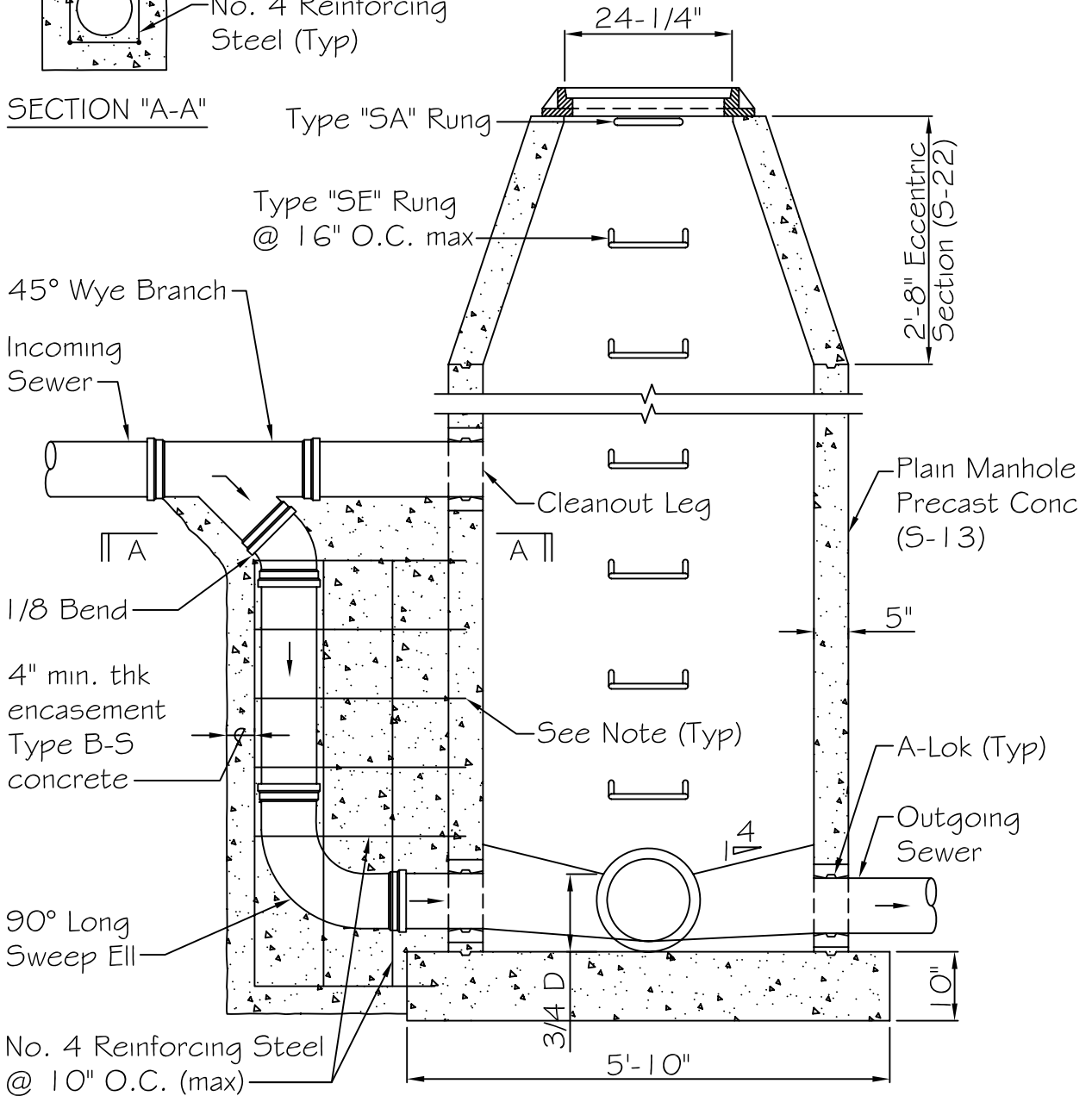
SCALE: 1-1/2" = 1'-0"

JULY 2010

STANDARD
DETAILS
WW-4



SECTION "A-A"



NOTE: 4" embedment w/ HILTI HSE 242 I Epoxy or equivalent.

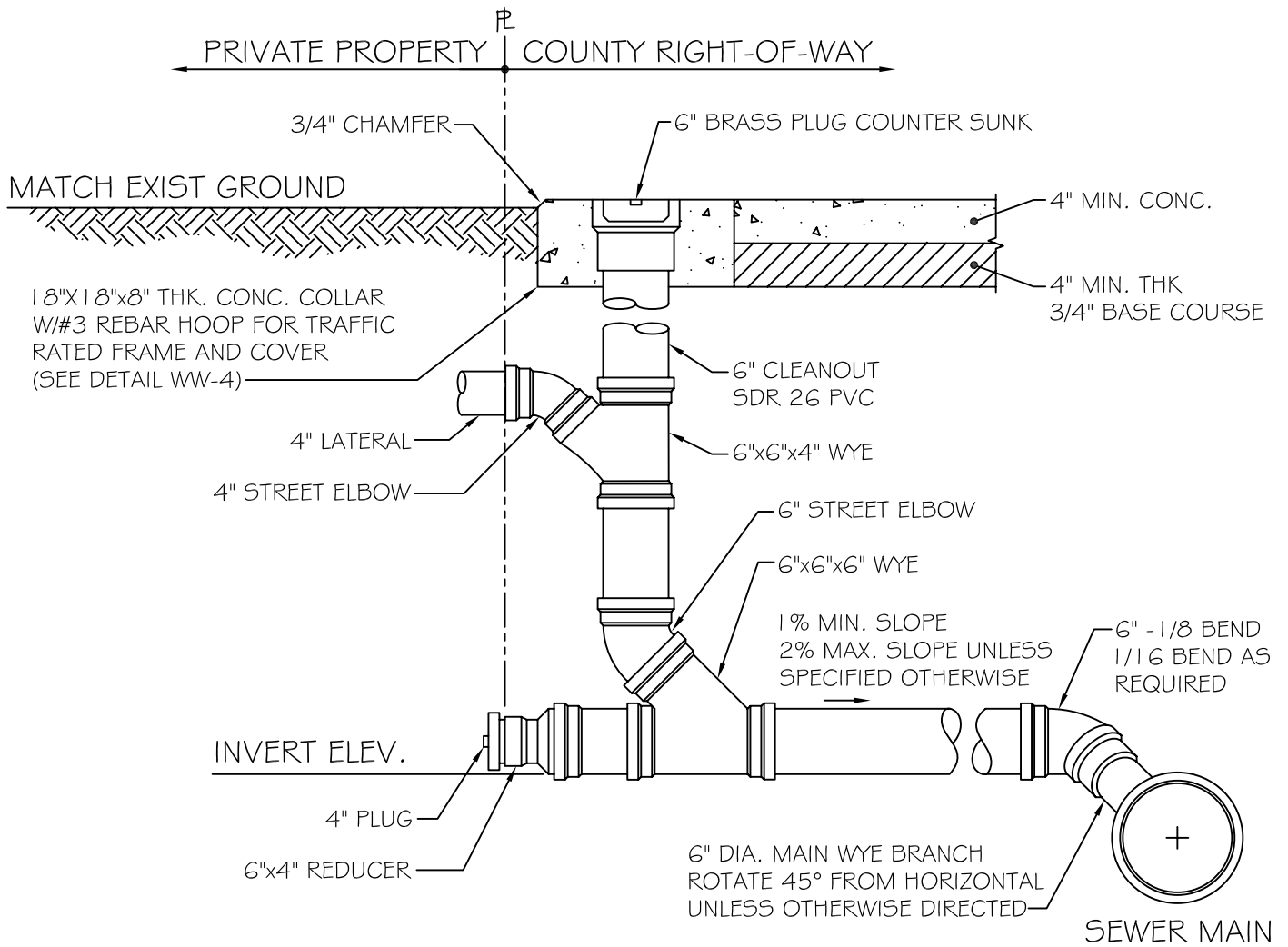
COUNTY OF HAWAII
ENVIRONMENTAL MANAGEMENT
WASTE WATER DIVISION

PRECAST SHALLOW
DROP MANHOLE

SCALE: 1/2" = 1'-0"

JULY 2010

STANDARD
DETAILS
WW-5



NOTE: SEE SEWER CONSTRUCTION PLANS FOR LENGTH AND ELEVATION OF LATERAL.

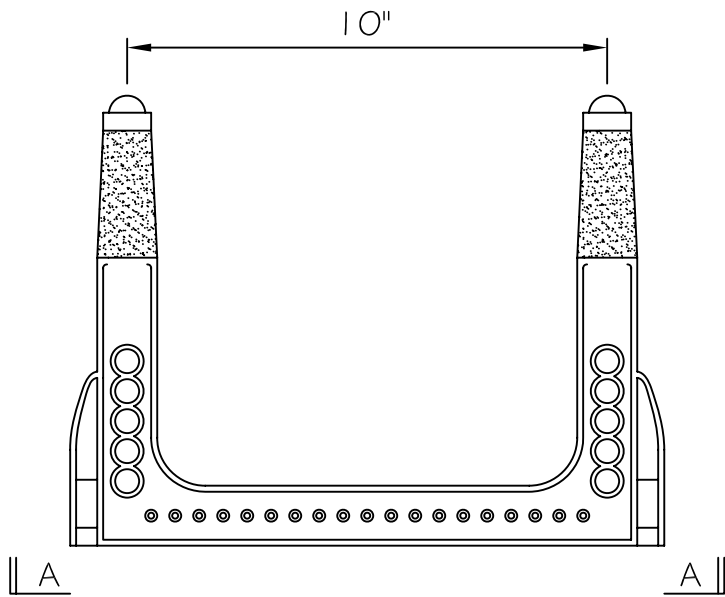
COUNTY OF HAWAII
ENVIRONMENTAL MANAGEMENT
WASTE WATER DIVISION

ADVANCE RISER
CONNECTION

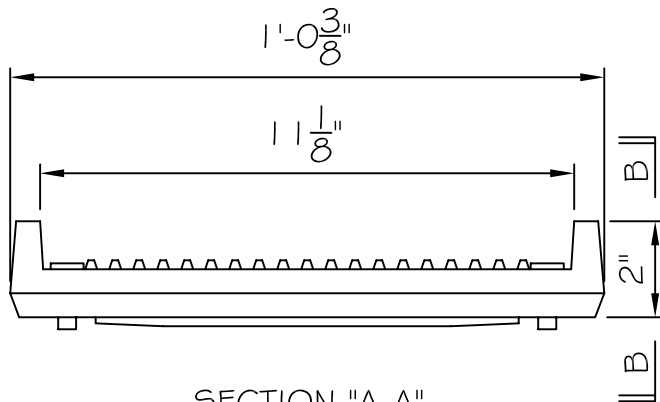
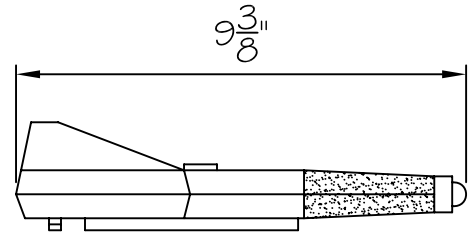
STANDARD
DETAILS
WW-6

SCALE: 3/4" = 1'-0"

JULY 2010

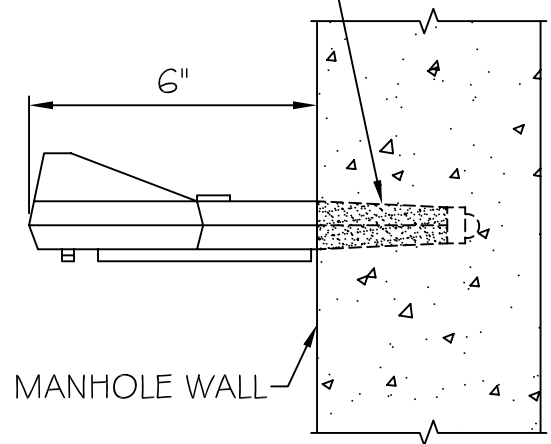


PLAN VIEW



SECTION "A-A"

DRILL AND INSTALL PER
MANUFACTURER'S
INSTRUCTIONS



SECTION "B-B"

COUNTY OF HAWAII
ENVIRONMENTAL MANAGEMENT
WASTE WATER DIVISION

MANHOLE RUNG - TYPE SP
COPOLYMER POLYPROPYLENE
PLASTIC

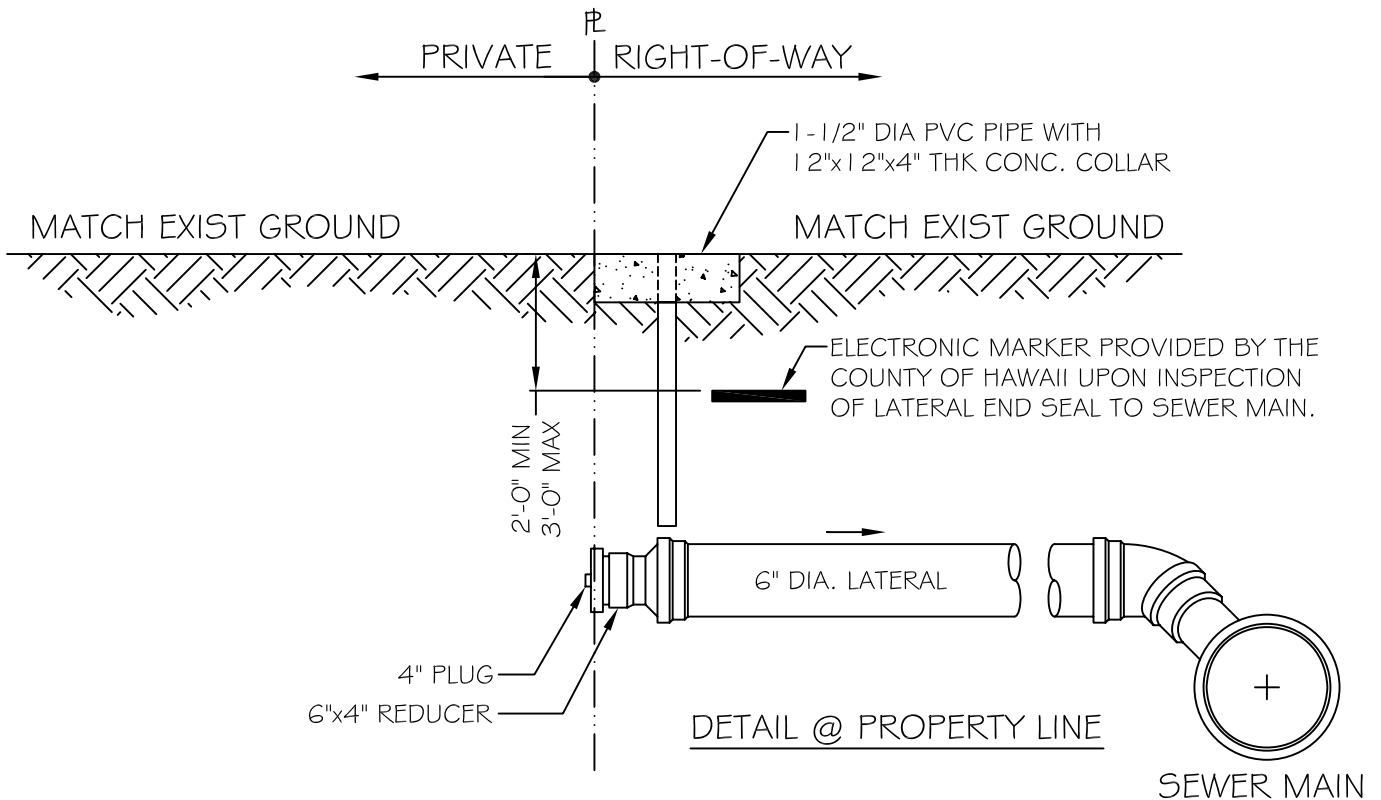
STANDARD
DETAILS
WW-7

SCALE: 3" = 1'-0"

JULY 2010

DISCONNECTION OF HOUSE WASTE PIPING FROM COUNTY SEWER LATERALS

1. The Wastewater Division shall inspect disconnection of house piping from the sewer lateral. Any work not properly inspected prior to backfill shall be re-excavated at the Contractor's expense.
2. The Contractor shall notify the Wastewater Division a minimum of 48 hours prior to inspections being required. The Wastewater Division can be reached At 961-8338.
3. All openings in the sewer line caused by the removal of any buildings or structures shall be sealed in such a manner as to prevent earth, debris, rain, surface, storm, or other water from entering the public sewer system.
4. All sealing work shall be performed in the presence of the Wastewater Division.
5. Disconnection of the sewer lateral shall be made as close to the property line as possible.
 - a. Disconnection on the upstream side of the sewer lateral cleanout is acceptable provided that the cleanout is located within close proximity of the property line and provided the cleanout will remain accessible and will not be damaged during removal of the existing structure or during replacement of the structure.
 - b. In the event that removal of the existing sewer lateral cleanout is required, the sewer lateral shall be sealed at the property line and an Electronic Marker, provided by the County of Hawaii, shall be installed directly above the existing sealed sewer lateral with a (2'-0") minimum and (3'-0") maximum cover below existing ground.



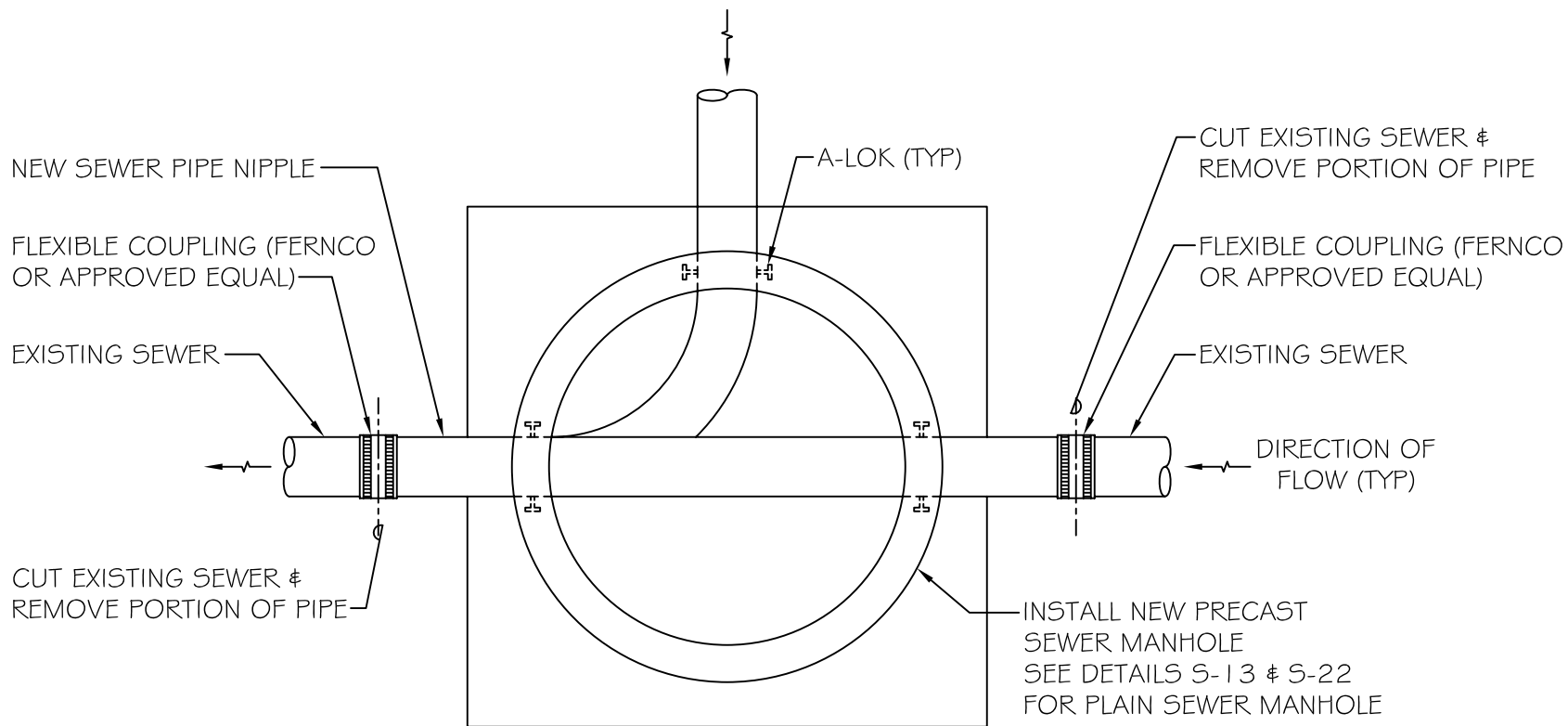
COUNTY OF HAWAII
ENVIRONMENTAL MANAGEMENT
WASTE WATER DIVISION

DISCONNECTION OF PIPING

SCALE: NTS

JULY 2010

STANDARD
DETAILS
WW-8



NOTES:

1. BYPASS EXISTING SEWER LINE AT UPSTREAM MANHOLE TO DOWNSTREAM MANHOLE.
2. CUT INTO PIPE AT LOCATION OF NEW MANHOLE AND REMOVE INTERFERING PORTION OF PIPE.
3. INSTALL NEW PRECAST MANHOLE.
4. JOIN NEW SEWER PIPE TO EXISTING SEWER PIPE WITH FERNCO COUPLING (OR APPROVED EQUAL).

COUNTY OF HAWAII
 ENVIRONMENTAL MANAGEMENT
 WASTE WATER DIVISION

MANHOLE OVER
EXISTING SEWER LINE

SCALE: NTS

JULY 2010

STANDARD
 DETAILS
 WW-9