

**O'BRIEN CO.**

RCB CULVERT EXTENSION-SINGLE BOX

LETTING DATE  
12-15-2020

ER-010-2(41)--28-71



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

**O'BRIEN COUNTY**

RCB CULVERT EXTENSION-SINGLE BOX

0.35 MI S OF SUTHERLAND

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

19-71-010-030

PROJECT NUMBER

ER-010-2(41)--28-71

R.O.W. PROJECT NUMBER

STPN-010-2(42)--2J-71

PROJECT NUMBER

STPN-010-2(43)--2J-71

Preliminary – D05

INDEX OF SHEETS

105-3

10-18-05

No.	Description
A.1	TITLE SHEET & LOCATON MAP
D.1	PLAN VIEW
V.1	TSL for Inlet End of RCB (ER-010-2(41)--28-71)
V.2	TSL for Outlet End of RCB (STPN-010-2(43)--2J-71)
W.1-W.8	Mainline Cross Sections

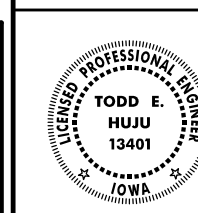
**DESIGN DATA RURAL**

2019 AADT	995	V.P.D.
2039 AADT	1194	V.P.D.
2039 DHV	--	V.P.H.
TRUCKS	17	%
Total Design ESALs	--	

**INDEX OF SEALS**

SHEET NO.	NAME	TYPE
A.1	TODD E. HUJU	Primary Signature Block

**ROADWAY DESIGN**



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature TODD E. HUJU Date X

Printed or Typed Name  
My license renewal date is December 31, 2020

Pages or sheets covered by this seal: X

FILE NO.

ENGLISH

DESIGN TEAM

District 3

O'BRIEN COUNTY

PROJECT NUMBER

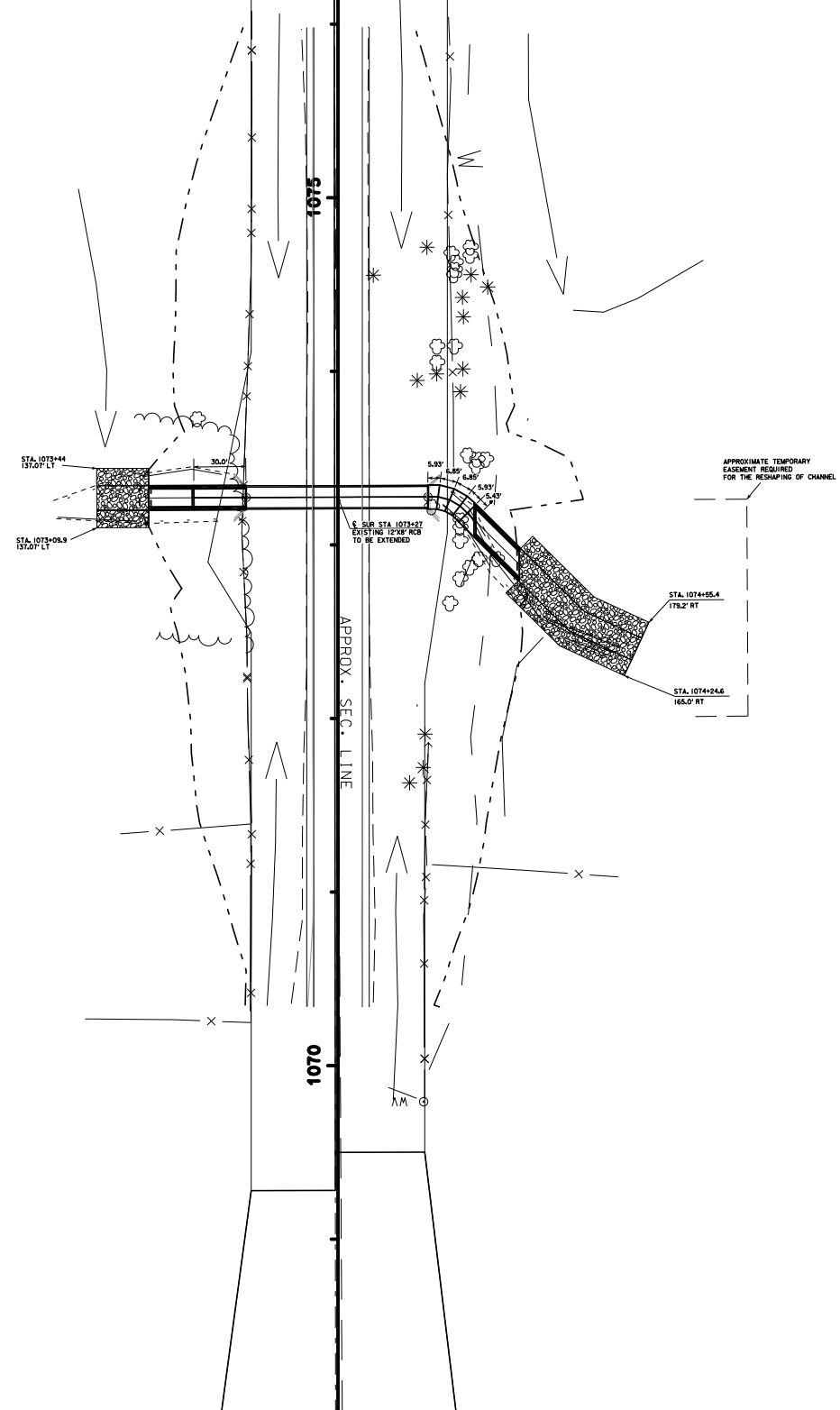
ER-010-2(41)--28-71

SHEET NUMBER

A.1

Sect. No. 17

Waterman TWP.  
T-94N R-39W  
SEC. 18



Sta. 1073+27.63  
12.0'x8.0'x104.8' RCB  
D.A.=1000 Ac R (Per Plan F.A. 566A)

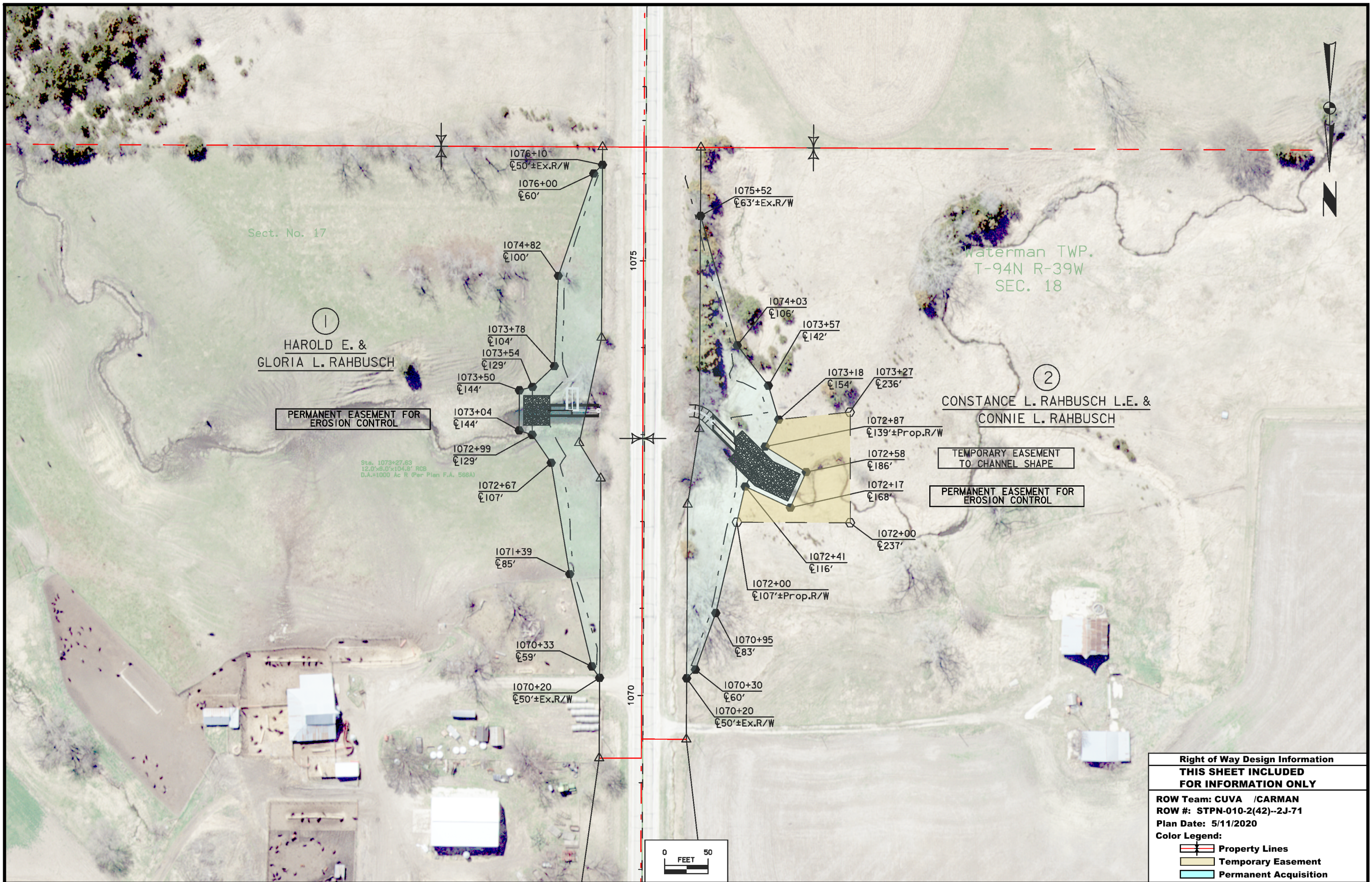
SW 1/4 NW 1/4  
SEC. 17-T94N-R39W

SE 1/4 NE 1/4  
SEC. 18-T94N-R39W

HAROLD E. & GLORIA L. RAHBUSCH

CONSTANCE RAHBUSCH LIFE ESTATE

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



Sect. No. 17

①  
HAROLD E. &  
GLORIA L. RAHBUSCH

PERMANENT EASEMENT FOR  
EROSION CONTROL

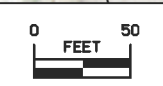
Sta. 1073+27.63  
12.0°±0.0'x104.8' RCB  
D.A.=1000 Ac R (Per Plan F.A. 566A)

Waterman TWP.  
T-94N R-39W  
SEC. 18

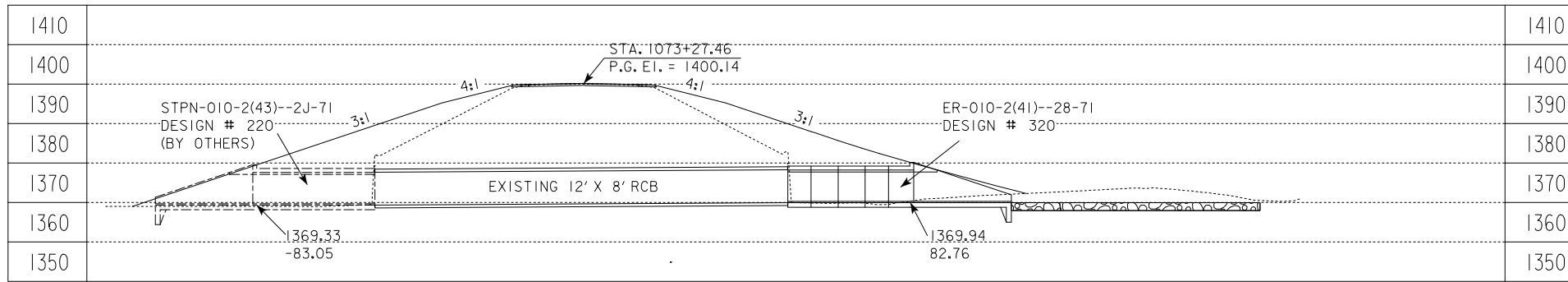
②  
CONSTANCE L. RAHBUSCH L.E. &  
CONNIE L. RAHBUSCH

TEMPORARY EASEMENT  
TO CHANNEL SHAPE

PERMANENT EASEMENT FOR  
EROSION CONTROL



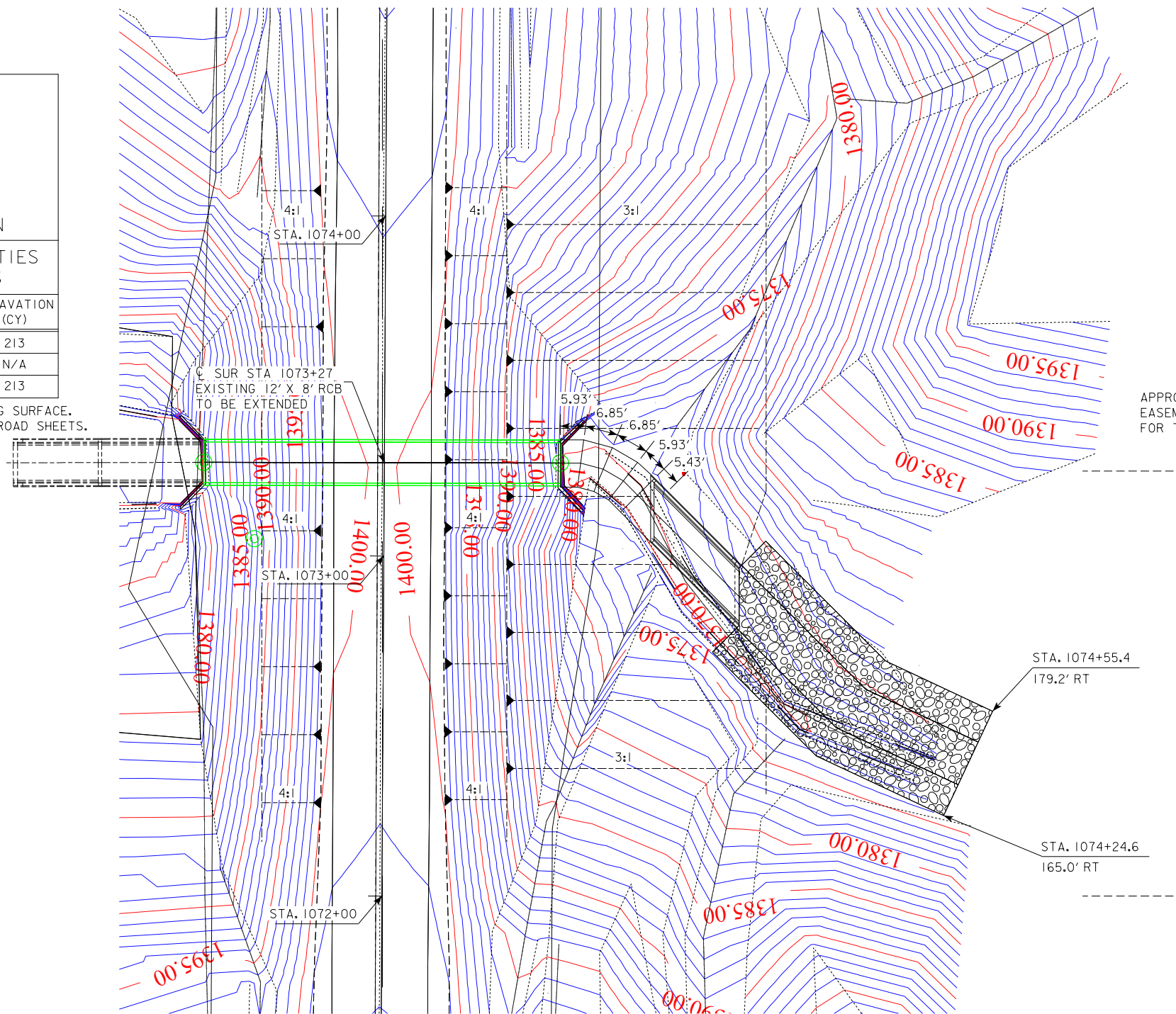
<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA /CARMAN	
ROW #: STPN-010-2(42)--2J-71	
Plan Date: 5/11/2020	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



**TYPICAL CHANNEL PROTECTION**

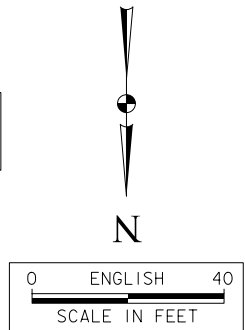
LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	345	375	213
OUTLET	N/A	N/A	N/A
TOTALS	345	375	213

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.



NOTE:  
REMOVE HEADWALL TO FACE OF PARAPET AND EXTEND.

USE 3 - 15° BENDS AND  
1 - 45° HEADWALL ON INLET END



**HYDRAULIC DATA**

DRAINAGE AREA = 1000 ACRES  
Q<sub>50</sub> = 827 CFS  
HW ELEV. = 1382.13

**UTILITIES LEGEND:**

SYMBOL - TYPE  
-or-  
NO KNOWN UTILITIES  
-or-  
UTILITY SURVEY NOT CONDUCTED

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**LOCATION**

T-94N R-39W  
SECTION 18  
WATERMAN TOWNSHIP  
O'BRIEN COUNTY  
LATITUDE ??.123456°  
LONGITUDE -???.123456°

PRELIMINARY

DESIGN FOR ?° SKEW

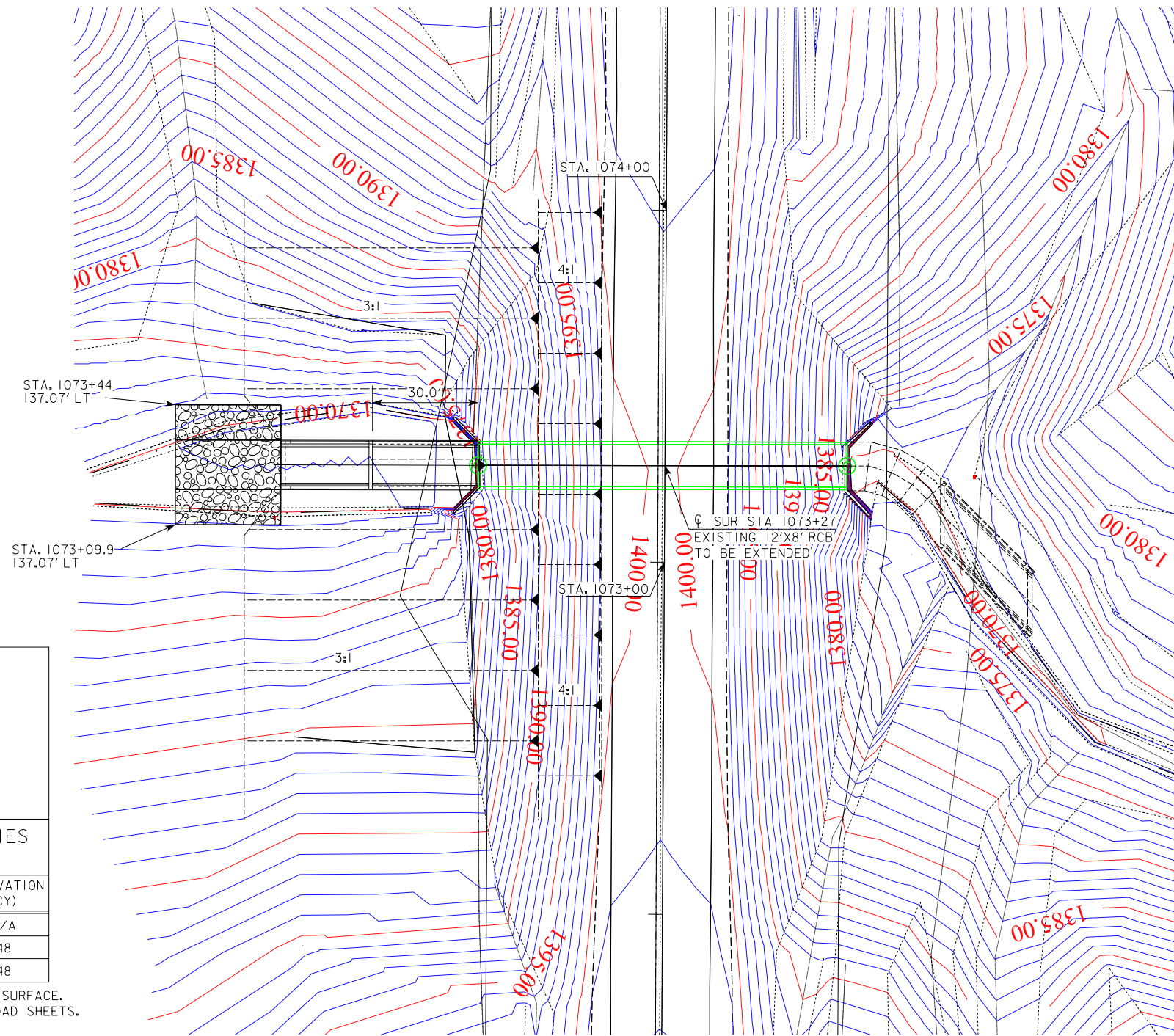
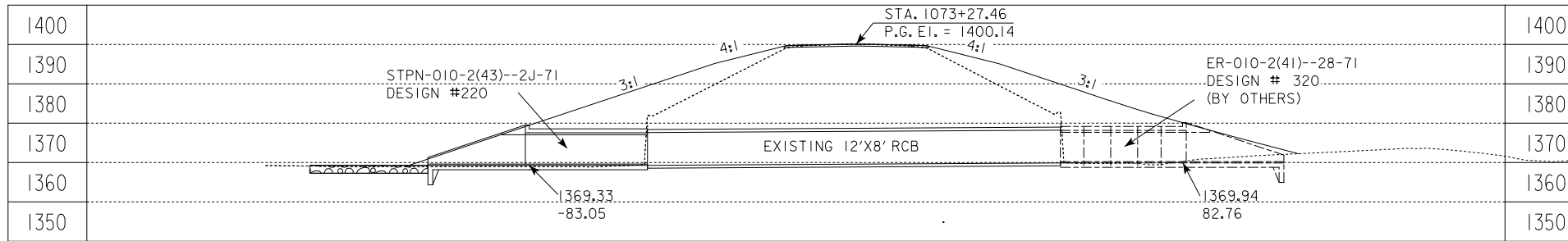
**12' x 8' x 31' REINFORCED CONCRETE BOX CULVERT EXTENSION SITUATION PLAN**

STATION 1073+27

O'BRIEN COUNTY

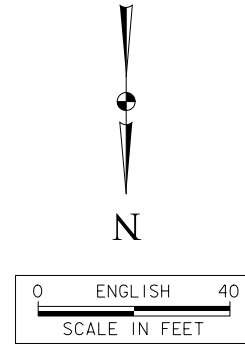
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ? OF ? FILE NO. 31914 DESIGN NO. 320



NOTE:  
REMOVE HEADWALL TO FACE  
OF PARAPET AND EXTEND

NOTE:  
USE ONE 0° HEADWALL



HYDRAULIC DATA

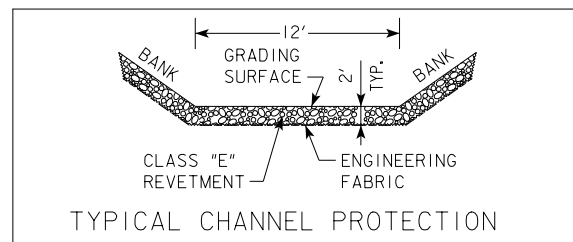
DRAINAGE AREA = 1000 ACRES  
Q<sub>50</sub> = 827 CFS  
HW ELEV. = 1382.13

LOCATION

T-94N R-39W  
SECTION 17  
WATERMAN TOWNSHIP  
O'BRIEN COUNTY  
LATITUDE ??,123456°  
LONGITUDE -??,123456°

UTILITIES LEGEND:

SYMBOL - TYPE  
-or-  
NO KNOWN UTILITIES  
-or-  
UTILITY SURVEY NOT CONDUCTED  
  
UTILITIES SHOWN ON THIS SHEET ARE FOR  
INFORMATION ONLY, SEE ROAD DESIGN  
SHEETS FOR FINAL UTILITY INFORMATION.



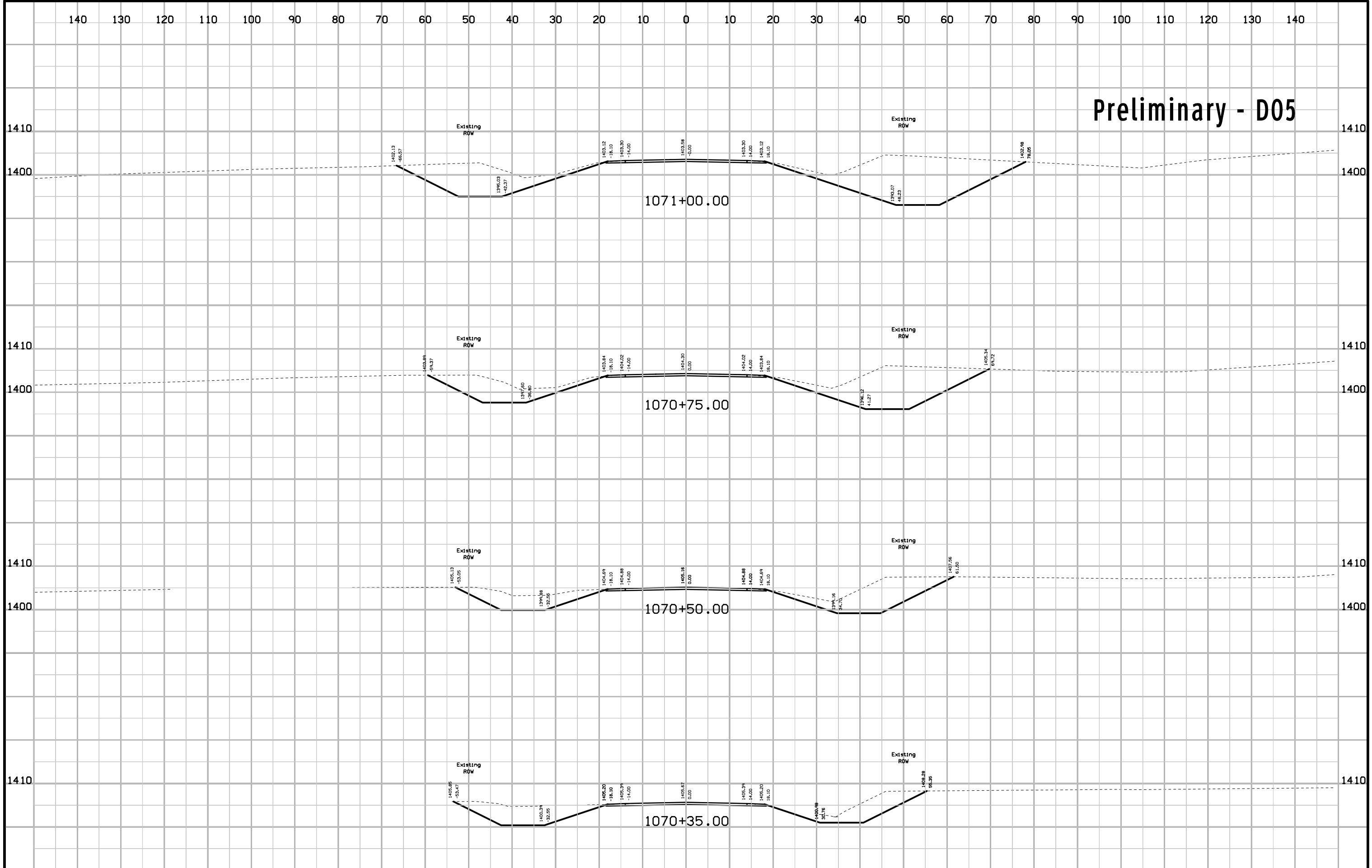
ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS

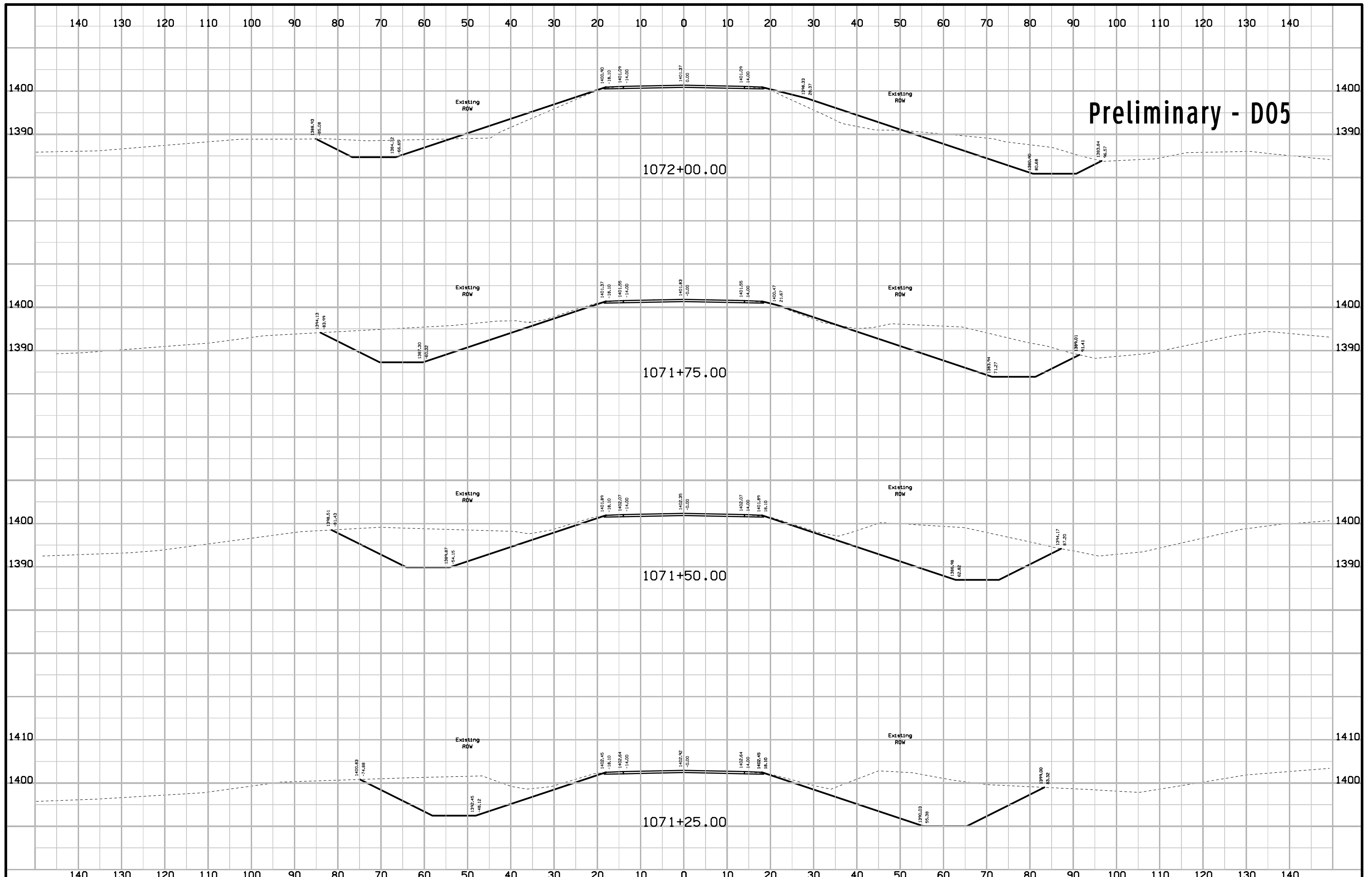
LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	N/A	N/A	N/A
OUTLET	123	76	48
TOTALS	123	76	48

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.  
QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

PRELIMINARY  
DESIGN FOR 0° SKEW  
**12' x 8' x 30' REINFORCED  
CONCRETE BOX CULVERT  
EXTENSION**  
SITUATION PLAN  
STATION 1073+27  
O'BRIEN COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO.    OF    FILE NO.   31914   DESIGN NO.   220

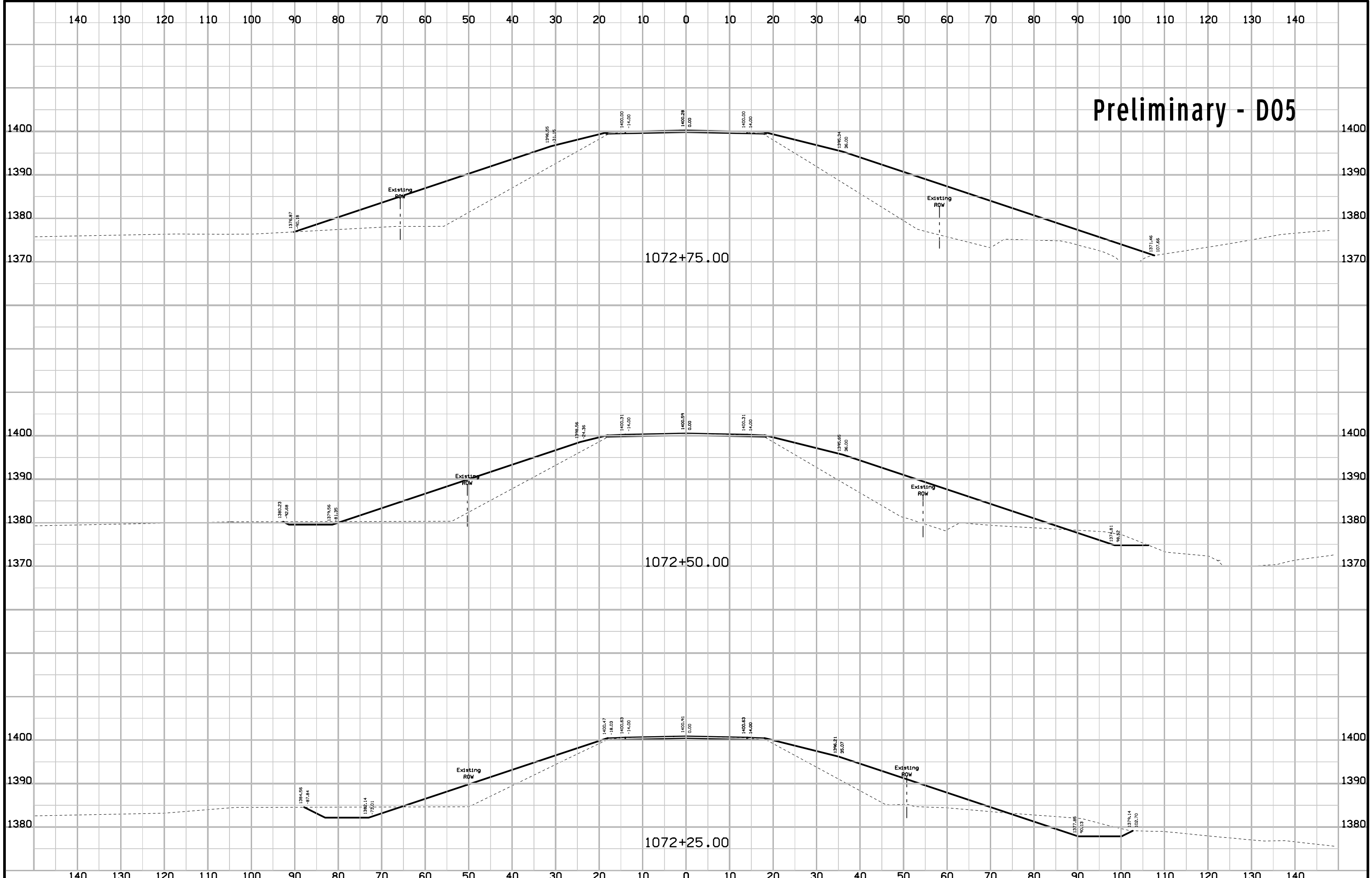
# Preliminary - D05

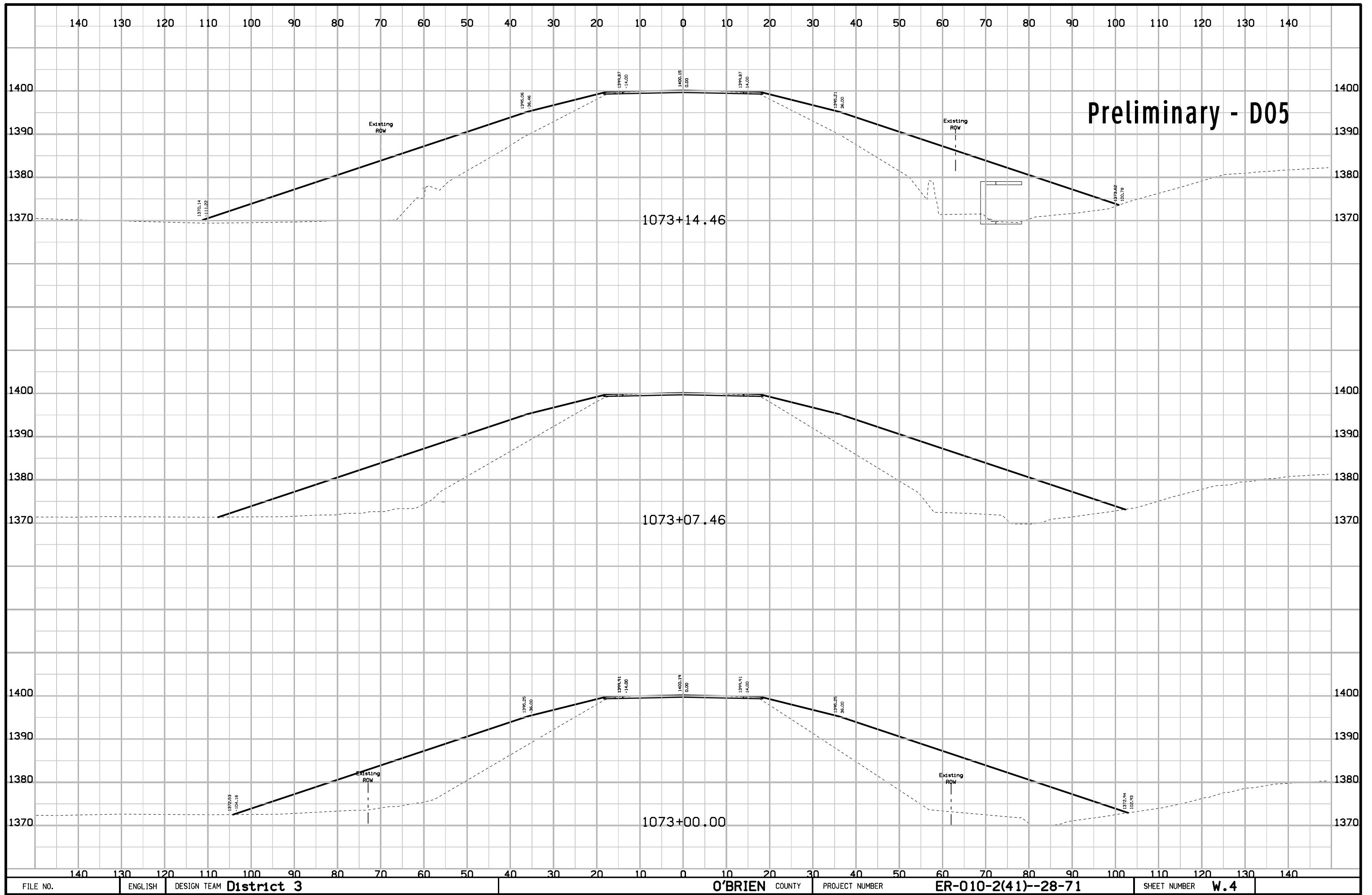


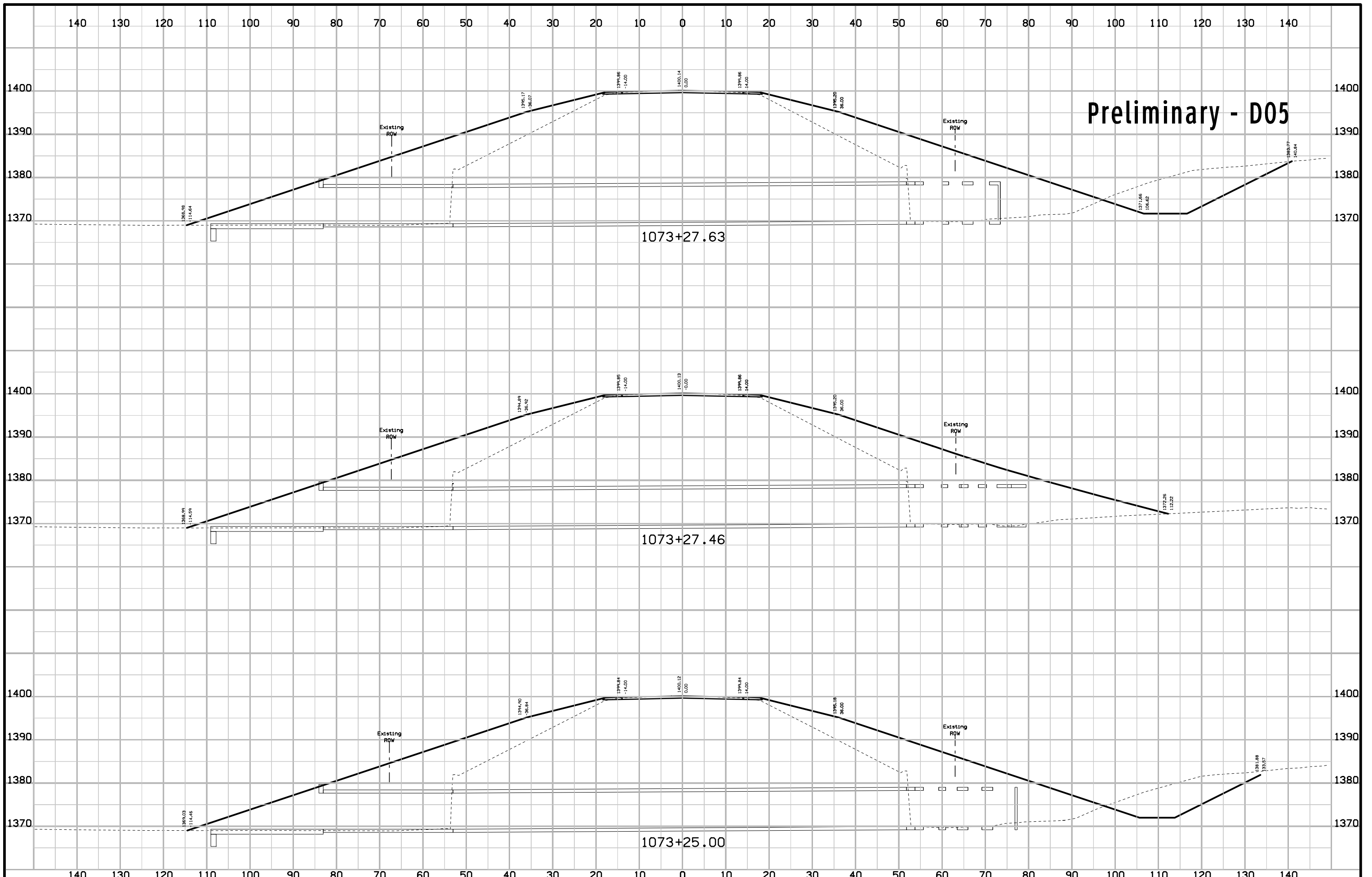




# Preliminary - D05

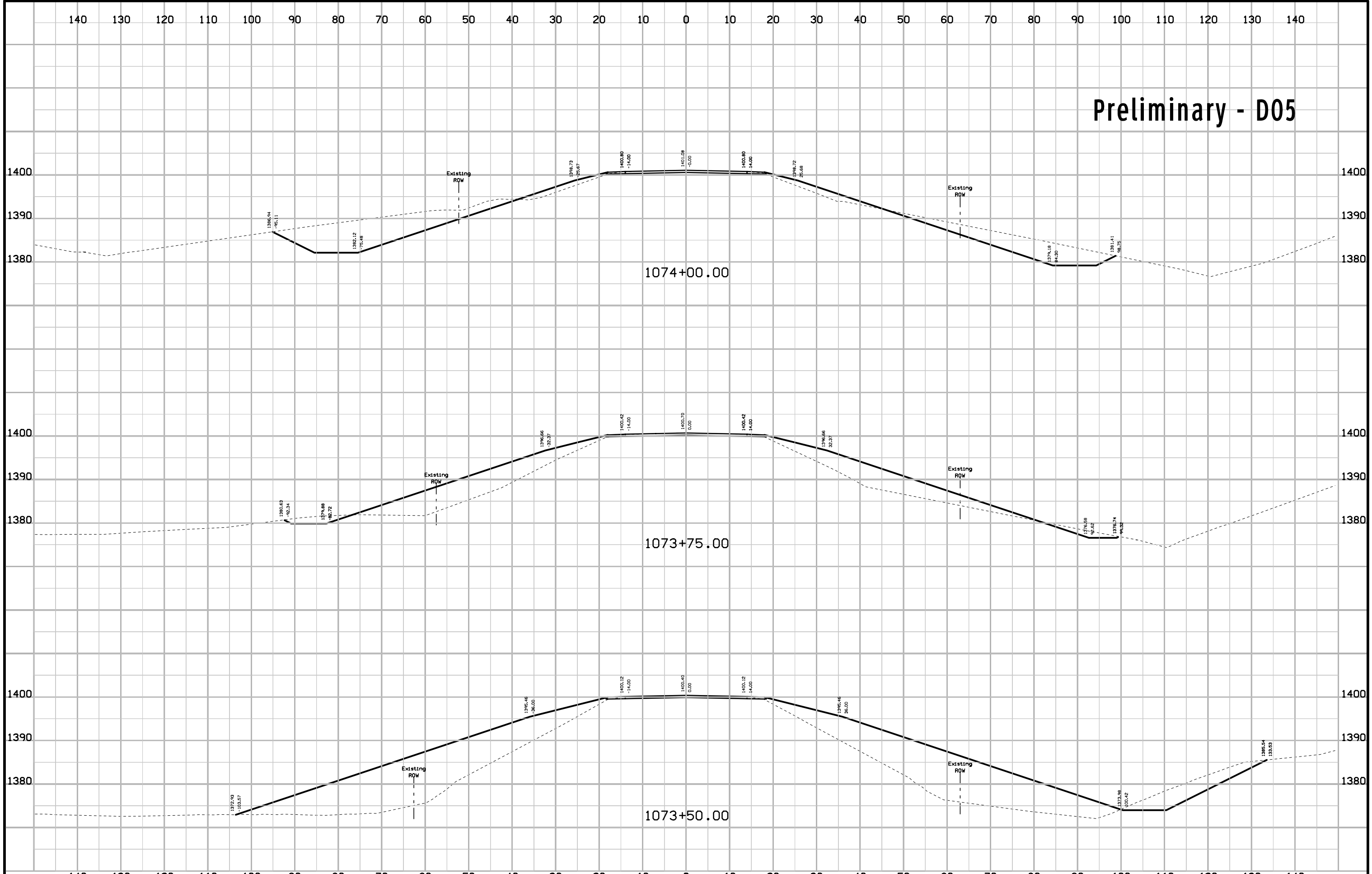




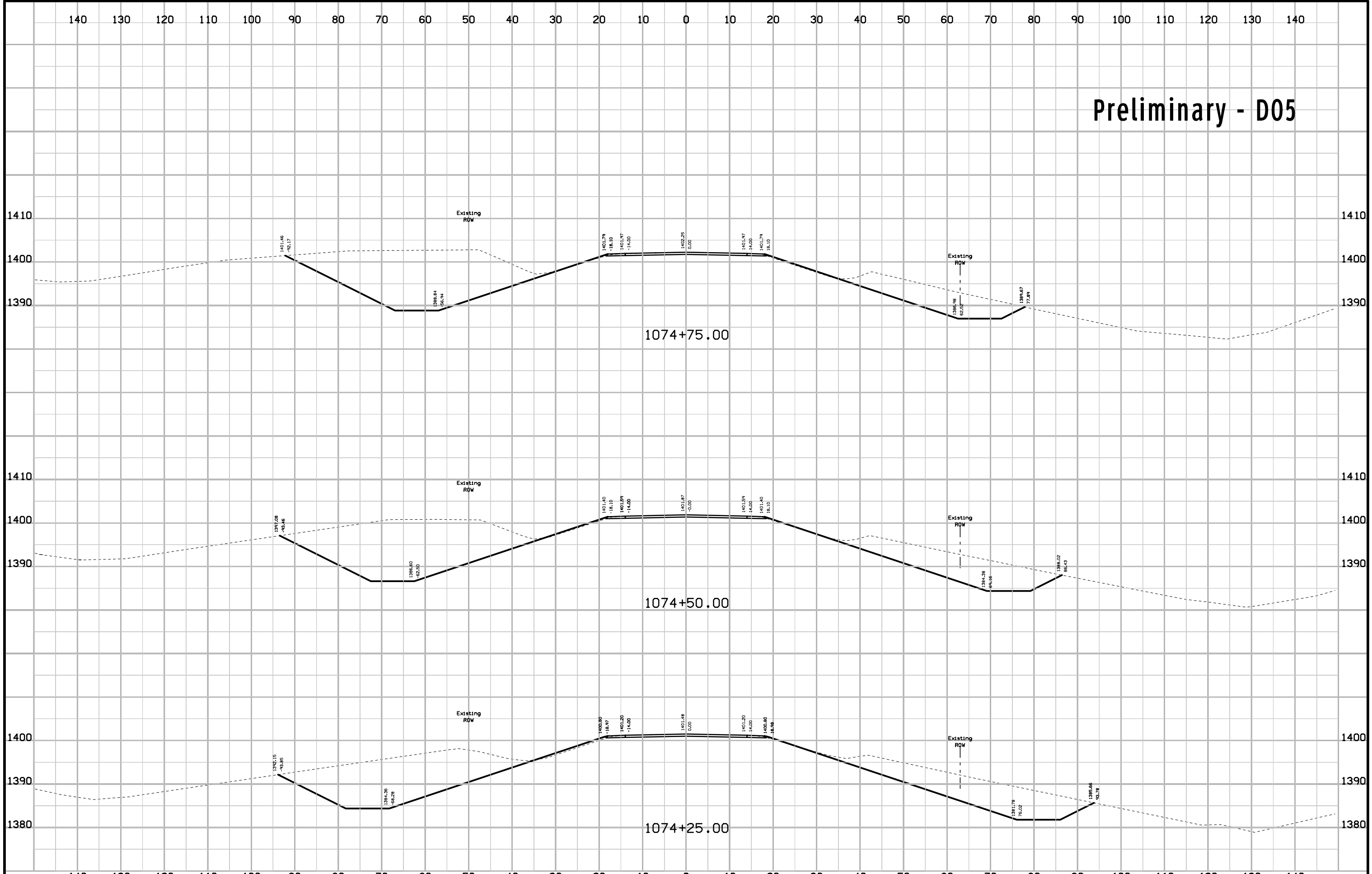


FILE NO.	ENGLISH	DESIGN TEAM <b>District 3</b>	<b>O'BRIEN</b> COUNTY	PROJECT NUMBER <b>ER-010-2(41)--28-71</b>	SHEET NUMBER <b>W.5</b>
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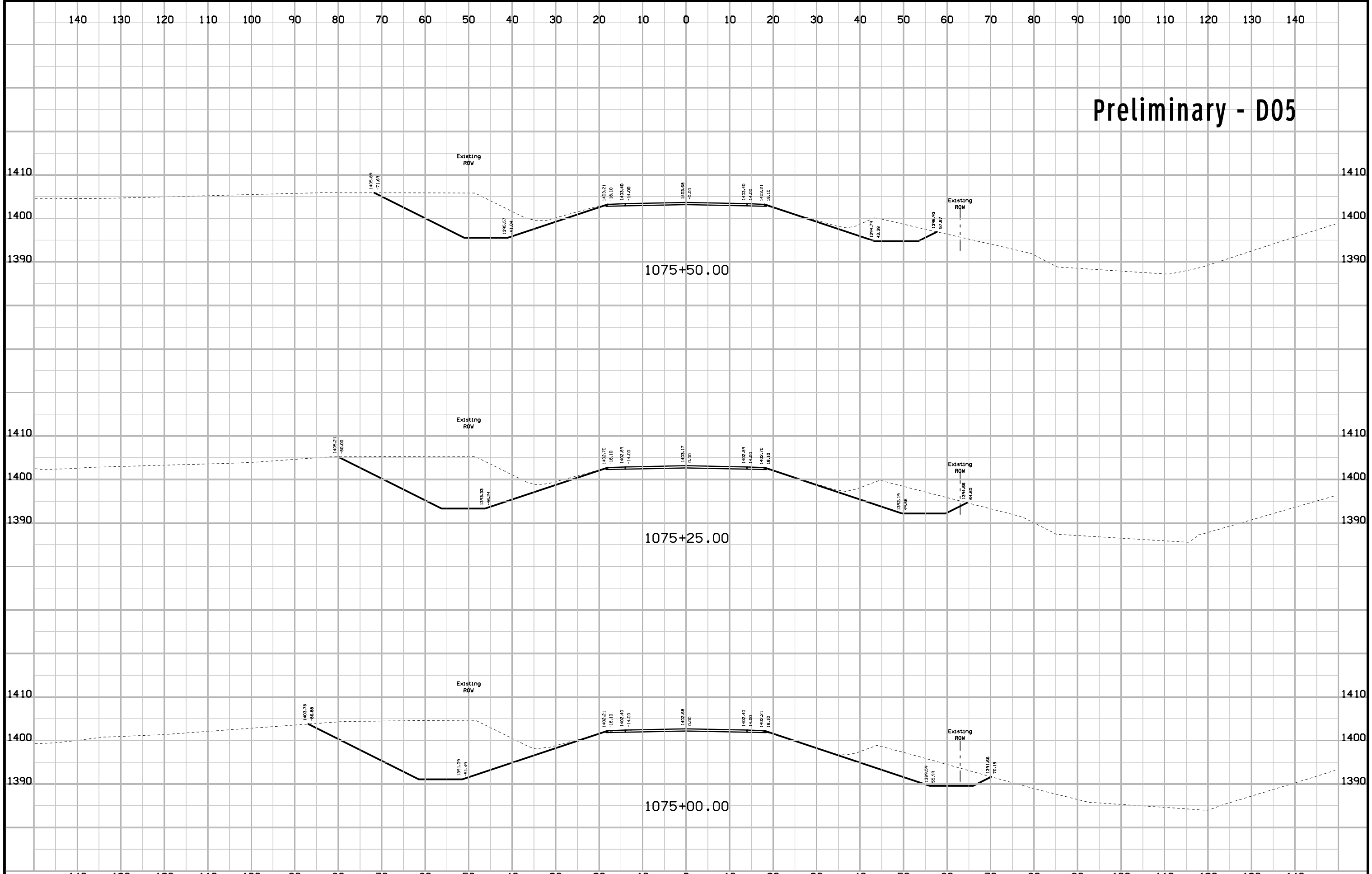
# Preliminary - D05



# Preliminary - D05



# Preliminary - D05



Preliminary - D05

