



1. DIGITAL POSITION AND ZOOM CONTROL FEEDBACK USING "D" PROTOCOL.
2. UL LISTED, RATED FOR FULL CONTINUOUS DUTY, CE CLASS B.
3. ASSEMBLY RATED FOR 90 MPH OPERATION.

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Sheet No. 42 of 48 Sheets

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0001 (30)	2007	42	89

GENERAL NOTES

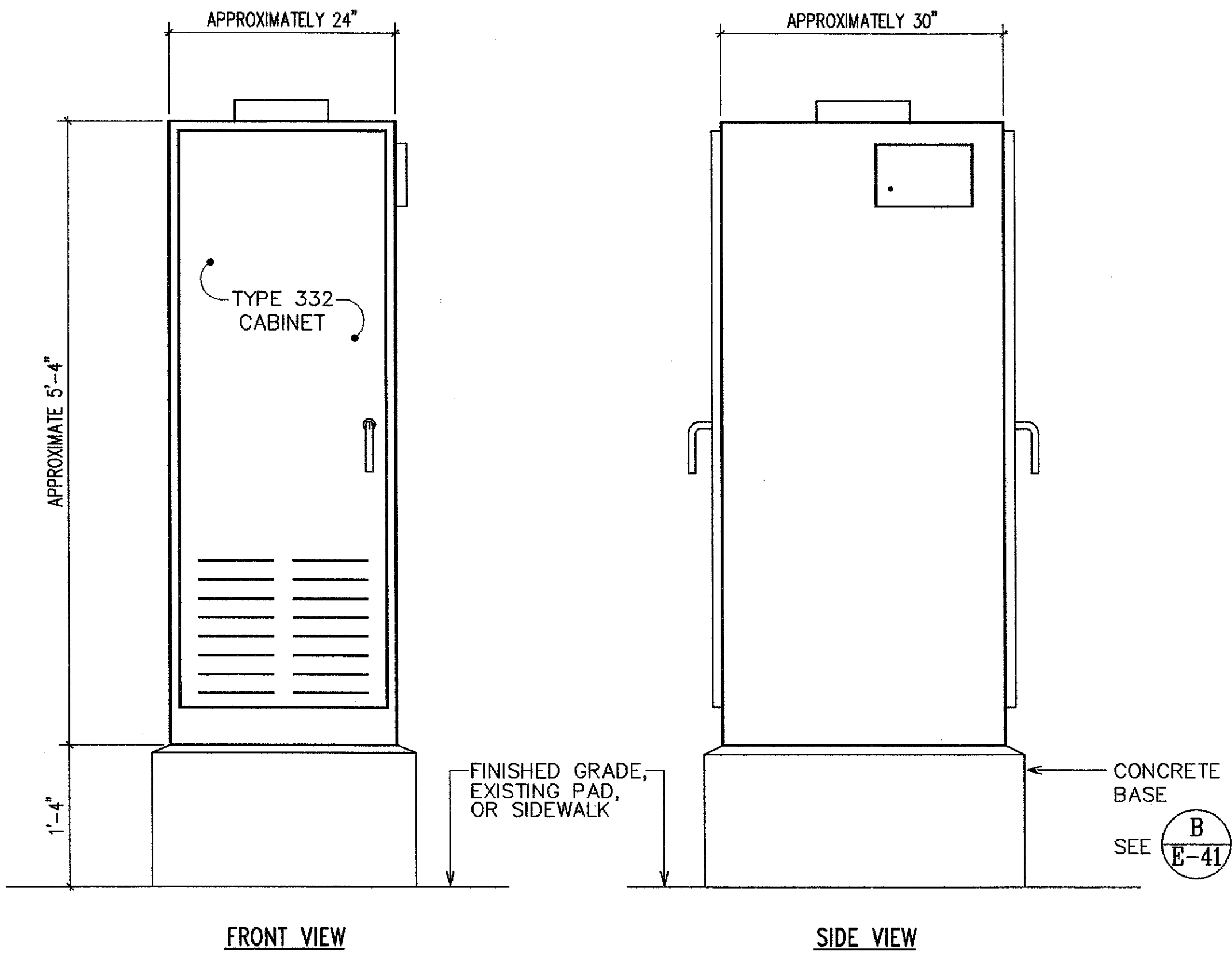
1. PROVIDE A MINIMUM OF ONE 16 X 2.5M COPPERWELD GROUND ROD IN EACH PULLBOX. WHEN DIRECTED BY THE TRAFFIC SIGNAL INSPECTOR/ENGINEER, INSTALL ADDITIONAL GROUND RODS. COST OF GROUND RODS SHALL BE INCIDENTAL TO THE PULLBOXES.
2. ALL PRE-CAST CONCRETE PULLBOXES SHALL BE MANUFACTURED IN TWO PIECES.
3. THE PULLBOX WITH COVER SHALL BE CAPABLE OF SUPPORTING AN MS 18 LOADING.
4. THE MAXIMUM WEIGHT OF THE PULLBOX COVER SHALL NOT EXCEED 27 KILOGRAMS.
5. THE OPENINGS FOR THE CONDUITS ON ALL PULLBOXES SHALL BE PRE-CAST CONCRETE KNOCKOUTS.
6. AFTER INSTALLING THE CONDUITS IN THE OPENINGS OF THE PULLBOXES, THE CONTRACTOR SHALL FILL THE EXCESS OPENING IN THE PRE-CAST KNOCKOUTS WITH CONCRETE MORTAR.
7. TRENCH AND ACHIEVE A MINIMUM OF 95% RELATIVE COMPACTION OF THE BOTTOM OF THE TRENCH.
8. ALL CONCRETE SHALL BE CLASS A (25MPA, MIN.)
9. REBARS SHALL BE GRADE 300 AND ALL LAPPED SPLICES SHALL BE 360MM MINIMUM.
10. THE #57 OR #67 SIZE AGGREGATE SHALL CONFORM TO LATEST VERSION OF AASHTO M43 (ASTM D 448).
11. TYPE "C" PULLBOX SHALL BE INSTALLED IN A LOCATION PROTECTED FROM VEHICULAR TRAFFIC (I.E. RAISED SIDEWALK, BEHIND A.C. CURBS, TRAFFIC SIGNAL STANDARD OR PIPE GUARDS).



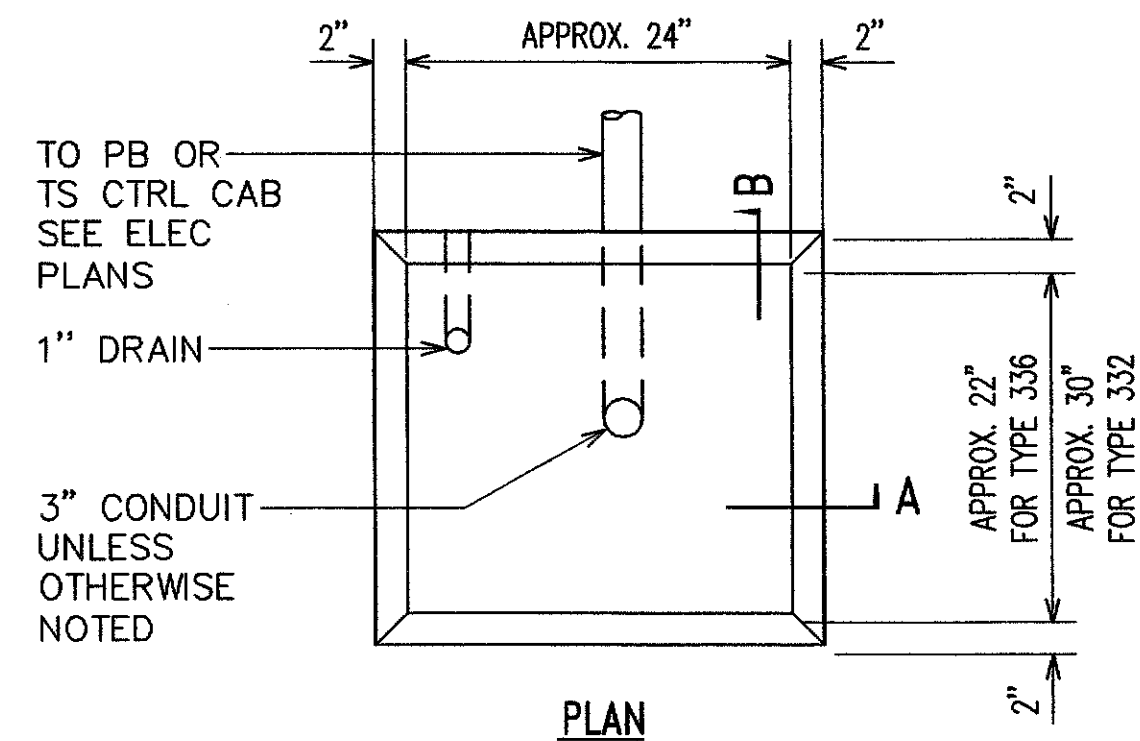
ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE SHOWN

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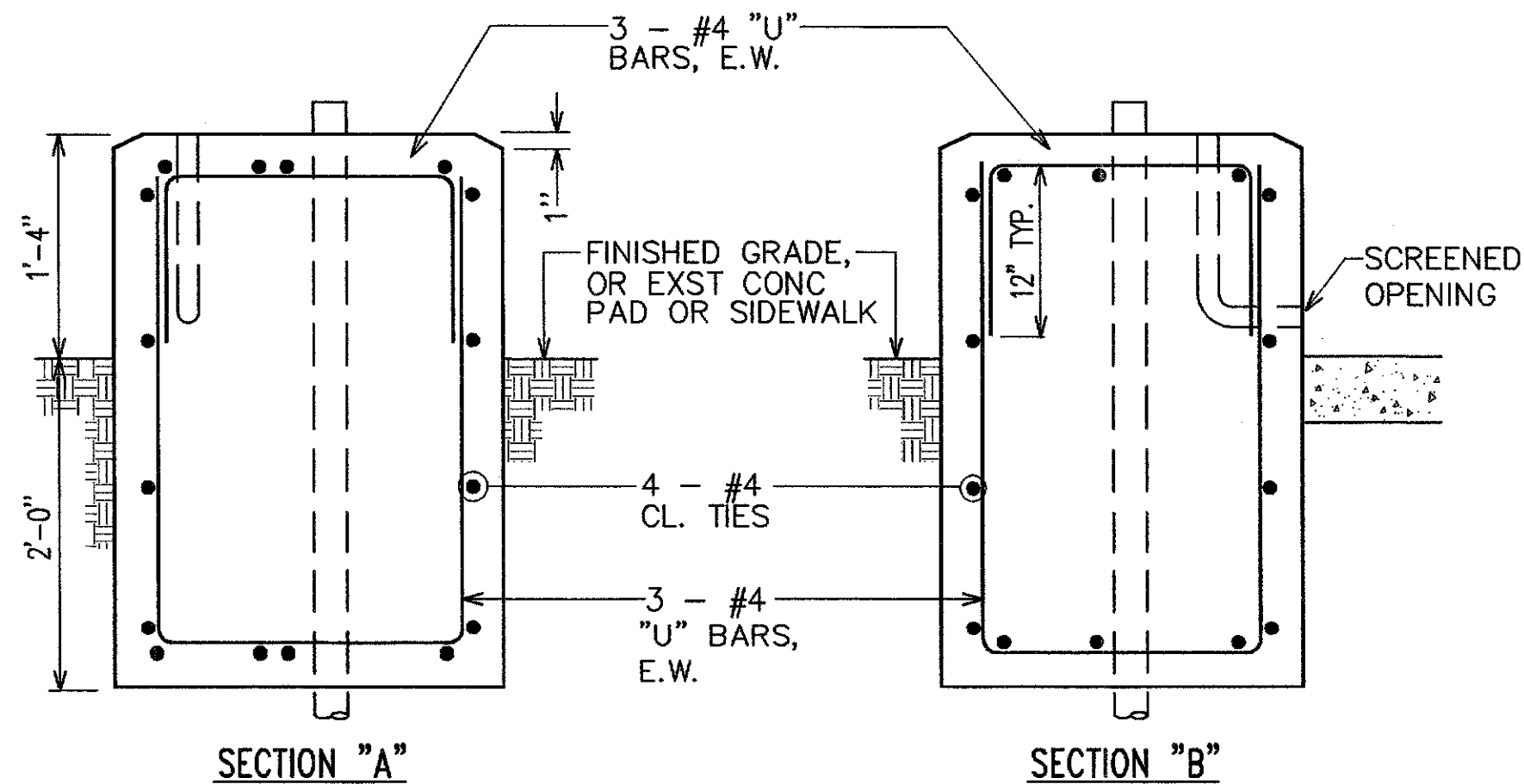
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HAWAII	HAW.	STP-0001 (30)	2007	43	89



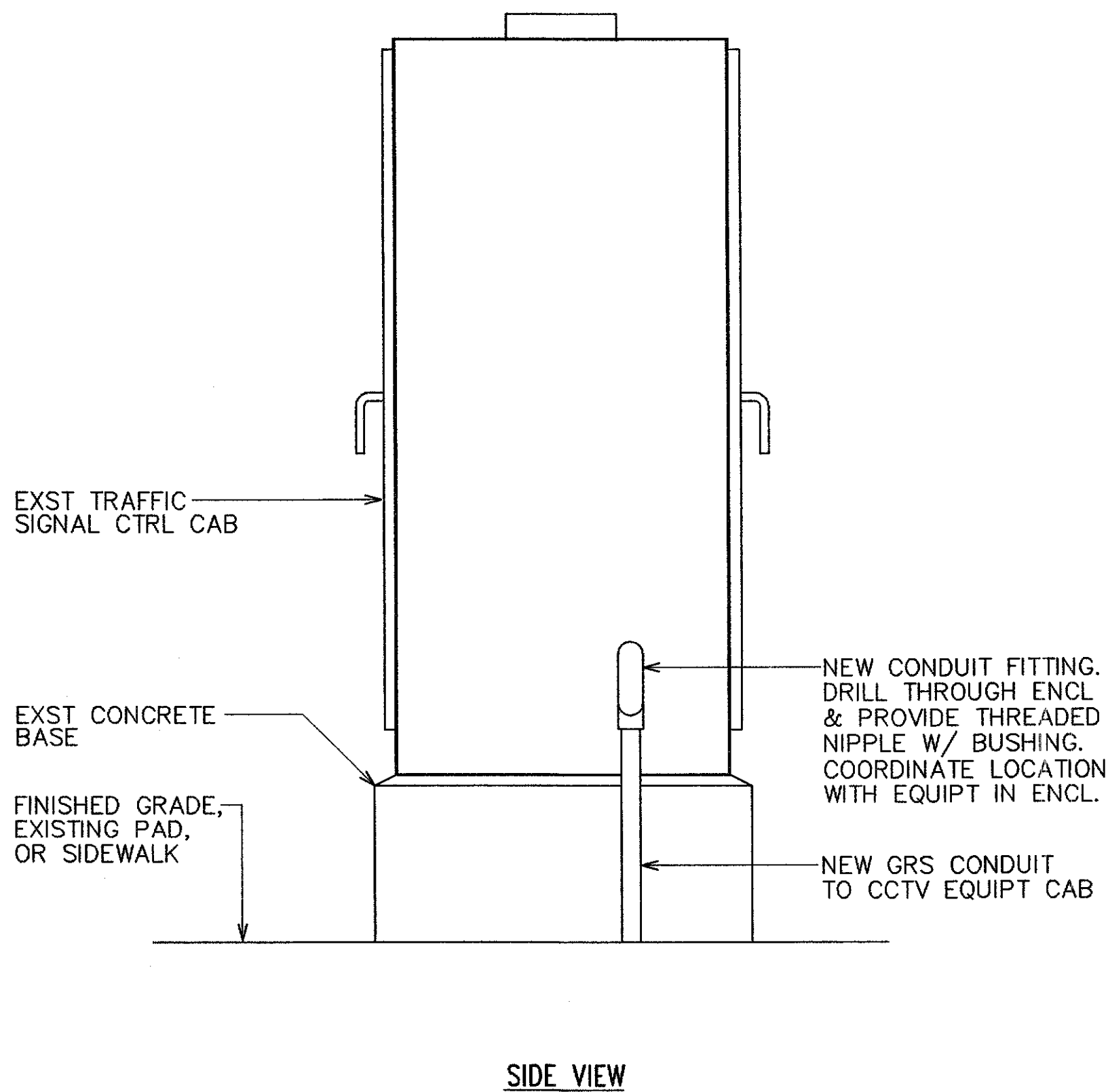
A
E-41 TYPE 332 VIDEO EQUIPMENT CABINET
NOT TO SCALE



- NOTE(S):
1. CONCRETE SHALL BE CLASS "B".
 2. DIMENSIONS SHALL BE ALTERED TO SUIT CONTROLLER CABINET ACTUALLY FURNISHED.
 3. CONDUIT BENDS AND DRAIN ARE INCIDENTAL TO CONCRETE BASE.
 4. REFER TO CABINET MANUFACTURER'S SPECIFICATIONS FOR DETAILS OF ANCHOR BOLTS AND BASE SETTING.
 5. ALL EXPOSED SURFACES OF CONCRETE BASE SHALL BE GIVEN A CLASS 2, RUBBED FINISH.



B
E-41 TYPE "D" CONCRETE BASE EQUIPMENT CABINET
NOT TO SCALE



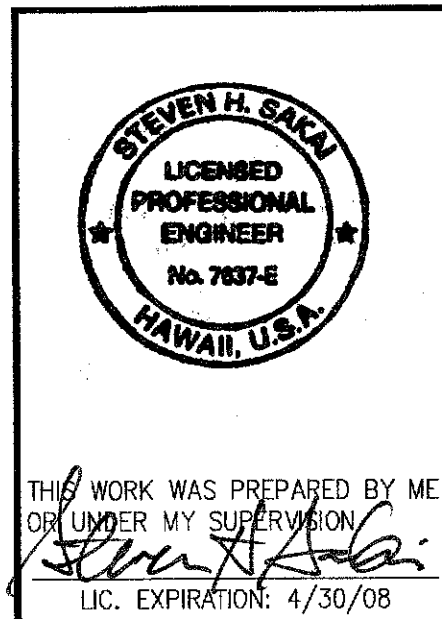
C
E-41 DETAIL - EQUIPMENT CABINET PENETRATION
NOT TO SCALE

APPROVED BY:

HAWAIIAN ELECTRIC COMPANY, INC. _____ DATE _____

HAWAIIAN TELCOM _____ DATE _____

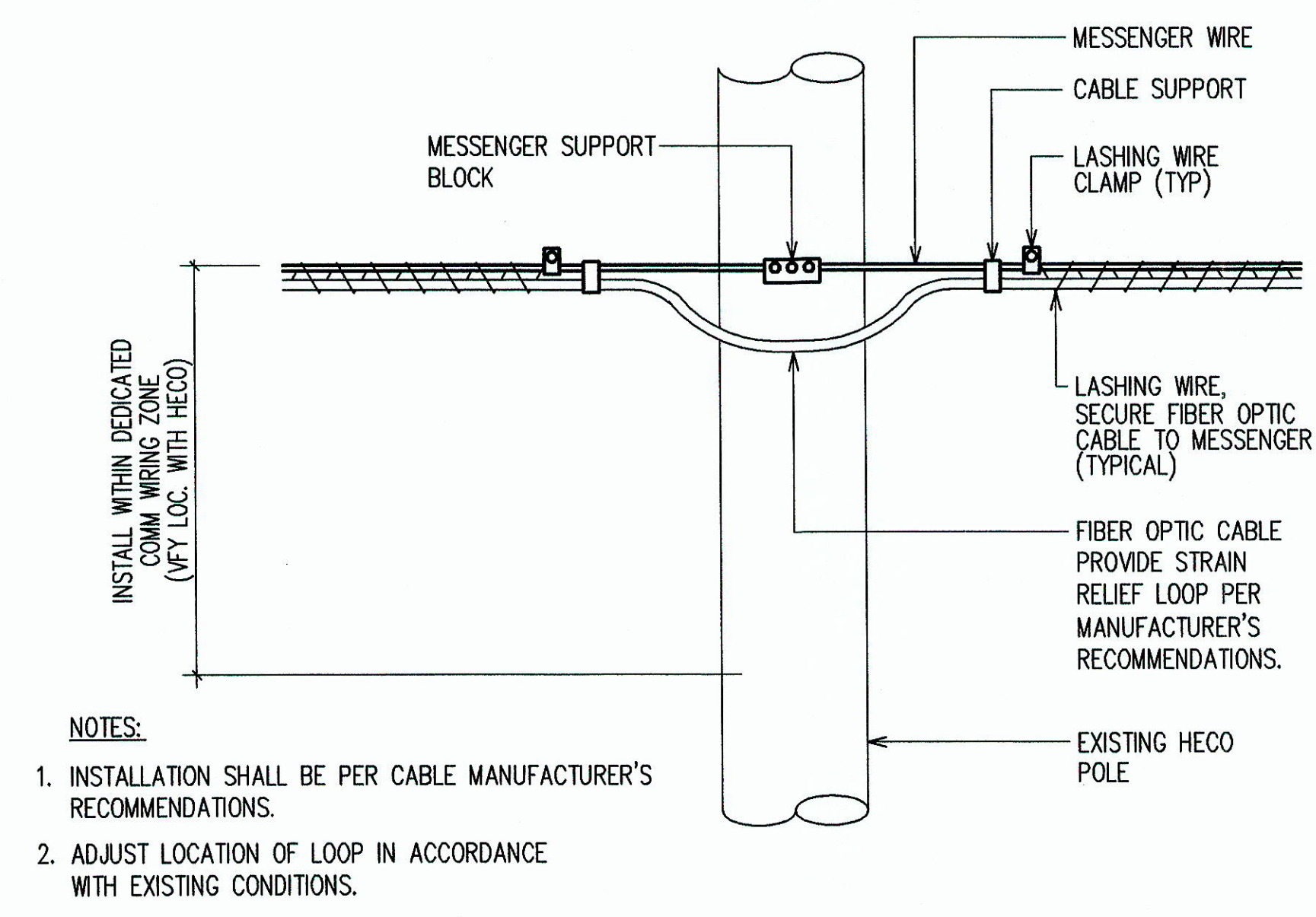
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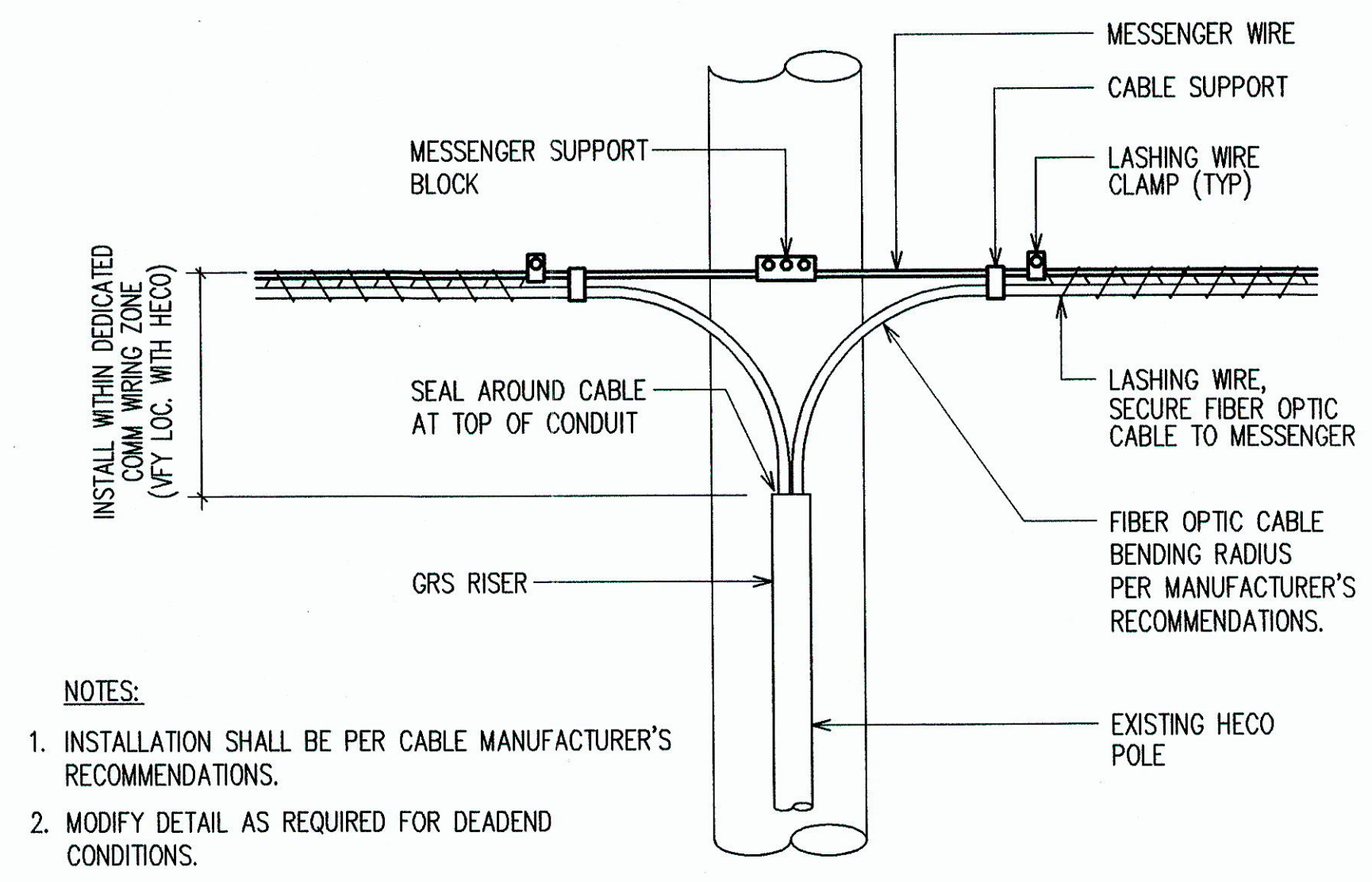
REVISION	DATE	BRIEF	BY	APPROVED
DEPARTMENT OF TRANSPORTATION SERVICES CITY AND COUNTY OF HONOLULU FEDERAL AID NO. STP-0001(30) COMPUTERIZED TRAFFIC CONTROL SYSTEM PHASE 9				
MISCELLANEOUS DETAILS				
ENGINEER	GTN	DATE	MARCH 2007	
DRAFTSMAN	SS	SCALE	AS NOTED	
CHK. BY		REF.		
APPROVED:		APPROVED:		
DIRECTOR		DIVISION ENGINEER		

FILE	PROJECT	FOUNDER	NO.

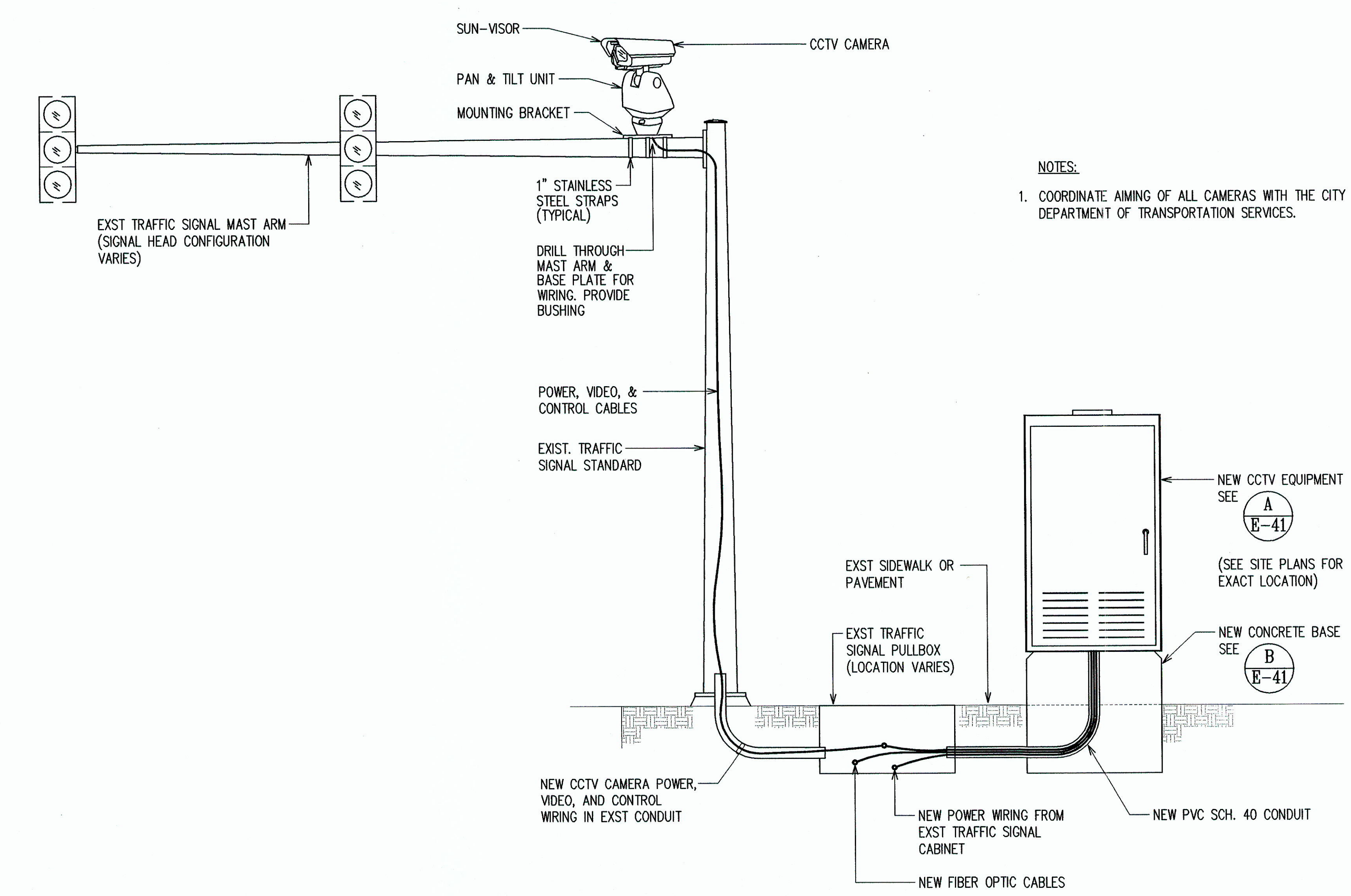
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HAWAII	HAW.	STP-0001 (30)	2007	44	89



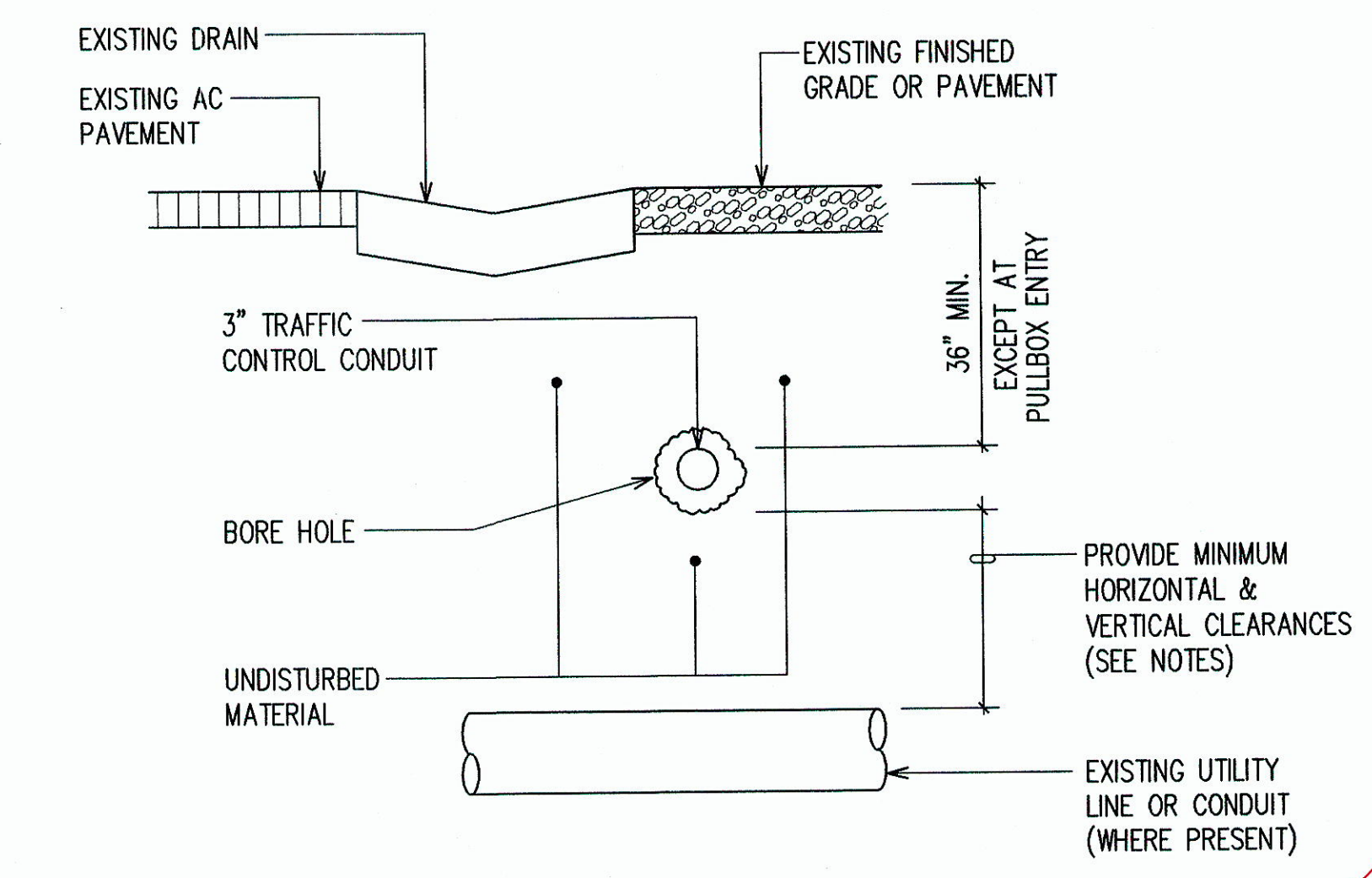
B FIBER OPTIC CABLE ATTACHMENT DETAIL
E-42 NOT TO SCALE



C POLE RISER DETAIL
E-42 NOT TO SCALE



A CCTV CAMERA MOUNTING DETAIL
E-42 NOT TO SCALE



D HORIZONTAL DIRECTIONAL DRILLING - TYPICAL SECTION
E-42 NOT TO SCALE

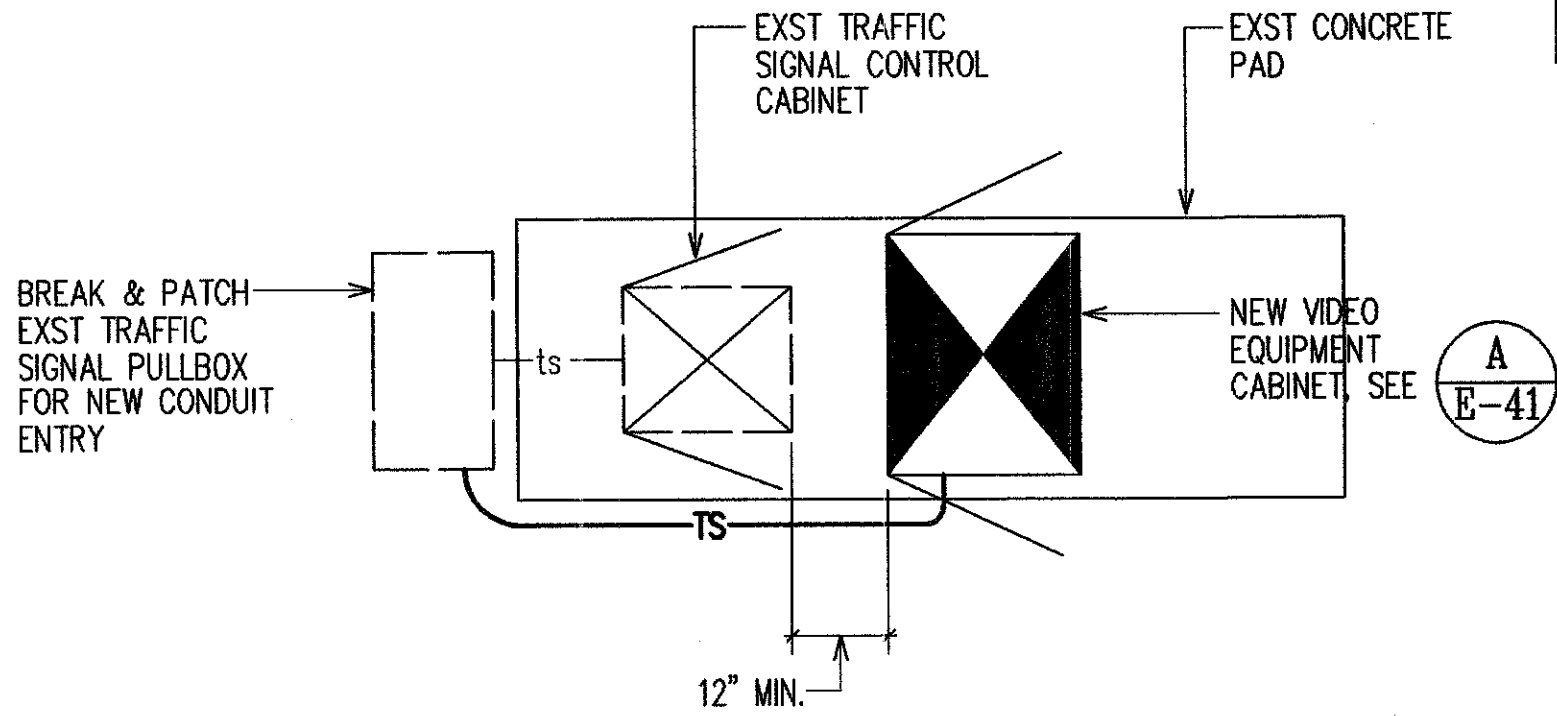
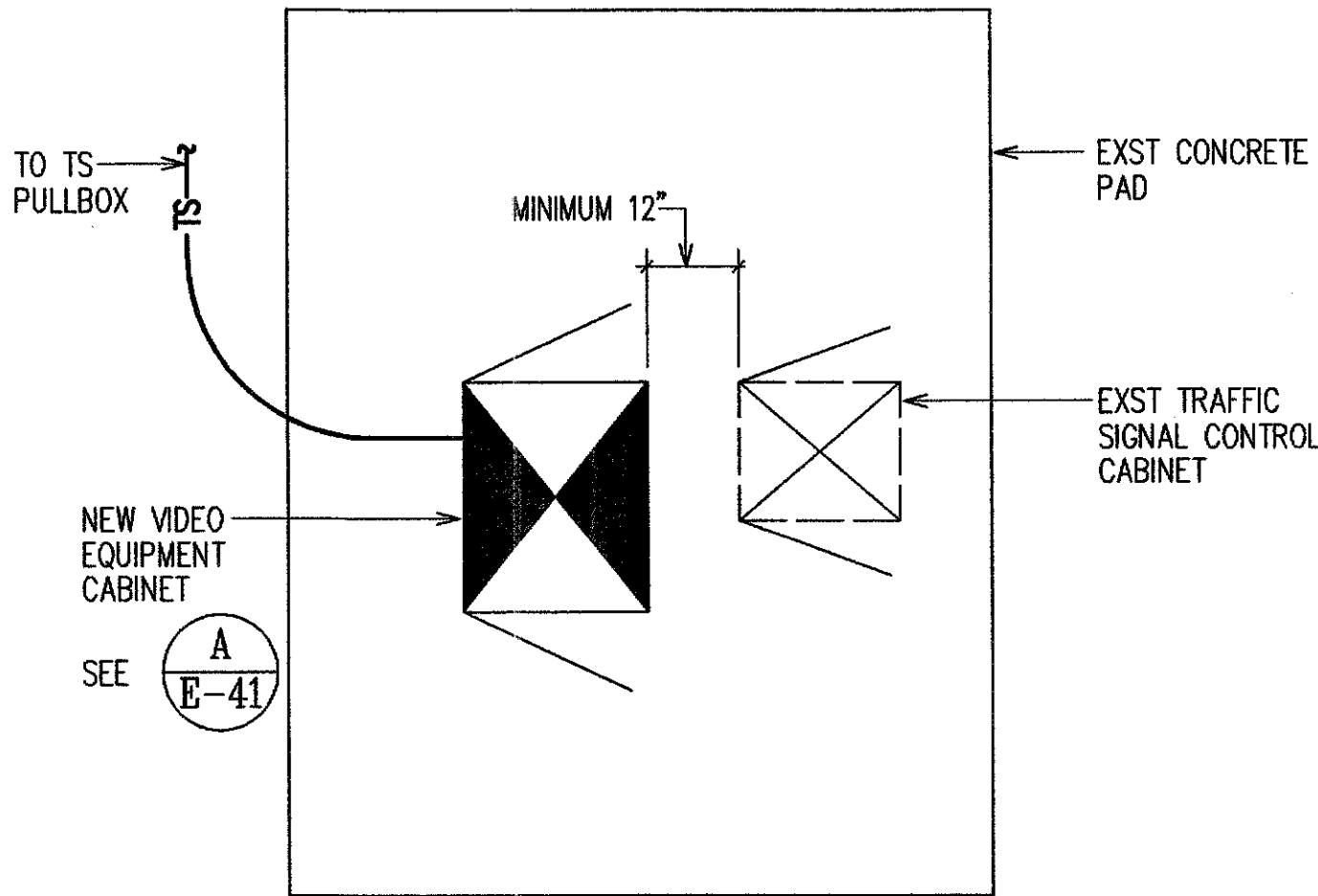
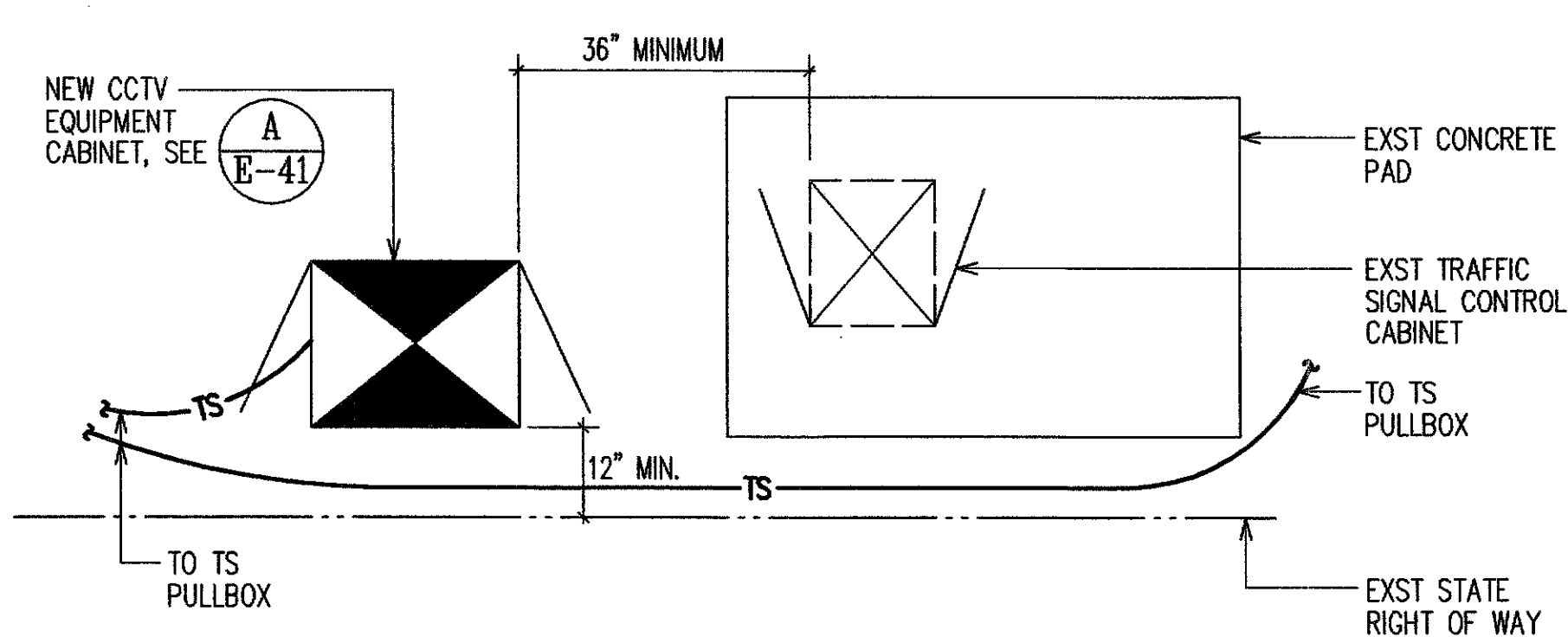
Provide 5' min. clearance from grade where conduits cross under guardrails.

REVISION	DATE	BRIEF	BY	APPROVED
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DEPARTMENT OF TRANSPORTATION SERVICES CITY AND COUNTY OF HONOLULU FEDERAL AID NO. STP-0001(30) COMPUTERIZED TRAFFIC CONTROL SYSTEM PHASE 9 MISCELLANEOUS DETAILS				
ENGINEER	GTN	DATE	MARCH 2007	
DRAFTSMAN	SS	SCALE	AS NOTED	
CHK. BY		REF.		
APPROVED:		APPROVED:		
DIRECTOR		DIVISION ENGINEER		

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
LIC. EXPIRATION: 4/30/08

LAST DATE: 02/13/07 @ 10:30:08 BY: GTN, PLOT: 50: 1'-1"
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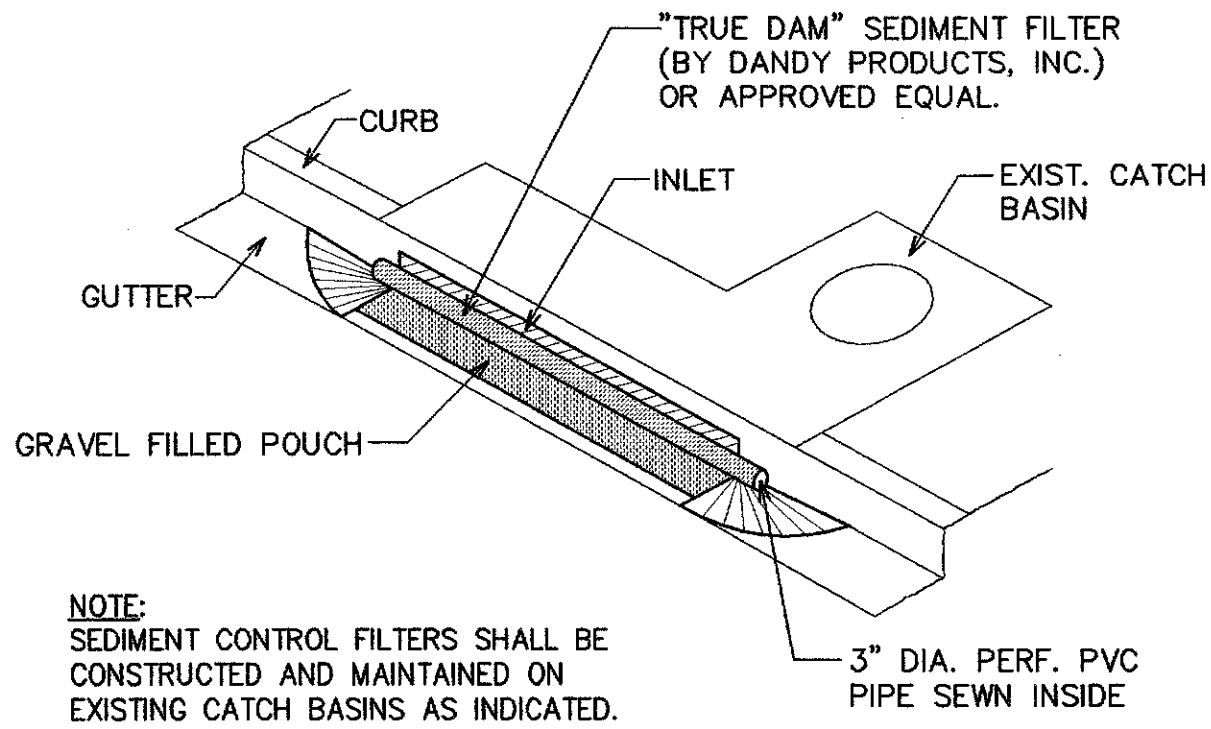
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0001 (30)	2007	45	89



A
E-43 **EQUIPMENT PLAN-HALEKOU INTERCHANGE**
(KANEEOHE SIDE)
NOT TO SCALE

B
E-43 **EQUIPMENT PLAN-HALEKOU INTERCHANGE**
(KAILUA SIDE)
NOT TO SCALE

C
E-43 **EQUIPMENT PLAN-LIKELIKE HIGHWAY/**
ANOI ROAD INTERSECTION
NOT TO SCALE



D
E-43 **SEDIMENT CONTROL FILTER**
AT CATCH BASIN DETAIL
NOT TO SCALE

BEST MANAGEMENT PRACTICES (BMP) NOTES:

1. THE CONTRACTOR SHALL INSTALL THE EROSION CONTROL MEASURES AS DIRECTED BY THE ENGINEER, AS SOON PRATICABLE.
2. ALL BEST MANAGEMENT PRACTICES (BMP's) SHALL NOT BE REMOVED UNTIL ALL WORK IN THE PROJECT AREA HAS BEEN COMPLETED.
3. THE CONTRACTOR SHALL COVER THE OPENINGS TO ALL EXISTING AND PROPOSED STORM DRAIN INLETS WITH A FILTER SYSTEM ("TRUE-DAM" BY DANDY PRODUCTS OR ACCEPTED EQUAL) UNTIL PERMANENT GROUND COVER IS ESTABLISHED. MAINTENANCE OF THE INLET FILTERS BY THE CONTRACTOR SHALL BE INCLUDED FOR THE DURATION OF THE PROJECT.
4. AT THE ENDING OF TRENCHING OPERATIONS, EXISTING STORM DRAIN INLETS AND MANHOLES SURROUNDING THE PROJECT SITE SHALL BE INSPECTED AND ANY ACCUMULATED SEDIMENT AND DEBRIS FOUND IN THE DRAIN STRUCTURES SHALL BE REMOVED. FLUSHING INTO THE INLETS AND MANHOLES IS PROHIBITED.

REVISION	DATE	BRIEF	BY	APPROVED

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
FEDERAL AID NO. STP-0001(30)
COMPUTERIZED TRAFFIC CONTROL SYSTEM
PHASE 9

MISCELLANEOUS DETAILS

ENGINEER GTN DATE MARCH 2007
DRAFTSMAN SS SCALE AS NOTED
CHK. BY REF.
APPROVED: APPROVED:
DIRECTOR DIVISION ENGINEER

