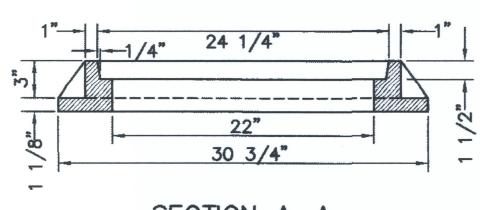
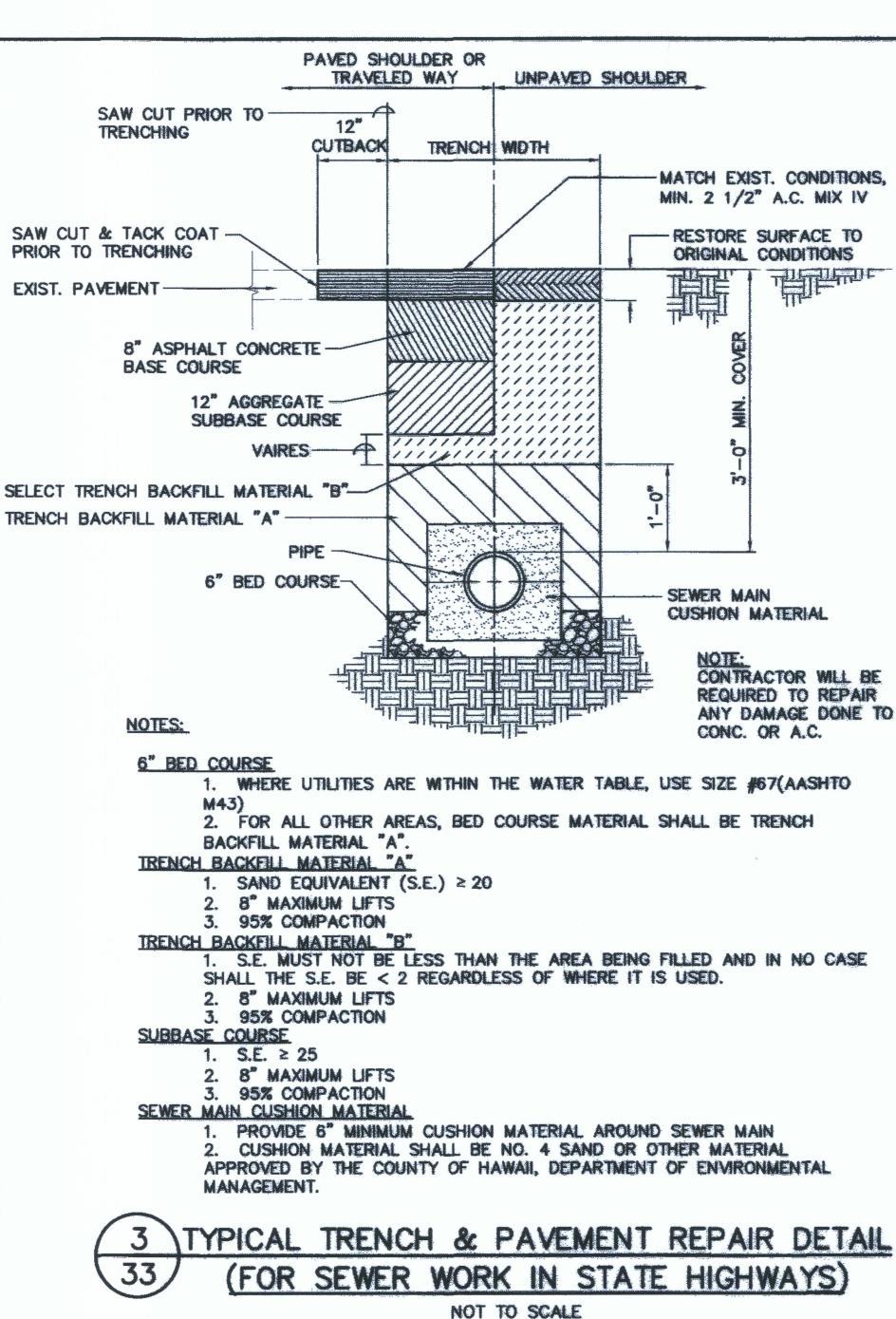


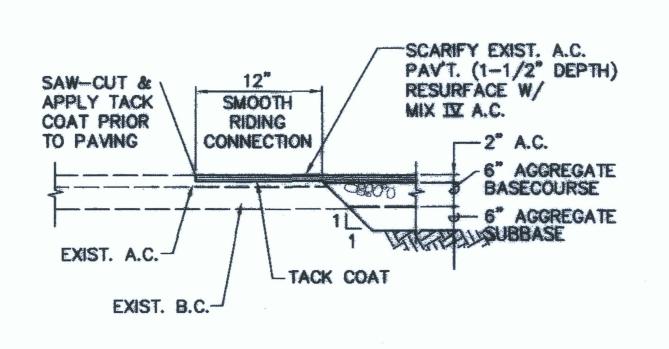
PLAN OF MANHOLE FRAME



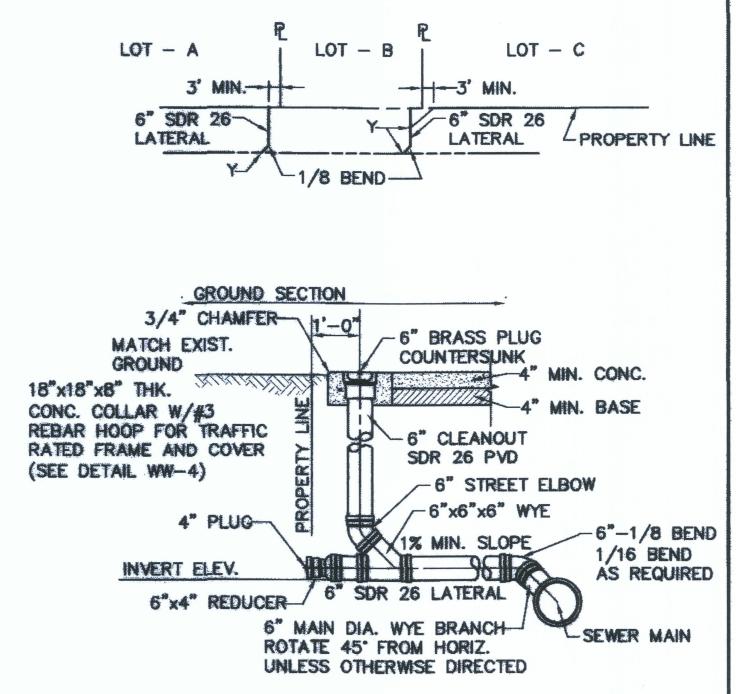
SECTION A-A

MH FRAME TYPE SA 33 NOT TO SCALE





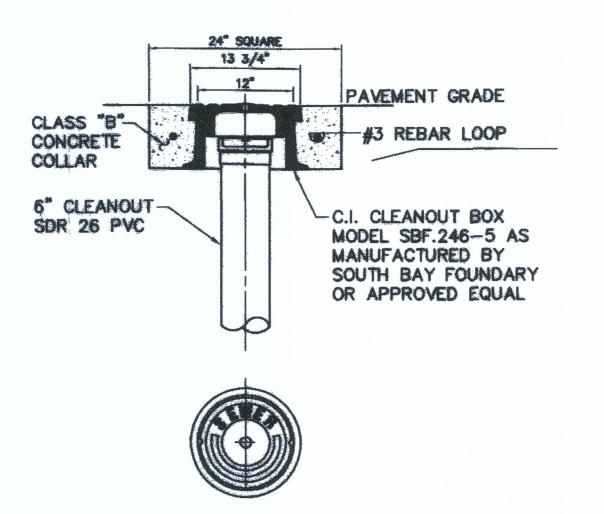
SMOOTH RIDING CONNECTION DETAIL 33 NOT TO SCALE



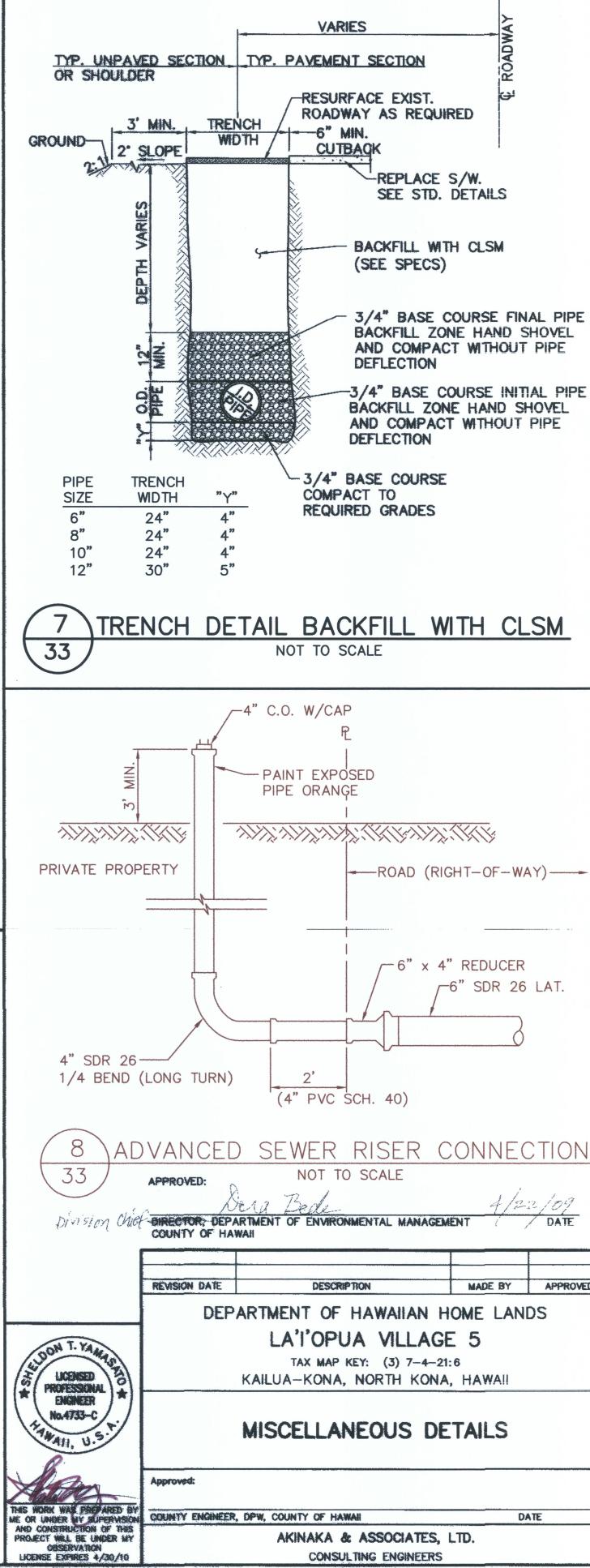
NOTE

- 1. PERMISSION IS TO BE SECURED FROM PROPERTY OWNER BEFORE CONSTRUCTION @ PROPERTY LINE IS STARTED
- 2. SEE SEWER CONSTRUCTION PLANS FOR LENGTH AND ELEVATION OF LATERAL.
- 3. MINIMUM BURIAL DEPTH OF 2' IS REQUIRED FOR ENDS OF SEWER LATERALS LOCATED AT THE PROPERTY LINE.





TRAFFIC RATED C.O. FRAME & COVER 33 NOT TO SCALE

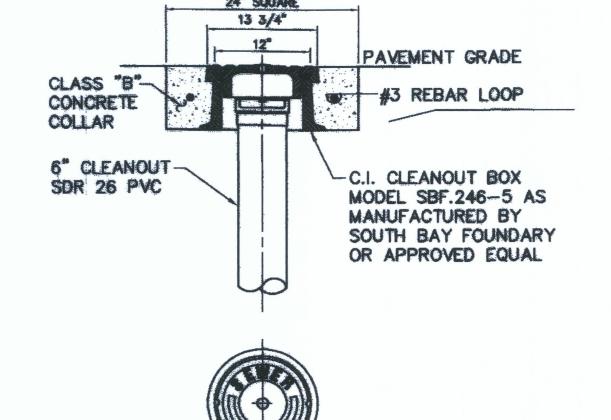


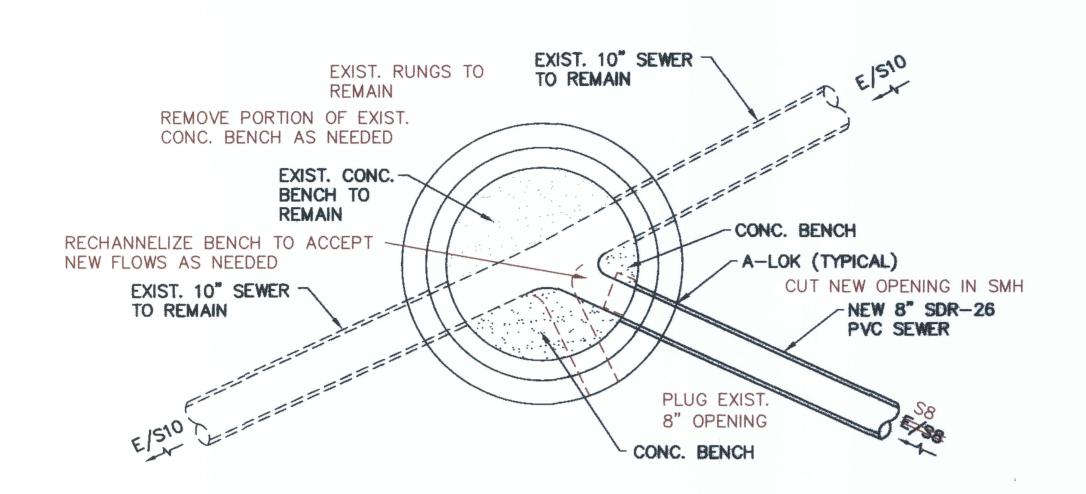
AS-BUILT

SHEET 33 OF 67 SHEETS

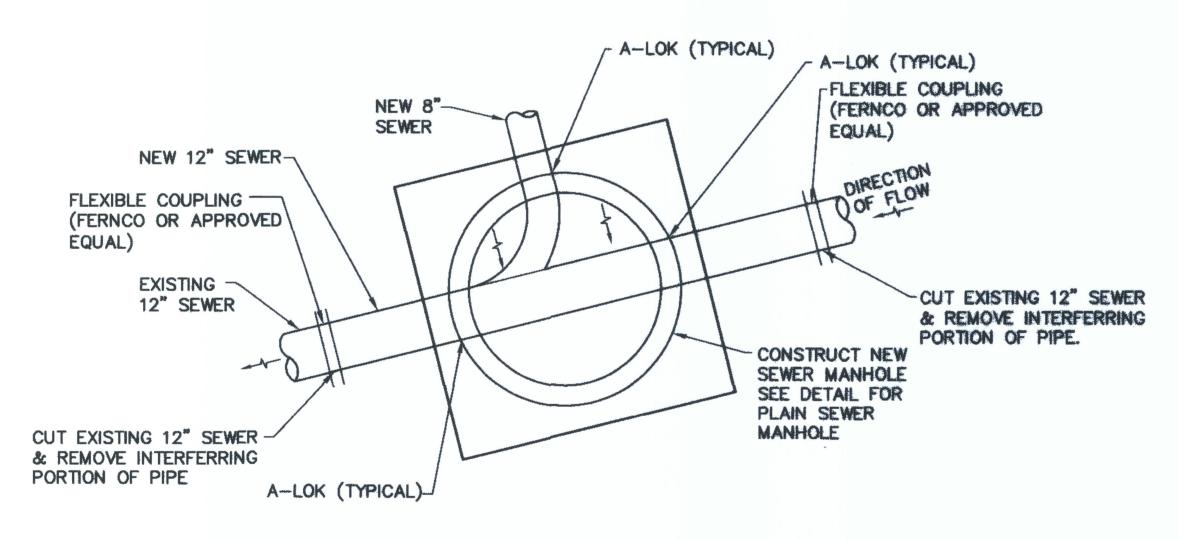
FILE POCKET FOLDER NO.

AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS





RECHANNELIZE EXIST. SMH AT KEALAKEHE PARKWAY SCALE: 1/2" = 1'-0"

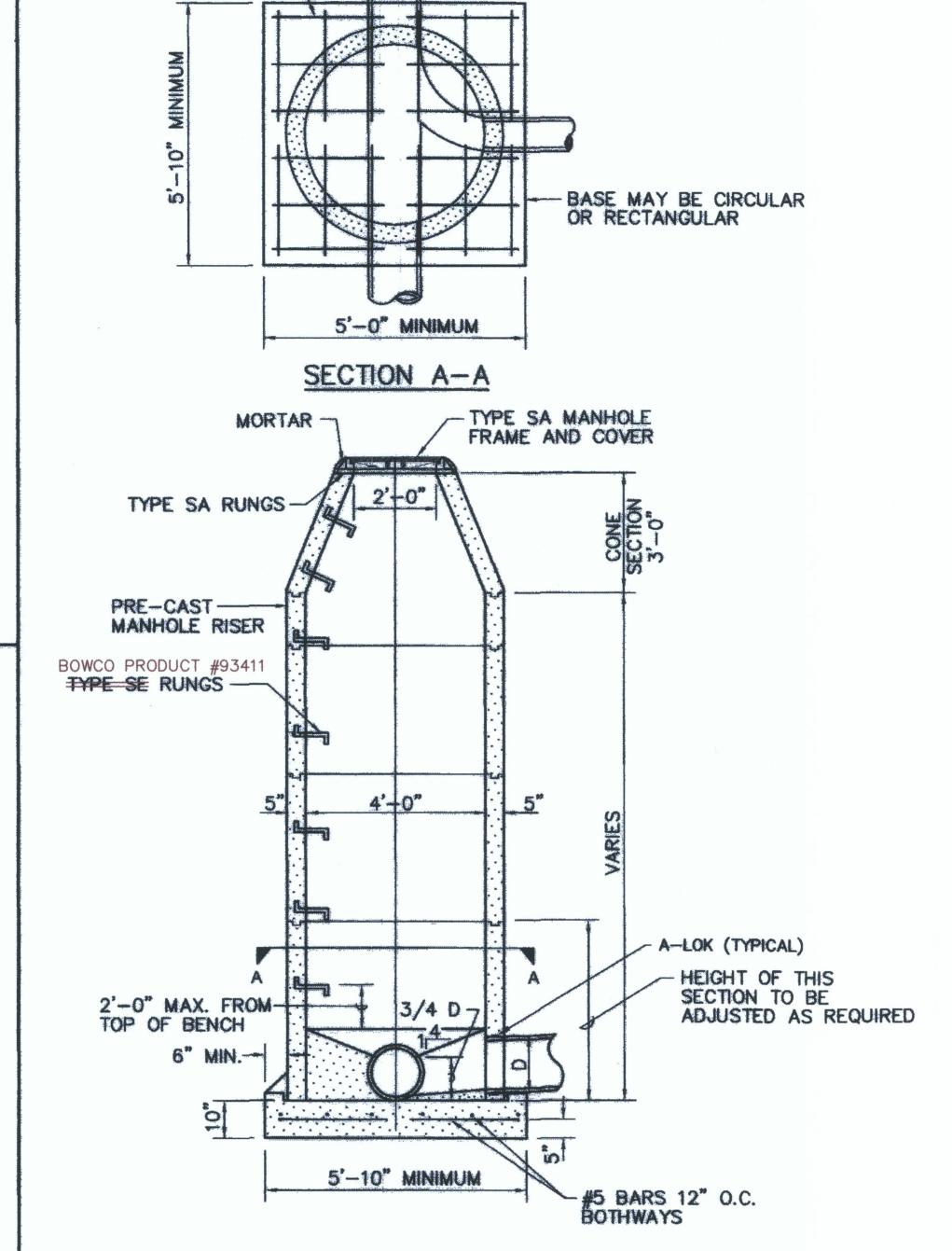


NOTES:

- 1. BYPASS EXISTING SEWER LINE AT UPSTREAM MANHOLE OF PROPOSED SMH #B1 TO MANHOLE DOWNSTREAM OF PROPOSED
- 2. CUT INTO PIPE AT LOCATION OF NEW MANHOLE SMH #B1 AND REMOVE INTERFERRING PORTION OF PIPE.
- 3. CONSTRUCT NEW MANHOLE SMH #B1.
- 4. JOIN NEW 12" SEWER PIPE TO EXISITNG 12" SEWER PIPE WITH FERNCO COUPLING (OR APPROVED EQUAL).



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



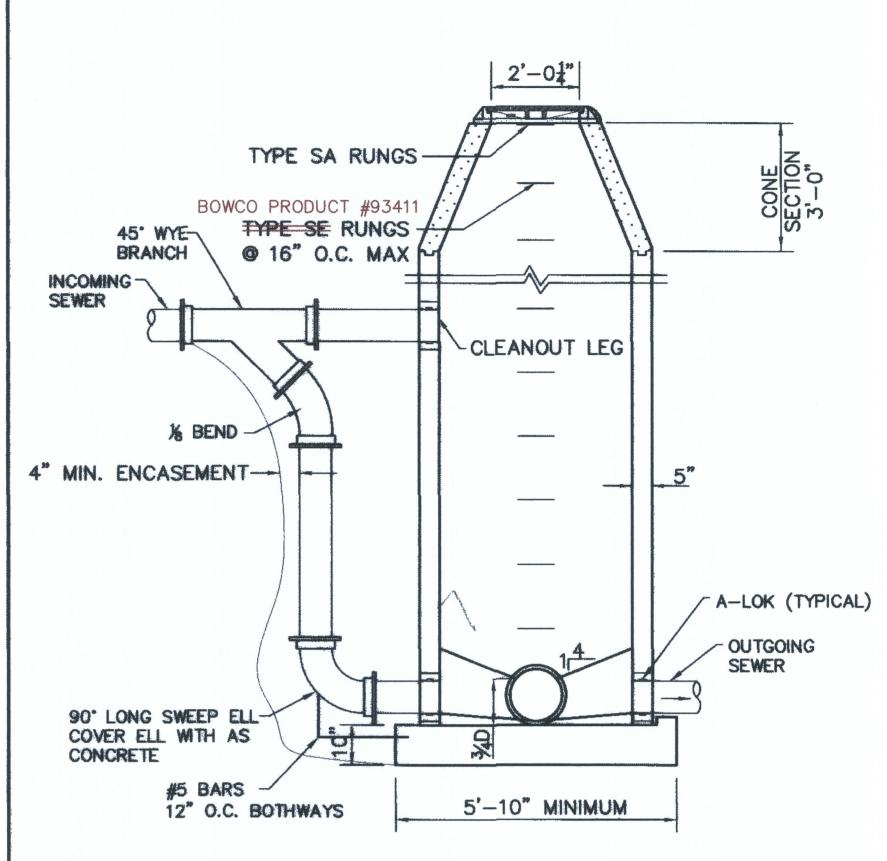
NOTE:

#5 BARS-

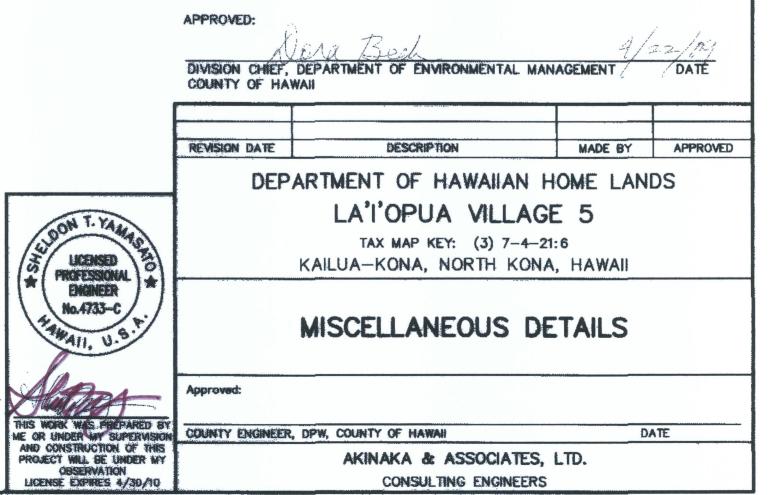
UNLESS OTHERWISE APPROVED OR NOTED, ALL MANHOLES SHALL BE PROVIDED "ECCENTRIC" CONE SECTIONS WITH TYPE SA FRAMES AND COVERS (STD. DETAIL S-22).

ALL MANHOLES LESS THAN 5'-0" DEEP SHALL BE PROVIDED 22-INCH "CONCENTRIC" CONE SECTIONS WITH TYPE SB FRAMES AND COVERS (STD. DETAIL S-21).

> PLAIN SEWER MANHOLE SCALE: 1/2" = 1'-0"



SHALLOW DROP MANHOLE



COUNTY ENGINEER, DPW, COUNTY OF HAWAII

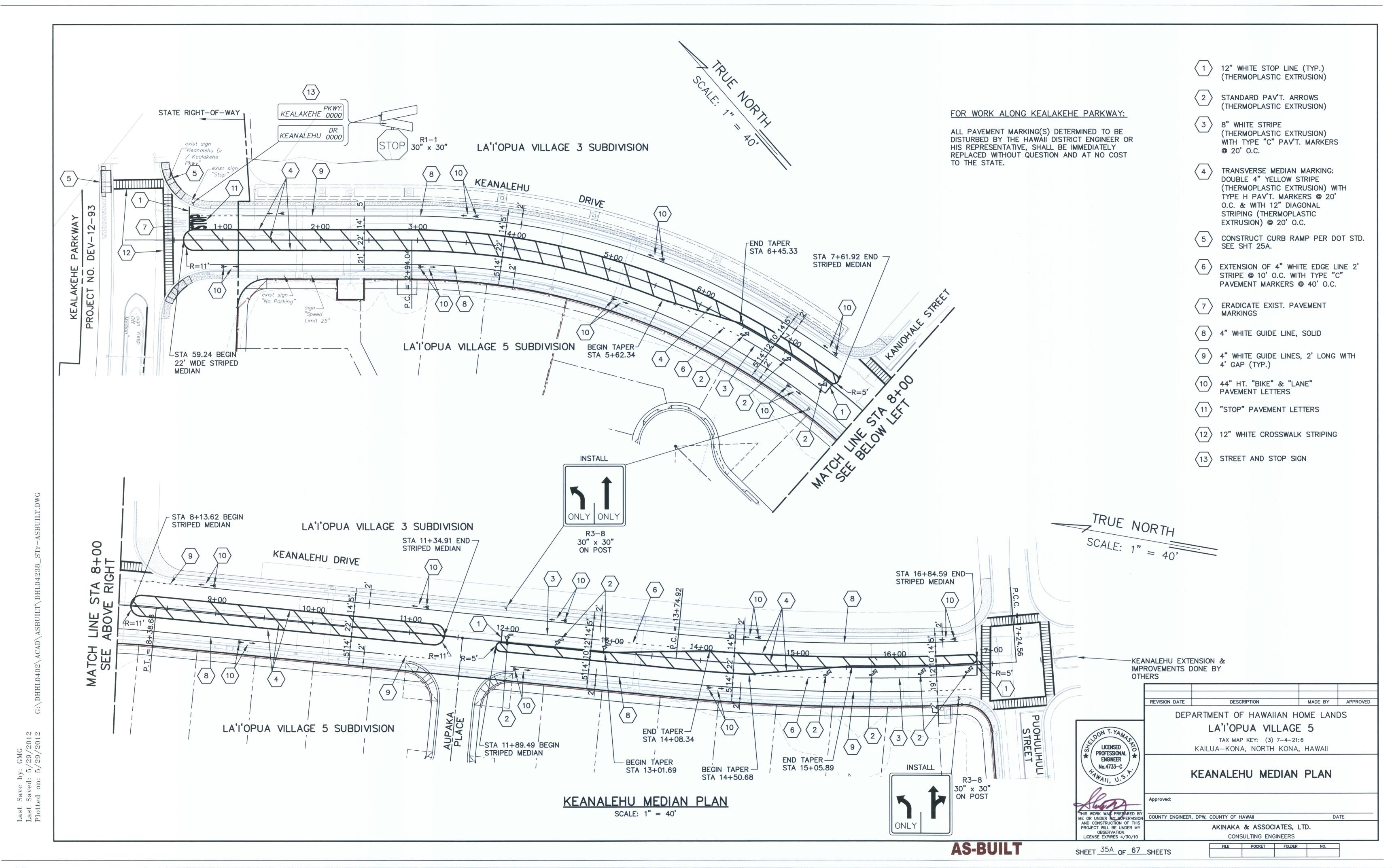
AS-BUILT

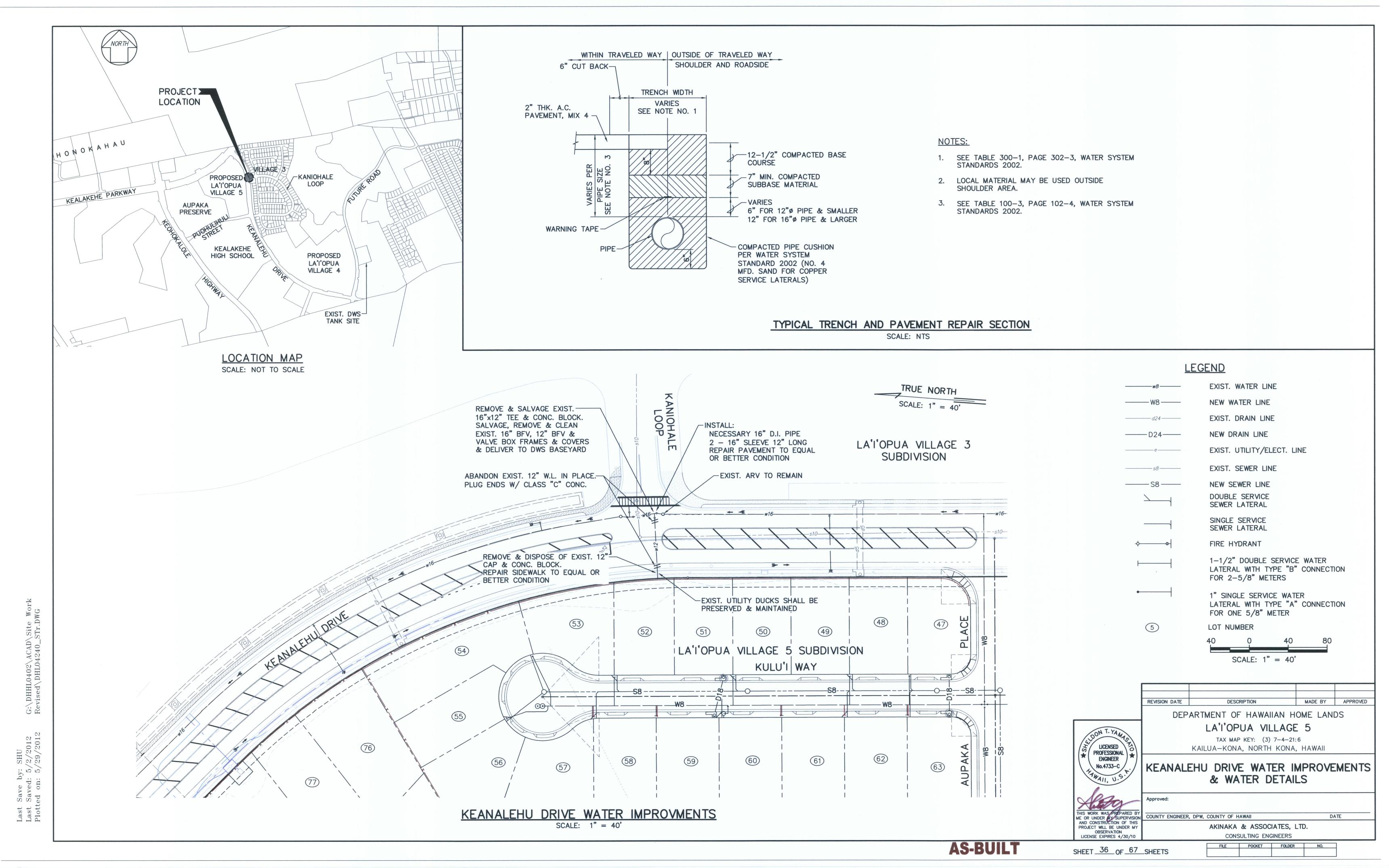
SHEET 34 OF 67 SHEETS

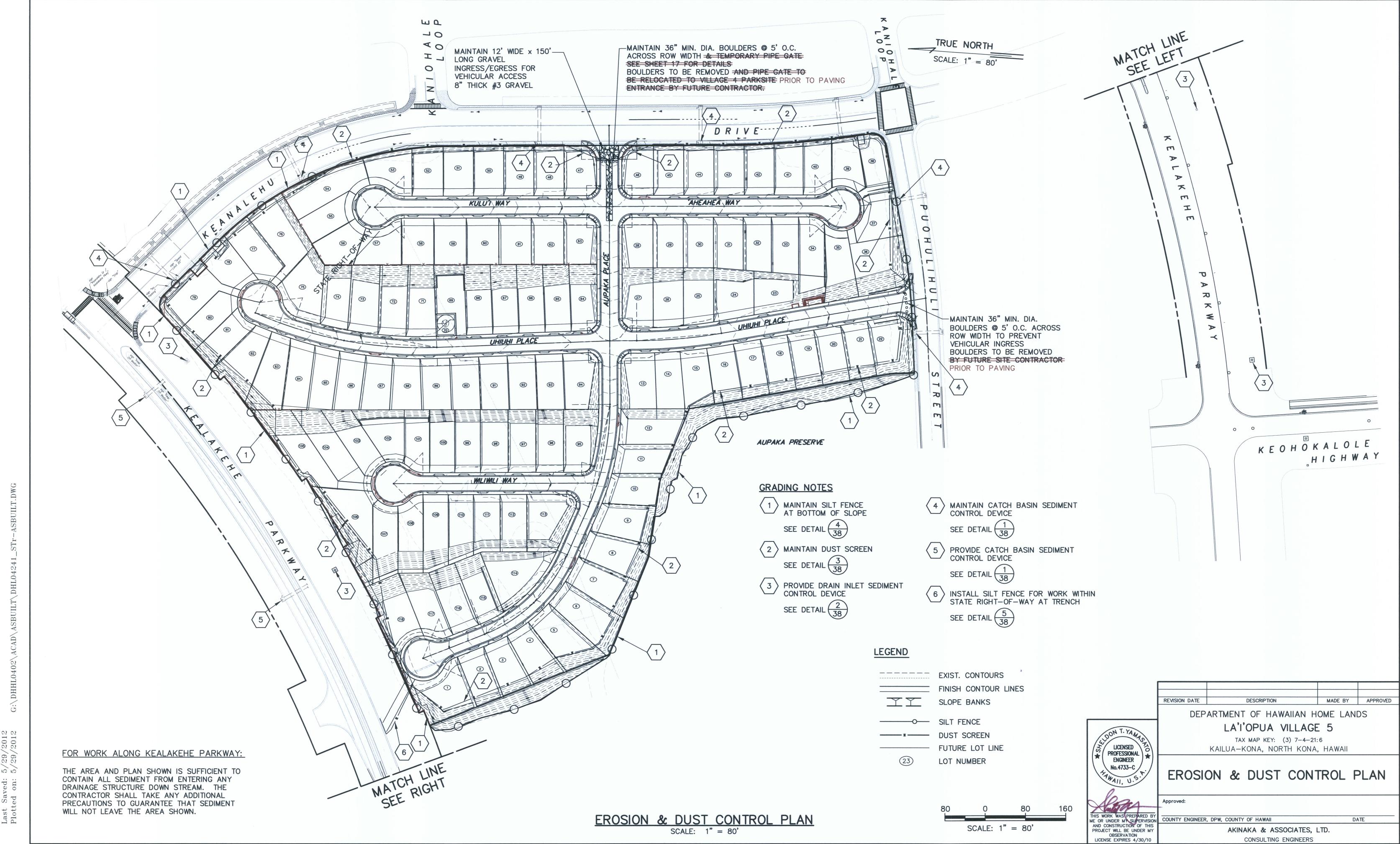
FILE POCKET FOLDER NO.

AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS

DATE





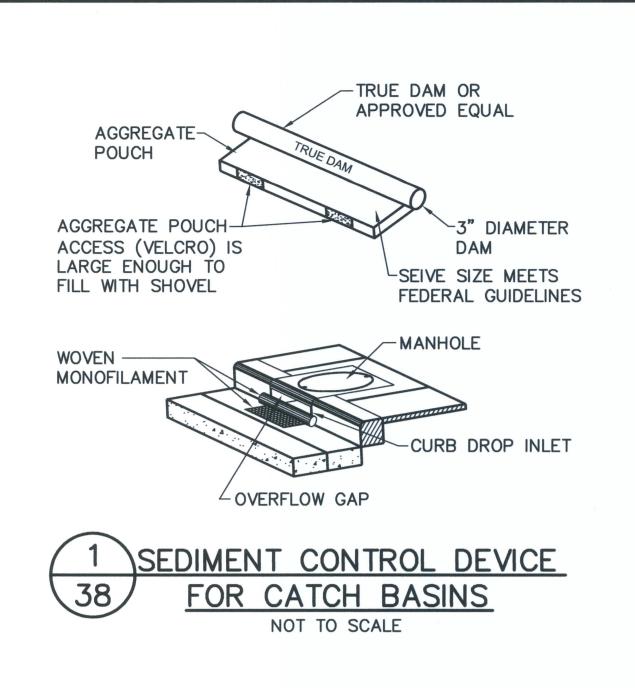


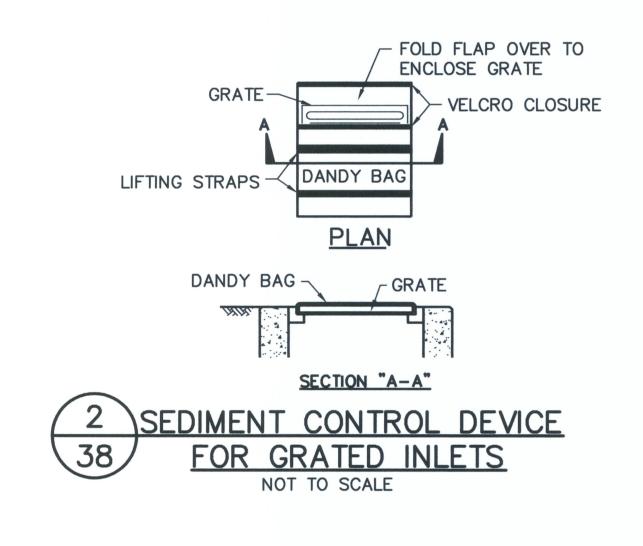
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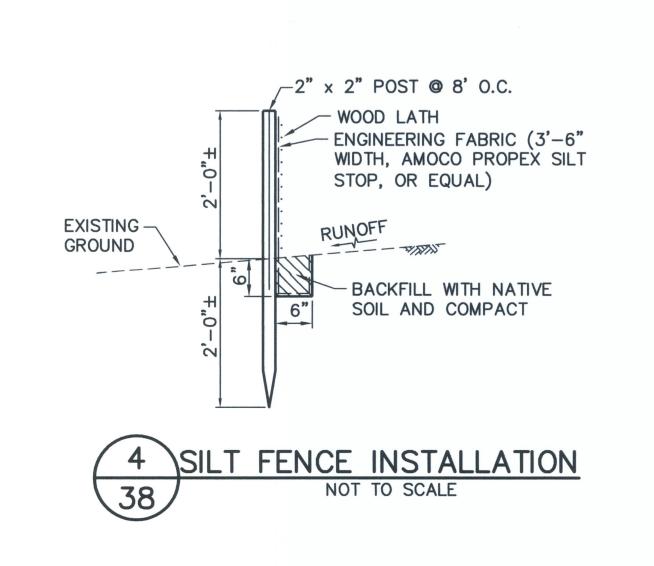
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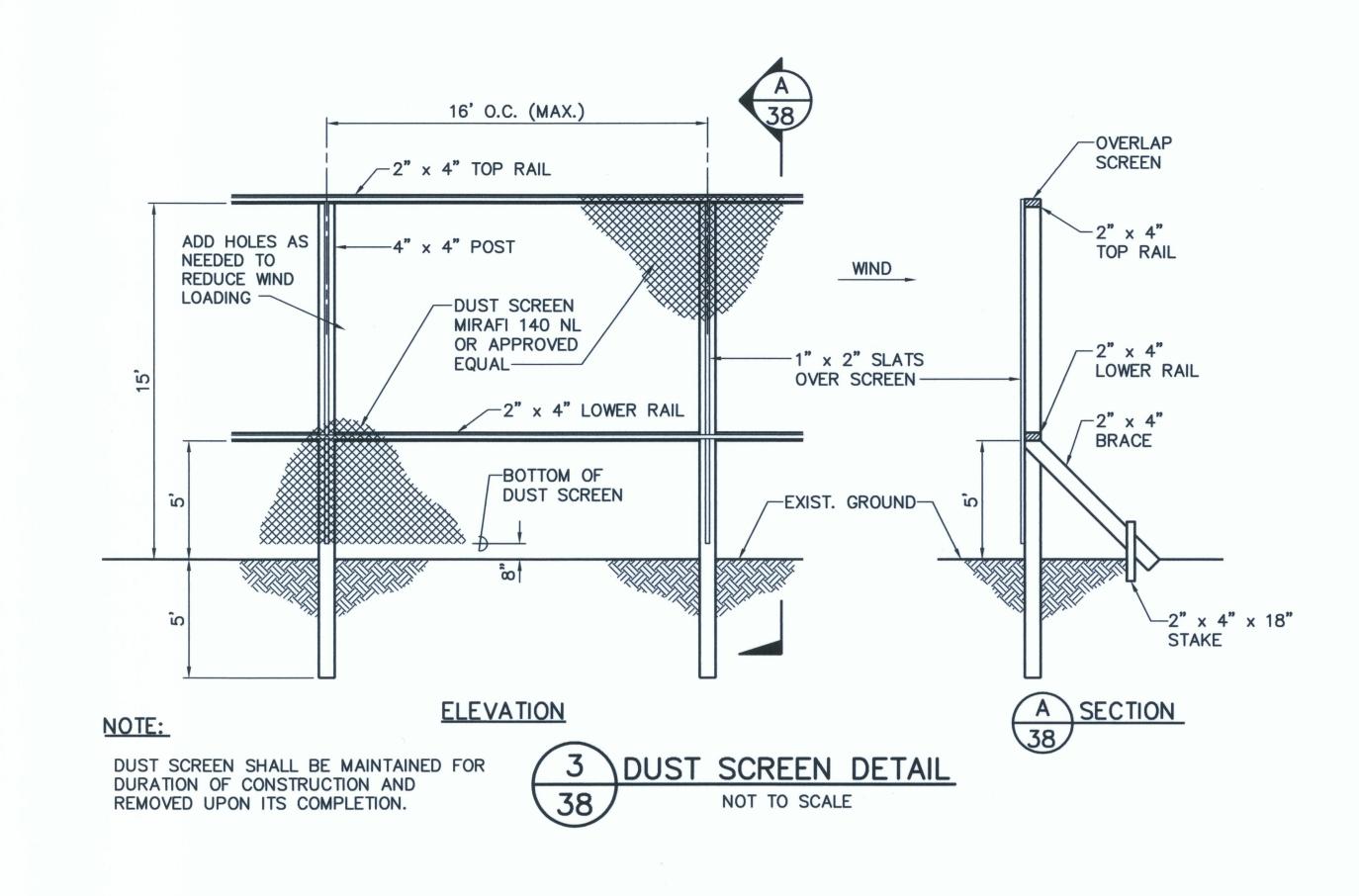
SHEET 37 OF 67 SHEETS

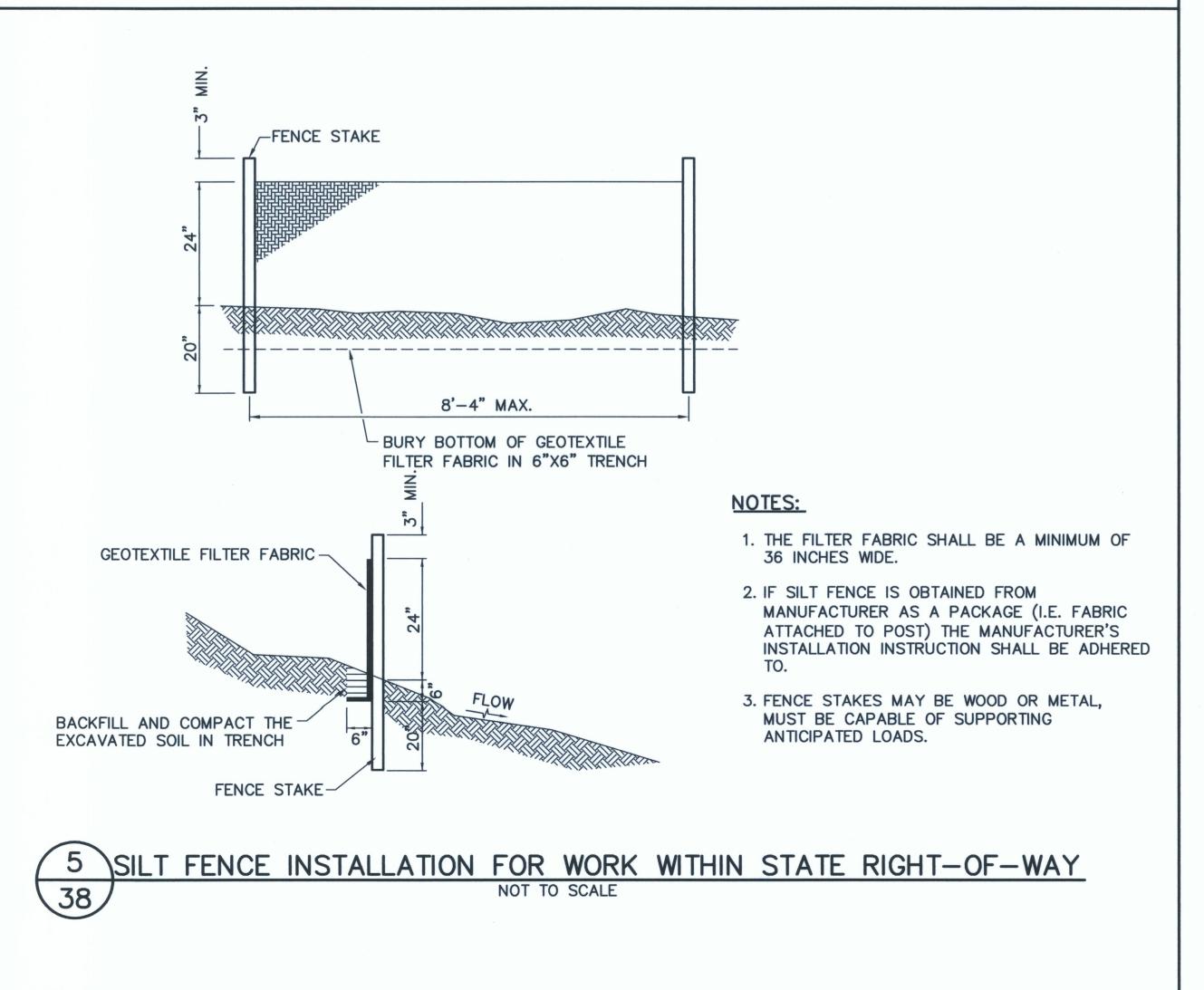
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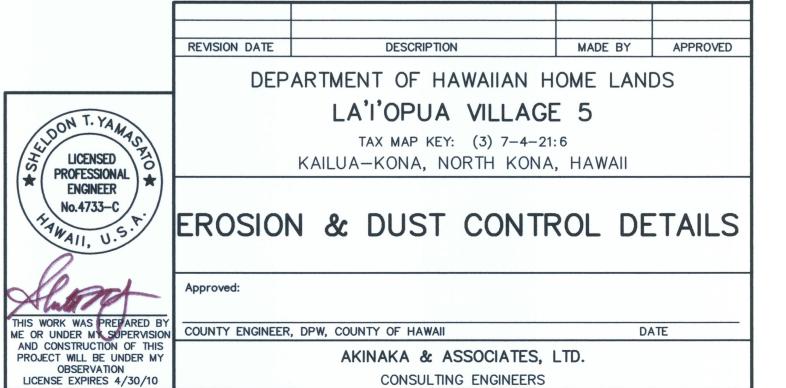


NOTES FOR TEMPORARY SEWER TRENCH PROTECTION:

- 1. DIMENSIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR TO APPLY SCHEMATICS TO EACH SPECIFIC LOCATION.
- 2. GRAVEL BAGS OR SILT FENCE IS TO COMPLETELY SURROUND ALL EQUIPMENT AND LAND DISTURBING ACTIVITIES.
- 3. CONTRACTOR IS TO DIVERT ALL ROADSIDE DRAINAGE AWAY FROM THE TRENCH.
- 4. ANY TRACKING OF SEDIMENT ONTO THE PUBLIC ROADWAY SHALL BE CLEANED IMMEDIATELY.
- 5. THE TRENCH SHALL BE SHORED TO PREVENT COLLAPSE AT ALL TIMES WHEN OPEN FOR USE.
- 6. IF ANY PORTION OF THE WORK IS OUTSIDE OF THE STATE/COUNTY RIGHT-OF-WAY, CONTRACTOR TO SECURE PERMISSION FROM ADJACENT PROPERTY OWNERS.
- 7. THE CONTRACTOR SHALL PROVIDE AN APPROVED TEMPORARY NCHRP 350-COMPLIANT TRAFFIC BARRIER SYSTEM BEFORE AND END OF EACH WORK DAY AND DURING NON-WORKING HOURS.

NOTES TO CONTRACTOR:

- 1. CONTRACTOR SHALL NOT HAVE ANY VEHICLES OR EQUIPMENT ON PUOHULIHULI STREET OR KEANALEHU DRIVE BETWEEN KEALAKEHE PARKWAY AND PUOHULIHULI STREET OR USE THEM FOR INGRESS/EGRESS OR VEHICLE STORAGE DURING SCHOOL DROP-OFF AND PICK-UP HOURS.
- 2. CONTRACTOR SHALL MAINTAIN SEDIMENT BARRIERS AND OR TRAPS.
- 3. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY BMP MEASURES UNTIL THE ENTIRE AREA IS COMPLETELY STABILIZED. ALL BMP MEASURES SHALL BE REMOVED IMMEDIATELY AFTER THE AREA IS COMPLETELY STABILIZED.



AS-BUILT

SHEET 38 OF 67 SHEETS

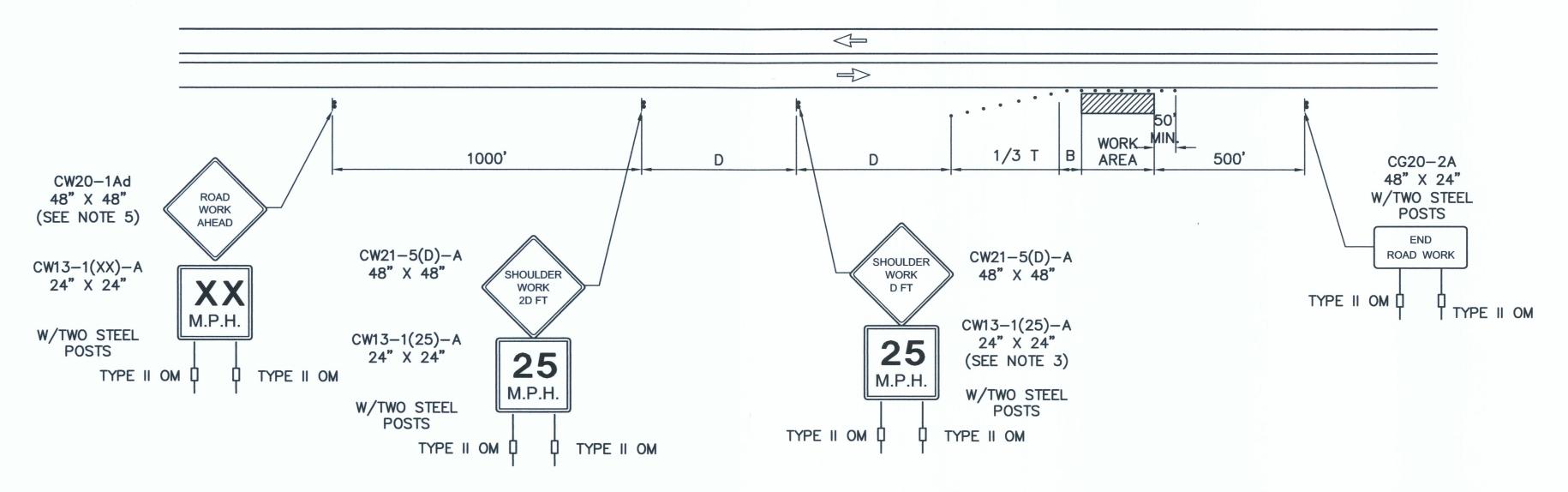
FILE POCKET FOLDER NO.

CONSULTING ENGINEERS

- TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICE FARTHEST FROM THE WORK AREA SHALL BE PLACED FIRST. THE OTHERS SHALL THEN BE PLACED PROGRESSIVELY TOWARD THE WORK
- REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED. ALL SIGNS SHALL BE RESTORED UPON COMPLETION OF WORK.
- FLAGGERS AND/OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
- WHEN REQUIRED BY THE ISSUING OFFICE, THE PERMITTEE SHALL INSTALL A FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLANS.
- SIGN SPACINGS (D), TAPER LENGTHS (T) AND SPACINGS OF CONES OR DELINEATORS SHALL BE AS SHOWN IN TABLE 1, UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLANS.
- ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
- ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
- THE BACKS OF ALL SIGNS USED FOR TRAFFIC CONTROL SHALL BE APPROPRIATELY COVERED TO PRECLUDE THE DISPLAY OF INAPPLICABLE SIGN MESSAGES (I.E., WHEN SIGNS HAVE MESSAGES ON BOTH FACES).
- 11. AT THE END OF EACH DAY'S WORK OR AS SOON AS THE WORK IS COMPLETED, THE PERMITTEE SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC. REMOVAL SHALL BE IN THE REVERSE ORDER OF INSTALLATION.
- PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL BE REPLACED UPON THE COMPLETION OF EACH PHASE OF WORK.

TABLE 1 FOR TRAFFIC CONTROL PLAN							
POSTED SPEED LIMIT (M.P.H.)	SIGN SPACING (D) (FEET)	TAPER LENGTH (T) (FEET)		LONGITUDINAL BUFFER	SPACING OF CONES OR DELINEATORS (FEET)		
		W=12' OR LESS ①	W= GREATER THAN 12' 1	SPACE (B) (FEET)	TAPER	TANGENT	WORK AREA
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W × 20	85	30	30	10
35	250	250	W × 20	120	35	35	10
40	500	350	W × 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W × 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10

NOTES: (1) W = WIDTH OF LANE, SHOULDER OR OFFSET.



WORKING ON SHOULDER OR ROADSIDE TRAFFIC CONTROL PLAN FOR SEWER CONNECTION

LEGEND

SIGN CONE OR DELINEATOR

⇒ DIRECTION OF TRAFIC

NOTES:

- 1. THIS PLAN MAY BE USED ONLY IF ALL ROAD WORK, INCLUDING EQUIPMENT AND WORKERS ARE OFF THE TRAVEL WAY.
- 2. SEE TABLE 1 FOR ADDITIONAL DIMENSIONS.
- 3. ENGINEER WILL DETERMINE IF ADVISORY SPEED SIGN IS NECESSARY.
- 4. CONTRACTOR WILL PROVIDE NECESSARY ADJUSTMENTS TO ACCOMODATE BICYCLISTS AND PEDESTRIANS.
- 5. CW20-1Ad SIGN REQUIRED FOR POSTED SPEED LIMIT OF 45 MPH OR GREATER.
- 6. SIGNING IS NOT REQUIRED IF THE WORK AREA INCLUDING EQUIPMENT AND WORKERS, IS OUTSIDE THE CLEAR ZONE DISTANCE, AS SPECIFIED IN THE LATEST AASHTO ROADSIDE DESIGN GUIDE.

NO LANE CLOSURES ARE ALLOWED UNDER THESE PLANS. IF LANE CLOSURES

ARE REQUIRED, DETAILED TRAFFIC CONTROL PLANS MUST BE SUBMITTED TO THE HIGHWAYS DIVISION, HAWAII DISTRICT OFFICE, FOR ACCEPTANCE PRIOR TO ANY

DOT RIGHT-OF-WAY NOTES:

LANE CLOSURES.

REVISION DATE DESCRIPTION MADE BY APPROVED DEPARTMENT OF HAWAIIAN HOME LANDS LA'I'OPUA VILLAGE 5 TAX MAP KEY: (3) 7-4-21:6 LICENSED KAILUA-KONA, NORTH KONA, HAWAII **PROFESSIONAL ENGINEER** No.4733-C TRAFFIC CONTROL NOTES THIS WORK WAS PREPARED B
ME OR UNDER MY SUPERVISION
AND CONSTRUCTION OF THIS
PROJECT WILL BE LIMITED MY COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE AKINAKA & ASSOCIATES, LTD. PROJECT WILL BE UNDER MY OBSERVATION

CONSULTING ENGINEERS

LICENSE EXPIRES 4/30/10

AS-BUILT

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