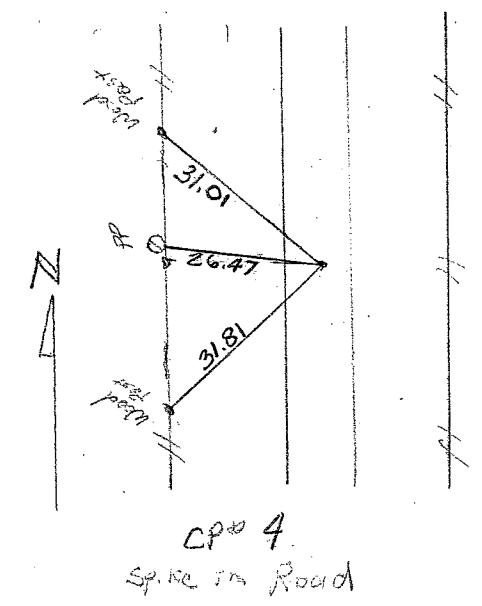
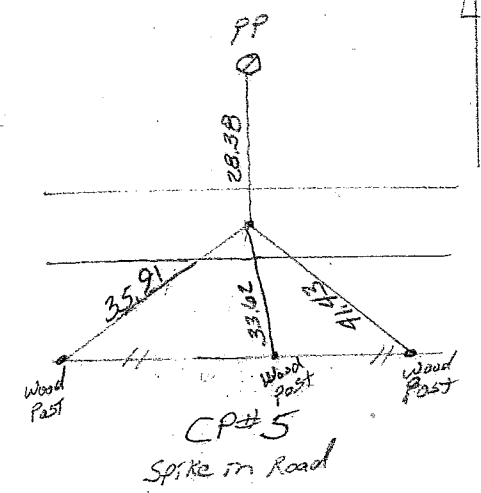
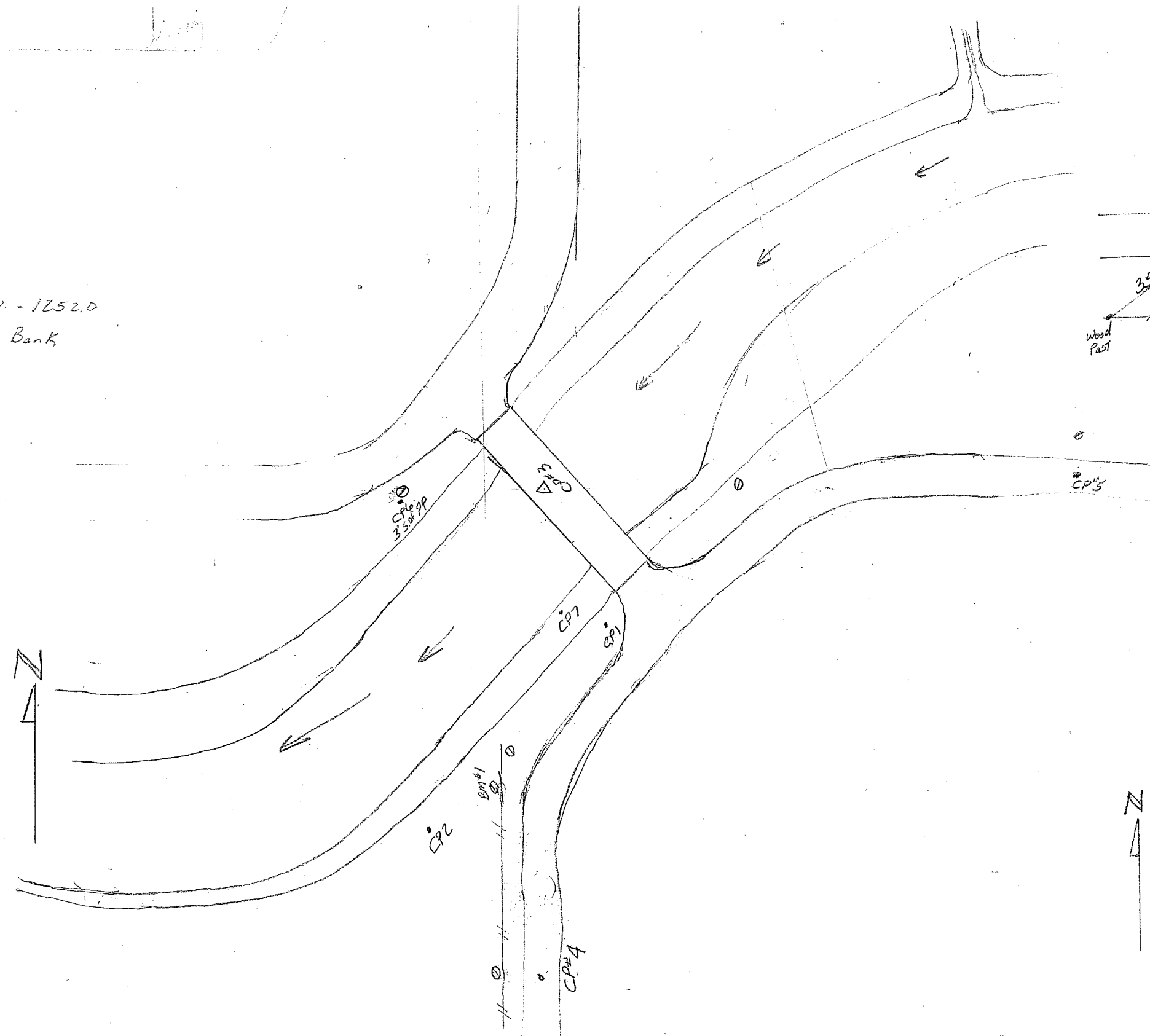
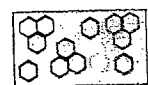
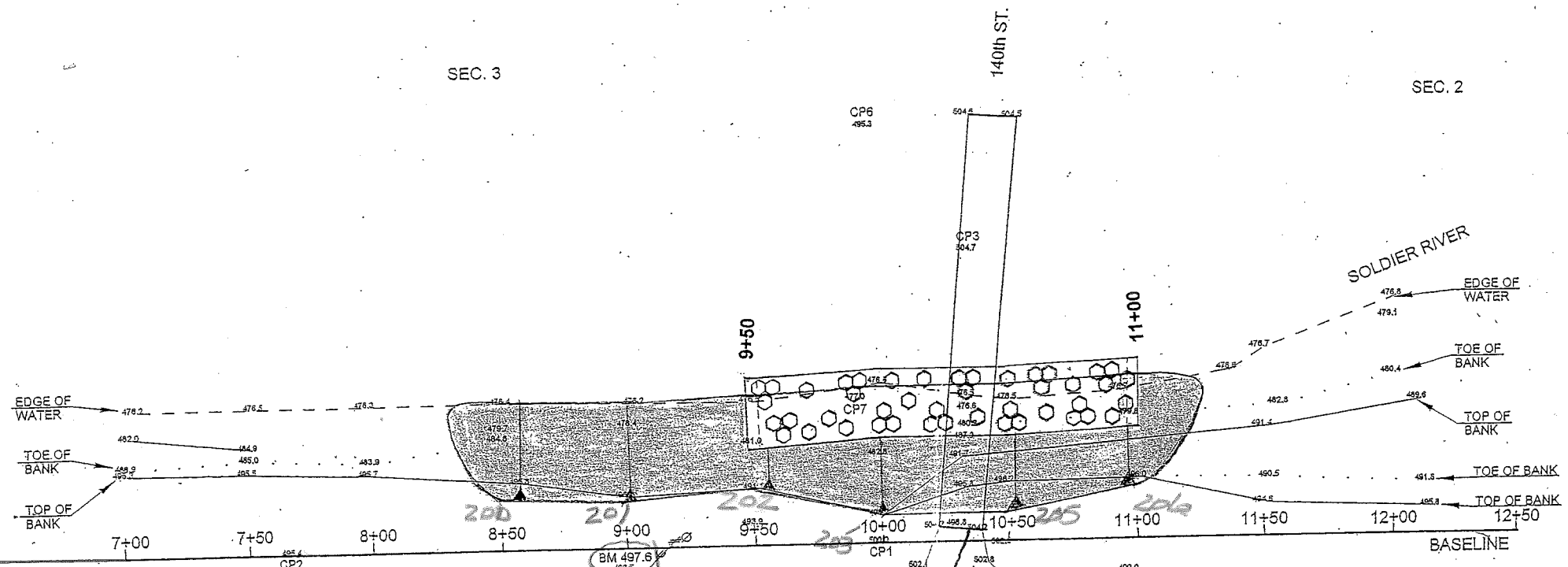


Approx. Deck Elev. - 1252.0
 X-sec South Bank





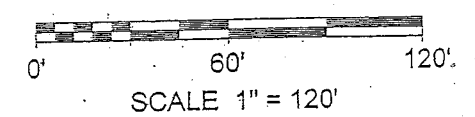
RIP RAP

PT1 10+00
 CP1 N 1000
 E 1000
 Z 500.00

PT2
 CP2 N 1000
 E 768.52.90
 Z 495.38

PT# 29
 CP# 4
 N 861.0662
 E 813.1829
 Z 495.64

PT# 78
 CP# 5
 N 786.0965
 E 1357.5988
 Z 497.89



SOLDIER TOWNSHIP
 SEC. 3-10 T-85N R-41W
 BANK STABILIZATION

EARTHWORK COMPUTATION .

1.25/9

--- 111. L3551-2W

By Ward

Date 3-20-08

[illegible]

LETTING DATE

CRAWFORD COUNTY

PROJECT NO. LBS51-2W BANK STABILIZATION

PROJECT NO. LBS51-2W

IOWA
DEPARTMENT OF TRANSPORTATION
Project Development Division
Plans of Proposed Improvement on The
SECONDARY ROAD SYSTEM
CRAWFORD COUNTY
PROJECT NO. LBS51-2W

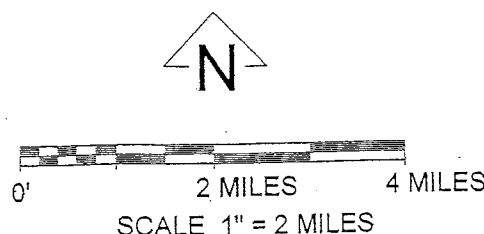
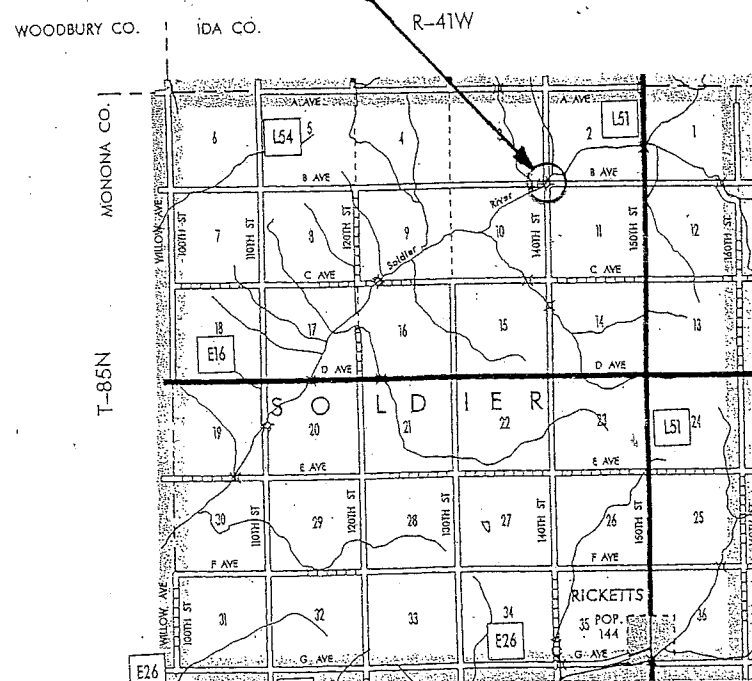
ON 140th ST. AT THE INTERSECTION OF B AVE. AND 140th ST.

BANK STABILIZATION

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND
BRIDGE CONSTRUCTION, SERIES 2001, PLUS APPLICABLE GENERAL SUPPLEMENTAL
SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND
SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT

Scales As Noted

PROJECT NO. LBS51-2W



GENERAL NOTES:

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY ARRANGEMENTS
WITH ADJACENT PROPERTY OCCUPANTS FOR RESTRAINING LIVESTOCK FROM ENTERING THE
RIGHT-OF-WAY.

CONTRACTOR IS TO USE DUE CAUTION IN WORKING OVER AND AROUND ALL TILE LINES.
BREAKS IN THE TILE LINE DUE TO THE CONTRACTOR'S CARELESSNESS ARE TO BE REPLACED AT
CONTRACTOR'S EXPENSE WITHOUT COST TO THE CONTRACTING AUTHORITY. ANY TILE LINES
BROKEN OR DISTURBED BY CUT LINES WILL BE REPLACED AS DIRECTED BY THE ENGINEER IN
CHARGE OF CONSTRUCTION AND AT THE CONTRACTING AUTHORITY'S EXPENSE.

ALL BORROW AREAS, STOCKPILE AREAS, HAUL ROADS, AND AREAS FOR MANEUVERING
EQUIPMENT ON THIS PROJECT WILL REQUIRE SUBSOIL TILLAGE TO AN AVERAGE DEPTH OF 18 TO
24 INCHES. SUCH TILLAGE SHALL BE ACCOMPLISHED ON MAXIMUM OF THREE FOOT CENTERS.
SUCH AREAS SHALL BE DESIGNATED BY THE ENGINEER

CONTRACTOR SHALL NOTIFY ONE-CALL (1-800-292-8989) FOR UTILITY LOCATES PRIOR TO
COMMENCING WORK.

CONSTRUCTION STAKING SHALL BE PROVIDED BY THE COUNTY.

THE CONTRACTOR IS ENCOURAGED TO CONDUCT CONSTRUCTION ACTIVITIES DURING A PERIOD
OF LOW FLOW. ANY TEMPORARY CROSSINGS SHALL INCLUDE ENOUGH CULVERTS TO
ACCOMMODATE LOW FLOWS AND MUST BE REMOVED AFTER COMPLETION OF WORK ON THIS
PROJECT. THE CONTRACTOR IS REQUIRED TO REMOVE ALL FILL MATERIAL USED AS A
TEMPORARY CROSSING TO AN UPLAND, NON-WETLAND SITE AND TO IMPLEMENT APPROPRIATE
MEASURES TO INSURE SEDIMENTS ARE NOT INTRODUCED INTO WATERS OF THE UNITED STATES
DURING CONSTRUCTION OF THIS PROJECT. THE COST OF INSTALLATION, MAINTENANCE AND
REMOVAL OF TEMPORARY CROSSINGS, INCLUDING CULVERTS, SHALL BE INCIDENTAL TO THE
PROJECT.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL
SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE), WHICH IS NOT
DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. THESE AREAS
SHALL NOT IMPACT WETLANDS OR "WATERS OF THE U.S." NO PAYMENT FOR OVERHAUL WILL BE
ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN
THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS.

INDEX OF SHEETS

NO.	
A1	TITLE PAGE, LOCATION MAP, MILEAGE SUMMARY, TRAFFIC NOTES, GENERAL NOTES, AND ROAD STANDARD PLANS
B1	QUANTITY SHEET INCLUDING ESTIMATE FO QUANTITIES, ITEM NOTES, AND DETAILS
V1	SITUATION PLAN
Z1-Z3	CROSS SECTIONS- CHANNEL

ROAD STANDARD PLANS

The following Standard Plans shall be considered applicable to construction work on this project.			
Identification	Date	Identification	Date
TC-202	10/16/07		

Pages or sheets covered by this seal _____

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT
WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF IOWA.

Paul J. Assman Date

MY LICENSE RENEWAL DATE IS _____

APPROVED
BOARD OF SUPERVISORS

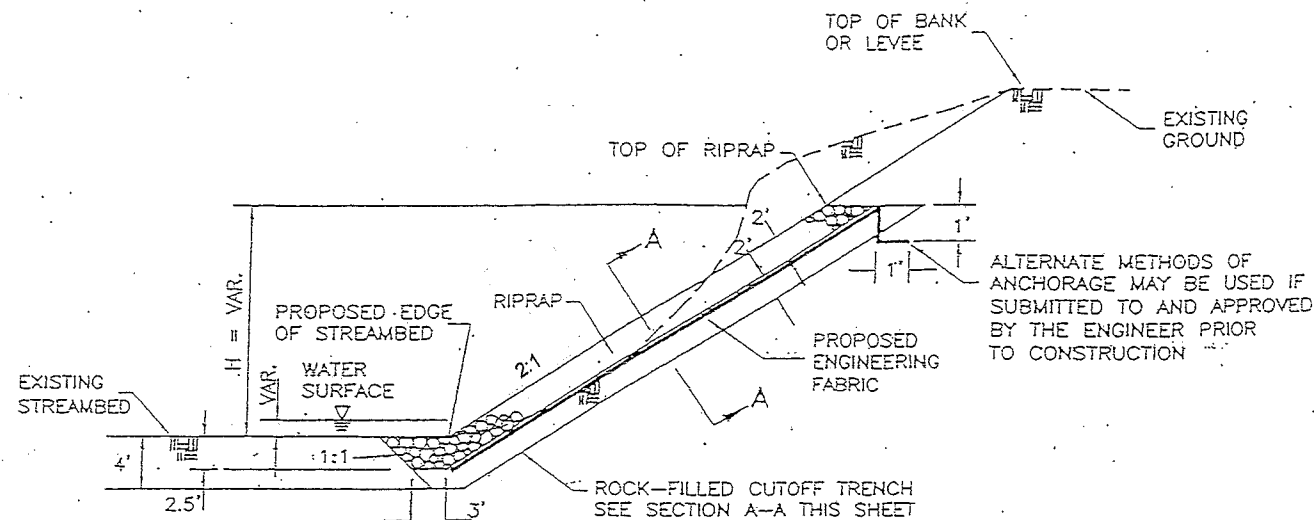
CRAWFORD COUNTY ENGINEER'S OFFICE
P.O. 458, DENISON, IOWA 51442
PHONE: (712) 263-2449 FAX: (712) 263-3423

DRAWN BY: MFB
REVIEWED BY: PJA
APPROVED BY: PJA

BANK STABILIZATION

PROJECT NO. LBS51-2W

SHEET NO. A1



TYPICAL HALF-CHANNEL BANK STABILIZATION SECTION

NOT TO SCALE
FOR TOP OF RIPRAP ELEVATIONS SEE CHANNEL CROSS SECTIONS

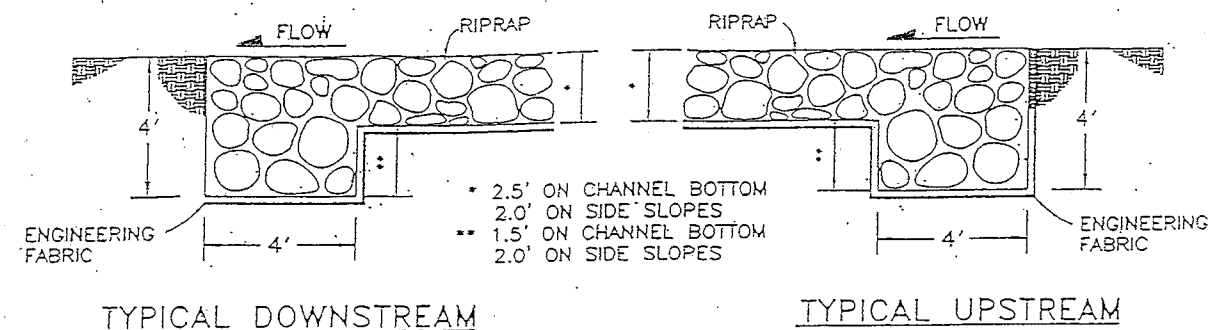
ESTIMATE OF QUANTITIES : LBS51-2W

REF. NO.	ITEM NO.	DESCRIPTION	UNITS	TOTAL
1	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	1422.0
2	2507-3250005	ENGINEERING FABRIC	SY	550.5
3	2507-6850053	REVTMENT, SPECIAL	TON	562.32
4	2533-4980005	MOBILIZATION	LS	1.0

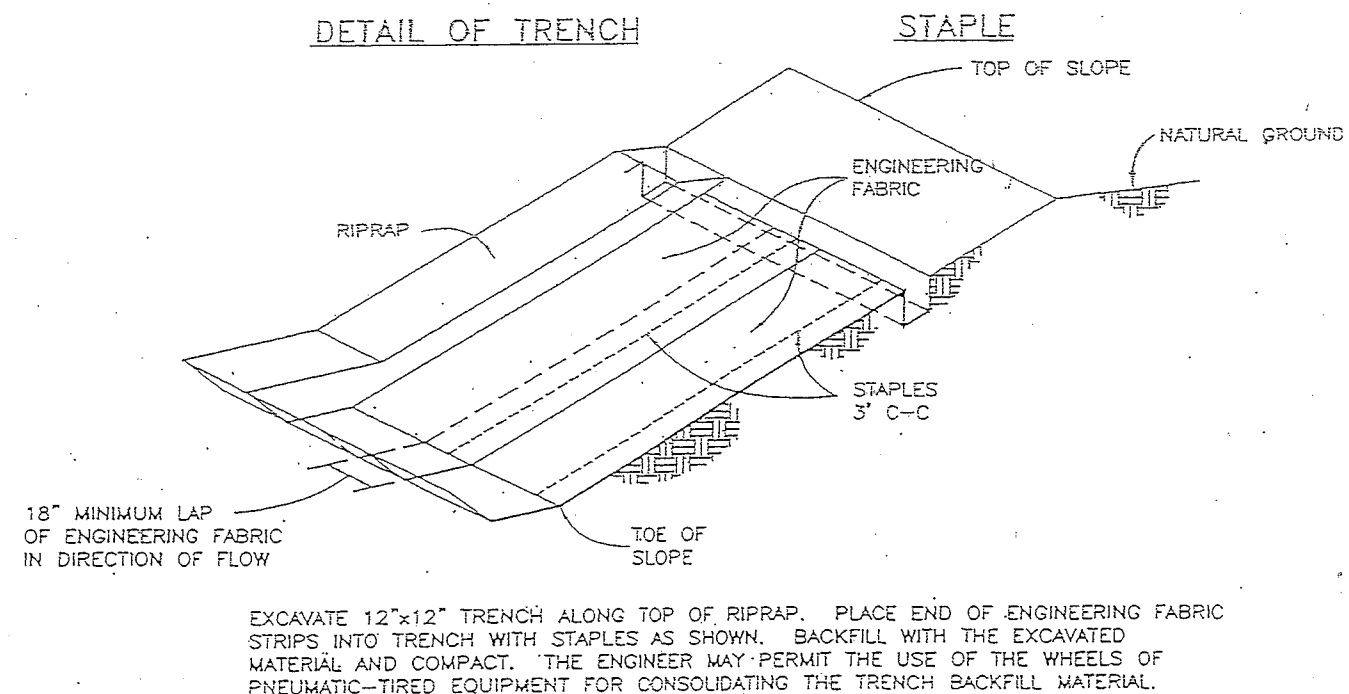
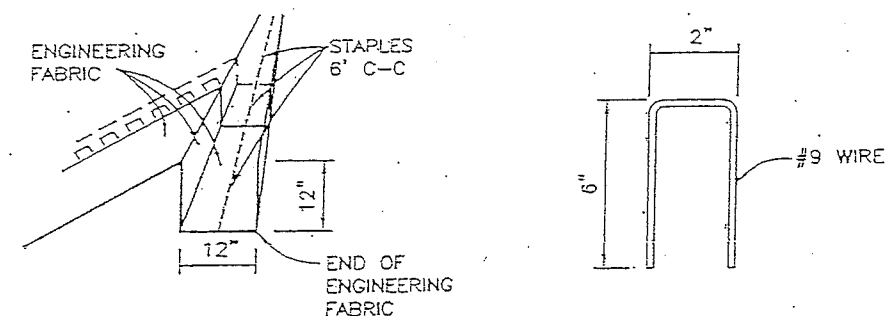
ESTIMATE REFERENCE SECTION

DATA LISTED BELOW IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT CONSTITUTE A BASIS FOR ANY EXTRA WORK ORDERS.

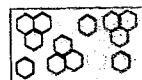
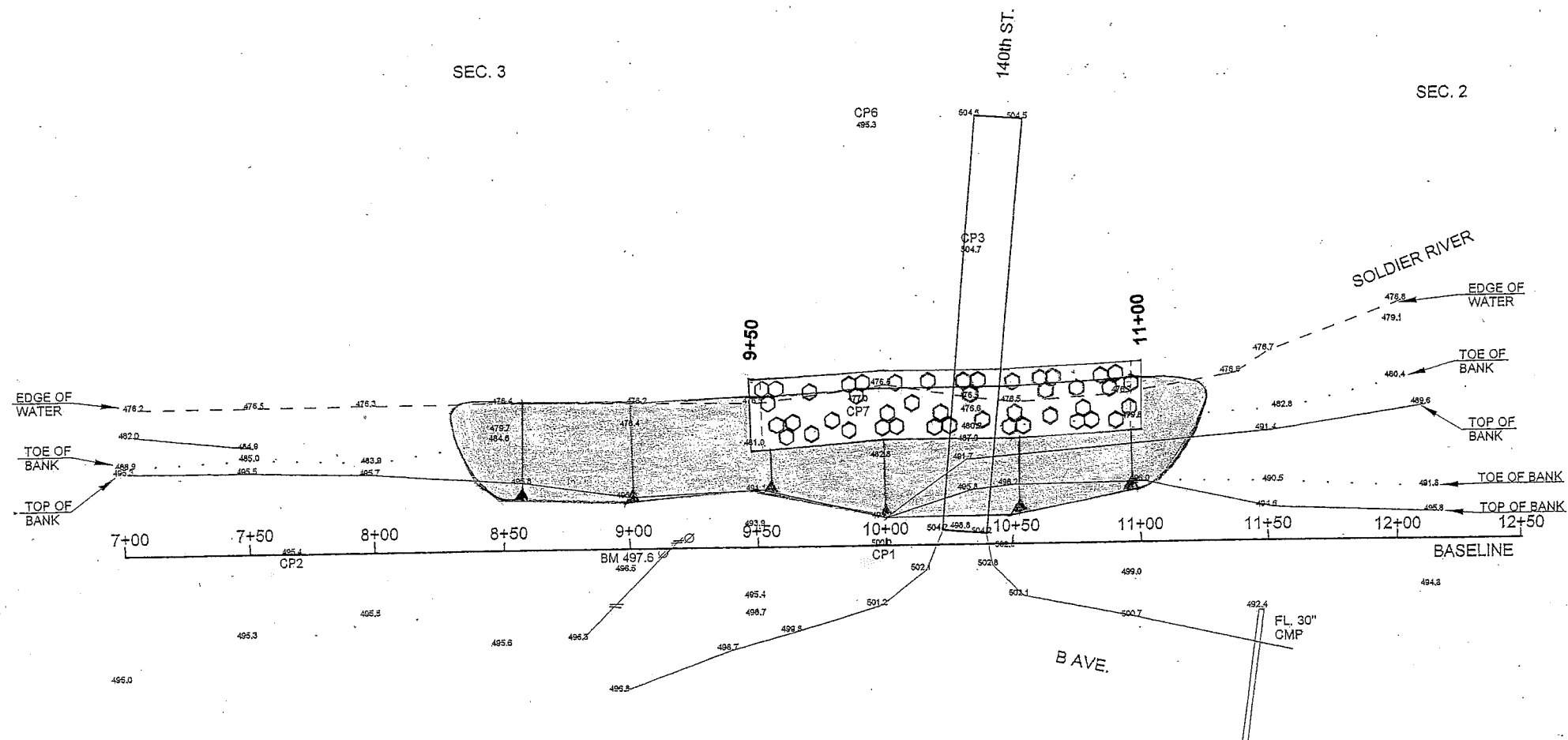
ITEM NO.	DESCRIPTION
1	EXCESS MATERIAL AND UNSUITABLE MATERIAL NOT DESIRED TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE HAULED FROM THE SITE. THE COST OF HAULING AND DISPOSING OF THIS MATERIAL SHALL BE INCLUDED IN AND CONSIDERED INCIDENTAL TO THE PRICE BID FOR CLASS 10 CHANNEL EXCAVATION. AT THE CONTRACTORS OPTION, EXISTING BROKEN CONCRETE MAY BE DISPOSED OF ON THE CHANNEL SLOPES AS DIRECTED BY THE ENGINEER OR DISPOSED OF OFF SITE IN ACCORDANCE WITH DISPOSAL REQUIREMENTS FOR EXCESS MATERIAL. QUANTITY INCLUDES EXCAVATION REQUIRED TO INSTALL THE SPECIAL REVTMENT FOR BANK STABILIZATION, ITEM INCLUDES 807 CY OF EMBANKMENT IN PLACE. QUANTITY INCLUDES EXCAVATION REQUIRED TO TRANSITION PROPOSED CHANNEL SLOPES INTO EXISTING SLOPES.
2	ENGINEERING FABRIC TO CONFORM TO IOWA DOT MATERIALS I.M. 496.01 APPENDIX A EMBANKMENT EROSION CONTROL (ARTICLE 4196.01, C). MATERIAL SHALL BE JOINED BY OVERLAPPING A MINIMUM OF 18 INCHES. REFER TO THE DETAILS ON SHEET 2.
3	THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING REVTMENT STONE, COMPLETE IN PLACE AS SHOWN ON THE DRAWINGS. REFER TO DETAILS ON SHEET 2. MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 4130 FOR CLASS B REVTMENT ON PRIMARY PROJECTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF ALL REMNANTS OF RIPRAP STOCKPILES FROM FARM FIELDS UTILIZED BY CONTRACTOR IN THE PROJECT AREA. THIS WORK WILL BE INCLUDED IN AND CONSIDERED INCIDENTAL TO THE PRICE BID FOR THIS ITEM.



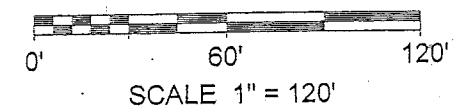
SECTION A-A ROCK-FILLED CUTOFF TRENCH DETAILS NOT TO SCALE



DETAILS OF PLACEMENT OF ENGINEERING FABRIC NOT TO SCALE



RIP RAP



SOLDIER TOWNSHIP
SEC. 3-10 T-85N R-41W
BANK STABILIZATION

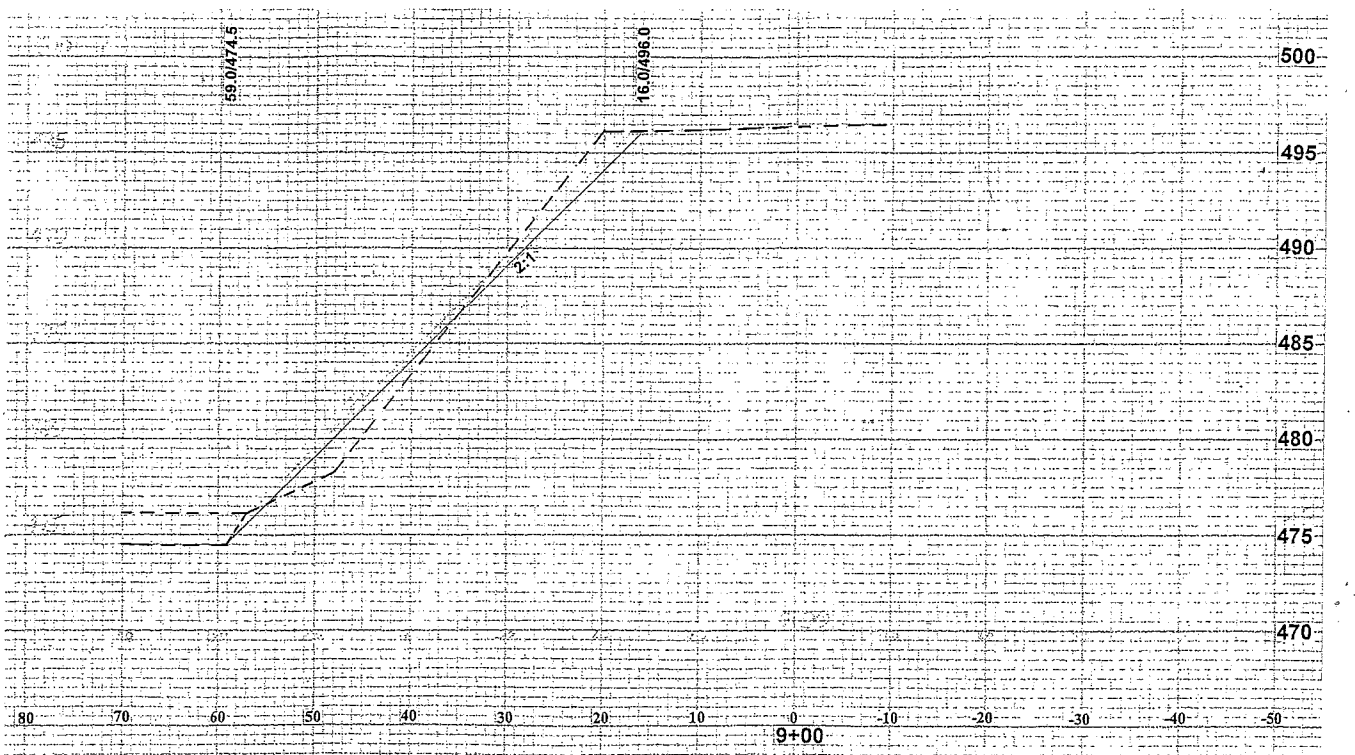
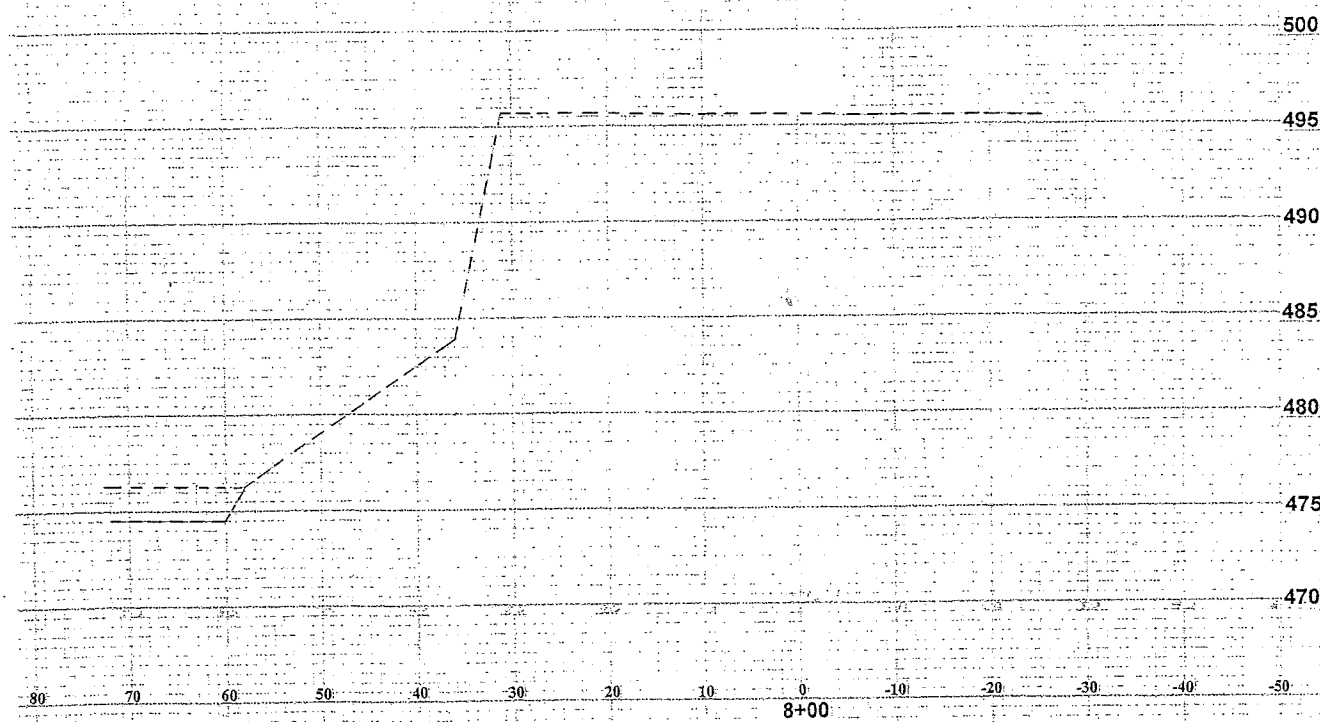
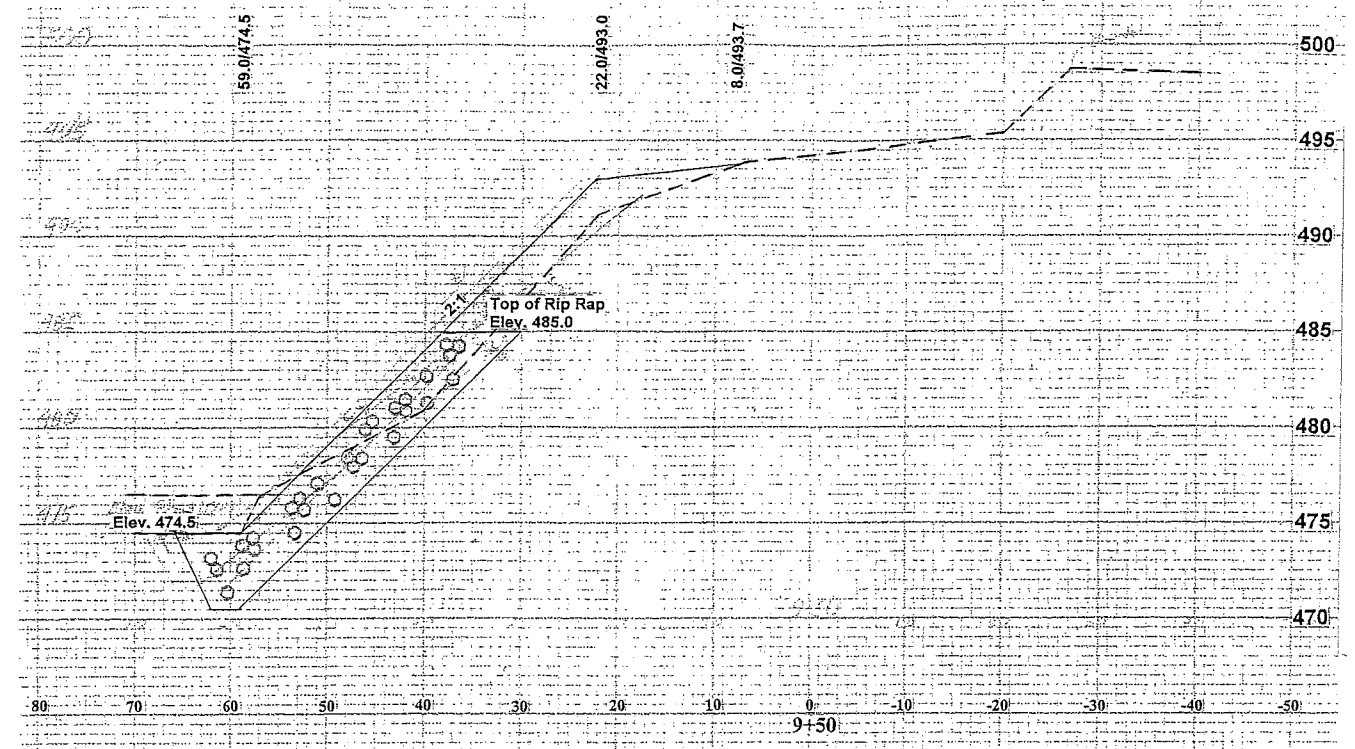
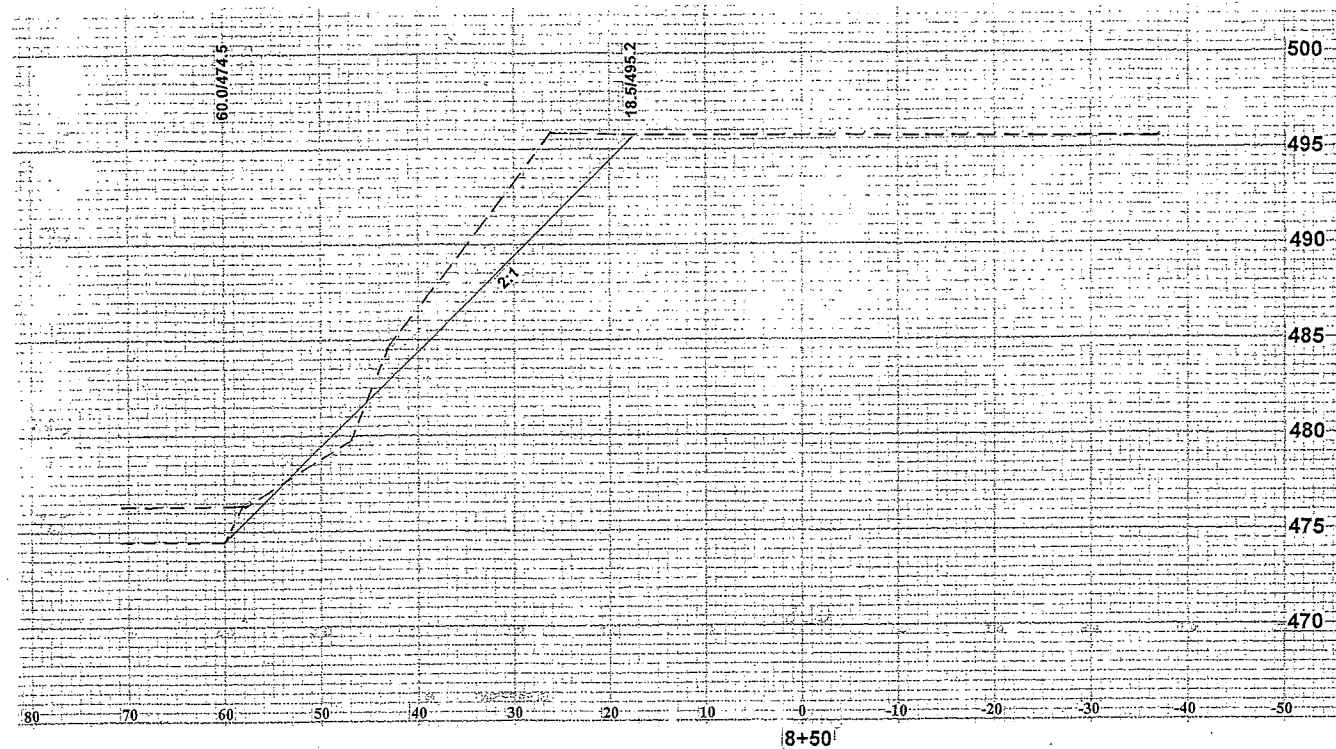
CRAWFORD COUNTY ENGINEER'S OFFICE
P.O. 458, DENISON, IOWA 51442
PHONE: (712) 263-2449 FAX: (712) 263-3423

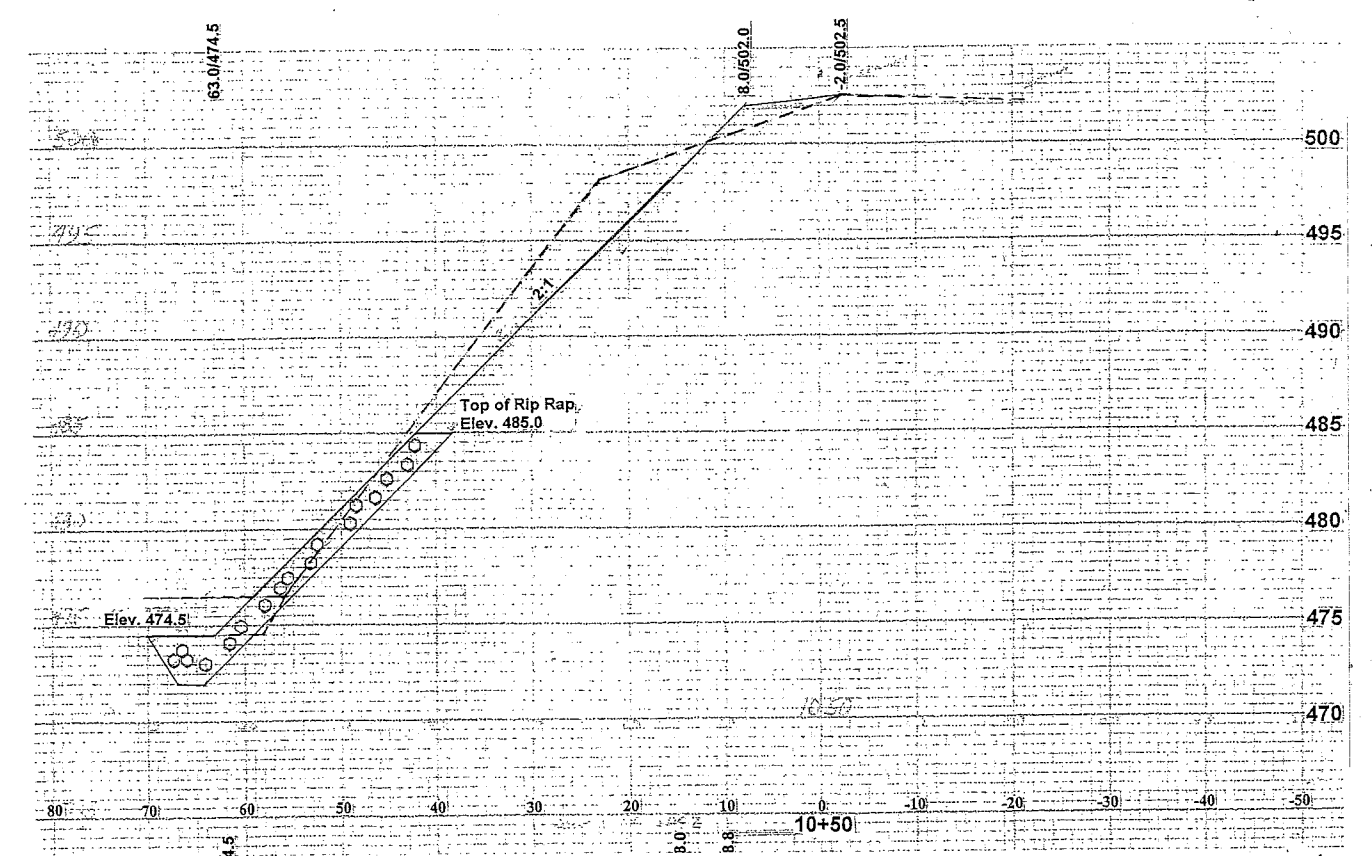
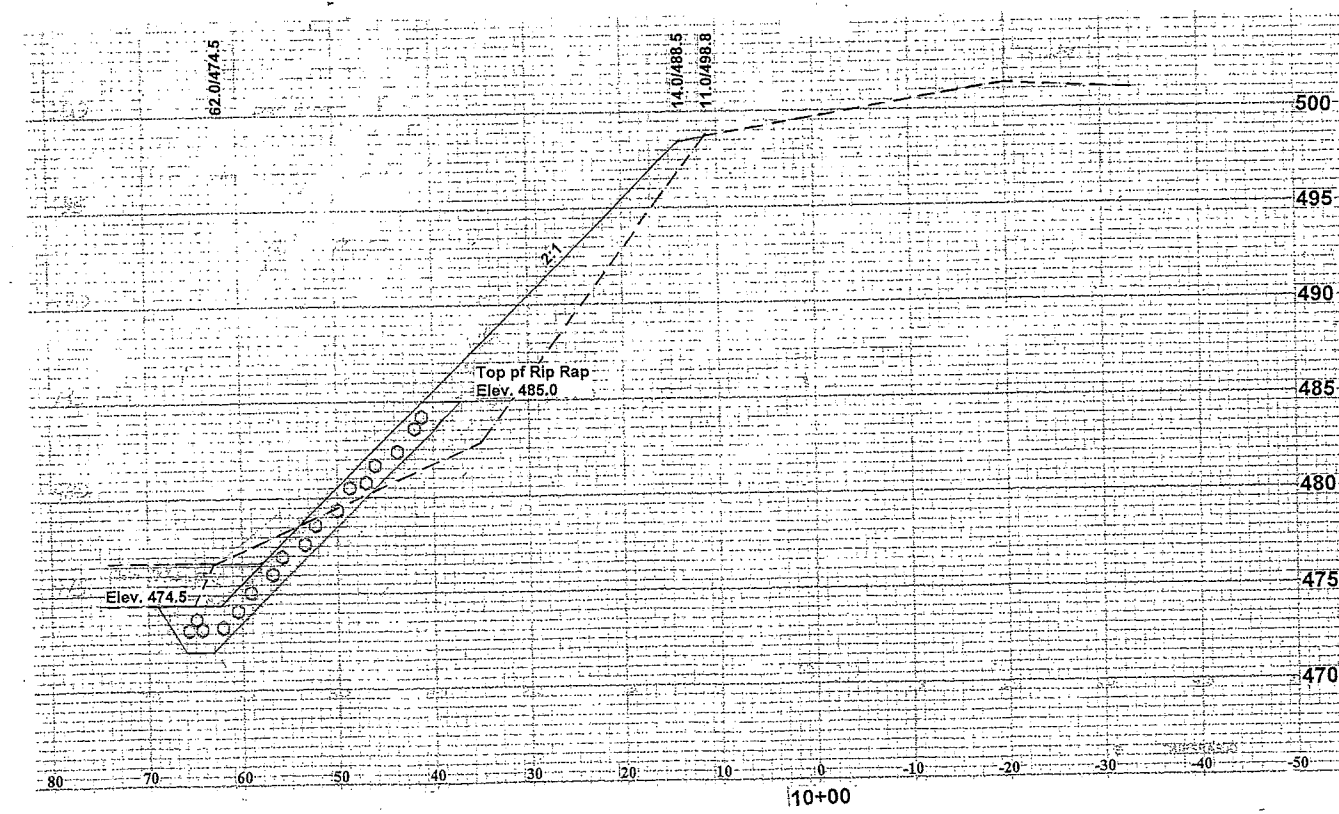
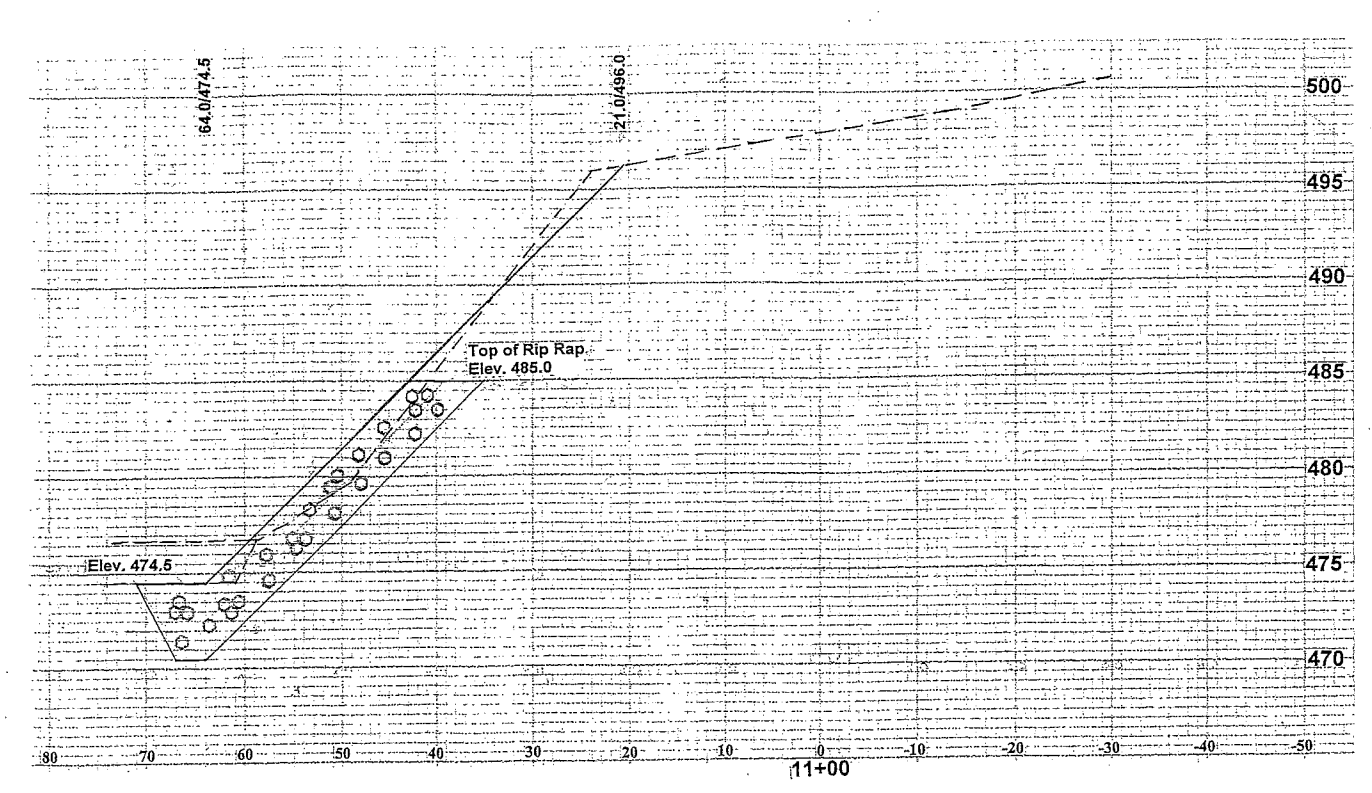
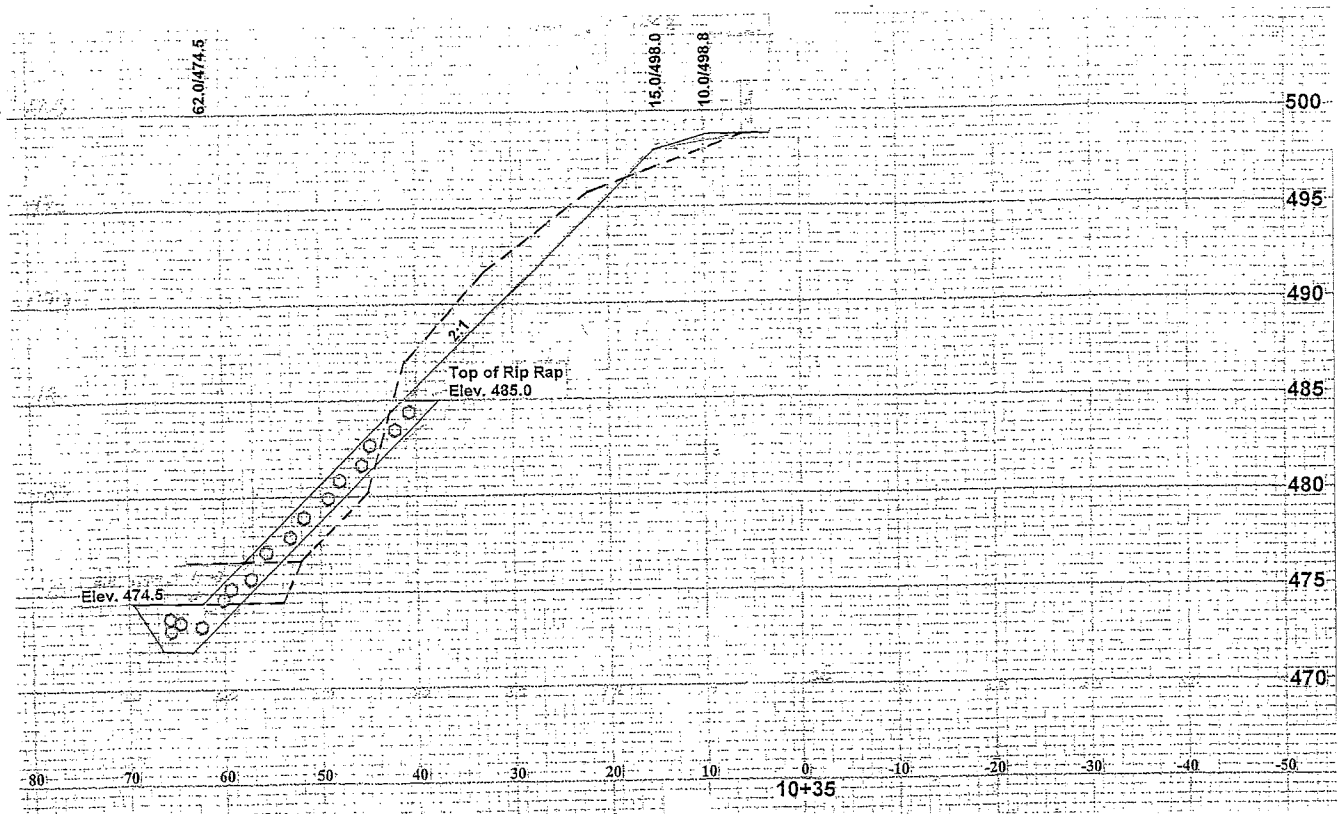
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REVIEWED BY: PJA
APPROVED BY: PJA

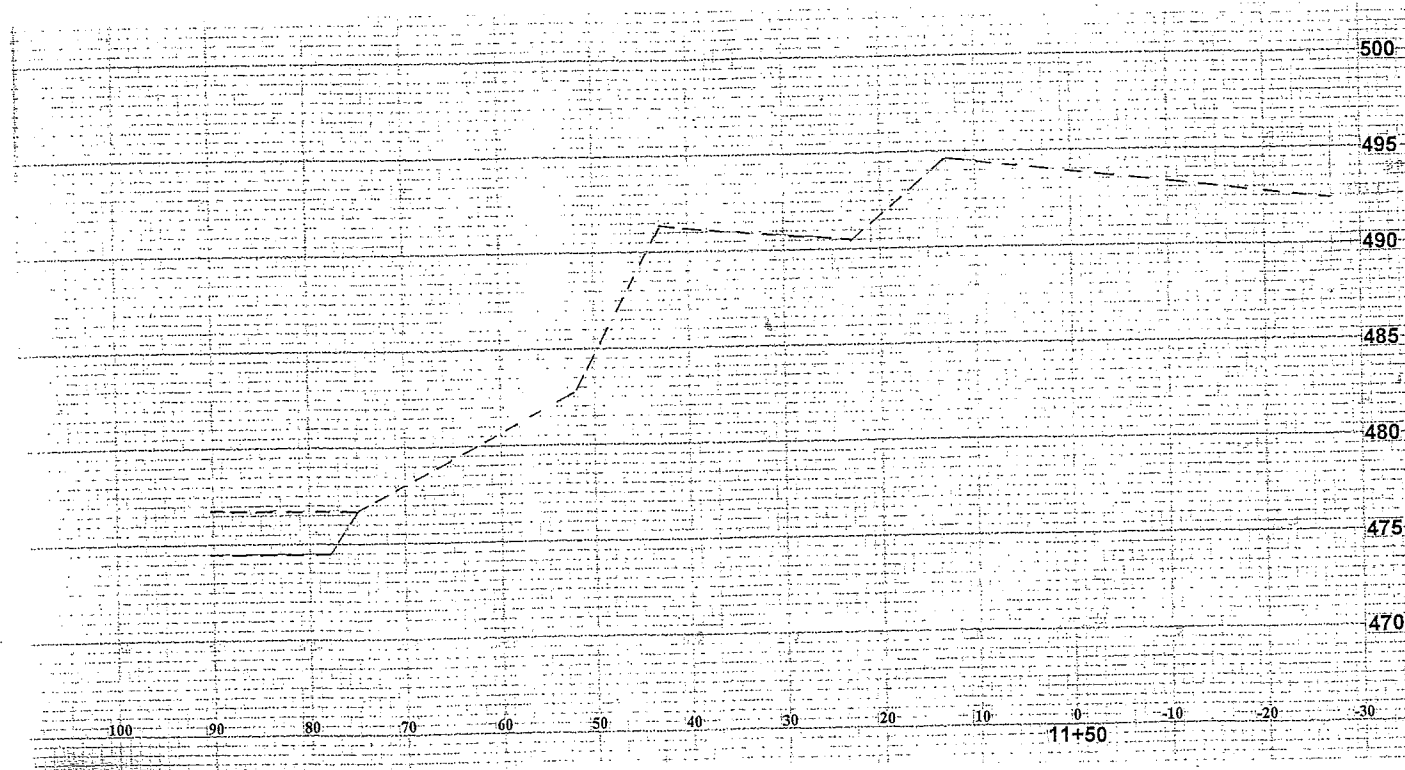
BANK STABILIZATION

PROJECT NO. LBS51-2W

SHEET NO. V1







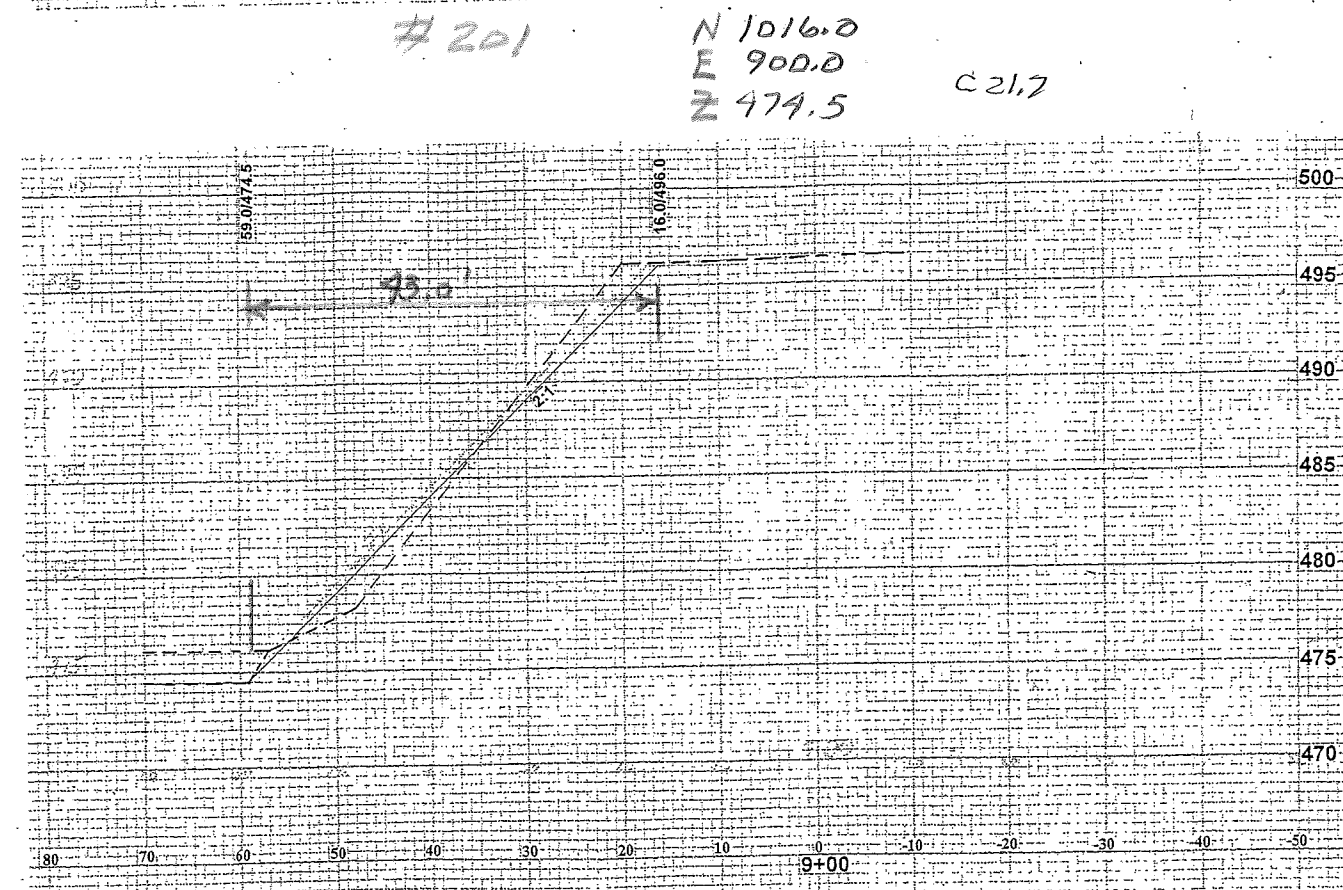
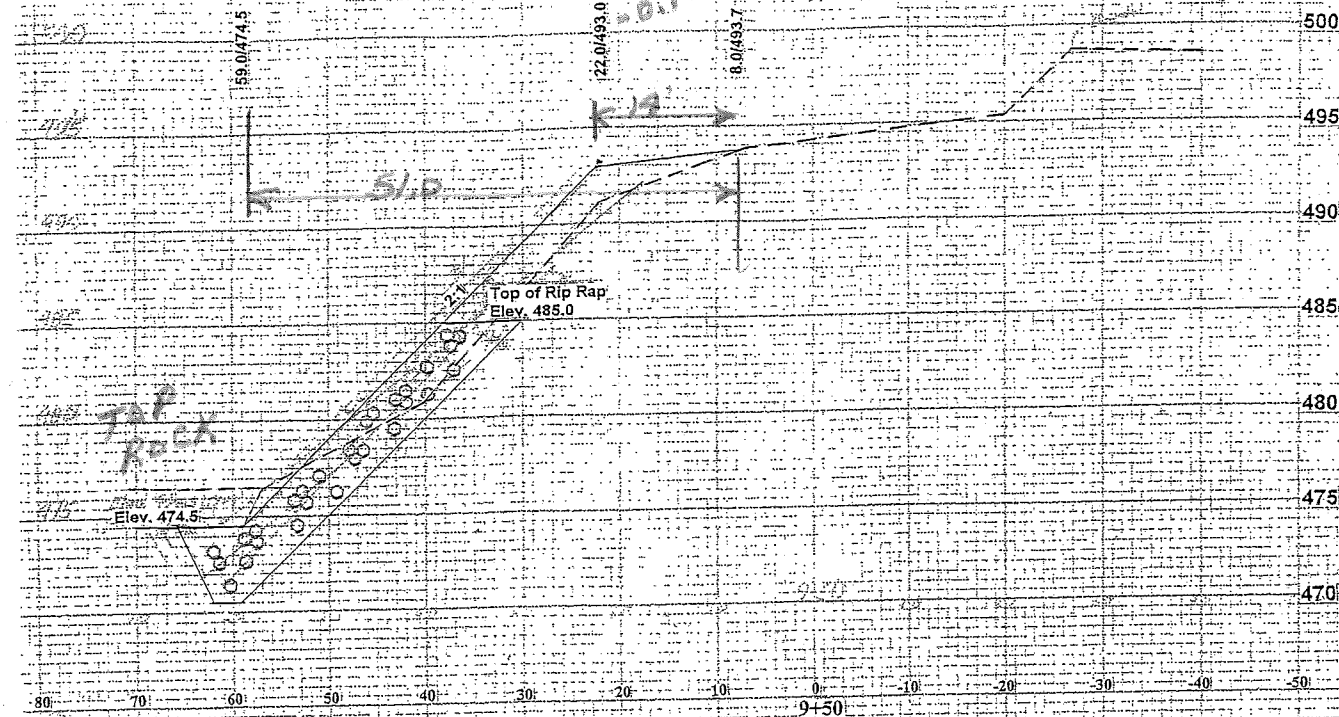
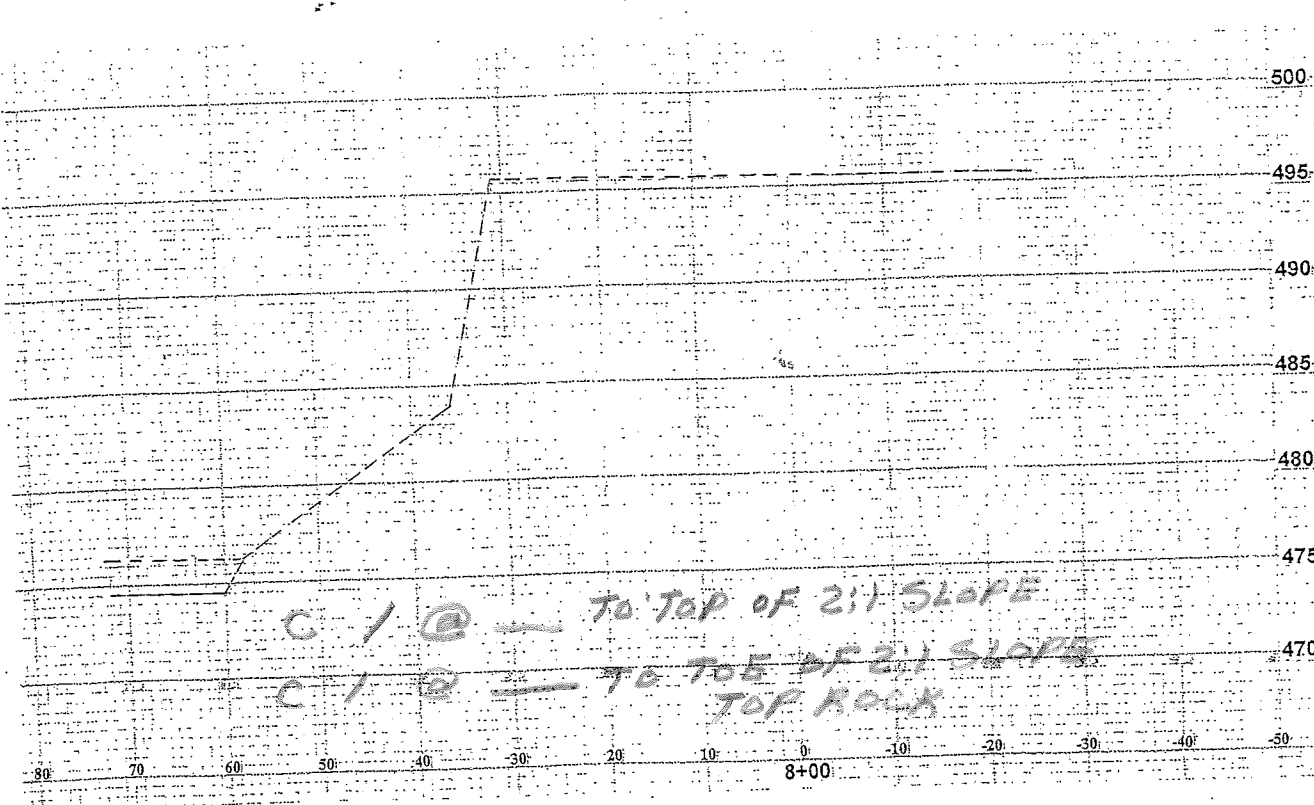
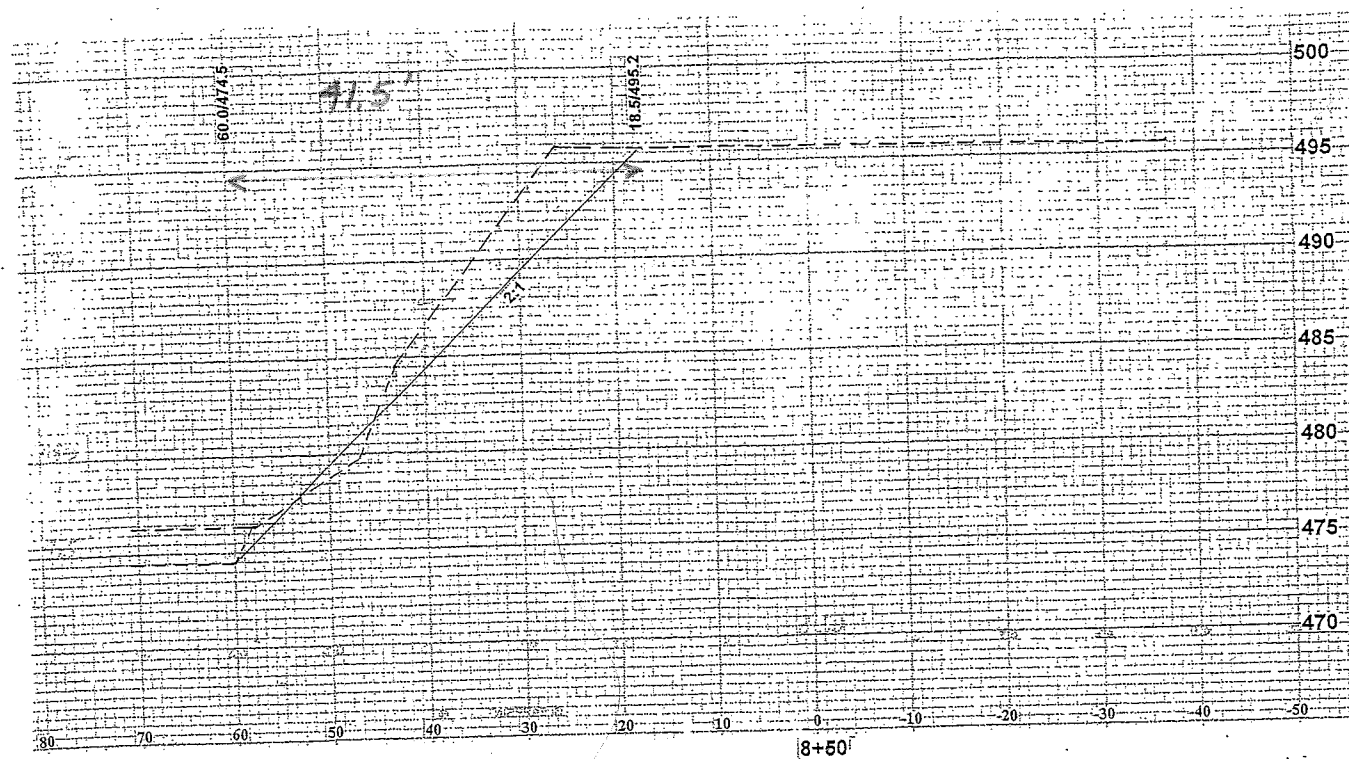
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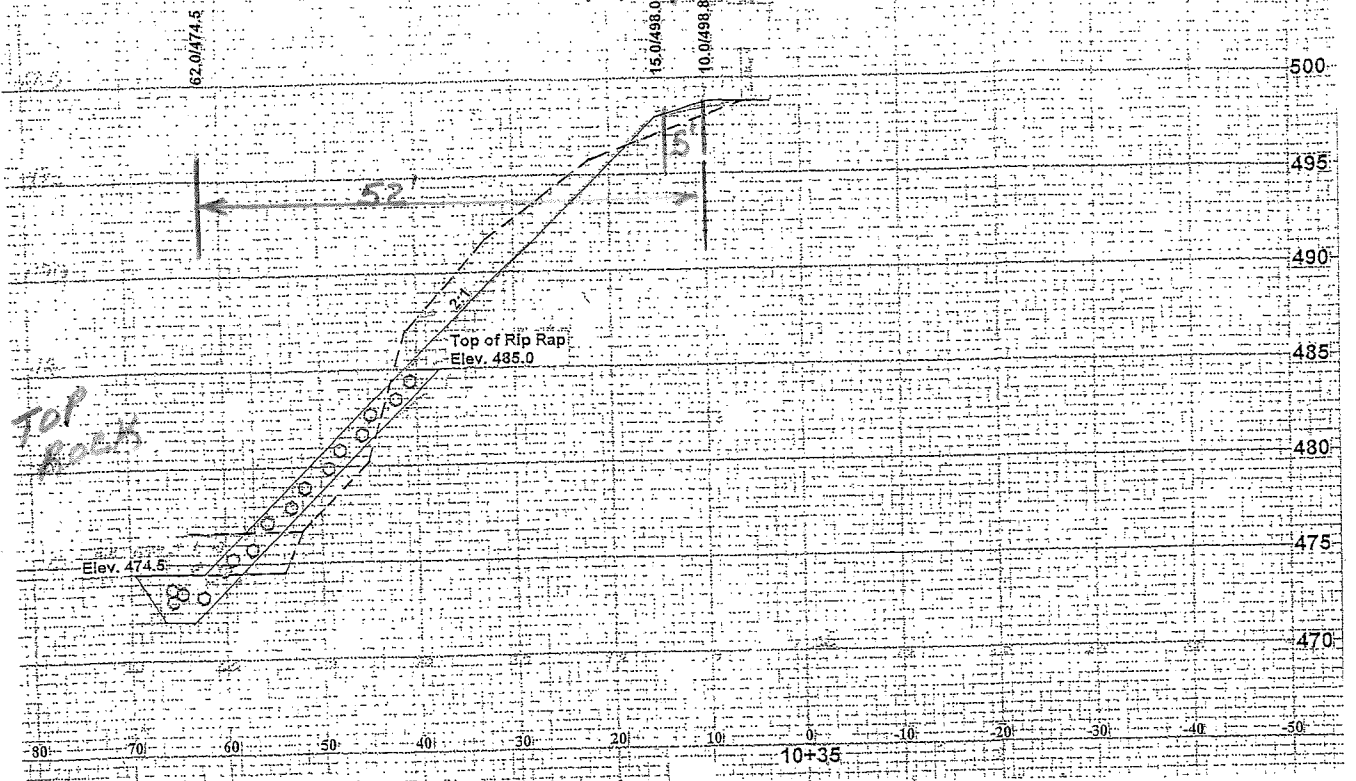
BANK STABILIZATION

PROJECT NO. LBS51-2W

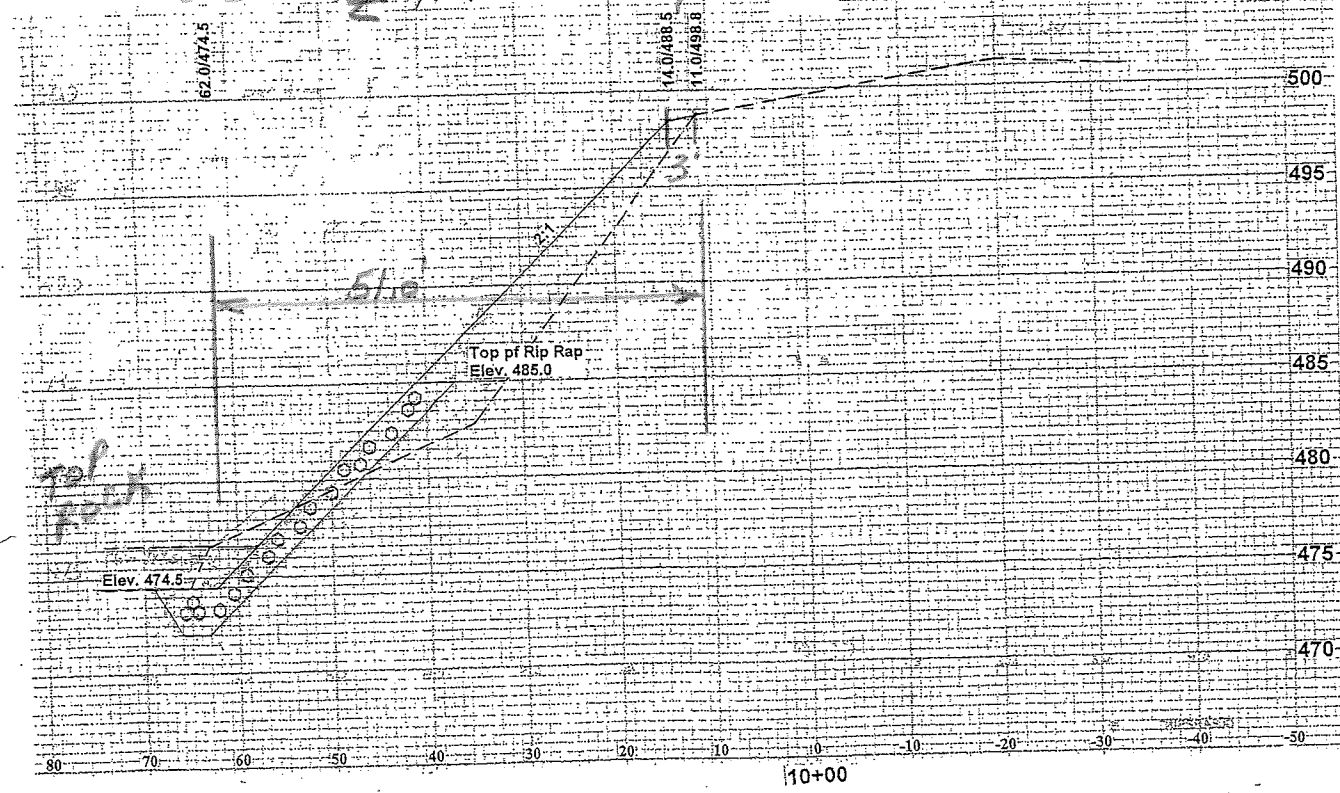
SHEET NO. **Z3**



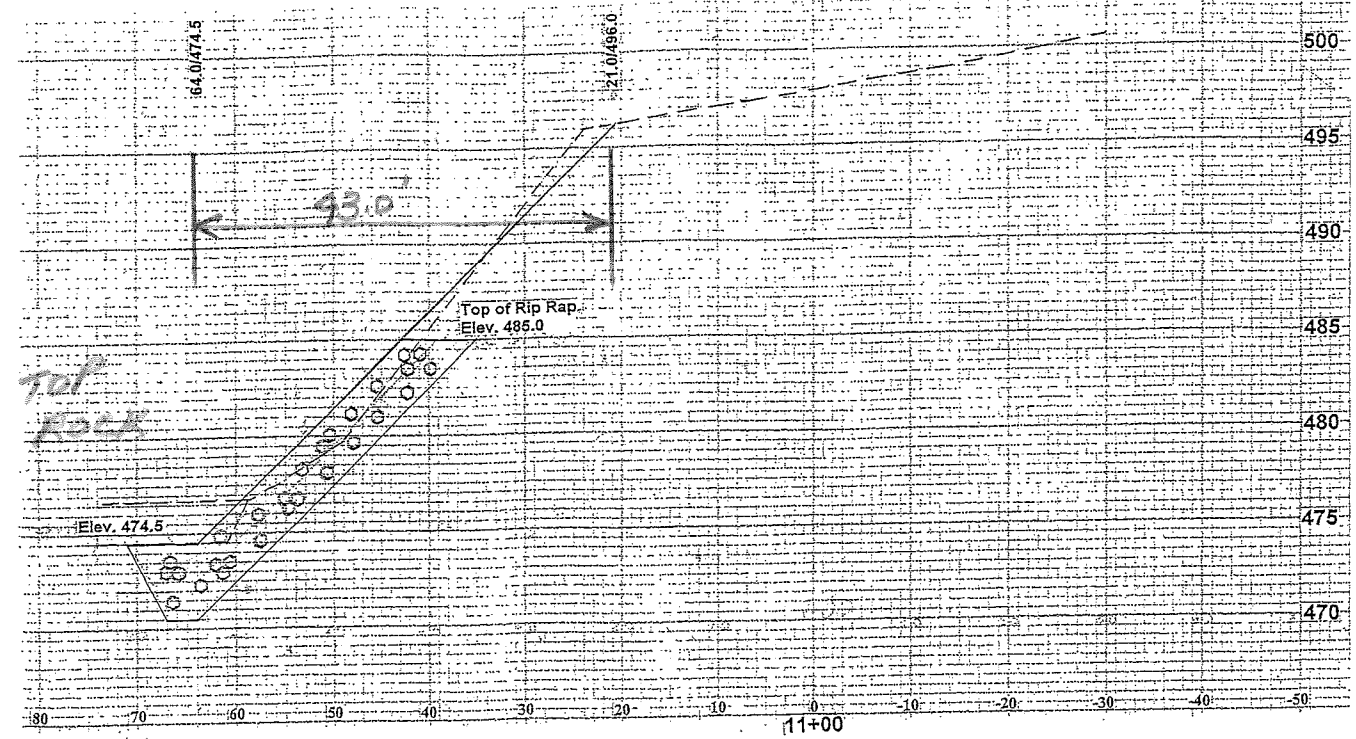
N 1010.0
E 1035.0
Z 474.50
#204 NOT SET UNDER BRIDGE
0.8 LOWER



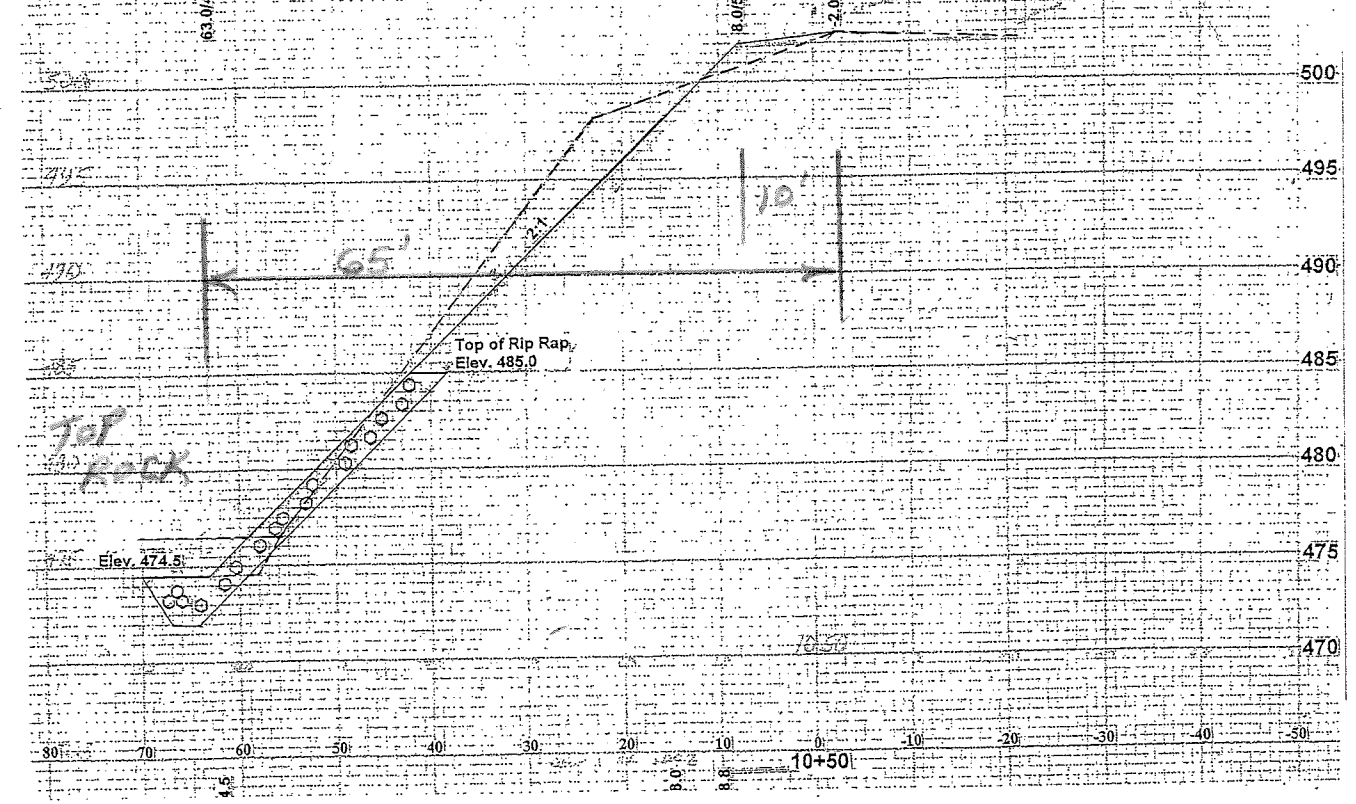
#203
N 1011.0
E 1000.0
Z 474.5
C 24.4
0.3 LOWER

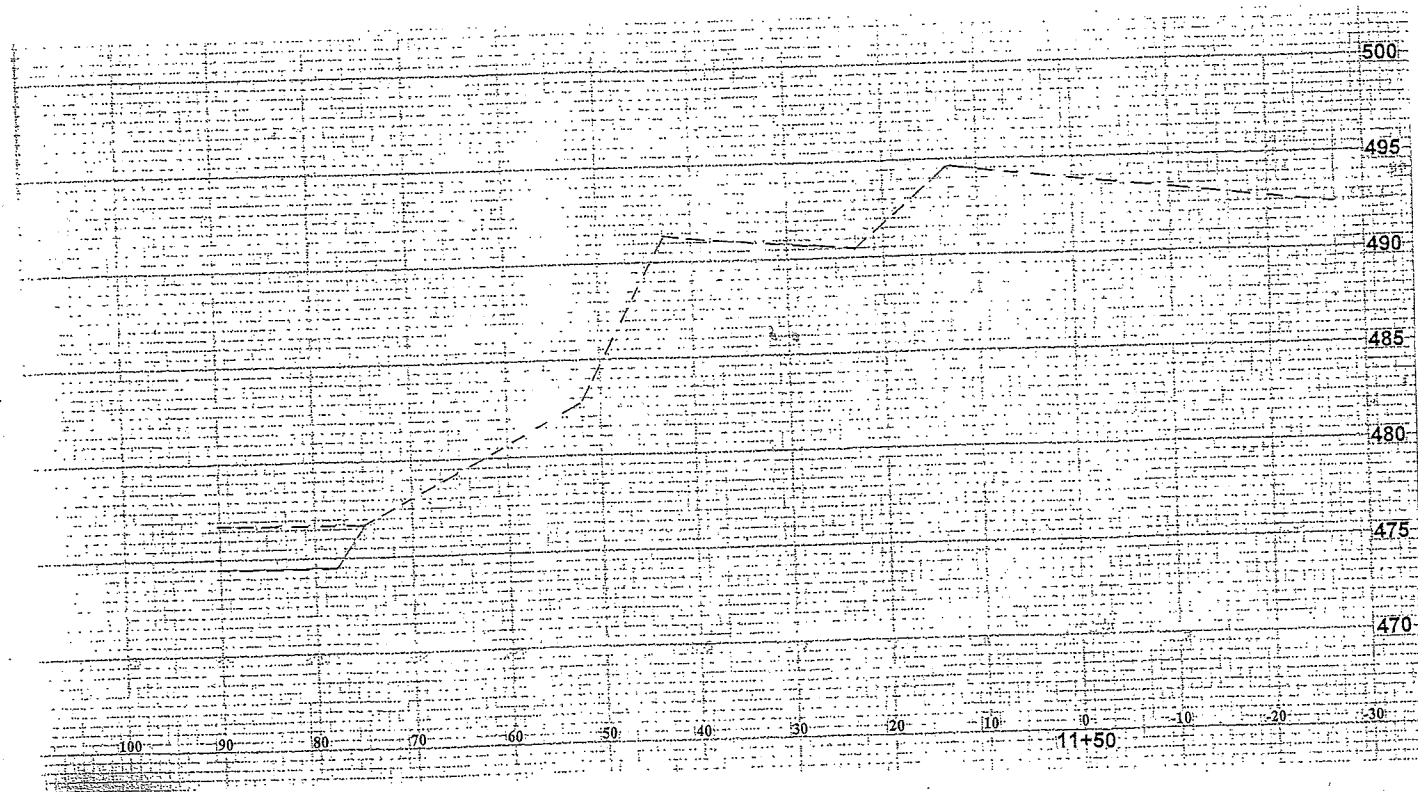


#206
N 1021.0
E 1100.0
Z 474.5
C 22.1



#205
N 998.0
E 1050.0
Z 479.5
C 28.2
0.5 LOWER





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BANK STABILIZATION

PROJECT NO. LBS51-2W

SHEET NO. **Z3**