

WATER NOTES

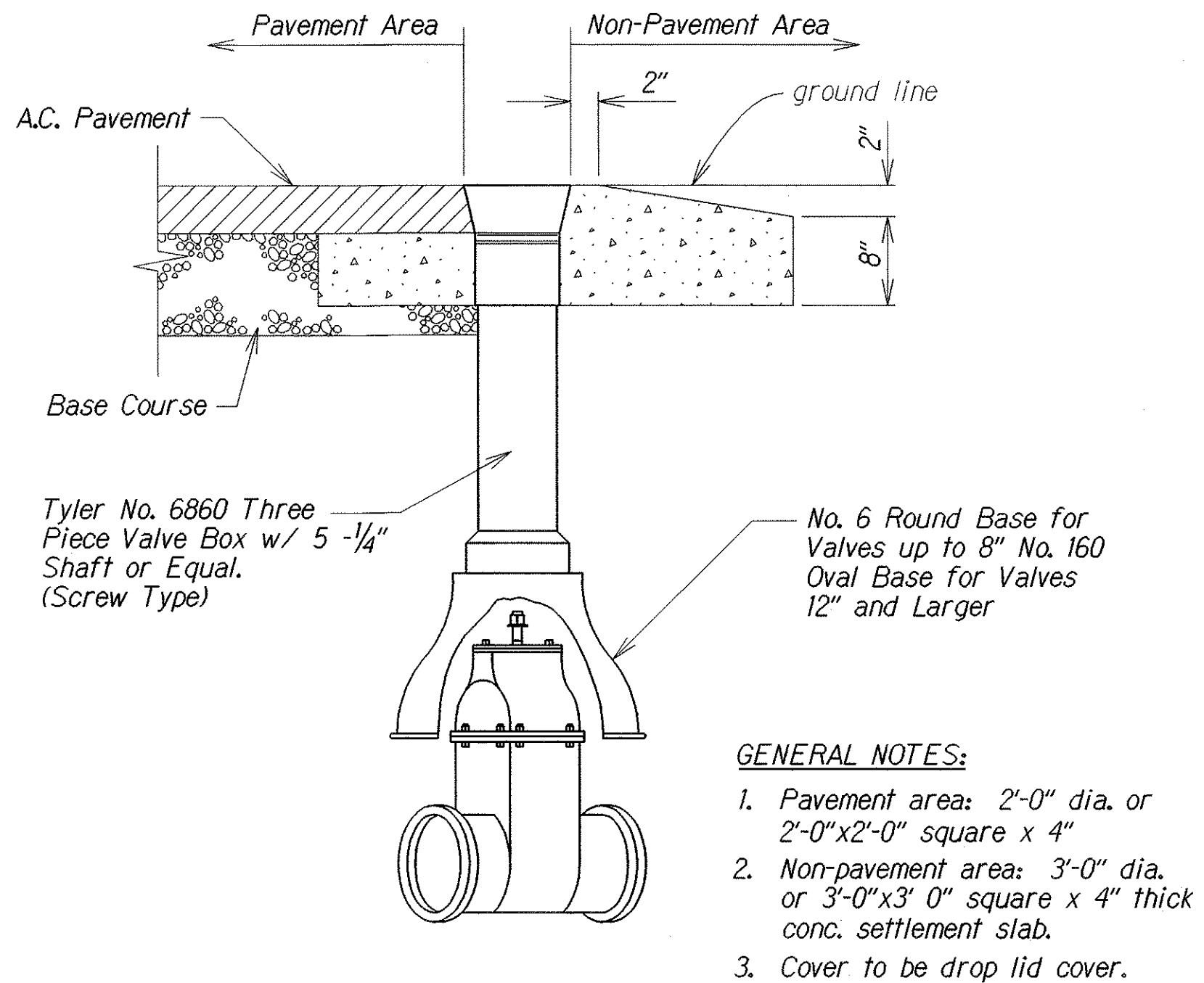
1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards, 2002", as adopted by the Department of Water, County of Kauai, including all subsequent amendments and additions.
2. The Contractor shall arrange a pre-construction conference at least 10 days before construction and shall notify the Department of Water at least 3 working days prior to the start of construction.
3. The Contractor shall submit the name and telephone number of its authorized superintendent on the job, and the names and telephone numbers of at least three (3) persons to contact in case of emergency during non-working hours.
4. The Contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or chlorination to insure that inspectional services will be available.
5. All materials (pipes, pipe lubricants, paints, sealants, form oils, concrete admixtures, etc.) in direct contact with the potable water shall have National Sanitation Foundation (NSF) approvals. The Contractor shall submit these approvals to the Department of Water for review and approval prior to its application.
6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.
7. The Contractor shall provide unobstructed access to the existing fire hydrants, valves and water mains at all times.
8. The Contractor shall secure all excavations in accordance with OSHA regulations.
9. There shall be no physical connection between a public or private potable water system and a non-potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water system.
10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawaii Standard Specifications for Road, Bridge, and Public Works Construction, 1994" or amended.
11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards". The warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene and 6 inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "Safety Precaution Blue" and shall bear a continuous printed inscription "CAUTION WATER LINE BURIED BELOW". Inscription shall be 2 inches high, black text.
12. All fire hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".
13. Unless otherwise directed, prior to the connection of any pipeline to the existing main, the pipeline installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Section 302.27 to 302.29 of the "Water System Standards".
14. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.
15. In order to prevent damage to the polyethylene encasement from excessive handling, the polywrap shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.

16. All connections shall be scheduled in coordination with the Department of Water.
  - a. An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost. (Deposits and fees waived for Department of Water contracts).
  - b. The Contractor shall place the deposit prior to scheduling the connection date.
  - c. Connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends, and holidays.
  - d. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.
  - e. Pumps used to de-water the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.
  - f. All connections shall be performed in the presence of the Engineer.
17. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.
18. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.
19. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted.
20. Nuts and bolts for flanged joints (both underground and exposed) shall be stainless steel. Nuts and bolts for exposed non-flanged joints (MJ ends, couplings, adapters, etc.) shall be stainless steel.

FIRE HYDRANT NOTES

1. Gaskets for flanged joints shall be 1/8" duck-inserted rubber packing Garlock No. 19.
2. Bolts shall be break-off type, 5/8" dia. x 3" long machine bolts with cut threads, American Standard Coarse Hexagon Heads, stainless steel or silicon bronze. Install bolts with threads facing down.
3. Nuts shall be American Standard Heavy Cold Punched Hexagon Nuts, stainless steel or silicon bronze.
4. Concrete shall be DWS 2500.
5. Refer to Plan Sht. #9 for fire hydrant installation with curb guard.
6. Flanged outlet for the tee is mandatory.
7. Tapping sleeve with tapping valve assembly may be used for connection to existing main.
8. Lubricate hydrant nozzle threads with non-toxic grease.
9. Install hydrant markers. (See Plates FHI2 and FHI3).
10. THE CONTRACTOR SHALL BE MADE AWARE THAT THERE ARE TWO (2) EXISTING PARALLEL 12" A.C. WATERLINES (HIGH PRESSURE & LOW PRESSURE) ALONG NANILINILI ROAD. THE NEW FIRE HYDRANT SHALL BE CONNECTED TO THE EXISTING 12" A.C. HIGH PRESSURE WATERLINE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND INVERTS OF THE EXISTING WATERLINES PRIOR TO THE INSTALLATION OF THE NEW TAPPING TEE & TAPPING VALVE.

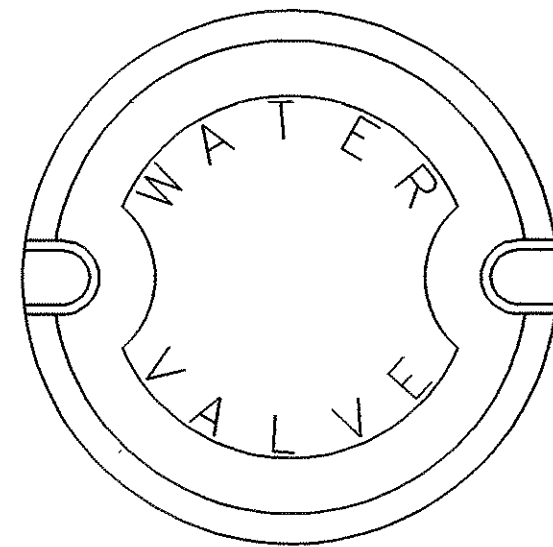
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-058-1(4)	2005	8	23



- GENERAL NOTES:
1. Pavement area: 2'-0" dia. or 2'-0"x2'-0" square x 4"
  2. Non-pavement area: 3'-0" dia. or 3'-0"x3' 0" square x 4" thick conc. settlement slab.
  3. Cover to be drop lid cover.

PROFILE

FOR GATE VALVE, BEVEL GEARED GATE VALVE, AND BUTTERFLY VALVES



COVER

CAST IRON VALVE BOX DETAILS

Not to Scale

RE-CERTIFIED: \_\_\_\_\_  
For Manager & Chief Engineer  
Department of Water  
APPROVED: \_\_\_\_\_  
Manager & Chief Engineer  
Department of Water

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

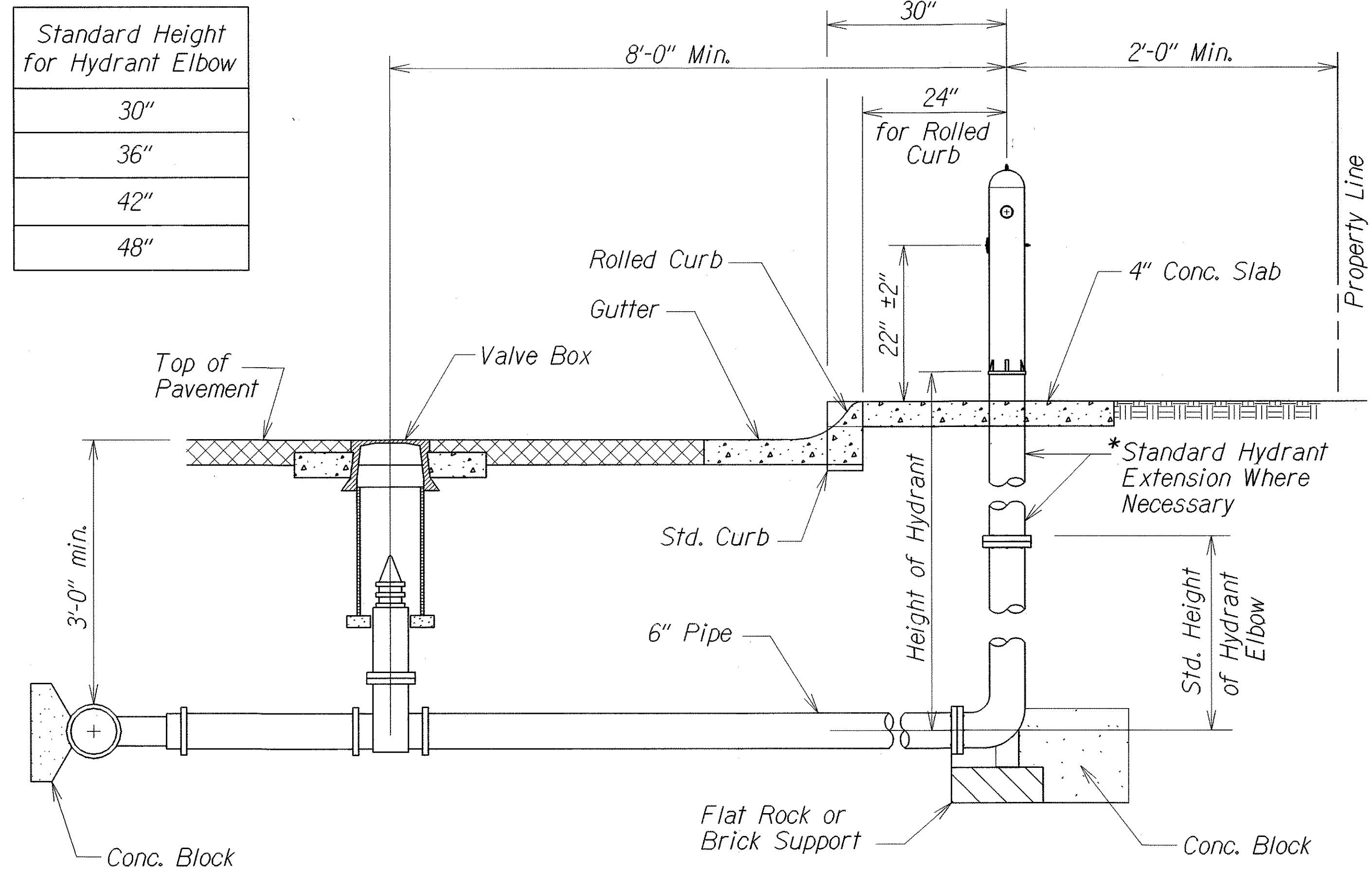
**WATER NOTES AND DETAILS**

NAWILIWILI ROAD BIKEWAY  
Kaunualii Highway to Waapa Road  
Fed. Aid Project No. CMAQ-058-1(4)

Date: April 2005

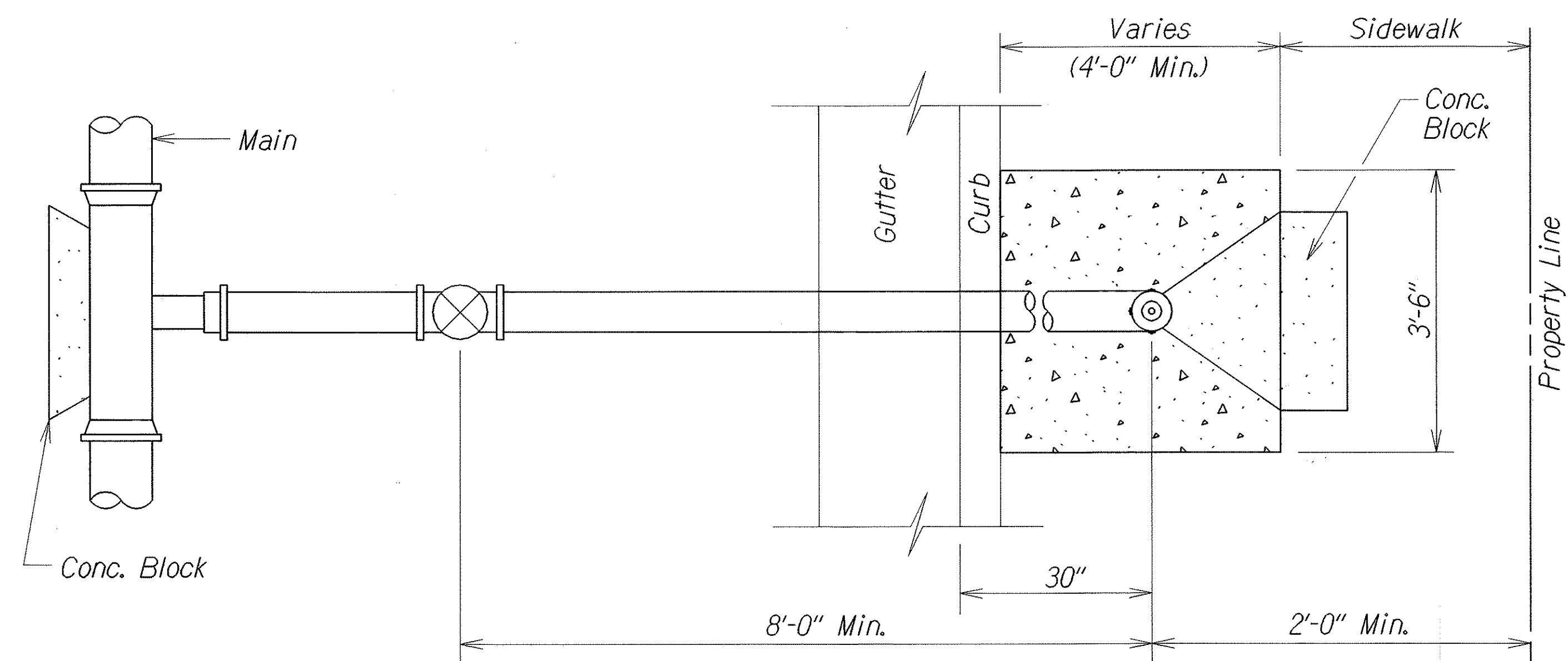
SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-058-1(4)	2005	9	23



SECTION

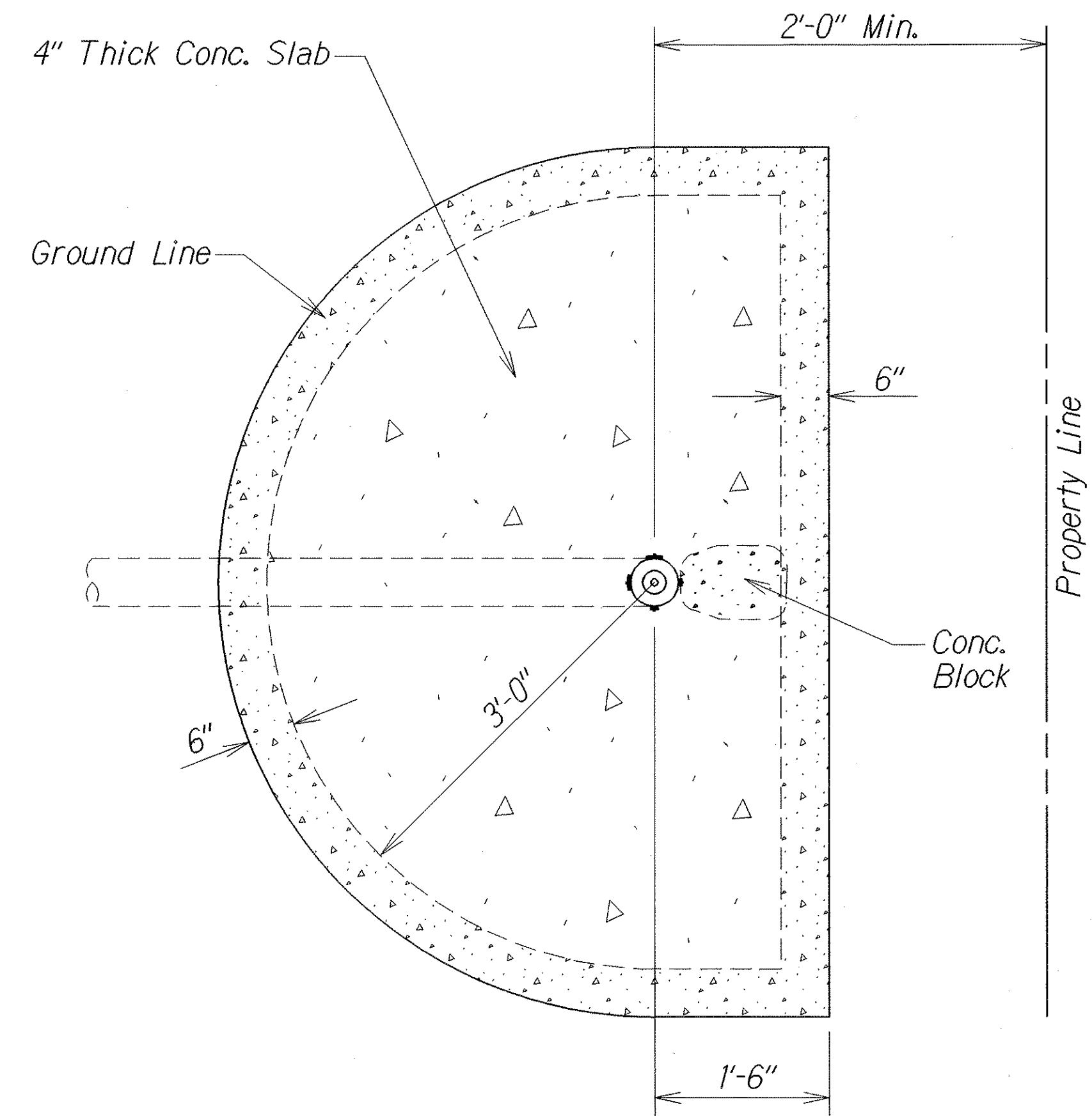
\* Standard hydrant extensions are available in the following lengths: 6 to 30 inches long in increments of 6 inches.



PLAN

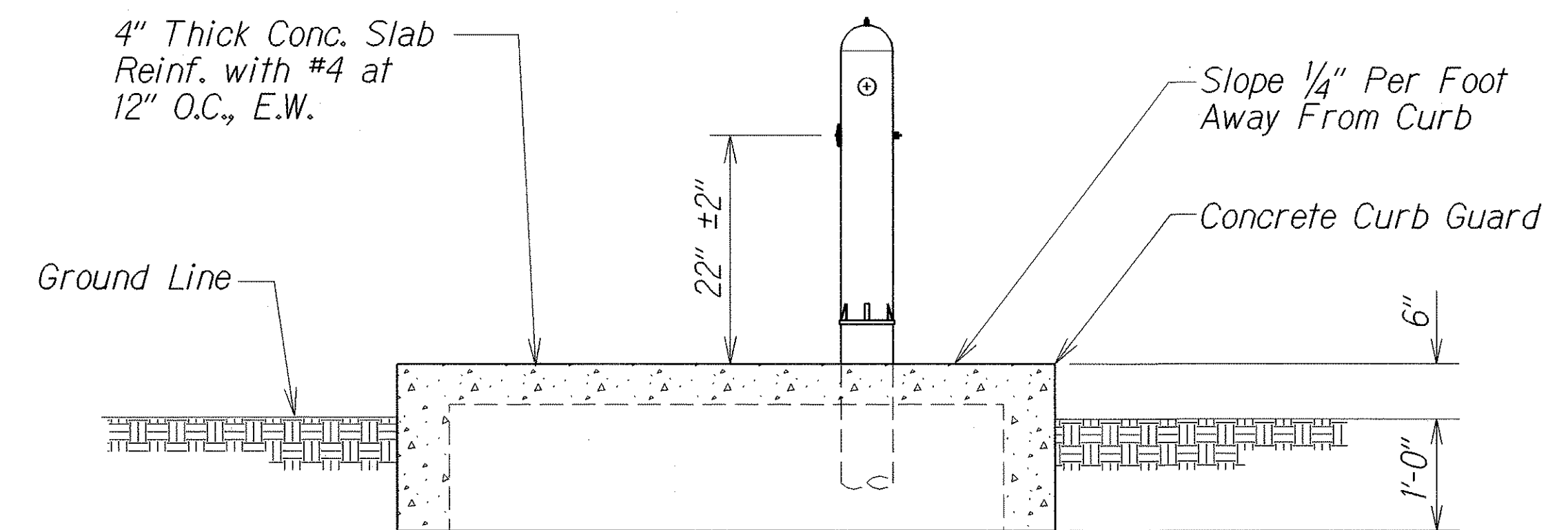
# HYDRANT CONNECTION - STRAIGHT RUN

Not to Scale



Notes:

- Concrete shall be DWS 2500.
- Slope slab 1/4" per foot away from hydrant.



## DETAIL OF CURB GUARD AT HYDRANT WHERE REQUIRED

Not to Scale

RECERTIFIED:

for Manager & Chief Engineer 10/29/07  
DEPARTMENT OF WATER DATE

APPROVED:

Manager & Chief Engineer 3/2/05  
Date  
Department of Water

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## WATER DETAILS

NAWILIWILI ROAD BIKEWAY  
Kaumualii Highway to Waapa Road  
Fed. Aid Project No. CMAQ-058-1(4)

Not to Scale Date: April, 2005

SHEET No. 1 OF 1 SHEETS