

MONONA CO.
BRIDGE REPLACEMENT-PPCB
BRFN-175-1(75)--39-67

LETTING DATE
 10-19-2021



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
MONONA COUNTY
 BRIDGE REPLACEMENT-PPCB

Maple River 1.0 mi W of E Jct IA 141

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

17

PROJECT IDENTIFICATION NUMBER

17-67-175-020

PROJECT NUMBER

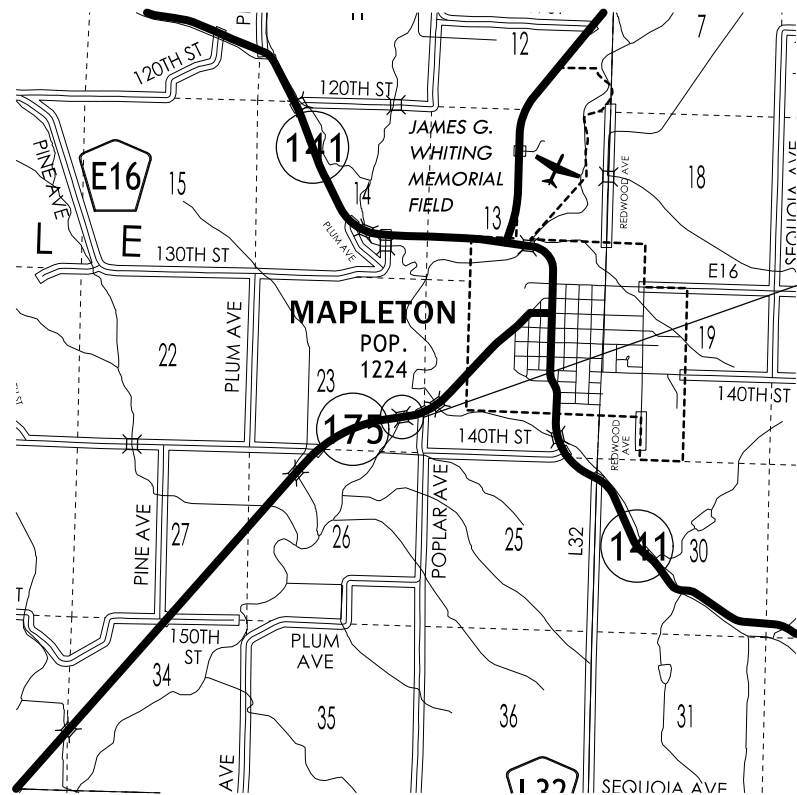
BRFN-175-1(75)--39-67

R.O.W. PROJECT NUMBER

STPN-175-1(76)--2J-67

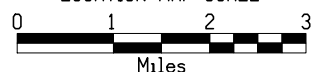
INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	IA 175 Plan and Profile Sheet
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.2	Detour Plan Sheet
V Sheets	Bridge and Culvert Situation Plans
V.1 - 3	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1 - 6	Mainline Cross Sections
	* Color Plan Sheets



Project Location
 Maint. No. 6727.6S175
 FHWA No. 37080

LOCATION MAP SCALE



DESIGN DATA RURAL

2022	AADT	1300	V.P.D.
2042	AADT	1500	V.P.D.
20--	DHV	--	V.P.H.
	TRUCKS	16	%
	Total		
	Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Kelly C. Bell	Primary Signature Block

PRELIMINARY PLANS

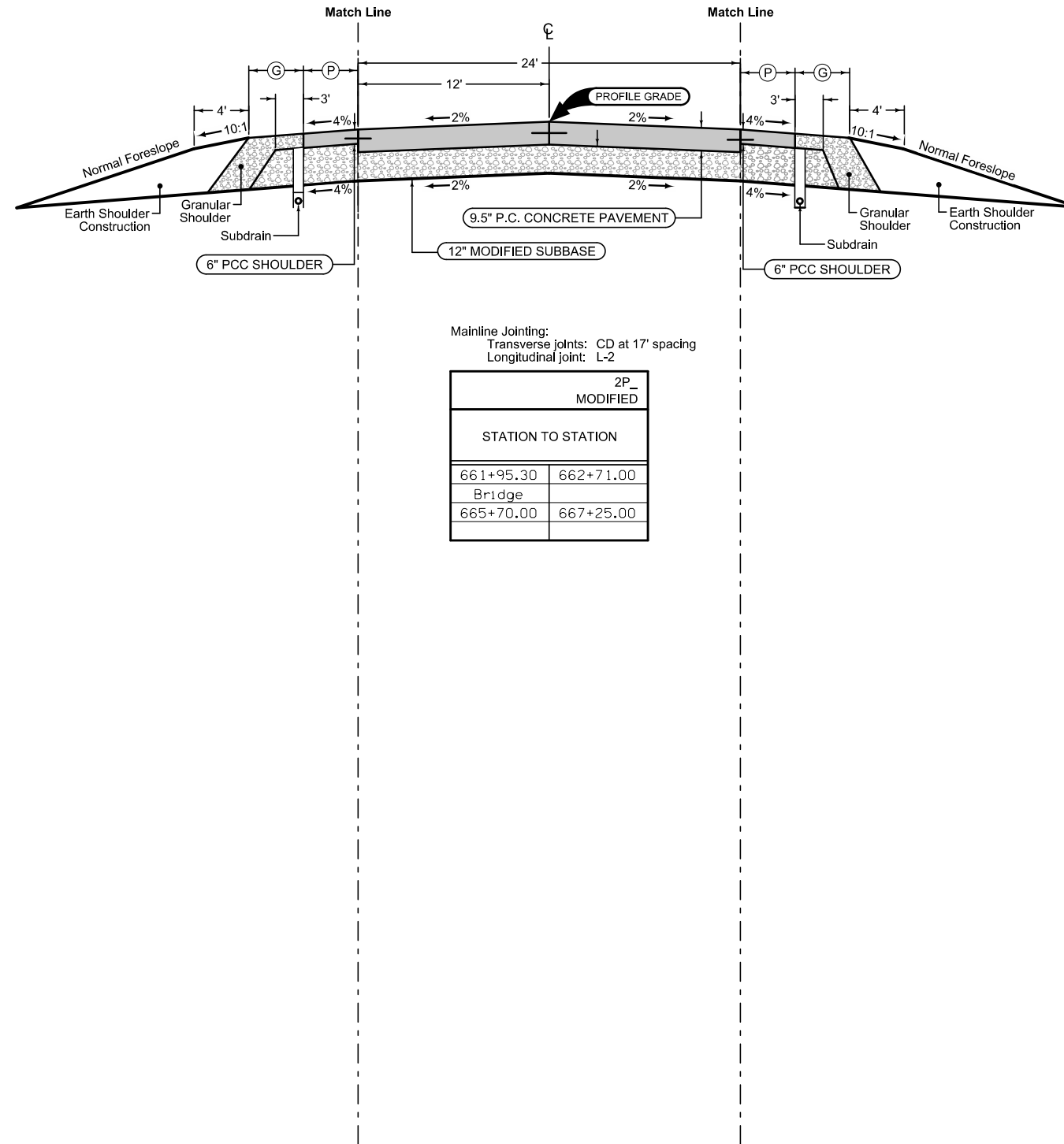
Subject to change by final design.

D5 PLAN - Date: 02/24/2020

Full Depth PCC Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 17' spacing

2_C_FullPCC_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
661+95.30	662+71.00	6.0	4.0
Bridge			
665+70.00	667+25.00	6.0	4.0



Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

2P_ MODIFIED	
STATION TO STATION	
661+95.30	662+71.00
Bridge	
665+70.00	667+25.00

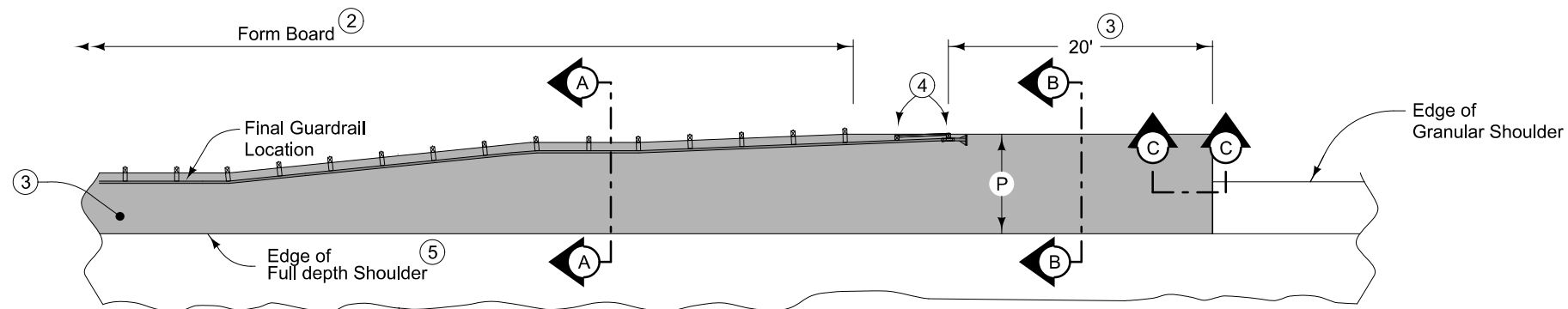
Full Depth PCC Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 17' spacing

2_C_FullPCC_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
661+95.30	662+71.00	6.0	4.0
Bridge			
665+70.00	666+94.54	6.0	4.0

See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

IA 175



PLAN VIEW

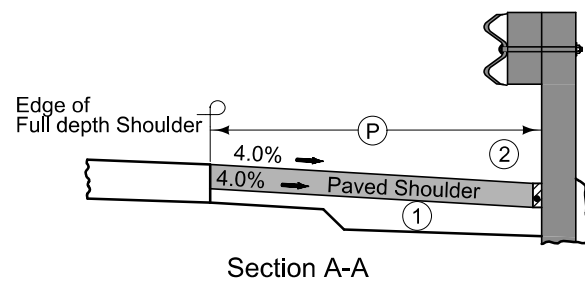
6" PCC paved shoulder at guardrail with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

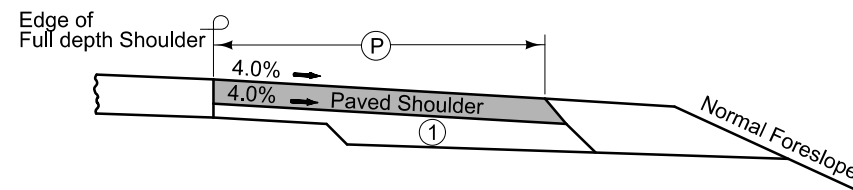
Paved guardrail shoulder designed assuming 12" blockouts. Field adjust as needed.

Refer to Tabulation 112-9M for shoulder quantities.

- ① For subgrade treatment, refer to other details in the plan.
- ② When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown. Refer to note 4 for final 2 posts.
- ③ Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.
- ④ Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ⑤ 'KT-1 joint for PCC shoulder.

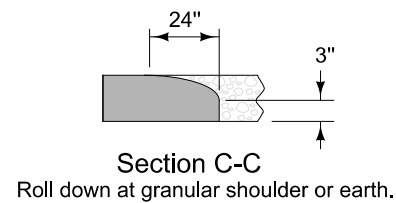


Section A-A



Section B-B

NEW CONSTRUCTION
















Section C-C
Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL







SURVEY SYMBOLS













UTILITY LEGEND









PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Yellow	(4)		Highlight for Critical Notes or Features
Red	(3)		Delineates Restricted Areas
Lavender	(9)		Temporary Pavement Shading
Gray, Light	(48)		Proposed Pavement Shading
Gray, Med	(80)		Proposed Granular Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

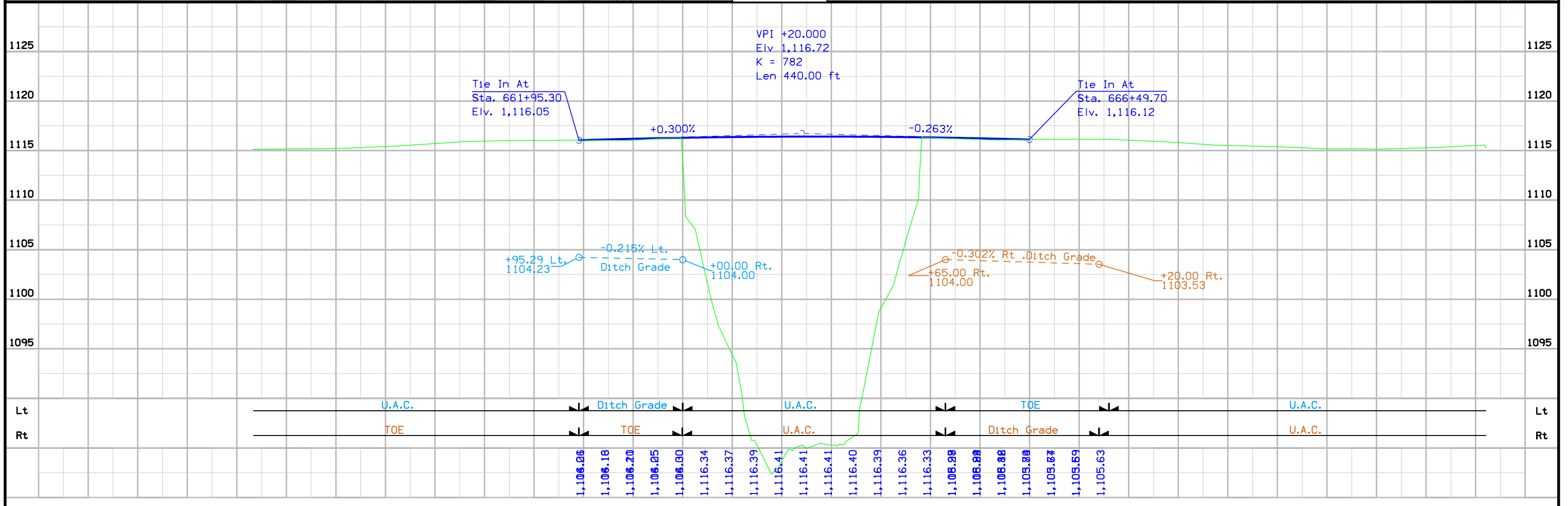
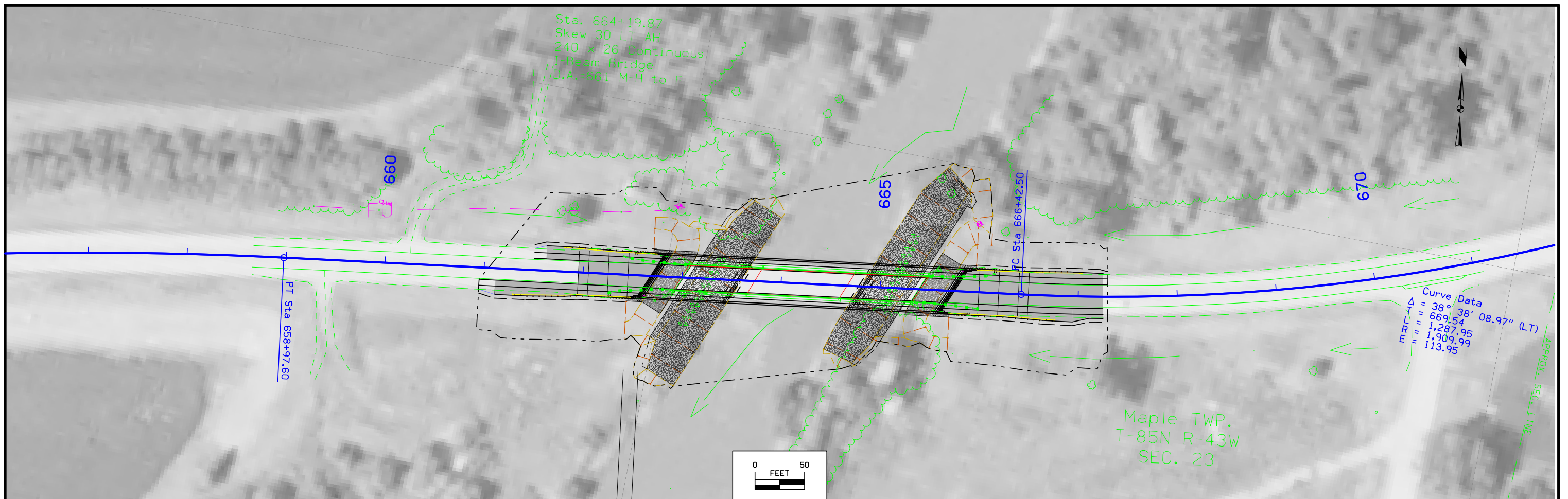
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND	
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

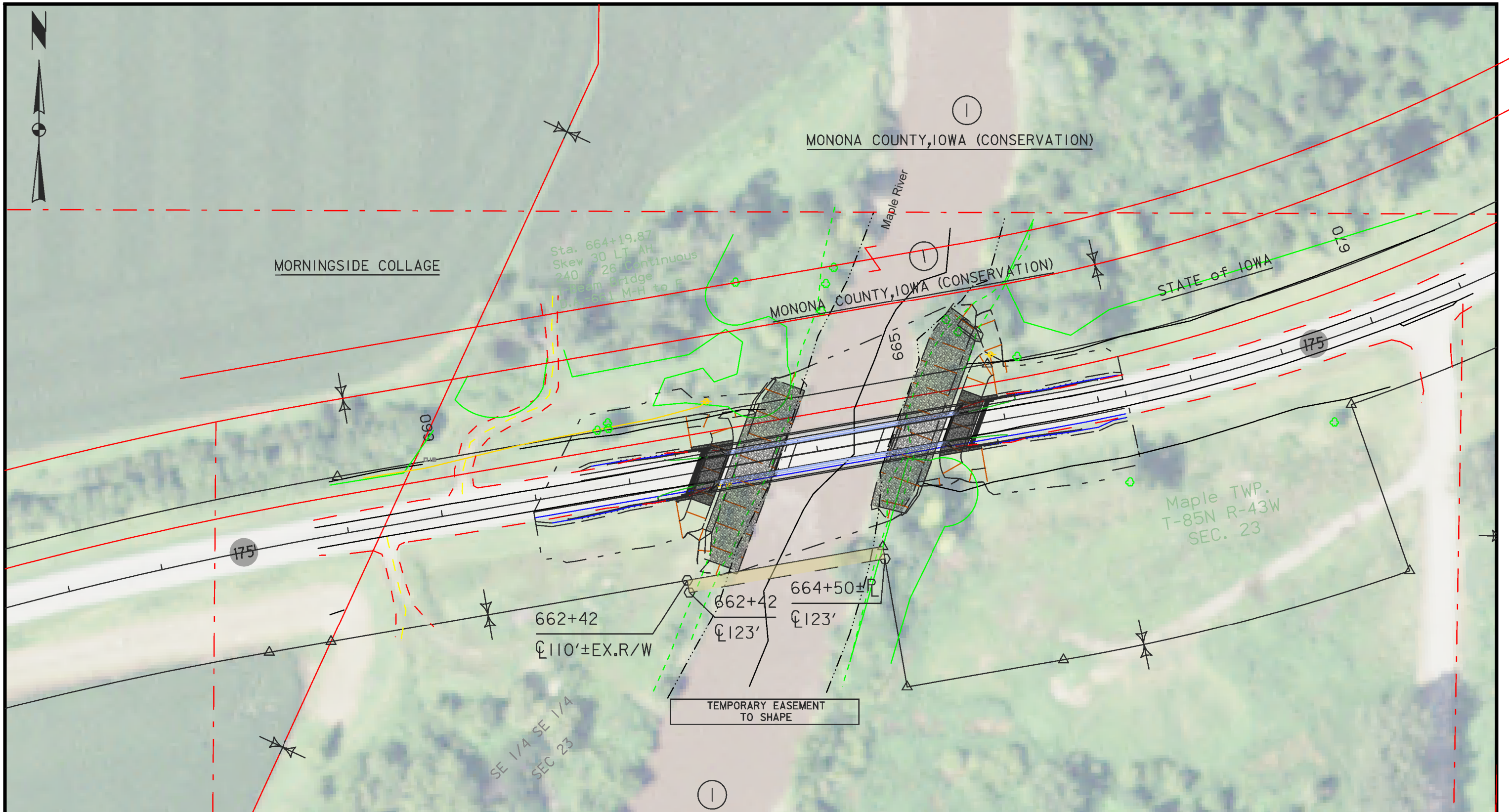
**PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES D, E, F, & K)



Monona	ROW: STPN-175-1(76)--2J-67			PIN 17-67-175-020															
	Maple River 1.0 mi W of E Jct IA 141																		
		STATE		COUNTY		CITY			TEMP EASE	BORROW									
PARCEL NO.	OWNER NAME	FEE	EASE	FEE	EASE	FEE	EASE	EXCESS			FEE	T.E.	MITIGATION	OTHER	HOUSE	BUILDING(S)	A/C ONLY	TOTAL ACQ.	
1	Monona County - Fee																		0.06 AC
1 Parcel	"TOTALS	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0.06 AC		0 AC	0 AC	0 AC						
		0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF		0 SF								

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



Sta. 664+19.87
 Skew 30 LT AH
 240' x 26' Continuous
 T-Beam Bridge
 D.A. 5' 1" M-H to F

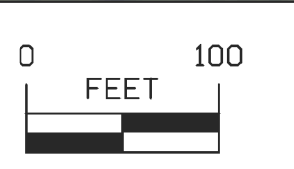
Maple TWP.
 T-85N R-43W
 SEC. 23

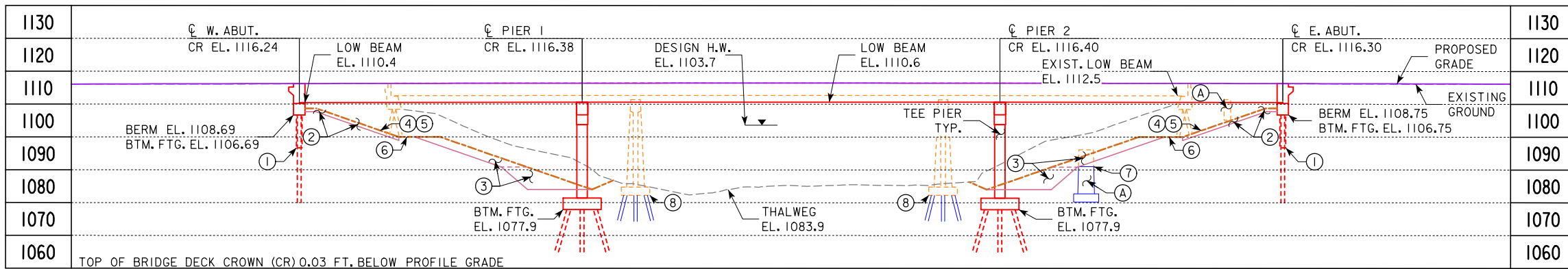
SE 1/4 SE 1/4
 SEC 23

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

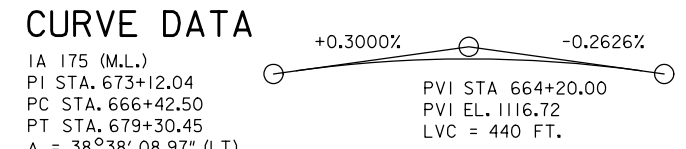
ROW Team: Larson / Hughes
 ROW #: STPN-175-1(76)--2J-67
 Plan Date: 3-25-2020

- Color Legend:
- Property Lines
 - Temporary Easement
 - Permanent Acquisition





BENCH MARK:
 BM C 159, NGS DISK
 X=16,472,170.7 Y=7,288,517.7
 IOWA RCS ZONE 6 (COUNCIL BLUFFS), SURVEY FEET
 ELEV. = 1097.92 NAVD88/1ARTN (GEOID12B)



PROPOSED PROFILE GRADE IA 175

HYDRAULIC DATA

DRAINAGE AREA = 670 SQ. MI.
 STREAM SLOPE = 3.78 FT./MI.
 AVG. LOW WATER STAGE = EL. 1087.4

Q₂₅ = 19,500 CFS
 STAGE = EL. 1102.7

Q₅₀ = 22,900 CFS
 STAGE = EL. 1103.7
 REGULATORY LOW BEAM = 1110.6
 BACKWATER = 0.18 FT.
 AVG. BRIDGE VELOCITY = 7.3 FPS

Q₁₀₀ = 26,100 CFS
 STAGE = EL. 1104.4
 OPERATIONAL LOW BEAM = 1110.4
 BACKWATER = 0.21 FT.
 AVG. BRIDGE VELOCITY = 7.9 FPS

Q₂₀₀ = 30,400 CFS
 STAGE = EL. 1105.2
 AVG. BRIDGE VELOCITY = 8.8 FPS
 CALCULATED DESIGN SCOUR = EL. 1073.9

Q₅₀₀ = 33,700 CFS
 STAGE = EL. 1105.8
 AVG. BRIDGE VELOCITY = 9.4 FPS
 CALCULATED CHECK SCOUR = EL. 1072.6

ROADWAY OVERTOP >500 YR. EVENT
 ROADWAY OVERTOP EL. 1108.1
 STA. 626+50 (MP 26.9)

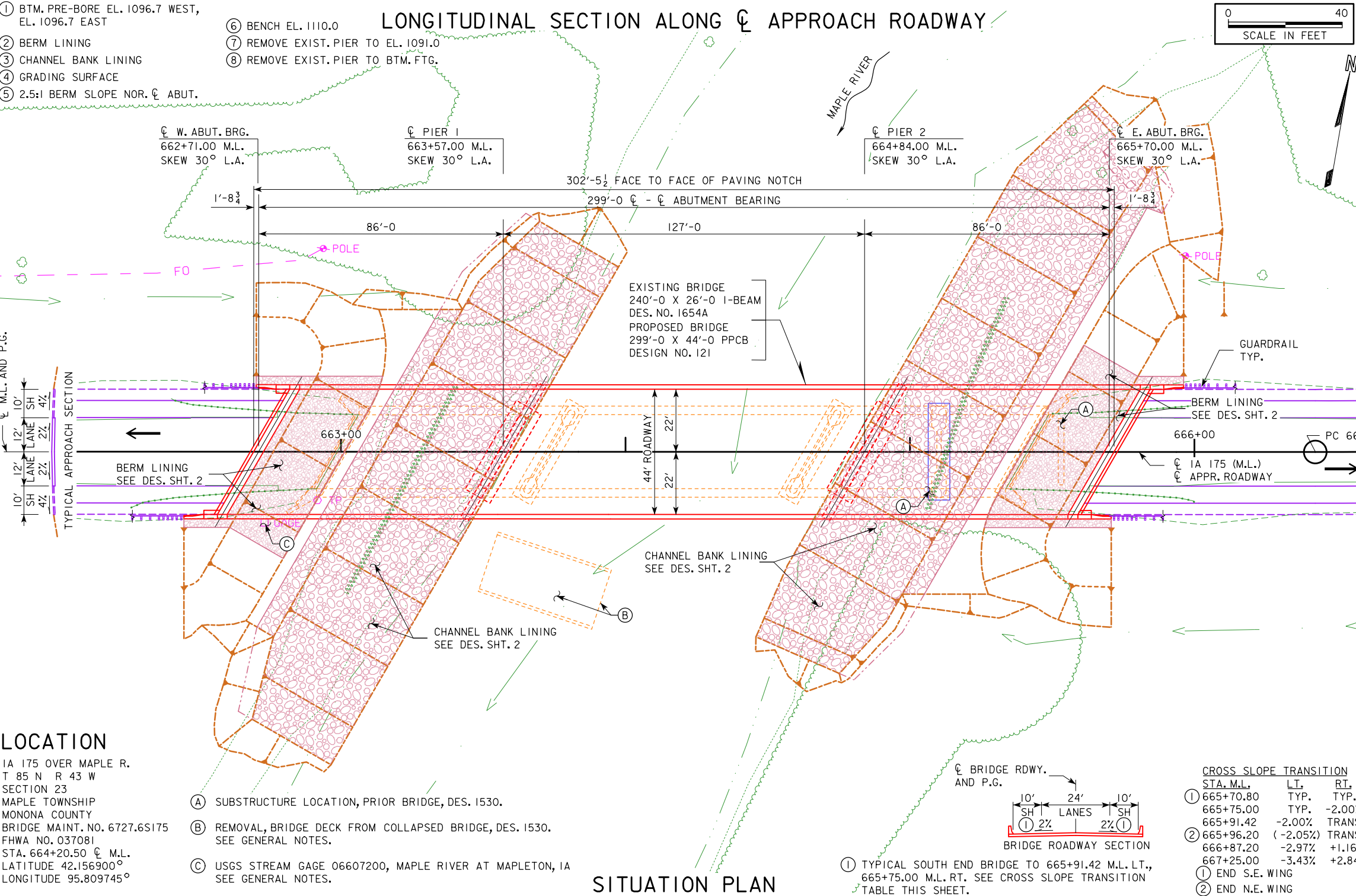
UTILITIES LEGEND

FO - FIBER OPTIC GAGE - STREAM GAGE

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

TRAFFIC ESTIMATE

2022 AADT 1,300 V.P.D.
 2042 AADT 1,500 V.P.D.
 2041 DHV -- V.P.H.
 TRUCKS 16%
 TOTAL DESIGN ESALS --



LOCATION
 IA 175 OVER MAPLE R.
 T 85 N R 43 W
 SECTION 23
 MAPLE TOWNSHIP
 MONONA COUNTY
 BRIDGE MAINT. NO. 6727.6S175
 FHWA NO. 037081
 STA. 664+20.50 @ M.L.
 LATITUDE 42.156900°
 LONGITUDE 95.809745°

- (A) SUBSTRUCTURE LOCATION, PRIOR BRIDGE, DES. 1530.
- (B) REMOVAL, BRIDGE DECK FROM COLLAPSED BRIDGE, DES. 1530. SEE GENERAL NOTES.
- (C) USGS STREAM GAGE 06607200, MAPLE RIVER AT MAPLETON, IA SEE GENERAL NOTES.

CROSS SLOPE TRANSITION

STA. M.L.	LT.	RT.
① 665+70.80	TYP.	TYP.
665+75.00	TYP.	-2.00%
665+91.42	-2.00%	TRANS.
② 665+96.20	(-2.05%)	TRANS.
666+87.20	-2.97%	+1.16%
667+25.00	-3.43%	+2.84%

① END S.E. WING
 ② END N.E. WING

PRELIMINARY

DESIGN FOR 30° SKEW (L.A.)

**299'-0" X 44'-0" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE**

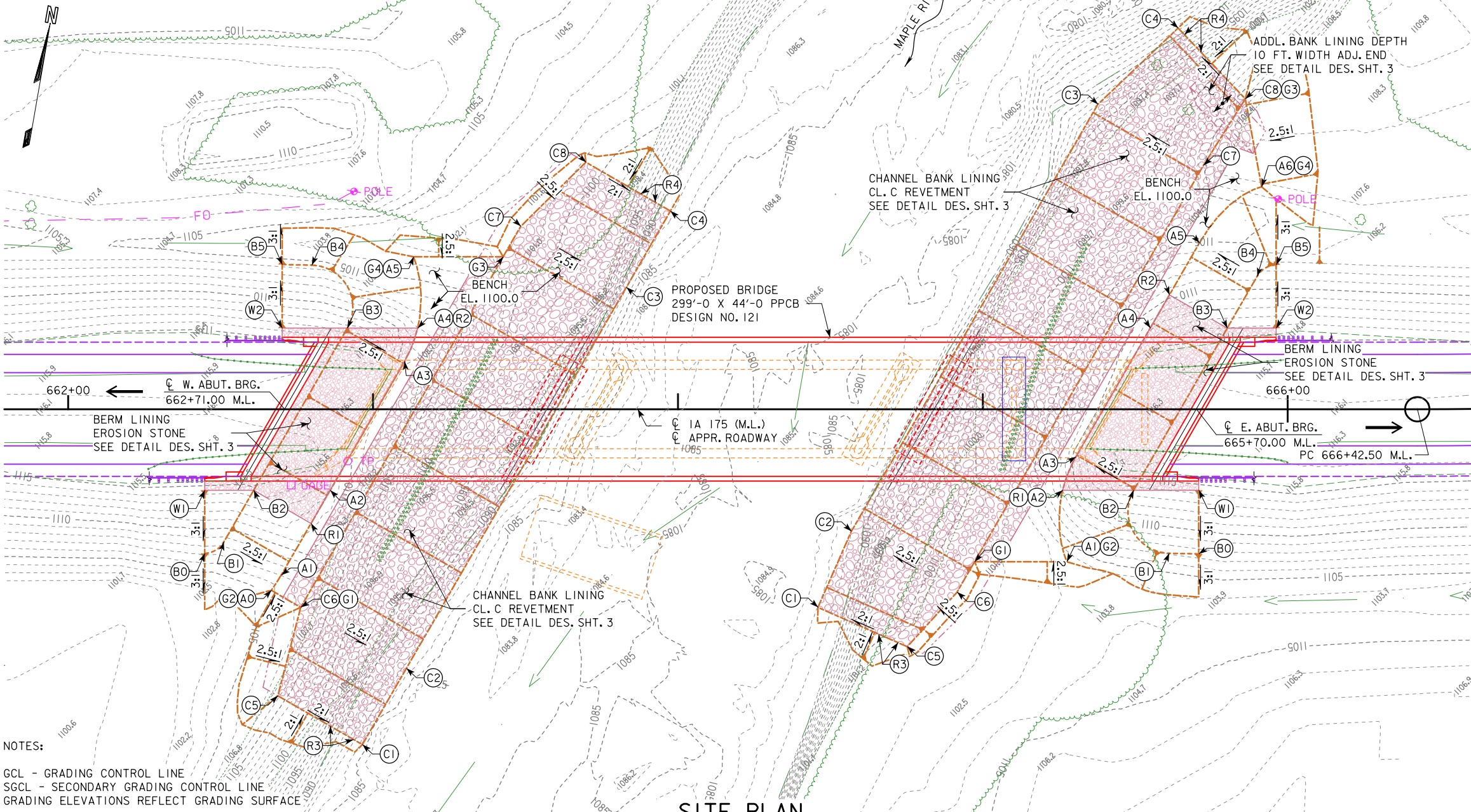
86'-0" END SPANS BTD BEAMS 127'-0" INT. SPANS

SITUATION PLAN

STATION 664+20.50 IA 175 OCT. 2021

MONONA COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 3 FILE NO. 31872 DESIGN NO. 121



SITE PLAN

NOTES:
 GCL - GRADING CONTROL LINE
 SGCL - SECONDARY GRADING CONTROL LINE
 GRADING ELEVATIONS REFLECT GRADING SURFACE

- WEST CHANNEL BANK GRADING CONTROL:**
- (C1) 662+96.5 M.L., 110.0' RT., TOE BANK, GCL, EL. 1084.0. BEGIN CHAN. GRADING, BEGIN SIDE SLOPE TRANSITION, 2:1 SLOPE.
 - (C2) 663+10.9 M.L., 85.0' RT., TOE BANK, GCL, EL. 1084.0. END SIDE SLOPE TRANSITION, 2.5:1 SLOPE.
 - (C3) 663+81.1 M.L., 40.0' LT., TOE BANK, GCL, EL. 1084.0. BEGIN SIDE SLOPE TRANSITION, 2.5:1 SLOPE.
 - (C4) 663+97.5 M.L., 65.0' LT., TOE BANK, GCL, EL. 1084.0. END CHAN. GRADING, END SIDE SLOPE TRANSITION, 2:1 SLOPE.
 - (C5) 662+68.8 M.L., 94.0' RT., TOP BANK, SGCL, EL. 1100.0. 2.5:1 SLOPE ABOVE SGCL
 - (C6) 662+76.3 M.L., 65.0' RT., TOP BANK, SGCL, EL. 1100.0.
 - (C7) 663+48.5 M.L., 60.0' LT., TOP BANK, SGCL, EL. 1100.0.
 - (C8) 663+69.8 M.L., 81.0' LT., TOP BANK, SGCL, EL. 1100.0. 2.5:1 SLOPE ABOVE SGCL

- EAST CHANNEL BANK GRADING CONTROL:**
- (C1) 664+45.9 M.L., 65.0' RT., TOE BANK, GCL, EL. 1084.0. BEGIN CHAN. GRADING, BEGIN SIDE SLOPE TRANSITION, 2:1 SLOPE.
 - (C2) 664+56.9 M.L., 40.0' RT., TOE BANK, GCL, EL. 1084.0. END SIDE SLOPE TRANSITION, 2.5:1 SLOPE.
 - (C3) 665+37.7 M.L., 100.0' LT., TOE BANK, GCL, EL. 1084.0. BEGIN SIDE SLOPE TRANSITION, 2.5:1 SLOPE.
 - (C4) 665+64.0 M.L., 125.0' LT., TOE BANK, GCL, EL. 1084.0. END CHAN. GRADING, END SIDE SLOPE TRANSITION, 2:1 SLOPE.
 - (C5) 664+75.2 M.L., 77.9' RT., TOP BANK, SGCL, EL. 1100.0. 2.5:1 SLOPE ABOVE SGCL
 - (C6) 664+91.5 M.L., 60.0' RT., TOP BANK, SGCL, EL. 1100.0.
 - (C7) 665+72.4 M.L., 80.0' LT., TOP BANK, SGCL, EL. 1100.0.
 - (C8) 665+86.1 M.L., 101.8' LT., TOP BANK, SGCL, EL. 1100.0. 2.5:1 SLOPE ABOVE SGCL

- WEST BERM GRADING CONTROL:**
- (B0) 662+44.8 M.L., 47.3' RT., TOP BERM, GCL, EL. 1108.7
 - (B1) 662+51.1 M.L., 43.6' RT., TOP BERM, GCL, EL. 1108.7
 - (B2) 662+60.85 M.L., 26.58' RT., TOP BERM, GCL, EL. 1108.69
 - (B3) 662+91.54 M.L., 26.58' LT., TOP BERM, GCL, EL. 1108.69
 - (B4) 662+79.9 M.L., 47.3' LT., TOP BERM, GCL, EL. 1108.7
 - (B5) 662+70.2 M.L., 47.5' LT., TOP BERM, GCL, EL. 1108.7
 - (A0) 662+66.6 M.L., 59.4' RT., BTM. BERM, GCL, EL. 1100.0
 - (A1) 662+69.9 M.L., 54.4' RT., BTM. BERM, GCL, EL. 1100.0
 - (A2) 662+85.94 M.L., 26.58' RT., BTM. BERM, GCL, EL. 1100.0
 - (A3) 662+10.4 M.L., 15.7' LT., BTM. BERM, GCL, EL. 1100.0
 - (A4) 663+14.65 M.L., 26.58' LT., BTM. BERM, GCL, EL. 1100.0
 - (A5) 663+13.3 M.L., 50.0' LT., BTM. BERM, GCL, EL. 1100.0

- EAST BERM GRADING CONTROL:**
- (B0) 665+70.8 M.L., 47.5' RT., TOP BERM, GCL, EL. 1108.8
 - (B1) 665+61.1 M.L., 47.3' RT., TOP BERM, GCL, EL. 1108.8
 - (B2) 665+49.46 M.L., 26.58' RT., TOP BERM, GCL, EL. 1108.75
 - (B3) 665+80.15 M.L., 26.58' LT., TOP BERM, GCL, EL. 1108.75
 - (B4) 665+90.0 M.L., 43.6' LT., TOP BERM, GCL, EL. 1108.8
 - (B5) 665+96.2 M.L., 47.3' LT., TOP BERM, GCL, EL. 1108.8
 - (A1) 665+27.5 M.L., 50.0' RT., BTM. BERM, GCL, EL. 1100.0
 - (A2) 665+26.20 M.L., 26.58' RT., BTM. BERM, GCL, EL. 1100.0
 - (A3) 665+30.5 M.L., 15.6' RT., BTM. BERM, GCL, EL. 1100.0
 - (A4) 665+54.89 M.L., 26.58' LT., BTM. BERM, GCL, EL. 1100.0
 - (A5) 665+71.0 M.L., 54.5' LT., BTM. BERM, GCL, EL. 1100.0
 - (A6) 665+91.4 M.L., 73.0' LT., BTM. BERM, GCL, EL. 1100.0

- WEST BRIDGE WING GRADING CONTROL:**
- (W1) 662+44.80 M.L., 26.58' RT., EL. 1115.59
 - (W2) 662+70.20 M.L., 26.58' LT., EL. 1115.65
- EAST BRIDGE WING GRADING CONTROL:**
- (W1) 665+70.80 M.L., 26.58' RT., EL. 1115.71
 - (W2) 665+96.20 M.L., 26.58' LT., EL. 1115.65
- WEST BENCH GRADING CONTROL:**
- (G1) 662+76.3 M.L., 65.0' RT., EDGE BENCH, GCL, EL. 1100.0
 - (G2) 662+66.6 M.L., 59.4' RT., EDGE BENCH, GCL, EL. 1100.0
 - (G3) 663+42.7 M.L., 50.0' LT., EDGE BENCH, EL. 1100.0
 - (G4) 50.0' LT., EDGE BENCH, EL. 1100.0
- EAST BENCH GRADING CONTROL:**
- (G1) 664+97.3 M.L., 50.0' RT., EDGE BENCH, EL. 1100.0
 - (G2) 50.0' RT., EDGE BENCH, EL. 1100.0
 - (G3) 665+86.1 M.L., 101.8' LT., EDGE BENCH, GCL, EL. 1100.0
 - (G4) 665+91.4 M.L., 73.0' LT., EDGE BENCH, GCL, EL. 1100.0
- WEST REVETMENT LAYOUT NOTES:**
- (R1) 662+79.7 M.L., 37.5' RT., EDGE BERM LINING, PERP. BERM SLOPE, PTS. (B2)-(R1)
 - (R2) 26.6' LT., EDGE BERM LINING, PTS. (B3)-(A4)
 - (R3) BEGIN CHANNEL BANK LINING, EDGE LINING, PTS. (C1)-(C5)
 - (R4) END CHANNEL BANK LINING, EDGE LINING, PTS. (C4)-(C8)
- EAST REVETMENT LAYOUT NOTES:**
- (R1) 26.6' RT., EDGE BERM LINING, PTS. (B2)-(A2)
 - (R2) 665+61.2 M.L., 37.5' LT., EDGE BERM LINING, PERP. BERM SLOPE, PTS. (B3)-(R2)
 - (R3) BEGIN CHANNEL BANK LINING, EDGE LINING, PTS. (C1)-(C5)
 - (R4) END CHANNEL BANK LINING, EDGE LINING, PTS. (C4)-(C8)

BERM SLOPE LOCATION TABLE:
 REFER TO PTS. (W1), (W2), (B2)-(B3), (A2)-(A3)-(A4)
 BERM SLOPE ELEVATIONS REFER TO GRADING SURFACE

PRELIMINARY

DESIGN FOR 30° SKEW (L.A.)

**299'-0 X 44'-0 PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE**

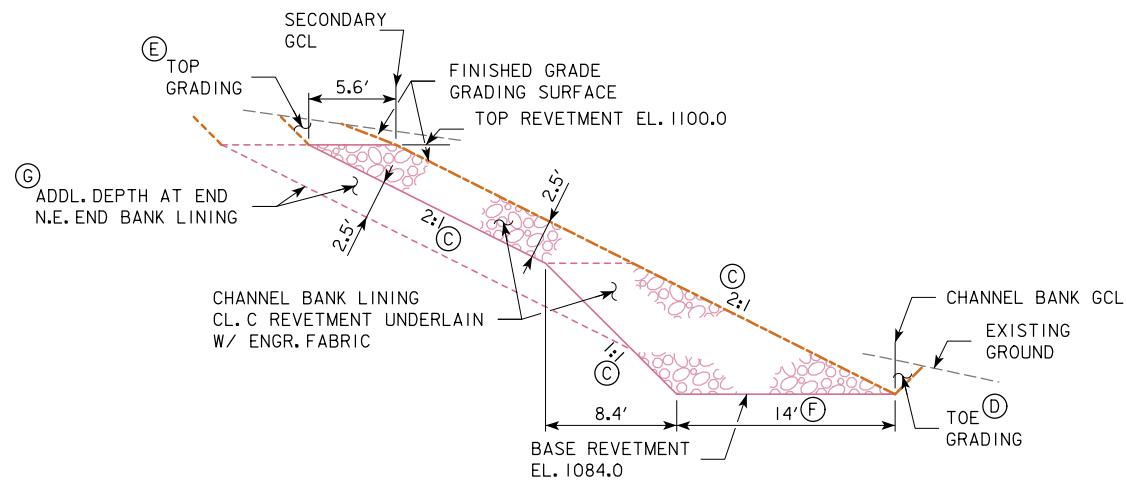
86'-0 END SPANS BTD BEAMS 127'-0 INT. SPANS

SITUATION PLAN - SITE

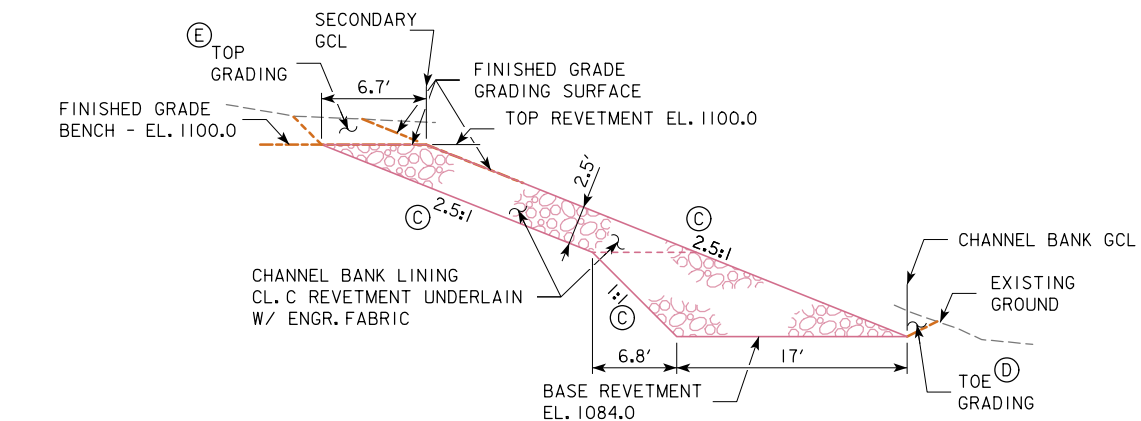
STATION 664+20.50 IA 175 OCT. 2021

MONONA COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 3 FILE NO. 31872 DESIGN NO. 121



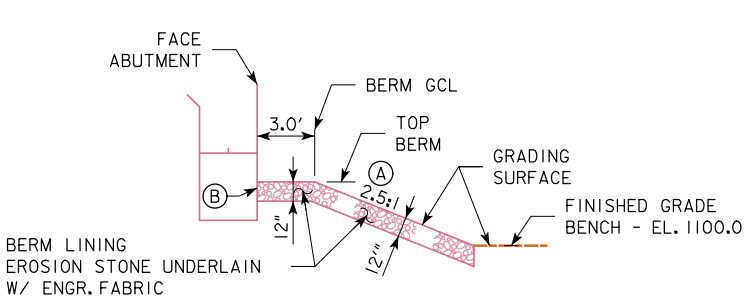
CHANNEL BANK LINING - AT END



CHANNEL BANK LINING - TYPICAL

SECTION THROUGH CHANNEL BANK LINING

- (A) SLOPE NOR. ϕ ABUT. / BERM GRADING CONTROL LINE (GCL) (PT. B2-B3).
- (B) CARRY ENGR. FABRIC UP FACE ABUTMENT.
- (C) SLOPE NOR. CHANNEL BANK GRADING CONTROL LINE (GCL).
- (D) EXCAVATE TO EXISTING GROUND OR FILL W/ REVETMENT AS REQUIRED.
- (E) EXCAVATE AT 1:1 SLOPE BEYOND BENCH LIMITS AS REQUIRED TO PLACE REVETMENT. BACKFILL TO EXISTING/FINISHED GRADE.
- (F) TRANSITION WIDTH FROM 17' TYP. TO 14' AT END THROUGH SIDE SLOPE TRANSITION.
- (G) ADDL. REVETMENT DEPTH, 10' WIDTH PARALLEL TO CHANNEL BANK GCL. DUB UP TO NORMAL PLACEMENT GRADE AT 1:1 SLOPE.



SECTION THROUGH BERM LINING

GENERAL NOTES:

THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 240' X 26' CONTINUOUS I-BEAM BRIDGE, MONONA DESIGN NO. 1654A, FHWA NO. 037080, MAINT. NO. 6727.6S175, WITH A YEAR OF CONSTRUCTION OF 1954.

WORK UNDER THIS DESIGN SHALL INCLUDE REMOVAL OF REMNANTS OF MONONA DESIGN NO. 1530. WORK WILL INCLUDE REMOVAL OF SUBSTRUCTURE UNITS IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS OR AS SHOWN IN THE PLANS. WORK SHALL INCLUDE REMOVAL OF A 42' X 20' I-BEAM APPROACH SPAN FROM THE CHANNEL LOCATED JUST TO THE SOUTH OF THE EXISTING BRIDGE.

THE PROJECT WILL IMPACT USGS STREAM GAGE 06607200, MAPLE RIVER AT MAPLETON, IA. CONTACT THE USGS 30 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS THAT WILL IMPACT THE GAGE. USGS CONTACT: JON NANIA, UNITED STATES GEOLOGICAL SURVEY, IOWA CITY, IA. PHONE: 319-358-3655 EMAIL: jfnania@usgs.gov

STREAM GAGE APPURTENANCES REMAINING FOLLOWING RELOCATION BY THE USGS WILL BE REMOVED IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS.

DESIGN / DESIGN DECISION NOTES:

- TL-4 BRIDGE RAILING PROPOSED
- BEAM TYPE - BTD
- AN IOWA DNR FLOOD PLAIN CONSTRUCTION PERMIT IS REQUIRED.

ESTIMATED REVETMENT QUANTITIES				
REVETMENT TYPE - LOCATION	REVETMENT CL. C (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LINING - WEST	-	105.4	197.6	65.9
BERM LINING - EAST	-	106.1	198.9	66.3
CHANNEL BANK LINING - WEST	1,681.9	-	1,127.2	1,051.2
CHANNEL BANK LINING - EAST	1,846.1	-	1,211.9	1,153.8
TOTALS	3,528.0	211.5	2,735.6	2,337.2

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. REVETMENT AND EROSION STONE ESTIMATED AT 1.6 TON/CY

PRELIMINARY

DESIGN FOR 30° SKEW (L.A.)

**299'-0 X 44'-0 PRETENSIONED
PRESTRESSED CONCRETE BEAM BRIDGE**

86'-0 END SPANS BTD BEAMS 127'-0 INT. SPANS

SITUATION PLAN - MISCELLANEOUS

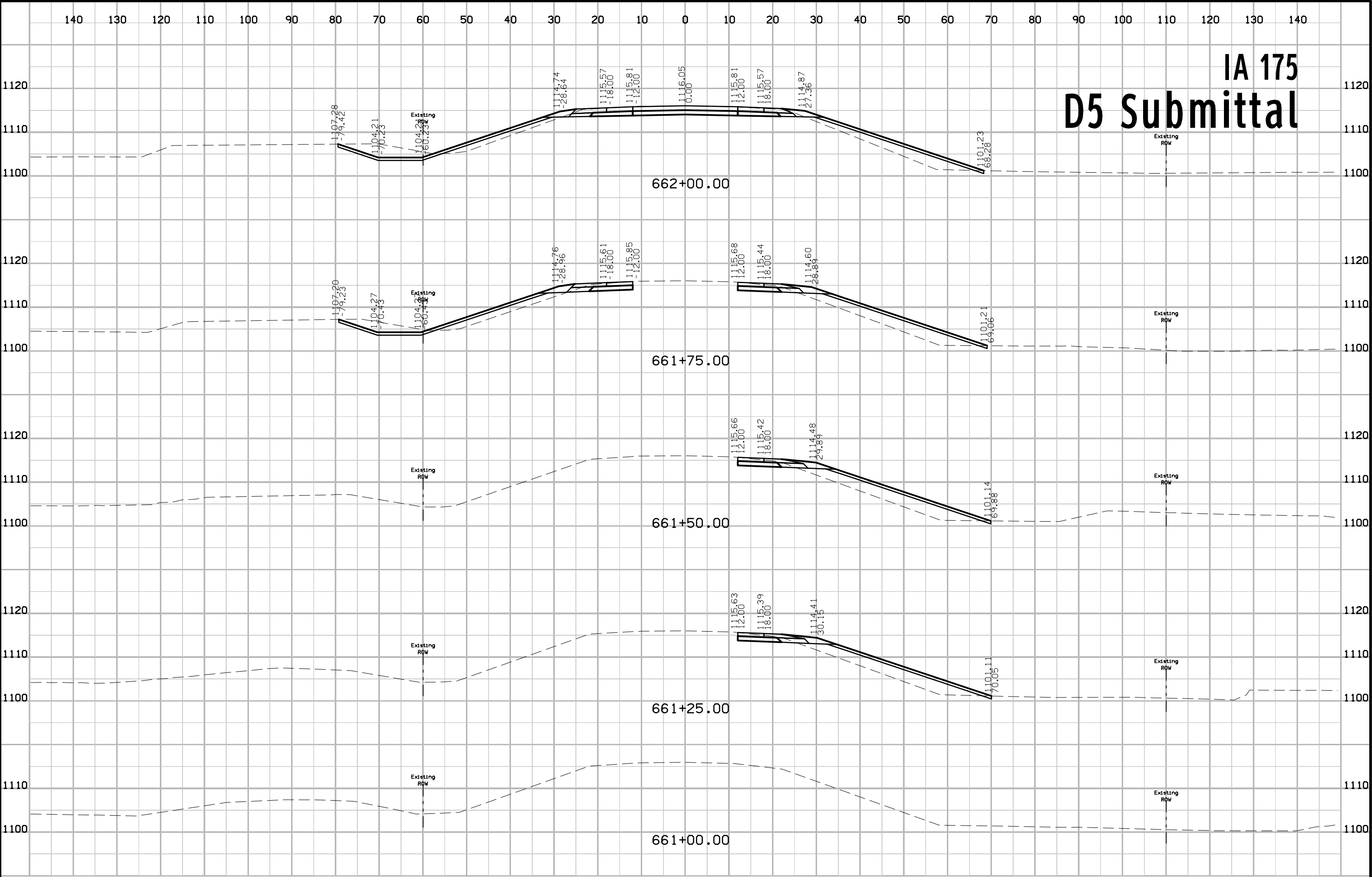
STATION 664+20.50 IA 175 OCT. 2021

MONONA COUNTY

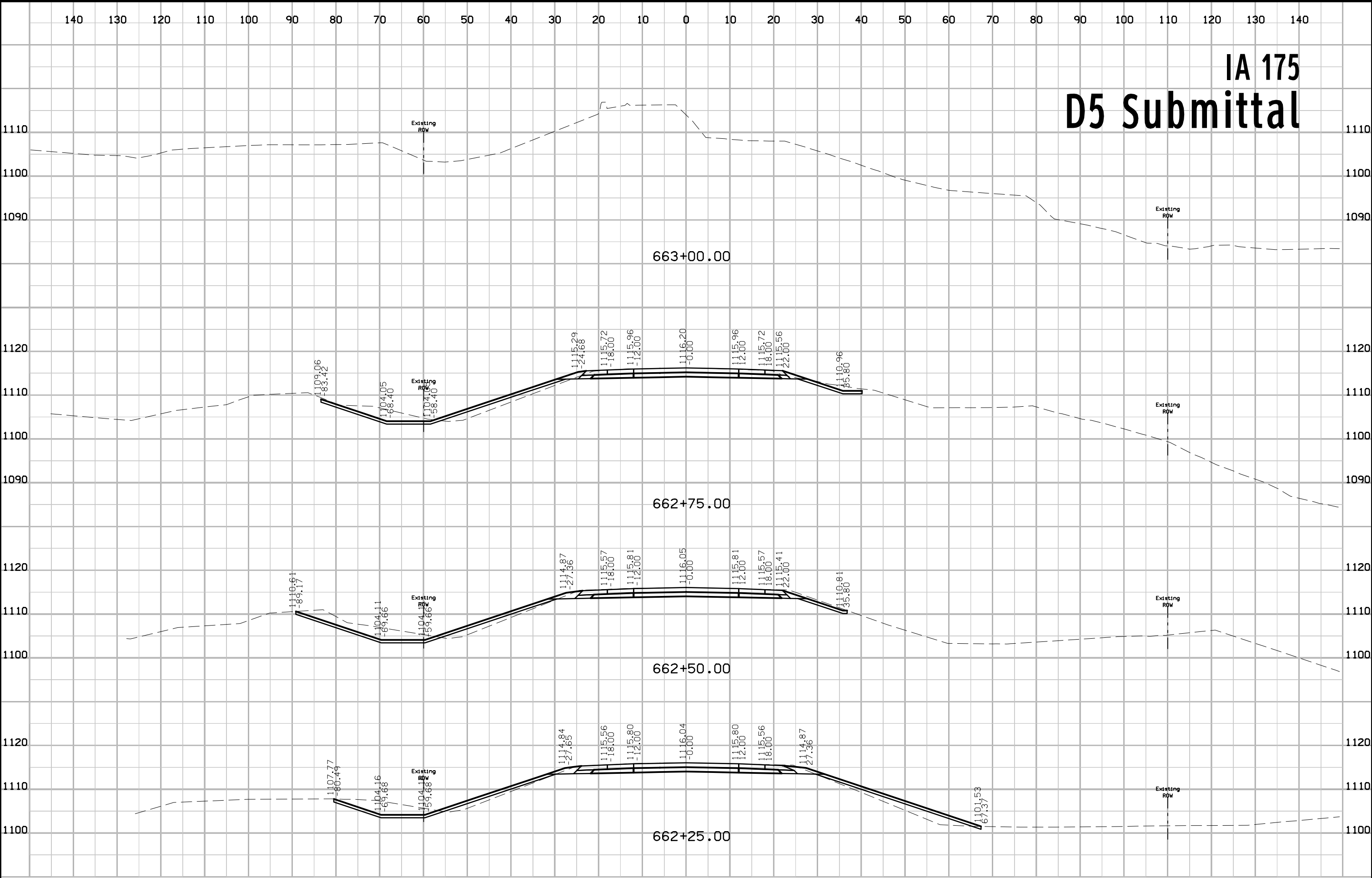
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 3 OF 3 FILE NO. 31872 DESIGN NO. 121

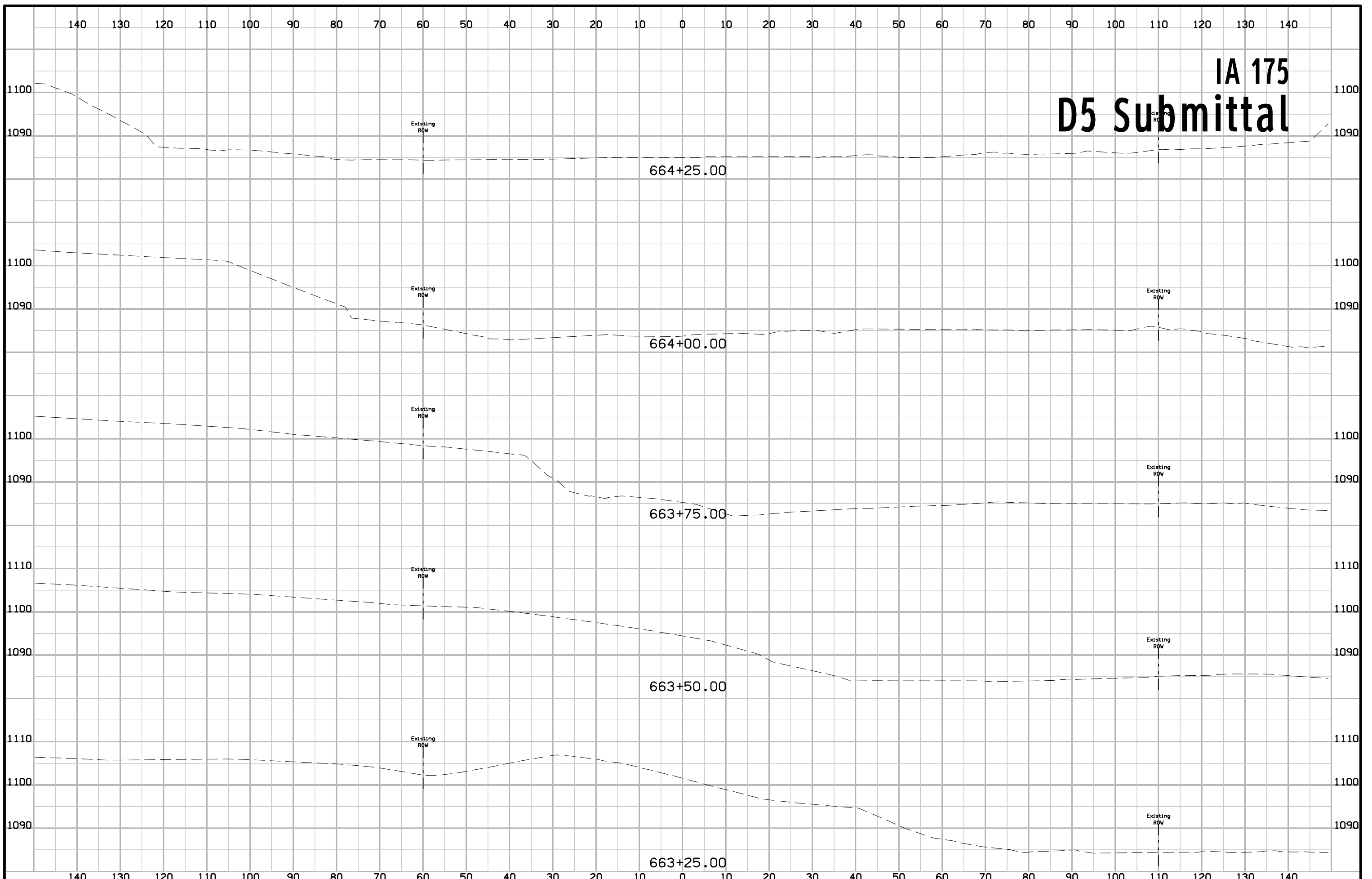
IA 175 D5 Submittal



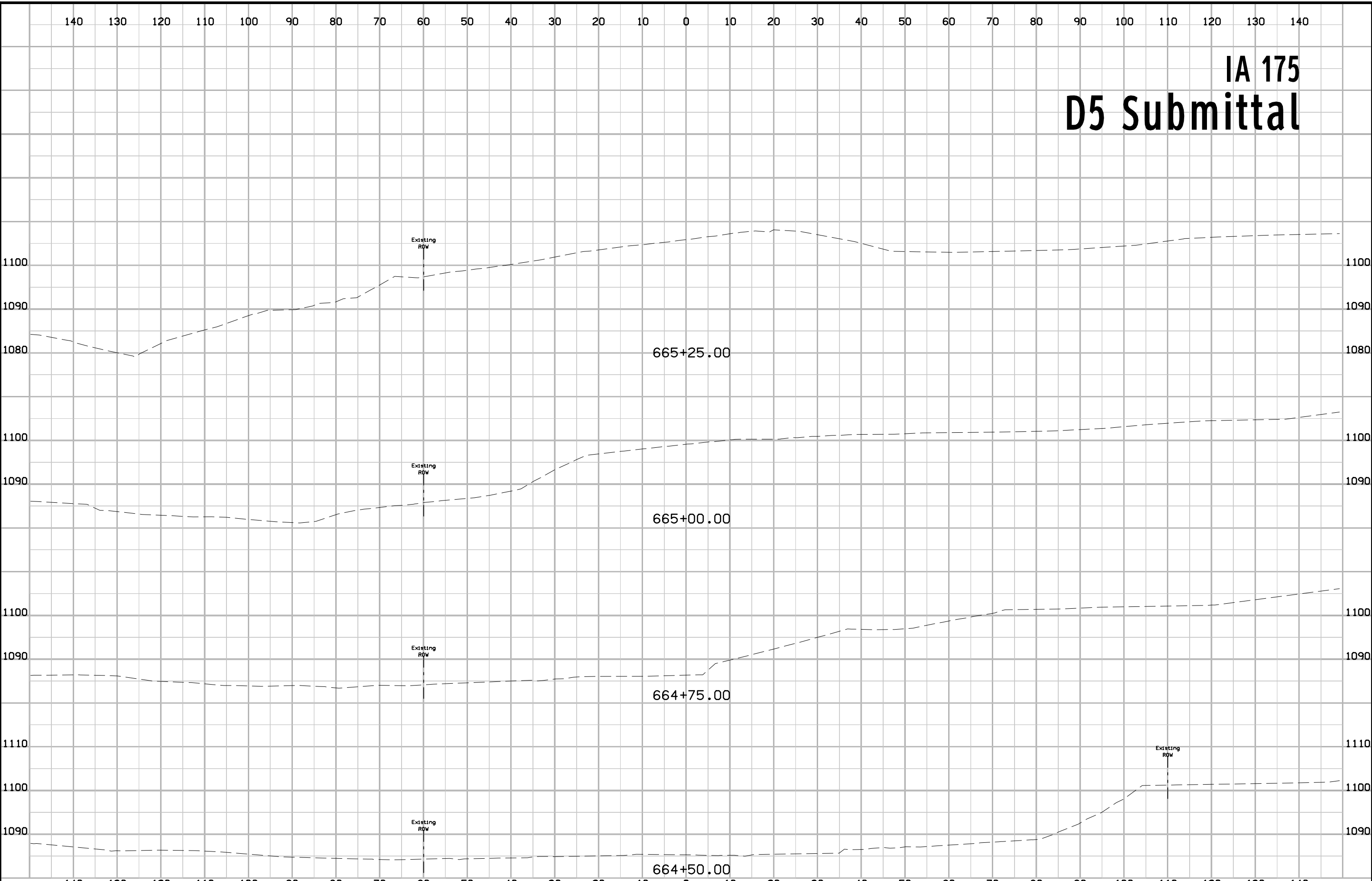
IA 175 D5 Submittal



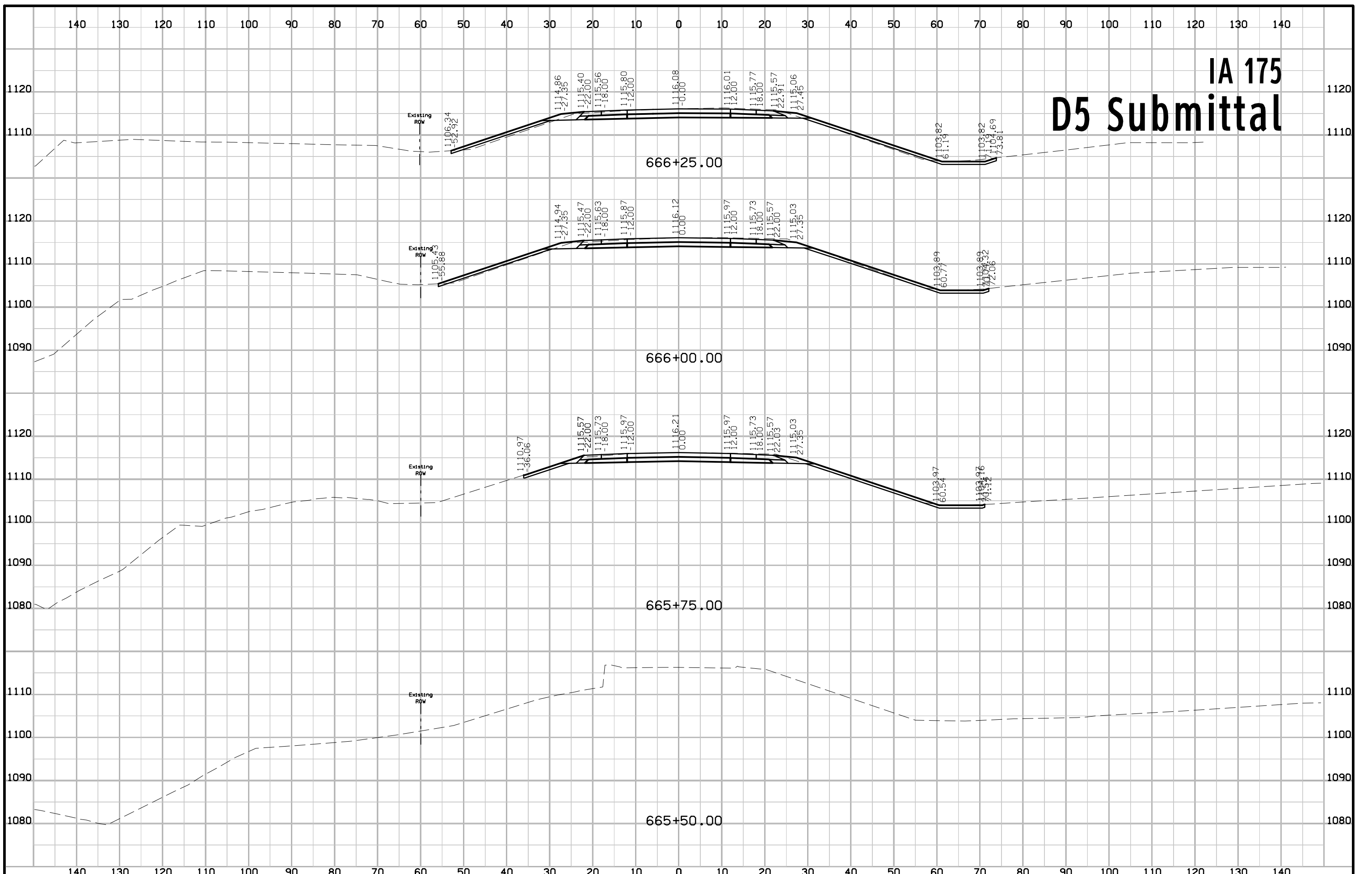
IA 175 D5 Submittal



IA 175 D5 Submittal



IA 175 D5 Submittal



IA 175 D5 Submittal

