

REQUEST FOR TENDER No. 20-038

Gabriola Island Village Way Path Construction Project

Addendum 3 (4 Pages) Issued: July 3, 2020

Closing Date & Time: on or before 3:00 PM Pacific Time on July 8, 2020

This addendum shall be read in conjunction with and considered as an integral part of the Request for Tender. Revisions supersede the information contained in the original Tender or previously issued Addendum. No consideration will be allowed for any extras due to any Vendor not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

Item 1RECEIPT OF ADDENDA
Acknowledge receipt of addenda by email to
nathan.trobridge@newcastleengineering.comItem 2Include Gabriola Island, Village Way Path Questions and Answers, July 3,
2020.Item 3Refer to the Specifications, Gabriola Island Village Way Path. Replace
Opus Engineering Ltd. Gabriola Village Way – S1 Rev 2 with Opus
Engineering Ltd. Gabriola Village Way – S1 Rev 3

Attachments:

- 1. Gabriola Island, Village Way Path Questions and Answers, July 3, 2020.
- 2. Opus Engineering Ltd S1 Rev 3.

End of Addendum 3

Gabriola Island, Village Way Path Questions and Answers, July 3, 2020.

Q: Bid Item C-01 'Retaining Wall'. Will there be a separate pay item for the base of the retaining wall?

A: No separate pay item for base of wall.

Q: Bid item C-01 'Retaining Wall'. Can Flex MSE be an alternative to the concrete retaining wall?

A: Retaining walls are to be concrete as specified.

Q: Just wondering what the Gravel topping for the path is. I assume the base is $\frac{3}{4}$ " and the subbase is 3"

A: 3/8 minus for gravel top. Base is 3/4 minus and sub base is 3" minus

Q: May we request that the tender closing date be extended.

A: The tender closing will not be extended.

Q: Who is responsible for survey?

A: The Consultant (Newcastle Engineering) will only provide layout information for the project and will not provide construction layout or survey services. The contractor will provide survey services as necessary for the project

Q: Who is responsible for Geotechnical testing of the gravel placement as well as review of Subgrade?

A: The Owner will retain a Geotechnical Consultant, The Contractor will be responsible to provide materials testing during the work to test all materials deemed necessary.

Q: Is there a milestone date when the project needs to be completed by A: The goal is to complete the project in 2020, however factors beyond the contractors control

will be taken into consideration should parts of the project extend into early 2021.

Q: Item A-14 BC Hydro Guy wire, Are we just to coordinate this, and the work to be done by BC Hydro?

A: Contractor to coordinate timing and site activity with work done by BC Hydro

Q: Item A-12 Once the Barriers are removed, are they to be placed somewhere on site or to be stored somewhere?

A: Relocated on school property

Q: What conversion factor will be used for payment survey to convert aggregates from M3 to tons?

A: 2.43 Tonne per cubic metre conversion factor will be acceptable.

Q: For trees to be fallen within the Bird Window, Who is responsible for a bird nest survey? A: Nest surveys are to be completed by a QEP prior to removal if within the Nesting Window and will be the responsibility of the Contractor.

Q: Will there be access to water at a hydrant provided by the RDN? Will there be a cost? A: Hydrant water is not available. Water is to be provided by the Contractor. Q: Item B-13 Tie into existing Storm Main. Is this where the proposed round catch basin goes? A: Correct

(1.0	GENERAL NOTES:	1.2 REFERENCES
.01	ALL DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE 2018 BC BUILDING CODE.	.1 ANSI/ACT 117, TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS. .2 ASTM DI751, SPECIFICATION FOR PREFORMED EXPANSION JOINT FILLERS FOR CONCRETE PAVING
	AS WELL AS THE LATEST EDITION OF ALL REFERENCED CODES AND ALL LOCAL BY-LAWS.	AND STRUCTURAL CONSTRUCTION (NONEXTRUDING AND RESILIENT BITUMINOUS TYPES). .3 CAN/CSA-A23.1-14, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
.02	COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR	.4 CAN/CSA-A23.2-14, METHODS OF TEST FOR CONCRETE. .5 CAN3-A266.1, AIR_ENTRAINING ADMIXTURES FOR CONCRETE.
.03	THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS.	.6 CAN3-A266.2, CHEMICAL ADMIXTURES FOR CONCRETE.
.04	DESIGN LOADS ARE IN ACCORDANCE WITH THE BC BUILDING CODE 2018 AND THE	1.3 CERTIFICATES
20	INCRECTIONS.	.1 PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CAN/CSA-A23.1 AND THAT MIX DESIGN IS ADJUSTED TO PREVENT
2.0		ALKALI AGGREGATE REACTIVITY PROBLEMS. .2 PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF
.01	THE BUILDING CODE REQUIRES INSPECTIONS TO BE CARRIED OUT TO CONFIRM THAT THE CONSTRUCTION CONFORMS WITH OUR DRAWINGS AND SPECIFICATIONS.	SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CAN/CSA-A23.1 AND
.02	THE ENGINEER REQUIRES A MINIMUM OF 24 HOURS' ADVANCE NOTICE FOR AN INSPECTION.	2 <u>PRODUCTS</u>
.03	INSPECTIONS ARE REQUIRED AS FOLLOWS: CONCRETE & REINFORCING STEEL - AFTER PLACING OF REINFORCEMENT	2.1 MATERIALS .1 PORTLAND CEMENT: TO CAN/CSA-A5.
3.0	CONCRETE FORMWORK:	.2 WATER: TO CAN/CSA_A23.1. 3 AGGREGATES: TO CAN/CSA_A23.1 COARSE AGGREGATES TO BE NORMAL DENSITY
1	GENERAL	.4 AIR ENTRAINING ADMIXTURE: TO CAN3_A266.1.
1.1 RE	ELATED WORK	RETARDING ADMIXTURES DURING COLD AND HOT WEATHER PLACING.
.2	SECTION 5.0 - CAST-IN-PLACE CONCRETE	.6 CURING COMPOUND: TO CAN/CSA_A23.1 WHITE AND TO ASTM C309, TYPE 1_CHLORINATED RUBBER. .7 PREMOULDED JOINT FILLERS: BITUMINOUS IMPREGNATED FIBER BOARD: TO ASTM D1751.
.3 1.2	SECTION 6.0 - CONCRETE FINISHES REFERENCES	.8 WEEP HOLE TUBES: PLASTIC. 2.2 CONCRETE MIXES
.1	CAN/CSA-A23.1-14, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION. CSA 086.1-14, ENGINEERING DESIGN IN WOOD.	.1 PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, ALTERNATIVE 1
.3	CSA 0121-08, DOUGLAS FIR PLYWOOD.	.1 CEMENT: TYPE 10 PORTLAND CEMENT.
.5	CAN/CSA-S269.3-M92, FORMWORK.	.2 MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 25 MPA. .3 MAXIMUM WATER/CEMENT RATIO: 0.45
2 2.1 M/	PRODUCTS ATERIALS	.4 CLASS OF EXPOSURE: N. 5 Nominal Size of coarse accregate: 20 MM
.1	FORMWORK LUMBER: PLYWOOD AND WOOD FORMWORK MATERIALS TO CAN/CSA-0121 AND CSA-086.1.	.6 SLUMP AT TIME AND POINT OF DISCHARGE: 80-120 MM.
.2	FORM TIES: 1" DIA PLASTIC CONE SNAP TIES ALLOWING SHORT-END SNAP TIES TO BE BROKE BACK WITH THE FORMS STULL IN PLACE FORM TIES SHALL BE OF NON-CORRODING MATERIALS	./ AIR CONTENT: 5-8%.
2	THAT WILL NOT MAR THE FINISHED SURFACE.	.2 PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, ALTERNATIVE 1 TO GIVE FOLLOWING PROPERTIES: FOR CONCRETE IN RETAINING WALLS.
.5	REACT WITH FREE LIME IN CONCRETE RESULTING IN WATER INSOLUBLE SOAPS.	.1 CEMENT: TYPE 10 PORTLAND CEMENT. 2 MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 32 MPA
.4	FORM STRIPPING AGENT: COLOURLESS MINERAL OIL, FREE OF KEROSENE, WITH VISCOSITY BETWEEN 15-24 MM2/S AT 40C, FLASHPOINT MINIMUM 150C, OPEN CUP.	.3 MAXIMUM WATER/CEMENT RATIO: 0.55
.5	SPRAY-APPLIED, WATER SOLUBLE SURFACE RETARDER TOP-STOP VERTICIAL A'S SUPPLIED BY W.R. MEADOWS, OR PRE-APPROVED ALTERNATIVE.	.4 CLASS OF EXPOSURE: F-2. .5 NOMINAL SIZE OF COARSE AGGREGATE: 10 MM.
.6	SEALANT: TO SECTION 07900 _ SEALANTS.	.6 SLUMP AT TIME AND POINT OF DISCHARGE: 80–120 MM. .7 AIR CONTENT: 4–7%.
3.1 ER	RECTION	3 <u>EXECUTION</u> 3.1 GENERAL
1.	SUBMIT FORMWORK DESIGN & DETAILED DRAWINGS SHOWING THE LOCATION OF JOINTS IN FORMWORK AND LOCATION OF FORM TIES.	.1 DO CAST_IN_PLACE CONCRETE WORK IN ACCORDANCE WITH CAN/CSA-A23.1.
.2	VERIFY LINES, LEVELS AND CENTRES BEFORE PROCEEDING WITH FORMWORK AND ENSURE DIMENSIONS AGREE WITH DRAWINGS.	3.2 WORKMANSHIP .1 OBTAIN ENGINEER'S APPROVAL BEFORE PLACING CONCRETE. PROVIDE 24 H NOTICE PRIOR TO
.3	OBTAIN ENGINEER'S APPROVAL FOR USE OF EARTH FORMS. HAND TRIM SIDES AND BOTTOMS AND REMOVE LOOSE EARTH FROM EARTH FORMS BEFORE	PLACING OF CONCRETE. .2 PUMPING OF CONCRETE IS PERMITTED ONLY AFTER APPROVAL OF EQUIPMENT AND MIX.
E	PLACING CONCRETE.	.3 ENSURE REINFORCEMENT AND INSERTS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
.5	CONCRETE CONFORMING TO SHAPE, DIMENSIONS, LOCATIONS AND LEVELS INDICATED WITHIN	PROTECTION OF CONCRETE DURING PLACING AND CURING IN ADVERSE WEATHER.
.6	TOLERANCES REQUIRED BY CAN/CSA-A23.1. OBTAIN ENGINEER'S PERMISSION BEFORE FRAMING OPENINGS NOT INDICATED.	POUR, QUALITY, AIR TEMPERATURE AND TEST SAMPLES TAKEN.
.7	USE 20 MM CHAMFER STRIPS ON EXTERNAL CORNERS, UNLESS SPECIFIED OTHERWISE. FORM CHASES, SLOTS, OPENINGS, DRIPS, RECESSES, EXPANSION AND CONTROL JOINTS AS	.6 DO NOT PLACE LOAD UPON NEW CONCRETE OR BACKFILL RETAINING WALLS UNTIL AUTHORIZED BY ENGINEER.
a	INDICATED.	3.3 INSERTS .1 NO SLEEVES, DUCTS, PIPES OR OTHER OPENINGS SHALL PASS THROUGH RETAINING WALLS OR
	SHALL NOT BE REUSED IF THERE IS ANY EVIDENCE OF SURFACE WEAR THAT WOULD IMPAIR THE QUALITY OF THE FINISHED SURFACE	FOOTINGS, EXCEPT WHERE INDICATED OR APPROVED BY ENGINEER
.10	LEAVE FORMWORK IN PLACE FOR FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING	.2 WHERE APPROVED BY ENGINEER, SET SLEEVES, TIES, AND OTHER INSERTS AND OPENINGS AS
	.1 1 DAY FOR WALLS.	INDICATED OR SPECIFIED ELSEWHERE. SLEEVES AND OPENINGS GREATER THAN 100 X 100 THT NOT INDICATED, MUST BE APPROVED BY ENGINEER.
.11	.2 I DAY FOR WALKS. FORMS ARE TO BE DESIGNED FOR EASY REMOVAL. WORKERS SHALL NOT PRY AGAINST THE	.3 DO NOT ELIMINATE OR DISPLACE REINFORCEMENT TO ACCOMMODATE HARDWARE. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF MODIFICATIONS FROM ENGINEER
	EXPOSED SURFACE OR OTHERWISE MARK THE FINISHED SURFACE.	BEFORE PLACING OF CONCRETE. .4 CHECK LOCATIONS AND SIZES OF SLEEVES AND OPENINGS SHOWN ON STRUCTURAL AND CIVIL
4.0	CONCRETE REINFORCING:	DRAWINGS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. 5 DRAINAGE HOLES AND WEEP HOLES: INSTALL WEEP HOLE TUBES AND DRAINS AS INDICATED
1	GENERAL	3.4 SURFACE TOLERANCE IN ACCORDANCE WITH CANCER AND I STRAIGHT EDGE METHOD
1.1 RE	ELATED WORK SECTION 3.0 - CONCRETE FORMWORK	3.5 <u>FINISHING</u>
.2	SECTION 5.0 - CAST-IN-PLACE CONCRETE SECTION 6.0 - CONCRETE FINISHES	.1 FINISH CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1. .2 USE PROCEDURES ACCEPTABLE TO ENGINEER TO REMOVE EXCESS BLEED WATER. ENSURE SURFACE
1.2 RE	FERENCES	IS NOT DAMAGED. .3 USE CURING COMPOUNDS COMPATIBLE WITH APPLIED FINISH ON CONCRETE SURFACES. PROVIDE
.2	CAN/CSA-A23.1-14, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.	WRITTEN DECLARATION THAT COMPOUNDS USED ARE COMPATIBLE.
.3	CAN3-A23.3-14, DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS. CSA G30.5-M1983, WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT.	.1 FURNISH FILLER FOR EACH JOINT IN SINGLE PIECE FOR DEPTH AND WIDTH REQUIRED FOR JOINT,
.5 .6	CAN/CSA G30.18-09, BILLET STEEL BARS FOR CONCRETE REINFORCEMENT. CSA G30.14-M1983, DEFORMED STEEL WIRE FOR CONCRETE REINFORCEMENT.	UNLESS OTHERWISE AUTHORIZED BY ENGINEER. WHEN MORE THAN ONE PIECE IS REQUIRED FOR A JOINT, FASTEN ABUTTING ENDS AND HOLD SECURELY TO SHAPE BY STAPLING OR OTHER
13	CSA G30.15-M1983, WELDED DEFORMED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT. SUBSTITUTES	POSITIVE FASTENING. .2 LOCATE AND FORM ISOLATION JOINTS AS INDICATED. INSTALL JOINT FILLER.
1.	SUBSTITUTE DIFFERENT SIZE BARS ONLY IF PERMITTED IN WRITING BY ENGINEER.	.3 USE 12 MM THICK JOINT FILLER TO SEPARATE SLABS-ON-GRADE FROM VERTICAL SURFACES AND
2 2.1 M4	TERIALS	UNLESS INDICATED OTHERWISE.
.1	REINFORCING STEEL: BILLET STEEL, GRADE 400, DEFORMED BARS TO CSA G30.12, UNLESS INDICATED OTHERWISE.	3.8 FIELD QUALITY CONTROL .1 INSPECTION AND TESTING OF CONCRETE AND CONCRETE MATERIALS WILL BE CARRIED OUT BY A
.2	DEFORMED STEEL WIRE FOR CONCRETE REINFORCEMENT: TO CSA G30.14.	TESTING LABORATORY DESIGNATED BY OWNER IN ACCORDANCE WITH CAN/CSA-A23.1. .2 OWNER WILL PAY FOR COSTS OF TESTS.
.3	WELDED STEEL WIRE FABRIC: TO CSA G30.5. [PROVIDE IN FLAT SHEETS ONLY.] CHAIRS BOISTERS BAR SUPPORTS SPACERS: TO CANAGEA-423.1	.3 ENGINEER WILL TAKE ADDITIONAL TEST CYLINDERS DURING COLD WEATHER CONCRETING. CURE CYLINDERS ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE WHICH THEY PERPENDED
.4	MECHANICAL SPLICES: SUBJECT TO APPROVAL OF ENGINEER.	.4 NON_DESTRUCTIVE METHODS FOR TESTING CONCRETE SHALL BE IN ACCORDANCE WITH
2.2 FA	FABRICATE REINFORCING STEEL IN ACCORDANCE WITH CAN/CSA-A23.1, ANSI/ACI 315, AND	.5 INSPECTION OR TESTING BY CONSULTANT WILL NOT AUGMENT OR REPLACE CONTRACTOR QUALITY
	REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY THE REINFORCING STEEL INSTITUTE OF ONTARIO OR ACI 315R, MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED	CONTROL NOR RELIEVE HIM OF HIS CONTRACTUAL RESPONSIBILITY. 3.9 COLD-WEATHER CONCRETE
2	CONCRETE STRUCTURES UNLESS INDICATED OTHERWISE. OBTAIN ENGINEER'S APPROVAL FOR LOCATIONS OF REINFORCEMENT SPLICES OTHER THAN THOSE	.1 <u>TEMPERATURE NOT BELOW 2°C:</u>
.2	SHOWN ON PLACING DRAWINGS.	 MIXING WATER TO BE HEATED TO MAINTAIN CONCRETE TEMPERATURE OF AT LEAST 10°C AT POINT OF POUR.
.3	SHIP BUNDLES OF BAR REINFORCEMENT, CLEARLY IDENTIFIED IN ACCORDANCE WITH BAR BENDING	CONCRETE SHALL NOT BE PLACED ON OR AGAINST ANY SURFACE WHICH IS AT A TEMPERATURE OF LESS THAN 5°C
з	DETAILS AND LISTS. EXECUTION	CONTRACTOR SHALL BE PREPARED TO COVER CONCRETE IF AIR TEMPERATURE SHOULD FALL BELOW 2°C WITHIN 48 HOURS OF BOURD
3.1 FIE	ELD BENDING DO NOT FIELD BEND OR FIELD WELD REINFORCEMENT EXCEPT WHERE INDICATED OR AUTHORIZED	JAUULU FALL DELUM ZU MITHIN 40 HUUKO UT TUUK.
	BY ENGINEER.	.2 TEMPERATURE BETWEEN -4°C AND 2°C:
.2	PRESSURE.	 FORMS AND REINFORCING TO BE FREE OF ICE AND SNOW. MIXING WATER TO BE HEATED TO MAINTAIN CONCRETE TEMPERATURES OF AT LEAST
.3 3.2 PL	REFLACE DARD WHICH DEVELOF CRACKS OR SPLITS. ACING REINFORCEMENT	10°C AT POINT OF POUR.
.1	PRIOR TO REACING CONCRETE OBTAIN ENCINEER'S APPROVAL OF REINFORCING MATERIAL AND	TEMPERATURE OF LESS THAN 10°C.
	FRICK TO FLACING CONCRETE, OBTAIN ENGINEERS AFFROMAL OF REINFORCING TATERIAL AND	the second second second to the second se
	PLACEMENT.	• CONCRETE TO BE COVERED WITH CANVAS WHICH MUST BE KEPT 2" ABOVE THE SURFACE OF THE CONCRETE.
5.0	PLACEMENT. CAST-IN-PLACE CONCRETE:	 CONCRETE TO BE COVERED WITH CANVAS WHICH MUST BE REPT 2" ABOVE THE SURFACE OF THE CONCRETE. PROTECTION TO BE MAINTAINED FOR A MINIMUM OF 72 HOURS AFTER POUR.
5.0	PLACEMENT. CAST-IN-PLACE CONCRETE: GENERAL	 CONCRETE TO BE COVERED WITH CANVAS WHICH MUST BE KEPT 2" ABOVE THE SURFACE OF THE CONCRETE. PROTECTION TO BE MAINTAINED FOR A MINIMUM OF 72 HOURS AFTER POUR. .03 <u>TEMPERATURE BELOW -4°C:</u> ALL ITEMS OF POINTS OF \$\$ 02 \$ ABOVE PLUS
5.0 1 1.1 RE .1	CAST-IN-PLACE CONCRETE: <u>GENERAL</u> ELATED WORK SECTION 3.0 - CONCRETE FORMWORK	 CONCRETE TO BE COVERED WITH CANVAS WHICH MUST BE REPT 2" ABOVE THE SURFACE OF THE CONCRETE. PROTECTION TO BE MAINTAINED FOR A MINIMUM OF 72 HOURS AFTER POUR. .03 <u>TEMPERATURE BELOW -4°C:</u> ALL ITEMS OF POINTS .01 \$.02, ABOVE, PLUS ALL CONCRETE TO BE ENCLOSED AND ARTIFICIAL HEAT PROVIDED AND MAINTAINED FOR A MINIMUM OF 72 HOURS AFTER POUR.

FOR CONCRETE CONSTRUCTION AND MATERIALS. HEAT TO COMMENCE ONE HOUR PRIOR TO POUR. FOR PREFORMED EXPANSION JOINT FILLERS FOR CONCRETE PAVING • SURFACE TEMPERATURE OF ALL CONCRETE TO BE KEPT AT 20°C FOR 72 HOURS OR CTION (NONEXTRUDING AND RESILIENT BITUMINOUS TYPES). 10°C FOR 120 HOURS. ALL CONCRETE TO BE KEPT ABOVE FREEZING FOR 168 HOURS (1 MATERIALS AND METHODS OF CONCRETE CONSTRUCTION. WEEK). HOARDING TO BE CONSTRUCTED SO THAT AIR CAN CIRCULATE OUTSIDE OF TEST FOR CONCRETE. THE OUTER EDGES AND MEMBERS. G ADMIXTURES FOR CONCRETE. .4 <u>STRIPPING:</u> OR THE USE OF ADMIXTURES IN CONCRETE. • NO FOOTING FORMS OR HEATING & HOARDING SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 17 MPa, AS DETERMINED BY BREAKING FIELD CURED TEST CYLINDERS. AT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE 6 OF CAN/CSA-A23.1 AND THAT MIX DESIGN IS ADJUSTED TO PREVENT 3.10 HOT-WEATHER CONCERETE .01 WHEN CONCRETING IN HOT WEATHER, THE CONTRACTOR IS REQUIRED TO IMPLEMENT AT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF MEASURES TO PREVENT A REDUCTION IN CONCRETE WORKABILITY, LOSSES FROM CEMENT ELD AND THAT STRENGTH WILL COMPLY WITH CAN/CSA-A23.1 AND HYDRATION, DRYING EVAPORATION, OR ELEVATED CONCRETE TEMPERATURES. TED TO PREVENT ALKALI AGGREGATE REACTIVITY PROBLEMS. IMPLEMENT MEASURES TO MAINTAIN THE TEMPERATURE OF CONCRETE BELOW 95'F (35'C) WHEN MEASURED AT THE POINT OF DISCHARGE FROM THE DELIVERY UNIT. COOL REINFORCING STEEL EXCEEDING 120°F (49°C) PRIOR TO CONCRETE PLACEMENT. .02 IMPLEMENTED PROCEDURES MAY INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: A23.1. COARSE AGGREGATES TO BE NORMAL DENSITY. - SCHEDULING WORK SO CONCRETE CAN BE PLACED WITH THE LEAST POSSIBLE DELAY - SCHEDULING WORK SO THAT THE CONCRETE CAN BE PLACED DURING A COOLER PART OF CAN3_A266.2. ENGINEER TO APPROVE ACCELERATING OR SET THE DAY RING COLD AND HOT WEATHER PLACING. - REDUCING LOSS OF WATER THROUGH ABSORPTION BY PRE-WETTING THE SUB-GRADE OR CSA_A23.1 WHITE AND TO ASTM C309, TYPE 1_CHLORINATED RUBBER. FORMS JUST PRIOR TO CONCRETE PLACEMENT SO THEY WILL NOT ABSORB WATER FROM BITUMINOUS IMPREGNATED FIBER BOARD: TO ASTM D1751. THE MIX - SPRAYING FORMS AND REINFORCING STEEL WITH COOL FRESH WATER JUST BEFORE PLACEMENT OF CONCRETE TY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, ALTERNATIVE 1 - ERECTING WINDBREAKS TO PREVENT WIND FROM DRYING EXPOSED CONCRETE SURFACES TIES: FOR CONCRETE IN FOOTINGS. WHILE THEY ARE BEING FINISHED - USING WATER-CURING METHODS TO PROVIDE EVAPORATIVE COOLING STRENGTH AT 28 DAYS: 25 MPA. - SCREED AND FLOAT CONCRETE AS IT IS PLACED, AND START CURING PROCEDURES IMMEDIATELY - APPLY LIQUID CURING COMPOUND TO ALL EXPOSED SURFACES AS FINISHING IS COMPLETED OINT OF DISCHARGE: 80-120 MM. .03 DO NOT IMPLEMENT ALTERNATE MEASURES TO THOSE LISTED ABOVE WITHOUT PRIOR APPROVAL BY THE ENGINEER TY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, ALTERNATIVE 1 .04 RECOMMENDATIONS PROVIDED IN ACI 305R, GUIDE TO HOT WEATHER CONCRETING MAY BE RTIES: FOR CONCRETE IN RETAINING WALLS. USED TO MEET THE REQUIREMENTS OF THIS SUBSECTION WITH APPROVAL FROM THE ENGINEER. STRENGTH AT 28 DAYS: 32 MPA. .05 THE CONTRACTOR RETAINS THE RESPONSIBILITY FOR PLACING CONCRETE THAT MEETS THE REQUIREMENTS OF THE PLAN, SPECIFICATIONS, AND SPECIAL PROVISIONS. OINT OF DISCHARGE: 80-120 MM. 6.0 CONCRETE FINISHES: <u>GENERAL</u> 1 1.1 RELATED WORK TE WORK IN ACCORDANCE WITH CAN/CSA-A23.1. .1 CURING AND TOLERANCES: SECTION 5.0 - CAST-IN-PLACE CONCRETE. 1.2 REFERENCES AL BEFORE PLACING CONCRETE. PROVIDE 24 H NOTICE PRIOR TO .1 CAN/CSA-A23.1-14] CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION. 2 <u>PRODUCTS</u> ERMITTED ONLY AFTER APPROVAL OF EQUIPMENT AND MIX. 2.1 MATERIALS INSERTS ARE NOT DISTURBED DURING CONCRETE PLACEMENT. CONCRETE MATERIALS: CONFORM TO SECTION 3.0. RETE OBTAIN ENGINEER'S APPROVAL OF PROPOSED METHOD FOR EXECUTION 3 DURING PLACING AND CURING IN ADVERSE WEATHER. 3.1 FINISHING OF CONCRETE DS OF POURED CONCRETE ITEMS TO INDICATE DATE, LOCATION OF

- .1 FINISH CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1-14. .2 EXPOSED SURFACES OF CONCRETE TO BE EXPOSED AGGREGATE
- 3.2 CURING AND SEALING .1 SEE SECTION 3.0 FOR GENERAL CURING AND PROTECTION REQUIREMENTS INCLUDING HOT
- WEATHER AND COLD WEATHER CONDITIONS. .2 CURE FINISHED CONCRETE SURFACES WHICH ARE TO REMAIN EXPOSED WITH AN APPROVED CURING AND SEALING COMPOUND WHICH WILL LEAVE THE SURFACE WITH A UNIFORM APPEARANCE AND WITH MINIMUM DISCOLORATION AFTER DRYING. ENSURE THAT THE CURING COMPOUND WILL BE COMPATIBLE WITH THE SEALERS OR OTHER COATINGS TO BE APPLIED LATER. APPLY THE CURING COMPOUND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS
- .3 PROTECT SURFACES WHICH WILL BE EXPOSED TO DIRECT SUNLIGHT DURING THE CURING PERIOD, IMMEDIATELY AFTER THE CURING AND SEALING COMPOUND HAS HARDENED SUFFICIENTLY. 3.3 TREATMENT OF FORMED SURFACES
- .1 THE BASIC TREATMENT TO ALL FORMED SURFACES IS TO BE IN ACCORDANCE WITH CLAUSE 24 OF CAN/CSA-A23.1-14.
- .2 DO NOT REPAIR HONEYCOMB AREAS UNTIL INSPECTED BY ENGINEER. FILL HONEYCOMB IN NON-STRUCTURAL ELEMENTS WITH MORTAR; REPAIR HONEYCOMB IN STRUCTURAL ELEMENTS IN ACCORDANCE WITH CAN/CSA-A23.1-14
- 3.4 EXPOSED AGGREGATE SURFACES
- FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLYING SURFACE RETARDER.
- .2 CURE CONCRETE AS SPECIFIED IN SECTION 3.0.
- .3 PROTECT SURFACES UNTIL FINAL STAGES OF BUILDING WORK, THEN CLEAN WITH A MILD SOLUTION OF HYDROCHLORIC ACID FOLLOWED BY HOSING WITH CLEAN WATER.





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