NOTES:

1. THIS PROJECT INCLUDES WORK WITHIN BNSF RIGHT-OF-WAY AND ON PARK PROPERTY TO CONSTRUCT A RAILROAD BRIDGE OVER LUNDS GULCH CREEK. WORK TO BE PERFORMED IS SHOWN ON THE "MEADOWDALE BEACH RAILROAD BRIDGE - CIVIL PLANS" AND THE "MEADOWDALE BEACH RAILROAD BRIDGE - STRUCTURAL PLANS" PREPARED BY HANSON PROFESSIONAL SERVICES AND ON THE "MEADOWDALE BEACH PARK AND ESTUARY DESIGN PLANS" BY ANCHOR QEA.
2. ALL WORK SHOWN WITHIN THIS SET OF PLANS SHALL BE RESPONSIBILITY OF BNSF OR THEIR DESIGNATED CONTRACTOR UNLESS OTHERWISE SPECIFIED; AND ALL WORK SHOWN ON THE "MEADOWDAE BEACH RAILROAD BRIDGE – CIVIL PLANS" AND ON THE "MEADOWDALE BEACH PARK AND ESTUARY DESIGN PLANS" SHALL BE ACCOMPLISHED BY THE CONTRACTOR UNDER CONTRACT WITH SNOHOMISH COUNTY UNLESS OTHERWISE SPECIFIED.
3. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL DETAIL ON COORDINATION OF WORK.

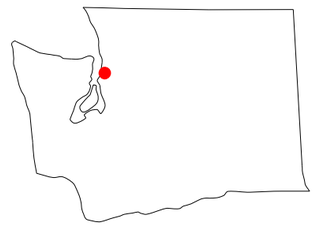
BNSF RAILWAY

Snohomish County Parks and Recreation

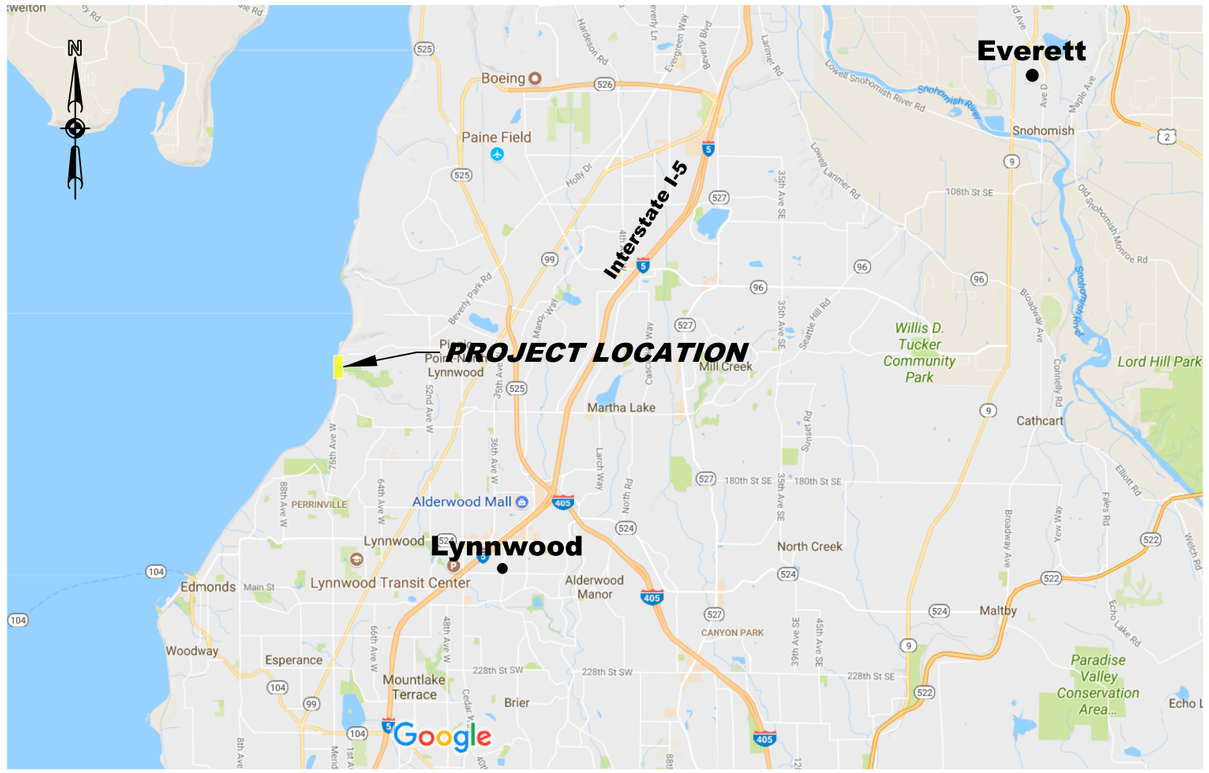
BNSF NORTHWEST DIVISION

MEADOWDALE BEACH PARK RAILROAD BRIDGE

WASHINGTON



PROJECT LOCATION



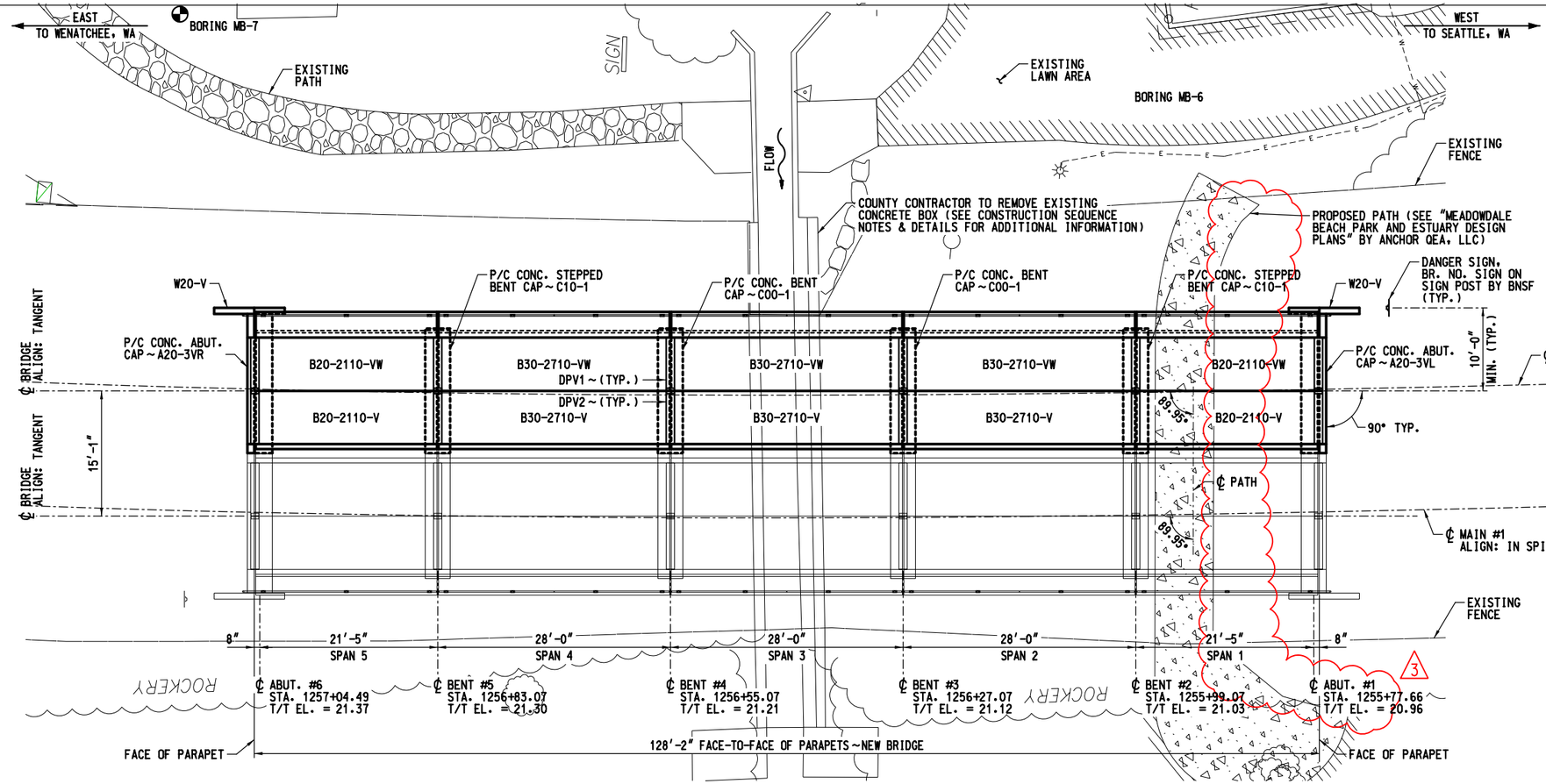
VICINITY MAP

NOT TO SCALE

SCENIC SUBDIVISION
LINE SEGMENT 50
BRIDGE 21.8A AND BRIDGE 21.8B
STRUCTURAL PLANS

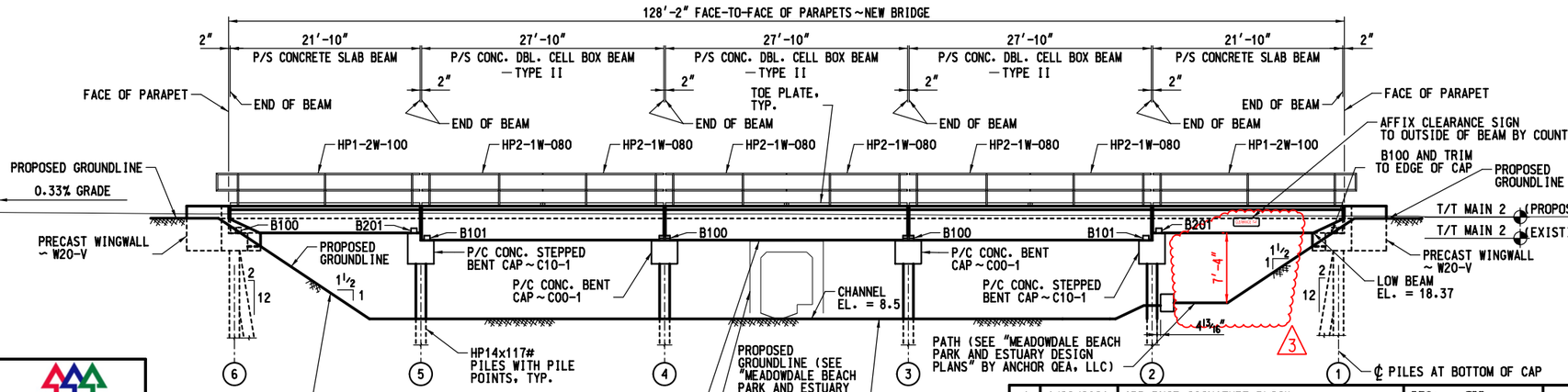
AS BUILT

DATE: JUNE 21, 2023



PLAN

NOTE: FILL GAP BETWEEN ENDS OF BEAMS WITH 8 ~ 1/2" x 28" x 6'-4" PLIES OF PREMOLDED JOINT FILLER.
FILL GAP BETWEEN END OF SLABS AND ENDS OF BEAMS WITH 8 ~ 1/2" x 18" x 6'-10" PLIES OF PREMOLDED JOINT FILLER.
FILL GAP BEWTEEN END OF SLABS AND FACE OF PARAPET WALL WITH 8 ~ 1/2" x 18" x 6'-10" PLIES OF PREMOLDED JOINT FILLER



PROTECT SLOPES UNDER BRIDGE WITH ROCK (SEE "MEADOWDALE BEACH RAILROAD BRIDGE - TRACK/CIVIL PLANS FOR DETAILS)

BNSF TO REMOVE THE TOP PORTION OF THE EXISTING CONCRETE BOX (SEE CONSTRUCTION SEQUENCE NOTES & DETAILS FOR ADDITIONAL INFORMATION)

COUNTY CONTRACTOR TO REMOVE THE REMAINDER OF THE EXISTING CONCRETE BOX (SEE CONSTRUCTION SEQUENCE NOTES & DETAILS FOR ADDITIONAL INFORMATION)

PROPOSED GROUNDLINE (SEE "MEADOWDALE BEACH PARK AND ESTUARY DESIGN PLANS" BY ANCHOR QEA, LLC)

ELEVATION

LOOKING RY SOUTH

NOTE: STATIONS ARE BASED ON MAIN #2

LIST OF DRAWINGS - BR. 21.80A

PLAN NO.	TITLE
0050-0021.800-001	GENERAL PLAN & ELEVATION
0050-0021.800-002	TYPICAL SECTIONS & PILE LAYOUT PLAN
0050-0021.800-003	CONSTRUCTION SEQUENCE NOTES & DETAILS
0050-0021.800-004	CONSTRUCTION SEQUENCE STAGING SECTIONS I, II & III
0050-0021.800-005	CONSTRUCTION SEQUENCE STAGING SECTIONS IV & V
0050-0021.800-006	CONSTRUCTION SEQUENCE PLAN - STAGE I, II & III
0050-0021.800-007	CONSTRUCTION SEQUENCE PLAN - STAGE IV
0050-0021.800-008	BILL OF MATERIAL
0050-0021.800-009	DRAINAGE SYSTEM
0050-0021.800-010	BORING LOGS

REFERENCES

NO.	PLAN NO.	SHEET NO.	DESCRIPTION
1	X	X	JUNE 1, 2016 BNSF STANDARD BRIDGE & COMPONENT PLANS

TABLE OF EST. LIFTING WEIGHTS

ITEM	MARK NO.	ESTIMATED WEIGHT (LBS)
PRECAST P/S CONC. DBL. CELL BOX BEAM - TYPE II	B30-2710-VW	48,150
PRECAST P/S CONC. DBL. CELL BOX BEAM - TYPE II	B30-2710-V	43,420
PRECAST P/S CONC. SLAB BEAM	B20-2110-VW	46,280
PRECAST P/S CONC. SLAB BEAM	B20-2110-V	42,570
PRECAST CONC. ABUTMENT CAP	A20-3VR	21,510
PRECAST CONC. ABUTMENT CAP	A20-3VL	21,510
PRECAST CONC. BENT CAP	C00-1	20,060
PRECAST CONC. STEPPED BENT CAP	C10-1	22,820
PRECAST CONC. WINGWALL	W20-V	4,140

TABLE OF ELEVATIONS

LOCATION	MAIN #2 TOP OF RAIL	TOP/CAP	PILE CUTOFF	T/T TO PILE CUTOFF MAIN #2
ABUT. 1	21.32	18.37	16.31	5'-0"
BENT 2	21.76	18.40/17.58	14.84	6'-5 1/8"
BENT 3	21.85	17.56	14.83	6'-4 1/2"
BENT 4	21.92	17.56	14.84	6'-3 1/2"
BENT 5	21.97	17.59/18.41	14.85	6'-2 1/8"
ABUT. 6	21.98	18.45	16.38	4'-7 3/4"

2 FOR FINAL PILE LENGTH BELOW CUTOFF, REFER TO SHANNON & WILSON REPORT "BNSF BRIDGE NUMBER 21.808 PILE DRIVING SUMMARY, MEADOWDALE BEACH PARK AND ESTUARY RESTORATION PROJECT, EDMONDS, WASHINGTON" DATED JULY 15, 2022.

TOP OF RAIL ELEVATION PROVIDED FOR MAIN #2 IS THE LOWER INSIDE RAIL ALONG MAIN TRACK 2 - CLOSEST TO PARK SIDE. LAST SURVEY DATA PROVIDED BY DHA SURVEYORS ON OCTOBER 17, 2022.

ADJACENT WORK

WORK THESE SHEETS WITH SHEETS FOR BR. 21.80B

LEGEND:

T/T = TOP OF TIE
RY = RAILWAY
B.S. = BOTH SIDES

DESIGN DATA:

2018 A.R.E.M.A. DESIGN SPECIFICATIONS
LOADING: COOPER E 80 W/ DIESEL IMPACT

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS-BUILT PLAN NOTES
3	6/12/2023	SHEETPILE WALL REMOVED. RAISED CLEARANCE

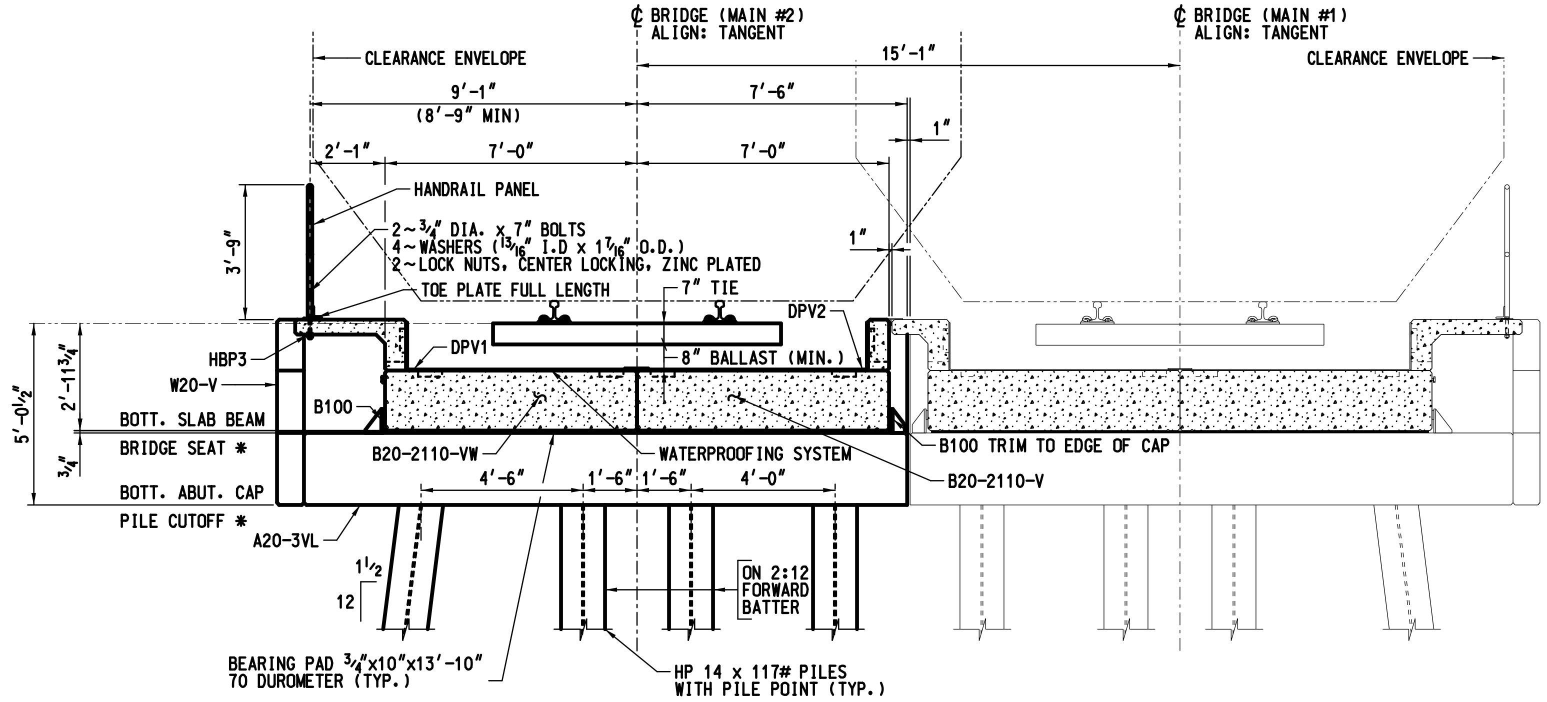
DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
GENERAL PLAN & ELEVATION

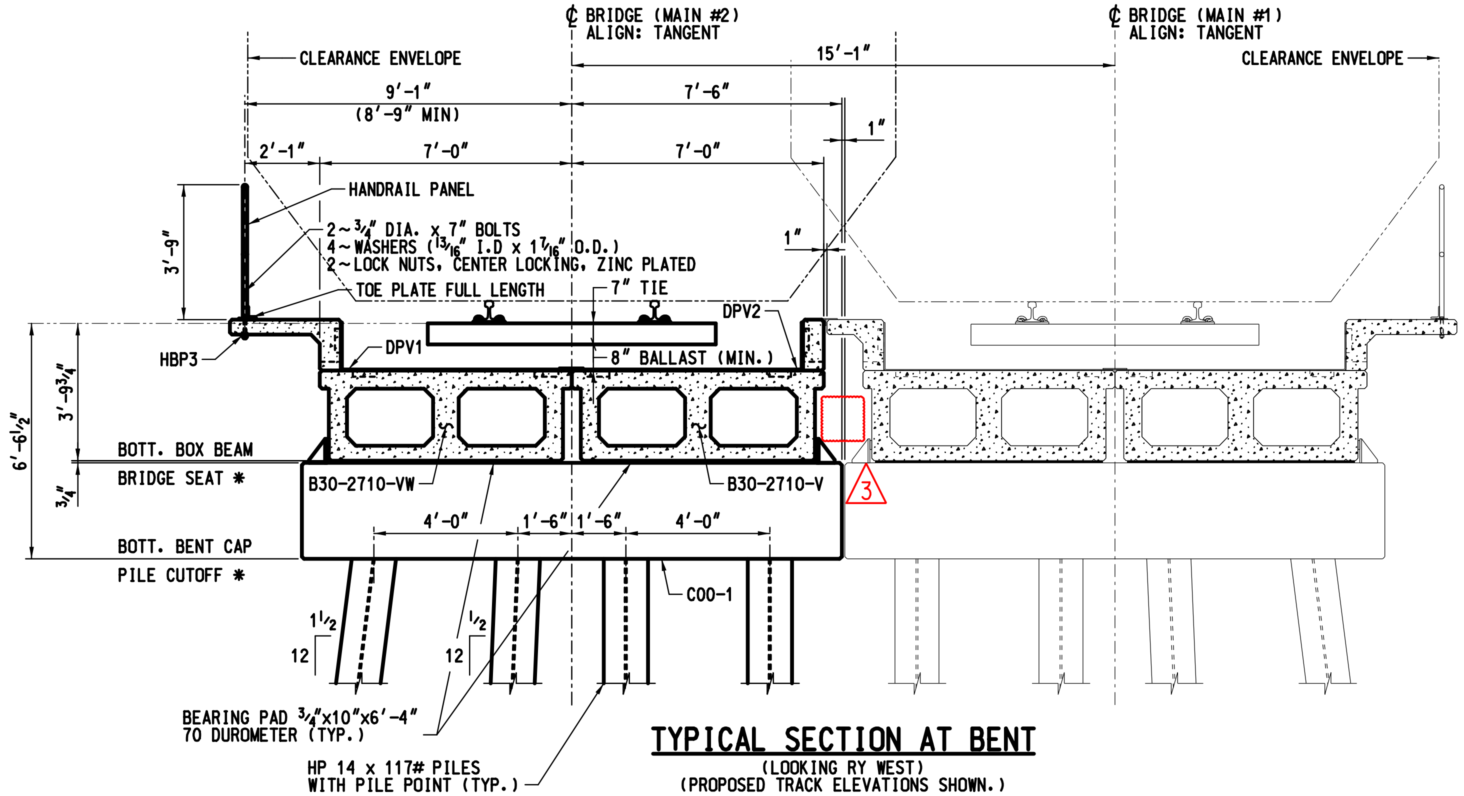
PLAN NO: 0050-0021.800-001 SHEET: 01 OF 10

File Location: I:\Apps\14\D0660\CAD\Struct\Sheet\21800001.dgn
Date Printed: 6/20/2023 Time Printed: 12:14:59 PM



TYPICAL SECTION AT ABUTMENT

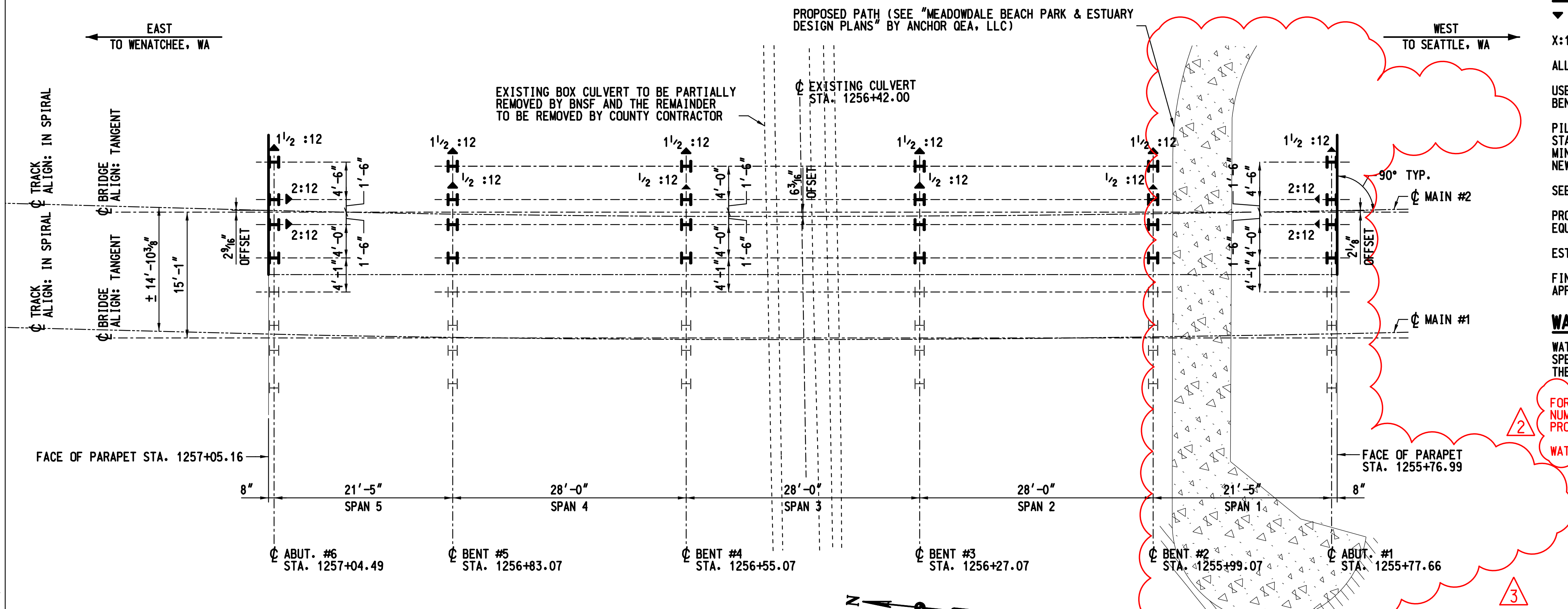
(WEST ABUTMENT SHOWN, EAST ABUTMENT OPPOSITE HAND)
(PROPOSED TRACK ELEVATIONS SHOWN.)



TYPICAL SECTION AT BENT

(LOOKING RY WEST)
(PROPOSED TRACK ELEVATIONS SHOWN.)

* SEE ELEVATION TABLE ON SHEET 1 FOR ELEVATIONS.



PLAN

NOTES:

▼ - INDICATES DIRECTION OF BATTER.

X:12 - INDICATES AMOUNT OF BATTER

ALL DIMENSIONS ARE GIVEN AT BOTTOM OF PRECAST CAP.

USE WELD METAL TO WRITE THE DATE AND AVERAGE PILE DEPTH IN 3 INCH TALL LETTERS ON EACH BENT.

PILES SHALL MEET THE MATERIAL REQUIREMENTS OF AND SHALL BE DRIVEN IN ACCORDANCE WITH BNSF STANDARD SPECIFICATIONS. HP14X117# PILES SHALL BE DRIVEN TO REFUSAL, IF POSSIBLE, OR TO A MINIMUM ULTIMATE RESISTANCE OF 250 TONS AS DETERMINED BY THE MODIFIED ENGINEERING NEWS-RECORD FORMULA AS PER THE BNSF ENGINEERING INSTRUCTION, 17.3.4.

SEE PROJECT GEOTECHNICAL REPORT BY SHANNON & WILSON INC. DATED FEBRUARY 16, 2018

PROVIDE PILE POINTS FOR PILES - MODEL VS314-117 BY VERSA STEEL INC., PORTLAND, OR OR EQUAL.

ESTIMATED PILE LENGTH BELOW CUTOFF = 112FT

FINAL ELEVATION TO BE DETERMINED FROM BORING LOG INFORMATION AND PILE DRIVING EQUIPMENT APPROVED BY THE ENGINEER.

WATERPROOFING:

WATERPROOFING SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED PER BNSF STANDARD SPECIFICATION SECTION 04800 AND AREMA CHAPTER 8, PART 29. CURB DRAINS TO BE CONNECTED TO THE DRAINAGE SYSTEM MUST REMAIN OPEN.

2 FOR FINAL PILE LENGTH BELOW CUTOFF, REFER TO SHANNON & WILSON REPORT "BNSF BRIDGE NUMBER 21.808 PILE DRIVING SUMMARY, MEADOWDALE BEACH PARK AND ESTUARY RESTORATION PROJECT, EDMONDS, WASHINGTON" DATED JULY 15, 2022.

WATERPROOFING SYSTEM WAS NOT INSTALLED ON ANY BRIDGE OF THE PROJECT.

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS-BUILT PLAN NOTES
3	6/12/2023	SHEETPILE WALL & DRAINAGE SYSTEM REMOVED

DES:	TDP
DRAWN:	CDP
CHECK:	MAF
DATE:	06/20/2023
PLAN:	000335554
LINE SEG:	0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
TYPICAL SECTIONS & PILE LAYOUT PLAN
PLAN NO: 0050-0021.800-002
SHEET: 02 OF 10

Date Printed: 6/20/2023 Time Printed: 12:15:03 PM

SUGGESTED CONSTRUCTION SEQUENCE

PRIOR TO STAGE I, BNSF TO RAISE MAIN #2 ELEVATION TO MATCH MAIN #1

STAGE I
1. BNSF TO DRIVE H-PILE AT ALL LOCATIONS. CUT OFF BELOW TOP OF TIE. ADJUST TRACK TIES WHERE NEEDED. (SEE PILE LAYOUT PLAN)

STAGE II
1. COUNTY CONTRACTOR TO PROVIDE TEMPORARY SOIL RETENTION SYSTEM BETWEEN MAIN TRACK #1 AND MAIN TRACK #2 (SEE THIS SHEET)

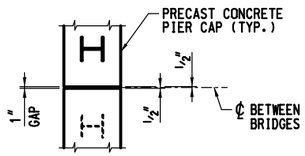
STAGE III
1. WITH MAIN #2 CLOSED: BNSF TO EXCAVATE AND CUT H-PILE TO CORRECT ELEVATION AT ABUTMENTS AND PIERS.
2. BNSF TO REMOVE EXISTING CONCRETE BOX CULVERT AS REQUIRED.
3. BNSF TO PLACE AND WELD PRECAST ABUTMENT & PIER CAPS.
4. BNSF TO PLACE CONTROLLED LOW-STRENGTH MATERIAL AT ABUTMENTS.
5. BNSF TO EXCAVATE BETWEEN FOUNDATION ELEMENTS AS REQUIRED TO INSTALL SUPERSTRUCTURE.
6. BNSF TO BACKFILL ABUTMENT CAPS.
7. BNSF TO SET BEARING PADS AND INSTALL SUPERSTRUCTURE.
8. BNSF TO INSTALL TRACKS ON MAIN #2 AND OPEN TO RAIL TRAFFIC.

* REPEAT STAGES I - III AS NECESSARY BY BNSF TO CONSTRUCT THE SECOUND RAILROAD BRIDGE.

STAGES IVa AND IVb- SAME AS III WITH CLOSURE WINDOW ON MAIN TRACK #1.

1. TEMPORARY SOIL RETENTION SYSTEM SHALL BE REMOVED BY THE COUNTY CONTRACTOR (LOCATIONS OF INTERFERENCE WITH STRUCTURE INSTALLATION) AT ANY TIME AFTER BNSF'S EXCAVATION FOR THE SUPERSTRUCTURE (SEE SUGGESTED CONSTRUCTION SEQUENCING SHEETS FOR FURTHER DETAILS AND NOTE 3 BELOW).

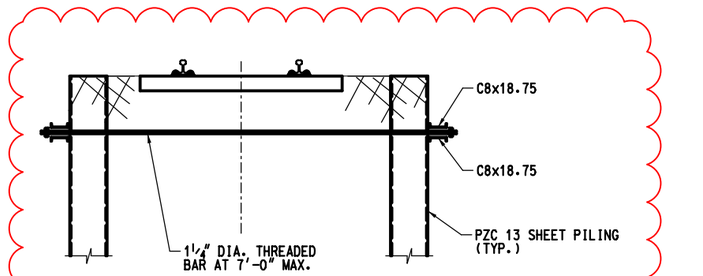
STAGE V
1. COUNTY CONTRACTOR EXCAVATE TO REQUIRED ELEVATIONS FOR STREAM RESTORATION.
2. COUNTY CONTRACTOR COMPLETELY REMOVE REMAINING PORTIONS OF CULVERT.
3. COUNTY CONTRACTOR CONSTRUCT NEW WALK PATH.
4. COUNTY CONTRACTOR CONSTRUCT BRIDGE DRAINAGE SYSTEM.



PLAN - PIER CAPS

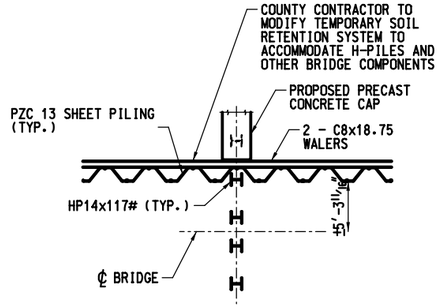
DURING STAGES II AND/OR III, COUNTY CONTRACTOR TO PARTIALLY INSTALL SHEET-PILE WALL UNDER THE PROPOSED BRIDGE UP TO EITHER SIDE OF THE TEMPORARY SOIL RETENTION SYSTEM (SEE "MEADOWDALE BEACH RAILROAD BRIDGE - TRACK/CIVIL PLANS" FOR DETAILS).

COUNTY CONTRACTOR TO COORDINATE WITH BNSF TO CONNECT AND COMPLETE THE SHEET-PILE WALL PRIOR TO BNSF PLACING BEAMS AND COUNTY CONTRACTOR COMPLETELY REMOVING THE TEMPORARY SOIL RETENTION SYSTEM.



VIEW B-B
TYPICAL AT TIEBACKS

2



VIEW A-A

BNSF REQUIREMENTS FOR COUNTY CONTRACTOR

NOTES

1. CONTRACTOR SHALL NOTE DATES FOR BNSF TO MOVE TIES IN 3 WEEK PLANNING SCHEDULES TO COORDINATE WORK WITH BNSF FORCES
2. DURING CLOSURE WINDOW, THE MOVEMENT AND LOCATION OF PERSONAL AND EQUIPMENT SHALL BE RESTRICTED DURING PASSAGE OF TRAINS ON ADJACENT TRACKS. THE CONTRACTOR SHALL COORDINATE WITH BNSF REPRESENTATIVE.
3. CONTRACTOR SCHEDULE MUST INCLUDE TIME FOR BNSF FORCES TO MODIFY TIES AND/OR RAIL AS NEEDED.
4. STAGED CLOSURE WINDOWS NEEDED BY THE COUNTY CONTRACTOR SHALL BE COORDINATED WITH BNSF A MINIMUM OF 60 DAYS AHEAD OF WHEN REQUIRED.
5. COUNTY CONTRACTOR TO REFER TO THE EXHIBIT C AND C-1 IN THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FROM BNSF.

TEMPORARY SOIL RETENTION SYSTEM NOTES

1. THE COUNTY CONTRACTOR MUST COORDINATE WITH THE BNSF REPRESENTATIVE TO WORK AROUND THE TRAIN SCHEDULE TO MINIMIZE THE IMPACT ON TRAIN OPERATIONS.
2. FOR ADDITIONAL SUGGESTED CONSTRUCTION SEQUENCE AND DETAILS, SEE SHEETS 04 TO 07.
3. MATS OR OTHER MEANS OF PROTECTION MUST BE PROVIDED TO PROTECT RAILS AND BALLAST FROM DAMAGE DUE TO EQUIPMENT OR CONSTRUCTION OPERATIONS. COST INCLUDED IN TEMPORARY CROSSING. DETAILS SHALL BE SUBMITTED TO BNSF FOR REVIEW AND APPROVAL.
4. THE COUNTY CONTRACTOR SHALL INSTALL THE TEMPORARY SOIL RETENTION SYSTEM IN XX (X) HOUR CLOSURE WINDOWS. COUNTY CONTRACTOR SHALL COORDINATE WITH BNSF ON MOVING TIES TO INSTALL PILES AND SHORING. THE XX (X) HOUR CLOSURE WINDOW SHALL INCLUDED TIME FOR BNSF FORCES TO MAKE MODIFICATIONS TO TIES AND/OR RAIL AS NEEDED TO COMPLETE WORK AND PRIOR TO RESTORING TRAIN OPERATIONS.
5. ONLY CONCEPTUAL LAYOUT AND DETAILS ARE SHOWN FOR THE TEMPORARY SOIL RETENTION SYSTEM. THE FINAL DESIGN AND DETAILS ARE THE RESPONSIBILITY OF THE COUNTY CONTRACTOR. FINAL DESIGN AND DETAILS SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
6. FINAL CONSTRUCTION SEQUENCE, DESIGN AND DETAILS SHALL BE SUBMITTED TO BNSF FOR APPROVAL AND COORDINATION PRIOR TO INSTALLATION OF THE TEMPORARY SOIL RETENTION SYSTEM.
7. DESIGN OF TEMPORARY SOIL RETENTION SYSTEM SHOULD BE PER THE BNSF GUIDELINES FOR TEMPORARY SHORING.
8. THE TEMPORARY SOIL RETENTION SYSTEM USED WAS A SINGLE WALL SHEET PILE, INSTALLED BETWEEN TRACKS DURING THE CONSTRUCTION OF THE BRIDGES.

2

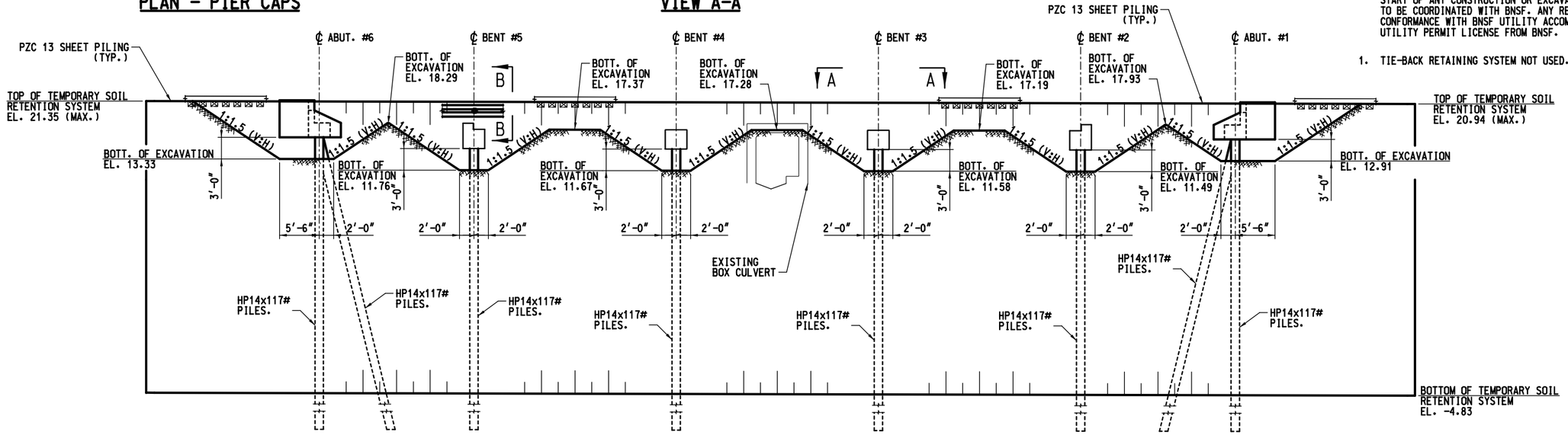
WORK BY BNSF

1. BNSF SHALL INSTALL THE STEEL H-PILES, CAPS AND SPANS.
2. ALL WELDING OF CAPS TO PILES SHALL BE PERFORMED BY A CERTIFIED WELDER.
3. BNSF WILL CUT EXISTING TRACK PANELS TO BE REMOVED (INTO 40 FOOT LENGTHS) AND THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF THE TRACK FROM THE BALLAST.
4. BNSF WILL INSTALL BRIDGE DECK WATERPROOFING.
5. BNSF TO INSTALL THE REPLACMENT TRACK PANELS.

UTILITIES

1. RAILROAD UTILITIES MAY EXIST WITHIN BNSF RIGHT-OF-WAY. PRIOR TO THE START OF ANY CONSTRUCTION OR EXCAVATION, UTILITY RELOCATIONS WILL HAVE TO BE COORDINATED WITH BNSF. ANY RELOCATION OF UTILITIES MUST BE IN CONFORMANCE WITH BNSF UTILITY ACCOMMODATION POLICY AND WILL REQUIRE A UTILITY PERMIT LICENSE FROM BNSF.

1. TIE-BACK RETAINING SYSTEM NOT USED.



TYPICAL SECTION - TEMPORARY SOIL RETENTION SYSTEM
BY COUNTY CONTRACTOR

NOTES:

1. PER THE TYPICAL SECTION, THE TEMPORARY SOIL RETENTION SYSTEM INCLUDES TWO DIFFERENT EXCAVATION REQUIREMENTS: (1) DEPTH TO ALLOW FOR SETTING OF SUPERSTRUCTURE. (2) DEPTH TO ALLOW FOR SETTING AND ATTACHING PRECAST CAPS AND ASSOCIATED SAFE WORKING SLOPES.
2. AT ABUTMENTS AND PIERS, SHEET PILING MAY BE BRACED AGAINST THE DRIVEN H-PILES. IF THIS METHOD IS USED, THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
3. IF THE CONTRACTOR ELECTS TO CUT AND REMOVE PORTIONS OF THE TEMPORARY SOIL RETENTION WALL INSTEAD OF REMOVING THE ENTIRE WALL, THE WALL SHALL BE REMOVED TO A DEPTH OF 5' BELOW FINISHED GRADE.
4. COORDINATE REMOVAL OF TEMPORARY SOIL RETENTION SYSTEM PRIOR TO INSTALLING SHEET-PILE WALL

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	SINGLE WALL TEMP SOIL RETENTION SYSTEM

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE NOTES & DETAILS

PLAN NO: 0050-0021.800-003 SHEET: 03 OF 10

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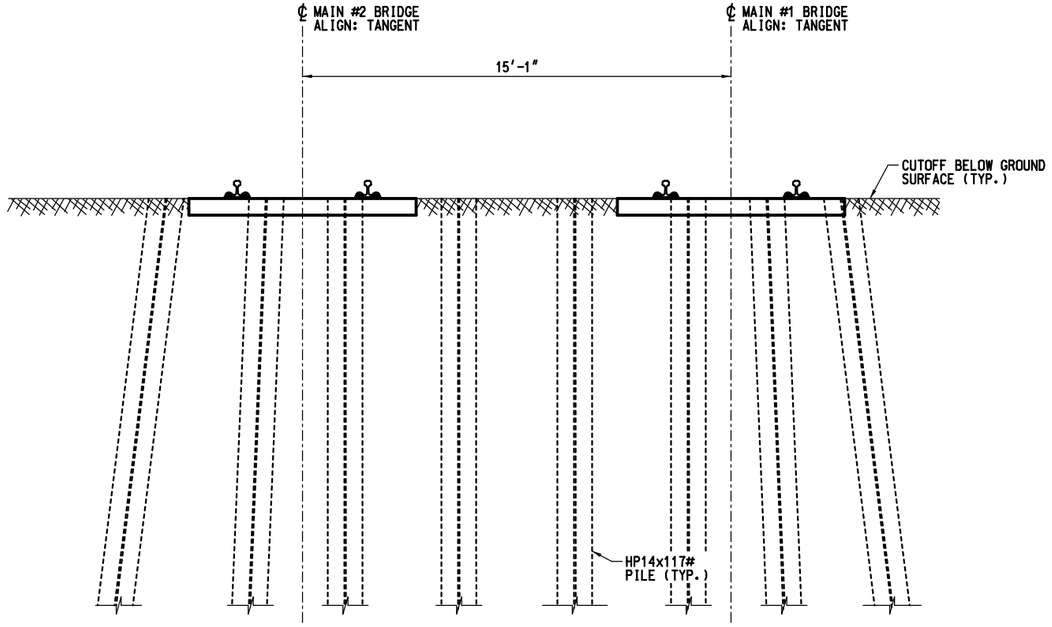
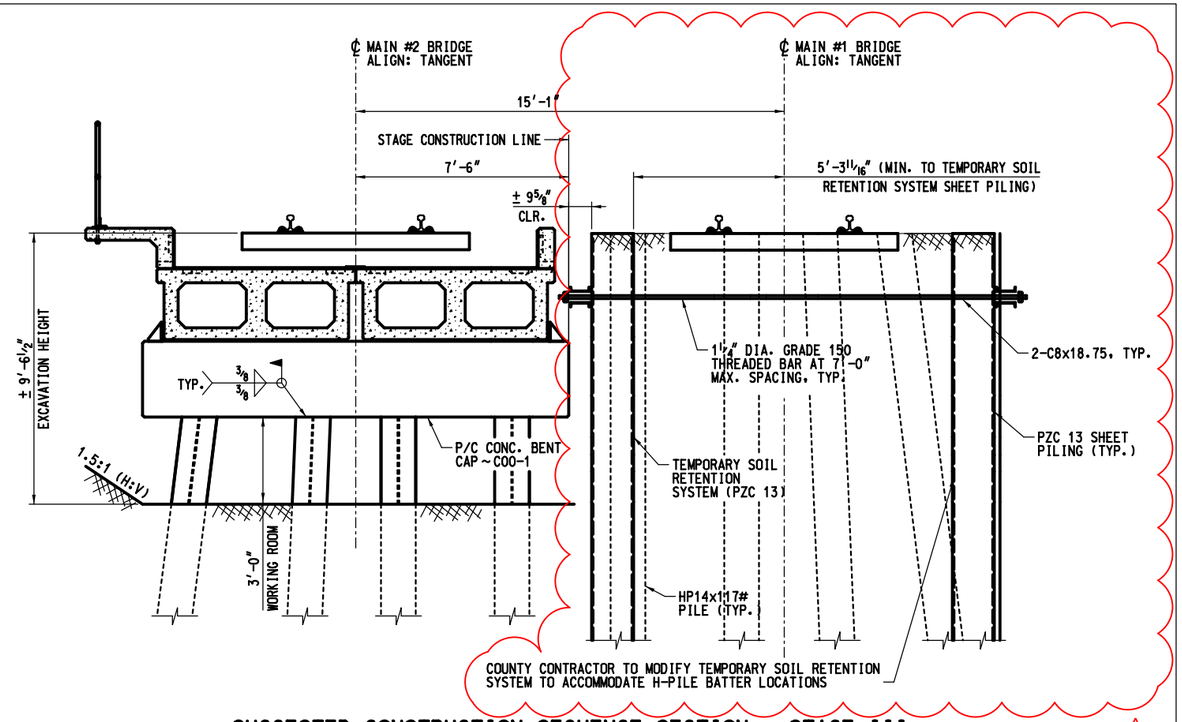
Date Printed: 6/20/2023 Time Printed: 12:15:04 PM



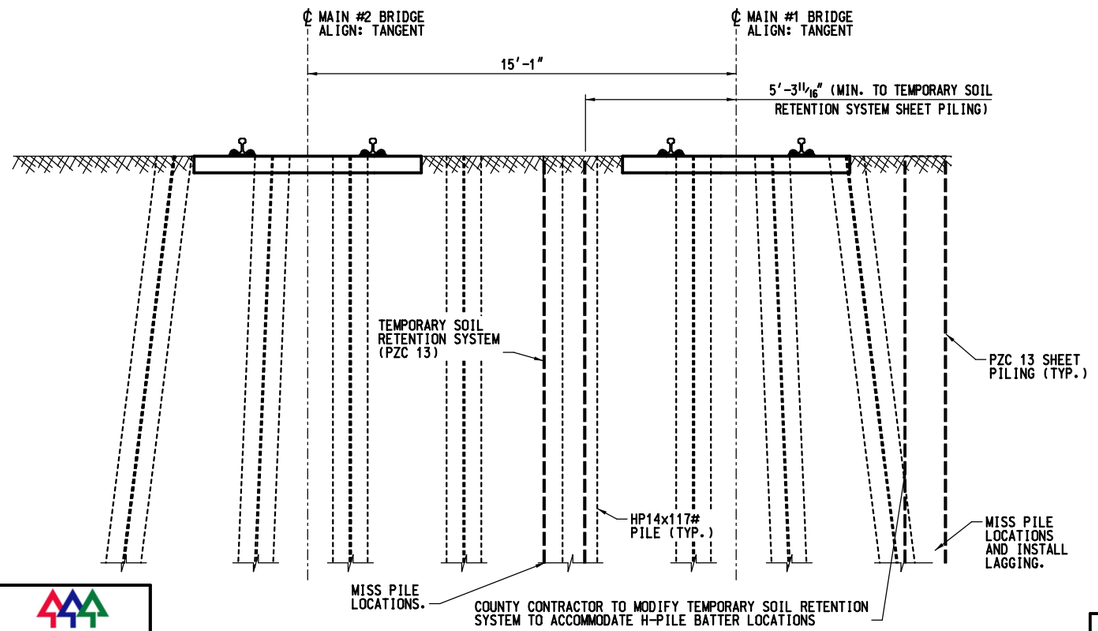
SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE I

BY BNSF
(LOOKING RY WEST AT BENT #3)



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE III

SPANS AND CAPS BY BNSF, TEMPORARY SOIL RETENTION SYSTEM BY COUNTY CONTRACTOR
(LOOKING RY WEST AT BENT #3)



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE II

BY COUNTY CONTRACTOR
(LOOKING RY WEST AT BENT #3)

2 TEMPORARY SOIL RETENTION SYSTEM USED WAS SINGLE SHEET PILE WALL BETWEEN BOTH TRACKS. NO THREADED BARS USED. NO SHEET PILES WERE USED ON OUTTER SIDES OF TRACKS.

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	SINGLE WALL TEMP SOIL RETENTION SYSTEM

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE
STAGING SECTIONS I, II, & III

PLAN NO: 0050-0021.800-004 SHEET: 04 OF 10

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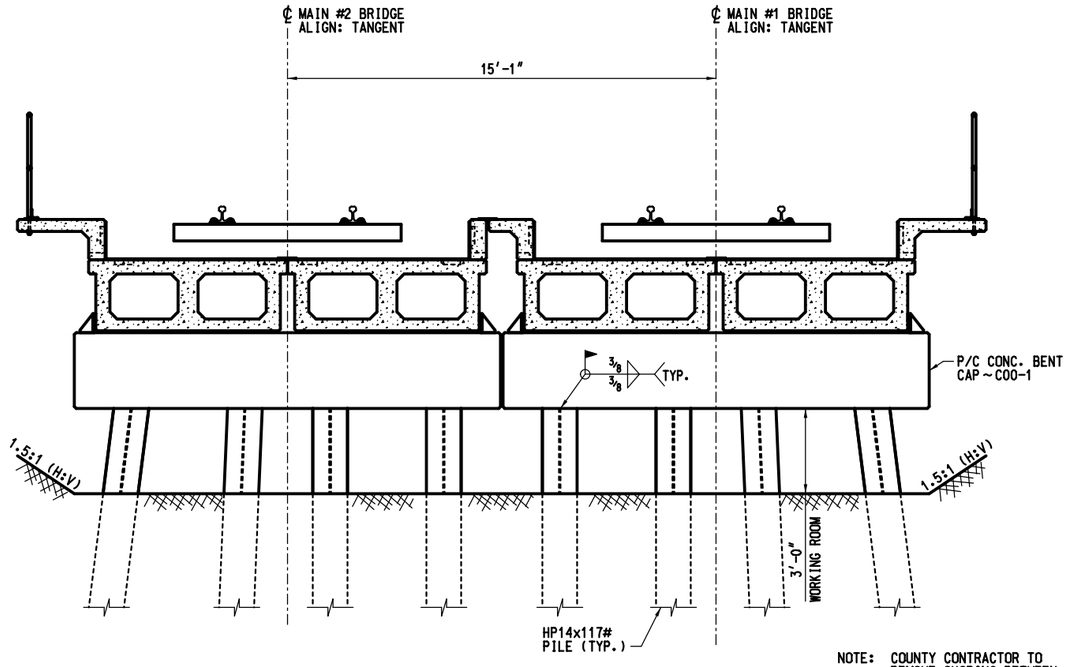
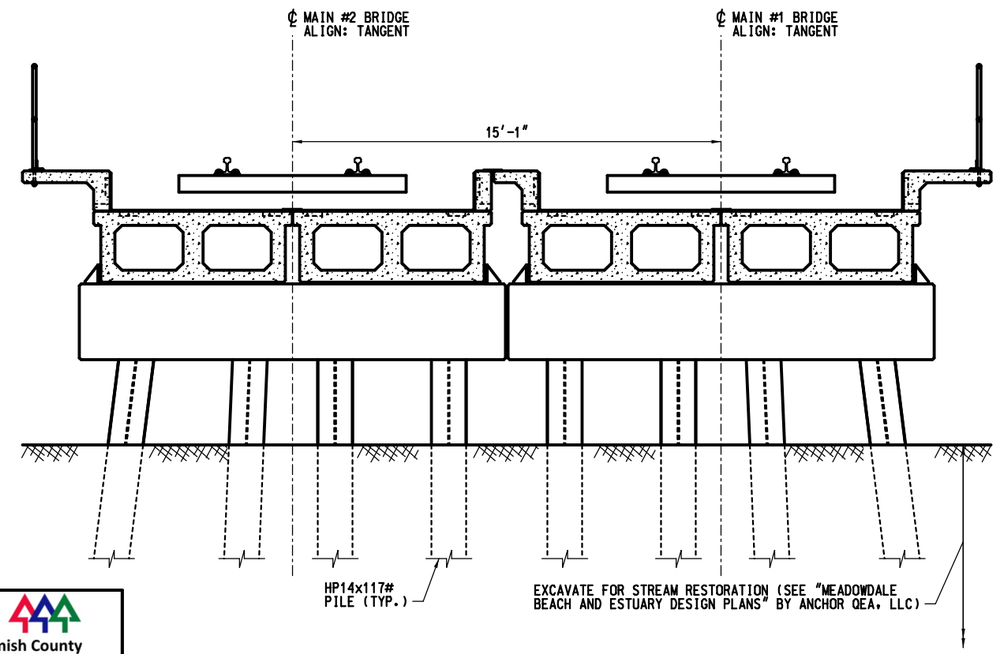


NOTE: COUNTY CONTRACTOR TO REMOVE SHORING BETWEEN STAGE III AND STAGE IV.

SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE IV

BY BNSF
(LOOKING RY WEST AT BENT #3)



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE V

(LOOKING RY WEST AT BENT #3)
BY COUNTY CONTRACTOR

Snohomish County
Parks and Recreation

HANSON
Hanson Professional Services Inc.

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE
STAGING SECTIONS IV & V

PLAN NO: 0050-0021.800-005 SHEET: 05 OF 10

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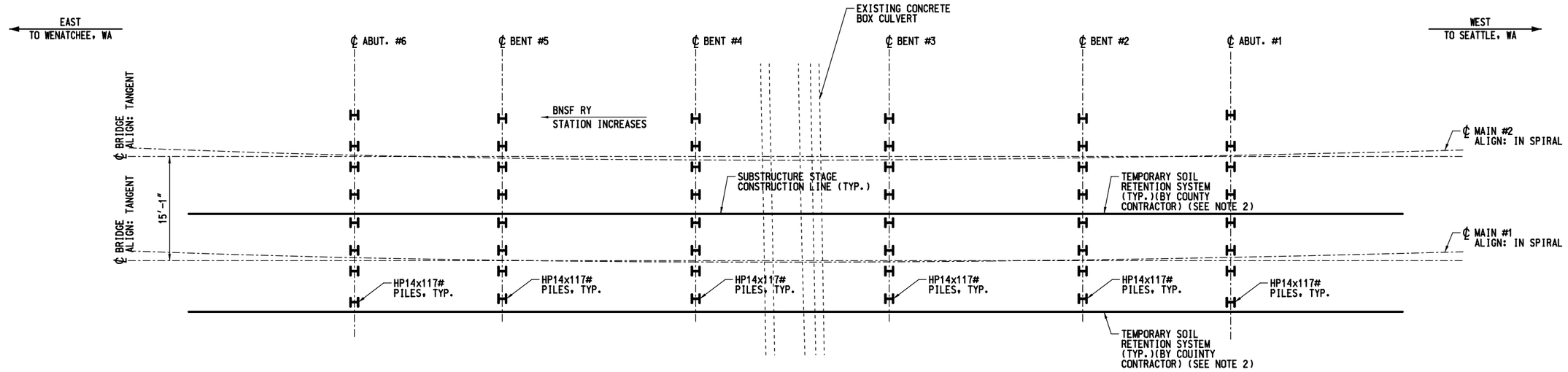
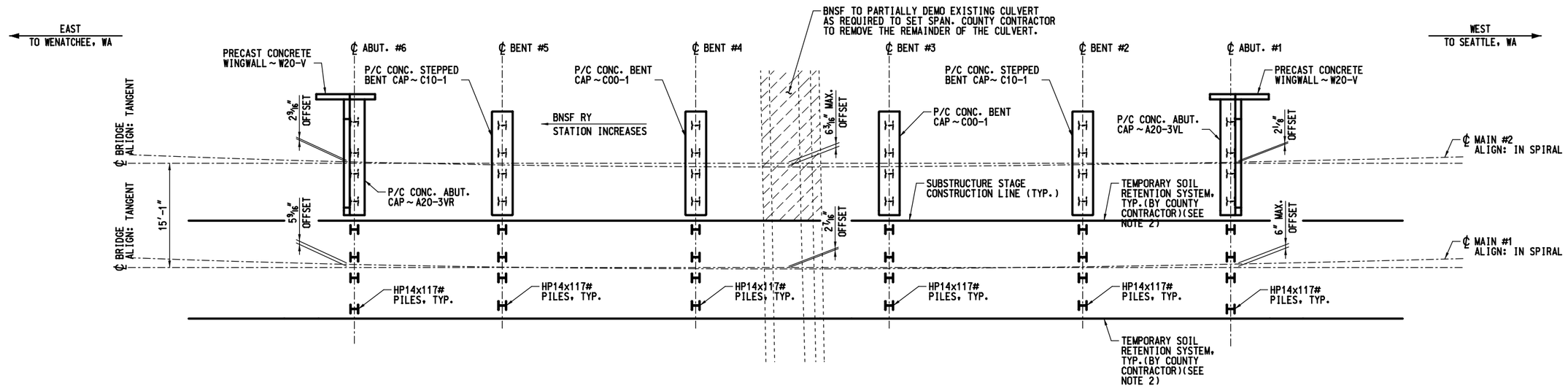


NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.

2. COUNTY CONTRACTOR TO MODIFY TEMPORARY SOIL RETENTION SYSTEM TO ACCOMMODATE H-PILES AND OTHER BRIDGE COMPONENTS

3. COUNTY CONTRACTOR TO COORDINATE REMOVAL OF TEMPORARY SOIL RETENTION SYSTEM PRIOR TO INSTALLING SHEET-PILE WALL

PLAN - SUGGESTED STAGE I & II



NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.

2. COUNTY CONTRACTOR TO MODIFY TEMPORARY SOIL RETENTION SYSTEM TO ACCOMMODATE H-PILES AND OTHER BRIDGE COMPONENTS

PLAN - SUGGESTED STAGE III

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE PLAN - STAGE I, II & III

PLAN NO: 0050-0021.800-006 SHEET: 06 OF 10

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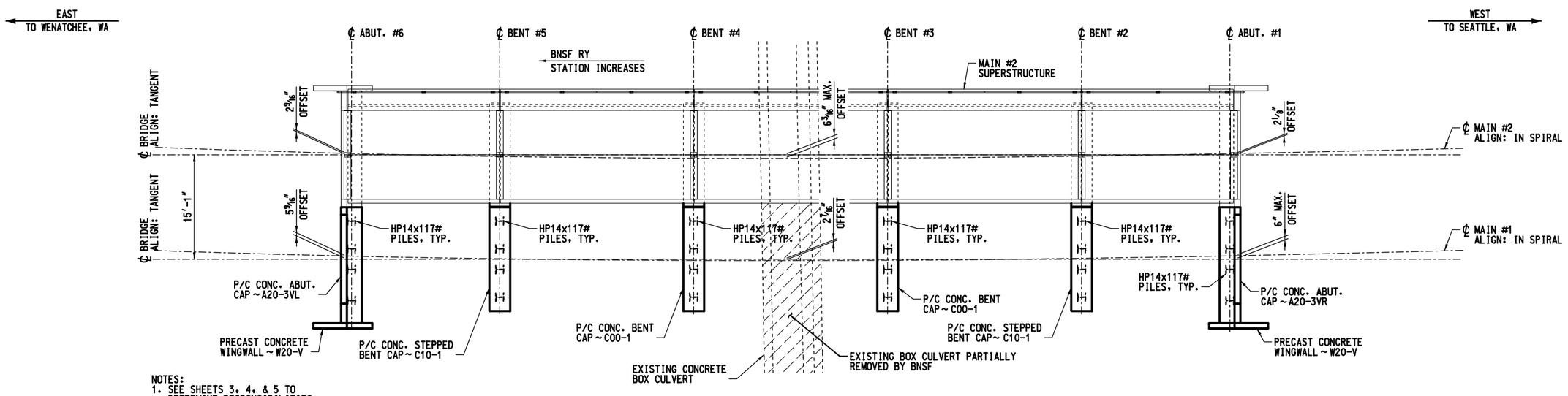
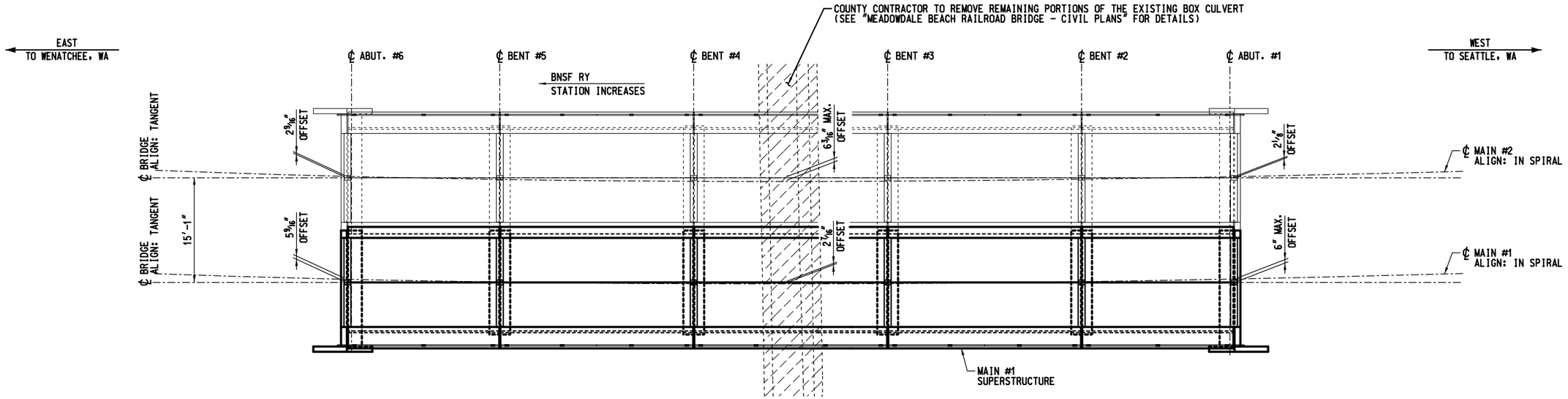


NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.
2. COUNTY CONTRACTOR MAY LEAVE TEMPORARY SOIL RETENTION SYSTEM IN PLACE AT BRIDGE ABUTMENTS.

PLAN - SUGGESTED STAGE IVa

REMOVE SHORING BETWEEN STAGE III AND STAGE IV



PLAN - SUGGESTED STAGE IVb

(COMPLETELY REMOVE TEMPORARY SOIL RETENTION SYSTEM BEFORE PLACEMENT OF SPANS ON MAIN #1)

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

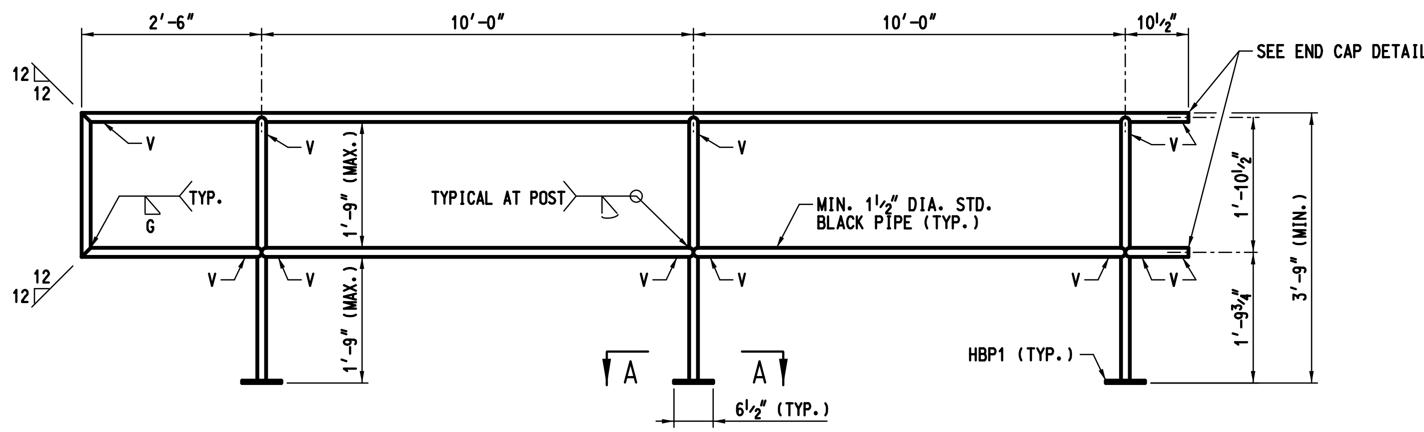
SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE PLAN - STAGE IV

PLAN NO: 0050-0021.800-007 SHEET: 07 OF 10

File Location: I:\Hpost\ALL0068\CAD\Struct\Sheet\27800007.dgn
Date Printed: 6/20/2023 Time Printed: 12:15:09 PM

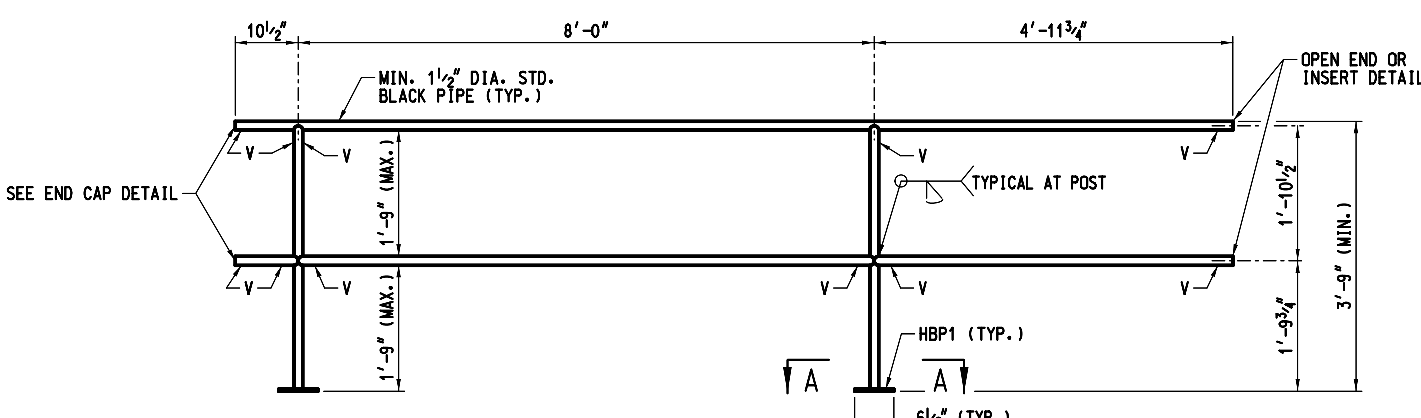
TYPICAL CLEARANCE SIGN 12"x36"

TO BE FURNISHED AND INSTALLED BY COUNTY CONTRACTOR



HANDRAIL PANEL ~ HP1-2W-100

INCLUDE ∠4"X3"X$\frac{3}{8}$" TOE PLATE. GALVANIZE AFTER FABRICATION.



HANDRAIL PANEL ~ HP2-1W-080

INCLUDE ∠4"X3"X$\frac{3}{8}$" TOE PLATE. GALVANIZE AFTER FABRICATION.

BILL OF MATERIAL (FOR BNSF ONLY)

LINE	QUAN.	UNIT.	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
1	2	EA	P/C P/S CONC. SLAB BEAM w/ CURB	B20-2110-V	20"x7'-0"	21'-10"	PER PLAN NO. 0000-1210-01 & 02
2	2	EA	P/C P/S CONC. SLAB BEAM w/ WALK	B20-2110-VW	20"x7'-0"	21'-10"	PER PLAN NO. 0000-1210-01 & 02
3	3	EA	P/C P/S CONC. BOX BEAM w/ CURB (TYPE II)	B30-2710-V	30"x7'-0"	27'-10"	PER PLAN NO. 0000-1212-03 & 04
4	3	EA	P/C P/S CONC. BOX BEAM w/ WALK (TYPE II)	B30-2710-VW	30"x7'-0"	27'-10"	PER PLAN NO. 0000-1212-03 & 04
5	1	EA	PRECAST CONC. CAP - ABUTMENT	A20-3VR	3'-0"x5'-$1\frac{3}{4}$"	16'-9"	PER PLAN NO. 0000-1120-05
6	1	EA	PRECAST CONC. CAP - ABUTMENT	A20-3VL	3'-0"x5'-$1\frac{3}{4}$"	16'-9"	PER PLAN NO. 0000-1120-05
7	2	EA	PRECAST CONC. CAP - BENT	C00-1	3'-0"x2'-8"	15'-0"	PER PLAN NO. 0000-1110-01
8	2	EA	PRECAST CONC. CAP - BENT	C10-1	3'-0"x3'-6"	15'-0"	PER PLAN NO. 0000-1110-04
9	2	EA	PRECAST CONC. WINGWALL	W20-V	9"x5'-$1\frac{3}{4}$"	8'-6"	PER PLAN NO. 0000-1121-02
10							
11	379,080	LBS.	STEEL H-PILES (72 PIECES)		HP14x117#	45'-0"	MAT'L PER ASTM 572, GR. 50
12							
13	8	EA	WASHER, GALVANIZED	W100	4"x$\frac{3}{4}$"	4"	PER PLAN NO. 0000-1000-06
14	6	EA	DECK PLATE, GALVANIZED	DPV1	12"x$\frac{3}{8}$"	7'-$9\frac{1}{2}$"	PER PLAN NO. 0000-1910-04
15	6	EA	DECK PLATE, GALVANIZED	DPV2	12"x$\frac{3}{8}$"	7'-$9\frac{1}{2}$"	PER PLAN NO. 0000-1910-04
16	8	EA	RESTRAINER BRACKET	B100	PC OF HP14x89#	8"	PER PLAN NO. 0000-1910-05
17	4	EA	RESTRAINER BRACKET	B101	PC OF HP14x89#	8"	PER PLAN NO. 0000-1910-05
18	4	EA	RESTRAINER BRACKET	B201	∠7"x4"x$\frac{3}{4}$"	8"	PER PLAN NO. 0000-1910-05
19							
20	2	EA	HANDRAIL PANEL w/ TOE PLATES, GALVANIZED	HP1-2W-100	$1\frac{1}{2}$" DIA. PIPE	23'-$4\frac{1}{2}$"	PER PLAN NO. 0000-1221-01
21	6	EA	HANDRAIL PANEL w/ TOE PLATES, GALVANIZED	HP2-1W-080	$1\frac{1}{2}$" DIA. PIPE	13'-$10\frac{1}{4}$"	PER PLAN NO. 0000-1221-01
22	18	EA	PLATE, GALVANIZED	HBP3	$\frac{1}{4}$"x$1\frac{1}{2}$"	6"	PER PLAN NO. 0000-1910-06
23	36	EA	BOLT, HEX HEAD, GALVANIZED		$\frac{3}{4}$" DIA.	7"	PER PLAN NO. 0000-1000-13
24	72	EA	STD. WASHER, GALVANIZED $\frac{13}{16}$" I.D. x $1\frac{7}{16}$" O.D.				PER PLAN NO. 0000-1000-13
25	36	EA	LOCK NUT, CENTER LOCKING, ZINC PLATED		$\frac{3}{4}$" DIA.		PER PLAN NO. 0000-1000-13
26							
27	4	EA	BEARING PAD, URETHANE, 70 DUROMETER		$\frac{3}{4}$"x10"	13'-10"	PER PLAN NO. 0000-1000-13
28	12	EA	BEARING PAD, URETHANE, 70 DUROMETER		$\frac{3}{4}$"x10"	6'-4"	PER PLAN NO. 0000-1000-13
29	32	EA	PREMOLDED JOINT FILLER, ASPHALT IMPREGNATED		$\frac{1}{2}$"x18"	6'-10"	PER PLAN NO. 0000-1000-06
30	16	EA	PREMOLDED JOINT FILLER, ASPHALT IMPREGNATED		$\frac{1}{2}$"x28"	6'-4"	PER PLAN NO. 0000-1000-06
31							
32	1	EA	BRIDGE NO. SIGN	21.80			DETAILS PLAN 3103.01.03
33	1	EA	DANGER SIGN, NO. 70		16"x30"		DETAILS PLAN 3070.01.01
34	2	EA	SIGN POST, NO. 1 BLACK			6'-0"	(TRACK STD. PLAN BOOK)
35							

SUPERVISOR STRUCTURES TO PROVIDE:

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
BILL OF MATERIAL

PLAN NO: 0050-0021.800-008
SHEET: 08 OF 10

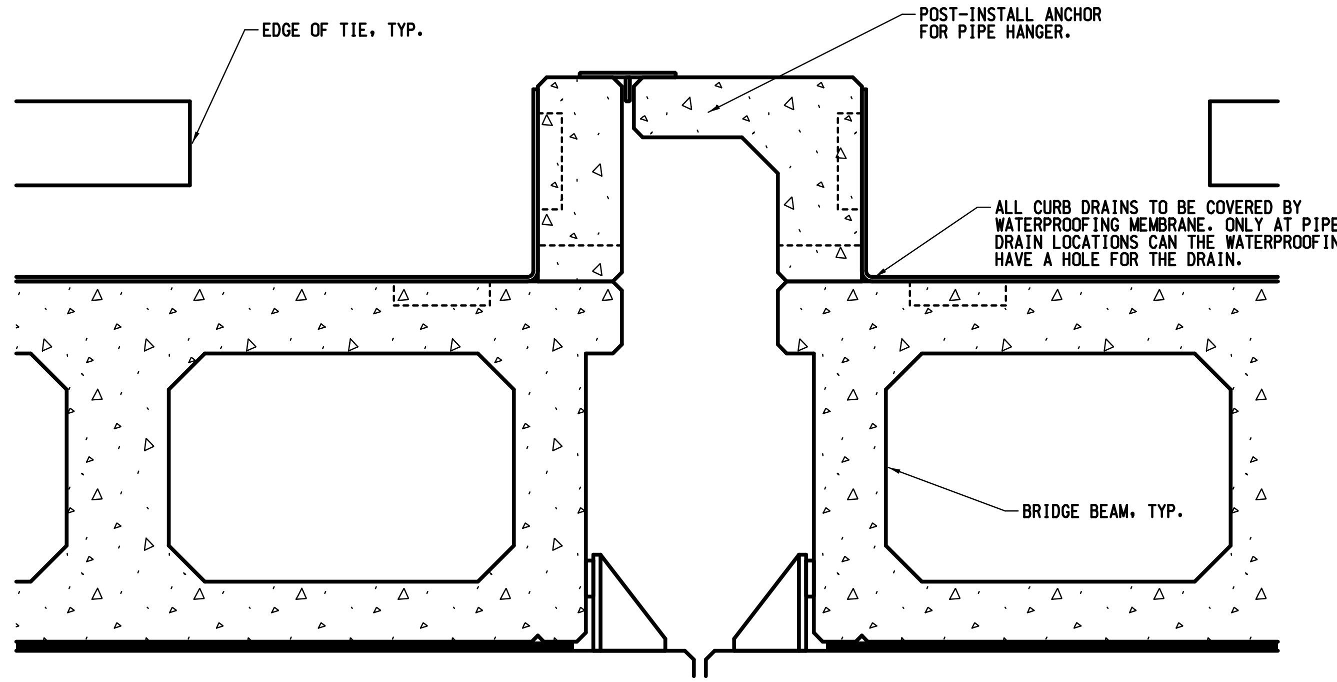
Snohomish County
Parks and Recreation

HANSON
Hanson Professional Services Inc.

Date Printed: 6/20/2023 Time Printed: 12:15:10 PM

DRAINAGE SYSTEM REMOVED FROM SCOPE OF WORK.
WATERPROOFING SYSTEM NOT INSTALLED.

2



NOTES:

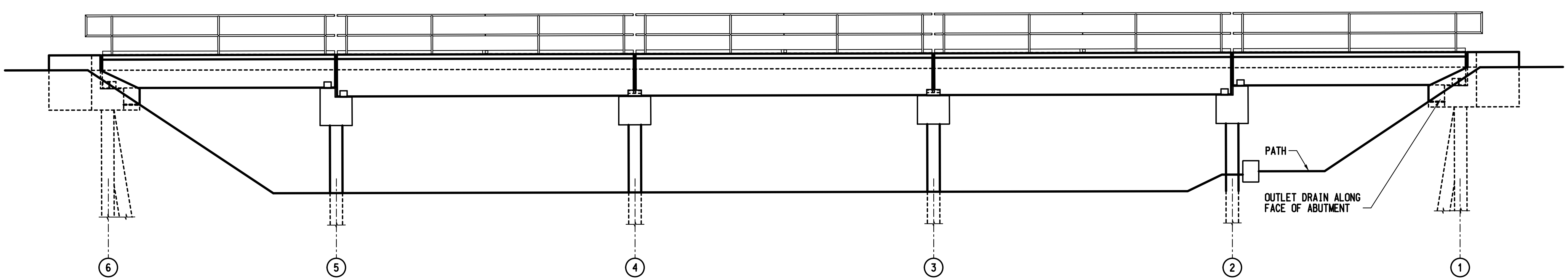
1. MAXIMUM FOUR (4) CURB CONNECTIONS PER SPAN. ALTERNATE CURB DRAIN LOCATIONS TO ALLOW FOR PIPE CLEARANCE.
2. DRAINAGE SYSTEM CONNECTS INTO EXISTING 3" DRAINS IN CURBS.
3. SEAL CONNECTION BETWEEN FLANGE AND THE CONCRETE SURFACE WITH SIKAFLEX-221. DRILL AND ANCHOR THE FLANGED FITTING TO THE CONCRETE USING 3/8" S.S. THREADED ANCHOR WITH 3" EMBEDMENT USING SIKA ANCHORFIX-1.

DECK DRAIN TYPICAL SECTION - BETWEEN BEAMS

BY COUNTY CONTRACTOR

GENERAL NOTES - BRIDGE DRAINAGE SYSTEM:

1. PIPE, FITTINGS, BRACKETS, JOINTS, SEALANTS, CLAMPS, ALL FASTENING AND MOUNTING HARDWARE, PIPE SUPPLIER APPROVED WELD BOND STRUCTURAL ADHESIVE FOR PIPE JOINTS, FABRICATION AND INSTALLATION SHALL BE INCLUDED IN THE COST OF "DRAINAGE SYSTEM", LUMP SUM.
2. THE STEEL COMPONENTS USED FOR SUPPORT BRACKETS AND CLAMPS SHALL MEET THE REQUIREMENTS OF ASTM A36.
3. ALL PIPE HANGERS, BRACKETS AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A-153 UNLESS OTHERWISE NOTED. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED. STAINLESS STEEL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-193, CLASS I, GRADE 8 OR 8F, 303 OR 304, AND STAINLESS STEEL WASHERS SHALL CONFORM TO ASTM A-240, TYPE 302 OR 304.
4. THE EXTERIOR SURFACES OF PVC AND DUCTILE IRON PIPES AND FITTINGS SHALL BE CLEANED ACCORDING TO SOCIETY OF PROTECTIVE COATING'S SPECIFICATION SSPC-SP1 PRIOR TO PAINTING AND SHALL BE COATED WITH AN ENGINEER APPROVED MUNSELL COLOR.



PROFILE DRAIN DETAIL

BY COUNTY CONTRACTOR

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS BUILT NOTES

DES: TDP / LB
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
DRAINAGE SYSTEM

PLAN NO: 0050-0021.800-009
SHEET: 09 OF 10

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

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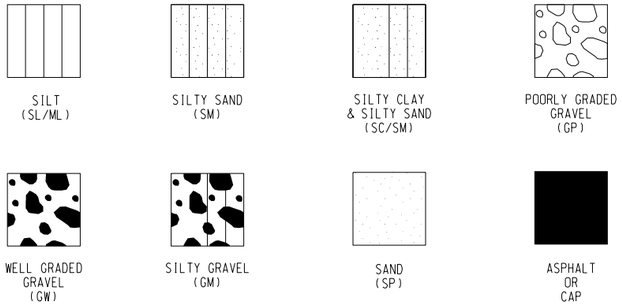
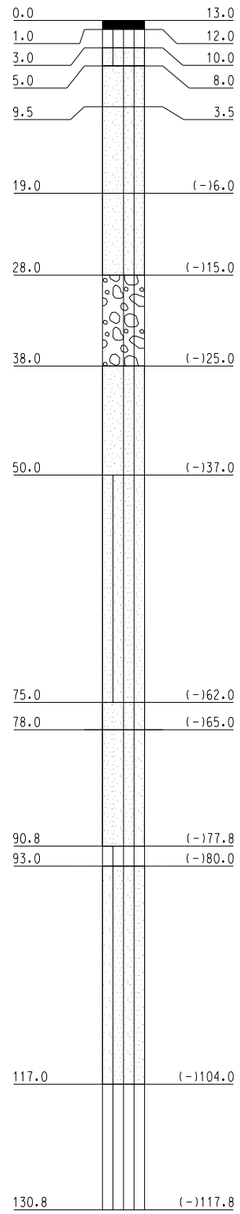
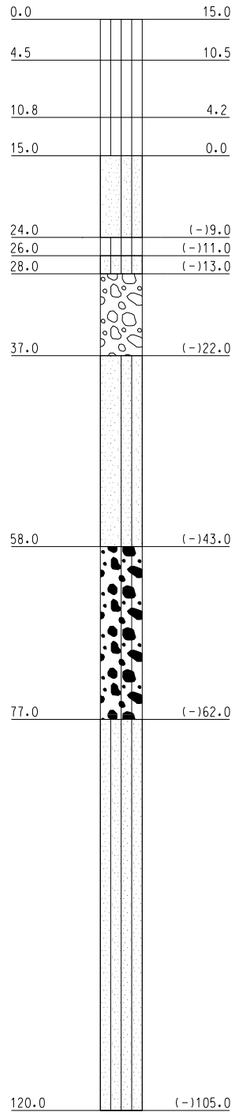
Date Printed: 6/20/2023 Time Printed: 12:15:11 PM

BORING LOG LEGEND





BORING MB-6



BORING MB-7

NOTE:

STICK BORING LOGS PROVIDED FOR REFERENCE ONLY. SEE GEOTECHNICAL REPORT BY SHANNON & WILSON, INC. FOR FULL DETAILS.

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
BORING LOGS

PLAN NO: 0050-0021.800-010 | SHEET: 10 OF 10

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

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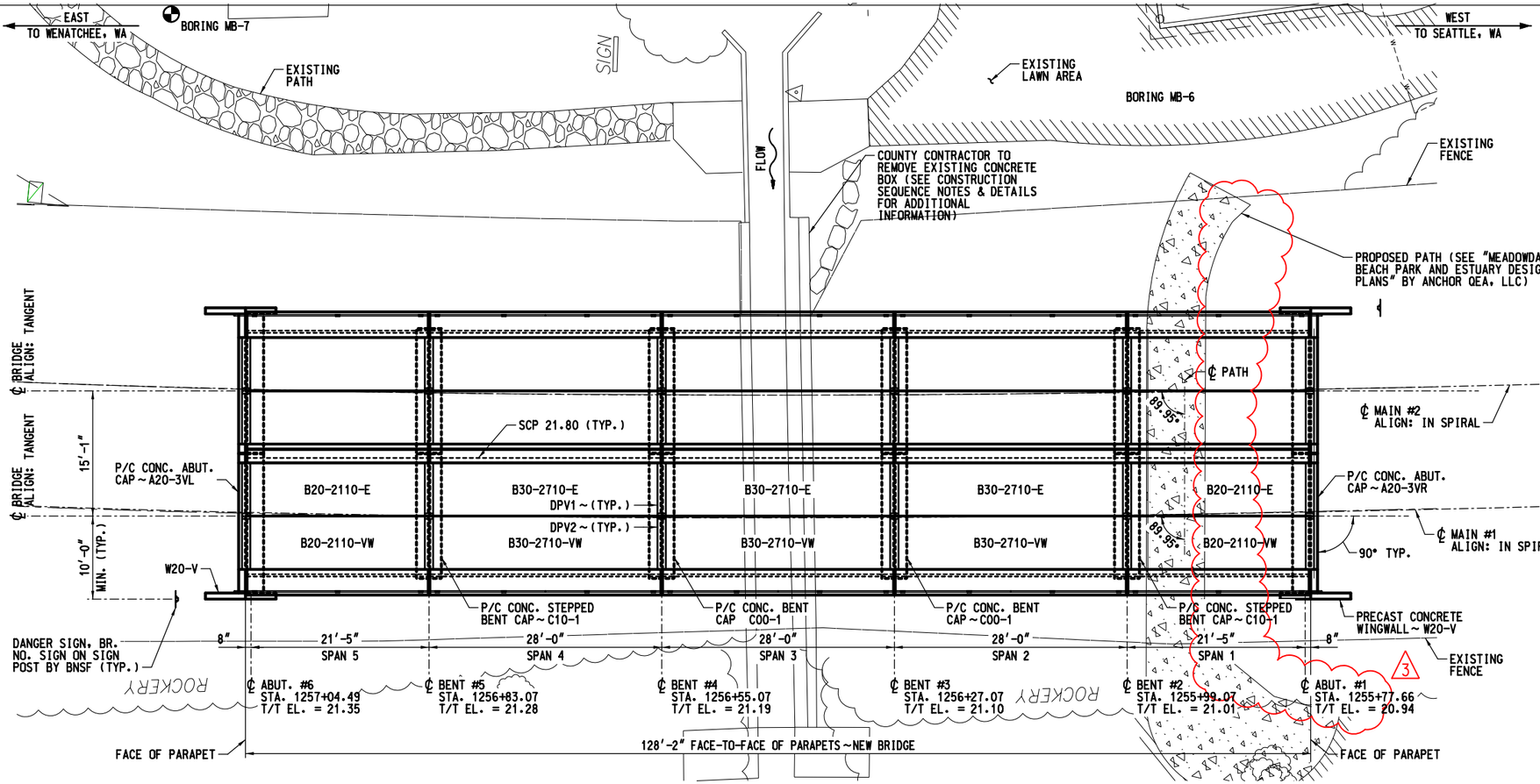
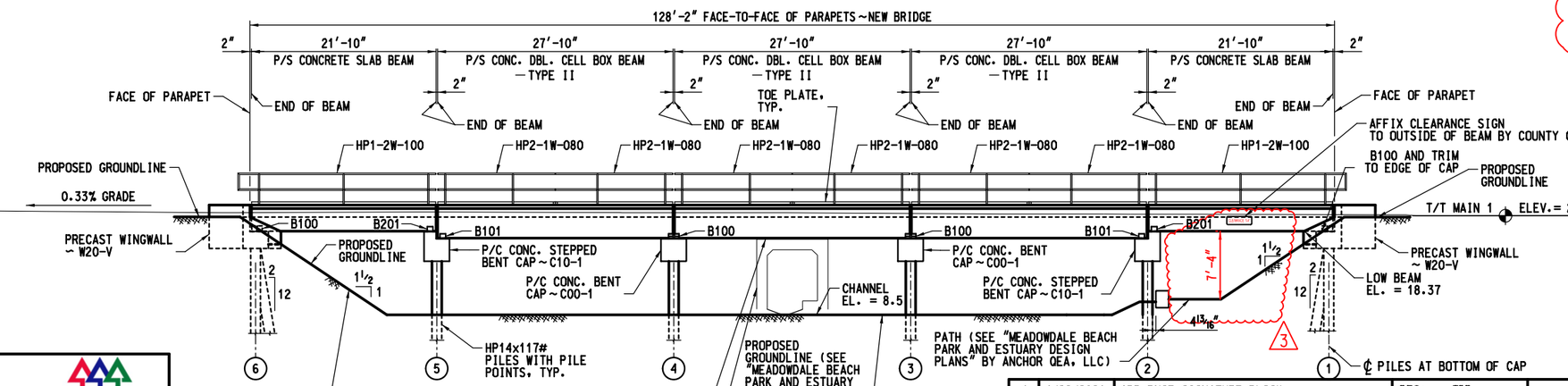


PLAN

NOTE: FILL GAP BETWEEN ENDS OF BEAMS WITH 8 ~ 1/2" x 28" x 6'-4" PLIES OF PREMOLDED JOINT FILLER.
FILL GAP BETWEEN END OF SLABS AND ENDS OF BEAMS WITH 8 ~ 1/2" x 18" x 6'-10" PLIES OF PREMOLDED JOINT FILLER.
FILL GAP BEWTEEN END OF SLABS AND FACE OF PARAPET WALL WITH 8 ~ 1/2" x 18" x 6'-10" PLIES OF PREMOLDED JOINT FILLER



ELEVATION

LOOKING RY SOUTH

NOTE: STATIONS ARE BASED ON MAIN #2

LEGEND:

T/T = TOP OF TIE
RY = RAILWAY
B.S. = BOTH SIDES

DESIGN DATA:

2018 A.R.E.M.A. DESIGN SPECIFICATIONS
LOADING: COOPER E 80 W/ DIESEL IMPACT

LIST OF DRAWINGS - BR. 21.80B

PLAN NO.	TITLE
0050-0021.800-011	GENERAL PLAN & ELEVATION
0050-0021.800-012	TYPICAL SECTIONS & PILE LAYOUT PLAN
0050-0021.800-013	CONSTRUCTION SEQUENCE NOTES & DETAILS
0050-0021.800-014	CONSTRUCTION SEQUENCE STAGING SECTIONS I, II & III
0050-0021.800-015	CONSTRUCTION SEQUENCE STAGING SECTIONS IV & V
0050-0021.800-016	CONSTRUCTION SEQUENCE PLAN - STAGE I, II & III
0050-0021.800-017	CONSTRUCTION SEQUENCE PLAN - STAGE IV
0050-0021.800-018	BILL OF MATERIAL
0050-0021.800-019	DRAINAGE SYSTEM
0050-0021.800-020	BORING LOGS

REFERENCES

NO.	PLAN NO.	SHEET NO.	DESCRIPTION
1	X	X	JUNE 1, 2016 BNSF STANDARD BRIDGE & COMPONENT PLANS

TABLE OF EST. LIFTING WEIGHTS

ITEM	MARK NO.	ESTIMATED WEIGHT (LBS)
PRECAST P/S CONC. DBL. CELL BOX BEAM - TYPE II	B30-2710-VW	48,150
PRECAST P/S CONC. DBL. CELL BOX BEAM - TYPE II	B30-2710-E	45,370
PRECAST P/S CONC. SLAB BEAM	B20-2110-VW	46,280
PRECAST P/S CONC. SLAB BEAM	B20-2110-E	44,100
PRECAST CONC. ABUTMENT CAP	A20-3VR	21,510
PRECAST CONC. ABUTMENT CAP	A20-3VL	21,510
PRECAST CONC. BENT CAP	C00-1	20,060
PRECAST CONC. STEPPED BENT CAP	C10-1	22,820
PRECAST CONC. WINGWALL	W20-V	4,140

TABLE OF ELEVATIONS

LOCATION	MAIN #1 TOP OF RAIL	TOP/CAP	PILE CUTOFF	T/T TO PILE CUTOFF MAIN #1
ABUT. 1	21.59	18.37	16.31	4'-7 1/2"
BENT 2	21.75	18.40/17.58	14.83	6'-2 1/8"
BENT 3	21.87	17.56	14.83	6'-3 1/4"
BENT 4	21.95	17.56	14.84	6'-4 1/8"
BENT 5	22.14	17.59/18.41	14.85	6'-5 1/8"
ABUT. 6	22.15	18.45	16.40	4'-11 3/8"

2 FOR FINAL PILE LENGTH BELOW CUTOFF, REFER TO SHANNON & WILSON REPORT "BNSF BRIDGE NUMBER 21.808 PILE DRIVING SUMMARY, MEADOWDALE BEACH PARK AND ESTUARY RESTORATION PROJECT, EDMONDS, WASHINGTON" DATED JULY 15, 2022.

TOP OF RAIL ELEVATION PROVIDED FOR MAIN #2 IS THE LOWER INSIDE RAIL ALONG MAIN TRACK 2 - CLOSEST TO PARK SIDE. LAST SURVEY DATA PROVIDED BY DHA SURVEYORS ON OCTOBER 17, 2022.

ADJACENT WORK

WORK THESE SHEETS WITH SHEETS FOR BR. 21.80A

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS-BUILT PLAN NOTES
3	6/12/2023	SHEETPILE WALL REMOVED. RAISED CLEARANCE

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

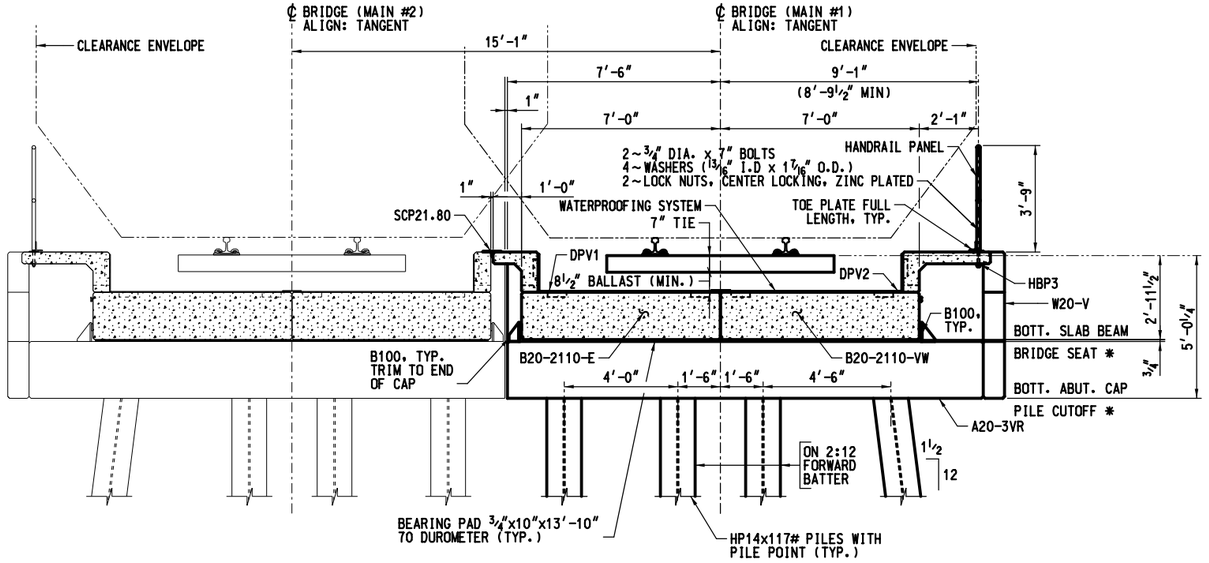
Snohomish County Parks and Recreation
HANSON Hanson Professional Services Inc.

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
GENERAL PLAN & ELEVATION

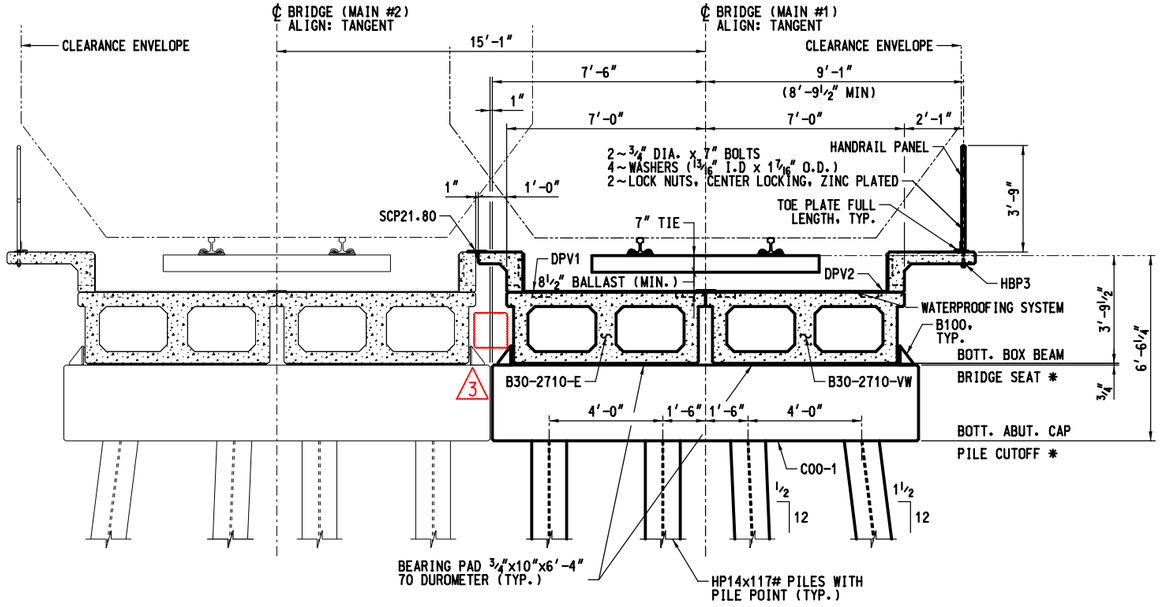
PLAN NO: 0050-0021.800-011 SHEET: 01 OF 10

File Location: I:\Apps\14\0066\CAD\Struct\Sheet\21800011.dgn
Date Printed: 6/20/2023 Time Printed: 12:15:14 PM



TYPICAL SECTION AT ABUTMENT

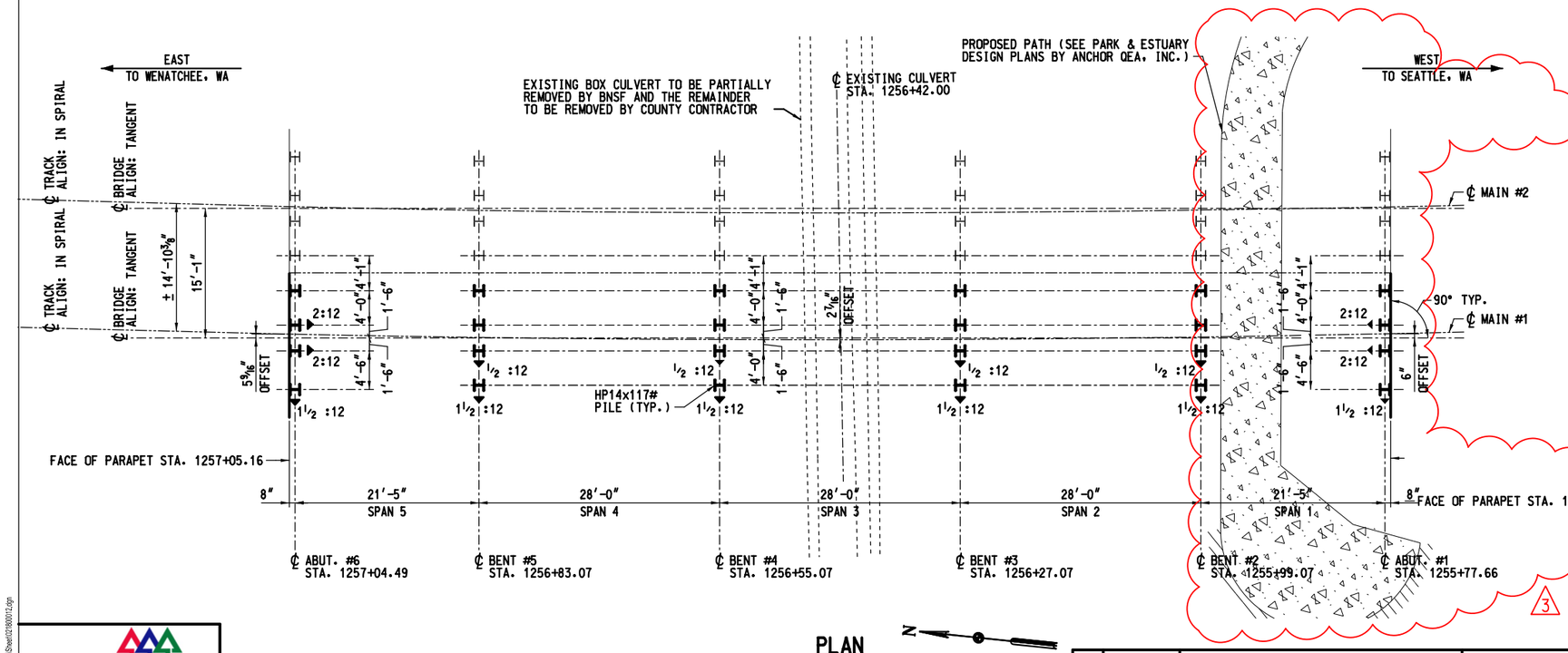
(WEST ABUTMENT SHOWN, EAST ABUTMENT OPPOSITE HAND)
(PROPOSED TRACK ELEVATIONS SHOWN.)



TYPICAL SECTION AT BENT

(LOOKING RY WEST)
(PROPOSED TRACK ELEVATIONS SHOWN.)

* SEE ELEVATION TABLE ON SHEET 1 FOR ELEVATIONS.



PLAN

NOTES:

▼ - INDICATES DIRECTION OF BATTER.

X:12 - INDICATES AMOUNT OF BATTER

ALL DIMENSIONS ARE GIVEN AT BOTTOM OF PRECAST CAP.

USE WELD METAL TO WRITE THE DATE AND AVERAGE PILE DEPTH IN 3 INCH TALL LETTERS ON EACH BENT.

PILES SHALL MEET THE MATERIAL REQUIREMENTS OF AND SHALL BE DRIVEN IN ACCORDANCE WITH BNSF STANDARD SPECIFICATIONS. HP14X117# PILES SHALL BE DRIVEN TO REFUSAL, IF POSSIBLE, OR TO A MINIMUM ULTIMATE RESISTANCE OF 250 TONS AS DETERMINED BY THE MODIFIED ENGINEERING NEWS-RECORD FORMULA AS PER THE BNSF ENGINEERING INSTRUCTION, 17.3.4.

SEE PROJECTT GEOTECHNICAL REPORT BY SHANNON & WILSON, INC. DATED FEBRUARY 16, 2018

PROVIDE PILE POINTS FOR PILES - MODEL VS314-117 BY VERSA STEEL INC., PORTLAND, OR OR EQUAL.

ESTIMATED PILE LENGTH BELOW CUTOFF = 112FT

FINAL ELEVATION TO BE DETERMINED FROM BORING LOG INFORMATION AND PILE DRIVING EQUIPMENT APPROVED BY THE ENGINEER.

WATERPROOFING:

WATERPROOFING SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED PER BNSF STANDARD SPECIFICATION SECTION 04800 AND AREMA CHAPTER 8, PART 29. CURB DRAINS TO BE CONNECTED TO THE DRAINAGE SYSTEM MUST REMAIN OPEN.

2

FOR FINAL PILE LENGTH BELOW CUTOFF, REFER TO SHANNON & WILSON REPORT "BNSF BRIDGE NUMBER 21.808 PILE DRIVING SUMMARY, MEADOWDALE BEACH PARK AND ESTUARY RESTORATION PROJECT, EDMONDS, WASHINGTON" DATED JULY 15, 2022.

WATERPROOFING SYSTEM WAS NOT INSTALLED ON ANY BRIDGE OF THE PROJECT.

3

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS-BUILT PLAN NOTES
3	6/12/2023	SHEETPILE WALL & DRAINAGE SYSTEM REMOVED

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.808
OVER LUNDS GULCH CREEK
EDMONDS, WA
TYPICAL SECTIONS & PILE LAYOUT PLAN

PLAN NO: 0050-0021.800-012 SHEET: 02 OF 10

File Location: I:\Projects\140068\CAD\Struct\Sheets\02160002.dgn
Date Printed: 6/20/2023 Time Printed: 12:15:16 PM

SUGGESTED CONSTRUCTION SEQUENCE

PRIOR TO STAGE I, BNSF TO RAISE MAIN #2 ELEVATION TO MATCH MAIN #1

STAGE I
1. BNSF TO DRIVE H-PILE AT ALL LOCATIONS. CUT OFF BELOW TOP OF TIE. ADJUST TRACK TIES WHERE NEEDED. (SEE PILE LAYOUT PLAN)

STAGE II
1. COUNTY CONTRACTOR TO PROVIDE TEMPORARY SOIL RETENTION SYSTEM BETWEEN MAIN TRACK #1 AND MAIN TRACK #2 (SEE THIS SHEET)

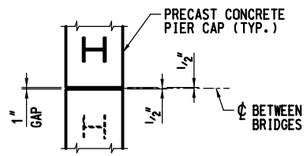
STAGE III
1. WITH MAIN #2 CLOSED: BNSF TO EXCAVATE AND CUT H-PILE TO CORRECT ELEVATION AT ABUTMENTS AND PIERS.
2. BNSF TO REMOVE EXISTING CONCRETE BOX CULVERT AS REQUIRED.
3. BNSF TO PLACE AND WELD PRECAST ABUTMENT & PIER CAPS.
4. BNSF TO PLACE CONTROLLED LOW-STRENGTH MATERIAL AT ABUTMENTS.
5. BNSF TO EXCAVATE BETWEEN FOUNDATION ELEMENTS AS REQUIRED TO INSTALL SUPERSTRUCTURE.
6. BNSF TO BACKFILL ABUTMENT CAPS.
7. BNSF TO SET BEARING PADS AND INSTALL SUPERSTRUCTURE.
8. BNSF TO INSTALL TRACKS ON MAIN #2 AND OPEN TO RAIL TRAFFIC.

* REPEAT STAGES I - III AS NECESSARY BY BNSF TO CONSTRUCT THE SECOUND RAILROAD BRIDGE.

STAGES IVa AND IVb- SAME AS III WITH CLOSURE WINDOW ON MAIN TRACK #1.

1. TEMPORARY SOIL RETENTION SYSTEM SHALL BE REMOVED BY THE COUNTY CONTRACTOR (LOCATIONS OF INTERFERENCE WITH STRUCTURE INSTALLATION) AT ANY TIME AFTER BNSF'S EXCAVATION FOR THE SUPERSTRUCTURE (SEE SUGGESTED CONSTRUCTION SEQUENCING SHEETS FOR FURTHER DETAILS AND NOTE 3 BELOW).

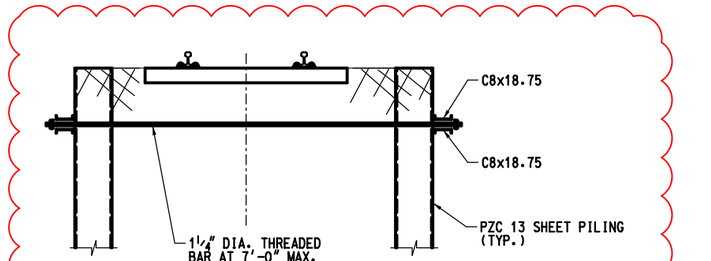
STAGE V
1. COUNTY CONTRACTOR EXCAVATE TO REQUIRED ELEVATIONS FOR STREAM RESTORATION.
2. COUNTY CONTRACTOR COMPLETELY REMOVE REMAINING PORTIONS OF CULVERT.
3. COUNTY CONTRACTOR CONSTRUCT NEW WALK PATH.
4. COUNTY CONTRACTOR CONSTRUCT BRIDGE DRAINAGE SYSTEM.



PLAN - PIER CAPS

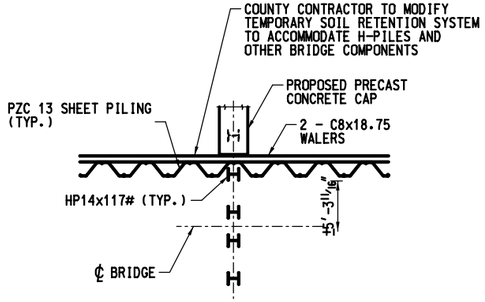
DURING STAGES II AND/OR III, COUNTY CONTRACTOR TO PARTIALLY INSTALL SHEET-PILE WALL UNDER THE PROPOSED BRIDGE UP TO EITHER SIDE OF THE TEMPORARY SOIL RETENTION SYSTEM (SEE "MEADOWDALE BEACH RAILROAD BRIDGE - TRACK/CIVIL PLANS" FOR DETAILS).

COUNTY CONTRACTOR TO COORDINATE WITH BNSF TO CONNECT AND COMPLETE THE SHEET-PILE WALL PRIOR TO BNSF PLACING BEAMS AND COUNTY CONTRACTOR COMPLETELY REMOVING THE TEMPORARY SOIL RETENTION SYSTEM.



VIEW B-B
TYPICAL AT TIEBACKS

2



VIEW A-A
TYPICAL AT ABUTMENTS & PIERS

BNSF REQUIREMENTS FOR COUNTY CONTRACTOR

NOTES

1. CONTRACTOR SHALL NOTE DATES FOR BNSF TO MOVE TIES IN 3 WEEK PLANNING SCHEDULES TO COORDINATE WORK WITH BNSF FORCES
2. DURING CLOSURE WINDOW, THE MOVEMENT AND LOCATION OF PERSONAL AND EQUIPMENT SHALL BE RESTRICTED DURING PASSAGE OF TRAINS ON ADJACENT TRACKS. THE CONTRACTOR SHALL COORDINATE WITH BNSF REPRESENTATIVE.
3. CONTRACTOR SCHEDULE MUST INCLUDE TIME FOR BNSF FORCES TO MODIFY TIES AND/OR RAIL AS NEEDED.
4. STAGED CLOSURE WINDOWS NEEDED BY THE COUNTY CONTRACTOR SHALL BE COORDINATED WITH BNSF A MINIMUM OF 60 DAYS AHEAD OF WHEN REQUIRED.
5. COUNTY CONTRACTOR TO REFER TO THE EXHIBIT C AND C-1 IN THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FROM BNSF.

TEMPORARY SOIL RETENTION SYSTEM NOTES

1. THE COUNTY CONTRACTOR MUST COORDINATE WITH THE BNSF REPRESENTATIVE TO WORK AROUND THE TRAIN SCHEDULE TO MINIMIZE THE IMPACT ON TRAIN OPERATIONS.
2. FOR ADDITIONAL SUGGESTED CONSTRUCTION SEQUENCE AND DETAILS, SEE SHEETS 04 TO 07.
3. MATS OR OTHER MEANS OF PROTECTION MUST BE PROVIDED TO PROTECT RAILS AND BALLAST FROM DAMAGE DUE TO EQUIPMENT OR CONSTRUCTION OPERATIONS. COST INCLUDED IN TEMPORARY CROSSING. DETAILS SHALL BE SUBMITTED TO BNSF FOR REVIEW AND APPROVAL.
4. THE COUNTY CONTRACTOR SHALL INSTALL THE TEMPORARY SOIL RETENTION SYSTEM IN XX (X) HOUR CLOSURE WINDOWS. COUNTY CONTRACTOR SHALL COORDINATE WITH BNSF ON MOVING TIES TO INSTALL PILES AND SHORING. THE XX (X) HOUR CLOSURE WINDOW SHALL INCLUDED TIME FOR BNSF FORCES TO MAKE MODIFICATIONS TO TIES AND/OR RAIL AS NEEDED TO COMPLETE WORK AND PRIOR TO RESTORING TRAIN OPERATIONS.
5. ONLY CONCEPTUAL LAYOUT AND DETAILS ARE SHOWN FOR THE TEMPORARY SOIL RETENTION SYSTEM. THE FINAL DESIGN AND DETAILS ARE THE RESPONSIBILITY OF THE COUNTY CONTRACTOR. FINAL DESIGN AND DETAILS SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
6. FINAL CONSTRUCTION SEQUENCE, DESIGN AND DETAILS SHALL BE SUBMITTED TO BNSF FOR APPROVAL AND COORDINATION PRIOR TO INSTALLATION OF THE TEMPORARY SOIL RETENTION SYSTEM.
7. DESIGN OF TEMPORARY SOIL RETENTION SYSTEM SHOULD BE PER THE BNSF GUIDELINES FOR TEMPORARY SHORING.
8. THE TEMPORARY SOIL RETENTION SYSTEM USED WAS A SINGLE WALL SHEET PILE, INSTALLED BETWEEN TRACKS DURING THE CONSTRUCTION OF THE BRIDGES.

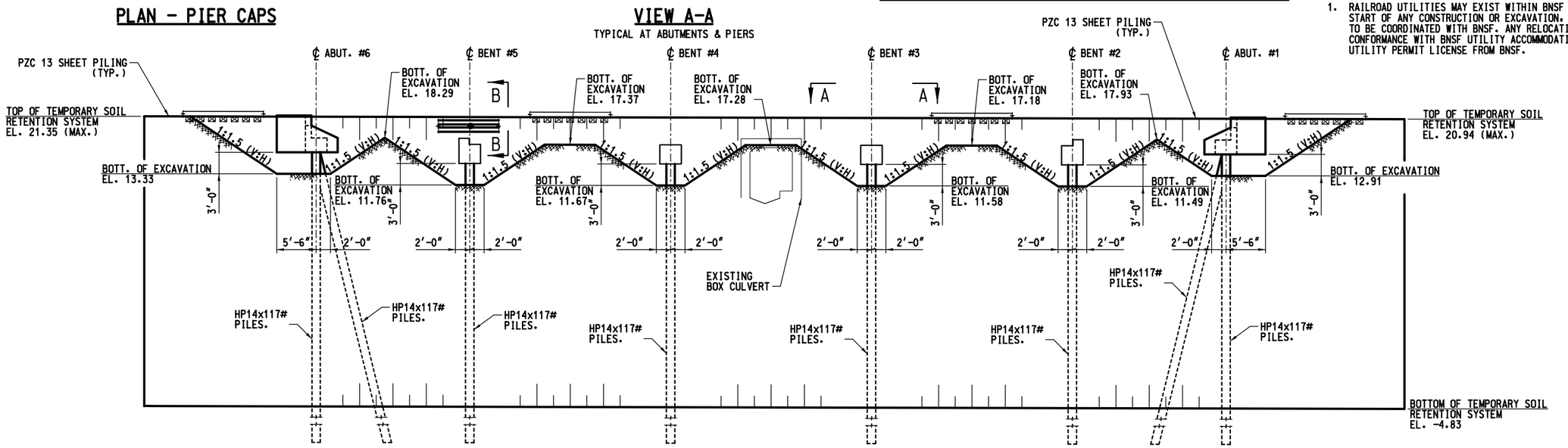
2

WORK BY BNSF

1. BNSF SHALL INSTALL THE STEEL H-PILES, CAPS AND SPANS.
2. ALL WELDING OF CAPS TO PILES SHALL BE PERFORMED BY A CERTIFIED WELDER.
3. BNSF WILL CUT EXISTING TRACK PANELS TO BE REMOVED (INTO 40 FOOT LENGTHS) AND THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF THE TRACK FROM THE BALLAST.
4. BNSF WILL INSTALL BRIDGE DECK WATERPROOFING.
5. BNSF TO INSTALL REPLACEMENT TRACK PANELS.

UTILITIES

1. RAILROAD UTILITIES MAY EXIST WITHIN BNSF RIGHT-OF-WAY. PRIOR TO THE START OF ANY CONSTRUCTION OR EXCAVATION, UTILITY RELOCATIONS WILL HAVE TO BE COORDINATED WITH BNSF. ANY RELOCATION OF UTILITIES MUST BE IN CONFORMANCE WITH BNSF UTILITY ACCOMMODATION POLICY AND WILL REQUIRE A UTILITY PERMIT LICENSE FROM BNSF.



TYPICAL SECTION - TEMPORARY SOIL RETENTION SYSTEM
BY COUNTY CONTRACTOR

NOTES:

1. PER THE TYPICAL SECTION, THE TEMPORARY SOIL RETENTION SYSTEM INCLUDES TWO DIFFERENT EXCAVATION REQUIREMENTS: (1) DEPTH TO ALLOW FOR SETTING OF SUPERSTRUCTURE. (2) DEPTH TO ALLOW FOR SETTING AND ATTACHING PRECAST CAPS AND ASSOCIATED SAFE WORKING SLOPES.
2. AT ABUTMENTS AND PIERS, SHEET PILING MAY BE BRACED AGAINST THE DRIVEN H-PILES. IF THIS METHOD IS USED, THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
3. IF THE CONTRACTOR ELECTS TO CUT AND REMOVE PORTIONS OF THE TEMPORARY SOIL RETENTION WALL INSTEAD OF REMOVING THE ENTIRE WALL, THE WALL SHALL BE REMOVED TO A DEPTH OF 5' BELOW FINISHED GRADE.
4. COORDINATE REMOCAL OF TEMPORARY SOIL RETENTION SYSTEM PRIOR TO INSTALLING SHEET-PILE WALL

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	SINGLE WALL TEMP SOIL RETENTION SYSTEM

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE NOTES & DETAILS

PLAN NO: 0050-0021.800-013 | SHEET: 03 OF 10

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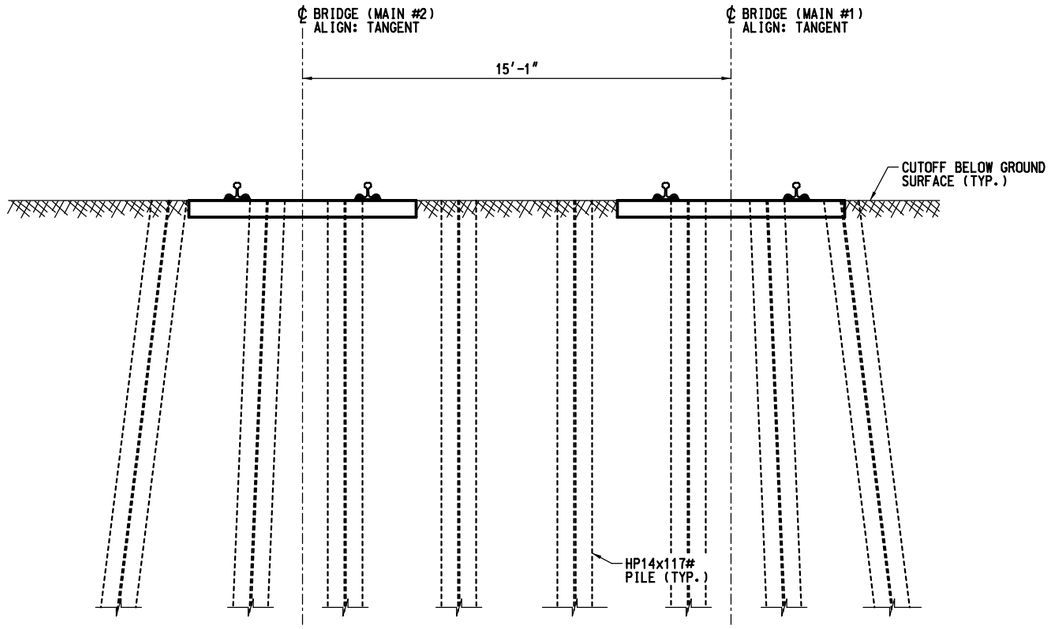
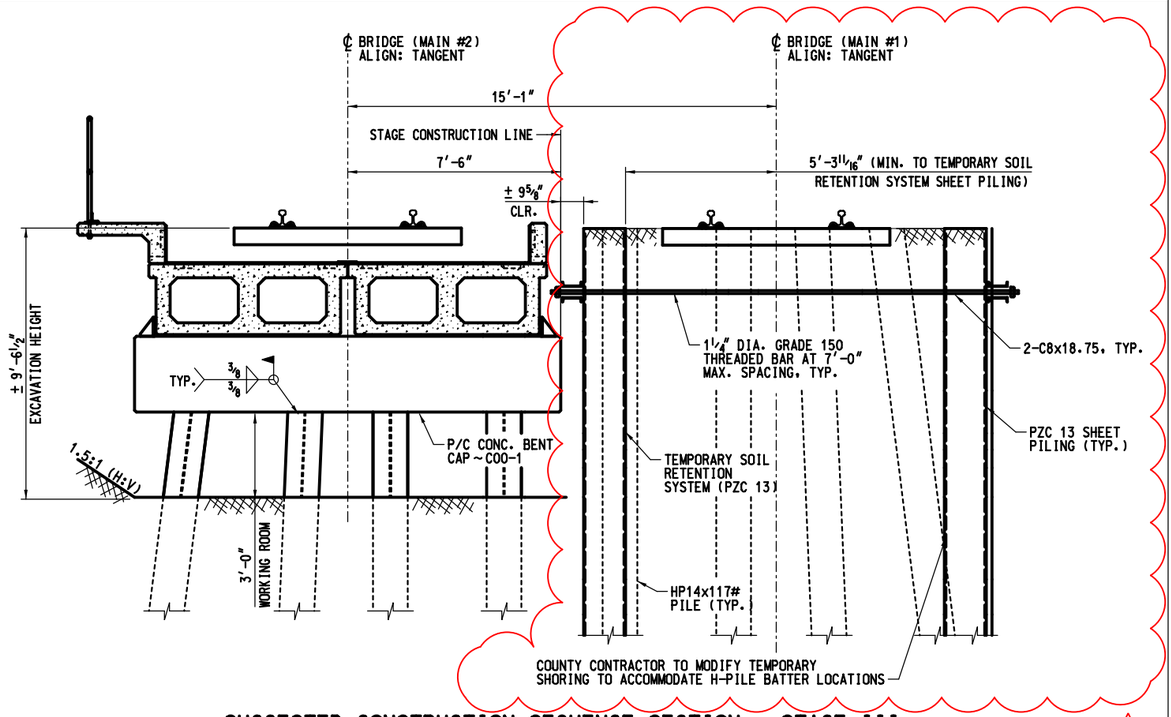


SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE I

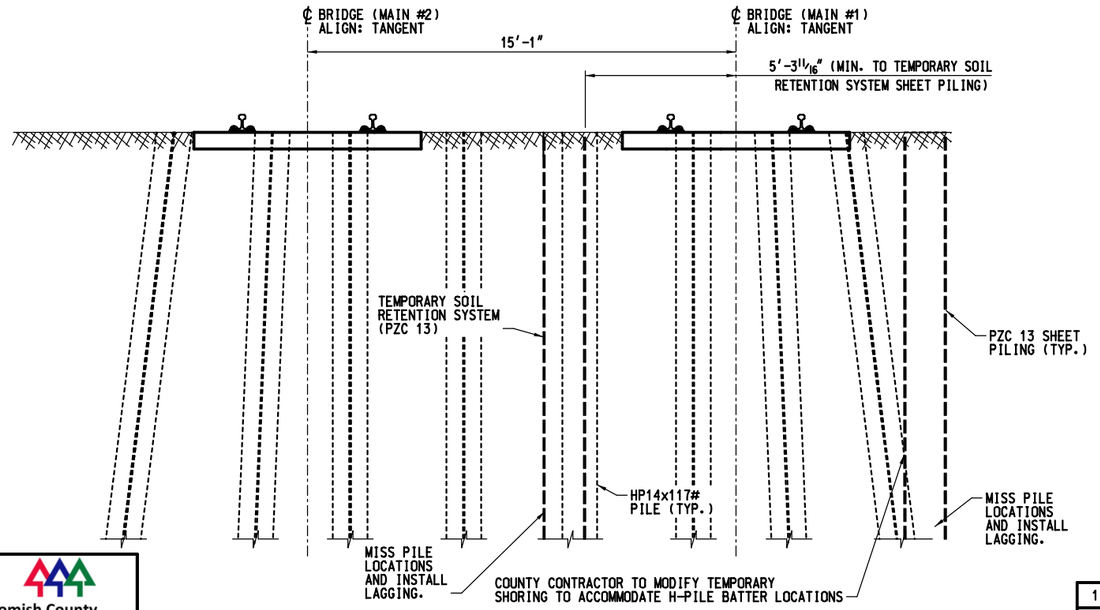
(LOOKING RY WEST AT BENT #3)
BY BNSF



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE III

(LOOKING RY WEST AT BENT #3)
CAPS AND SPANS BY BNSF, COUNTY CONTRACTOR TO INSTALL TIES AS EXCAVATION PROGRESSES

2



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE II

(LOOKING RY WEST AT BENT #3)
BY COUNTY CONTRACTOR

2 TEMPORARY SOIL RETENTION SYSTEM USED WAS SINGLE SHEET PILE WALL BETWEEN BOTH TRACKS. NO THREADED BARS USED. NO SHEET PILES WERE USED ON OUTTER SIDES OF TRACKS.

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	SINGLE WALL TEMP SOIL RETENTION SYSTEM

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE
STAGING SECTIONS I, II, & III

PLAN NO: 0050-0021.800-014 SHEET: 04 OF 10

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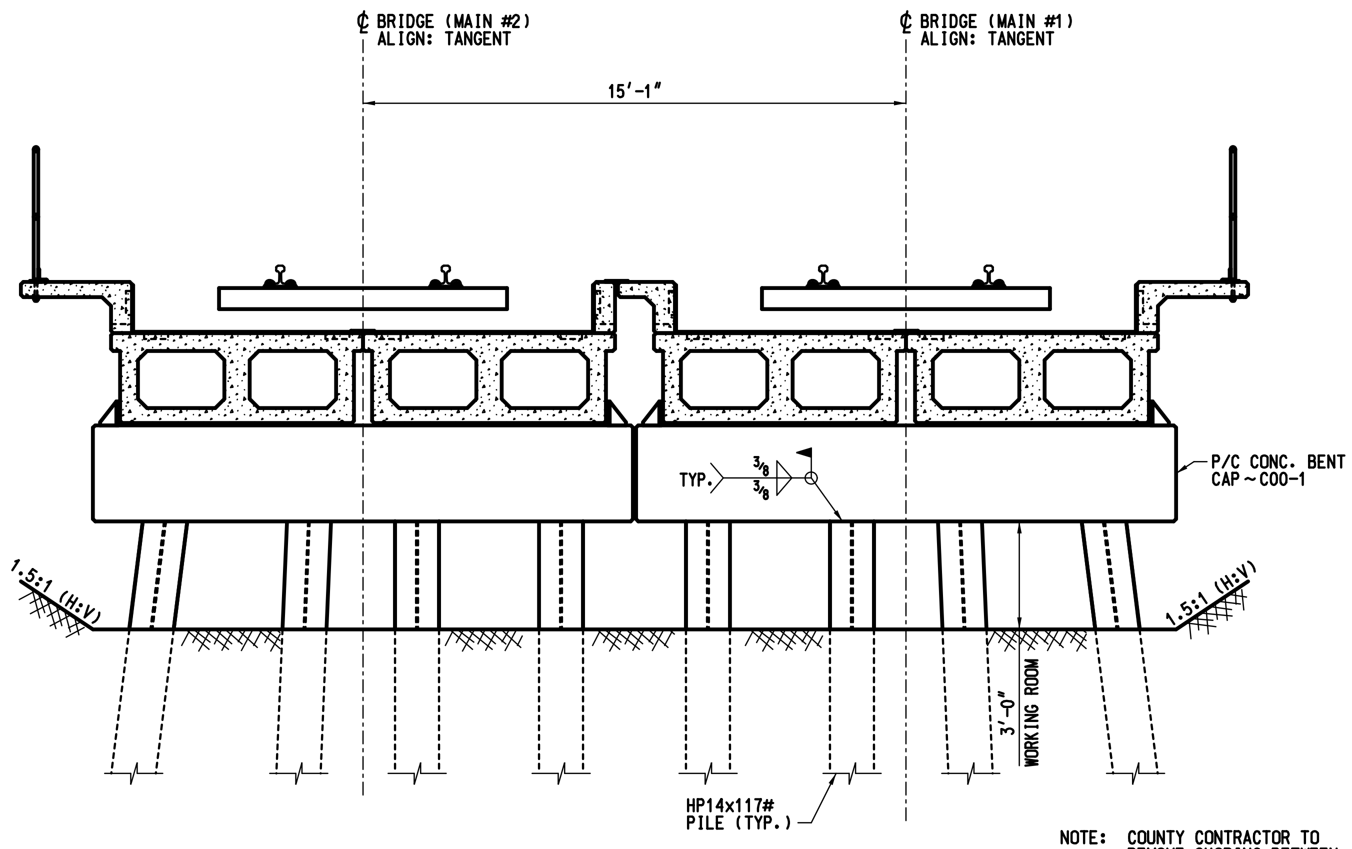
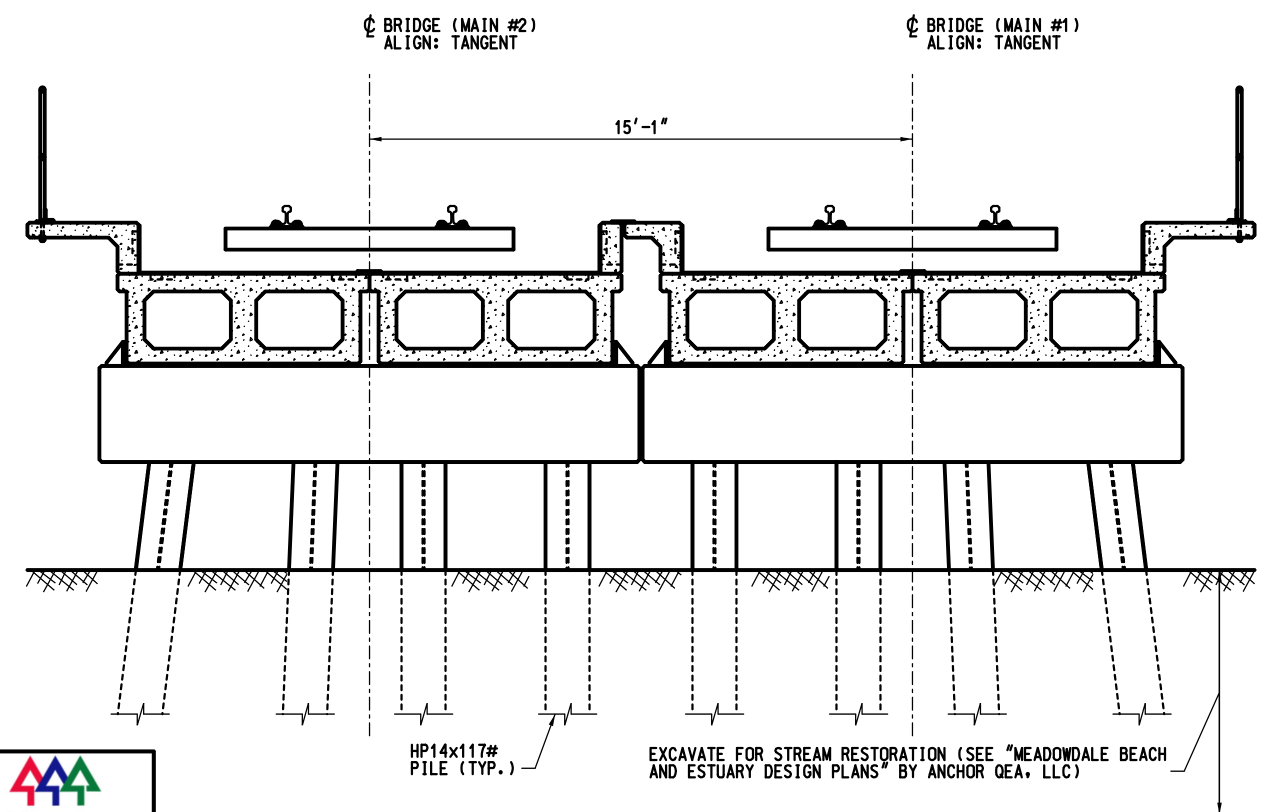


NOTE: COUNTY CONTRACTOR TO REMOVE SHORING BETWEEN STAGE III AND STAGE IV.

SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE IV

(LOOKING RY WEST AT BENT #3)
BY BNSF



SUGGESTED CONSTRUCTION SEQUENCE SECTION - STAGE V

(LOOKING RY WEST AT BENT #3)
BY COUNTY CONTRACTOR

Snohomish County
Parks and Recreation

HANSON
Hanson Professional Services Inc.

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

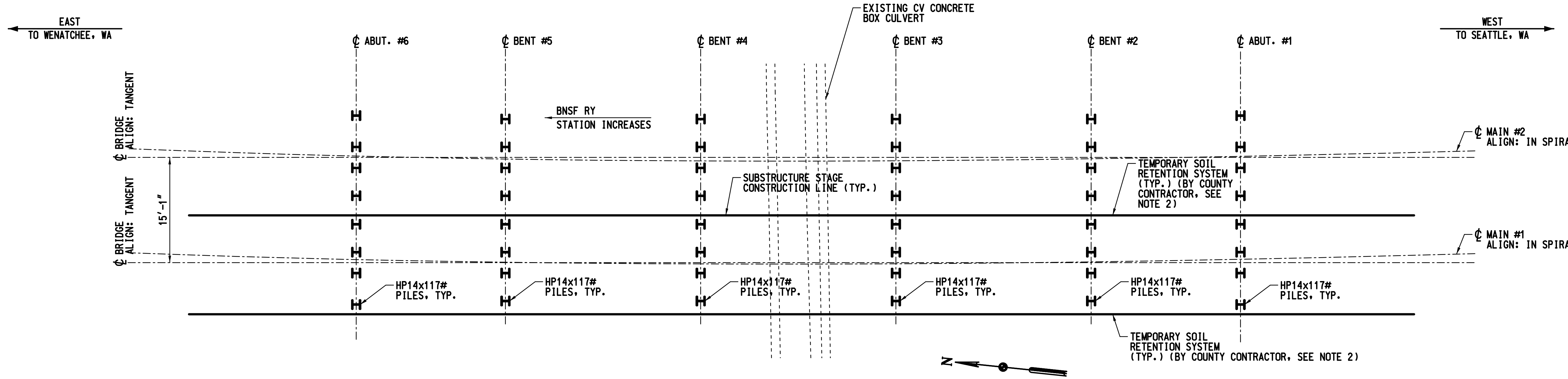
DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE
STAGING SECTIONS IV & V

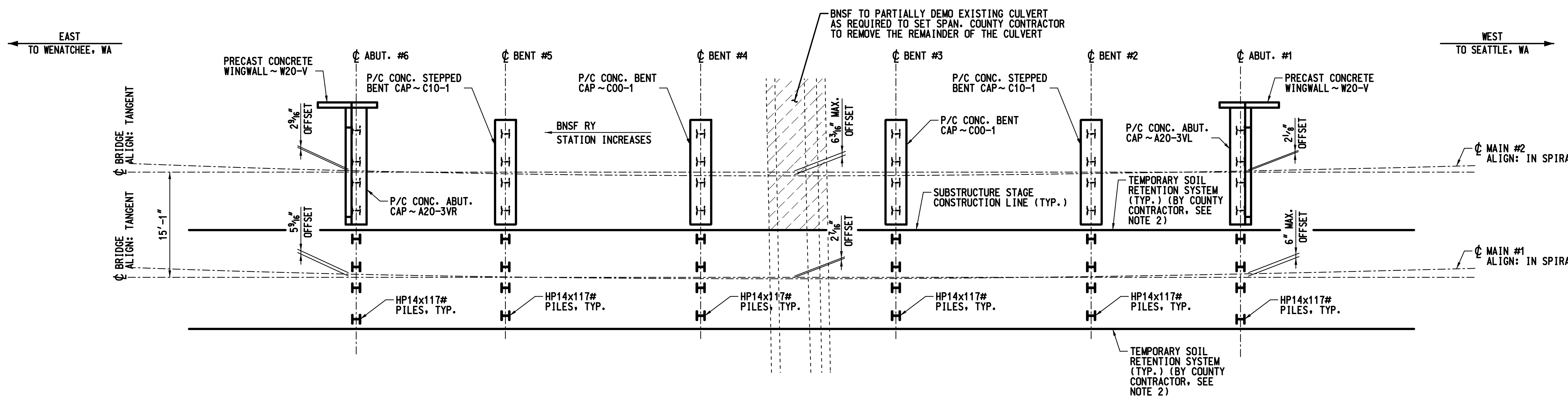
PLAN NO: 0050-0021.800-015
SHEET: 05 OF 10

Date Printed: 6/20/2023 Time Printed: 12:15:19 PM



NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.
2. COUNTY CONTRACTOR TO MODIFY TEMPORARY SOIL RETENTION SYSTEM TO ACCOMMODATE H-PILES AND OTHER BRIDGE COMPONENTS
3. COUNTY CONTRACTOR TO COORDINATE REMOVAL OF TEMPORARY SOIL RETENTION SYSTEM PRIOR TO INSTALLING SHEET-PILE WALL

PLAN - SUGGESTED STAGE I & II



NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.
2. COUNTY CONTRACTOR TO MODIFY TEMPORARY SOIL RETENTION SYSTEM TO ACCOMMODATE H-PILES AND OTHER BRIDGE COMPONENTS

PLAN - SUGGESTED STAGE III

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

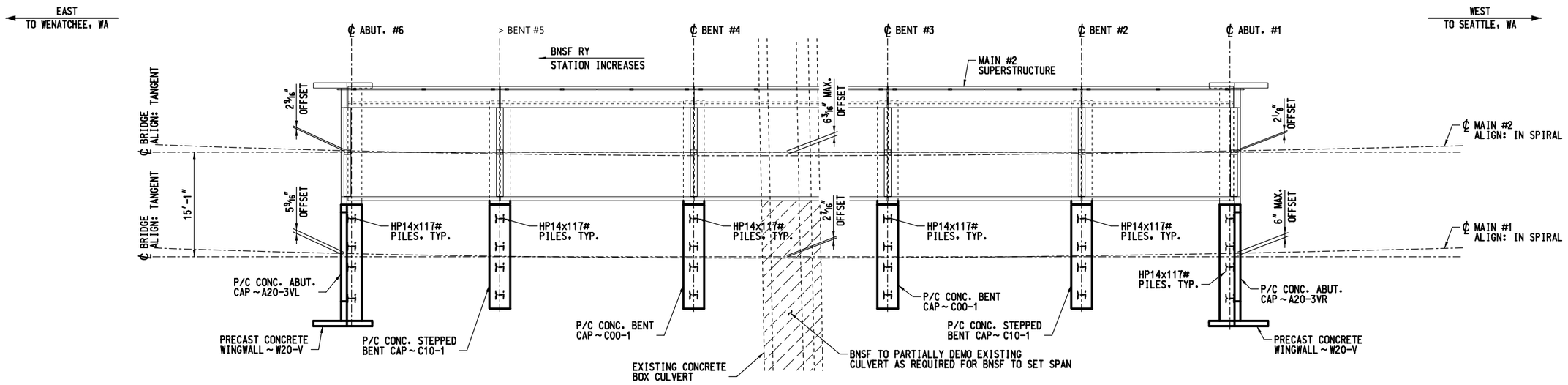
BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE PLAN - STAGE I, II & III

PLAN NO: 0050-0021.800-016
SHEET: 06 OF 10

Snohomish County Parks and Recreation
HANSON
Hanson Professional Services Inc.

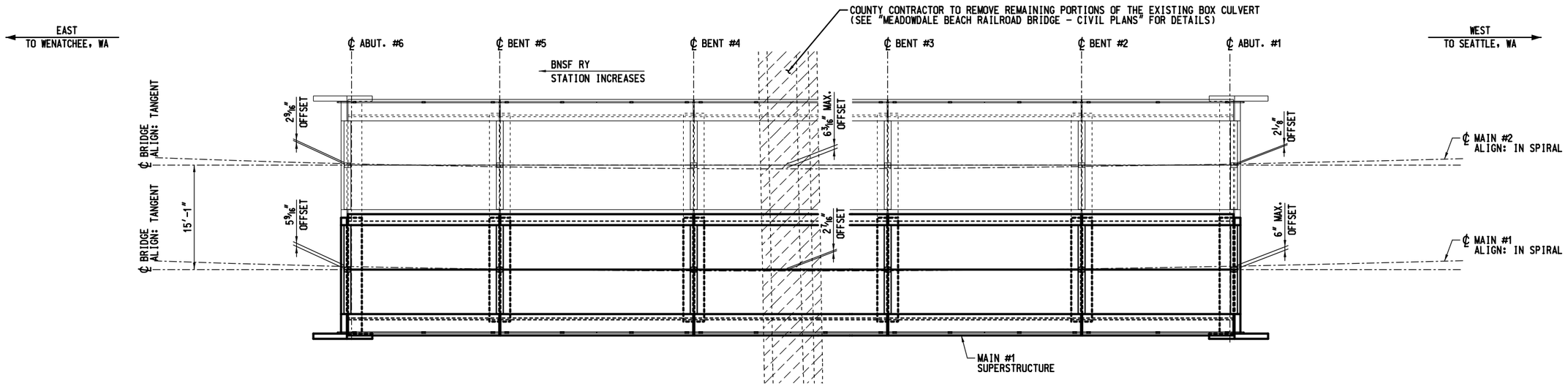
Date Printed: 6/20/2023 Time Printed: 12:15:20 PM



NOTES:
1. SEE SHEETS 3, 4, & 5 TO DETERMINE RESPONSIBILITIES OF BNSF AND COUNTY CONTRACTOR.
2. COUNTY CONTRACTOR MAY LEAVE TEMPORARY SOIL RETENTION SYSTEM IN PLACE AT BRIDGE ABUTMENTS.

PLAN - SUGGESTED STAGE IVa

REMOVE SHORING BETWEEN STAGE III AND STAGE IV



PLAN - SUGGESTED STAGE IVb

(COMPLETELY REMOVE TEMPORARY SOIL RETENTION SYSTEM BEFORE PLACEMENT OF SPANS ON MAIN #1)

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
CONSTRUCTION SEQUENCE PLAN - STAGE IV

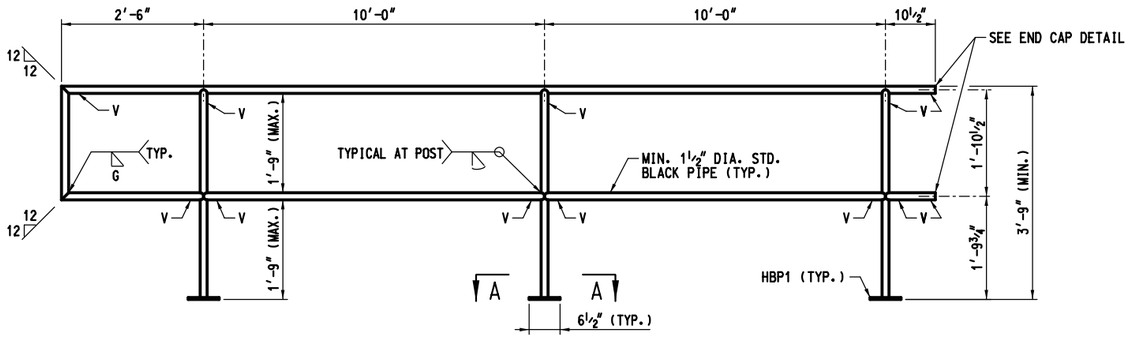
PLAN NO: 0050-0021.800-017 SHEET: 07 OF 10

File Location: I:\Projects\4400687\CAD\Sheet\Sheet07280017.dgn
Date Printed: 6/20/2023 Time Printed: 12:15:21 PM

CLEARANCE 6'-8"

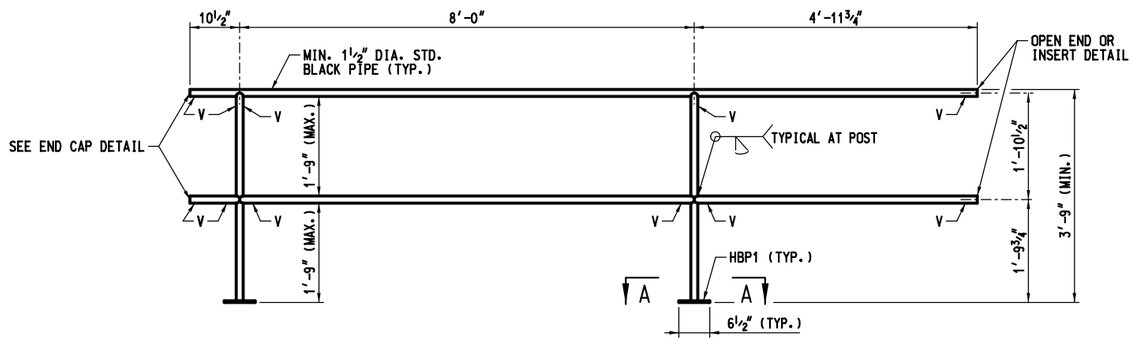
TYPICAL CLEARANCE SIGN 12"x36"

FO BE FURNISHED AND INSTALLED BY COUNTY CONTRACTOR



HANDRAIL PANEL ~ HP1-2W-100

INCLUDE ∠4"X3"X⅜" TOE PLATE. GALVANIZE AFTER FABRICATION.



HANDRAIL PANEL ~ HP2-1W-080

INCLUDE ∠4"X3"X⅜" TOE PLATE. GALVANIZE AFTER FABRICATION.

BILL OF MATERIAL (FOR BNSF ONLY)

LINE	QUAN.	UNIT.	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
1	2	EA	P/C P/S CONC. SLAB BEAM w/ EXT. CURB	B20-2110-E	20"x7'-0"	21'-10"	PER PLAN NO. 0000-1210-01 & 02
2	2	EA	P/C P/S CONC. SLAB BEAM w/ WALK	B20-2110-VW	20"x7'-0"	21'-10"	PER PLAN NO. 0000-1210-01 & 02
3	3	EA	P/C P/S CONC. BOX BEAM w/ EXT. CURB (TYPE II)	B30-2710-E	30"x7'-0"	27'-10"	PER PLAN NO. 0000-1212-03 & 04
4	3	EA	P/C P/S CONC. BOX BEAM w/ WALK (TYPE II)	B30-2710-VW	30"x7'-0"	27'-10"	PER PLAN NO. 0000-1212-03 & 04
5	1	EA	PRECAST CONC. CAP - ABUTMENT	A20-3VR	3'-0"x5'-1¾"	16'-9"	PER PLAN NO. 0000-1120-05
6	1	EA	PRECAST CONC. CAP - ABUTMENT	A20-3VL	3'-0"x5'-1¾"	16'-9"	PER PLAN NO. 0000-1120-05
7	2	EA	PRECAST CONC. CAP - BENT	C00-1	3'-0"x2'-8"	15'-0"	PER PLAN NO. 0000-1110-01
8	2	EA	PRECAST CONC. CAP - BENT	C10-1	3'-0"x3'-6"	15'-0"	PER PLAN NO. 0000-1110-04
9	2	EA	PRECAST CONC. WINGWALL	W20-V	9"x5'-1¾"	8'-6"	PER PLAN NO. 0000-1121-02
10							
11	379.080	LBS.	STEEL H-PILES (72 PIECES)		HP14x117#	45'-0"	MAT'L PER ASTM 572, GR. 50
12							
13	8	EA	WASHER, GALVANIZED	W100	4"x¾"	4"	PER PLAN NO. 0000-1000-06
14	6	EA	DECK PLATE, GALVANIZED	DPV1	12"x⅜"	7'-9½"	PER PLAN NO. 0000-1910-04
15	6	EA	DECK PLATE, GALVANIZED	DPV2	12"x⅜"	7'-9½"	PER PLAN NO. 0000-1910-04
16	9	EA	CURB PLATE, GALVANIZED (27'-10" SPANS)	SCP21.80-1	8"x⅜"	9'-3¼"	PER PLAN NO. 0000-1910-04
17	6	EA	CURB PLATE, GALVANIZED (21'-10" SPANS)	SCP21.80-2	8"x⅜"	7'-3¼"	PER PLAN NO. 0000-1910-04
18	8	EA	RESTRAINER BRACKET	B100	PC OF HP14x89#	8"	PER PLAN NO. 0000-1910-05
19	4	EA	RESTRAINER BRACKET	B101	PC OF HP14x89#	8"	PER PLAN NO. 0000-1910-05
20	4	EA	RESTRAINER BRACKET	B201	∠7"x4"x¾"	8"	PER PLAN NO. 0000-1910-05
21							
22	2	EA	HANDRAIL PANEL w/ TOE PLATES, GALVANIZED	HP1-2W-100	1½" DIA. PIPE	23'-4½"	PER PLAN NO. 0000-1221-01
23	6	EA	HANDRAIL PANEL w/ TOE PLATES, GALVANIZED	HP2-1W-080	1½" DIA. PIPE	13'-10¼"	PER PLAN NO. 0000-1221-01
24	18	EA	PLATE, GALVANIZED	HBP3	¼"x1½"	6"	PER PLAN NO. 0000-1910-06
25	36	EA	BOLT, HEX HEAD, GALVANIZED		¾" DIA.	7"	PER PLAN NO. 0000-1000-13
26	72	EA	STD. WASHER, GALVANIZED 13/16" I.D. x 1 7/16" O.D.				PER PLAN NO. 0000-1000-13
27	36	EA	LOCK NUT, CENTER LOCKING, ZINC PLATED		¾" DIA.		PER PLAN NO. 0000-1000-13
28							
29	4	EA	BEARING PAD, URETHANE, 70 DUROMETER		¾"x10"	13'-10"	PER PLAN NO. 0000-1000-13
30	12	EA	BEARING PAD, URETHANE, 70 DUROMETER		¾"x10"	6'-4"	PER PLAN NO. 0000-1000-13
31	32	EA	PREMOLDED JOINT FILLER, ASPHALT IMPREGNATED		½"x18"	6'-10"	PER PLAN NO. 0000-1000-06
32	16	EA	PREMOLDED JOINT FILLER, ASPHALT IMPREGNATED		½"x28"	6'-4"	PER PLAN NO. 0000-1000-06
33							
34	1	EA	BRIDGE NO. SIGN	21.80			DETAILS PLAN 3103.01.03
35	1	EA	DANGER SIGN, NO. 70		16"x30"		DETAILS PLAN 3070.01.01
36	2	EA	SIGN POST, NO. 1 BLACK			6'-0"	(TRACK STD. PLAN BOOK)

SUPERVISOR STRUCTURES TO PROVIDE:

AS BUILT PLAN SET

Snohomish County Parks and Recreation

HANSON Hanson Professional Services Inc.

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
BILL OF MATERIAL

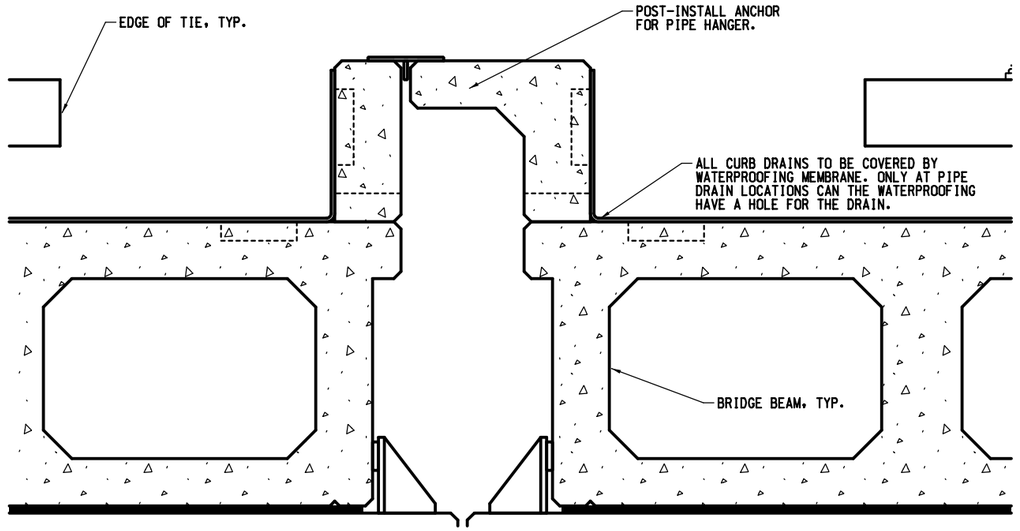
PLAN NO: 0050-0021.800-018 SHEET: 08 OF 10

File Location: E:\Hpost\4\U0080\CAD\Struct\Sheet\21800018.dgn

Date Printed: 6/20/2023 Time Printed: 12:15:22 PM

DRAINAGE SYSTEM REMOVED FROM SCOPE OF WORK.
WATERPROOFING SYSTEM NOT INSTALLED.

2



NOTES:

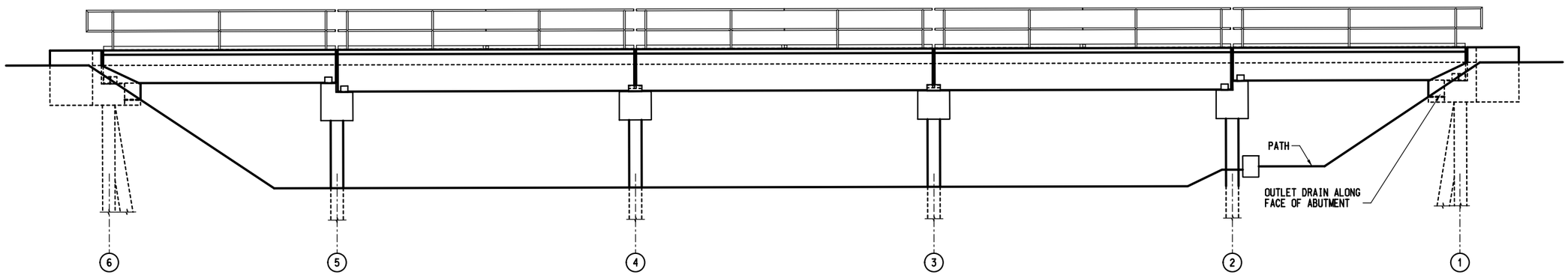
1. MAXIMUM FOUR (4) CURB CONNECTIONS PER SPAN. ALTERNATE CURB DRAIN SIDES TO ALLOW FOR PIPE CLEARANCE.
2. DRAINAGE SYSTEM CONNECTS INTO EXISTING 3" DRAINS IN CURBS.
3. SEAL CONNECTION BETWEEN FLANGE AND THE CONCRETE SURFACE WITH SIKAFLEX-221. DRILL AND ANCHOR THE FLANGED FITTING TO THE CONCRETE USING 3/8" S.S. THREADED ANCHOR WITH 3" EMBEDMENT USING SIKA ANCHORFIX-1.

DECK DRAIN TYPICAL SECTION - BETWEEN BEAMS

BY COUNTY CONTRACTOR

GENERAL NOTES - BRIDGE DRAINAGE SYSTEM:

1. PIPE, FITTINGS, BRACKETS, JOINTS, SEALANTS, CLAMPS, ALL FASTENING AND MOUNTING HARDWARE, PIPE SUPPLIER APPROVED WELD BOND STRUCTURAL ADHESIVE FOR PIPE JOINTS, FABRICATION AND INSTALLATION SHALL BE INCLUDED IN THE COST OF "DRAINAGE SYSTEM", LUMP SUM.
2. THE STEEL COMPONENTS USED FOR SUPPORT BRACKETS AND CLAMPS SHALL MEET THE REQUIREMENTS OF ASTM A36.
3. ALL PIPE HANGERS, BRACKETS AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A-153 UNLESS OTHERWISE NOTED. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED. STAINLESS STEEL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-193, CLASS I, GRADE 8 OR 8F, 303 OR 304, AND STAINLESS STEEL WASHERS SHALL CONFORM TO ASTM A-240, TYPE 302 OR 304.
4. THE EXTERIOR SURFACES OF PVC AND DUCTILE IRON PIPES AND FITTINGS SHALL BE CLEANED ACCORDING TO SOCIETY OF PROTECTIVE COATING'S SPECIFICATION SSPC-SP1 PRIOR TO PAINTING AND SHALL BE COATED WITH AN ENGINEER APPROVED MUNSELL COLOR.



PROFILE DRAIN DETAIL

BY COUNTY CONTRACTOR

AS BUILT PLAN SET

NO.	DATE	REVISIONS
1	4/22/2021	ADD BNSF SIGNATURE BLOCK
2	6/12/2023	AS BUILT NOTES

DES: TDP
DRAWN: CDP
CHECK: MAF
DATE: 06/20/2023
PLAN: 000335554
LINE SEG: 0050

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80A
OVER LUNDS GULCH CREEK
EDMONDS, WA
DRAINAGE SYSTEM

PLAN NO: 0050-0021.800-019 SHEET: 09 OF 10

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

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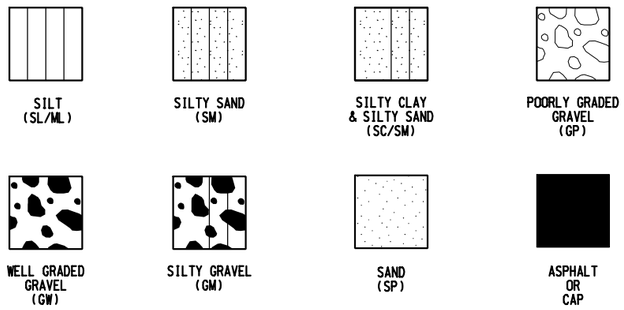
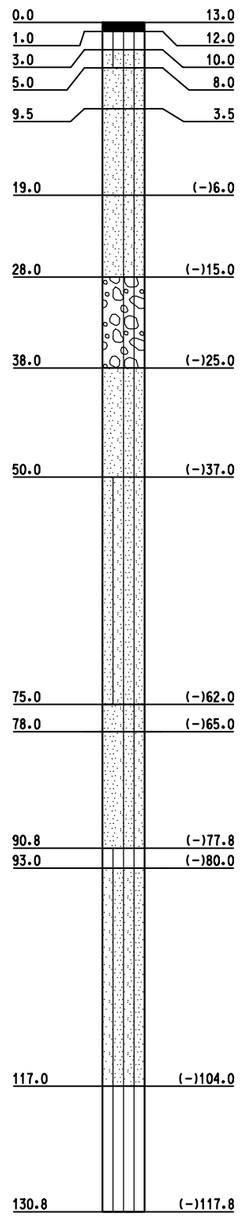
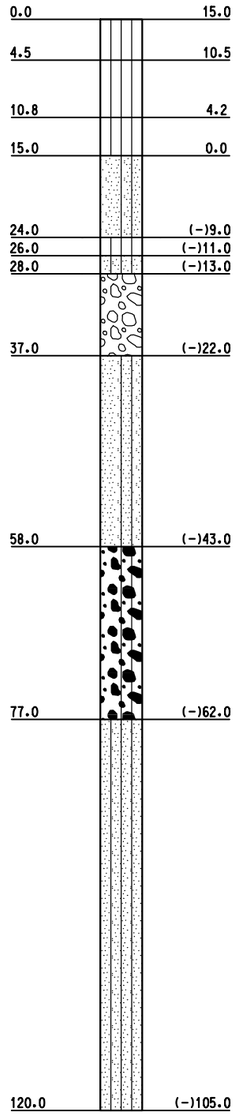
Date Printed: 6/20/2023 Time Printed: 12:15:23 PM

BORING LOG LEGEND





BORING MB-6



BORING MB-7

NOTE:

STICK BORING LOGS PROVIDED FOR REFERENCE ONLY. SEE GEOTECHNICAL REPORT BY SHANNON & WILSON, INC. FOR FULL DETAILS.

AS BUILT PLAN SET

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1	4/22/2021	ADD BNSF SIGNATURE BLOCK

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DATE: 06/20/2023
PLAN: 000335554
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BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

SEATTLE, WA TO WENATCHEE, WA
BRIDGE NUMBER 21.80B
OVER LUNDS GULCH CREEK
EDMONDS, WA
BORING LOGS

PLAN NO: 0050-0021.800-020 SHEET: 10 OF 10

Snohomish County Parks and Recreation

HANSON
Hanson Professional Services Inc.

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