SIZE GPM VAL 11.96 1" 1A 2A 14.46 1" 1" 3A 14.19 4A 1" 11.03 1" 16.01 5A 1" 6A 11.63 1" 8.95 7A 1" 8A 13.67 9A 14.57 1" 1" 12.46 10A 1-1/4" | 18.62 11A 12A 1" 16.16 13A 1-1/4" 18.14 MAX 16 14A 1" 15A MAX 16 1" 16A 1" MAX 16 17A MAX 16 1" 18A MAX 16 1"

VALVE KEY A :

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SIZE PIPING AS FOLLOWS:

SIZE PIPING AS FOL 0 - 8 GPM = 3/4" PIPE 9-16 GPM = 1" PIPE 17- 24 GPM = 1 1/4" PIPE 25 - 32 GPM = 1 1/2" PIPE 33 - 50 GPM = 2" PIPE

Irrigation Plan



HUNTER IRRIGATION EQUIPMENT SCHEDULE:

HUNTER IRRIGATION EQUIPMENT SHOWN IN SCHEDULE. TORO, RAINBIRD, WEATHERMATIC OR EQUIVALENT IRRIGATION EQUIPMENT MAYBE SUBSTITUTED WITH LANDSCAPE ARCHITECT'S WRITTEN APPROVAL ONLY.

SYMBOL	DESCRIPTION	P.S.I.	RADIUS				
0.19 0.38 0.19	HUNTER MPLCS515, MPRCS515, MPSS530 STRIP ROTATOR HEAD, WITH MATCHED PRECIPITATION RATES	30	4'x28', 4'x14				
	HUNTER MP800SR ROTATOR, 6'-12' ADJUSTABLE ARC AND RADIUS NOZZLE, WITH MATCHED PRECIPITATION RATES	30	6'-12'				
	HUNTER MP1000 ROTATOR, 12' ADJUSTABLE ARC AND RADIUS NOZZLE, WITH MATCHED PRECIPITATION RATES	30	12'				
^{0.33} ^{0.65} ^{0.74} ^{0.95} ^{1,27}	HUNTER MP2000 ROTATOR, 17' & 18' ADJUSTABLE ARC AND RADIUS NOZZLE, WITH MATCHED PRECIPITATION RATES	30	17'-18'				
L ⁷⁴	HUNTER MP3000 ROTATOR, 27' ADJUSTABLE ARC AND RADIUS NOZZLE, WITH MATCHED PRECIPITATION RATES	30	27'				
P ^{0.17} D ^{0.34} D ^{0.39}	HUNTER MP CORNER ROTATOR, 12' RADIUS HEADS, ADJUSTABLE ARC NOZZLE, WITH MATCHED PRECIPITATION RATES	30	12'				
В	BRASS GATE VALVE - RuB Ball Valve - Model S95F43 (Round Handle) - SIZE TO FIT MAINLINE						
BFP	BACKFLOW ASSEMBLY - FEBCO LF850 (SIZE TO MATCH METER)						
	AUTOMATIC CONTROL VALVE, HUNTER ICV, SEE VALVE KEY						
М	1" WATER METER (BY OTHERS - COORDINATE POC WITH CONSTRUCTION MANAGER)						
Q	QUICK COUPLER - HUNTER HQ-44-LRC-AW						
	RAIN SENSOR - HUNTER RAIN-CLIK-WIRELESS RAIN SENSOR (WRC-INT) OR EQUAL, SEE GENERAL NOTE C						
A	CONTROLLER - HUNTER I-CORE WITH DUAL (18- STATION EXTERIOR, WALL MOUNT, PLASTIC ENCLOSURE)						
	CLASS 200 PVC LATERAL LINE PIPING, SIZE PER PLAN						
	2" SCHEDULE 40 PVC MAIN LINE						
	CLASS 200 PVC SLEEVE 2X PIPE DIAMETER, 4" MIN.						
Not Shown	#14 AWG TYPE UF CONTROL WIRE, RED = SIGNAL, WHITE = COMMON, ORANGE= SPARE						

SPRAY DETAILS:

(Not To Scale)

NOTES 1. DO NOT ALLOW VAULT TO REST ON PIPE. USE EXTENSIONS AS NECESSARY. 2. VALVE TO BE SET PLUMB. 3. CONTRACTOR TO PROVIDE QCV KEY WITH SWIVEL HOSE ELL ATTACHED 4. PROVIDE 6" DEPTH DRAIN ROCK.





FLUSH W/ FINISH GRADE CARSON STANDARD VAULT OR EQUAL QUICK COUPLER

SS HOSE CLAMP (3) SCH 80 PVC NIPPLE BRASS ST. ELL & 90%%127 ELL SCH 80 PVC NIPPLE, 12" LENGTH

BRASS TT 90 AND 3" LENGTH SCH 80 PVC NIPPLE STEEL 'T' FENCE POST, 36" LENGTH MAIN LINE

Quick Coupler (Not To Scale)



IRRIGATION REQUIREMENTS:

3. DCVA MUST HAVE A MIN 6" AIR SPACE CLEARANCE BELOW ASSEMBLY & 3" CLEARANCE ON EACH END

FLUSH WITH FINISH GRADE

MASTER VALVE

(MATCH METER SIZE)

QUICK COUPLER VALVE

NBS PRO SERIES VALVE BOX

OR APPROVED EQUAL. SIZE &

QUANTITY AS REQUIRED

DOUBLE CHECK VALVE FEBCO 850

DRAIN ROCK, 6" DEPTH THROUGHOUT

A. IRRIGATION DESIGN ASSUMES 55 PSI STATIC WATER PRESSURE IS AVAILABLE ON SITE. VERIFY STATIC WATER PRESSURE IN FIELD PRIOR TO CONSTRUCTION. NOTIFY LANDSCAPE ARCHITECT IF STATIC WATER PRESSURE IS LESS THAN 55 PSI. IRRIGATION DESIGN IS BASED ON 30 PSI FOR SPRAY ZONES/25 PSI FOR DRIP ZONES.

B. USE 4" POP-UP HEADS WITHIN ALL LAWN AREAS AND 6" POP-UP HEADS WITHIN ALL SHRUB AREAS. 12" POP-UP HEADS ARE OPTIONAL IN SHRUB BEDS WITH OWNERS REQUEST.

C. RAIN SENSOR TO BE INSTALLED ON SOUTH OR WEST SIDE OF BUILDING, AT A MINIMUM OF 8 FEET ABOVE GRADE WHERE SENSOR IS FREE FROM VANDALISM, TREE CANOPIES, BUILDING OVER HANGS OR OTHER STRUCTURAL NATURAL RAIN IMPEDIMENTS. COORDINATE LOCATION WITH CONSTRUCTION MANAGER.

1. PLAN IS DIAGRAMMATIC. VERIFY LOCATION OF STRUCTURES, UTILITIES AND OTHER SITE ELEMENTS PRIOR TO COMMENCING WORK. NOTIFY PROJECT MANAGER OF ANY CONFLICTS.

2. CONTRACTOR TO TEST EXISTING WATER PRESSURE AN PROVIDE WRITTEN REPORT TO PROJECT MANAGER PRIOR TO COMMENCING WORK.

4. REFER TO EQUIPMENT SCHEDULE FOR ALL IRRIGATION HEAD TYPES AND EQUIPMENT.

5. PROVIDE 2 (TWO) SPARE WIRES FROM THE CONTROLLER TO THE FURTHEST VALVE LOCATIONS FOR FUTURE EXPANSION.

STAKE ALL VALVE BOX LOCATIONS FOR APPROVAL.

8. ALL IRRIGATION UNDER ROADS, WALKS, PARKING AREAS OR OTHER PAVED SURFACES SHALL BE SLEEVED. SLEEVES SHALL BE 2 (TWO) TIMES THE DIAMETER OF THE INSERTED PIPE OR AS INDICATED.

9. ALL PIPING IS DIAGRAMMATIC. PIPING SHOWN WITHIN PAVING OR ADJACENT / PARALLEL TO PLANTED AREAS ARE INTENDED TO BE PLACED WITHIN PLANTING BEDS WHERE POSSIBLE. ALL MATERIAL TO BE INSTALLED ON OWNER'S PROPERTY.

10. MAKE ANY AND ALL REQUIRED ADJUSTMENTS TO THE IRRIGATION PLAN TO ASSURE COMPLETE AN ADEQUATE COVERAGE WITH MINIMUM OVER SPRAY.

11. WHEN SLEEVING, PIPING OR HEAD LAYOUT IS REQUIRED IN R.O.W., CONTRACTOR TO COORDINATE LOCATION WITH THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. INDICATE EXACT LOCATION OF SLEEVES AND PIPING ON THE AS-BUILT DRAWINGS.

13. LATERAL LINE SHALL HAVE MINIMUM 12" OF COVER AND MAINLINES A MINIMUM OF 18" COVER.

14. PROVIDE MANUAL DRAINS AT ALL LOW POINT ON THE MAIN LINE AND RECORD ACCURATELY ON AS-BUILT DRAWINGS.

15. LOCATE IRRIGATION BACK-FLOW PREVENTER DOWN-STREAM OF SITE WATER METER (WATER METER BY OTHERS). VERIFY LOCATION WITH PROJECT MANAGER PRIOR TO COMMENCING WORK.

16. COORDINATE LOCATION OF CONTROLLER WITH PROJECT MANAGER. INSTALL CONTROLLER AT 60" ABOVE (FINISH FLOOR / FINISH GRADE) ON EXTERIOR WALL OF (BUILDING). PROVIDE A 110 GFI POWER OUTLET AT CONTROLLER LOCATION FOR POWER SUPPLY. PROVIDE CONDUIT FROM IRRIGATION CONTROLLER LOCATION TO OUTSIDE PLANTING BED. FLAG ALL LOCATIONS.

GENERAL NOTES

IRRIGATION NOTES

3. REVIEW ALL IRRIGATION DETAILS PRIOR TO COMMENCING WORK.

7. SET VALVE BOXES SQUARE TO ADJACENT BUILDING, CURB OR PAVING.

12. PLACE TRACE WIRE ON ALL IRRIGATION PIPING AT OWNER'S REQUEST.

BRADLEY DESIGN GROUP, INC. LANDSCAPE ARCHITECTURE + SITE PLANNING	B mail 4330 N Tacoma location 455B St Tacoma t.253.27 f.253.27 www.br info@b	Lexington St WA 98407 Helens Ave WA 98402 72.4848 76.0132 adtree.com radtree.com
LAN	STATE OF WASHINGTO REGISTERE NDSCAPE ARC Theen Bradley Certificate No.	E DN ED HITECT Reader
IRRIGATION SCHEDULE, NOTES & DETAILS	Taco Time	Azure Green Consulting Engineers 115 E. Main Ave., Puyallup, WA
No.	REVISIC Date	DN By
Scale NTS Designer SYF Project Manager KCL Principal KBR Date 7 July 20 Phase	23	Sheet No. IR-2 of 2 Sheets



LANDSCAPE NOTES AND REQUIREMENTS:

GENERAL NOTES:

- A. Plant material list submittal: within 30 calendar days after receipt of the notice to proceed, landscape contractor shall submit a complete list of materials proposed to be furnished and installed demonstrating conformance with the requirements specified. Include the name, addresses and telephone numbers of all plant material suppliers and
- growers. 1.A. Documentation shall also include suppliers name, contact person, address, telephone number, botanical and common name, plant size and size of container or ball.
- 1.B. Contractor shall provide a signed statement from the plant suppliers who have furnished the plant materials identifying the plant materials being supplied by botanical and common names, plant size and stating that all of the plants supplied by them are in healthy growing conditions meeting the American Standard for Nursery Stock (ANSI Z60.1).
- 1.C. Submit a project installation schedule, coordinated with the proposed soil amending and planting schedule to the landscape architect or owner for approval at least 30 calendar days prior to start of work under this section.
- B. Substitutions of plant materials will not be permitted unless authorized in writing by the landscape architect or owner. If proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of the nearest equivalent size and or variety. Such proof shall be substantiated and submitted in writing to the landscape architect or owner at least 30 days prior to start of work under this section. These provisions shall not relieve contractor of the responsibility of obtaining specified materials in advance if special growing conditions or other arrangements must be made in order to supply specified materials.
- C. Plants shall be subject to inspection and approval by landscape architect or owner for conformance to specifications upon delivery to the project site. Such approval shall not impair the subsequent right of inspection and rejection during progress of the work. Contractor shall give landscape architect 48 hours advance notice when plants will be delivered to the site for inspection. Inspection of plant materials shall take place within 24 hours of delivery to the site.
- D. Coordinate work with other trades as required.
- E. Locate all underground utilities prior to commencing work to avoid damage to buried pipes and cables.
- F. Provide protection for all property, persons, work in progress, structures, utilities, walls, curbs and paved surfaces from potential damage arising from this work. The contractor shall pay for any such damage at no additional cost to the owner. Unfinished and completed work shall be protected from erosion or trespassing, and proper safeguards shall be erected to protect the public from injury or danger.

PLANTING NOTES:

- 1. Verify bedlines and plant layout with landscape architect prior to commencing work.
- 2. Verify that site conditions are acceptable prior to beginning work. Do not install any site elements or plant material until unsatisfactory conditions are corrected. When conditions detrimental to plant growth/constructed elements are encountered, immediately notify the owner.
- 3. Substitutions or changes in materials and placement shall be made only after written change orders are accepted by the owner.
- 4. Install protective fencing for on site existing trees and vegetation to remain, and plant material located on adjacent property prior to commencing work. The critical root protection area of all trees to remain has been established as a 1' radius of protection area for every 1" of diameter measured at 4.5' above grade, or the tree drip line, whichever is greater. Locate tree protection fencing as indicated on plan. Fencing is to be installed with stakes driven into the ground, not mounted on cinder blocks. Signage shall be affixed to the fencing that reads: 'No Entry, Tree Root Protection Area'. See existing tree and vegetation protection detail for additional information.
- 5. All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, demonstrate the following:

1) General Soil Requirements: The topsoil layer shall have a minimum depth of eight inches except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible. The topsoil laver shall have an organic matter content of 5% dry weight for turf areas, and 10% dry weight for planting beds (typically around 20-25% compost for turf areas and 35-40% compost for planting areas). The soil portion must be 75-80% sandy loam for turf areas, and 60-65% sandy loam for planting areas. Soil pH should be 5.5-6.5 for turf areas, 5.5-7.0 for planting areas and 4.5-5.5 for areas planted with acid-tolerant or native plantings.

2) Requirements for Amending Existing Soil in Place:

Turf Areas - Place and rototill 1.75 inches of composted material into 7.75 inches of existing soil for a total depth of 9.5 inches, and a settled depth of 8 inches. Subsoils below this layer should be scarified at least 4 inches, for a finished minimum depth of 12 inches of uncompated soil. Planting Beds - Place and rototil 3 inches of composted material into 6.5 inches of existing soil for a total depth of 9.5 inches, and a settled depth of 8 iches. Subsoils below this layer should be scarified at least 4 inches, for a finished minimum depth of 12 inches of uncompated soil. Do not scarify within drip lines of existing trees to be retained.

- 3) Requirements for Applying Imported Topsoil:
- Turf Areas and Planting Areas Scarify or till subgrade in two directions to 6 inches depth. Entire surface should be disturbed by scarification. Do not scarify within drip lines of existing trees to be retained. Place 4 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 4 inches topsoil mix on surface.
- 4) Requirements for Reapplying Stockpiled Topsoil: Turf Areas - Reapply stockpiled soil and rototill in 1.75 inches of composted material for a combined minimum depth of 8 inches of soil and compost. Planting Beds - Reapply stockpiled soil and rototil in 3 inches of
- composted material for a combined minimum depth of 8 inches of soil and compost.
- 5) Within Stormwater Systems On-site soil mixing or placement shall not be performed if soil is saturated or frozen. Total amended soil depth shall be a minimum of 18 inches. Mix all soil amendments uniformly throughout the rain garden soil section. Amended soil shall be placed in horizontal layers in no greater than 12 inches lifts. Allow soils to compact and settle naturally. Areas can be watered after each lift is placed to speed settling, but should not be wetted to saturation. Until the upstream catchment area is thoroughly stabilized, flow diversion and erosion control measures must be installed to protect the bioretention area from sedimentation.
- 6) Rake beds to smooth, clean and remove all rocks, roots and debris over 1 inch in diameter. Water or roll turf areas to compact soil to 85 percent of maximum. Finish grade shall be at least 3 inches below adjacent hard surfaces for planting areas to allow for application of mulch. Finished grade for turf areas shall be at least 2 inches below adjacent hard surfaces. All planting areas must be mulched with 2 inches of organic material.
- 7. Plants shall be pit planted with a 50/50 prepared mix of native soil and topsoil mix. See planting details for depth and staking requirements.
- 8. Fertilize all installed plants during backfill operations with organic fertilizer as recommended by manufacturer.
- 9. Mulch all planted areas with a minimum 2 inch (2") depth of medium fine bark mulch. Finish grade of mulch shall be one inch (1") below top of adjacent hard surface.
- 10. All plant material to be nursery grown stock and arrive on-site in a healthy, vigorous, well branched, disease and insect free condition.

- 11. Plant trees, shrubs and groundcover as shown in the planting details. Roughly scarify sides of the planting pits. Install plant material at finish grade and feather bark mulch away from base of plant. Water plant pits thoroughly midway through backfilling and add fertilizer tablets. Balled and burlapped material that cannot be installed immediately shall be heeled in, mulched and watered regularly to keep root balls moist.
- 12. Provide landscape maintenance immediately after planting and continue until final acceptance. Work shall include watering, spraying, fertilizing, pruning, resetting of plants, restoring eroded areas, adjustments to staking and removal of weeds/debris as required for healthy plant growth.
- 13. Inspection and acceptance: the owner will make an inspection for substantial completion of the work upon request by the contractor.
- 14. Replacement of plantings: remove any plant from site that is either dead, or in unsatisfactory condition as determined by the owner or landscape architect. Replace with a new planting of equal size and species as soon as conditions permit within the normal planting season. All replacement plantings are then to be under re-instated guarantee period as specified. Identify those replacements and take whatever measures necessary to prevent similar demise of additional plant material.
- 15. Provide root barrier in a surround or linear pattern for tree plantings when trunk is located within five (5) linear feet of any paved surface. Deeproot universal barrier #UB18-2 (or approved equal). Install per manufacturer's recommendations.

Warranty:

The warranty shall include replacing and planting the same size and species of plant material, as shown on the landscape plan and that has been designated, by the landscape architect, to be replaced. Except for loss due to excessively severe climatological conditions (20 year weather charts), installed plant materials are required to be guaranteed until the end of one growing season against defects and unsatisfactory growth, except for cases of neglect or abuse by the owners or others. All plants replaced shall be re-instated under these plant guaranty conditions.

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DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

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