ENGINEERING DEPARTMENT

ADDENDUM TO THE CONTRACT

for the

MAIN STREET, SECOND TO FIFTH STREET IMPROVEMENTS

Contract No. E12-167

ADDENDUM NO.: TWO

CURRENT DEADLINE FOR BIDS: May 30, 2012

PREVIOUS ADDENDA: ONE

ISSUED BY: City and Borough of Juneau
ENGINEERING DEPARTMENT
155 South Seward Street
Juneau, Alaska 99801

PREVIOUS DEADLINE FOR BIDS: May 25, 2012

DATE ADDENDUM ISSUED: May 22, 2012

The following items of the Contract are modified as herein indicated. All other items remain the same. This is a faxed addendum. A confirming copy will not be mailed to you. If this fax is incomplete, please call (907) 586-0490, and we will re-send it. This addendum has been issued and is posted online. Please refer to the CBJ Engineering Contracts Division webpage at: http://www.juneau.org/engineering ftp/contracts/Contracts.php

PROJECT MANUAL

Item No. 1 SECTION 00030 – NOTICE INVITING BIDS, DEADLINE FOR BIDS. ***Change*** the date of the Deadline for Bids ***from*** May 25, 2012, ***to*** May 30, 2012. The time remains the same.

Item No. 2 SECTION 00310 – BID SCHEDULE, ***delete*** in its entirety and ***replace*** with the attached bid schedule, titled "SECTION 00310 – BID SCHEDULE, ADDENDUM NO. TWO." The only change is the addition of Additive Alternate Three, Pay Item 5120.2A, Alaska Office Building Entrance Canopy.

Item No. 3 SECTION 01025 – MEASUREMENT AND PAYMENT, PART 1 – GENERAL, ARTICLE 1.1 SCOPE, PARAGRAPH C, ITEM 21, ***replace*** "two adjacent canopy footings" with "four adjacent canopy footings".

Item No. 4 SECTION 01025 – MEASUREMENT AND PAYMENT, PART 1 – GENERAL, ***delete*** *article 2.39A* in its entirety and ***replace*** with the following:

"2.39A WINDFALL FISHERMAN SITE IMPROVEMENTS (Pay Item No. 2930.2A)
PRICE BASED ON LUMP SUM

A. Measurement for payment for Windfall Fisherman Site Improvements will be based upon the completion of the entire WORK as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.

B. The WORK under this Pay Item will include all site work behind (right of) the concrete band at back of sidewalk surrounding the Windfall Fisherman (Bear) at approximate station "M" 13+10 RT, as shown on Drawings C.108 and L.404. The WORK under this Pay Item will include the following:

1. All planting soil, mulch, trees, shrubs, perennials, bulbs, and all other vegetation items.
2. All concrete walls, planter walls, stairs, and flatwork.
3. All excavation and grading.
4. Removal of all existing concrete walls, rock pavers, plants, shrubs, and trees.
5. All landscaping rock, shot rock borrow, base course, sand, pavers, handrail and other site furnishings.
6. The provision of the underground circuits and ductwork between the base bid handhole at approximate station "M" 13+07.0, 27.8 RT and the recessed wall lights shown on Drawings C.108 and E.303. This WORK includes the provision and installation of the handhole at approximate station "M" 13+19.7, 35.5 RT and the nine recessed wall lights.
7. The provision and installation of CB-10A and the 8-Inch PVC storm drain between CB-10 and CB-10A.
8. All WORK associated with the removal and resetting of the existing 2000 pound Windfall Fisherman Brown Bear sculpture.

C. Payment for Windfall Fisherman Site Improvements will be made at the amount named in the Bid Schedule under Pay Item 2930.2, which payment will constitute full compensation for all WORK in Section 02501 Storm Sewer Pipe, Section 02502 Storm Sewer Manholes, Inlets, and Catch Basins, Section 02870 Site Furnishings, Section 02920 - Lawns and Grasses, Section 02930 – Exterior Plants, Section 03301 Structural Concrete, Section 03302 Concrete Structures, Section 03303 Sidewalk, Curb and Gutter, and Section 03305 Concrete and Granite Pavers, as shown on the Drawings and as directed by the ENGINEER."

Item No. 5 SECTION 01025 – MEASUREMENT AND PAYMENT, PART 1 – GENERAL, ARTICLE 3.2 ALASKA OFFICE BUILDING CANOPY FOOTINGS, ***add*** the following paragraph:

"E. WORK under this item includes the two footings for the Alaska Office Building Entrance Canopy, as shown on the Drawings."

Item No. 6 SECTION 01025 – MEASUREMENT AND PAYMENT, PART 1 – GENERAL, ***add*** the following article:

5.2A ALASKA OFFICE BUILDING ENTRANCE CANOPY (Pay Item No. 5120.2A, Additive Alternate Three) PRICE BASED ON LUMP SUM

A. Measurement for payment for Alaska Office Building Entrance Canopy will be based upon the completion of the entire WORK as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.

B. The WORK under this Item includes the construction of a new canopy at the entrance to the Alaska Office Building at approximate Station "M" 13+50 LT, all inclusive of concrete footings and base plates for columns, steel posts and structure, glazing system, gutters, downspouts, and underground storm conduit to a point of connection to the storm sewer line at approximate Station 13+42, 34.0 LT.

C. Payment for Alaska Office Building Entrance Canopy will be made at the Unit Price named in the Bid Schedule under Pay Item No. 5120.2A, which payment will constitute full compensation for all WORK described in Section 05120 – Structural Steel, Section 05121 – Architecturally-Exposed Structural Steel Framing, Section 08635 – Metal-Framed Canopies, Section 08800 -- Glazing, and Section 09900 – Paints and Coatings as shown on the Drawings and as directed by the ENGINEER.

Item No. 7 SECTION 02930 – EXTERIOR PLANTS, ***delete*** the section in its entirety and ***replace*** with the attached.

DRAWINGS

Item No. 8 Sheet No. 11, titled "WINDFALL FISHERMAN PLAN AND DETAILS," ***delete*** the drawing in its entirety and ***replace*** with the attached.

Item No. 9 Sheet No. 24, titled "LANDSCAPE LAYOUT PLAN – MAIN STREET B.O.P. TO STA "M" 12+75," ***delete*** the drawing in its entirety and ***replace*** with the attached. The only change is the addition of landscaping behind the back of sidewalk at approximate Station "M" 12+65 LT.

Item No. 10 Sheet No. 25, titled "LANDSCAPE LAYOUT PLAN – MAIN STREET STA "M" 12+75 to STA "M" 15+26," ***delete*** the drawing in its entirety and ***replace*** with the attached. The only change is the addition of landscaping behind the back of sidewalk at approximate Station "M" 14+40 LT.

Item No. 11 Sheet No. 27, titled "LANDSCAPE DETAILS MAIN STREET" ***delete*** the drawing in its entirety and ***replace*** with the two attached drawings, Sheet No. 27A, titled "LANDSCAPE DETAILS MAIN STREET" and Sheet No. 27B, titled "LANDSCAPE DETAILS MAIN STREET".

Item No. 12 Sheet No. 28, titled "WINDFALL FISHERMAN SITE IMPROVEMENTS" ***delete*** the drawing in its entirety and ***replace*** with the attached.

Item No. 13 Sheet No. 35, titled "LIGHTING PLAN – MAIN STREET STA "M" 15+26 TO E.O.P." ***add*** the following to the "LUMINAIRE SCHEDULE":

TYPE	DESCRIPTION	MANUFACTURER	LAMPS	REMARKS
D	2.5" DIA RECESSED LED MARKER, ALUMINUM BODY, STAINLESS STEEL TOP RING, FLAT POLYCARBONATE DIFFUSER, 30-DEGREE FLOOD DISTRIBUTION, REMOTE 17W 24V DC ELECTRONIC DRIVER	SISTEMALUX S.3430W-19 S.3402	1.5W WARM WHITE LED 3000K, CRI 75	WALL MOUNT IN CURB @ 4" AFF TO CENTER OF LUMINAIRE. SEE SHEET C.108 OF CIVIL SET FOR LAYOUT. MOUNT DRIVER IN WEATHERPROOF ENCLOSURE INSIDE HANDHOLE, LOCATE TOWARDS TOP OF HANDHOLE.

Item No. 14 ***Add*** attached sheets:

- "Sheet No. 38A - ALASKA OFFICE BUILDING ENTRANCE CANOPY PLAN AND ELEVATION.
- Sheet No. 39A - ALASKA OFFICE BUILDING ENTRANCE CANOPY CROSS SECTIONS.
- Sheet No. 41A - ALASKA OFFICE BUILDING ENTRANCE CANOPY GLASS CANOPY DETAILS.
- Sheet No. 43A - ALASKA OFFICE BUILDING ENTRANCE CANOPY PLAN AND ELEVATION.
- Sheet No. 44A - ALASKA OFFICE BUILDING ENTRANCE CANOPY SECTIONS AND DETAILS."

By:_____

Jennifer Mannix, CBJ Contract Administrator

Total number of pages contained within this Addendum: 31

SECTION 00310 - BID SCHEDULE

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
1505.1	Mobilization	Lump Sum	All Req'd	Lump	Sum		
1550.1	Traffic Control	Lump Sum	All Req'd	Lump	Sum		
1570.1	Erosion and Sediment Control	Lump Sum	All Req'd	Lump	Sum		
2202.1	Excavation	CY	2,746				
2202.2	Shot Rock Borrow	CY	1,730				
2202.3	Selected Borrow	CY	300				
2202.4	Mining Area Restoration & Road Cleaning Guarantee	Contingent Sum	All Req'd	Contingent	Sum	$ 5,000	00
2202.5	Individual Mining Plan	Lump Sum	All Req'd	Lump	Sum		
2203.1	Concrete Backfill	Lump Sum	All Req'd	Lump	Sum		
2204.1	2-Inch Minus Shot Rock w/Base Course	CY	684				
2401.1	Sanitary Sewer Pipe - 8-Inch PVC	LF	329.7				
2401.2	Sanitary Sewer Pipe - 12-Inch PVC	LF	403.7				
2401.3	Sanitary Sewer Service Lateral, 6-Inch	EA	10				
2402.1	Sanitary Sewer Manhole, Type 1, With Fiberglass Base Liner	EA	3				
2501.1	4 & 6-Inch Pipe Culvert	LF	500				
2501.2	12-Inch Pipe Culvert	LF	560.4				
2501.3	18-Inch Pipe Culvert	LF	361.9				
2501.4	CPP Saddle Tee	EA	6				
2501.5	6" Underdrain	LF	100				
2502.1	Storm Drain Manhole, Type I	EA	5				
2502.2	Catch Basin, Type III	EA	7				
2502.3	Catch Basin, Type IV	EA	4				
2502.4	Trench Drain and Heated Sidewalk	Lump Sum	All Req'd	Lump	Sum		
2601.1	6-Inch D.I. Water Service	EA	5				
2601.2	8-Inch D.I. Water Pipe	LF	110.3				
2601.3	12-Inch D.I. Water Pipe	LF	637.1				
2602.1	8-Inch Gate Valve	EA	2				
2602.2	12-Inch Gate Valve	EA	3				
2603.1	Fire Hydrant Assembly	EA	2				
2605.1	1" Water Service	EA	5				
2607.1	Pipe Insulation	BD	20				

COMPANY NAME _____

SECTION 00310 - BID SCHEDULE

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
2702.1	Construction Surveying	Lump Sum	All Req'd	Lump	Sum		
2703.1	Remove and Reset Monument w/New Case	EA	2				
2714.1	Stabilization Fabric	SY	1,000				
2716.1	Water, Storm and Sanitary Pipe Removal	Lump Sum	All Req'd	Lump	Sum		
2717.1	Storm and Sanitary Structure Removal	Lump Sum	All Req'd	Lump	Sum		
2718.1	Sign Assemblies	Lump Sum	All Req'd	Lump	Sum		
2718.2	Project Sign Assembly	Lump Sum	All Req'd	Lump	Sum		
2720.1	Painted Traffic Markings	Lump Sum	All Req'd	Lump	Sum		
2801.1	A.C. Pavement, Type II-A, Class B	Ton	562				
2803.1	Fog Seal Coat	Ton	2				
2803.2	Blotting Sand	Ton	10				
2804.1	Asphalt Treated Base	Ton	463				
2806.1	Remove Existing Asphalt Surfacing	SY	3,279				
2870.1	Site Furnishings	Lump Sum	All Req'd	Lump	Sum		
2920.1	Lawns and Grasses	Lump Sum	All Req'd	Lump	Sum		
2930.1	Exterior Plants	Lump Sum	All Req'd	Lump	Sum		
3302.1	Concrete Retaining Walls	Lump Sum	All Req'd	Lump	Sum		
3302.2	Alaska Office Building Canopy Footings	Lump Sum	All Req'd	Lump	Sum		
3303.1	Concrete Sidewalk and Driveway 4 and 6-Inches Thick	SY	432.2				
3303.2	Detectable Tile	SF	180				
3303.3	Curb and Gutter, Type I	LF	1,652.9				
3304.1	Removal of Concrete Sidewalk and Driveway	SY	973.1				
3304.2	Removal of Curb and Gutter	LF	1,440.1				
3305.1	Sidewalk, Granite Pavers	SY	70.7				
3305.2	Sidewalk, Holland Pavers	SY	1,352.5				
16000.1	Utiliwalk Removal and Duct Bank Installation Coordination	Lump Sum	All Req'd	Lump	Sum		
16000.2	Lighting	Lump Sum	All Req'd	Lump	Sum		

TOTAL BASE BID: _____

COMPANY NAME _____

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
Additive Alternate One							
5120.1A	Alaska Office Building Canopy	Lump Sum	All Req'd	Lump	Sum		
16000.3A	Alaska Office Building Canopy Lighting	Lump Sum	All Req'd	Lump	Sum		
			TOTAL ADDITIVE ALTERNATE ONE:				
Additive Alternate Two							
2930.2A	Windfall Fisherman Site Improvements	Lump Sum	All Req'd	Lump	Sum		
			TOTAL ADDITIVE ALTERNATE TWO:				
Additive Alternate Three							
5120.2A	Alaska Office Building Entrance Canopy	Lump Sum	All Req'd	Lump	Sum		
			TOTAL ADDITIVE ALTERNATE THREE:				

COMPANY NAME _____

SECTION 02930 - EXTERIOR PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Trees
2. Shrubs.
3. Perennials.
4. Planting Soils and Amendments.
5. Boulders.

1.2 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.

C. Boulders: Naturally rounded river rocks, free of sharp faces or edges. Shot rock and other blasted or drilled rock is not acceptable.

D. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

E. Finish Grade: Elevation of finished surface of planting soil.

F. Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

G. Invasive Species: Plant material as listed within the most recent US Department of Agriculture publication for Region 10 (Alaska) or most recent University of Alaska Fairbanks Cooperative Extension publication, specific for the region of Alaska in which the project is located.

H. Native Topsoil: Existing native organic and mineral soils used to produce planting soil.

I. Planting Soil: Soil produced by homogeneously blending native topsoil, mineral soils and/or sand with stabilized organic soil amendments to produce planting soil to meet the planting soil specifications.

J. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include but are limited to: insects, mites, grubs, mollusks (snails and slugs), rodents (voles and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

K. Planting Area: Areas to be planted.

L. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

M. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

N. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

O. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

P. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

Q. Weeds: Plant material that is not specified in the Drawings or Specifications.

1.3 REFERENCES

A. ANSI Z60.1 (latest edition), American Standard for Nursery Stock, American Nursery and Landscape Association.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For each of the following:

1. Organic Mulch: 1-quart volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
2. Planting Soil: 1-quart volume of each soil required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of soil. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and soil makeup.
3. Tree tie and wire: One tie and 6 inch segment of wire
4. Landscape Boulders: Images of boulders at source of sufficient detail to determine color and shape.

C. Product certificates.

D. Planting Schedule: Indicating anticipated planting dates for exterior plants.

E. Maintenance Instructions: Recommended procedures to be established by OWNER for maintenance of exterior plants during a calendar year.

1.5 QUALITY ASSURANCE

A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

B. Topsoil and Planting Soil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; deleterious material; pH; and mineral and plant-nutrient content for topsoil and each type of planting soil.

1. Report suitability of soil for plant growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

C. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

D. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.

E. Observation: Landscape Architect may observe all plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Landscape Architect retains right to observe all plant material further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Landscape Architect may remove a portion of or all growth media from the root system for inspection of the roots and to ensure proper nursery practices. This shall be a maximum of two plants per species, up to 2% of the species if greater. The Landscape Architect reserves the right to observe and remove growing media from additional plants should previous observations indicate defects in the root system or nursery practices. It will be the responsibility of the Contractor to immediately plant or repot in original container, if approval of material is granted.

1. Notify Landscape Architect of arrival of planting materials for inspection 7 days prior to installation.

F. Approval: Plant material shall not be planted by the Contractor until observed and approved by the Landscape Architect. All rejected material shall be immediately removed from the Project site. All rejected material shall be replaced with observed and approved material of the required species and size at no additional cost. The Landscape Architect reserves the right to reject individual plants, or the entire shipment of any species or multiple species not meeting the specifications.

G. Trees shall meet the following specifications for quality:

1. As typical for the species/cultivar, trees shall be healthy and vigorous, as indicated by an inspection for the following:

a. foliar crown density

b. length of shoot growth (throughout crown)
c. size, color and appearance of leaves
d. uniform distribution of roots in the container media
e. appearance of roots
f. absence of twig and/or branch dieback
g. relative freedom from insects and diseases

2. There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around in the top half of the root ball. Roots larger than this may be cut provided they are smaller than one-third the trunk diameter. There shall be no kinked roots (90 degrees or more) greater than 1/5 the trunk diameter. Roots larger than this can be cut provided they are less than one-third the trunk diameter.
3. Trunk flare on trees must be visible above the surface of the root ball. Major roots must be found at 2 inches or less below surface of root ball.
4. Trees should be rooted into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted. The trunk should bend when gently pushed, not pivot at or below soil line.
5. The point where the top-most root in the root ball emerges from the trunk shall be visible at the soil surface.
6. The relationship between caliper, height and root ball size shall meet the ANSI Z60.1 standard.
7. There should be one dominant leader more-or-less straight to the top of the tree with the largest branches spaced at least 6 inches apart. There can be a double leader in the top 10% of the tree when typical of the species or cultivar. All coniferous plant material shall have only one leader.
8. The tree canopy should be symmetrical, free of large voids greater than twelve inches, and typical of the species or cultivar. Live crown ratio (distance from bottom of canopy to tree top/tree height) should be at least 65%.
9. One-half or more of the foliage shall be on branches originating on the lower two-thirds structure of the canopy, and one-half or less shall occur on the upper one-third of the canopy structure.
10. Branches should be less than 2/3 the trunk diameter when measured one inch above the branch, free of bark inclusions, and more-or-less radially distributed around the trunk and vertically along trunk, without crossed branching.
11. Trees shall stand erect without a supporting stake.
12. The trunk shall decrease in taper with increasing height.
13. The trunk and main branches shall be free of wounds (except for properly-made pruning wounds), damaged areas, conks, bleeding, and signs of insects or disease. Open wounds or visible damage on the trunk shall not exceed 2 inches in length or be more than 5% of the total circumference of the trunk. Pruning wounds do not have to be closed over but shall have been made properly and just outside the collar.
14. There shall be live buds or foliage along the length and to the ends of all twigs.
15. At time of inspection and delivery, the rootball shall be moist throughout, and the tree crown shall show no signs of moisture stress, as indicated by wilt, shriveled, dead leaves, or branch dieback. Roots shall show no signs of being subjected to excess soil moisture conditions, as indicated by root discoloration, distortion, death, or foul odor.
16. Trees shall not have nursery tape, labels, wire, twine, or other materials within live tissue of the trunk, branches, major roots, or other portions of the tree that may compromise the health or structural integrity of the tree.
17. If any of the above conditions are not met, trees may be rejected.

H. Observation: LANDSCAPE ARCHITECT may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. LANDSCAPE ARCHITECT retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify LANDSCAPE ARCHITECT of arrival of planting materials for inspection three days prior to installation.

I. Shrubs shall meet the same requirements for quality as for trees with the exception of trunk and branching requirements. The Landscape Architect may reject shrubs not meeting these requirements.

J. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

K. Pre-installation Conference: Conduct conference on site prior to beginning work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Bulk Materials: Do not deliver or place backfill, soils and soil amendments in frozen, wet, or muddy conditions.

1. Do not dump or store bulk materials near structures, utilities, sidewalks, pavements, and other facilities, or on existing trees, turf areas or plants.
2. Provide protection including tarps, plastic and or matting between all bulk materials and any finished surfaces sufficient to protect the finish material.

B. Provide erosion-control measures to prevent erosion or displacement of bulk materials and discharge of soil-bearing water runoff or airborne dust to adjacent properties, water conveyance systems, and walkways. Provide additional sediment control to retain excavated material, backfill, soil amendments and planting mix within the project limits as needed.

C. Do not prune plants before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery and handling.

D. Plants transported to the site on open vehicles shall be completely covered with tarpaulins or other suitable covers securely fastened to the vehicle to prevent damage to the plants or wind desiccation. Closed vehicles or shipping containers shall be adequately ventilated to prevent overheating of plants and allow natural respiration. Do not ship plants in the same container with fresh produce (fruit and vegetables) or other products harmful to plant material. Ensure plants are well watered prior to shipping. Immediately open shipping containers upon arrival in port and water plants if necessary. Do not let plants remain in shipping containers more than 24 hours after arrival in port. Plants damaged in transit or due to improper handling shall be cause of rejection.

E. Handle planting stock by root ball or container.

F. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants and trees in shade, protect from weather and mechanical damage, and keep roots moist.

1. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

G. Keep plant tags and labels on all plants until approved.

H. Store bulbs, corms, and tubers in a dry place at 60 to 65 degrees F until planting.

1.7 PROJECT CONDITIONS

A. Verification of Existing Conditions and Protection of New or Existing Improvements: Before proceeding with work in this section, the Installer shall carefully check and verify all dimensions, quantities, and grade elevations, and inform the LANDSCAPE ARCHITECT immediately of any discrepancies.

1. Carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging. Verify the location of all aboveground and underground utility lines, infrastructure, other improvements, and existing trees, shrubs, and plants to remain including their root system, and take proper precautions as necessary to avoid damage to such improvements and plants.
2. In the event of conflict between existing and new improvements notify the LANDSCAPE ARCHITECT in writing and obtain written confirmation of any changes to the work prior to proceeding.

a. When new or previously existing utility lines are encountered during the course of excavation, notify the LANDSCAPE ARCHITECT in writing and make recommendations as to remedial action. Proceed with work in that area only upon approval of appropriate remedial action. Coordinate all work with the appropriate utility contractors, utility company or responsible public works agency.

B. Protect partially completed installation against damage from other construction traffic when work is in progress, and following completion with highly visible construction tape, fencing, or other means until construction is complete.

1.8 COORDINATION

A. Planting Restrictions: Plant during the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. All Plant Material: May 1 to September 15 or as approved by LANDSCAPE ARCHITECT.
2. All Spring Flowering Bulbs: September 15 to November 1 or as approved by LANDSCAPE ARCHITECT.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit. Do not plant during excessive periods of rain or when soils are saturated and can become compacted due to normal planting operations.

1.9 WARRANTY

A. Warranty: Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by OWNER, or incidents that are beyond CONTRACTOR's control.
b. Structural failures including plantings falling or blowing over.

2. Warranty Period from Date of Substantial Completion:

a. Plant Material: One year.

1.10 MAINTENANCE SERVICE

A. Initial Maintenance Service for all Plants (except grasses): Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: One year from date of substantial completion.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

B. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

C. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls. Tree and shrub sizes indicated on Drawings are sizes after pruning.

D. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

E. Labeling: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

F. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

G. Mosses: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery [and that are in bud but not yet in bloom].

2.2 SPRING BULBS

A. General: Furnish nursery-grown landscape #1 quality bulbs, harvested for year of planting. Do not use bruised, soft, damaged or diseased bulbs.

B. Provide bulbs as indicated on Drawings.

2.3 NATIVE TOPSOIL

A. Native Topsoil: Fertile, friable, surface soil containing natural loam (approximately 45% sand, 40% silt and 15% clay) and complying with ASTM D 5268, pH range of 5.5 to 7, an average of 10 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth. Topsoil to be free of vegetative plant parts or seed capable of propagating. Topsoil shall be free of volcanic ash and shall not have a deleterious material mass percentage of greater than 5% not passing through a #4 screen. Obtain topsoil from naturally well-drained sites where topsoil occurs at least 4” deep; do not obtain from bogs or marshes.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

    a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.

2.4 INORGANIC SOIL AMENDMENTS

A. Sand: Clean, washed, natural or manufactured uniform coarse texture sand, free of toxic materials and other deleterious material.

2.5 ORGANIC SOIL AMENDMENTS

A. Organic Soil Amendments: Shall be shredded material with a deleterious material mass of less than 5%.

B. Compost: Well-composted, sterilized, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

1. Organic Matter Content: 50 to 60 percent of dry weight.

C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.

D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.

E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.6 FERTILIZER

A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: 8 percent nitrogen, 32 percent phosphorous, and 16 percent potassium, by weight.

2.7 PLANTING SOIL MIXES

A. Planting Soil: Create planting soil using the following as indicated and homogeneously blending to a uniform texture. Soil mixes shall not have a deleterious material mass percentage of greater than 10% not passing through a #4 screen. Percentages are volume.

B. Planting Soil Mix: Mix soil with the following soil amendments in the following quantities:

1. Ratio of Loose Native Topsoil by Volume: 60%
2. Ratio of Sand by Volume: 30%
3. Ratio of Loose Organics by Volume: 10%
4. Total organic content: 13-15%

5. % passing 200 sieve: 11-16%
6. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: As recommended by soil testing agency.

C. Planting Soil For All Beds Adjacent to Windfall Fisherman Sculpture: Mix soil as indicated above and add four inch depth of compost or shredded peat over soils after soil installation.

2.8 TREE STABILIZATION MATERIALS

A. Tree Stakes:

1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, size and length as indicated, pointed at one end.
2. Guys and Tie Wires: ASTM A 641A/M, Class 1 galvanized-steel wire, 2 strand, twisted, 0.05 inch in diameter.
3. Tree Webbing: 1 inch wide, UV-resistant polypropylene webbing, 18 inches long with a brass grummet on each end. Do not use hose and wire.

2.9 MULCHES

A. Organic Mulch: Ground or shredded bark.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.

B. Obtain utility locates for all underground utilities and structures in planting areas. Notify the LANDSCAPE ARCHITECT of any conflicts prior to beginning excavation.

C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

D. Lay out planting beds and trenches for exterior plantings. Stake locations, outline areas, adjust locations when requested and obtain LANDSCAPE ARCHITECT acceptance of layout before starting planting bed excavation work and planting. Make minor adjustments as required.

E. Excavate beds to the depth required to accept the depth of planting soils as indicated on Drawings.

F. Fill all excavations completely with water and allow to naturally percolate from excavations. Notify LANDSCAPE ARCHITECT of any beds which fail to percolate within 24 hours and make good excavations through drilling, reducing compaction, and other methods to get adequate percolation as indicated. Repeat water percolation test as needed.

G. Scarify the sides and bottom of all beds to a depth of 3 inches after percolation test to reduce compaction as a result of testing.

H. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain LANDSCAPE ARCHITECT acceptance of layout before planting. Make minor adjustments as required.

3.3 PLANTING BED ESTABLISHMENT

A. Homogeneously blend soil mixes off-site before spreading or mix planting soil in beds and homogeneously blend planting soil mix to the full depth to a uniform texture. Do not add planting soil until all water has percolated out of excavation.

B. Spread planting soil to the depth indicated on Drawings. Install in lifts that do not exceed 8 inches. Compact using irrigation or a water filled roller. Do not use mechanical compaction. Compact soil to 84-86% of maximum dry density. Check the soil compaction with a penetrometer or densiometer. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

C. If the planting soil becomes overly compacted, remove the soil and reinstall.

D. For all planting beds associated with the Windfall Fisherman, apply four inch depth of compost or peat over installed planting soils, prior to installing plants.

E. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

F. Plant plant material after finish grades are established and before planting lawns. Do not plant in soils immediately after performing irrigation compaction of planting soils. Allow soils to dry before planting.

G. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 LANDSCAPE BOULDERS

A. Place boulders prior to installation of plant material.

B. Stake locations, or outline areas, to receive boulders as indicated on Drawings. Adjust locations when requested and obtain Landscape Architect acceptance of layout before installing boulders. Make minor adjustments as required.

C. Set boulders as indicated on Drawings and ensure boulders are stable and will not move.

D. Place most aesthetic side of boulder up and face to allow maximum visibility. Make minor adjustments as requested by Landscape Architect.

3.5 TREES AND SHRUB AND GROUND COVER PLANTING

A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Excavation of Pits and Trenches in Planting Beds: Excavate pits to a depth and width to accommodate roots and result in the uppermost lateral root being no more than 2 inches below finish grade but below finish grade. Avoid mixing of soil layers during excavation. Scarify sides of plant pit smeared or smoothed during excavation. Limit compaction of planting soils as a result of planting operations. Loosen planting soils, by hand, that have been compacted during planting operations.

D. Set balled and burlapped, and container grown stock plumb and in center of pit or trench with uppermost lateral root no more than 2 inches below finish grades.

1. Remove burlap and wire baskets from root balls without breaking root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
2. Make adjustments to ensure proper planting depth is obtained. Verify that root flare is visible at top of root ball according to ANSI Z60.1.
3. Plumb before backfilling, and maintain plumb while working backfill around roots.
4. Place planting soil in lifts that do not exceed 6 inches. Compact using irrigation or a water filled roller. Do not use mechanical compaction. Compact soil to 80-85% of maximum dry density. Check the soil compaction with a penetrometer or densiometer. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
5. Backfill around root ball with planting soil in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
6. Continue backfilling process in layers to maintain soil layers established prior to excavating plant pits. Water again after placing and tamping final layer of soil.

E. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.6 BULB PLANTING

A. Plant spring flowering bulbs in the autumn during dates indicated. Do not plant in frozen or waterlogged soils.

B. Plant bulbs with noses pointing upward at the spacing and depth indicated on the Drawings.

C. Minimize disturbance to existing plant material within planting area and prevent planting soil from becoming overly compacted due to planting operations.

3.7 TREE, SHRUB AND VINE PRUNING

A. Prune only when directed by Landscape Architect. Pruning to be executed by or under direct supervision of a certified Arborist, or experienced nurseryman with pruning experience.

B. All pruning cuts shall comply with ANSI A-300 standards. Do not cut tree leaders; remove only injured or dead branches from trees. Do not prune branches unless damaged or to retain natural character. Prune trees and shrubs according to standard horticultural practice with sharp, clean tools.

C. Tree sizes indicated are sizes after pruning. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

D. Do not apply pruning paint to wounds.

3.8 TREE STABILIZATION

A. Upright Staking and Tying: Stake all trees indicated.

1. Use stakes of length required as indicated on drawings and to extend to height indicated above grade.
2. Set vertical stakes and space to avoid penetrating root balls or root masses.
3. Support trees with two strands of tie wire and webbing at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

3.9 MULCHING

A. Cover all beds with minimum of two inch depth of mulch. Keep mulch four inches from all trunks and canes. Ensure even coverage.

3.10 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated past management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.11 CLEANUP AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

3.12 DISPOSAL

A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION 02930