



# GENERAL NOTES:

## 1. GENERAL

- A. VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING WORK.
- B. ALL DIMENSIONS ARE MILLIMETRES UNLESS NOTED OTHERWISE.
- C. ALL WORK SHALL CONFORM TO THE CANADIAN HIGHWAY BRIDGE DESIGN CODE CSA S6:19 AND SAFETY REGULATIONS OF THE WORKERS COMPENSATION BOARD OF BRITISH COLUMBIA.
- D. WHERE CODES AND STANDARDS ARE REFERENCED, THE LATEST EDITION SHALL APPLY.
- E. SUBMIT DETAILS OF PROPOSED SCHEDULE AND WORK METHODS TO THE ENGINEER PRIOR TO CONSTRUCTION.
- F. DETAILED REQUIREMENTS FOR MATERIALS AND FABRICATION ARE DESCRIBED IN THE SPECIFICATIONS. FOR CONVENIENCE, CERTAIN EXTRACTS ARE REPRODUCED BELOW. IN THE EVENT OF CONFLICT, THE SPECIFICATIONS SHALL GOVERN.
- G. MATERIALS AND TESTING HAVE BEEN SPECIFIED TO CONFORM TO THE CURRENT EDITIONS OF RELEVANT STANDARDS PUBLISHED BY THE FOLLOWING ORGANIZATIONS:
  - 1. CANADIAN STANDARDS ASSOCIATION (CSA)
  - 2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- H. UPON COMPLETION OF THE WORK REMOVE ALL DEBRIS AND SURPLUS MATERIALS FROM SITE. LEAVE THE WORK AREA IN CLEAN AND NEAT CONDITION TO THE SATISFACTION OF THE ENGINEER.
- I. THE ESPLANADE IS A PUBLIC FACILITY AND THUS THE CONTRACTOR MUST PROVIDE SAFETY BARRIERS THAT PREVENT PUBLIC ACCESS TO AREAS OF THE ESPLANADE UNDER REPAIR TO THE SATISFACTION OF THE ENGINEER.

## 2. DEMOLITION

- A. TAKE ALL NECESSARY PRECAUTIONS TO CONTAIN THE DEMOLITION WITHIN THE LIMITS DESIGNATED. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO EXISTING STRUCTURES.
- B. ANY DAMAGE INCURRED IN THE EXECUTION OF THIS CONTRACT TO ANY PART OF THE PROPERTY OR STRUCTURE NOT SPECIFICALLY DESIGNATED FOR DEMOLITION SHALL BE REPAIRED, REPLACED AND/OR RECONSTRUCTED BY THE CONTRACTOR AT THEIR EXPENSE TO ITS ORIGINAL CONDITION OR BETTER.
- C. REMOVE AND DISPOSE OF ALL DEMOLITION MATERIAL OFF SITE IN ACCORDANCE WITH ALL MUNICIPAL, PROVINCIAL AND FEDERAL REQUIREMENTS.

## 3. METAL FABRICATIONS

- A. ROLLED STEEL SECTIONS, STEEL BARS AND PLATES: TO CAN/CSA G40.21, GRADE 300W, (44 KSI MINIMUM YIELD) UNLESS OTHERWISE NOTED.
- B. BOLTS, NUTS, AND WASHERS THROUGH TIMBER SHALL CONFORM TO ASTM A307.
- C. DRIFT PINS SHALL CONFORM TO CSA G40.21 GRADE 260W.
- D. ALL METAL AND FASTENERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM A153 AS APPROPRIATE UNLESS NOTED OTHERWISE.
- E. IF APPLICABLE, ALL RE-USED HARDWARE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO REUSE.
- F. SHOP DRAWINGS FOR ALL METAL FABRICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

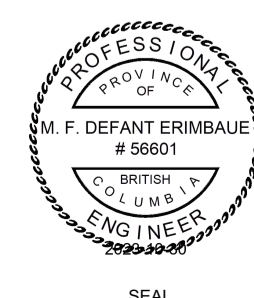
## 4. SAWN TIMBER

- A. ALL TIMBER WORK SHALL CONFORM TO CSA STANDARD O86.
- B. ALL SAWN TIMBER SHALL BE COAST DOUGLAS FIR, NO. 1 GRADE OR BETTER, AND UNLESS NOTED OTHERWISE, SHALL BE PROPERLY DRIED AND SEASONED, CONTAINING NOT MORE THAN 19% MOISTURE.
- C. THE PRESERVATION OF ALL SAWN TIMBER MEMBERS SHALL CONFORM TO CSA O80 TABLE 10 UNLESS NOTED OTHERWISE.
- D. TIMBER SIZE AND DRESSING SHALL BE IDENTICAL TO EXISTING, UNLESS OTHERWISE NOTED. VERIFY PRIOR TO PROCURING.
- E. THE EXACT LENGTH OF EACH TIMBER MEMBER TO BE REPLACED SHALL BE MEASURED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCURING. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL PROJECT QUANTITIES.
- F. LENGTHS OF CORBELS AND SUBCAPS SHOWN ON THE DRAWINGS ARE NOMINAL. CONTRACTOR SHALL VERIFY THAT THE LENGTH SHOWN CAN BE INSTALLED OR ADJUST THE LENGTH REQUIRED TO SUIT THE ADJACENT PILES. SUBMIT FINAL LENGTHS TO THE ENGINEER FOR REVIEW PRIOR TO PROCURING.

## 5. EXECUTION

- A. PILE POSTINGS SHALL BE INSTALLED TO THE FOLLOWING TOLERANCES.  
PLUMB: 1 IN 200
- B. ALL TIMBER TREATMENT SHALL FOLLOW CSA O80.3, UNLESS NOTED OTHERWISE.
- C. ALL CUTTING AND MACHINING OF TIMBER SHALL BE DONE BEFORE TREATMENT WHEN POSSIBLE.
- D. ANY CUTS, HOLES, OR BREAKS IN TIMBER AFTER TREATMENT SHALL BE PROTECTED USING COPPER NAPHTHENATE, AS DEFINED IN CSA O80.3 UNLESS OTHERWISE NOTED. CHECK THAT ALL BOLTS AND NUTS HAVE BEEN CORRECTLY TIGHTENED.

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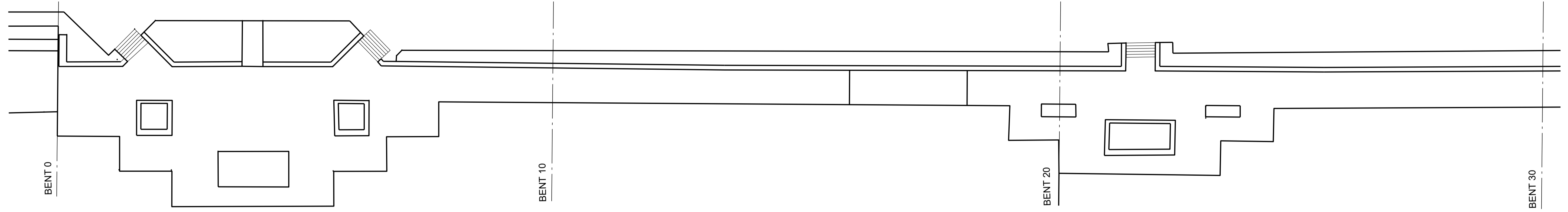


DESIGN	B. WONG				
DRAWN	I. LUKE				
CHECK	M. HELMINGER				
APPROVED	F. DEFANT				
DATE	2023-10-26				
SCALE	AS NOTED				
PROJECT No.	478752				
No.	REVISION DESCRIPTION	DATE (YMD)	BY	CHECK	
A	ISSUED FOR TENDER	2023-10-26			

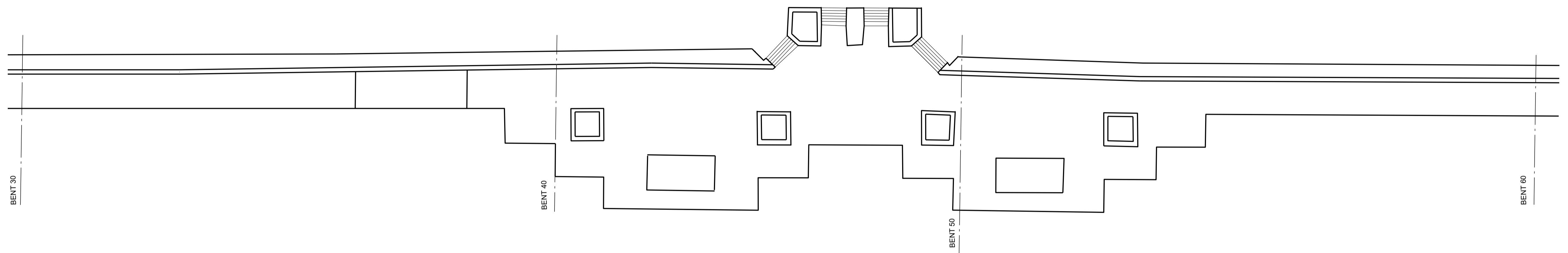


CITY OF NEW WESTMINSTER	
2023 ESPLANADE REHABILITATION PROJECT-NWIT-23-20	
GENERAL NOTES	

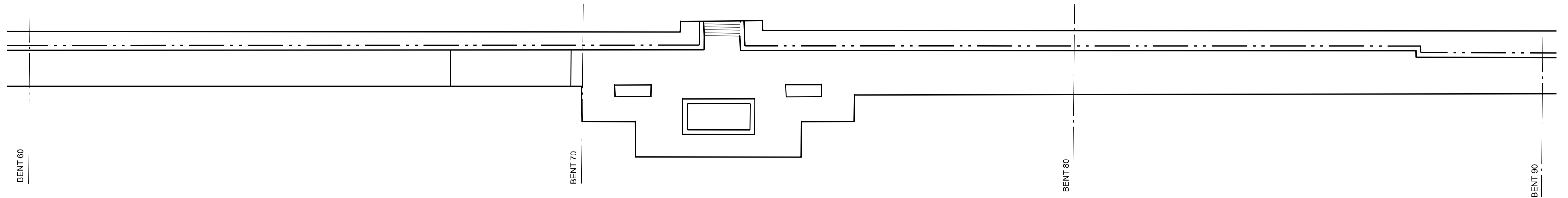
SHEET No.	2	
OF	7	REV. A
DRAWING NO.	SSD-01	



PLAN - BENTS 0-30  
1:200



PLAN - BENTS 31-60  
1:200

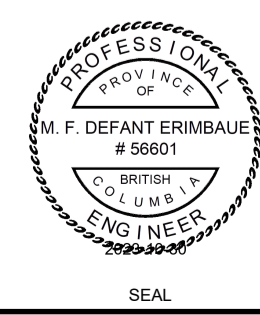


PLAN - BENTS 61-90  
1:200

**NOTES:**

- FOR SCOPE AND LOCATION OF WORK SEE CONTRACT SPECIFICATIONS IN CONJUNCTION WITH DRAWINGS SSD-01 TO SSD-06.
- FOR REPAIR LOCATIONS, SEE DRAWING SSD-04
- FOR REPAIR DETAILS, SEE DRAWING SSD-05
- BENTS ARE NUMBERED STARTING AT BENT 0 ON THE WEST SIDE OF THE ESPLANADE AND CONTINUING TO BENT 169. FIRST PILE IS REFERRED TO AS PILE 1 ADJACENT TO THE CONCRETE BACKWALL AND SUBSEQUENT PILES ARE NUMBERED IN A SOUTHERLY OR OFFSHORE DIRECTION.

© PROJECT INFRASTRUCTURE/478752 NEW WESTMINSTER - 2023 ESPLANADE REHABILITATION/1. CAD/WORKS/478752 - SSD-02 - ESPLANADE BENTS 0-90 PLAN.DWG - PLOTTED ON 2023/10/26 4:33pm BY P002206

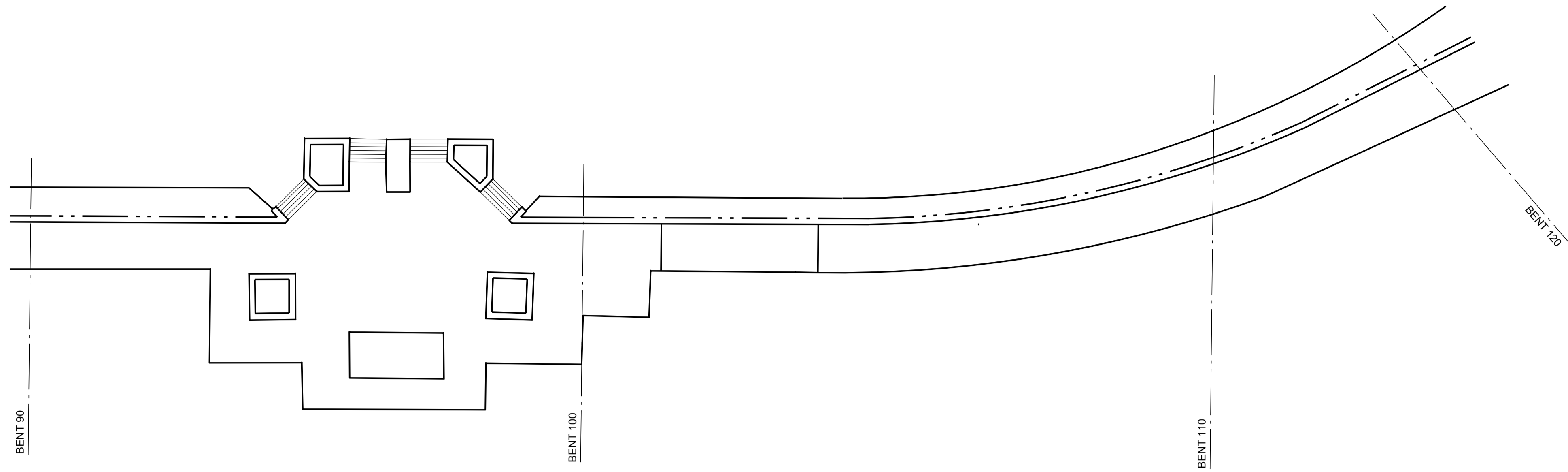
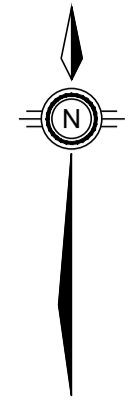


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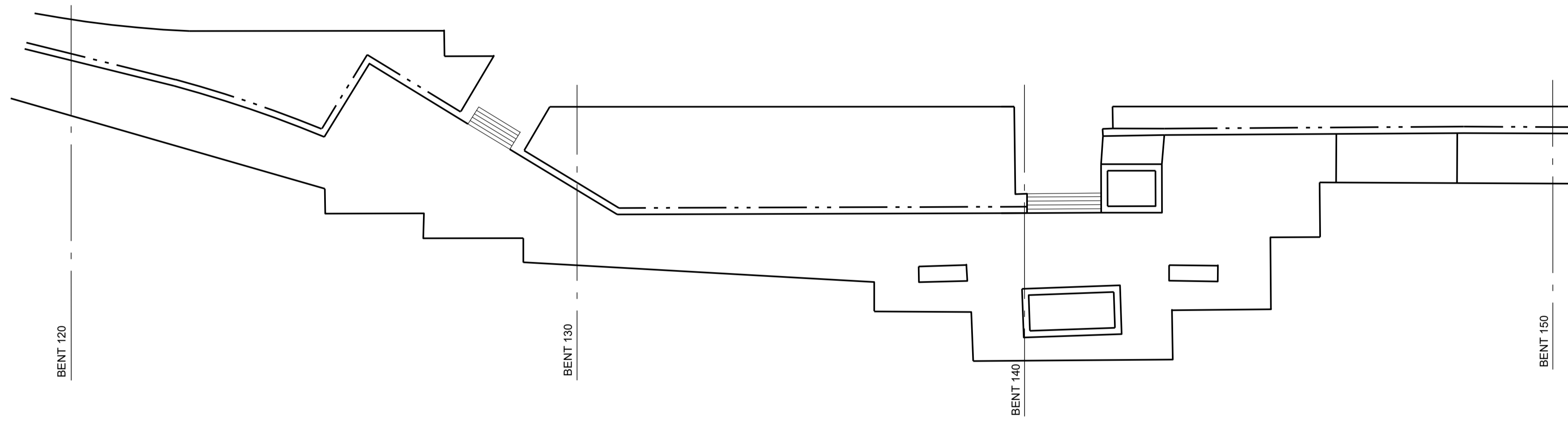
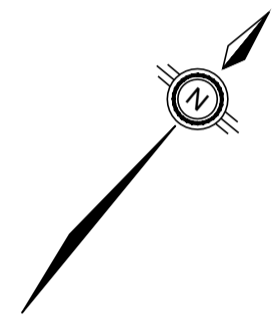
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2023 ESPLANADE REHABILITATION PROJECT-NWIT-23-20	
ESPLANADE BENTS 0 - 90 PLAN	

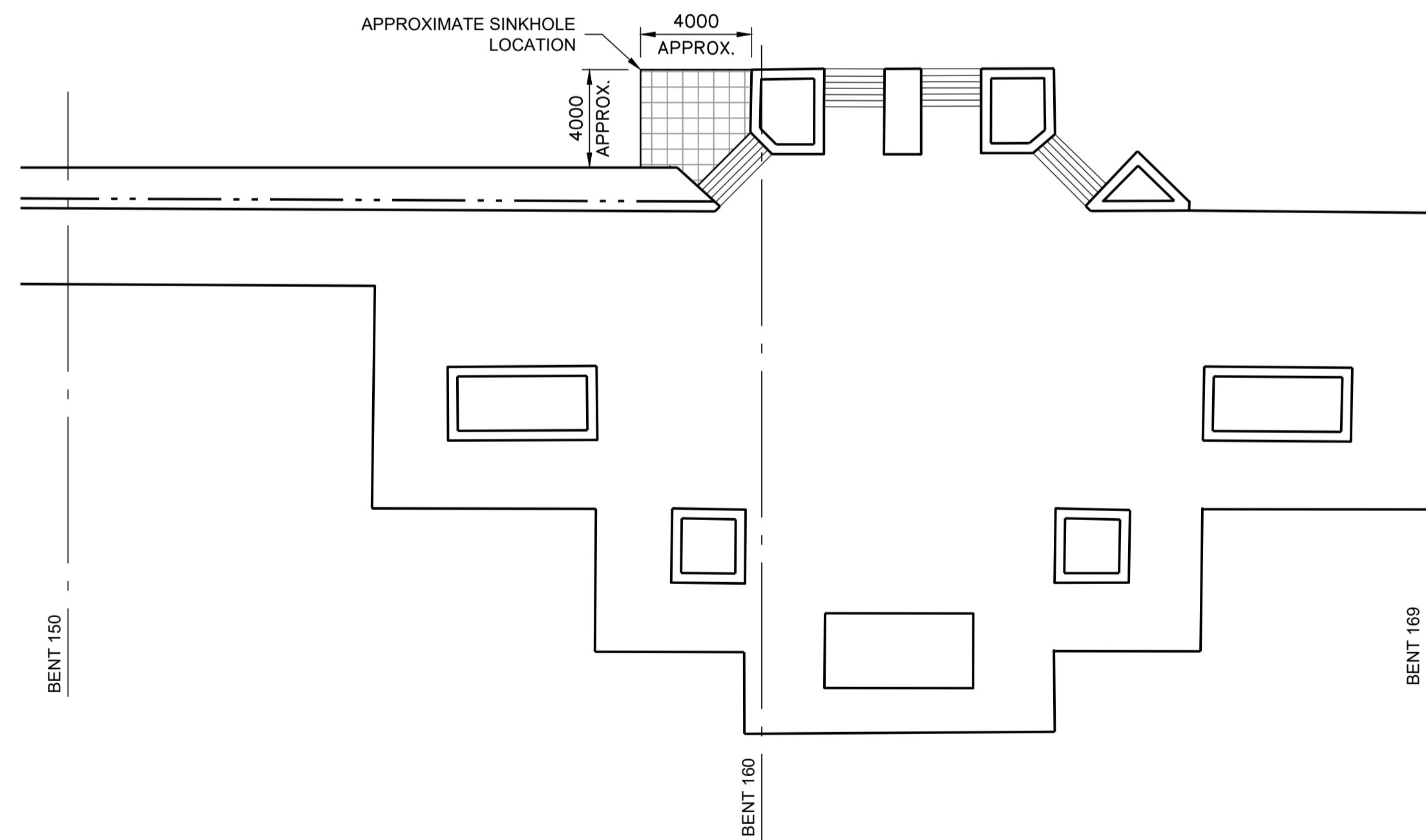
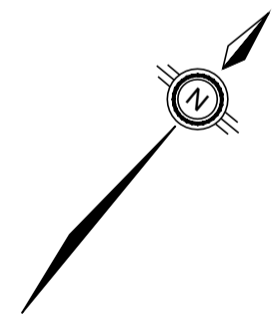
SHEET No.	<b>3</b>
OF	7
REV.	A
DRAWING NO.	SSD-02



PLAN - BENTS 91-120  
1:200



PLAN - BENTS 121-150  
1:200



PLAN - BENTS 151-169  
1:200

**NOTES:**

1. FOR SCOPE AND LOCATION OF WORK SEE CONTRACT SPECIFICATIONS IN CONJUNCTION WITH DRAWINGS SSD-01 TO SSD-06.
2. FOR REPAIR LOCATIONS, SEE DRAWING SSD-04
3. FOR REPAIR DETAILS, SEE DRAWING SSD-05
4. BENTS ARE NUMBERED STARTING AT BENT 0 ON THE WEST SIDE OF THE ESPLANADE AND CONTINUING TO BENT 169. FIRST PILE IS REFERRED TO AS PILE 1 ADJACENT TO THE CONCRETE BACKWALL AND SUBSEQUENT PILES ARE NUMBERED IN A SOUTHERLY OR OFFSHORE DIRECTION.

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PROJECT No.	478752				
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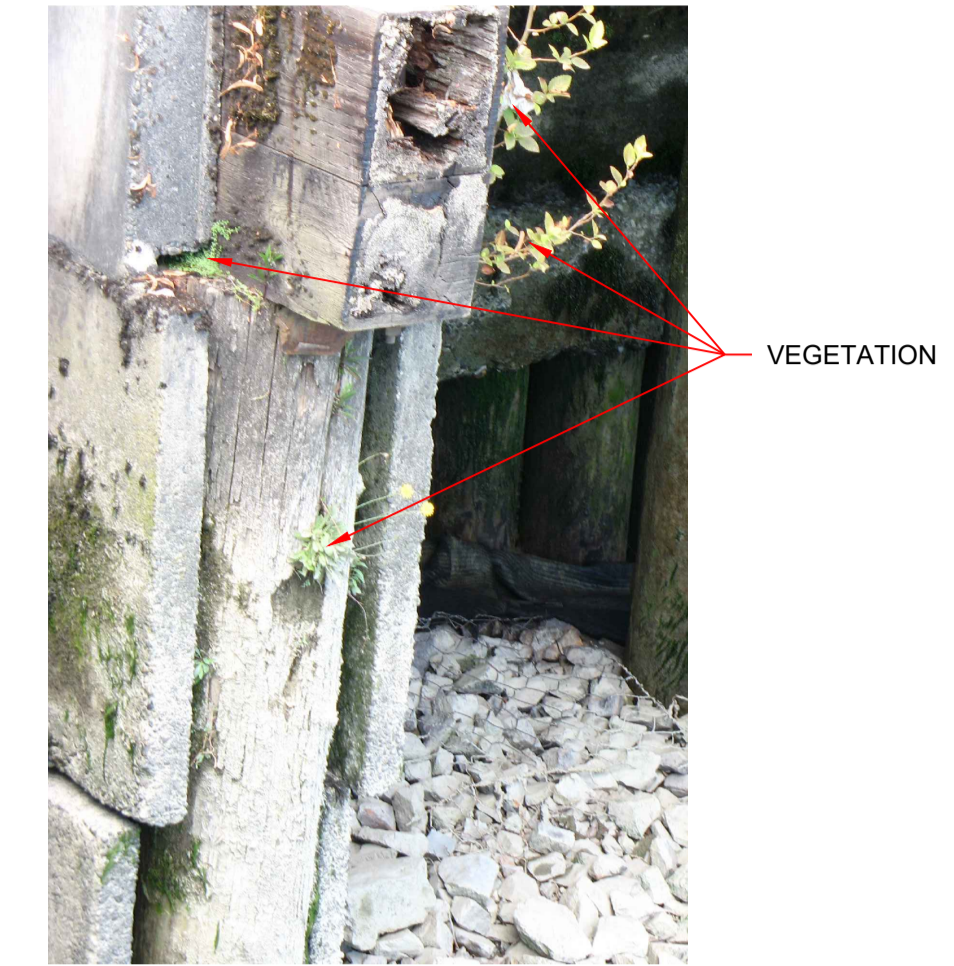
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2023 ESPLANADE REHABILITATION PROJECT-NWIT-23-20	
ESPLANADE BENTS 91 - 169 PLAN	

SHEET No.	
4	
OF 7	REV. A
DRAWING NO.	
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### SUMMARY OF REPAIRS

BENT	PILE	WIDTH	HEIGHT	LENGTH	REPAIR DETAIL	REPAIR DETAIL #	SS REF. #	COMMENTS
2	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
3	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
4	CAP	12"	15-1/2"	OP	REPLACE PILE CAP	FIG. 2	SSP 6	BENT B4 IS INCORRECTLY LABELLED IN THE FIELD AS B5.
	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	BENT B4 IS INCORRECTLY LABELLED IN THE FIELD AS B5.
7	7				INSTALL PILE BANDING STRIPS	FIG. 8	SSP 7	
	1				ADD SHIM BETWEEN PILE AND POSTING	FIG. 4	SSP 6	
8	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
10	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
14	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
15	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
18	2				INSTALL PILE BANDING STRIPS	FIG. 8	SSP 7	
	2				ADD SHIM BETWEEN PILE AND POSTING	FIG. 4	SSP 6	
20	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
21	BRACE				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
25	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
26	CAP	12"	32-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	DOUBLE CAP (15-1/2" + 17" HEIGHT), BOTH MEMBERS TO BE REPLACED.
32	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
34	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
35	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
36	CAP				CONNECT CAPS TOGETHER	FIG. 8	SSP 7	
38	CAP				CONNECT CAPS TOGETHER	FIG. 8	SSP 7	
39	CAP	12"	46-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
42	CAP	12"	15-1/2"	OP	REPLACE PILE CAP	FIG. 2	SSP 6	
45	6				INSTALL PILE BANDING STRIPS	FIG. 8	SSP 7	
	12				REMOVE VEGETATION	-	SSP 5	
46	9				INSTALL PILE BANDING STRIPS	FIG. 8	SSP 7	
48	N/A				REMOVE VEGETATION	-	SSP 5	
	BRACE				ADD CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
52	CAP	12"	15-1/2"	OP	REPLACE PILE CAP	FIG. 2	SSP 6	
53	CAP	12"	15-1/2"	OP	REPLACE PILE CAP	FIG. 2	SSP 6	
62	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
63	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
68	CAP	14-1/4"	24"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	DOUBLE CAP (14" + 10" HEIGHT), REPLACE BOTH.
72	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
78	N/A				REMOVE DRIFTWOOD	-	SSP 5	DRIFTWOOD MAY OR MAY NOT EXIST AT TIME OF CONSTRUCTION.
82	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
94	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
95	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
96	4				INSTALL PILE BANDING STRIPS	FIG. 8	SSP 7	
97	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
110	CAP	12"	16-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	REMOVE EXISTING CAP AND SHIMS. CONTRACTOR IS TO RIP NEW PILE CAP BEAM TO FIT SNUG. TREAT EXPOSED FACE IN ACCORDANCE WITH MOT SSHC, SECTION 213.
112	CAP	12"	15-1/2"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
119	CAP	12"	15-3/4"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
120	CAP	12"	15-3/4"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	
125	CAP	12"	15-3/4"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	REMOVE EXISTING CAP AND SHIMS. CONTRACTOR IS TO RIP NEW PILE CAP BEAM TO FIT SNUG. TREAT EXPOSED FACE IN ACCORDANCE WITH MOT SSHC, SECTION 213.
	9				PILE POSTING REQUIRED	FIG. 1	SSP 6	
126	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
143	BRACE				REPLACE CROSS BRACING	FIG. 5	SSP 6	THE CONTRACTOR IS RESPONSIBLE FOR FASTENERS AND ITEMS REQUIRED FOR INSTALLATION.
151	CAP	12"	25"	12'	REPLACE PILE CAP	FIG. 2	SSP 6	DOUBLE CAP (13-1/2" + 11-1/2" HEIGHT), REPLACE BOTH.
160	N/A				REPAIR SINKHOLE	FIG. 9	SSP 9	



EXAMPLE OF VEGETATION TO BE REMOVED

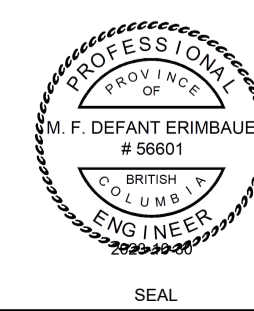


EXAMPLE OF DRIFTWOOD TO BE REMOVED

**NOTES:**

- FOR BENTS OVER 12' LONG (OBSERVATION PLATFORM IDENTIFIED BY "OP"), FIELD CUT LENGTH OF 4'-8" MAY BE USED.
- 4" x 4" x 16' TIMBER CROSS BRACING MEMBERS HAVE BEEN PROCURED BY THE CITY. CONTRACTORS SHALL COORDINATE WITH THE ENGINEER FOR PICKUP LOCATION AND DATE/TIME.
- TYPICAL PILE CAP CROSS SECTIONAL SIZE IS 12" x 15 1/2" U.N.O.

C:\PROJECTS\INFRASTRUCTURE\NEW WESTMINSTER\2023 ESPLANADE REHABILITATION\DRAWINGS\SSDC\SUMMARY OF REPAIR WORK.DWG PLOTTED ON 2023/10/24 11:04 AM BY 60022960



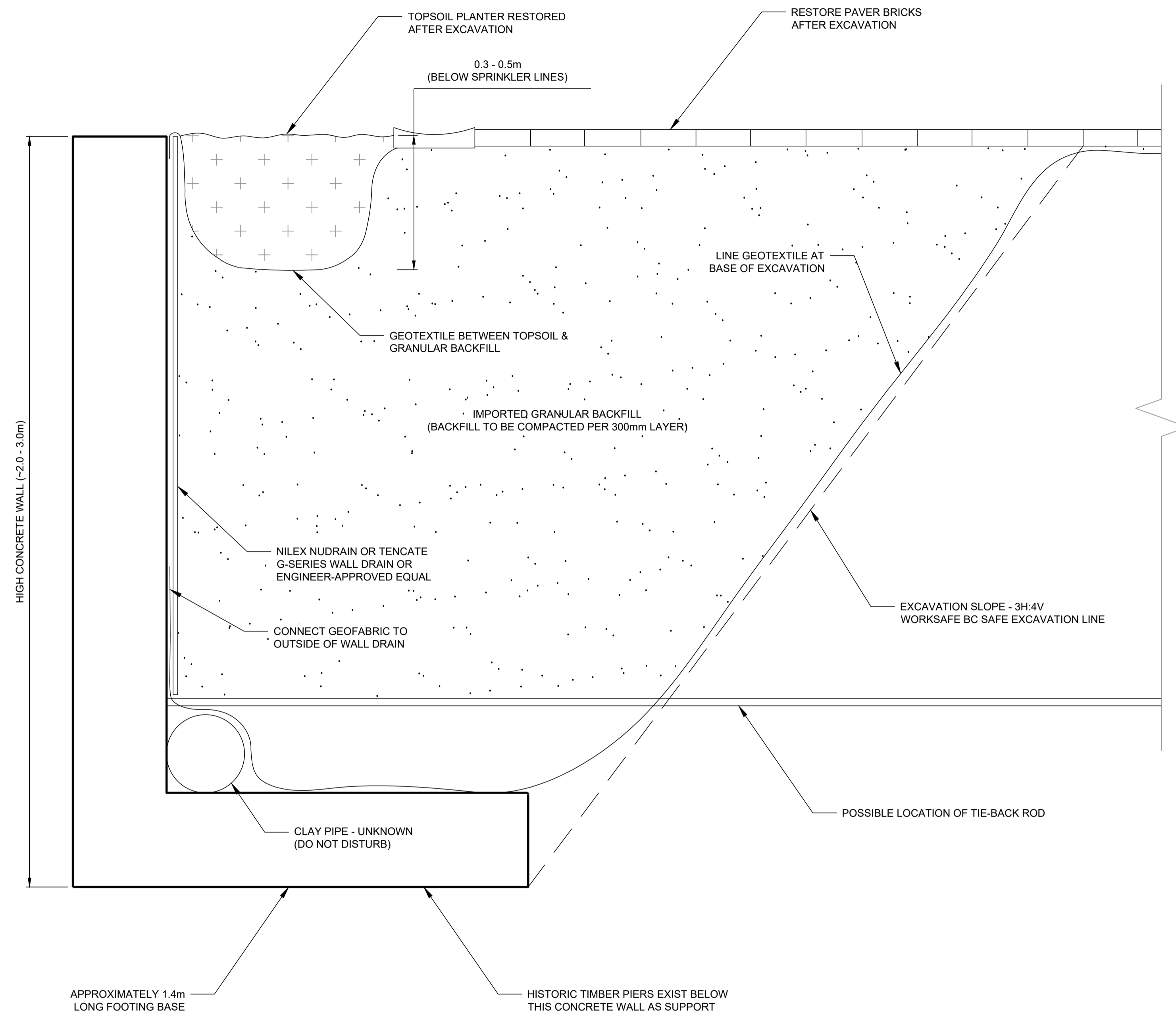
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DATE	2023-10-26
SCALE	AS NOTED
PROJECT No.	478752



CITY OF NEW WESTMINSTER		SHEET No.	5
2023 ESPLANADE REHABILITATION PROJECT-NWIT-23-20		OP	7
SUMMARY OF REPAIR WORK		REV.	A
		DRAWING NO.	SSD-04



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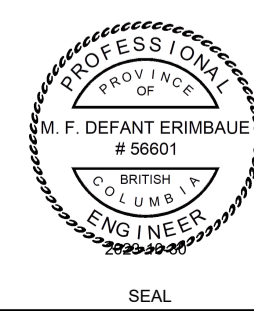


**SINKHOLE REPAIR DETAIL**

**FIGURE 9**

**NOTES:**

1. DETAIL SHOWN ON THIS PAGE FOR SINKHOLE REMEDIATION HAS BEEN TAKEN FROM GOLDER REPORT "WATERFRONT ESPLANADE BOARDWALK RECONSTRUCTION 2020" DATED MAY 14, 2021 PER THE DIRECTION OF THE CITY OF NEW WESTMINSTER.
2. PLACE BACKFILL IN LIFTS NO MORE THAN 300mm THICK AND COMPACT TO MEET 95% MODIFIED PROCTOR DRY DENSITY IN-SITU DENSITY.
3. SIZE OF SINKHOLE AS OF AUGUST 2023 IS APPROXIMATELY 4m x 4m x 2.4m. TO ACCOUNT FOR VARIABILITY AND CHANGES IN CONDITIONS, CONTRACTOR SHALL ASSUME A TOTAL SIZE OF 6m x 6m x 3m WHEN PRICING THIS WORK ELEMENT. CONTRACTOR SHALL CONFIRM DIMENSIONS IN FIELD PRIOR TO PROCURING MATERIAL.



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2023 ESPLANADE REHABILITATION PROJECT-NWIT-23-20	
SINKHOLE REMEDIATION DETAIL	

SHEET No.	
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