





STRUCTURE REHABILITATION

STRUCTURE B-55-58
CTH K OVER WILLOW RIVER
CITY OF NEW RICHMOND, ST. CROIX COUNTY

Legend

-  Greaton Park
-  Project Location
-  Riverside Mobile Home Park



Project Location 

K

K

140th St

140th St

143rd St

181st Ave

144th St

Oak Ridge Dr

Riverside Mobile Home Park

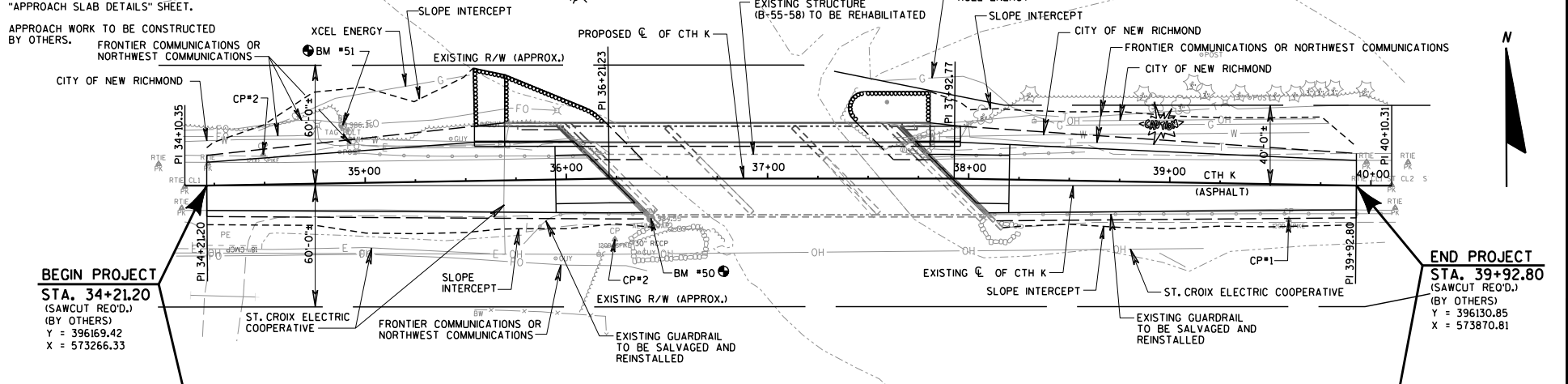
Greaton Park

NOTE:
FOR ALIGNMENT CONTROL POINTS,
BEARINGS, TIES, AND COORDINATES,
SEE "ALIGNMENT CONTROLS" SHEET.

FOR APPROACH SLAB DETAILS SEE
"APPROACH SLAB DETAILS" SHEET.

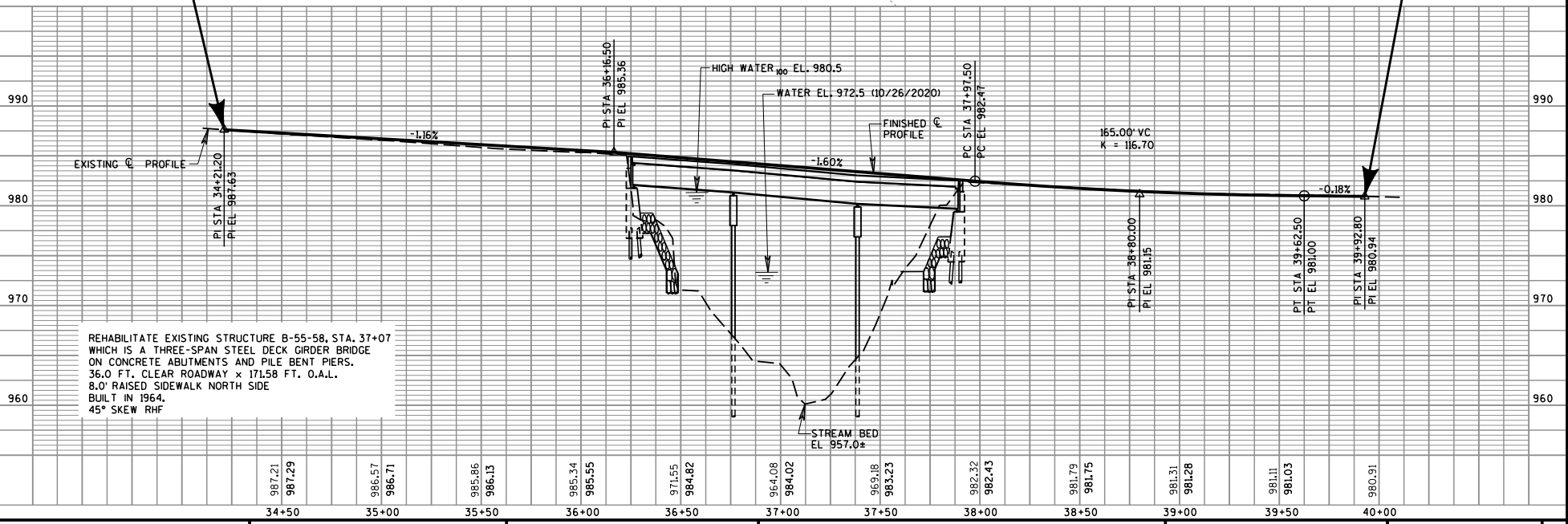
APPROACH WORK TO BE CONSTRUCTED
BY OTHERS.

BENCH MARKS			ELEV.
NO.	STA.	DESCRIPTION	ELEV.
50	36+42	ALUM. CAP, 20' RT.	984.55
51	34+89	TAG. BOLT, 29' LT.	986.36



BEGIN PROJECT
STA. 34+21.20
(SAWCUT REQ'D.)
(BY OTHERS)
Y = 396169.42
X = 573266.33

END PROJECT
STA. 39+92.80
(SAWCUT REQ'D.)
(BY OTHERS)
Y = 396130.85
X = 573870.81



REHABILITATE EXISTING STRUCTURE B-55-58, STA. 37+07
WHICH IS A THREE-SPAN STEEL DECK GIRDER BRIDGE
ON CONCRETE ABUTMENTS AND PILE BENT PIERS.
36.0 FT. CLEAR ROADWAY x 171.58 FT. O.A.L.
8.0' RAISED SIDEWALK NORTH SIDE
BUILT IN 1964.
45° SKEW RHF

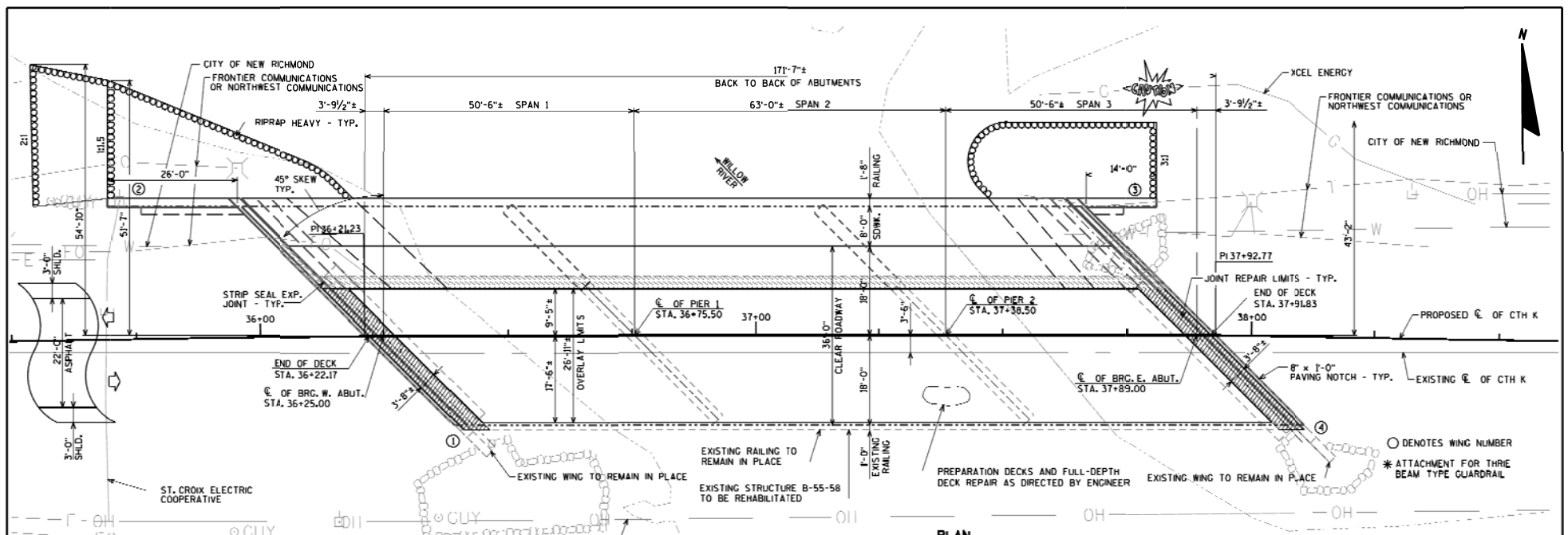
987.21 987.29	986.57 986.71	985.86 986.13	985.34 985.55	971.55 984.82	964.08 984.02	963.18 983.23	982.32 982.43	981.79 981.75	981.31 981.28	981.11 981.03	980.91
34+50	35+00	35+50	36+00	36+50	37+00	37+50	38+00	38+50	39+00	39+50	40+00

HWY: CTH K COUNTY: ST. CROIX PLAN AND PROFILE SCALE, FEET 0 25 50 SHEET E

2/11/2022
PE V:\AE\3\Reou_shd_util1-3

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

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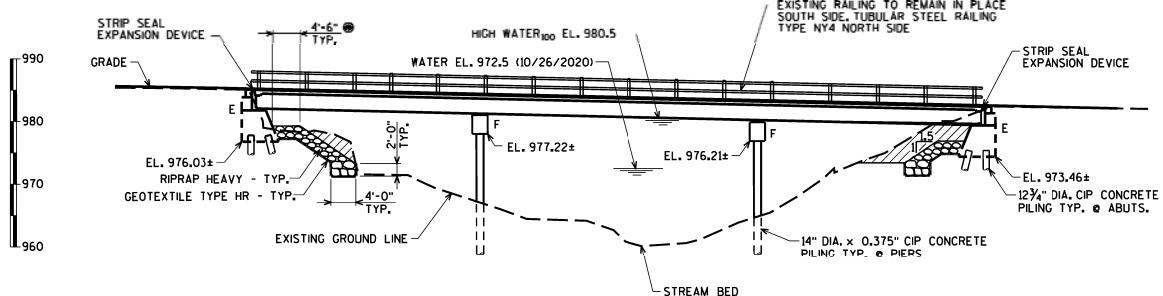
PLAN

3 SPAN CONTINUOUS STEEL GIRDER BRIDGE
(WIDENING AND OVERLAY)

FOR TYPICAL SECTION
AND DESIGN DATA
SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION AND DESIGN DATA
3. QUANTITIES AND GENERAL NOTES
4. GENERAL DETAILS



ELEVATION

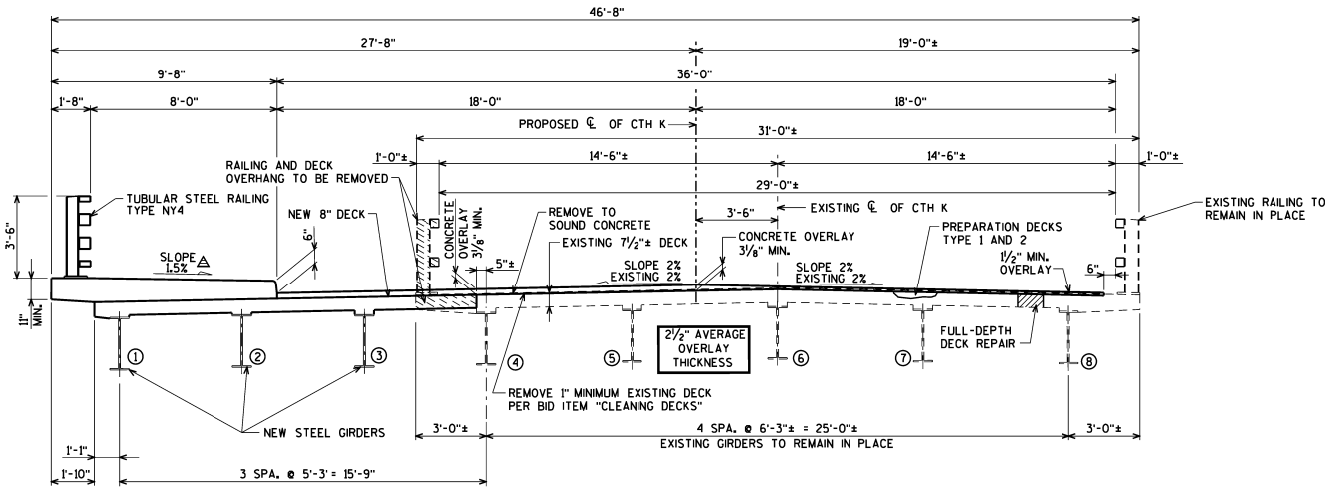
(NORMAL TO C.E. OF RIVER)

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-55-58".

⊙ BERM WIDTH TO TRANSITION FROM 4'-6" WIDE AT END OF EXISTING BRIDGE TO 2'-6" WIDE AT END OF PROPOSED WIDENING - TYP.

CONSULTANT CONTACT:
ARLEN BEAUCLETTE
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STRUCTURE B-55-58			
CTH K OVER WILLOW RIVER			
COUNTY	ST. CROIX	TOWNSHIP	CITY OF NEW RICHMOND
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	DESIGN CKD.	DRAWN BY	PLANS CKD.
GENERAL PLAN			SHEET 1 OF
I.D.			DATE:



TYPICAL SECTION THRU BRIDGE
(LOOKING EAST)

△ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING FACTOR:
OPERATING RATING FACTOR:
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) * KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY (SUPERSTRUCTURE)	f'_c	=	4,000	p.s.i.
(ALL OTHER)	f'_c	=	3,500	p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	f_y	=	60,000	p.s.i.
STRUCTURAL CARBON STEEL (ASTM A36)	f_y	=	36,000	p.s.i.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 12 1/4" DIA. x 0.375" CIP CONCRETE PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 55'-0".

PIERS TO BE SUPPORTED ON 14" DIA. x 0.375" CIP CONCRETE PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 240 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 55'-0".

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

A.A.D.T. = 3,000 (2021)
R.D.S. = 35 M.P.H.

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NO.	DATE	REVISION	BY
STRUCTURE B-55-58			
DRAWN BY		JLB	PLANS CKD.
TYPICAL SECTION AND DESIGN DATA			SHEET 2 OF

ORIGINAL PLANS PREPARED BY
AVRES 3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com