



Wisconsin Department of Transportation

Division of Transportation Systems Development

Bureau of Project Development
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January 6, 2020

NOTICE TO ALL CONTRACTORS:

Proposal #05: 5989-05-26, WISC 2018 139
City of Beloit, Powerhouse Riverwalk
Pleasant St. To S of Portland Ave
Non-Highway
Rock County

Letting of January 14, 2020

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
8	Utilities
30	Prestressed Girders Box Type 21-Inch, Item SPV.0090.02
34	Wall Modular Block Mechanically Stabilized Earth, Item SPV.0165.01

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
2	General Notes- Added the word "Gas" to Alliant Energy
7	Removal Plan-Removed "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" and linework from Preconstruction Plan Details; revised "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" to "Future Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" in Post Construction Plan Details; added Alliant Gas linework
9	Plan Details- Removed "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" and linework from Preconstruction Plan Details; Revised "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" to "Future Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" in Post Construction Plan Details
13	Permanent Signing & Pavement Markings- Revised "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" to "Future Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse"

18	Traffic Control Plan- Revised "Existing Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse" to "Future Drive, Parking Lot, Multi-use Path, Curb & Gutter for College Powerhouse"
98	Structure B-53-379- Revised Note 2 of Legend: Changed Second sentence from "A325 steel" to "A449 steel"

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

5989-05-26

January 6, 2020

Special Provisions

8. Utilities

*Delete the last sentence under section titled **City of Beloit - Water**:*

“Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.”

30. Prestressed Girders Box Type 21-Inch, Item SPV.0090.02

*Replace Table 1 under section title **B.2 Grout between Prestressed Concrete Box Girders (Shear Keys)** with the following:*

Table 1. Cementitious grout properties, requirements and test methods

Property		Requirement	Test Method
Strength	3 days	≥ 5000 psi	ASTM C1090/C1107
	7 days	> 6000 psi	
Slump/flow		Pourable/flowable	Demonstrate using procedure described below, or provide plastic consistency
Early age expansion at final set		Min: 0% Max: 4%	ASTM C827/C1107
Expansion of hardened grout		Min: 0.02% Max: 1%	ASTM C1090/C1107
Shrinkage		0% from max. expansion	ASTM C1090/C1107
Neat grout depth/thickness limit*		Min: 1.50 in. Max: 2.75 in.	Provide grout that can be placed “neat” in the minimum and maximum anticipated keyway openings.
Air content		8% +/- 1.5%	ASTM C173

34. Wall Modular Block Mechanically Stabilized Earth, Item SPV.0165.01

*Replace Section **B.3.4.1 Geogrids** with the following:*

B.3.4.1 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester. Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall supplier shall provide the nominal long-term design strength (T_{al}) and nominal long-term connection strength, T_{ac} as discussed below.

Nominal Long-Term Design Strength (T_{al})

The wall supplier shall supply the nominal long-term design strength (T_{al}) used in the design for each reinforcement layer and shall be determined by dividing the Ultimate Tensile Strength (T_{ult}) by the factors RF_{ID} , RF_{CR} , RF_D .

Hence,

$$T_{al} = \frac{T_{ult}}{RF_{ID} \times RF_{CR} \times RF_D}$$

where:

T_{ult} = Ultimate tensile strength of the reinforcement determined from wide width tensile tests (ASTM D6637) for geogrids based on the minimum average roll value (MARV) for the product.

RF_{ID} = Strength reduction factor to account for installation damage to the reinforcement. In no case shall RF_{ID} be less than 1.1.

RF_{CR} = Strength reduction factor to prevent long-term creep rupture of the reinforcement. In no case shall RF_{CR} be less than 1.2.

RF_D = Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation. In no case shall RF_D be less than 1.1.

Values for RF_{ID} , RF_{CR} , and RF_D shall be determined from product specific test results. Guidelines for determining RF_{ID} , RF_{CR} , and RF_D from product specific data are provided in FHWA Publication No. FHWA-NHI-10-024 and FHWA-NHI-10-025 "Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes".

Nominal Long-term Connection Strength T_{ac}

The nominal long-term connection strength, T_{ac} , shall be based on laboratory geogrid connection tests between wall facing and geogrids. T_{ac} shall be as given below

$$T_{ac} = \frac{T_{ult} * CR_{cr}}{RF_D}$$

where:

T_{ac} = Nominal long-term reinforcement facing connection strength per unit reinforcement width at a specified confining pressure.

T_{ult} = Ultimate tensile strength of the reinforcement for geogrids defined as the minimum average roll value (MARV) for the product.

CR_{cr} = Long term connection strength reduction factor to account for reduced ultimate strength resulting from connection.

RF_D = Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation.

T_{ac} shall be developed from the tests conducted by an independent laboratory on the same facing blocks and geogrids as proposed for the wall and shall cover a range of overburden pressures comparable to those anticipated in the proposed wall. The connection strength reduction factor CR_{cr} shall be determined according to long-term connection test as described in Appendix B of FHWA Publication No. FHWA-NHI 10-025 "Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes". CR_{cr} may also be obtained from the short term connection test meeting the requirements of NCMA test method SRWU-1 in Simac et al 1993 or ASTM D4884.

The contractor shall provide a manufacturer's certificate that the T_{ult} (MARV) of the supplied geogrid has been determined according to ASTM D4595 or ASTM D6637 as appropriate. Contractor shall also provide block to block and block to reinforcement connection test reports prepared and certified by an independent laboratory. Also provide calculations according to AASHTO LRFD, and using the results of laboratory tests, that the block-geogrid connections shall be capable of resisting 100% of the maximum tension load in the soil reinforcements at any level within the wall, for the design life of the wall system.

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

Revised: 2, 7, 9, 13, 18 and 98.

END OF ADDENDUM

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NGVD 29. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS EXCAVATION COMMON. THE LOCATION OF EBS SHALL BE DETERMINED BY THE ENGINEER. BREAKER RUN SHALL BE USED IN ALL EBS AREAS. THE EROSION CONTROL FEATURES ARE SHOWN ON THE PLAN AND ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. DISTURBED AREAS SHALL BE RESTORED AS DIRECTED BY THE ENGINEER. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER. DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. RESTORATION OF EXPOSED SLOPE AND DITCHES SHALL TAKE PLACE NOT MORE THAN 7 DAYS AFTER FINISHED GRADING IS COMPLETE.

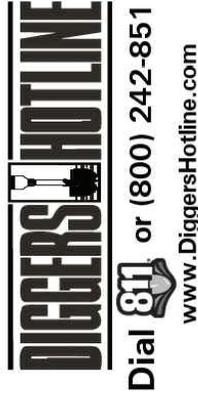
ORDER OF DETAIL SHEETS
GENERAL NOTES
PROPOSED TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
EROSION CONTROL
STORM SEWER
PERMANENT SIGNING/PAVEMENT MARKINGS
LIGHTING PLAN
TRAFFIC CONTROL
CONTROL POINT TIES

UTILITIES

ALLIANT ENERGY (ELECTRIC/GAS)
935 WEBB TOWNLINE ROAD
BELOIT, WI 53511
TELEPHONE: (608)364-6431
EMAIL: DEANCOFF@ALLIANTENERGY.COM
AT&T WISCONSIN
316 W. WASHINGTON AVENUE
MADISON, WI 53701
TELEPHONE: (608) 622-2079
EMAIL: CA2624@ATT.COM
CITY OF БЕЛОIT WATER
ATN: MIKE TINDER
2400 SPRINGBROOK COURT
BELOIT, WI 53511
TELEPHONE: (608) 364-5725
EMAIL: TINDERM@BELOITWI.GOV
CITY OF БЕЛОIT LIGHTING
ATN: JASON DUPUIS, P.E.
2400 SPRINGBROOK COURT
BELOIT, WI 53511
TELEPHONE: (608) 364-6735
EMAIL: DUPUISJ@BELOITWI.GOV

NOTE: UTILITIES NOT A MEMBER OF DIGGER'S HOTLINE.

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RUNOFF COEFFICIENT TABLE

Table with columns for Hydrologic Soil Group (A, B, C, D) and Slope Range (Percent). Rows include Land Use (Land Use, Row Crops, Median Strip-Turf, Side Slope-Turf) and Pavement (Asphalt, Concrete, Brick, Drives/Walks, Roofs, Gravel Roads/Shoulders).

TOTAL PROJECT AREA = 0.40 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.36 ACRES

ABBREVIATIONS

- AC ACRES
ASPH ASPHALT
AVG AVERAGE
ADT AVERAGE DAILY TRAFFIC
BND BENCHMARK
BL BENCHMARK
CN CENTERLINE OR CLASS
CC CENTER TO CENTER
COM COMMON
CON CONCRETE
CMP CORRUGATED METAL PIPE
CULV CULVERT PIPE
CORR CORRUGATED METAL PIPE
CPTH CERTIFIED SURVEY MAP
CSM COUNTY SURVEY MAP
CTH COUNTY TRUNK HIGHWAYS
C&G CURB & GUTTER
DHHV DESIGN HOURLY VOLUME
DIA DIAMETER
ELEV ELEVATION
EW ENDWALL
EQU EQUIVALENT
EXS EXISTING
EXC EXCAVATION
EBS EXCAVATION BELOW SUBGRADE
EST ESTIMATE
FF FACE TO FACE
FERT FERTILIZER
FE FIELD ENTRANCE
FG FISHED GRADE
FT FOOT
GV GAS VALVE
HE HIGHWAY EASEMENT
INVERT INVERT ELEVATION
INV INVERT

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: SHELLEY WARWICK
1000 WISCONSIN ROAD
FITCHBURG, WI 53711
TELEPHONE: (608) 444-2635
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DESIGN CONTACT

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CITY OF БЕЛОIT ENGINEERING

PUBLIC WORKS DIRECTOR
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DESIGN CONTACT

JEWELL ASSOCIATES ENGINEERS, INC.
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EMAIL: FRED.GRUBER@JEWELLASSOC.COM

BELOIT COLLEGE CONTACT

CHIEF OF STAFF
ATTN: DANIEL SCHOOFF
100 COLLEGE STREET
BELOIT, WI 53511
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DESIGN CONTACT

ANGUS-YOUNG ASSOCIATES, INC.
ATTN: JOE STADELMAN
555 S RIVER STREET
JANESVILLE, WI 53446
TELEPHONE: (608) 756-2336
EMAIL: JOES@ANGUSYOUNG.COM

PROJECT NO: 5989-05-26

HWY: NON HWY

COUNTY: ROCK

GENERAL NOTES

PLOT NAME :

PLOT SCALE :

SHEET 2

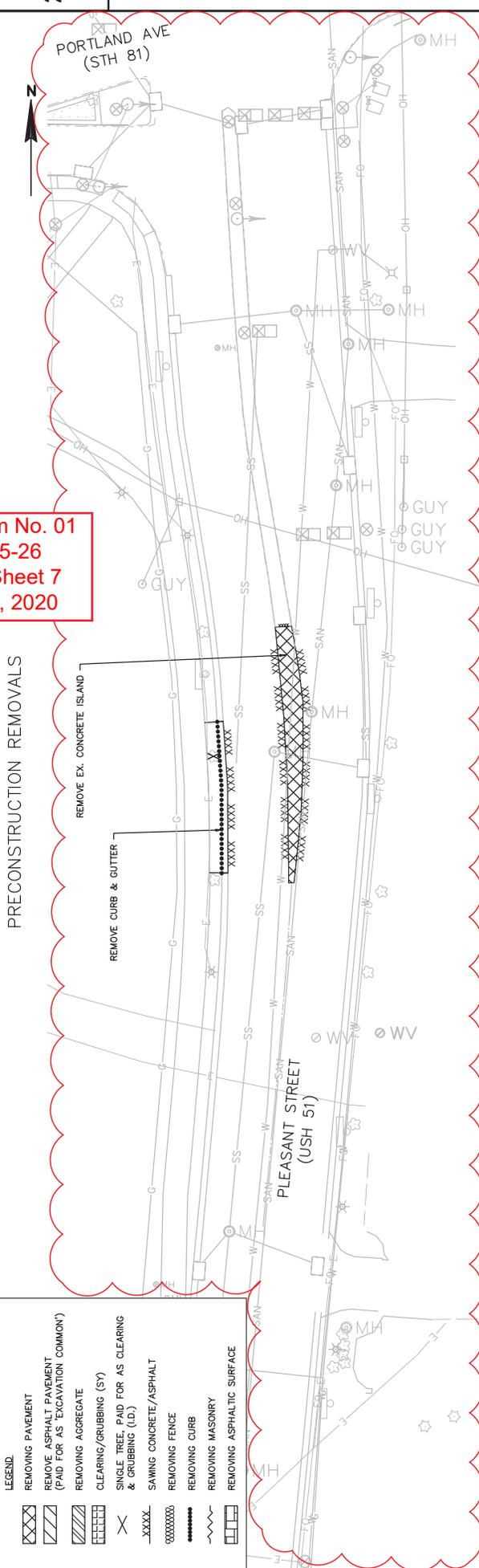
WISDOT/CADD SHEET 42

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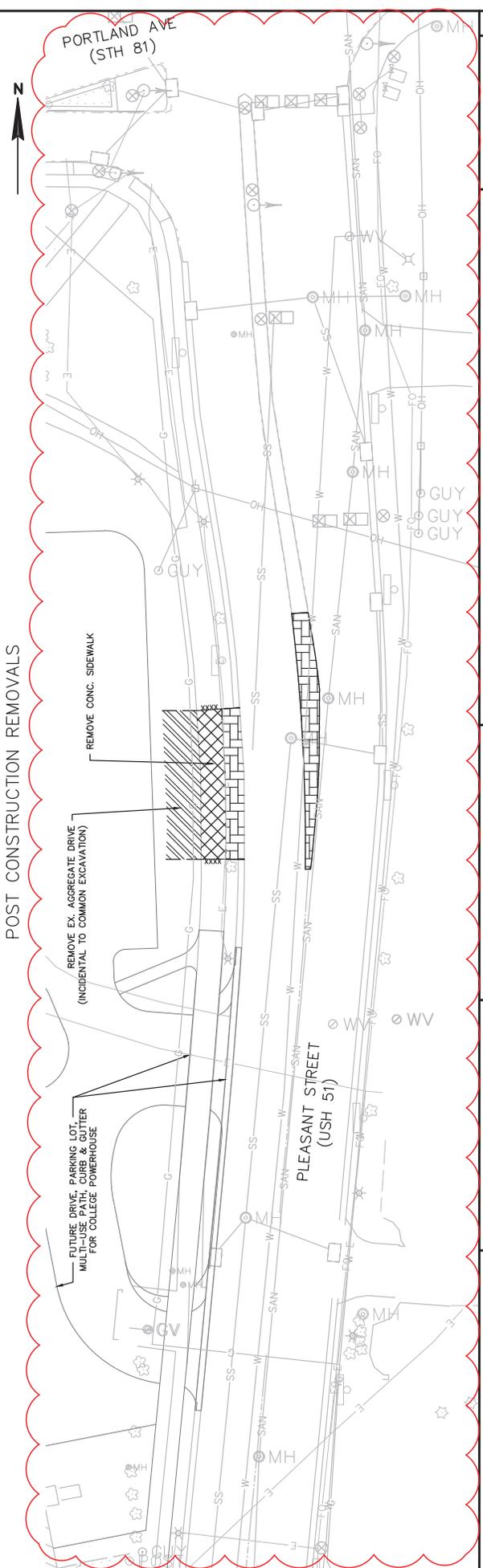
PRECONSTRUCTION REMOVALS

LEGEND

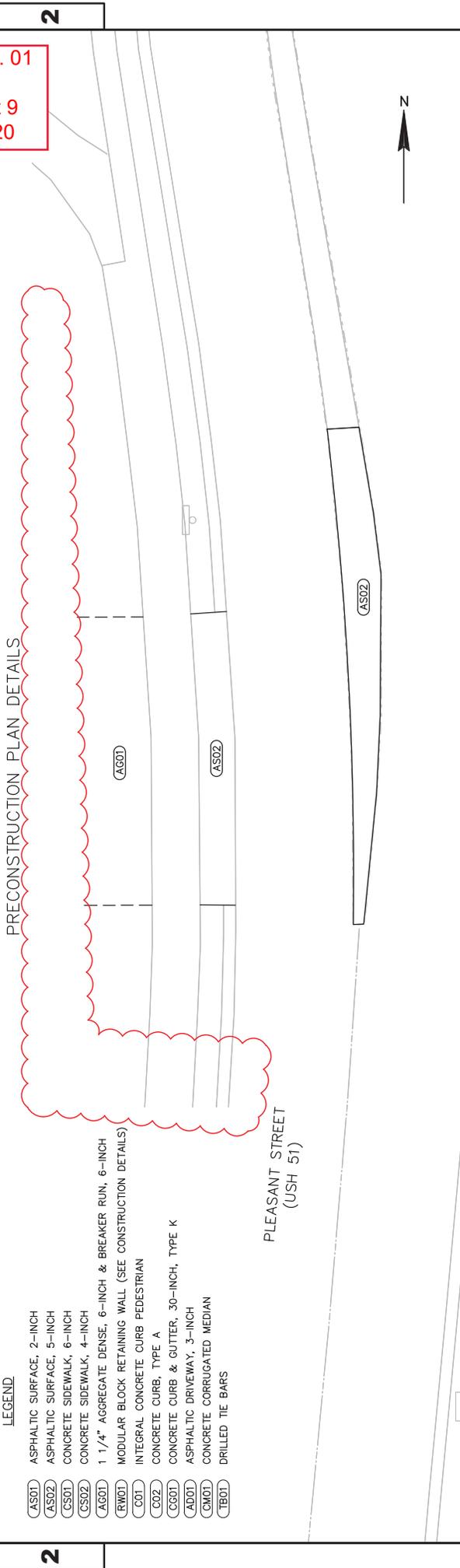
	REMOVING PAVEMENT
	REMOVE ASPHALT PAVEMENT (PAID FOR AS 'EXCAVATION COMMON')
	REMOVING AGGREGATE
	CLEARING/GRUBBING (SY)
	SINGLE TREE, PAID FOR AS CLEARING & GRUBBING (I.D.)
	SAWING CONCRETE/ASPHALT
	REMOVING FENCE
	REMOVING CURB
	REMOVING MASONRY
	REMOVING ASPHALTIC SURFACE



POST CONSTRUCTION REMOVALS

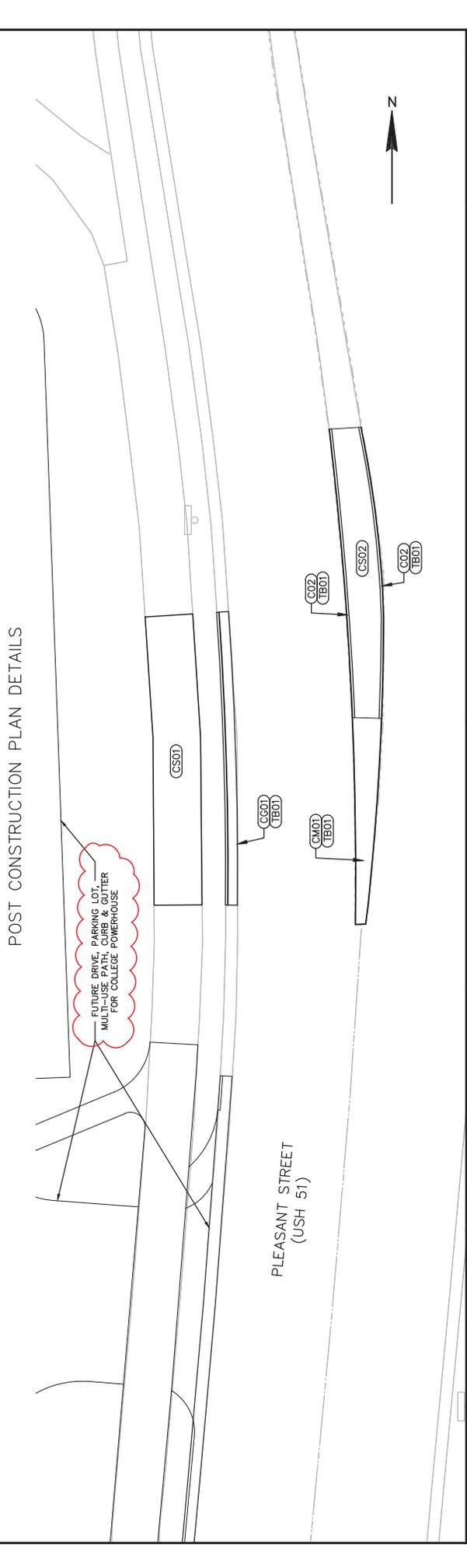


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LEGEND

- (AS01) ASPHALTIC SURFACE, 2-INCH
- (AS02) ASPHALTIC SURFACE, 5-INCH
- (CS01) CONCRETE SIDEWALK, 6-INCH
- (CS02) CONCRETE SIDEWALK, 4-INCH
- (AG01) 1 1/4" AGGREGATE DENSE, 6-INCH & BREAKER RUN, 6-INCH
- (RW01) MODULAR BLOCK RETAINING WALL (SEE CONSTRUCTION DETAILS)
- (C01) INTEGRAL CONCRETE CURB PEDESTRIAN
- (CG01) CONCRETE CURB, TYPE A
- (ADD1) CONCRETE CURB & GUTTER, 30-INCH, TYPE K
- (CM01) ASPHALTIC DRIVEWAY, 3-INCH
- (TB01) CONCRETE CORRUGATED MEDIAN
- (TB01) DRILLED TIE BARS

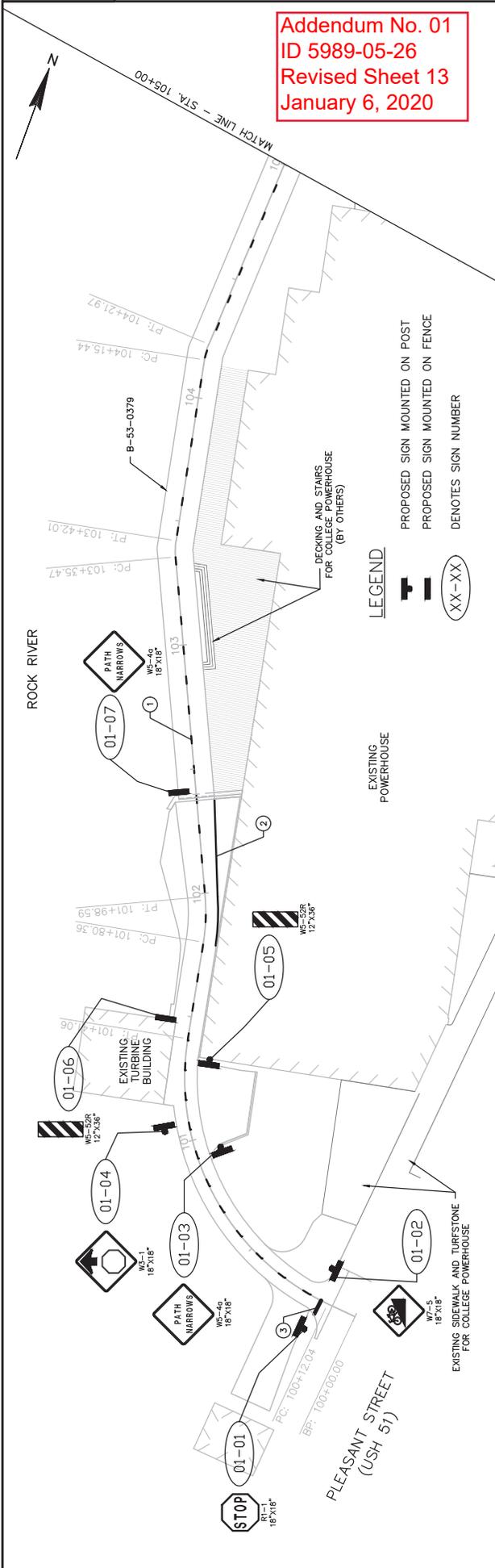


2

2

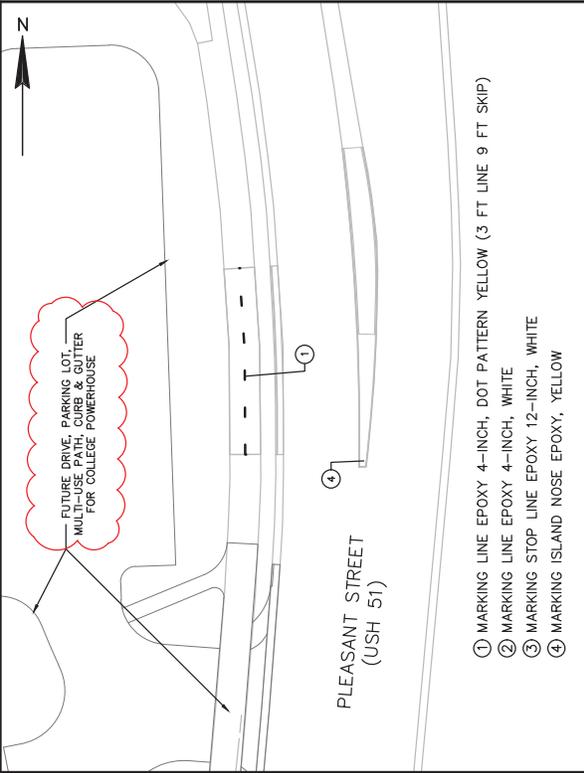


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LEGEND

- PROPOSED SIGN MOUNTED ON POST
- PROPOSED SIGN MOUNTED ON FENCE
- DENOTES SIGN NUMBER



- ① MARKING LINE EPOXY 4-INCH, DOT PATTERN YELLOW (3 FT LINE 9 FT SKIP)
- ② MARKING LINE EPOXY 4-INCH, WHITE
- ③ MARKING STOP LINE EPOXY 12-INCH, WHITE
- ④ MARKING ISLAND NOSE EPOXY, YELLOW

GENERAL NOTES:

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN PLANS.

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

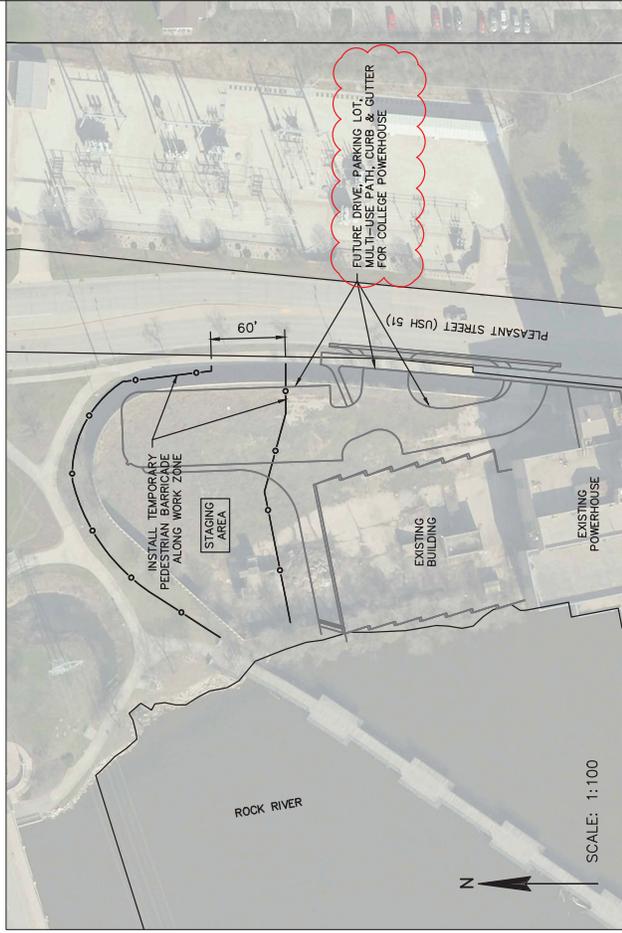
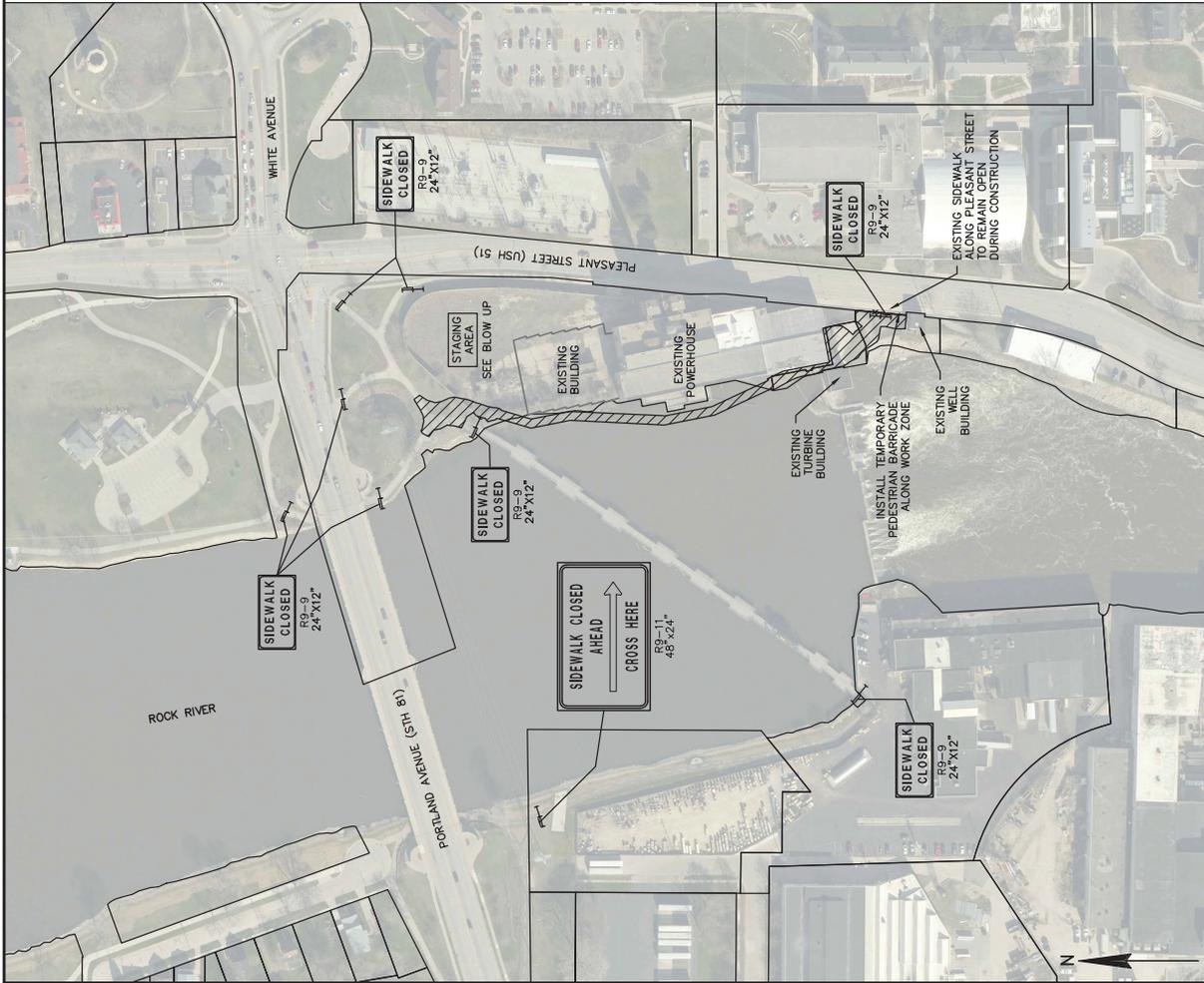
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
- TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
- TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS

LEGEND

- WORK AREA
- TYPE II BARRICADE WITH ATTACHED SIGN
- TYPE II BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED SIGNS ARE NOT NEEDED FOR THE ENTIRE DURATION OF THE PROJECT. PLACE SIDEWALK CLOSED SIGNS WHEN CONSTRUCTION ACTIVITIES ARE OCCURRING ON THE EXISTING PATHWAY.

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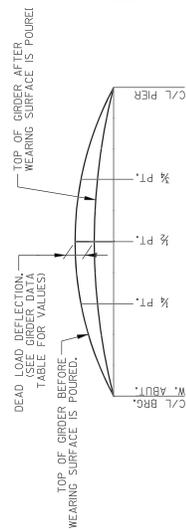


SCALE: 1:100

GIRDER DATA

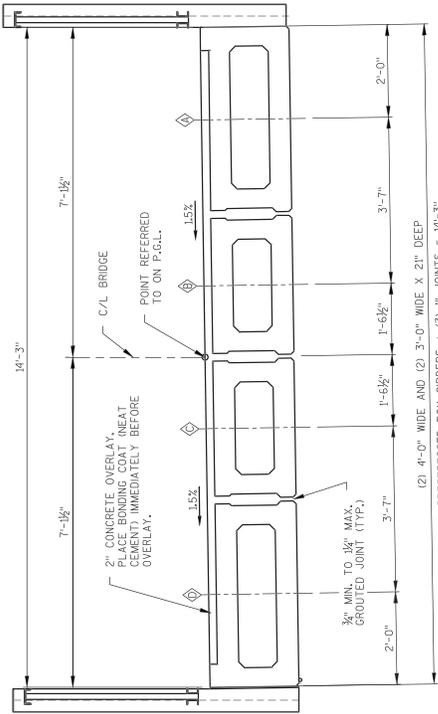
SPAN	GIRDER NO.	WIDTH (FEET)	LENGTH	TOTAL STRANDS	TOTAL INITIAL FORCE (KIPS)	DEAD LOAD (DEE) (INCHES)	RESIDUAL FORCE (KIPS)	"D" (INCHES)	"E" (INCHES)	"F" (INCHES)	"G" (INCHES)
1	D	4'-0"	50'-3 3/4"	12	372.0	0	0	7 3/4	39	12	39'-0"
1	C	3'-0"	50'-3 3/4"	10	310.0	0	0	7 3/4	39	12	39'-0"
1	B	3'-0"	50'-3 3/4"	10	310.0	0	0	7 3/4	39	12	39'-0"
1	A	4'-0"	50'-3 3/4"	12	372.0	0	0	7 3/4	39	12	39'-0"
2	D	5'-0"	50'-0 7/8"	12	372.0	0	0	7 3/4	39	12	39'-0"
2	C	3'-0"	49'-7 3/4"	10	310.0	0	0	11	38	12	38'-0"
2	B	3'-0"	49'-3 3/4"	10	310.0	0	0	8 3/4	38	12	38'-0"
2	A	4'-0"	48'-10"	12	372.0	0	0	6 1/2	38	12	38'-0"
3	D	4'-0"	40'-0 7/8"	10	310.0	0	0	7 1/2	29	12	29'-0"
3	C	3'-0"	39'-7 3/4"	8	248.0	0	0	11	28	12	28'-0"
3	B	3'-0"	39'-3 3/4"	8	248.0	0	0	8 3/4	28	12	28'-0"
3	A	4'-0"	38'-10"	10	310.0	0	0	6 1/2	28	12	28'-0"
4	D	4'-0"	40'-0 7/8"	10	310.0	0	0	7 1/2	29	12	29'-0"
4	C	3'-0"	39'-7 3/4"	8	248.0	0	0	11	28	12	28'-0"
4	B	3'-0"	39'-3 3/4"	8	248.0	0	0	8 3/4	28	12	28'-0"
4	A	4'-0"	38'-10"	10	310.0	0	0	6 1/2	28	12	28'-0"
5	D	4'-0"	51'-1 1/8"	12	372.0	0	0	8 1/2	40	12	40'-0"
5	C	3'-0"	50'-8 3/4"	10	310.0	0	0	11 1/4	39	12	39'-0"
5	B	3'-0"	50'-3 3/4"	10	310.0	0	0	9	39	12	39'-0"
5	A	4'-0"	49'-10 1/4"	12	372.0	0	0	6 3/4	39	12	39'-0"
6	D	4'-0"	50'-6"	12	372.0	0	0	9	39	12	39'-0"
6	C	3'-0"	50'-6"	10	310.0	0	0	9	39	12	39'-0"
6	B	3'-0"	50'-6"	10	310.0	0	0	9	39	12	39'-0"
6	A	4'-0"	50'-6"	12	372.0	0	0	9 1/2	38	12	38'-0"
7	D	4'-0"	49'-10 3/8"	12	372.0	0	0	9	39	12	39'-0"
7	C	3'-0"	50'-3 3/4"	10	310.0	0	0	6 3/4	39	12	39'-0"
7	B	3'-0"	50'-8 3/4"	10	310.0	0	0	9	39	12	39'-0"
7	A	4'-0"	51'-1 1/8"	12	372.0	0	0	11 1/4	39	12	39'-0"
8	D	4'-0"	31'-0"	10	310.0	0	0	11	19	12	19'-0"
8	C	3'-0"	31'-6"	8	248.0	0	0	7 1/2	20	12	20'-0"
8	B	3'-0"	31'-10 1/2"	8	248.0	0	0	10 1/2	20	12	20'-0"
8	A	4'-0"	32'-3 3/4"	10	310.0	0	0	6 3/4	21	12	21'-0"
9	D	4'-0"	32'-11"	10	310.0	0	0	8 3/4	22	12	22'-0"
9	C	3'-0"	32'-0 3/4"	8	248.0	0	0	8 1/2	21	12	21'-0"
9	B	3'-0"	31'-3 3/4"	8	248.0	0	0	10	20	12	20'-0"
9	A	4'-0"	30'-5 3/4"	10	310.0	0	0	11 1/2	19	12	19'-0"
10	D	4'-0"	53'-10 1/4"	12	372.0	0	0	8 1/2	43	12	43'-0"
10	C	3'-0"	53'-0 3/4"	10	310.0	0	0	8 1/4	42	12	42'-0"
10	B	3'-0"	52'-3 3/4"	10	310.0	0	0	9 1/4	41	12	41'-0"
10	A	4'-0"	51'-4 3/8"	12	372.0	0	0	11 3/4	40	12	40'-0"

NOTES: THE FOLLOWING DATA APPLIES TO ALL GIRDERS. CONCRETE STRENGTH $f'_c = 4,250$ PSI
3,000 PSI CONCRETE RELEASE STRENGTH $f_{cr} = 4,250$ PSI
SEE SHEET 12 FOR STIRRUP SPACING DATA LOCATION FOR "D", "E", "F", "G".



DEAD LOAD DEFLECTION DIAGRAM

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Revised Sheet 98
January 6, 2020



TYPICAL CROSS SECTION
LOOKING NORTH

(2) 4'-0" WIDE AND (2) 3'-0" WIDE X 21" DEEP
PRESTRESSED BOX GIRDERS * (3) 1" JOINTS = 14'-3"

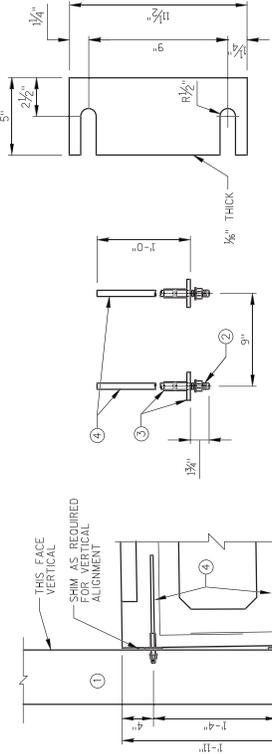
◇ INDICATES GIRDER LINE

GENERAL NOTES

STRAIGHT LOOP FERRULE INSERTS OR EQUIVALENT FERRULE LINE FERRULES PER POSTS AND LOCATIONS. SEE SHEET 19 FOR DETAILS AND LOCATIONS.

FILL BOLT SLOTT OPENINGS IN POST SHIMS AND JOINTS WITH NON-STAINING BLACK NON-BITUMINOUS JOINT SEALER.

STEEL POST SHIMS MAY BE USED AT POSTS WHERE REOD. FOR VERTICAL ALIGNMENT.



POST SHIM DETAIL
(1/4 PER POST)

ANCHOR DETAIL - PLAN
ANCHORS MAY BE FABRICATED IN A CASE IF OPTED BY THE MFGOR.

RAIL POST VERTICAL ADJUSTMENT PLATE
(1 PER POST)

- LEGEND**
- ① W&S POST. SEE SHEET 19 FOR RAILING DETAILS. PLACE POSTS VERTICAL.
 - ② ~~1/4" DIA. SLID WITH NUT & WASHER. FOUR REOD. PER POST.~~ (449 STEEL)*
 - ③ THREADED BAR COUPLER FOR 1/4" STUD. ACCEPTABLE PRODUCTS ARE WILLIAMS REBAR FLANGE COUPLERS BY WILLIAMS FORM ENGINEERING CORP. OR DOWEL BAR REPLACEMENTS BY DAYTON SUPERIOR. FOUR REOD PER POST. EXPOSED FLANGE TO BE GALVANIZED.**
 - ④ ANCHOR BAR 1/2" DIA. THREADED REINFORCEMENT BAR GRADE 60. FOUR REOD PER POST.**
- * SHALL BE MECHANICALLY GALVANIZED OR ELECTRO-PLATED.
** NOT GALVANIZED OR ELECTRO-PLATED.

SECTION THRU RAILING



William C. Dehn
12/20/19

NO.	DATE	REVISION	BY
1	12/19/19	CHANGED STEEL TYPE TO ASTM A449	TR

STRUCTURE B-53-379

PRESTRESSED CONCRETE BOX GIRDER TABLE

