3435 Pembina Hwy – Public Area Landscaping Proposal

HTFC – Landscaping Consultants Review and Input:

Landscaping Trading Pricing: $44,613.47 (GST Included)

-Including landscaping, timber bench, patio area, banner pole

-Site management: 15% of gross costs (~$6,692.02)

Grand Total Estimate - $55,305.49 (Plus GST)

LAND DEDICATION RESERVE FUND
PROJECT EVALUATION FORM

APPLICANT INFORMATION						
Applicant/Organization:	Ridgix Building Solutions Inc.					
Project Name/ Description	Terrasse Boisjoli Apartments (Landscaping Project)					
Community Committee:	Riel and Assiniboia	**Ward:**	St. Norbert - Seine River and Waverley West Ward	**Councillor:**	Markus Chambers and Janice Lukes	
Project Contact:	**Name:**	Ryan Ridge	**Address:**			
	Phone (daytime):		**Phone (c):**			
City of Winnipeg Project Manager/Contact:	n/a		**Land Dedication Reserve Funding Request:**	**$30,000.00**		

COUNCIL ADOPTED LAND DEDICATION RESERVE CRITERIA

1. Funds may be utilized for:
   a) the acquisition of land for parks or recreation facilities;
   b) the development of properties for parks and recreation purposes including such ancillary equipment and structures as may be necessary to that development;
   c) the construction or renovation of recreation facilities on parks and recreation properties.

2. The expenditures of Reserve funds will be limited by the following exclusions for use. Specifically, funds **will not** be utilized for:

   a) Salaries related to the regular operation of the City's services;
   b) Operating materials and supplies;
   c) Regular maintenance of parks and recreation facilities or equipment;
   d) Acquisition of equipment not directly related to the development or renovation of parks properties;
   e) Property management costs including utilities, taxes, and other related costs.

3. The use of funds will result in the creation or continuation of a physical legacy of parks and recreation facilities for the City of Winnipeg.

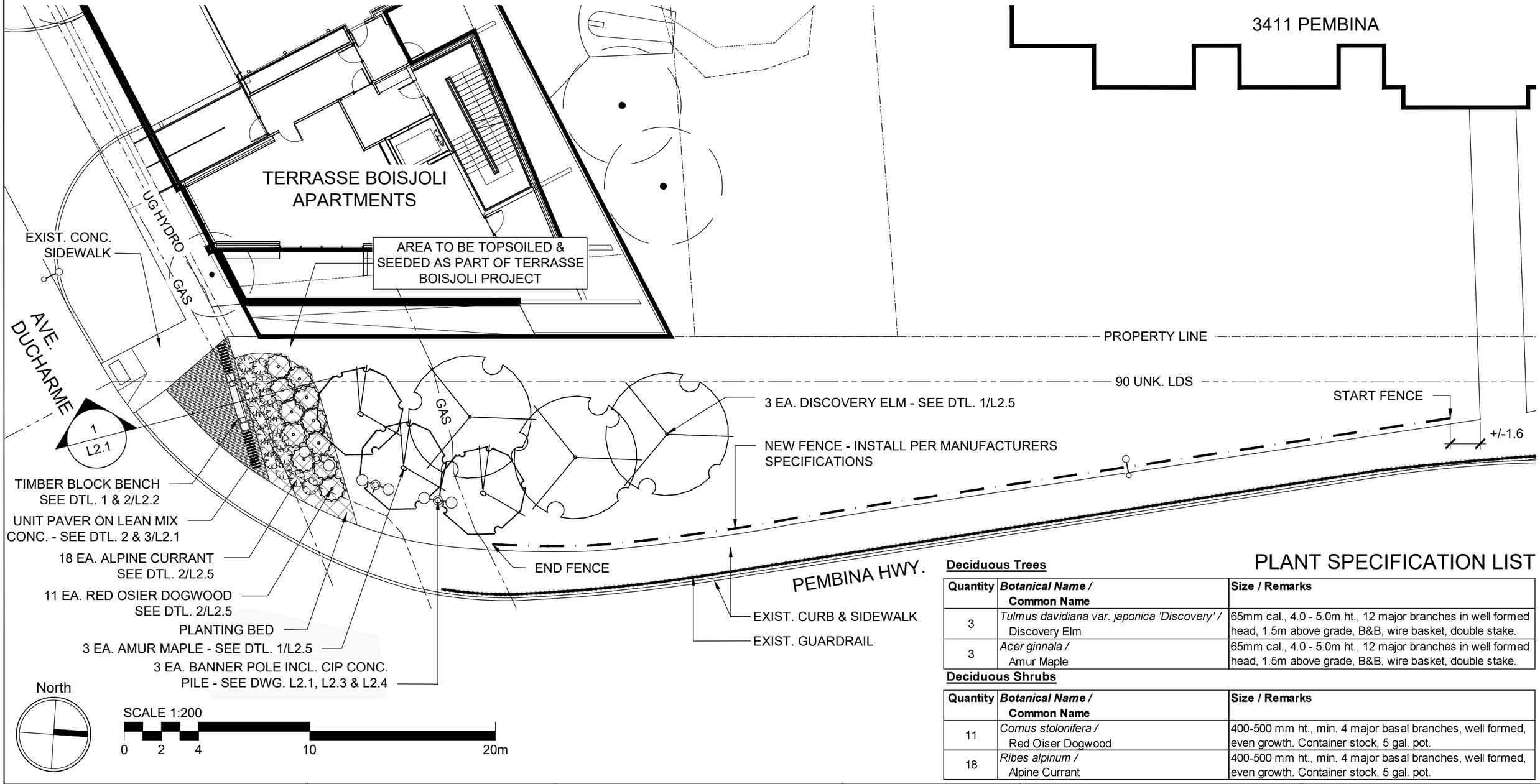
4. The expenditure of funds will be contingent upon the existence of the resources necessary for the ongoing operation, maintenance and support of any parks or recreation facilities which are developed or renovated through the use of Land Dedication Reserve.

PROJECT MEETS COUNCIL ADOPTED CRITERIA?: **YES** ☐ **NO** ☒

DEPARTMENTAL RECOMMENDATION:

That the application, in the amount of $15,000.00 from the Riel Community Committee (St. Norbert-Seine River Ward) and $15,000 from Assiniboia Community Committee (Waverley West Ward), for a total of $30,000.00 to assist Ridgix Building Solutions Inc. with the Terrasse Boisjoli Apartments (Landscaping Project), be denied as it does not meet Council-adopted Land Dedication Reserve Criteria #1 and #3.

Prepared by:	Helen Fabbri	Planning, Property and Development Department	**Date:**	March 28, 2024



PLANT SPECIFICATION LIST

Deciduous Trees

Quantity	*Botanical Name* / Common Name	Size / Remarks
3	*Tulmus davidiana var. japonica 'Discovery'* / Discovery Elm	65mm cal., 4.0 - 5.0m ht., 12 major branches in well formed head, 1.5m above grade, B&B, wire basket, double stake.
3	*Acer ginnala* / Amur Maple	65mm cal., 4.0 - 5.0m ht., 12 major branches in well formed head, 1.5m above grade, B&B, wire basket, double stake.

Deciduous Shrubs

Quantity	*Botanical Name* / Common Name	Size / Remarks
11	*Cornus stolonifera* / Red Oiser Dogwood	400-500 mm ht., min. 4 major basal branches, well formed, even growth. Container stock, 5 gal. pot.
18	*Ribes alpinum* / Alpine Currant	400-500 mm ht., min. 4 major basal branches, well formed, even growth. Container stock, 5 gal. pot.

NO.	ISSUE NOTES	DATE
02	RE-ISSUED - U/G UTILITY UPDATE	2022-09-27
01	FOR PRICING	2022-09-07

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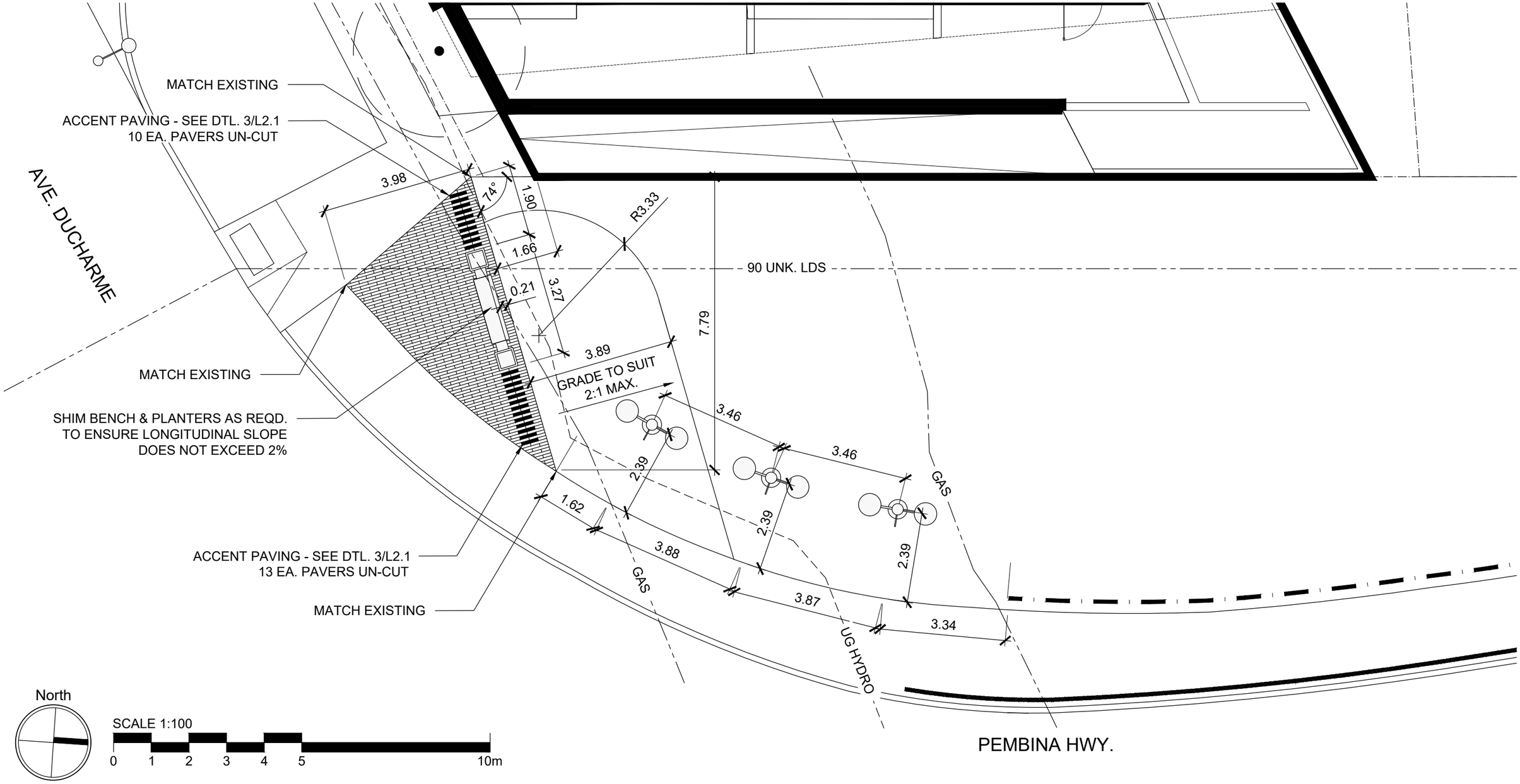
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PROFESSIONAL SEAL

PROJECT TITLE
TERRASSE BOISJOLI APARTMENTS
WINNIPEG, MB

SHEET TITLE
MATERIALS & PLANTING PLAN

DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L1.1



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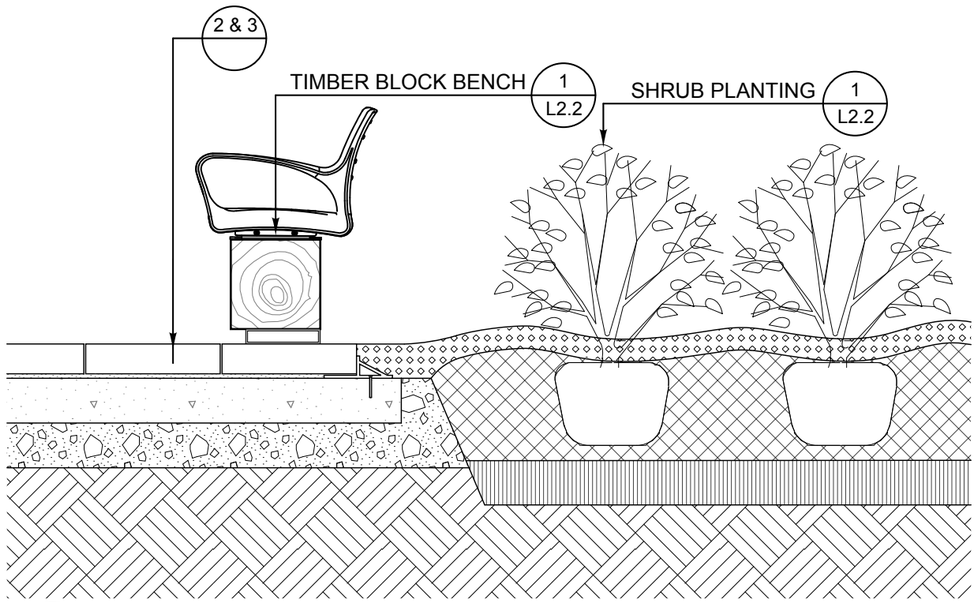
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WINNIPEG, MB

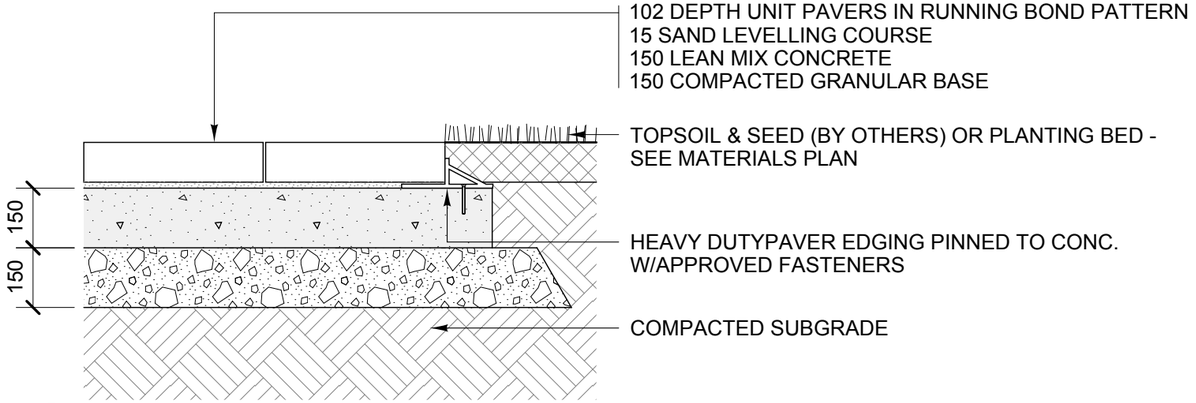
SHEET TITLE

SEATING NODE & ACCENT PAVING LAYOUT PLAN

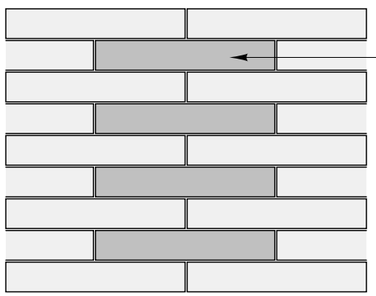
DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L1.2



1 L2.1 SECTION - SEATING NODE
1:20

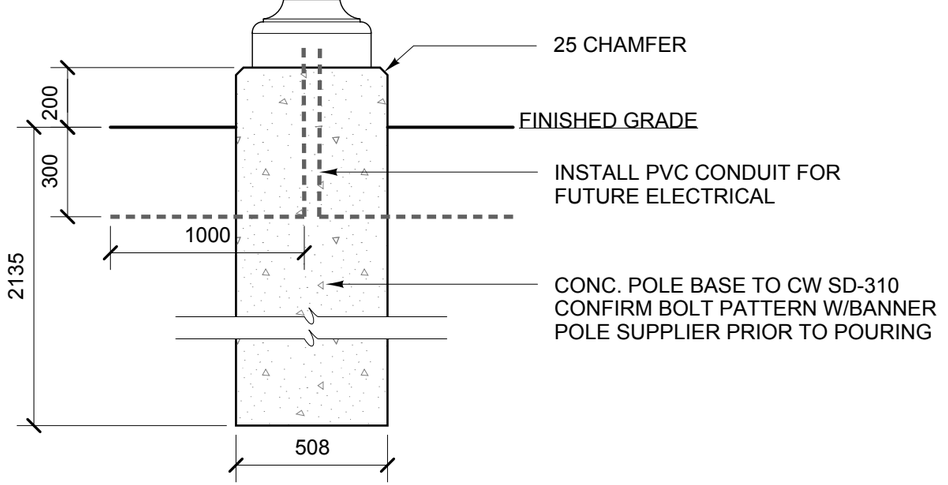


2 L2.1 UNIT PAVER ON LEAN MIX CONC.
1:15



SINGLE CHARCOAL COLOUR PAVER
EVERY SECOND COURSE
ALIGN W/LANDSCAPE FEATURES
REFER TO LAYOUT PLAN

3 L2.1 ACCENT PAVING
NTS



4 L2.1 CIP CONC. PILE
1:20

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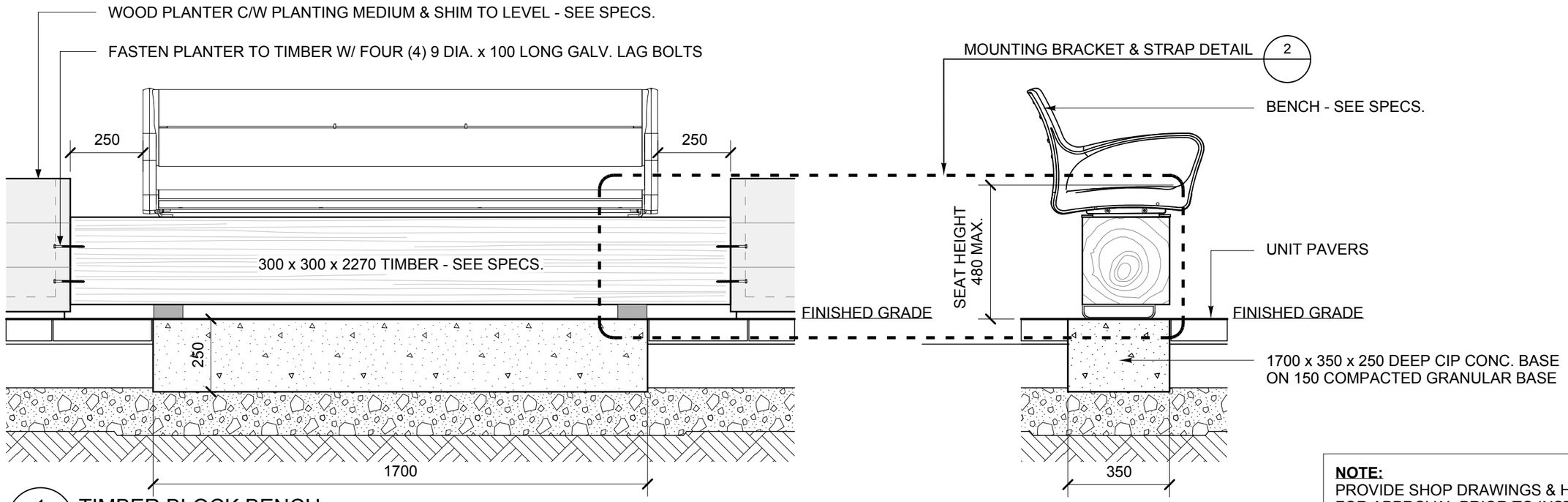
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PROJECT TITLE
TERRASSE BOISJOLI APARTMENTS
WINNIPEG, MANITOBA

SHEET TITLE
DETAILS 1

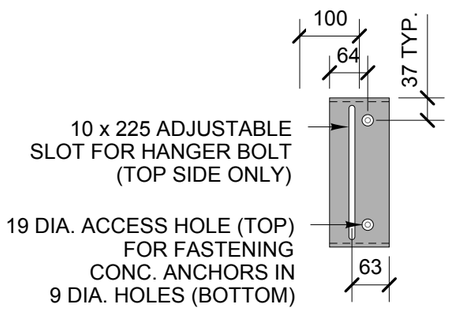
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REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L2.1



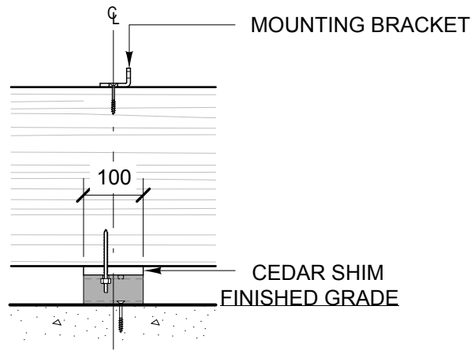
1 / L2.2 TIMBER BLOCK BENCH

SCALE: 1:15

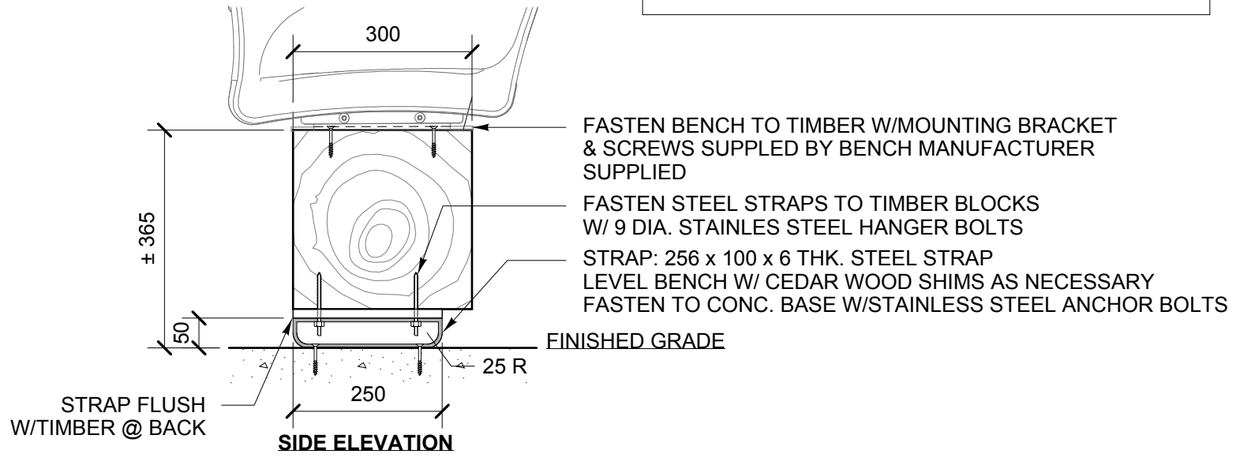
NOTE:
PROVIDE SHOP DRAWINGS & HARDWARE SAMPLES FOR APPROVAL PRIOR TO INSTALLATION.



PLAN - STRAP



FRONT ELEVATION



SIDE ELEVATION

2 / L2.2 MOUNTING BRACKET & STRAP DETAIL

SCALE: 1:10

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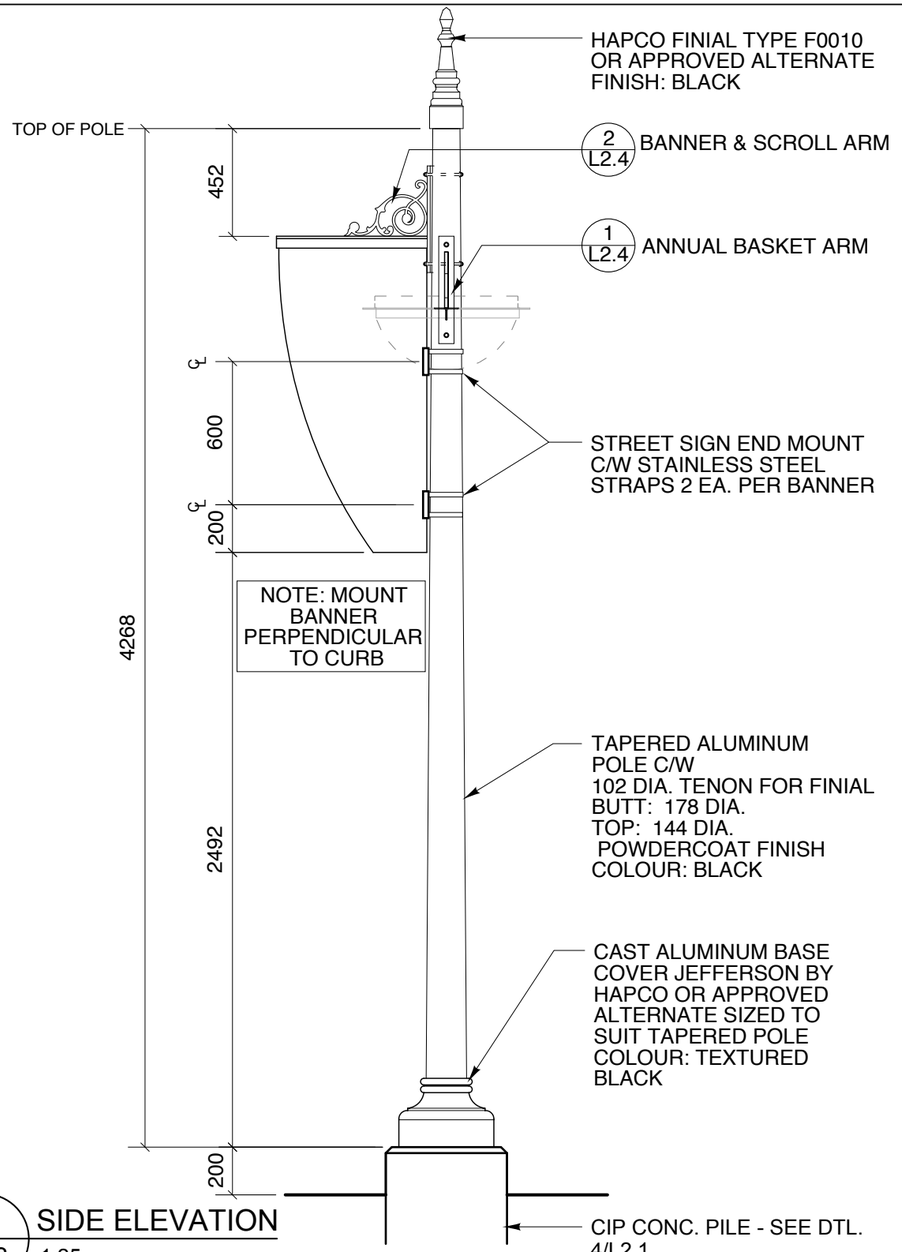
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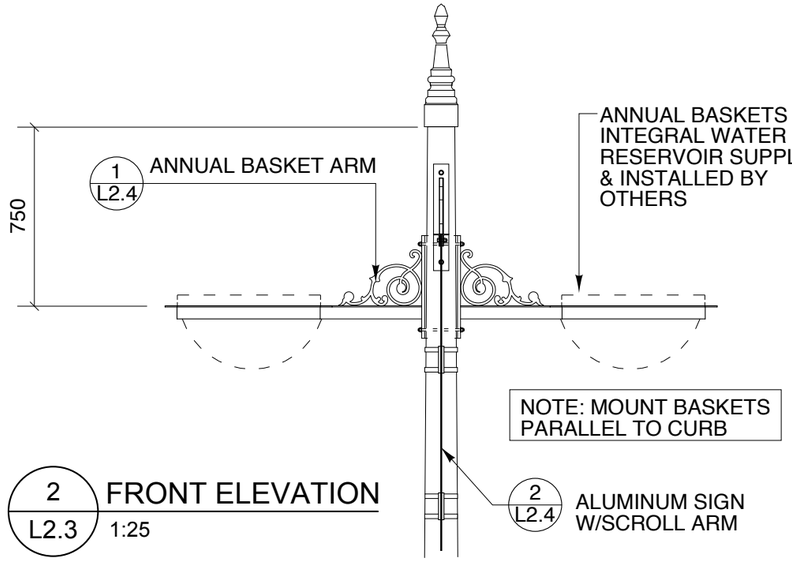
PROJECT TITLE
TERRASSE BOISJOLI APARTMENTS
WINNIPEG, MANITOBA

SHEET TITLE
DETAILS 2

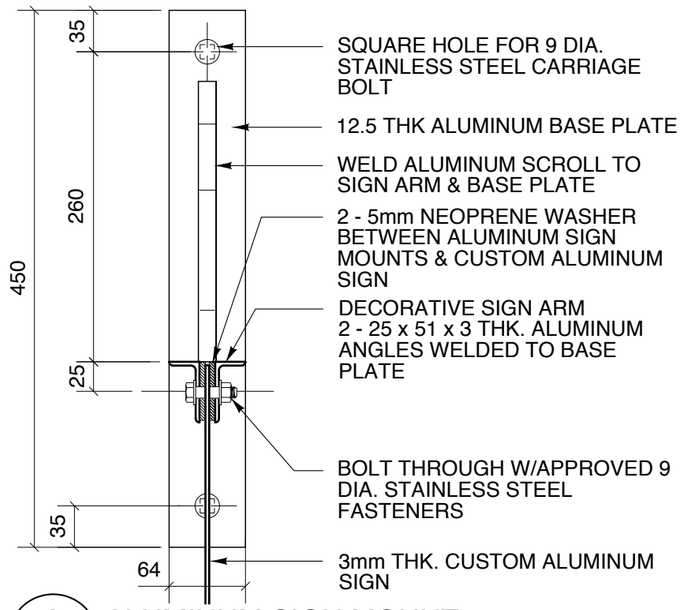
DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L2.2



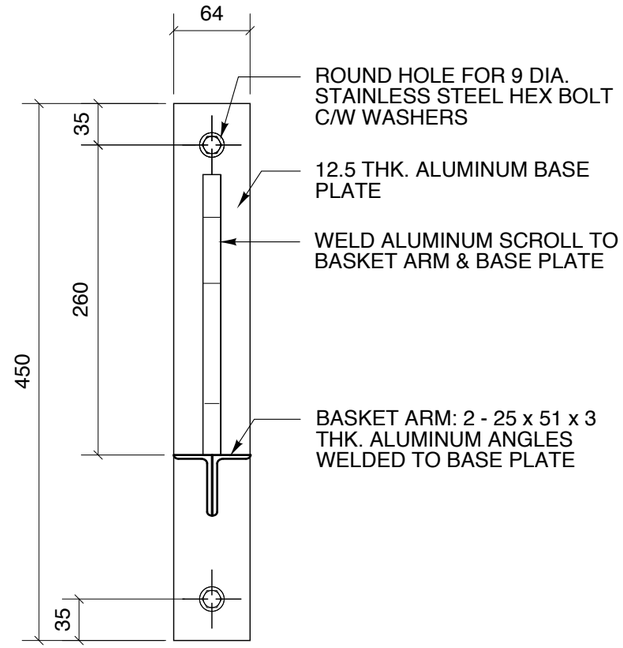
1 L2.3 SIDE ELEVATION
1:25



2 L2.3 FRONT ELEVATION
1:25



3 L2.3 ALUMINUM SIGN MOUNT
1:5



4 L2.3 BASKET ARM MOUNT
1:5

BANNER POLE NOTES:
1. Banner Poles supplied & installed by Prairie Pole
Ph.: 204-326-9988, Contact: Brad Lagimodier.

2. Submit shop drawings to Consultant for review
prior to fabrication.

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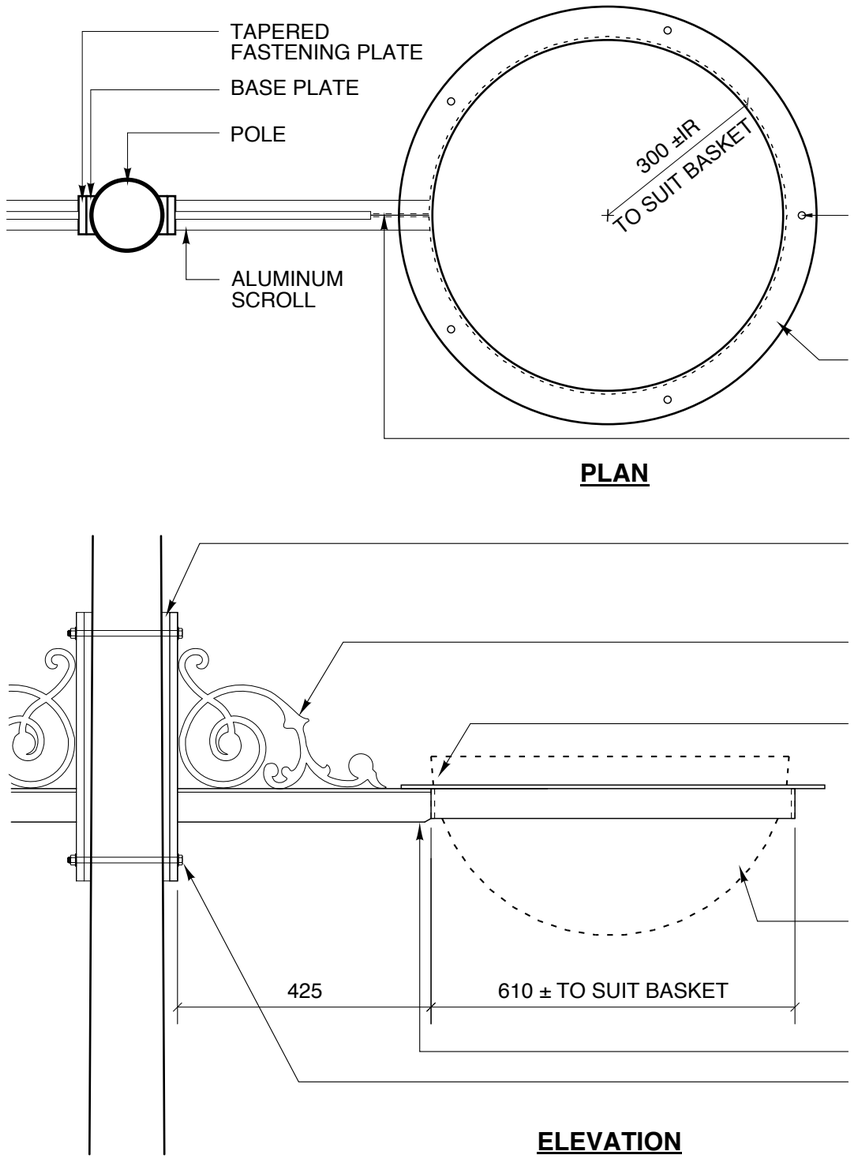
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PROJECT TITLE
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WINNIPEG, MANITOBA

SHEET TITLE
DETAILS 3 - BANNER POLE

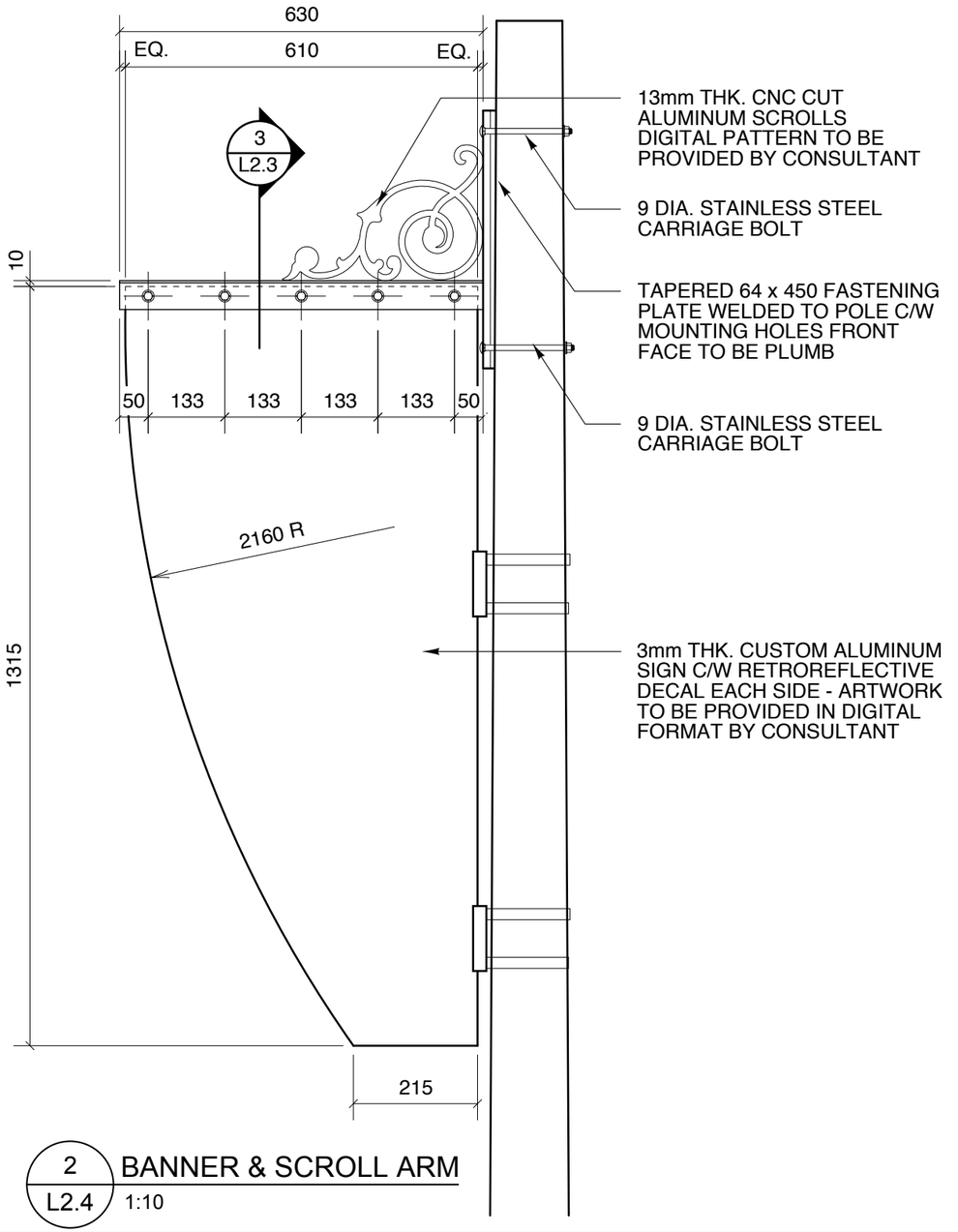
DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L2.3



PLAN

ELEVATION

1 / L2.4 ANNUAL BASKET ARM
1:10



2 / L2.4 BANNER & SCROLL ARM
1:10

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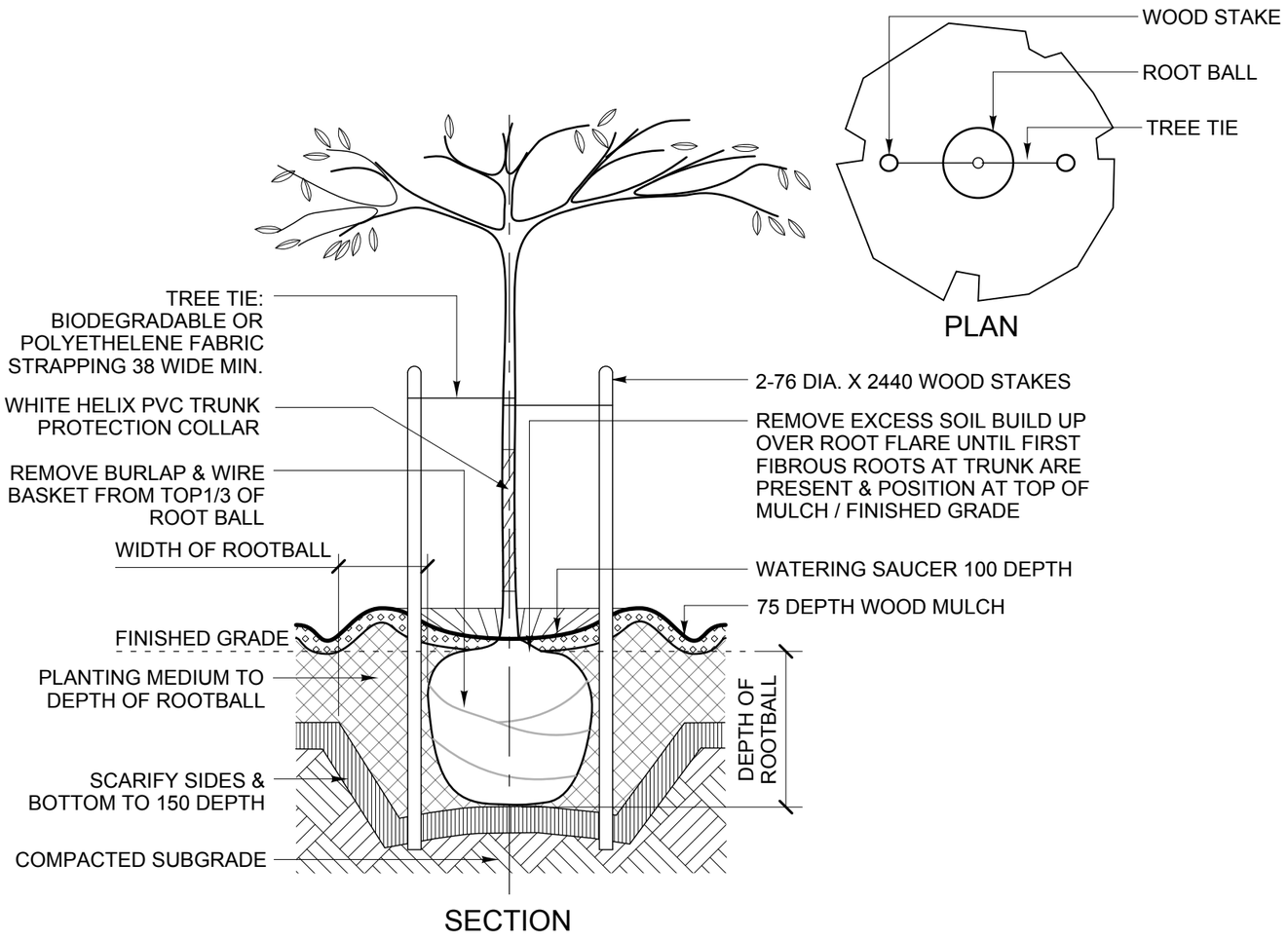
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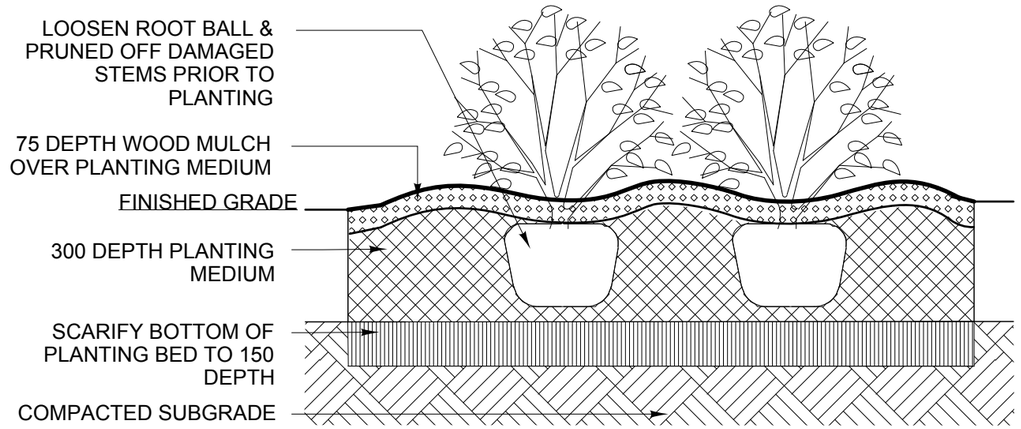
PROJECT TITLE
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WINNIPEG, MANITOBA

SHEET TITLE
DETAILS 4 - BANNER POLE

DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L2.4



1 L2.5 DECIDUOUS TREE PLANTING
SCALE NTS



2 L2.5 SHRUB PLANTING
SCALE NTS

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TERRASSE BOISJOLI APARTMENTS
WINNIPEG, MANITOBA

SHEET TITLE
DETAILS 5

DRAWN	JH
REVIEWED	GM
SCALE	As Shown
PROJECT NO.	22-071
DRAWING NO.	L2.5

Part 1 General

1.1 RELATED SECTIONS

.1 Section 32 91 19 – Planting Medium & Finish Grading

.2 Section 32 93 00 – Trees, Shrubs & Groundcover Planting

1.2 REFERENCES

.1 American Society for Testing and Materials International (ASTM)

.1 ASTM D698-00ae1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft^3) (600kN-m/m^3).

.2 City of Winnipeg Standard Construction Specifications

.1 CW 3110 – Sub-Grade, Sub-Base and Base Course Construction.

1.3 REGULATIONS

.1 Shore and brace excavations, protect slopes and banks and perform all work in accordance with Provincial and Municipal regulations whichever is more stringent.

1.4 BURIED SERVICES

.1 Before commencing work verify the location of all buried services on and adjacent to the site.

1.5 PROTECTION

.1 Protect excavations from freezing.

.2 Keep excavations clean, free of standing water, and loose soil.

.3 Where soil is subject to significant volume change due to change in moisture content, cover and protect to the Consultant's approval.

.4 Protect natural and man-made features required to remain undisturbed. Protect buried services that are required to remain undisturbed.

Part 2 Products

2.1 SUB-BASE MATERIALS

.1 Approved site sub-base, clay borrow, or crushed sub-base material, conforming to the requirements CW3110.

Part 3 Execution

3.1 SITE PREPARATION

.1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.

3.2 CLEARING AND GRUBBING

.1 Remove trees, stumps, logs, brush, shrubs, bushes, vines, undergrowth, rotten wood, dead plant material, exposed boulders and debris within areas designated on Drawings.

.2 Remove stumps and tree roots below footings, slabs, and paving, and to 600mm below finished grade elsewhere.

.3 Dispose of cleared and grubbed material off site daily to disposal areas acceptable to authority having jurisdiction.

3.3 EXCAVATION

.1 Excavate as required to carry out Work.

- .1 Excavate in accordance with lines and levels required to erect formwork.
- .2 Excavate for slabs and paving to subgrade levels.
- .3 Do not disturb soil or rock below bearing surfaces.
- .4 Notify Consultant when excavations are complete.
- .5 If bearings are unsatisfactory, additional excavation will be authorized in writing and paid for as additional Work. Excavation taken below depths shown without Consultant written authorization to be filled with concrete of same strength as for footings at Contractor's expense.
- .6 Excavations are not to interfere with normal 45 degree bearing splay of any foundation.
- .7 Remove excess or unsuitable excavated subsoil from site.

3.4 DEWATERING

.1 Keep excavations dry at all times. Provide necessary equipment including pumps, piping and temporary drains and trenches.

.2 Discharge drainage water lines in manner and location acceptable to Consultant.

.3 Direct surface drainage away from excavated areas.

.4 Control the grading in and adjacent to excavations to prevent water running into excavated areas.

.5 Furnish and operate suitable pumps on a 24 hour basis to keep excavations free of water until foundations have been placed.

3.5 BACKFILLING

.1 Inspection: Do not commence backfilling until fill material and spaces to be filled have been inspected and approved by Consultant.

.2 Remove snow, ice, construction debris, organic soil and standing water from spaces to be filled.

.3 Compaction of subgrade: compact existing subgrade under slabs-on-grade, to same compaction as specified for fill.

.4 Fill excavated areas with selected subgrade material compacted as specified for fill.

.5 Supply all necessary fill to meet grading requirements and with minimum and maximum rough grade variance.

.6 Placing: Place backfill, fill and base course material in 150 mm lifts: add water as required to achieve specified density.

.7 Backfill areas to grades, contours, levels and elevations indicated on Drawings.

.8 Perform backfilling operations systematically and as early as possible to allow maximum time for natural settlement and compaction.

.9 Compaction: compact each layer of material to following densities for material to ASTM D698: 95% Modified Proctor Density.

3.6 GRADING

.1 Grade so that water will drain away from buildings, walls and paved areas, to existing drainage areas. Grade to be gradual between finished spot elevations shown on Drawings, with no abrupt ridges or creases unless otherwise indicated.

3.7 SURPLUS MATERIAL

.1 Dispose of surplus material, unsuitable for fill or grading at the existing landfill or as directed by the Consultant.

.2 All excavated surplus material is property of the Owner. Excavated surplus material shall not be removed from the job site unless directed by the Consultant.

3.8 CLEANING

.1 Upon completion of installation, remove construction and accumulated environmental dirt, surplus materials, rubbish, tools and equipment barriers.

3.9 ACCEPTANCE

.1 Obtain final approval of rough grading via site inspection with Consultant.

.2 Produce final compaction test results for deficient areas prior to proceeding with hard and soft landscape site development operations.

END OF SECTION

Part 1 General

1.1 DESCRIPTION

.1 This Specification shall supplement CW 3010, CW 3110, and CW 3235 and shall cover the requirements for demolition, salvage, removal and disposal wholly or in part of various items designated to be removed or partially removed and for backfilling resulting trenches, holes and pits.

.2 The Work under this Specification shall include the following items as shown within the limit of Work on the Drawings or otherwise directed by the Consultant:

(a) Removal and disposal of turf and subgrade material (granular and clay);

(b) Removal and disposal of chain link fence.

1.2 RELATED SECTIONS

.1 Section 31 00 99 – Earthworks for Minor Works

1.3 REFERENCES

.1 City of Winnipeg Standard Construction Specifications

.1 CW 3010 Clearing and Grubbing

.2 CW 3110 Sub-Grade, Sub-Base and Base Course Construction

.3 CW 3235 Renewal of Existing Miscellaneous Concrete Slabs

.4 CW 2030 Excavation, Bedding and Backfill

1.4 STORAGE AND PROTECTION

.3 Existing buried utilities and structures:

(a) Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.

(b) Prior to commencing any excavation work, notify applicable Owner or authorities having jurisdiction, establish location and state of use of buried utilities and structures. Clearly mark such locations to prevent disturbance during work.

(c) Confirm locations of buried utilities by careful test excavations.

(d) Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered or as indicated. Fibre optic lines shall be protected in accordance with requirements of MTS.

(e) Where utility lines or structures exist in area of excavation, obtain direction of utility company.

(f) Record location of maintained, re-routed and abandoned underground lines.

.4 Protect existing surface features that may be affected by the work. In event of damage to such items, immediately replace or make repairs to approval of Consultant at no cost to Owner.

.5 In all circumstances ensure that demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.

.6 Do not dispose of waste or volatile materials such as, mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers. Ensure proper disposal procedures are maintained throughout the project.

.7 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers or onto adjacent properties.

.8 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.

.9 Protect trees, plants and foliage on site and adjacent properties where indicated.

Part 2 Products

2.1 EQUIPMENT

.1 Equipment and heavy machinery used to meet or exceed all applicable emission requirements and operate in compliance with MVSA.

.2 The size, weight, and destructive capabilities of the equipment shall be matched to the type of removal to be done.

2.2 MATERIALS

.1 Backfill Material: in accordance with CW 2030.

.2 Sub-base Material: Granular A to CW3110, granite material only – do not use limestone.

Part 3 Execution

3.1 FEES AND PERMITS

.1 The Contractor shall obtain and pay for all licenses and permits necessary for the demolition work.

3.2 SAFETY PRECAUTIONS

.1 The Contractor shall provide flagmen, barricades, railings, and whenever necessary, warning signs at excavation holes, plywood access ramps and /or other construction necessary to secure the safety of workers, the public, and personnel alike and shall comply with all Provincial Statutes applicable to the Work of this nature. The Contractor shall provide all other protective measures as may be required by any law in force in Manitoba.

3.3 PREPARATION OF SITE

.1 Inspect Site and verify with Consultant items designated for removal, disposal, salvage and items to remain.

.2 Locate and protect utility lines. Preserve in operating condition active utilities traversing site.

.3 Notify utility companies before starting demolition. Utilities to provide clearance before any excavation is done.

.4 Notify Geomatics Service Branch at (204) 986-4826 to obtain clearance and mark survey infrastructure minimum of 72 hours before any excavation.

3.4 REMOVALS

.1 Remove items as indicated on the Drawings and as directed by the Consultant. Do not disturb adjacent items designated to remain in place.

3.5 DISPOSAL OF MATERIALS

.1 The Contractor shall promptly dispose of materials not designated for salvage or re-use in Work, off-site.

.2 Trim disposal areas to approval of Consultant.

3.6 BACKFILL

.1 Backfill in areas as indicated in accordance with CW 2030.

3.7 RESTORATION

.1 Restore areas and existing works outside areas of demolition to match condition of adjacent, undisturbed areas.

3.8 CLEANUP

.1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

.2 Use only cleaning solutions and procedures that are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or groundwater.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Preparation of sub-grade, supply and placement of base course materials.

1.2 RELATED SECTIONS

.1 Section 32 14 13 – Unit Paving

1.3 REFERENCES

.1 City of Winnipeg Standard Construction Specifications

- .1 CW 1130 Work Site Requirements
- .2 CW 3110 Sub-Grade, Sub-Base and Base Course Construction
- .3 CW 3130 Supply and Installation of Geotextile Fabrics

Part 2 Products

2.1 MATERIALS

.1 Sub-base Material: Granular A to CW3110, granite material only – do not use limestone.

.2 Base Course Material: Granular A to CW3110, granite material only – do not use limestone.

Part 3 Execution

3.1 EXCAVATION

.1 In accordance with CW 3110.

.2 Hydro-excavate or hand excavate within 2.5 metres of tree trunk and as directed by Consultant.

3.2 SUB-GRADE PREPARATION AND PLACEMENT OF SUB-BASE MATERIAL

.1 Prepare the sub-grade as directed in CW 3110.

.2 Place and compact approved sub-base material where unsuitable sub-grade is encountered in accordance with CW 3110.

3.3 PLACEMENT OF GEOTEXTILE

.1 Install reinforcement geotextile in accordance with CW 3130.

3.4 PLACEMENT OF BASE COURSE MATERIAL

.1 Place and compact approved base material in accordance with CW 3110 to depths shown on the Drawings.

.2 Compact base for seating blocks to 100% Standard Proctor Density.

.3 Compact base for other pavements to 95% Standard Proctor Density.

3.5 COMPACTION TESTING

.1 Undertake compaction and quality control tests in accordance with CW 3110, Item 3.9. Tests to be ordered by Contractor, frequency and number as directed by Consultant. Tests to be paid for through cash allowance.

3.6 SITE TOLERANCES

.1 Finished base surface to be within plus or minus 10 mm of grades indicated on the Drawings but not uniformly high or low.

3.7 PROTECTION

.1 Maintain finished base in condition conforming to this Section until succeeding material is applied or until acceptance by Consultant.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Unit pavers on lean concrete base.

1.2 RELATED SECTIONS

.1 Section 32 11 23 – Base Course Construction

.2 Section 32 16 15 – Site Concrete

1.3 REFERENCES

.1 City of Winnipeg Standard Construction Specifications (most recent edition):

.1 CW 3335 – Installation of Interlocking Pavement Stones on a Lean Concrete Base

1.4 SUBMITTALS

.1 Submit product data for unit pavers, paver edging and edging anchors.

Part 2 Products

2.1 MATERIALS

.1 Materials to conform to CW 3335.

.2 Unit pavers: Broadway planks 100, 451 x 76 x 100mm, colour: sierra grey and charcoal, patterns as shown on the drawings. Available from Barkman, 909 Gateway Road, Winnipeg, MB R2K 3L1, phone (204) 667 3310.

.3 Bedding and joint sand to the requirements of Specification CW 3335.

.4 Paver Edging: Heavy duty rigid style prefabricated aluminum or PVC paver edging, suitable for 100 mm depth concrete paving units, complete with connector pipes. Edging product shall provide complete end-to-end contact on all pavement facing edges with no lapping. Connection device shall extend beyond splice at least 50 mm in each direction from splice. Acceptable product: Pave Edge, Industrial grade, manufactured by Pave Tech, PO Box 576, Prior Lake, MN 55372, phone: (952) 226-6400.

.5 Edging Anchors: Tapcon stainless steel concrete screws, 9 mm dia x 63 mm long.

Part 3 Execution

3.1 EXAMINATION

.1 Verify existing conditions are ready to receive Work.

.2 Beginning of installation implies acceptance of existing conditions.

.3 Report unsuitable conditions to Consultant. Proceed with Work only after instruction is received from Consultant.

3.2 LAYOUT OF WORK

.1 Accurately lay out paving Work to patterns and conditions shown on Drawings and encountered on site, and specified for installation. Provide additional control points and stakeouts as required to effect correct alignments and grade elevations. Advise Consultant of discrepancies and on-site conditions detrimental to critical layouts and obtain approved correction.

.2 Ensure positive drainage to ditches and/or gutters as indicated.

3.3 INSTALLATION OF LEAN CONCRETE BASE

.1 Install lean concrete base in accordance with CW 3335.

3.4 INSTALLATION OF EDGING

.1 Install edging in accordance with manufacturers written instructions, using stainless steel Tapcon concrete screws, maximum spacing 600mm.

3.5 PREPARATION OF SAND BASE

.1 Install bedding sand over aggregate base, depth as indicated. Sand layer shall be spread and leveled so that pavers when installed are 5mm higher than finished grade. No more sand shall be spread than can be covered in one day with pavers. Bedding sand layer shall not be compacted prior to installation of pavers.

.2 No pavers shall be placed until underlying layers has been approved by Consultant.

3.6 INSTALLATION OF UNIT PAVERS

.1 Pavers shall be installed to CW 3335, set in locations and patterns as indicated. Spaces between joints shall not exceed 3mm, and shall be uniform and consistent while maintaining true patterns as indicated.

.2 If cutting of pavers is required, sawn edges shall be true, even and undamaged. Confirm location of proposed cuts with Consultant.

.3 Compact into bedding sand layer using approved vibratory compactors until pavers are at proper grade, uniformly level and free of movement.

3.7 SAND JOINTS

.1 Ensure paving surface is dry and free of dirt or other debris.

.2 Fill paver joints with joint sand.

.3 Sweep joint sand into joints until full, using a soft brush at a 45° angle to the joint lines.

3.8 FIELD QUALITY CONTROL

.1 Inspect completed work and replace broken, cracked, or damaged pavers.

3.9 CLEANING

.1 Remove excess sand and cutting debris with broom.

3.10 PROTECTION

.1 Protect pavers from damage resulting from subsequent construction operations.

.2 Remove protection materials upon Substantial Performance of Work, or when risk of damage is no longer present.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Work includes lean concrete base for unit pavers and concrete piles.

1.2 RELATED SECTIONS

.1 32 14 13 – Unit Paving

1.3 REFERENCES

.1 City of Winnipeg Standard Construction Specifications

.1 CW 3110 - Sub-Grade, Sub-Base and Base Course Construction

.2 CW 3310 – Portland Cement Concrete Pavement Works

1.4 SUBMITTALS

.1 To CW 3310.

Part 2 Products

2.1 MATERIALS

.1 Use only those materials listed as approved products for surface works in CW 3310.

.2 Concrete mixes and materials in accordance with CW 3310.

.3 Reinforcing steel in accordance with CW 3310.

Part 3 Execution

3.1 CONCRETE CONSTRUCTION

.1 Obtain Consultant’s approval of granular base and reinforcing prior to placing concrete.

.2 Do concrete work in accordance with CW 3310.

3.2 CONCRETE PILE INSTALLATION

.1 Bore holes to diameters and depths indicated on the Drawings, with equipment appropriately sized for the working conditions.

.2 Dispose of excavated materials off site in accordance with local regulations.

.3 Removed loose material foreign matter and water from excavation.

.4 Install reinforcing. Obtain Consultant's approval of excavation and reinforcing prior to placing concrete.

3.3 CLEANING

.1 Upon completion of installation, remove construction and accumulated environmental dirt, surplus materials, rubbish, tools and equipment barriers from site.

3.4 ACCEPTANCE

.1 Obtain approval of site concrete from Consultant prior to proceeding soft landscape installation.

END OF SECTION

Part 1 General

1.1 DESCRIPTION

.1 Work includes fabrication and installation of custom furnishings, and the supply and installation of catalogue furnishings.

1.2 REFERENCES

.1 ASTM F593-13a, Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs,

.2 CAN/CGSB-1.40-97, Anti-corrosive Structural Steel Alkyd Primer.

.3 CAN/CGSB-1.181-99, Ready-Mixed, Organic Zinc-Rich Coating.

.4 CAN/CSA-G40.20/G40.21-13, General Requirements for Rolled or Welded Structural Quality Steel.

.5 CAN/CSA-S16.1-09, Limit States Design of Steel Structures.

.6 CSA W59-13, Welded Steel Construction (Metal Arc Welding).

1.3 SUBMITTALS

.1 Submit shop drawings for fabricated elements, indicating materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

.2 Submit product data sheets for catalog furniture. Indicate dimensions, sizes, assembly, anchorage and installation details for each furnishing specified that is not detailed on Drawings.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store, handle and protect materials in accordance with Section 01 00 10 – General Requirements.

.2 For delivery and installation of exterior site furnishings, use motorized equipment that will not disturb trees or area designated for preservation. Manually place items as required. Do not store items in preservation areas.

.3 Cover exposed metal surfaces with pressure sensitive heavy protection paper or apply strippable plastic coating, before shipping to job site.

.4 Leave protective covering in place until construction activities on the site are complete.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for reuse and recycling.

Part 2 Products

2.1 METAL FABRICATION

.1 Steel sections and plates: to CAN/CSA-G40.20/G40.21, Grade 300W.

.2 Welding materials to CSA W59.

.3 Zinc primer: zinc rich, ready mix to CAN/CGSB-1.181.

2.2 OAK TIMBERS

.1 Reclaimed source, unfinished common white or burr oak, ‘rustic’ grade, or approved alternate. Surfaces should appear weathered. Suitable supplier: Wood Anchor, 3375 Waverley Street Winnipeg,R3V 0B2, phone (204) 261-1913, or approved equal.

2.3 BENCHES

.1 MLB870-L-W Bench with back, arms, and no legs as supplied by Maglin Site Furniture, 4303 9th Street SE, Calgary, AB, T2G 3C8, phone (888) 271-8666. Wood: Ipe. Powdercoat colour: Black.

2.4 WOOD PLANTERS

.1 EP 4930 Planter as supplied by Equiparc, 1001 Rue James-Brodie, Saint-Jean-sur Richelieu, QC Canada J2X 0C1 phone (800) 363-9264. Wood: White Oak. Powdercoat colour: Black.

2.5 HARDWARE

.1 Bolts and anchor bolts: stainless steel, to ASTM A307. Exposed fasteners to be tamper resistant.

.2 Stainless steel hanger bolts, washers and nuts: to ASTM A593.

Part 3 Execution

3.1 FABRICATION

.1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.

.2 Where possible, fit and shop assemble work, ready for erection.

.3 Do welding work in accordance with CSA W59 unless specified otherwise. Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

3.2 EXAMINATION

.1 Examine areas to receive furnishings.

.2 Notify Conultant of conditions that would adversely affect installation or subsequent use.

.3 Do not begin installation until unacceptable conditions are corrected.

3.3 GENERAL INSTALLATION REQUIREMENTS

.1 Erect site furnishings square, plumb, straight, and true, accurately fitted, with tight joints and intersections.

.2 Confirm locations and obtain approval prior to securing in place.

.3 Exposed fastening devices shall be tamper resistant, match finish and be compatible with material through which they pass.

3.4 INSTALLATION OF BENCHES

.1 Anchor metal bench supports to concrete in approved locations using galvanized steel HILTI or approved alternate anchors.

.2 Install stainless steel hanger bolts in lower face of timber to align with slots in metal bench supports. Ensure the bolts are installed to proper depth to allow installation and tightening.

.3 Cut and install wood shims as necessary to level the timber.

.4 Carefully place timber on base plates to avoid scratching the finish on the steel and secure hanger bolts with stainless steel nylar nuts or approved alternate.

.5 Install bench manufacturer’s mounting plates and bench tops on timber.

3.5 INSTALLATION OF PLANTERS

.1 Shim planters so they are plumb and flush with adjacent timbers and fasten to timber with stainless steel lag bolts.

.2 Install planting medium in planters in accordance with Section 32 93 00 Trees, Shrubs and Groundcovers.

3.6 TOUCH-UPS

.1 Touch-up all damaged surfaces and finishes s recommended by manufacturers to Consultant’s approval.

3.7 CLEANING

.1 Upon completion of installation, remove construction and accumulated environmental dirt, surplus materials, rubbish, tools and equipment barriers from site.

3.8 ACCEPTANCE

.1 Site furnishings will be subject to a thorough field inspection by the Consultant and will not be accepted until all workmanship and deficiencies have been addressed.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 This specification shall cover the supply, installation and final contouring of planting medium for all for all tree wells and planting beds.

1.2 RELATED SECTIONS

.1 Section 31 00 99 – Earthworks for Minor Works

.2 Section 32 93 00 – Trees, Shruns & Groundcovers

1.3 REFERENCES

.1 Agriculture and Agri-Food Canada

.1 The Canadian System of Soil Classification, Third Edition, 1998.

1.4 SUBMITTALS

.1 Soil Testing: submit certified test reports showing compliance with or recommended amendments in accordance with the performance characteristics and physical properties as described in Item 1.5 - Quality Assurance.

.2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 QUALITY ASSURANCE

.1 Obtain approval of proposed imported planting medium materials at source.

.2 Prepare and ship samples to approved laboratory in accordance with provincial regulations and laboratory requirements, indicating intended use on each sample.

.3 Test for clay, sand and silt content, NPK, Mg, soluble salt content, pH value, growth inhibitors and soil sterilants.

.4 Submit two (2) copies of soil analysis and recommendations for corrections to Consultant.

.5 Acceptance of planting medium is subject to inspection and confirmation of test results. Do not commence work until planting medium has been accepted by Consultant.

1.6 DELIVERY STORAGE AND HANDLING

.1 Deliver and store fertilizer in waterproof bags labeled with weight, analysis and name of manufacturer.

.2 Store materials in a dry area, protected from freezing, sedimentation and contamination.

Part 2 Products

2.1 TOPSOIL

.1 Screened clay-textured or loam-textured dark naturally occurring topsoil, fertile, friable material neither of heavy clay nor of very light sandy nature.

.2 Topsoil shall be free of subsoil contamination, roots, stones or clay lumps over 40 mm in diameter and other extraneous matter. Salinity rating less than 2.5 dS/m and a pH range of 6.5-8.0. Topsoil shall not contain quack grass rhizomes, Canada thistle roots or other noxious weeds.

.3 Topsoil shall not be blown dirt deposited in ditches along wind erosion sites.

.4 Topsoil shall not be taken from fields abandoned to corn production where such soil may contain soil-incorporated herbicides with lasting residual effects such as Eradicane and Atrazine.

.5 Inform Inform Consultant of proposed source of topsoil to be supplied. Topsoil to be imported from a facility within 50km of site. The Consultant shall reject topsoil not conforming to this Specification.

2.2 PEATMOSS

.1 Derived from partially decomposed fibrous or cellular stems and leaves of species of sphagnum mosses.

.2 Elastic and homogeneous, brown in colour.

.3 Free of wood and deleterious material that could prohibit growth.

.4 Shredded particle minimum size: 5mm.

2.3 COMPOST

.1 Mixture of soil and decomposing organic matter used as fertilizer, mulch, or soil conditioner.

.2 Compost shall be dark brown in colour, and no objectionable odour.

.3 Compost is processed organic matter containing 40% or more organic matter as determined by Walkley-Black or Loss On Ignition (LOI) test.

.4 Product must be sufficiently decomposed (i.e. stable) so that any further decomposition does not adversely affect plant growth (C:N ratio below 25:1) and contain no toxic or growth inhibiting contaminates.

.5 Composted bio-solids to: CCME Guidelines for Compost Quality, Category A.

2.4 FERTILIZER

.1 To Canada "Fertilizers Act" and "Fertilizers Regulations".

.2 Complete synthetic organic starter fertilizer with guaranteed minimum analysis ratio 12: 36:15 or approved equal.

2.5 SAND

.1 Coarse Sand: Clean, hard fine silica sand, well washed and free of impurities, chemical or organic matter. Coarse texture, and to the following gradation:

Particle Size (mm)	% Passing through Screen
2.0	100%
1.0	95 to 100%
0.5	80 to 100%
0.25	0 to 30%
0.15	0 to 8%
0.075	0 to 1%

2.6 PLANTING MEDIUM

.1 All planting media shall be thoroughly blended.

.2 Keep all materials moist during blending stage to facilitate uniform mixing and to minimize peat, soil and sand separation.

.3 Final mix shall have a pH of between 6.5 and 8 unless otherwise noted.

.4 Provide a two gallon sample of planting medium with the required soil test results.

2.7 PLANTING MEDIUM MIX

.1 Planting medium for planting beds, tree pits and sodded areas to contain (by volume):

.1 45% Topsoil
.2 35% Peat
.3 5% Compost
.4 15% Coarse Sand

2.8 FERTILITY

.1 Fertility : major soil nutrients present in following amounts:

.1 Nitrogen N: 20 to 40 micrograms of available N per gram of topsoil.
.2 Phosphorus P: 40 to 50 micrograms of phosphate per gram of topsoil.
.3 Potassium K: 75 to 110 micrograms of potassium per gram of topsoil.
.4 Calcium magnesium, sulphur and micro-nutrients present in balanced ratios to support germination and/or establishment of intended vegetation

Part 3 Execution

3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL

.1 Provide temporary erosion and sedimentation control measures in addition to site sedimentation and erosion control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties as necessary during topsoil placement and grading.

.2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established

.3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.2 PREPARATION OF PLANTING BEDS

.1 Confirm rough grades conform to the drawings and that rough grading operations have been reviewed and approved by the Consultant prior to proceeding.

.2 Report any discrepancies in sub-grade conditions to the Consultant immediately upon discovery,

.3 Fine grade subgrade, eliminating uneven areas and low spots, sloped to drain as indicated on the drawings. Remove debris, roots, branches, stones in excess of 50 mm diameter and building materials. Remove subsoil that has been contaminated with oil or gasoline.

.4 Remove subsoil that has been contaminated with oil or gasoline.

.5 Remove stones, roots, grass, weeds, construction materials, debris and foreign non-organic objects from planting medium.

.6 Protect bottom of of all excavations against freezing. Remove water that enters excavations prior to planting. Ensure source of water is not groundwater.

.7 Scarify bottom of planting bed excavations to a depth of 150mm.

.8 Cover bottom of each planting bed excavation with bone meal fertilizer per manufacturers written specifications and application rate for each type of application.

.9 Do not backfill planting bed with planting medium until the Consultant has approved planting bed preparations.

3.3 PLACING AND SPREADING OF PLANTING MEDIUM

.1 Spread planting medium with adequate moisture in uniform layers during dry weather over approved, dry, unfrozen subgrade, where planting is indicated.

.2 Do not spread planting medium until Consultant has approved tree pits and placement of trees.

.3 Spread planting medium in uniform layers not exceeding 100 mm.

.4 Spread planting medium to 300mm depth after settlement.

.5 Tamp down or roll soil with manual or mechanized equipment until it forms a firm solid surface that lightly takes a foot imprint.

3.4 SOIL AMENDMENTS

.1 Apply lime, sulphur or other soil amendments at rate determined and recommended by the soil testing laboratory.

.2 Mix soil amendments well into full depth of planting medium by cultivating or rototilling prior to application of fertilizer.

3.5 APPLICATION OF FERTILIZER

.1 Prior to planting and sodding, spread fertilizer over entire area at rate and ratio determined by soil test, or as specified above.

.2 Mix fertilizer thoroughly into upper 50mm of planting medium.

3.6 FINISH GRADING

.1 Fine grade entire planting medium area to contours and elevations as indicated. Eliminate rough spots and low areas to ensure positive drainage.

.2 Prepare loose friable bed by means of rototilling and subsequent raking. Roll lightly and rake wherever planting medium is too loose.

.3 Roll planting medium with 50 kg roller, minimum 900 mm wide, to compact and retain surface.

.4 Leave surface smooth, uniform, firm against deep foot printing, with a fine loose texture.

3.7 CLEANING

.1 Upon completion of installation, remove construction and accumulated environmental dirt, surplus materials, rubbish, tools and equipment barriers from site.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 This specification shall cover the supply and installation of trees, shrubs,and all associated accessories.

1.2 RELATED SECTIONS

.1 Section 32 91 19 – Planting Medium & Finish Grading

1.3 SOURCE QUALITY CONTROL

.1 Obtain approval of plant material at source.

.2 Notify Consultant of source of material at least seven (7) days in advance of shipment. No work under this section is to proceed without approval.

.3 Acceptance of plant material at its source does not prevent rejection on site prior to or after planting operation.

.4 Imported plant material must be accompanied with necessary permits and import licenses. Conform to federal and provincial regulations.

1.4 SHIPMENT AND PRE-PLANTING CARE

.1 Coordinate shipping of plants and excavation of holes to ensure minimum time lapse between digging and planting.

.2 Tie branches of trees and shrubs securely and protect plant material against abrasion, exposure and extreme temperature change during transit. Avoid binding of planting stock with rope or wire that would damage bark, break branches or destroy natural shape of plant. Give full support to rootball of large trees during lifting.

.3 Cover plant foliage with tarpaulin and protect bare roots by means of dampened straw, peatmoss, saw dust or other acceptable material to prevent loss of moisture during transit and storage.

.4 Remove broken and damaged roots with sharp pruning shears. Make clean cut and cover cuts over 20 mm (3/4”) diameter with wound dressing.

.5 Keep roots moist and protect from sun and wind. Heel-in trees and shrubs that cannot be planted immediately in shaded areas and water well.

1.5 GUARANTEE OF NURSERY STOCK

.1 Provide a written guarantee, stating that the plant material as itemized on plant list is guaranteed against defects for a period of two (2) years from the date of the Substantial Performance of the Work for all deciduous trees over 75 mm (3”) caliper and all coniferous trees over 3 m (10’) height and for one (1) year for all other nursery stock.

.2 The Contractor shall replace and replant any nursery stock found dead and/or in poor condition one (1) year from date of Substantial Performance of the Work, 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 in leaves. Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the Owner.

.3 End-of-Warranty inspection will be conducted.

.4 The Consultant may extend the Contractor's warranty responsibilities for an additional one (1) year if, at the end of the initial warranty period, leaf development and growth is not sufficient to ensure future survival.

1.6 REPLACEMENTS

.1 During warranty period, remove from site any plant material that has died or failed to grow satisfactorily as determined by the Consultant.

.2 Replace any plant material in the next planting season.

.3 Extend warranty on replacement plant material for a period equal to the original warranty period.

.4 Continue such replacement and warranty until plant material is accepted.

.5 All required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original Drawings and Specifications, and the replaced material shall carry an additional one (1) year guarantee. Should the replaced plant material not survive, the Contractor will be responsible to replace it a third time and guarantee it for one (1) year unless it is determined that unique site conditions or inadequate maintenance causes the death of plants.

Part 2 Products

2.1 PLANT MATERIAL

.1 Quality and source: comply with Guide Specifications for Nursery Stock, latest edition of Canadian Nursery Trades Association referring to size and development of plant material and rootball. Measure plant material and rootball. Measure plants when branches are in their natural position. Height and spread dimensions refer to main body of plant and not from branch tip to branch tip. Measure caliper for trees minimum 300 mm (12”) above grade for trees 100 mm (4”) caliper and larger and 150 mm (6”) above grade for trees up to 100 mm (4”) caliper.

.2 Additional plant material qualifications:

.1 Bare root plant material or plant material obtained from areas with milder climatic conditions from those of site are acceptable only when moved to site prior to the breaking of buds in their original location and heeled-in in a protected area until conditions are suitable for planting.

.2 Plant material that has come out of dormant stage and is too far advanced will not be accepted for bare root planting unless prior approval is obtained.

.3 Use trees with strong fibrous root system free of disease, insects, defects or injuries and structurally sound. Use trees with straight trunks, well and characteristically branched for species. Plants must have been root pruned regularly, but not later than one growing season prior to arrival on site.

.3 Cold storage: approval is required for plant material that has been held in cold storage.

.4 Container grown stock: acceptable if containers are large enough for root development. Trees must have grown in container for minimum of one growing season but not longer than two. Root system must be able to "hold" soil when removed from container. Plants that have become root bound are not acceptable. Container stock must have been fertilized with slow releasing fertilizer.

.5 Balled and burlapped: coniferous and broad leaf evergreens over 500 mm (1'-8") tall must be dug with soil ball. Deciduous trees in excess of 3 m (10') height must have been dug with large firm ball. Rootballs must include 75% of fibrous and feeder root system. This excludes use of native trees grown in light sandy or rocky soil. Secure rootballs with burlap, heavy twine and rope. For large trees wrap rootball in double layer of burlap and drum lace with minimum 10 mm (1/2") diameter rope. Protect rootballs against sudden changes in temperature and exposure to heavy rainfall.

.6 Tree spade dug material: dig plant material with mechanized digging equipment of hydraulic spade or clam-shell type. Rootballs to satisfy CNTA standards. Lift rootball from hole, place in wire basket designed for purpose and line with burlap. Replace rootball and tie basket to ball with heavy rope. Take care not to injure trunk of tree with wire basket ties or rope.

.7 Collected or native plant material: use only native trees indigenous to area into which they are to be transplanted. Select trees from reasonably open stands. Trees must have well-developed crown and must be characteristically branched. Not more than 40% of overall tree height may be free of branches.

.8 Substitutions to plant material as indicated on planting plan are not permitted.

.9 Refer to Plant Specification List on the Drawings for species, size and quality of plant materials.

2.2 OTHER MATERIALS

.1 Water: potable and free of minerals which may be detrimental to plant growth.

.2 Backfill mix as specified in Section 32 91 19 – Planting Medium and Finish Grading.

.3 Tree anchors: underground 100 mm diameter steel disc tree anchors, screw in type or approved alternate.

.4 Tree supports: Arbortie by DeepRoot or approved alternate.

.5 Stakes: 75 diameter wood posts, tamarack or approved alternate species, length as required.

.6 Rootball burlap: 150 g Hessian burlap, biodegradable.

.7 Anti-desiccant: wax-like emulsion to provide film over surfaces reducing evaporation but permeable enough to permit transpiration.

.8 Wound dressing: horticulturally accepted non-toxic, non-hardening emulsion.

.9 Horticultural bonemeal: raw bonemeal finely ground with minimum analysis of 3% nitrogen and 10% phosphoric acid.

.10 Trunk collar: 150 mm (6") diameter corrugated plastic pipe, 300 mm (12") height.

.11 Wood Mulch: Shredded wood mulch, varying in size from 25 to 125 mm in length, uniform in colour and texture, free of CCA or creosote. Colour: charcoal. Provide sample for approval prior to installation.

Part 3 Execution

3.1 PLANTING TIME AND WORKMANSHIP

.1 When planting deciduous plant material after buds have broken, spray plants with anti-desiccant to slow down transpiration prior to transplanting.

.2 Trees, shrubs and groundcovers growing in containers may be planted throughout growing season.

.3 Plant only under conditions that are conducive to health and physical conditions of plants.

.4 Provide planting schedule. Extending planting operations over long period using limited crew will not be accepted.

3.2 EXCAVATION

.1 Shrub beds: excavate to minimum depth of 300 mm (12").

.2 Trees: excavate holes to depth and width to accommodate rootball and shown on Drawings.

.3 Provide drainage for planting holes in heavy soil if natural drainage does not exist. Have method approved.

.4 Protect bottom of excavations against freezing.

.5 Remove water that enters excavations prior to planting. Ensure source of water is not groundwater.

.6 Provide drainage for planting holes in heavy soil if natural drainage does not exist. Have method approved.

3.3 WOOD PLANTER PREPARATION

.1 Fill planter plastic liner with planting medium to elevation shown on the Drawings. Lightly tamp prior to installing plant material to remove air pockets

.2 Place filter cloth over planter soil and staple in place for first season.

3.4 PLANTING

.1 Loosen bottom of planting hole to depth of 150 mm (6”). Cover bottom of each excavation with bonemeal in amount recommended by manufacturer.

.2 Plant trees and shrubs vertically with roots placed straight out in hole. Orient plant material to give best appearance in relation to structure, roads and walks.

.3 Place plant material to depth equal to depth they were originally growing in nursery.

.4 With balled and burlapped rootballs, loosen burlap and cut away top 1/3 without disturbing rootball. Do not pull burlap or rope from under rootball. With container stock, remove entire container without disturbing rootball. Non-biodegradable wrappings must be removed.

.5 Tamp planting soil around root system in layers of 150 mm (6”) eliminating air voids. Frozen or saturated planting soil is unacceptable. When 2/3 of planting soil has been placed, fill hole with water. After water has completely penetrated into soil, complete backfilling.

.6 With frozen ball material, mulch planting pit to prevent freezing.

.7 Build 100 mm (4”) depth saucer around outer edge of hole to assist with maintenance watering.

.8 When planting is completed, give surface of planting tree saucer dressing of slow release 12:36:15 fertilizer at rate recommended by manufacturer, or approved equal. Mix fertilizer thoroughly with top layer of planting soil and water in well.

3.5 TREE SUPPORT

.1 Support trees as shown on planting details.

.2 Staking for trees up to 3 m (10’) and evergreens up to 2 m (6.5’) in height: backfill planting hole 2/3, drive wood post 900 mm (3’) into bottom of pit, taking care not to damage main roots. Place post or anchor 150 mm (6”) away from trunk on side of prevailing wind. Fasten trunk to post or anchor with Arbortie. Different methods of fastening tree trunk to stake or anchor are acceptable if no damage to bark of tree will occur. Obtain approval prior to using other methods.

3.6 PRUNING

.1 Prune trees after planting, only to remove damaged, miss-shapen or hazardous branches. Do not prune to compensate for loss of roots suffered during transplanting**.** Postpone pruning of those trees where heavy bleeding may occur, until in full leaf. Employ clean sharp tools and make cut flush with main branch, smooth and sloping as to prevent

accumulation of water. Remove projecting stumps on trunks or main branches and branches that rub causing damage to bark. Trim out crown of trees and shrubs without changing their natural shape. Do not damage lead branches or remove smaller twigs along main branches. Treat cuts in excess of 20 mm (3/4") diameter and damaged parts with application of wound dressing.

3.7 MULCHING

.1 Obtain approval of planting before mulching material is applied. Loosen soil in planting beds and pits and remove debris and weeds. Spread mulch to minimum thickness of 75 mm (3") or as indicated on drawing. Mulch material susceptible to blowing must be moistened and mixed with topsoil before applying. When mulching is placed in fall, place immediately after planting. When mulch is placed in spring, wait until soil has warmed up.

3.8 MAINTENANCE

.1 Ensure all plant material is watered in immediately after installation. Maintain all planted areas from time of installation to the time they are accepted to start warranty.

3.9 ACCEPTANCE

.1 Trees and shrubs will be inspected at substantial performance and at the end of the one (1) year warranty period. Trees and shrubs will be accepted by the Consultant, provided that:

.1 Plants are showing vigorous well rounded new growth.

.2 Plants are free of disease or pests.

.3 Plants show no signs of malnutrition or stress.

.2 After the warranty inspection the Contractor shall replace all trees and shrubs that do not meet the standards in 3.9 with new plant material as originally specified at no additional cost to the Owner. All replacement plants shall be subject to a thirty (30) day establishment and maintenance period.

END OF SECTION