

GENERAL PROJECT NOTES:	03 30 00 CAST IN PLACE CONCRETE	CAST IN PLACE CONCRETE CONT.	05 50 01 LANDSCAPE METALS	LANDSCAPE METALS CONT.	12 93 11 SITE FURNISHINGS	31 22 13 ROUGH GRADING	32 91 13 TOPSOIL AND FINISHED GRADING
GENERAL 1. IF POWER EQUIPMENT IS TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST: A) NOTIFY ALL UTILITIES OF THE PROPOSED LOCATION OF EXCAVATION B) TAKE PRECAUTION TO AVOID DAMAGE TO ALL UTILITIES C) CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION D) WITHOUT INTERRUPTING ALL EXISTING CONDITIONS, DIMENSIONS AND MATERIALS ON SITE AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION E) REFER ALSO TO ALL CITY OF WINNIPEG AND WRITTEN SPECIFICATIONS	REFERENCES 1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) .1 ASTM C260-94, SPECIFICATION FOR AIR-ENTRAINING ADMIXTURES FOR CONCRETE. .2 ASTM C598-94, SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE. .3 ASTM C494-92, SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE. .4 ASTM D175-83(1991), SPECIFICATION FOR PREFORMED EXPANSION JOINT FILLERS FOR CONCRETE PAVING AND STRUCTURAL CONSTRUCTION (NONEXTRUDING AND RESILIENT BITUMINOUS TYPES). 2. CANADIAN STANDARDS ASSOCIATION (CSA) .1 CAN/CSA-A5-93, PORTLAND CEMENT. .2 CAN/CSA-A23-1-04, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION. .3 CAN/CSA-A23-2-04, METHODS OF TEST FOR CONCRETE.	CONSTRUCTION 1. DO CAST-IN-PLACE CONCRETE WORK IN ACCORDANCE WITH CAN/CSA-A23.1. 2. SLEEVES AND INSERTS .1 NO SLEEVES, DUCTS, PIPES OR OTHER OPENINGS SHALL PASS THROUGH JOISTS, BEAMS, COLUMN CAPITALS OR COLUMNS, EXCEPT WHERE INDICATED OR APPROVED BY CONTRACT ADMINISTRATOR. 2. WHERE APPROVED BY CONTRACT ADMINISTRATOR, SET SLEEVES, TIES, PIPE HANGERS AND OTHER INSERTS AND OPENINGS AS INDICATED OR SPECIFIED ELSEWHERE. SLEEVES AND OPENINGS GREATER THAN 100 X 100 MM (4" X 4") NOT INDICATED MUST BE APPROVED BY CONTRACT ADMINISTRATOR. 3. DO NOT ELIMINATE OR DISPLACE REINFORCEMENT TO ACCOMMODATE HARDWARE, IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF MODIFICATIONS FROM CONTRACT ADMINISTRATOR BEFORE PLACING OF CONCRETE. 4. CHECK LOCATIONS AND SIZES OF SLEEVES AND OPENINGS SHOWN ON DRAWINGS. 5. SET SPECIAL INSERTS FOR STRENGTH TESTING AS INDICATED AND AS REQUIRED BY NON-DESTRUCTIVE METHOD OF TESTING CONCRETE. 3. FINISHING 1. FINISH CONCRETE TO CSA A23.1/A23.2. REFER TO DRAWINGS FOR FINISHES. 2. USE PROCEDURES ACCEPTABLE TO CONTRACT ADMINISTRATOR OR THOSE NOTED IN CAN/CSA-A23.1 TO REMOVE EXCESS BLEED WATER, ENSURE SURFACE IS NOT DAMAGED. 3. USE CURING COMPOUNDS COMPATIBLE WITH APPLIED FINISH ON CONCRETE SURFACES. PROVIDE WRITTEN DECLARATION THAT COMPOUNDS USED ARE COMPATIBLE. 4. RUB EXPOSED SHARP EDGES OF CONCRETE WITH CARBORUNDUM TO PRODUCE 3 MM (1/8") RADIUS EDGES UNLESS OTHERWISE INDICATED. .5. PROVIDE LIGHT BROOM FINISH WITH NO FRAMES OR LIGHT SANDBLAST FINISH WITH NO FRAMES FOR EXTERIOR SLABS AS SHOWN IN DRAWINGS. .6. FOR LIGHT SANDBLAST FINISH, PROVIDE REPRESENTATIVE SAMPLE OF FINAL FINISH. .7. CONTRACTOR TO MAKE ALL SAWCUTS AS SHOWN IN DRAWINGS WITH CHALK LINE FOR APPROVAL BY C.A. SAWCUTS SHALL NOT BE CUT USING HANDSAW. SAWCUTS SHALL BE STRAIGHT AND USE A STEEL PLATE GUIDE EDGE. 4. JOINT FILLERS 1. FURNISH FILLER FOR EACH JOINT IN SINGLE PIECE FOR DEPTH AND WIDTH REQUIRED FOR JOINT, UNLESS OTHERWISE AUTHORIZED BY CONTRACT ADMINISTRATOR. WHEN MORE THAN ONE PIECE IS REQUIRED FOR A JOINT, FASTEN ABUTTING ENDS AND HOLD SECURELY TO SHAPE BY STAPLING OR OTHER POSITIVE FASTENING. 2. LOCATE AND FORM CONSTRUCTION, EXPANSION JOINTS AS INDICATED. INSTALL JOINT FILLER.	REFERENCES 1. AMERICAN SOCIETY FOR TESTING AND MATERIALS INTERNATIONAL (ASTM) .1 ASTM A53/A53M-02, SPECIFICATION FOR STEEL BLACK AND HOT-DIPPED GALVANIZED ZINC-COATED WELDED AND STEAMLESS. .2 ASTM A307-02, SPECIFICATION FOR CARBON STEEL BOLTS AND STUDS, 60,000 PSI TENSILE STRENGTH. 2. CANADIAN GENERAL STANDARDS BOARD (CGSB) .1 CAN/CGSB-1 40-97, ANTI-CORROSIVE STRUCTURAL STEEL ALKYL PRIMER. .2 CAN/CGSB-1 181-92, READY-MIXED, ORGANIC ZINC-RICH COATING. 3. CANADIAN STANDARDS ASSOCIATION (CSA INTERNATIONAL) .1 CAN/CSA-G40.20/G40.21-98, GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL. .2 CAN/CSA-G164-M20(R1986), HOT DIP GALVANIZING OF IRREGULARLY SHAPED ARTICLES. .3 CAN/CSA-S16-1-01, LIMIT STATES DESIGN OF STEEL STRUCTURES. .4 CSA W48-01, FILLER METALS AND ALLIED MATERIALS FOR METAL ARC WELDING (DEVELOPED IN CO-OPERATION WITH THE CANADIAN WELDING BUREAU). .5 CSA W59-1988(R2001), WELDED STEEL CONSTRUCTION (METAL ARC WELDING)	FABRICATION 1. WELDED CONNECTIONS: FABRICATE COMPONENTS FOR CONNECTING MEMBERS BY WELDING. FOR CONNECTIONS MADE DURING FABRICATION, WELD CORNERS AND SEAMS CONTINUOUSLY TO COMPLY WITH THE FOLLOWING: .1 USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP. .2 REMOVE WELDING FLUX IMMEDIATELY. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO THAT NO ROUGHNESS SHOWS AFTER FINISHING AND WELDED SURFACE MATCHES CONTOURS OF ADJOINING SURFACES. .3 FABRICATE JOINTS THAT WILL BE EXPOSED TO WEATHER IN WATERTIGHT MANNER. FINISHES 1. PROTECT MECHANICAL FINISHES ON EXPOSED SURFACES FROM DAMAGE BY APPLYING A STRIPPABLE, TEMPORARY PROTECTIVE COVERING PRIOR TO SHIPMENT. 2. APPEARANCE OF FINISHED WORK: VARIATIONS IN APPEARANCE OF ABUTTING OR ADJACENT PIECES ARE ACCEPTABLE IF THEY ARE WITHIN ONE HALF OF THE RANGE OF APPROVED SAMPLES. NOTICEABLE VARIATIONS IN THE SAME PIECE ARE NOT ACCEPTABLE. VARIATIONS IN APPEARANCE OF OTHER COMPONENTS ARE ACCEPTABLE IF THEY ARE WITHIN THE RANGE OF APPROVED SAMPLES AND THEY ARE ASSEMBLED OR INSTALLED TO MINIMIZE CONTRAST. EXECUTION INSTALLATION 1. FIT EXPOSED CONNECTIONS ACCURATELY TOGETHER TO FORM TIGHT, HAIRLINE JOINTS. 2. CUTTING, FITTING, AND PLACEMENT: PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING COMPONENTS. SET COMPONENTS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION. MEASURED FROM ESTABLISHED LINES AND LEVELS AND FREE FROM RACK. 3. DO NOT WELD, CUT, OR ABRASE SURFACES OF COMPONENTS THAT HAVE BEEN COATED OR FINISHED AFTER FABRICATION AND ARE INTENDED FOR FIELD CONNECTION BY MECHANICAL OR OTHER MEANS WITHOUT FURTHER CUTTING OR FITTING. 4. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS. .1 REMOVE WELDING FLUX IMMEDIATELY. .2 REMOVE WELDING FLUX IMMEDIATELY. .3 REMOVE WELDING FLUX IMMEDIATELY. .4 AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO THAT NO ROUGHNESS SHOWS AFTER FINISHING AND WELDED SURFACE MATCHES CONTOURS OF ADJOINING SURFACES. .5 ADJUST COMPONENTS TO ANCHORING TO ENSURE MATCHING ALIGNMENT AT ABUTTING JOINTS. SPACE COMPONENTS AT INTERVAL INDICATED BUT NOT LESS THAN THAT REQUIRED BY STRUCTURAL LOADS.	SUBMITTALS 1. SUBMIT PRODUCT DATA AND A MINIMUM OF 60 DAYS BEFORE BEGINNING WORK, UNLESS INDICATED OTHERWISE. 2. PRODUCT DATA: SUBMIT PRODUCT DATA FOR EACH TYPE OF FURNISHING. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, FINISHES, FIELD-ASSEMBLY REQUIREMENTS, AND INSTALLATION DETAILS. PROVIDE SHOP DRAWINGS WHERE REQUIRED. 3. MATERIAL CERTIFICATES: SUBMIT PRODUCT DATA FOR SITE FURNISHINGS, SIGNED BY MANUFACTURERS. 4. MAINTENANCE DATA: SUBMIT PRODUCT DATA FOR SITE FURNISHINGS TO INCLUDE IN MAINTENANCE MANUALS. 5. WARRANTIES: COMPLY WITH MANUFACTURER'S WRITTEN WARRANTY, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED. PRODUCTS 1. PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: .1 BICYCLE RACKS: BOLA BIKE RACK, WITH GALV. FINISH SURFACE MOUNT BY LANDSCAPE FORMS 7800 E. MICHIGAN AVE. KALAMAZOO, MI 49048, USA 269.381.3455 FAX 1.800.430.6209 PHONE QTY: 2 OR APPROVED EQUAL IN ACCORDANCE WITH B7 SUBSTITUTES .2 BICYCLE REPAIR STATION: CYCLE RESCUE STATION BY SARIS PARKING CW OUTDOOR PUMP, COLOUR: BLACK SEE PRODUCT WEBSITE: WWW.SARISPARKING.COM/PRODUCT/CYCLE-RESCUE-STATION/ QTY: 1 OR APPROVED EQUAL IN ACCORDANCE WITH B7 SUBSTITUTES .3 DRINKING FOUNTAIN: HAW'S BARRIER-FREE STEEL PEDESTAL DRINKING FOUNTAIN MODEL # 3500 W/ DOG BOWL QTY: 1 COLOUR: BLACK OR APPROVED EQUAL IN ACCORDANCE WITH B7 SUBSTITUTES	WORK INCLUDED 1. THIS SPECIFICATION SHALL COVER ALL WORK ASSOCIATED WITH SITE GRADING AS DESCRIBED BY THE DRAWINGS. THE CONTRACTOR SHALL FURNISH ALL SUPERINTENDENCE, OVERHEAD LABOUR, MATERIALS, EQUIPMENT, TOOLS, SUPPLIES AND ALL THINGS NECESSARY FOR AND INCIDENTAL TO THE SATISFACTORY PERFORMANCE AND COMPLETION OF ALL WORK HEREINAFTER SPECIFIED. THIS SPECIFICATION SHALL SUPPLEMENT CW3170. EXECUTION GENERAL 1. THE CONTRACTOR SHALL GRADE TO THE LEVELS AND CONTOURS AS DIRECTED ALLOWING FOR SURFACE TREATMENT AS SHOWN ON DRAWINGS. EXISTING TOPSOIL SHALL BE STOCKPILED ON-SITE AS DIRECTED BY THE CONTRACT ADMINISTRATOR. PRIOR TO PLACING ANY FILL OVER EXISTING GROUND THE CONTRACTOR SHALL SCARIFY SURFACE OF EXISTING GROUND TO A DEPTH OF 150MM. MOISTURE CONTENT OF FILLING AND EXISTING SURFACE MATERIAL SHALL BE THE SAME IN ORDER TO FACILITATE PROPER BONDING. 2. ALL FILL SHALL BE CLEAN FILL. COMPACTION 1. COMPACT FILL AND UNDISTURBED AREAS TO STANDARD PROCTOR DENSITY TO ASTM D698-78 AS FOLLOWS: .1 LANDSCAPED AREAS - 85% .2 PAVED AREAS - 95% APPROVALS 1. THE CONTRACT ADMINISTRATOR SHALL APPROVE GRADING WORK PRIOR TO INSTALLATION OF TOPSOIL AND/OR SURFACING MATERIALS. 31 32 11 GEOTEXTILES REFER TO CW 3130 32 11 23 SUBGRADE, SUB-BASE AND BASE COURSE REFER TO CW 3110-R10 32 15 40 CRUSHED STONE SURFACING	MATERIALS 1. PLANTING SOIL: BLACK TOP SOIL, A FERTILE FRIABLE NATURAL LOAM CONTAINING BY VOLUME NOT LESS THAN 4% AND NO MORE THAN 2% OF ORGANIC MATTER FOR 15 CM AND NOT LESS THAN 2% AND NO MORE THAN 25% FOR SANDY LOAMS, WITH AN ACIDITY VALUE RANGING FROM PH 6.0 TO 8.0 AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. TOPSOIL IS TO BE FREE OF ANY MIXTURE OF SUBSOIL, CLAY LUMPS AND FREE OF STONES AND OTHER EXTRANEIOUS MATTER. IT IS NOT TO CONTAIN COUGH OR CRAB GRASS RHIZOMES. 2. MULCH: 3/4" CLEAN BLACK GRANITE MULCH 3. WATER: POTABLE AND FREE OF MINERALS WHICH MAY BE DETRIMENTAL TO PLANT GROWTH. 4. FERTILIZER: COMPLETE SYNTHETIC SLOW RELEASE FERTILIZER WITH MAXIMUM 35% WATER-SOLUBLE NITROGEN. PLANTING BED PREPARATION 1. ALL AREAS TO BE EXCAVATED SHALL BE TO THE SHAPE SHOWN ON THE DRAWINGS. BEDS SHALL BE EXCAVATED TO THE FINISHED DEPTH (INCLUDING MULCH) SHOWN ON DRAWINGS. 2. EXCAVATION SHALL BE FILLED WITH SOIL MIXTURE. AFTER FILLING, EXCAVATION OF TOP OF BED SHALL BE LEVEL WITH SURROUNDING GRADE. SOIL SHOULD BE LIGHTLY COMPACTED AND INDICATED SOIL DEPTHS SHALL BE DEPTHS AFTER LIGHT COMPACTION. 3. ALL AREAS AND LOCATIONS PROVIDED FOR PLANTING SHALL BE STAKED ACCORDING TO LAYOUT TO CONSTRUCTION. EXCAVATION SHALL NOT PROCEED UNTIL THE LAYOUT HAS BEEN INSPECTED AND APPROVED BY THE CONTRACT ADMINISTRATOR. EXCAVATION SHALL NOT BE UNDERTAKEN UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND PROTECTED. 4. THE CONTRACTOR SHALL PROVIDE A PLANTING BED WITH A CRISP SPADE EDGE (WHERE APPROPRIATE), COMPLETE WITH TOPSOIL AND BARK MULCH AS INDICATED ON THE DRAWINGS. INSTALLATION OF MULCH 1. EXPOSURE OF STONE MULCH SHALL BE SPREAD TO A CONSISTENT DEPTH OVER ENTIRE PLANTING BED AREA, TAKING CARE NOT TO DAMAGE THE PLANTS. 32 92 23 SODDING REFER TO CW 3510-R6 AND CW 3540 32 93 00 TREES, SHRUBS AND GROUNDCOVERS WARRANTY 1. THE CONTRACTOR SHALL AGREE AND GUARANTEE THE REPLACEMENT AND REPLANT ANY NURSERY STOCK FOUND DEAD AND/OR IN POOR CONDITION ONE (1) YEAR FROM THE DATE PLANT MATERIAL IS ACCEPTED TO BEGIN THE WARRANTY PERIOD. WITHOUT COST TO THE OWNER. POOR CONDITION SHALL BE INTERPRETED AS MEANING NURSERY STOCK ON WHICH BRANCHES ARE DEAD OR DYING, OR HAVE NOT SHOWN SATISFACTORY GROWTH OF LEAVES. EXCEPTED IS NURSERY STOCK DAMAGED BY ACCIDENTAL CAUSES OR VANDALISM, WHICH STOCK SHALL BE REPLACED AT THE COST OF THE OWNER. 2. THE CONTRACTOR HEREBY WARRANTS THAT DECIDUOUS PLANT MATERIAL OVER 60MM DIAMETER AND EVERGREEN TREES OVER 1.8M HEIGHT WILL REMAIN FREE OF DEFECTS FOR TWO (2) FULL GROWING SEASONS. 3. AN END OF WARRANTY INSPECTION WILL BE CONDUCTED. 4. THE CONTRACT ADMINISTRATOR RESERVES THE RIGHT TO EXTEND CONTRACTOR'S WARRANTY RESPONSIBILITIES FOR AN ADDITIONAL ONE (1) YEAR IF, AT THE END OF THE INITIAL WARRANTY PERIOD, LEAF DEVELOPMENT AND GROWTH ARE NOT SUFFICIENT TO ENSURE FUTURE SURVIVAL. REPLACEMENTS 1. DURING THE WARRANTY PERIOD, THE CONTRACTOR SHALL REMOVE FROM SITE ANY PLANT MATERIAL THAT HAS DIED OR FAILED TO GROW SATISFACTORY AS DETERMINED BY THE CONTRACT ADMINISTRATOR AND REPLACE WITHIN TWO (2) WEEKS. 2. REQUIRED REPLACEMENTS SHALL BE BY PLANTS OF THE SAME SPECIES AND AT LEAST THE SAME SIZE AS SPECIFIED, AND SHALL BE SUPPLIED AND PLANTED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. PLANT MATERIAL 1. QUALITY AND SOURCE: COMPLY WITH ALL SECTIONS OF "CANADIAN STANDARDS FOR NURSERY STOCK" LATEST EDITION OF CANADIAN NURSERY TRADES ASSOCIATION REFERRING TO SIZE AND DEVELOPMENT OF PLANT MATERIAL AND ROOT BALL. MEASURE PLANTS WHEN BRANCHES ARE IN THEIR NATURAL GROWTH POSITION. 2. HEIGHT AND SPREAD DIMENSIONS REFER TO MAIN BODY OF PLANT AND NOT FROM BRANCH TO BRANCH TIP. 3. USE TREES AND SHRUBS OF NO.1 GRADE. THE USE OF "COLLECTED PLANTS" WILL NOT BE PERMITTED UNLESS APPROVED BY THE OWNER OR CONTRACT ADMINISTRATOR. 4. SUBSTITUTIONS TO PLANT MATERIAL AS INDICATED ON PLANTING PLAN WILL NOT BE ALLOWED, UNLESS WRITTEN APPROVAL HAS BEEN OBTAINED FROM CONTRACT ADMINISTRATOR AS TO TYPE, VARIETY AND SIZE. PLANT SUBSTITUTIONS MUST BE OF SIMILAR SPECIES AND OF EQUAL SIZE AS THOSE ORIGINALLY SPECIFIED. TOPSOIL / PLANTING SOIL 1. CULTIVATE ENTIRE AREA WHICH IS TO RECEIVE TOPSOIL TO DEPTH OF 4" (100MM). 2. APPLY TOPSOIL TO DEPTHS SHOWN ON THE DRAWINGS. 32 93 45 LANDSCAPE MAINTENANCE 1. THIRTY (30) DAYS AFTER ALL PLANTING HAS BEEN INSTALLED THE CONTRACT ADMINISTRATOR SHALL PERFORM AN INSPECTION TO DETERMINE IF THE PLANT MATERIAL IS ACCEPTABLE TO START WARRANTY. 2. PROVIDE MAINTENANCE FROM DATE OF INSTALLATION UP TO THE DATE PLANT MATERIAL IS ACCEPTED TO BEGIN WARRANTY PERIOD. 3. CONTRACT ADMINISTRATOR SHALL PROVIDE WRITTEN NOTIFICATION THAT THE MAINTENANCE PERIOD HAS ENDED AND THE WARRANTY PERIOD HAS COMMENCED. 4. ALL PLANT MATERIAL SHALL BE UNDER WARRANTY FOR ONE (1) YEAR AFTER ACCEPTANCE.
CONCRETE 1. THE USE OF CALCIUM CHLORIDE IS NOT PERMITTED. 2. FINISHES: THE LOCATION OF ALL ITEMS EMBEDDED IN CONCRETE WORK WITH ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. 3. CONTRACT ADMINISTRATOR TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ALL MAJOR POUR. 4. REFER TO LANDSCAPE ARCHITECTURAL DRAWINGS FOR CONCRETE SURFACES REQUIRING ARCHITECTURAL FINISHES. 5. EXTERIOR PAVEMENT TO BE 4" THK. CONCRETE ON COMPACTED GRANULAR FILL REINFORCED WITH 10M @ 12" O/C E.W. MID-DEPTH. PROVIDE SAWCUT JOINTS @ MAX. 10'-0" O/C, AS SHOWN ON DRAWINGS. 6. PROVIDE LIGHT BROOM FINISH WITH NO TOOL FRAMES OR LIGHT SANDBLAST FINISH WITH NO TOOL FRAMES FOR EXTERIOR SLABS AS SHOWN IN DRAWINGS. REINFORCING 1. ALL BARS TO CONFORM TO CSA G30.18. 15M BARS AND LARGER TO BE GRADE 400 10M BARS AND SUPPORTING RODS TO BE GRADE 300 OR BETTER. 2. ALL STEEL TO BE DETAILED IN ACCORDANCE WITH THE CURRENT ACI DETAILING MANUAL. 3. MINIMUM CLEAR COVER TO REINFORCING: .1 1" INTERIOR FACE OF WALLS .2 1" FACE OF GRADE BEAMS .3 2" EXTERIOR FACE OF WALLS, BOTTOM OF GRADE BEAMS & WALLS 4. ALL REINFORCING SHALL BE HELD IN PLACE WITH PROPER ACCESSORIES. 5. ALL REINFORCING STEEL SHALL BE CLEANED OF ALL DIRT, GREASE AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING. 6. ALL REINFORCING SHALL BE NEW BILLET DEFORMED BARS. 7. MINIMUM REINFORCING FOR EQUIPMENT BASES 10M @ 12" O/C E.W. 8. REINFORCING STEEL SUPPLIER TO CONFER WITH CONTRACTOR AS TO DESIRED CONSTRUCTION JOINT LOCATIONS AND SUPPLY DOWELS AND BAR LENGTHS TO ACCOMMODATE THESE JOINTS. 9. REINFORCING STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS FOR REVIEW OF FABRICATION, SIZES, DIMENSIONS, PLACEMENT AND SPLICE LOCATIONS. SEE ALSO CW 3310 AND CW-SD-212.	STANDARD 1. CONCRETE MATERIALS AND METHODS OF CONSTRUCTION TO CAN/CSA-A23.1 UNLESS OTHERWISE SPECIFIED. TESTING AND INSPECTION 1. CONCRETE TESTING TO CAN/CSA-A23.1 BY TESTING LABORATORY DESIGNATED BY CONTRACT ADMINISTRATOR. 2. GIVE CONTRACT ADMINISTRATOR MINIMUM OF SEVEN DAYS NOTICE PRIOR TO EACH CONCRETE POUR. SAMPLES 1. CONCRETE TESTING TO CAN/CSA-A23.1 BY TESTING LABORATORY DESIGNATED BY SUBMIT SAMPLES IN ACCORDANCE WITH SECTION 01 33 00 - SUBMITTAL PROCEDURES. 2. AT LEAST 4 WEEKS PRIOR TO COMMENCING WORK, INFORM CONTRACT ADMINISTRATOR OF PROPOSED SOURCE OF AGGREGATES AND PROVIDE ACCESS FOR SAMPLING. CERTIFICATES 1. SUBMIT CERTIFICATES IN ACCORDANCE WITH SECTION 01 33 00 - SUBMITTAL PROCEDURES. 2. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF QUALITY, YIELD AND STRENGTH AS SPECIFIED IN CONCRETE MIXES, AND WILL COMPLY WITH CAN/CSA-A23.1. 3. PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CAN/CSA-A23.1. PRODUCTS MATERIALS 1. PORTLAND CEMENT: TO CAN/CSA-A5. 2. SUPPLEMENTARY CEMENTING MATERIALS: TO CAN/CSA-A23.5. 3. WATER: TO CAN/CSA-A23.1. 4. AGGREGATES: TO CAN/CSA-A23.1. 5. AIR ENTRAINING ADMIXTURE: TO ASTM C260. 6. CHEMICAL ADMIXTURES: TO ASTM C494. CONTRACT ADMINISTRATOR TO APPROVE ACCELERATING OR SET RETARDING ADMIXTURES DURING COLD AND HOT WEATHER PLACING. 7. CONCRETE RETARDERS: TO ASTM C494. DO NOT ALLOW MOISTURE OF ANY KIND TO COME IN CONTACT WITH THE RETARDER FILM. 8. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, PORTLAND CEMENT, WATER REDUCING AND PLASTICIZING AGENTS. .1 COMPRESSIVE STRENGTH: 50 MPA AT 28 DAYS 9. POLYETHYLENE FILM: 6 MIL THICKNESS TO CAN/CSA-S1-24. 10. CURING COMPOUND: TO CAN/CSA-A23.1 AND TO ASTM C309. 11. PREMOULDED JOINT FILLERS: .1 BITUMINOUS IMPREGNATED FIBER BOARD: TO ASTM D1751. MIXES 1. PROPORTION CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1. TO GIVE QUALITY AND YIELD FOR CONCRETE AS INDICATED. REFER TO DRAWINGS, GENERAL NOTES FOR MIX PROPORTIONS AND STRENGTHS. DELIVERY AND STORAGE 1. CONCRETE HAULING TIME: DELIVER TO SITE OF WORK AND DISCHARGE WITHIN 120 MINUTES MAXIMUM AFTER BATCHING. EXECUTION PREPARATION 1. OBTAIN CONTRACT ADMINISTRATOR'S APPROVAL BEFORE PLACING CONCRETE. PROVIDE SEVEN DAYS NOTICE PRIOR TO PLACING OF CONCRETE. 2. PUMPING OF CONCRETE IS PERMITTED ONLY AFTER APPROVAL OF EQUIPMENT AND MIX. 3. ENSURE REINFORCEMENT AND INSERTS ARE NOT DISTURBED DURING CONCRETE PLACEMENT. 4. PRIOR TO PLACING OF CONCRETE OBTAIN CONTRACT ADMINISTRATOR'S APPROVAL OF PROPOSED METHOD FOR PROTECTION OF CONCRETE DURING PLACING AND CURING IN ADVERSE WEATHER. 5. MAINTAIN ACCURATE RECORDS OF POURED CONCRETE ITEMS TO INDICATE DATE, LOCATION OF POUR, QUALITY, AIR TEMPERATURE AND TEST SAMPLES TAKEN. 6. DO NOT PLACE LOAD UPON NEW CONCRETE UNTIL AUTHORIZED BY CONTRACT ADMINISTRATOR. COLD WEATHER REQUIREMENTS 1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CAN 3-A23.1 FOR "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" INCLUDING COLD WEATHER REQUIREMENTS WHEN THE TEMPERATURE FALLS BELOW 5°C.	QUALITY ASSURANCE 1. STEEL FABRICATOR TO BE EXPERIENCED IN STEEL FABRICATION INCLUDING CUTTING, BENDING, FASTENING, AND FINISHING. 2. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENT RESULTS FROM THE FOLLOWING (MAXIMUM CHANGE RANGE) IN AMBIENT TEMPERATURE IN ENGINEERING, FABRICATING, AND INSTALLING HANDRAILS AND RAILING SYSTEMS TO PREVENT BUCKLING, OPENING OF JOINTS, OVERTRESSING OF COMPONENTS AND CONNECTIONS, AND OTHER DETRIMENTAL EFFECTS. BASE ENGINEERING CALCULATION ON ACTUAL SURFACE TEMPERATURES OF MATERIALS DUE TO BOTH SOLAR HEAT GAIN AND NIGHTTIME SKY HEAT LOSS. .1 TEMPERATURE CHANGE (RANGE): 120 DEG F (67 DEG C), AMBIENT; 180 DEG F (100 DEG C), MATERIAL SURFACES. 3. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS. 4. MOCKUPS: PRIOR TO INSTALLING EDGINGS AND WALLS, CONSTRUCT MOCKUPS FOR EACH FINISH REQUIRED TO VERIFY SELECTIONS MADE UNDER SAMPLE SUBMITTALS AND TO DEMONSTRATE AESTHETIC EFFECTS AS WELL AS QUALITIES OF MATERIALS AND EXECUTION. BUILD MOCKUPS TO COMPLY WITH THE FOLLOWING: .1 FURNISH FILLER FOR EACH JOINT IN SINGLE PIECE FOR DEPTH AND WIDTH REQUIRED FOR JOINT, UNLESS OTHERWISE AUTHORIZED BY CONTRACT ADMINISTRATOR. WHEN MORE THAN ONE PIECE IS REQUIRED FOR A JOINT, FASTEN ABUTTING ENDS AND HOLD SECURELY TO SHAPE BY STAPLING OR OTHER POSITIVE FASTENING. 2. LOCATE AND FORM CONSTRUCTION, EXPANSION JOINTS AS INDICATED. INSTALL JOINT FILLER. CURING 1. CURE AND PROTECT CONCRETE IN ACCORDANCE WITH CAN/CSA A23.1. SITE TOLERANCE 1. CONCRETE TOLERANCE IN ACCORDANCE WITH CAN/CSA-A23.1 AND TO TOLERANCE SCHEDULE AS INDICATED. FIELD QUALITY CONTROL 1. INSPECTION AND TESTING OF CONCRETE AND CONCRETE MATERIALS WILL BE CARRIED OUT BY A TESTING LABORATORY DESIGNATED BY CONTRACT ADMINISTRATOR IN ACCORDANCE WITH CAN/CSA-A23.1 AND SECTION 01 45 00 - QUALITY CONTROL. 2. CONTRACT ADMINISTRATOR WILL TAKE ADDITIONAL TEST CYLINDERS DURING COLD WEATHER CONCRETING. CURS CYLINDERS ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE WHICH THEY REPRESENT. 3. NON-DESTRUCTIVE METHODS FOR TESTING CONCRETE SHALL BE IN ACCORDANCE WITH CAN/CSA-A23.2. 4. INSPECTION OR TESTING BY CONTRACT ADMINISTRATOR WILL NOT AUGMENT OR REPLACE CONTRACTOR QUALITY CONTROL NOR RELIEVE HIM/HER OF HIS/HER CONTRACTUAL RESPONSIBILITY. PRODUCTS METALS 1. GENERAL: PROVIDE METAL FREE FROM SURFACE BLEMISHES WHERE EXPOSED TO VIEW IN THE FINISHED UNIT. EXPOSED-TO-VIEW SURFACES SHALL BE FREE FROM RUST, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, OR OTHER IMPERFECTIONS ARE NOT ACCEPTABLE. 2. REFER TO DRAWINGS FOR MATERIAL TYPE. FASTENERS 1. FASTENERS FOR ANCHORING: SELECT FASTENERS OF THE TYPE, GRADE, AND CLASS REQUIRED TO PRODUCE CONNECTIONS THAT ARE SUITABLE FOR DESIGN LOADS.	ADJUSTING AND CLEANING 1. CLEAN METALS BY WASHING THOROUGHLY WITH CLEAN WATER AND SOAP, FOLLOWED BY RINSING WITH CLEAN WATER OR BY SANDBLASTING. PROTECTION 1. PROTECT FINISHES OF COMPONENTS FROM DAMAGE DURING CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT THE TIME OF SUBSTANTIAL COMPLETION. 2. RESTORE FINISHES DAMAGED DURING INSTALLATION AND CONSTRUCTION PERIOD SO THAT NO EVIDENCE REMAINS OF CORRECTION WORK. RETURN ITEMS THAT CANNOT BE REFINISHED IN THE FIELD TO THE SHOP. MAKE REQUIRED ALTERATIONS AND REFINISH ENTIRE UNIT, OR PROVIDE NEW UNITS. DELIVERY, STORAGE AND HANDLING 1. SHIP, STORE, AND HANDLE ALL ITEMS SO AS TO PROTECT METAL COMPONENTS FROM DAMAGE ON SITE. STORE IN A SAFE LOCATION, OUT OF PEDESTRIAN AND VEHICULAR TRAFFIC AND PROTECTED FROM WEATHER. REPAIR OR REPLACE ANY DAMAGED COMPONENTS BEFORE INSTALLATION. PROJECT CONDITIONS 1. FIELD MEASUREMENTS: CHECK ACTUAL DIMENSIONS OF OTHER CONSTRUCTION BY ACCURATE FIELD MEASUREMENTS BEFORE FABRICATION; SHOW RECORDED MEASUREMENTS ON FINAL SHOP DRAWINGS. COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK. 2. WHERE FIELD MEASUREMENTS CANNOT BE MADE WITHOUT DELAYING THE WORK, GUARANTEE DIMENSIONS AND PROCEED WITH FABRICATION WITHOUT FIELD MEASUREMENTS. COORDINATE OTHER CONSTRUCTION TO ENSURE THAT ACTUAL DIMENSIONS CORRESPOND TO GUARANTEED DIMENSIONS. PRODUCTS METALS 1. GENERAL: PROVIDE METAL FREE FROM SURFACE BLEMISHES WHERE EXPOSED TO VIEW IN THE FINISHED UNIT. EXPOSED-TO-VIEW SURFACES SHALL BE FREE FROM RUST, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, OR OTHER IMPERFECTIONS ARE NOT ACCEPTABLE. 2. REFER TO DRAWINGS FOR MATERIAL TYPE. FASTENERS 1. 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FASTENERS FOR ANCHORING: SELECT FASTENERS OF THE TYPE, GRADE, AND CLASS REQUIRED TO PRODUCE CONNECTIONS THAT ARE SUITABLE FOR DESIGN LOADS.	INSTALLATION 1. COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED. COMPLETE FIELD ASSEMBLY OF SITE FURNISHINGS, WHERE REQUIRED. 2. UNLESS OTHERWISE INDICATED, INSTALL SITE FURNISHINGS AFTER LANDSCAPING AND PAVING HAVE BEEN COMPLETED. 3. INSTALL SITE FURNISHINGS LEVEL, PLUMB, TRUE, AND SECURELY ANCHORED AT FINAL LOCATIONS TO BE LOCATED ON SITE BY THE CONTRACT ADMINISTRATOR. CLEANING 1. AFTER COMPLETING SITE FURNISHING INSTALLATION, INSPECT COMPONENTS, REMOVE SPOTS, DIRT, AND DEBRIS. REPAIR DAMAGED FINISHES TO MATCH ORIGINAL FINISH OR REPLACE COMPONENT. MAINTENANCE AND SEASONAL COMMISSIONING 1. REFER TO ARCHITECTURAL SPEC 01 93 00 FACILITY MAINTENANCE 2. THE CONTRACTOR SHALL PERFORM THE FIRST YEAR WINTER DECOMMISSIONING OF DRINKING FOUNTAIN WITH TRAINING FOR CITY OF WINNIPEG STAFF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE DRINKING FOUNTAIN DECOMMISSIONED IS A TIMELY MANNER AS TO PREVENT FREEZE UP AND DAMAGE TO DRINKING FOUNTAIN.	MATERIALS 1. GRANULAR LIMESTONE: SCREENINGS; HARD, DURABLE, CRUSHED LIMESTONE PARTICLES, FREE FROM CLAY LUMPS, CEMENTATION, ORGANIC MATERIAL, FROZEN MATERIAL AND OTHER DELETERIOUS MATERIALS GRADATIONS: 6MM (1/4") DOWN BLACK GRANITE AND 20MM (3/4") DOWN LIMESTONE 3. LANDSCAPE FABRIC: GEOTEXTILE NON-WOVEN POLYPROPYLEN NEEDLE PUNCHED FABRIC STYLE LPS OR APPROVED EQUAL. EXECUTION 1. CONTRACTOR TO STAKE PROPOSED LAYOUT OF SURFACING FOR APPROVAL BY CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION. 2. SUBGRADE PREPARATION: ENSURE THAT SUBGRADE CONFORMS TO LEVELS AND COMPACTION REQUIRED TO ALLOW FOR INSTALLATION OF GRANULAR MATERIAL. OBTAIN APPROVAL OF SUBGRADE BY CONSULTANT BEFORE PLACING GRANULAR MATERIAL. INSTALL LANDSCAPE FABRIC OVER SUBGRADE BEFORE PLACING GRANULAR MATERIAL. 3. AGGREGATE MATERIAL: .1 GRANULAR MATERIAL TO BE A MINIMUM COMPACTED THICKNESS OF 225MM (9") COMPOSED OF THE FOLLOWING: -150MM BASE OF 20MM DOWN LIMESTONE -100MM LIFT OF 6MM DOWN BLACK GRANITE .2 SPREAD AND COMPACT GRANULAR MATERIAL IN UNIFORM LAYERS. .3 COMPACT TO A DENSITY OF NOT LESS THAN 100% STANDARD DENSITY IN ACCORDANCE WITH ASTM D698.	5 YY.MM.DD - 4 YY.MM.DD - 2 YY.MM.DD - 1 16.06.03 - ISSUED FOR CONSTRUCTION No. DATE REVISION / ISSUANCE Seal Elizabeth Wreford Taylor Member No. 141 the Manitoba Association of Landscape Architects Consultant PLAIN PROJECTS LANDSCAPE ARCHITECTURE & ENVIRONMENTAL DESIGN 562 Academy Road / Winnipeg, MB / R3N 0E3 (204) 930 0272 / www.plainprojects.ca Project CRESCENT DRIVE PARK PAVILION Sheet Title SPECIFICATIONS Project No. Sheet Date JUNE 2016 L001