

Received 12-27-2024

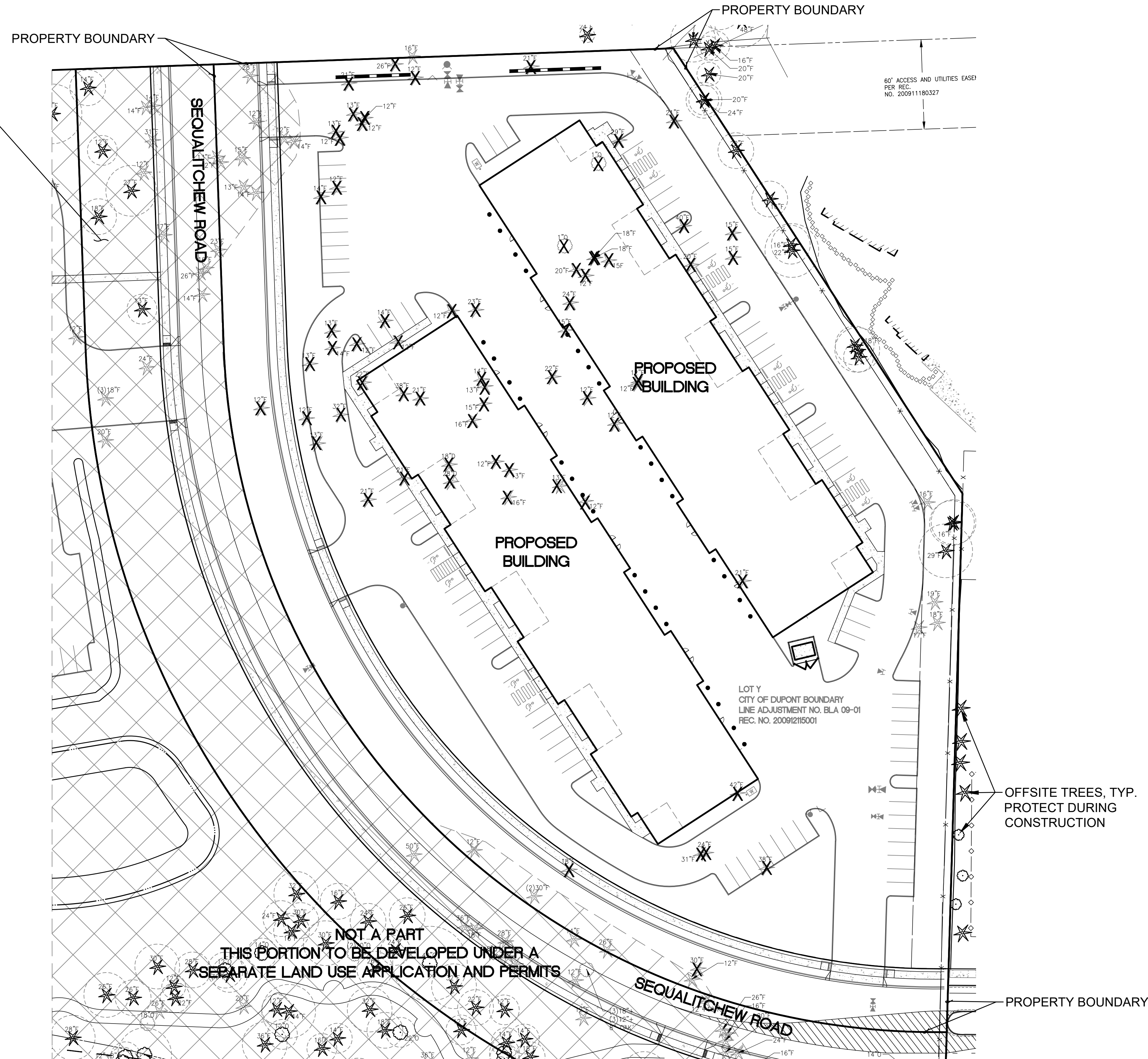
PRELIMINARY TREE RETENTION PLAN  
FOR  
DUPONT BUSINESS PARK  
A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

APPROVED FOR CONSTRUCTION

BY: CITY OF DUPONT DATE:

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS, OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DRAWINGS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.

NOTE  
ALL EXISTING TREES WITHIN  
THIS HATCHED AREA  
ARE INCLUDED IN TREE  
RETENTION PLAN FOR  
DUPONT 243-WEST AND  
ARE NOT INCLUDED HERE



LEGEND

- EXISTING TREE TO BE RETAINED  
PROTECT DURING CONSTRUCTION
- EXISTING TREE TO BE REMOVED

TREE RETENTION

TOTAL PROJECT ACREAGE:	5.64 ACRES
TOTAL # OF HEALTHY TREES:	119 TREES
TREE RET. REQ. (1.5 TREES PER ACRE):	9 TREES
PROJECTED TREE RETENTION:	18 TREES
EXCESS OF TREE RET. OVER TREE REQ.	9 TREES
HEALTHY TREES TO BE REMOVED	68 TREES

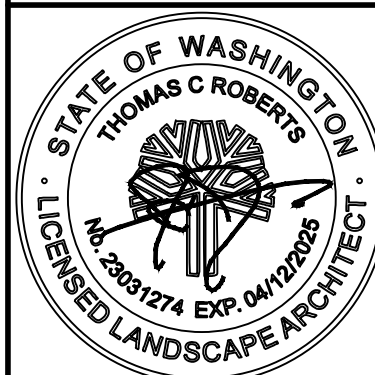
Revision

No.	Date	By	Ckd.	Appr.
1	12/23/24	TCR	JMV	JMV

PER SITE PLAN

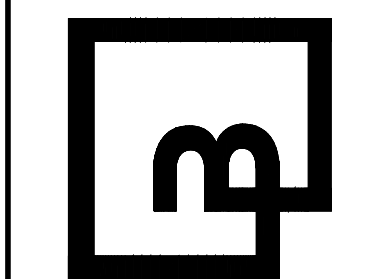
Title:

For:  
AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696



Scale:	Horizontal	1"=40'	Vertical	N/A
Designed	TCR		Drawn	JMV
Checked	JMV		Approved	JMV
Date	12/23/24			

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Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
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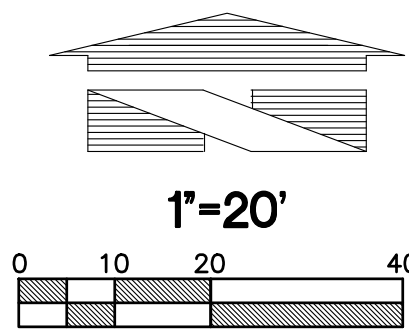


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18666

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CODE REQUIREMENTS

SITE AREA = 5.64 ACRES  
DMC 25.90.090: 20% OF SITE AREA MUST BE LANDSCAPE (1.13 AC)  
LANDSCAPE AREA = 55,716 SF / 1.28 ACRES (23%)  
  
DMC 25.90.030: ONE PARKING LOT TREE REQUIRED PER EACH 6  
PARKING SPACES (93 SPACES SHOWN)  
93 / 6 = 16 PARKING LOT TREES REQUIRED, 24 PROVIDED  
  
DMC 25.90.030: LANDSCAPE BUFFER REQUIRED BETWEEN PARKING  
LOTS AND R/W (SEE LANDSCAPE PLAN)

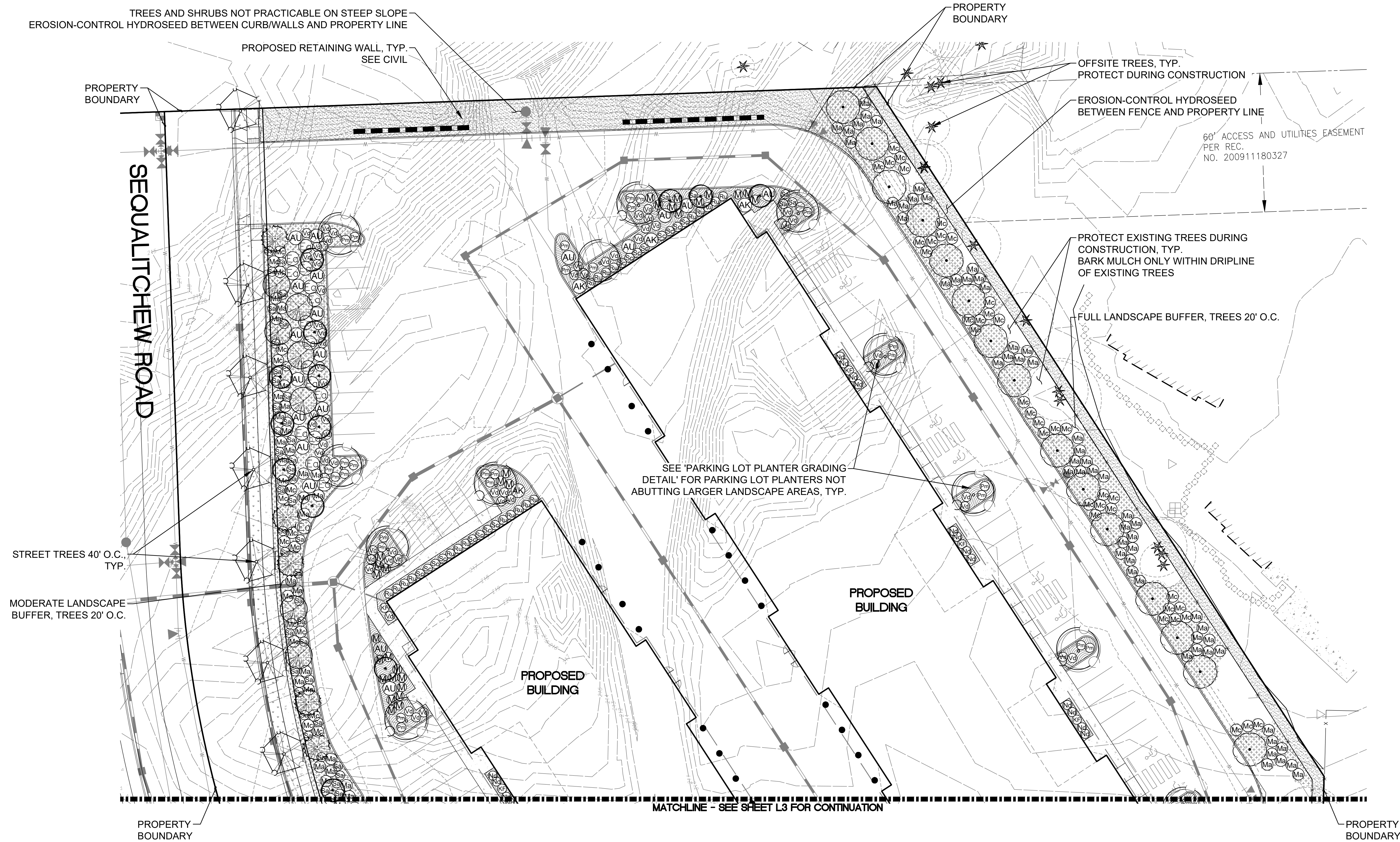
PRELIMINARY LANDSCAPE PLAN  
FOR  
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CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

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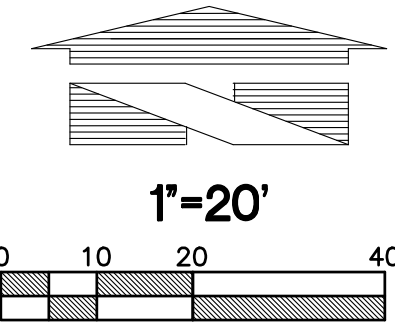
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Revision	
No.	Date
1	12/23/24
JMV   PER SITE PLAN	
JMV   By	
Ctd. Appr.	
Title	
PRELIMINARY LANDSCAPE PLAN FOR DUPONT BUSINESS PARK	
For	
AVENUE 55, LLC 601 UNION STREET, SUITE 2930 SEATTLE, WA 98101 (206) 707-9696	
Scale:	
Horizontal 1"=20'	
Vertical N/A	
Designed TCR	
Drawn TCR	
Checked JMV	
Approved JMV	
Date 12/23/24	
Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com	
Job Number	18666
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PRELIMINARY LANDSCAPE PLAN  
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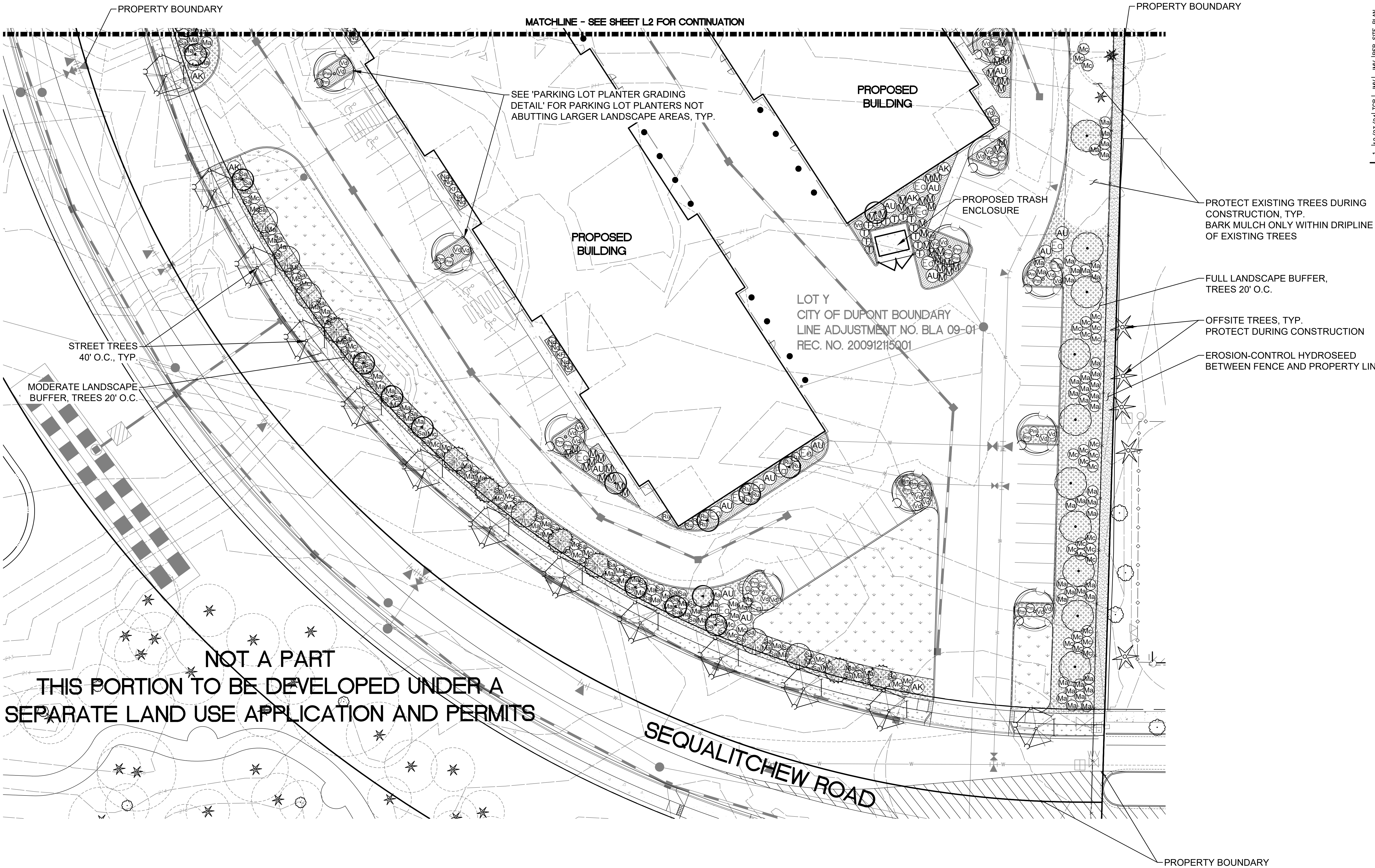
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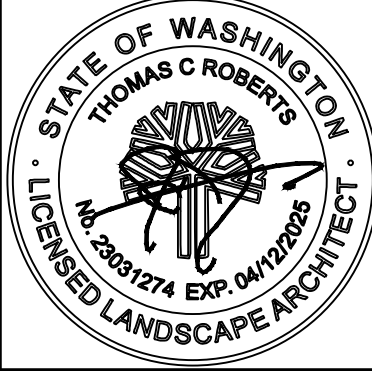
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PRELIMINARY  
LANDSCAPE PLAN  
FOR  
DUPONT BUSINESS PARK

For:  
AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696



Scale:	Horizontal	1"=30'	Vertical	N/A					
Designed	TCR	Drawn	TCR	Checked	JMV	Approved	JMV	Date	12/23/24

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Sheet  
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PLANT SCHEDULE  
FOR  
DUPONT BUSINESS PARK  
A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

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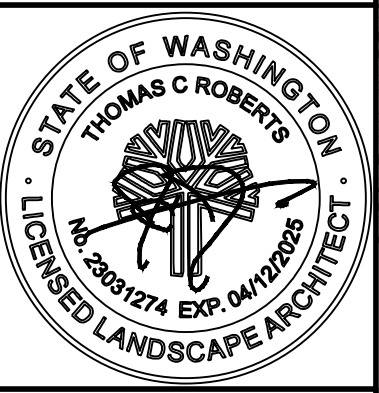
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1	12/23/24								

Title: PLANT SCHEDULE FOR DUPONT BUSINESS PARK

For: AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
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Job Number 18666

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PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT.	SIZE
TREES				
	27	ACER CIRCINATUM / VINE MAPLE	B & B	2" CAL
	20	CORNUS KOUSA / KOUSA DOGWOOD	B & B	2" CAL
	22	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' / HONEY LOCUST	B & B	2" CAL
	13	PINUS CONTORTA VAR. CONTORTA / SHORE PINE	B & B	6" MIN. HT.
	25	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	B & B	6" MIN. HT.
	12	THUJA PLICATA 'EXCELSA' / EXCELSA CEDAR	B & B	6" MIN. HT.

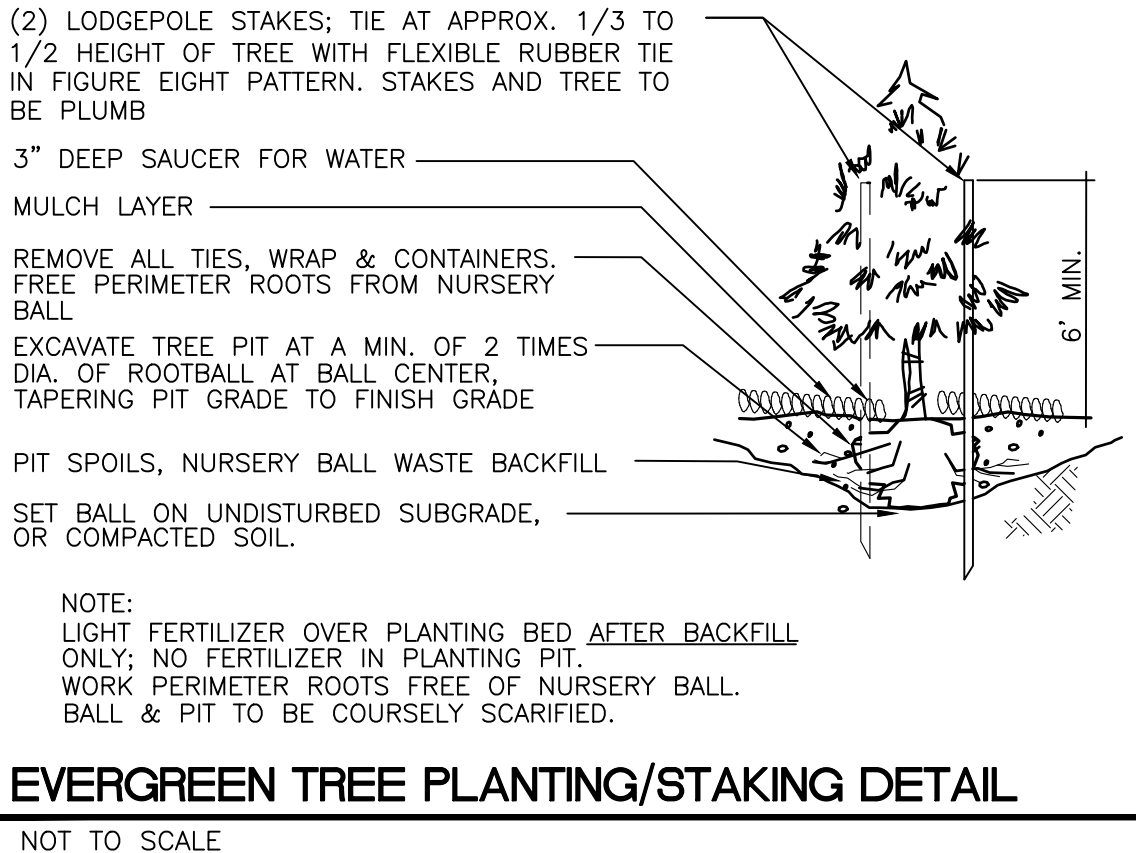
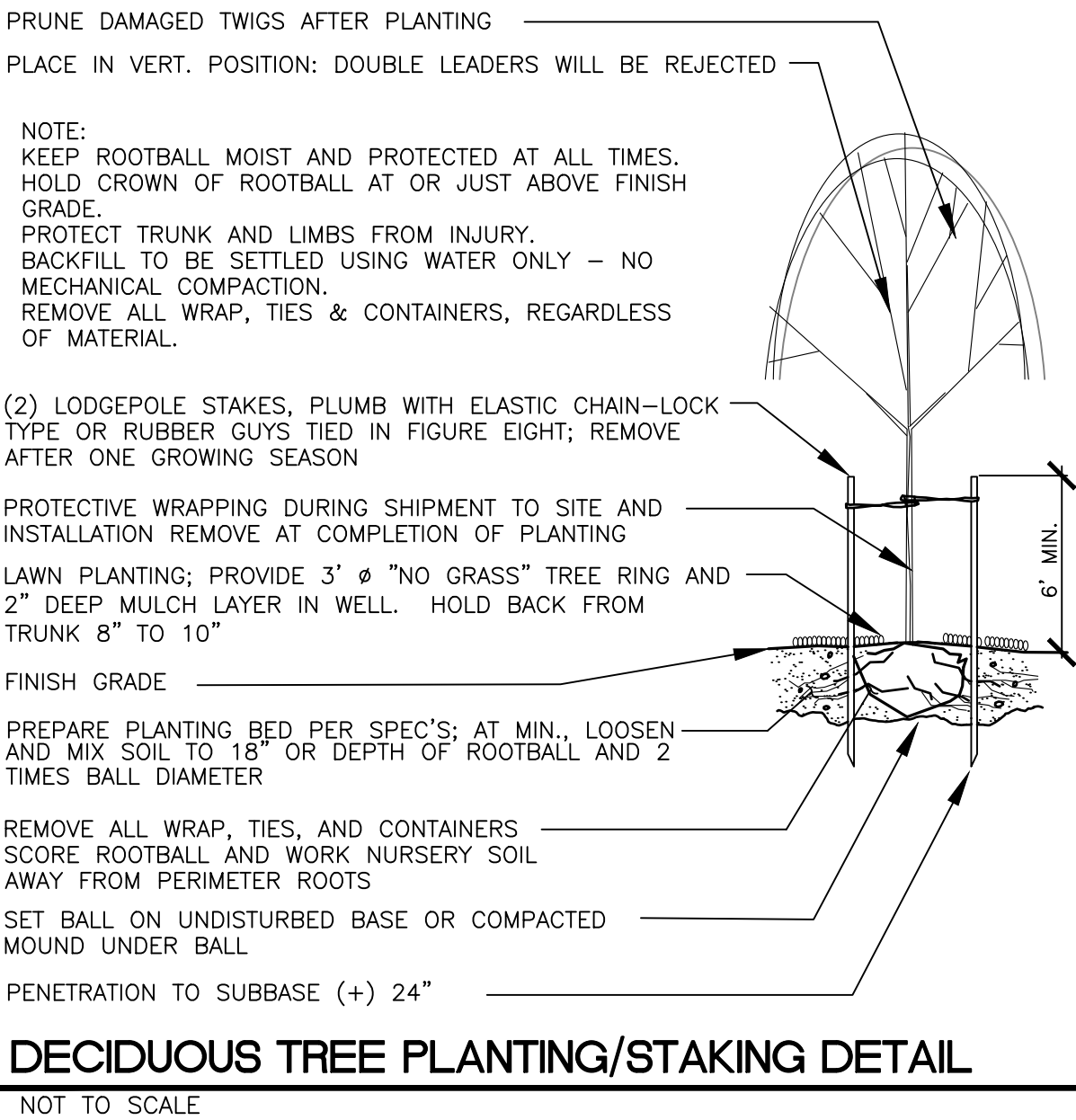
SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT.
SHRUBS			
	31	ARBUTUS UNEDO 'COMPACTA' / DWARF STRAWBERRY TREE	1 GAL.
	31	EUONYMUS ALATUS 'COMPACTUS' / COMPACT BURNING BUSH	1 GAL.
	182	MAHONIA AQUIFOLIUM / OREGON GRAPE	1 GAL.
	71	MAHONIA AQUIFOLIUM 'COMPACTA' / DWARF OREGON GRAPE	1 GAL.
	108	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	1 GAL.
	24	NANDINA DOMESTICA 'GULF STREAM' / DWARF HEAVENLY BAMBOO	1 GAL.
	53	PINUS MUGO 'PUMILIO' / DWARF MUGO PINE	1 GAL.
	32	RHAPHIOLEPIS UMBELLATA 'GULF GREEN' / YEDDA HAWTHORN	1 GAL.
	9	RHODODENDRON X 'ANAH KRUSCHKE' / RHODODENDRON	1 GAL.
	16	SARCOCOCCA CONFUSA / SWEETBOX	1 GAL.
	118	SYMPHORICARPOS ALBUS / SNOWBERRY	1 GAL.
	13	THUJA OCCIDENTALIS 'SMARAGD' / EMERALD GREEN ARBORVITAE	4" MIN. HT.
	83	VIBURNUM DAVIDII / DAVID VIBURNUM	1 GAL.

FERNS AND GRASSES			
	8	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS	1 GAL.

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING
GROUND COVERS				
	1,803	ARCTOSTAPHYLOS UVA-URSI 'MASSACHUSETTS' / KINNIKINNICK	1 GAL.	36" o.c.
	409	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL.	36" o.c.

TURFGRASS LAWN  
SOD OR HYDROSEED. COUNTRY GREEN LOW GROW SEED MIX OAE, 5 LBS. PER 1,000 SF (220 LBS. PER ACRE)11,989 SF

EROSION-CONTROL HYDROSEED  
WA. ST. D.O.T. EROSION CONTROL MIX OAE, 80-120 LBS. PER ACRE6,646 SF





# LANDSCAPE NOTES AND DETAILS

FOR

## DUPONT BUSINESS PARK

A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.

CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

### LANDSCAPE PLANTING NOTES AND MATERIALS

#### SCOPE OF WORK

FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND RELATED ITEMS NECESSARY TO ACCOMPLISH TOPSOIL, TREATMENT AND PREPARATION OF SOIL, FINISH GRADING, PLACEMENT OF SPECIFIED PLANT MATERIALS, FERTILIZER, STAKING, MULCH, CLEAN-UP, DEBRIS REMOVAL, AND 30-DAY MAINTENANCE.

#### QUALIFICATIONS:

LANDSCAPE CONTRACTOR TO BE SKILLED AND KNOWLEDGEABLE IN THE FIELD OF WORK AND HAVE A MINIMUM OF FIVE (5) YEAR'S EXPERIENCE. INSTALLING SIMILAR WORK. CONTRACTOR TO BE LICENSED TO PERFORM THE WORK SPECIFIED WITHIN THE PRESIDING JURISDICTION.

#### JOB CONDITIONS:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SITE AND REPORT ANY DISCREPANCIES TO THE OWNER OR THE OWNER'S REPRESENTATIVES. ALL PLANT MATERIAL AND FINISH GRADES ARE SUBJECT TO APPROVAL BY THE OWNER.

#### PROTECTION:

SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN. DO NOT PLANT UNTIL OTHER CONSTRUCTION OPERATIONS WHICH CONFLICT HAVE BEEN COMPLETED. IF AN IRRIGATION SYSTEM IS TO BE INSTALLED DO NOT PLANT UNTIL THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER. HANDLE PLANTS WITH CARE - DO NOT DAMAGE OR BREAK ROOT SYSTEM, BARK, OR BRANCHES. REPAIR AND/OR REPLACE ITEMS DAMAGED AS A RESULT OF WORK, OR WORK NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS, AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.

#### REPAIR OF EXISTING PLANTINGS:

DURING THE COURSE OF WORK, REPAIR ALL EXISTING PLANTING AREAS BY PRUNING DEAD GROWTH, RE-ESTABLISHING FINISH GRADE AND RE-MULCHING TO SPECIFIED DEPTH.

#### GUARANTEE:

GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE JOB BY OWNER.

#### 30-DAY MAINTENANCE:

CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 30 DAYS FOLLOWING STORE OPENING. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

#### SUBMITTALS:

SUBMIT THE FOLLOWING TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE START OF ANY WORK:

- DOCUMENTATION THAT ALL PLANT MATERIAL HAS BEEN ORDERED.
- TOPSOIL ANALYSIS AND RECOMMENDED AMENDMENTS.
- TREE STAKING AND GUYING MATERIALS.
- ONE (1) QUART SIZE OF TOPSOIL AND MULCH.
- PLANTING SCHEDULE INCLUDING DATES AND TIMES.
- MAINTENANCE INSTRUCTIONS FOR ONE (1) FULL YEAR.

#### MATERIALS:

##### PLANT MATERIALS:

PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (AAN) AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-2004). PRUNE PLANTS RECEIVED FROM THE NURSERY ONLY UPON AUTHORIZATION BY THE LANDSCAPE ARCHITECT. "B & B" INDICATES BALLED AND BURLAPPED; "CONT." INDICATES CONTAINER; "BR" INDICATES BARE ROOT; "CAL" INDICATES CALIPER AT 6" ABOVE SOIL LINE; "GAL" INDICATES GALLON.

- SPECIFIED PLANT CANOPY SIZE OR CALIPER IS THE MINIMUM ACCEPTABLE CONTAINER OR BALL SIZE AND ESTABLISHES MINIMUM PLANT CONDITION TO BE PROVIDED.

##### B) QUALITY:

PLANT MATERIAL TO COMPLY WITH STATE AND FEDERAL LAWS FOR DISEASE INSPECTION. PLANTS TO BE FULLY LIVE, VIGOROUS, WELL FORMED, WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS. ROOT BALLS OF PLANTS TO BE SOLID AND FIRMLY HELD TOGETHER, SECURELY CONTAINED AND PROTECTED FROM INJURY AND DESICCATION. PLANTS DETERMINED BY LANDSCAPE ARCHITECT TO HAVE BEEN DAMAGED; HAVE DEFORMITIES OF STEM, BRANCHES, OR ROOTS; LACK SYMMETRY, HAVE MULTIPLE LEADERS OR "Y" CROTCHES LESS THAN 30 DEGREES IN TREES, OR DO NOT MEET SIZE OR ANSI STANDARDS WILL BE REJECTED. PLANT MATERIAL TO BE FROM A SINGLE NURSERY SOURCE FOR EACH SPECIFIED SPECIES/HYBRID. NURSERY SOURCES TO BE THOSE LOCATED IN THE SAME REGION AS THE JOB SITE.

##### C) SUBSTITUTION:

NO SUBSTITUTION OF PLANT MATERIAL, SPECIES OR VARIETY, WILL BE PERMITTED UNLESS WRITTEN EVIDENCE IS SUBMITTED TO THE OWNER FROM TWO QUALIFIED PLANT BROKERAGE OFFICES. SUBSTITUTIONS WHICH ARE PERMITTED TO BE IN WRITING FROM THE OWNER AND LANDSCAPE ARCHITECT. THE SPECIFIED SIZE, SPECIES AND NEAREST VARIETY, AS APPROVED, TO BE FURNISHED. SUBSTITUTIONS MAY REQUIRE SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.

- LABEL AT LEAST ONE (1) TREE, SHRUB, AND GROUNDCOVER OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAMES.

- DELIVER PLANT MATERIAL AFTER PREPARATION OF PLANTING AREAS HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX (6) HOURS AFTER DELIVERY, SET MATERIAL IN SHADE, PROTECT FOR WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOT BALLS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

#### SOIL PREPARATION:

TOPSOIL, AMENDMENT, AND BACKFILL, ARE GENERAL REQUIREMENTS FOR ALL LANDSCAPE AREAS, UNLESS NOTED OTHERWISE ON THE PLANS. SOIL AMENDMENTS AND FERTILIZER NOTED BELOW ARE TO BE USED FOR BID PRICE BASIS ONLY. SPECIFIC AMENDMENTS AND FERTILIZERS WILL BE MADE AFTER SOIL SAMPLES ARE LABORATORY TESTED BY THE CONTRACTOR. PROVIDE CHANGE ORDER FOR ADDITIONAL OR REDUCTION OF MATERIALS REQUIRED OR NOT REQUIRED BY THE SOILS REPORT.

#### SOIL FERTILITY AND AGRICULTURAL SUITABILITY ANALYSIS:

AFTER ROUGH GRADING AND PRIOR TO SOIL PREPARATION, CONTRACTOR TO OBTAIN TWO REPRESENTATIVE SOIL SAMPLES, FROM LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, TO A SOIL TESTING LABORATORY. SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR REVIEW. TESTS TO INCLUDE FERTILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL AMENDMENT, FERTILIZER, CONDITIONS, APPLICATION RATES, AND POST-CONSTRUCTION MAINTENANCE PROGRAM. TESTS TO BE CONTRACTED WITH AND PAID FOR BY THE CONTRACTOR.

##### A) TOPSOIL:

CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL TOPSOIL AND FOR DETERMINING THE VOLUME OF TOPSOIL REQUIRED PER THE INFORMATION ON PLANS AND NOTED HERE-IN. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY WEED CONTROL RESULTING FROM CONTAMINATED OFF SITE SOURCES.

- TOPSOIL TO CONSIST OF 1/3 BY VOLUME SANDY LOAM, 1/3 BY VOLUME COMPOSTED GARDEN MULCH, AND 1/3 BY VOLUME COARSE WASHED SAND OR EQUIVALENT.

##### C) TOPSOIL PREPARATION AND INSTALLATION:

- VERIFY SUBGRADES TO -9 INCHES IN LANDSCAPE AREAS OR AS INDICATED ON PLANS. THIS ACCOMMODATES, TOPSOIL, AMENDMENTS, AND MULCH. 6" IMPORTED TOPSOIL FOR LANDSCAPE BEDS.
- ERADICATE ANY SURFACE VEGETATION ROOTED IN THE SUB-GRADE PRIOR TO SUB-GRADE PREPARATION.
- REMOVE SOIL LUMPS, ROCK, VEGETATION AND/OR DEBRIS LARGER THAN 2 INCHES FROM ALL SUB-GRADE PRIOR TO PLACEMENT OF SPECIFIED TOPSOIL.
- REMOVE ANY ASPHALT EXTENDING BEYOND 6 INCHES FROM CURBS INTO ADJACENT LANDSCAPE AREAS.

##### D) TOPSOIL PLACEMENT:

- PROVIDE A TOTAL FINISH COURSE OF 6 INCHES OF TOPSOIL FOR LANDSCAPE AREAS.
- PLACE ADDITIONAL TOPSOIL AND SOIL MIX AS REQUIRED TO MEET FINISH ELEVATIONS.

#### MULCH (TOPDRESSING):

ONE-HALF-INCH (1/2") SIZE, TO ONE-QUARTER (1/4"), HEMLOCK/FIR BARK. FINE TEXTURED AND DARK BROWN IN COLOR.

#### STAKES:

2-INCH DIAMETER BY 8-FOOT MINIMUM LODGEPOLE PINE STAKES.

#### GUY MATERIAL:

1-INCH WIDE POLYETHYLENE CHAIN LOCK TYPE TIES; OR, 3/8" DIAMETER RUBBER. NO WIRE.

#### EXECUTION:

##### CONTAMINANTS:

VERIFY THAT ALL SOIL CONTAMINANTS (E.G., PAINT, SEALANTS, SOLVENTS, OILS, GREASES, CONCRETE/ASPHALT SPOILS, ETC.) HAVE BEEN SATISFACTORY REMOVED FROM ALL PLANTING AREAS. DO NOT BEGIN WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

##### FINISH GRADES:

FINE GRADE AND REMOVE ROCKS, DEBRIS, AND FOREIGN OBJECTS OVER 2 INCHES DIAMETER FROM TOP SURFACE OF PREPARED LANDSCAPE AREAS. FINISH ELEVATIONS TO BE DEFINED AS 3 INCHES BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL PLANTING BED AREAS AND 1-INCH BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL LAWN AREAS. FINISH GRADE REFER TO GRADES PRIOR TO INSTALLATION OF MULCH OR LAWN. ALL FINISH GRADES TO BE SMOOTH EVEN GRADES, LIGHTLY COMPACTED, AS SHOWN ON THE PLAN AND DETAILED. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. SITE CIVIL DRAWINGS IDENTIFY FINAL ELEVATIONS. MOISTEN PREPARED AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.

##### TREES AND SHRUBS:

ARRANGE TREES AND SHRUBS ON SITE IN PROPOSED LOCATIONS PER DRAWINGS. EXCAVATE PIT, PLANT AND STAKE OR GUY, AS CALLED OUT AND DETAILED. ALL TREES, SHRUBS, AND SUPPORTS TO STAND VERTICAL. BACKFILL SHALL BE PIT SPOILS. SETTLE BACKFILL USING WATER ONLY. NO MECHANICAL COMPACTION.

##### GROUNDCOVERS:

EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

##### MULCH:

MULCH ALL LANDSCAPE AREAS. MATCH DEPTH OF EXISTING MULCH. AT A MINIMUM, APPLY SUFFICIENT QUANTITY TO PROVIDE A 4-INCH DEPTH.

##### UTILITY CLEARANCES:

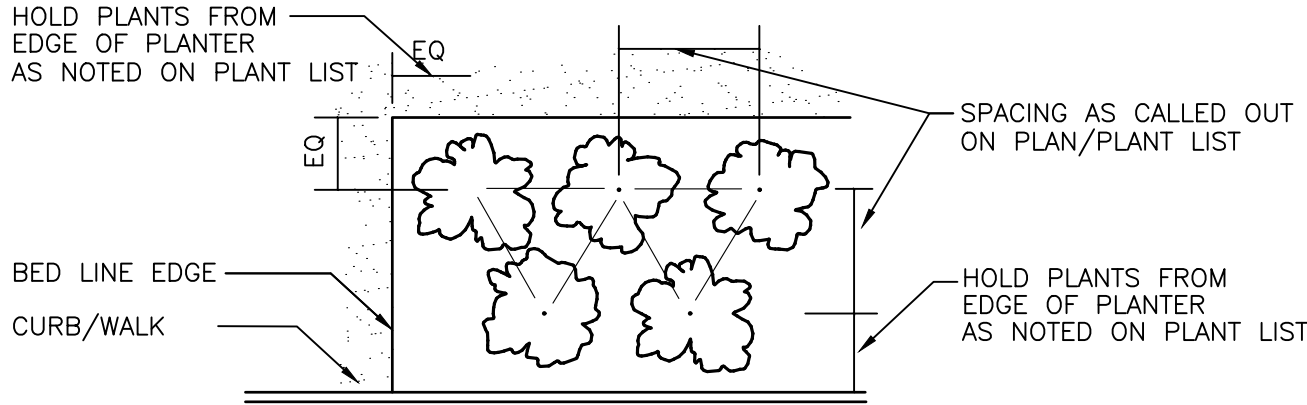
FIELD ADJUST PLANT LOCATIONS FOR 8-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUNDCOVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

##### CLEANUP AND PROTECTION:

DURING LANDSCAPE WORK, KEEP ALL PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIOD. TREAT, REPAIR, OR REPLACE DAMAGE LANDSCAPE WORK AS DIRECTED BY THE OWNER.

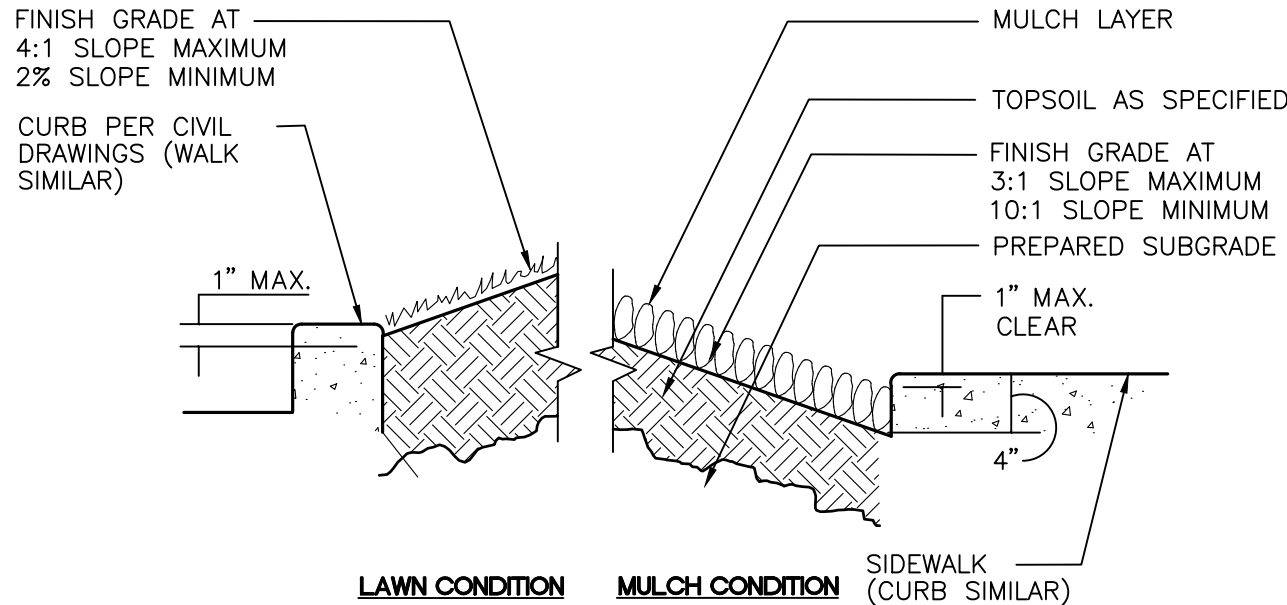
##### PLANTING MAINTENANCE:

PROVIDE FULL MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLERS. CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTling PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES; AND MOWING LAWNS WEEKLY AFTER LAWN ESTABLISHMENT. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION. INCLUDED IS REPLACEMENT OF DEAD PLANTS AND PLANTS SHOWING LOSS OF 40 PERCENT OR MORE OF CANOPY.



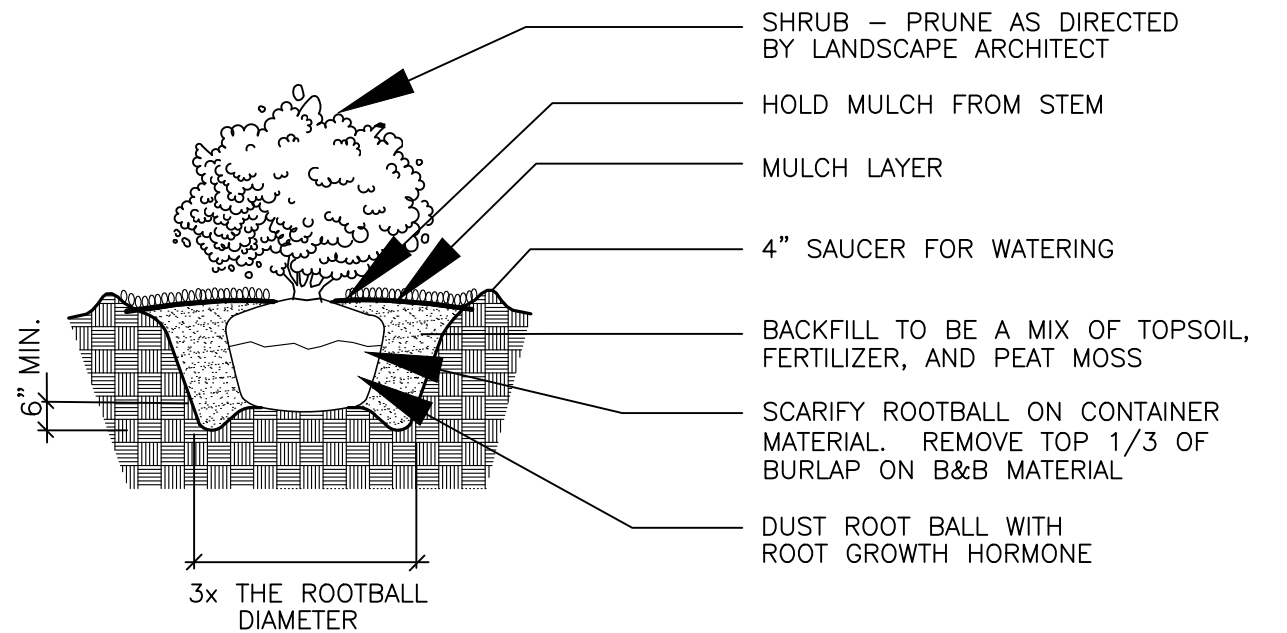
### PLANT MATERIAL SPACING DETAIL

NOT TO SCALE



### PLANTER SECTION DETAIL

NOT TO SCALE



#### NOTE:

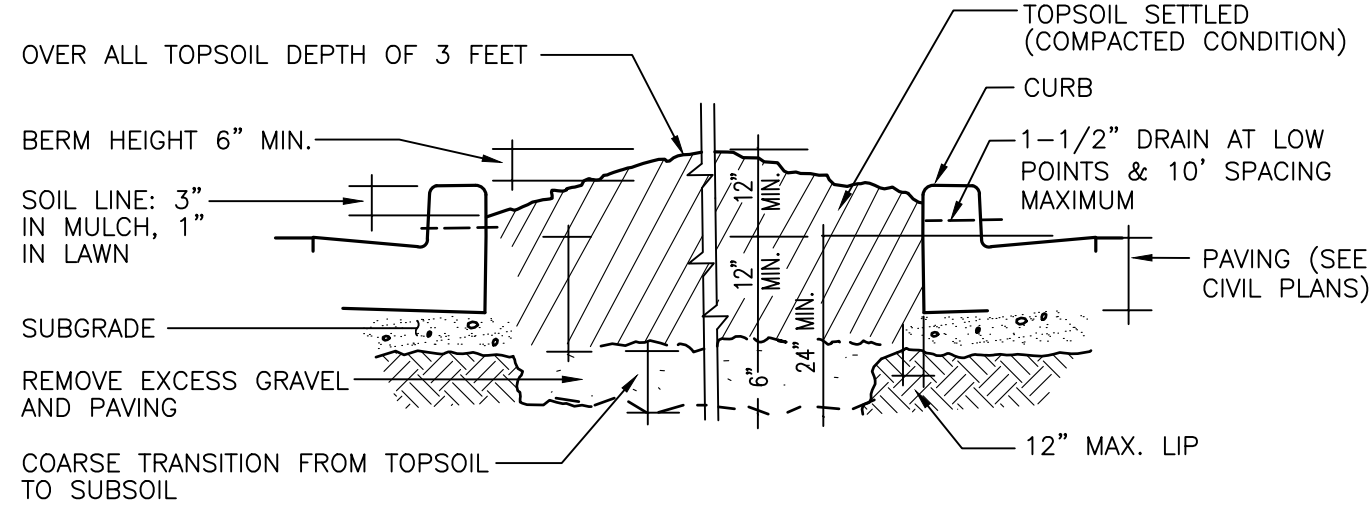
APPLY ADDITIONAL 4 OZ. 8-32-16 FERTILIZER INTO TOP 2" OF PLANTING MIX.

PLANT SHRUB HIGH ENOUGH TO ALLOW POSITIVE DRAINAGE AWAY FROM ROOTBALL. ROUGHEN ALL SURFACES OF PIT.

CUT AND REMOVE BURLAP FROM ROOT BALL

### SHRUB PLANTING DETAIL

NOT TO SCALE



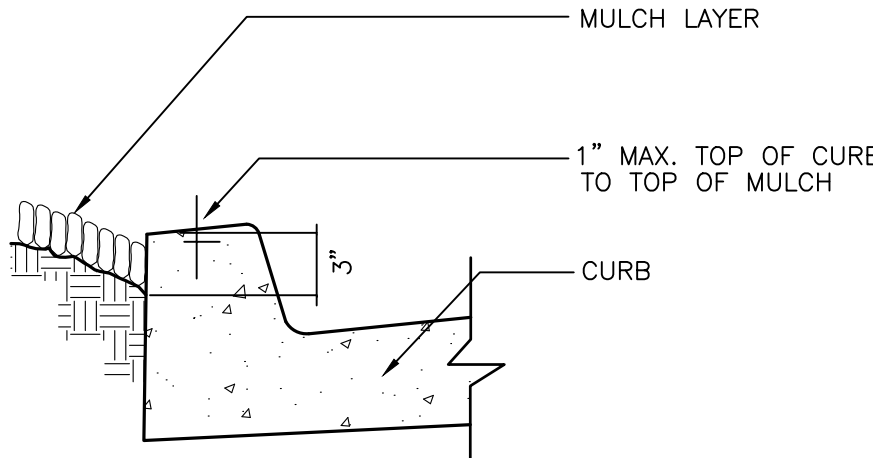
#### NOTE:

OVER EXCAVATE PARKING LOT PLANTERS TO LOOSEN COMPACTED SUBBASE

### PARKING LOT PLANTER GRADING DETAIL

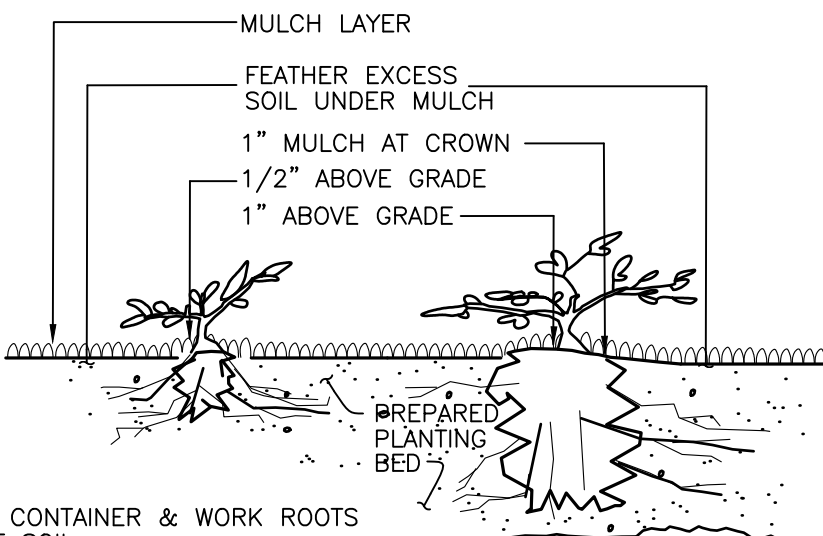
NOT TO SCALE

DEDUCT ALT #1: IF LANDSCAPE CONTRACTOR CAN DEMONSTRATE THAT PLANTER ISLANDS ARE NOT FULL OF NON-SOIL MATERIALS (CONCRETE WASTE, LUMBER, ROAD BASE, GRAVEL), FULL EXCAVATION AND REPLACE WITH 18"-21" OF TOPSOIL CAN BE ELIMINATED AND IN ITS PLACE, 6" OF COMPOST CAN BE PLACED ON SUB-GRADE AND CULTIVATED INTO TOP 12" OF EXISTING SOIL. TOP OF FINISH GRADE AND DEPTH OF MULCH STILL APPLIES



### MULCH AT CURB DETAIL

NOT TO SCALE



#### NOTE:

REMOVE CONTAINER & WORK ROOTS FREE OF SOIL. BACKFILL TO BE SETTLED USING WATER ONLY. SEE PLANT LIST FOR PLANT SPACING

LESS THAN 1 GAL (PLANTED BEFORE MULCH)

1 GAL. CONTAINER and LARGER (PLANTED BEFORE MULCH)

### GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

#### APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY OF DUPONT

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Revision

1 1/2/23/24 TCR JMW PER SITE PLAN JMW JMW App. No. Date By Ctd.

Title:

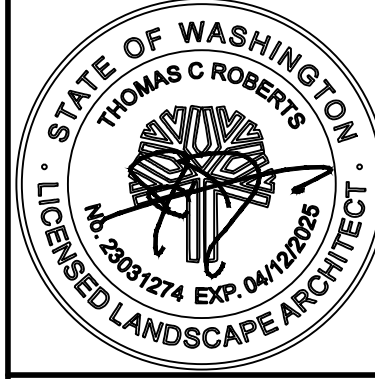
LANDSCAPE NOTES AND DETAILS

FOR

DUPONT BUSINESS PARK

AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696

For:



Scale:

Horizontal

N/A

Vertical

N/A

Designed TCR

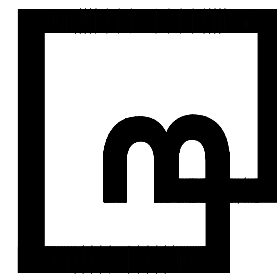
Drawn TCR

Checked JMW

Approved JMW

Date 11/23/24

Barghausen  
Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



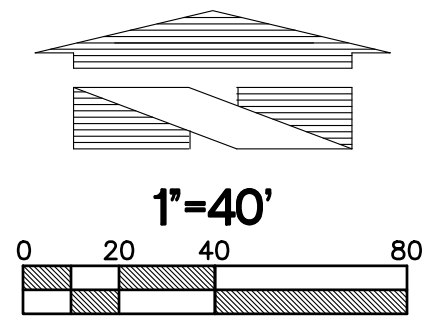
Job Number

18666

Sheet

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PRELIMINARY IRRIGATION PLAN  
FOR  
DUPONT BUSINESS PARK  
A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY OF DUPONT

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IRRIGATION LEGEND

DESCRIPTION				
DRIP IRRIGATION:				
HUNTER LANDSCAPE DRIPLINE COMPONENTS				
HDL-06-12-250-CV SUB-SURFACE DRIPLINE TUBING 0.6 GPH PRESSURE COMPENSATING EMITTERS WITH CHECK VALVE AT 12" ON-CENTER SPACING - ALL TUBING SHALL BE INSTALLED ON GRADE W/ 9" WIRE STAKES FOUR (4) FEET ON-CENTER; VERIFY THE LAYOUT AND 18" ON-CENTER SPACING IN THE FIELD PRIOR TO STARTING WORK. INSTALL ALL COMPONENTS PER MANUF. SPECIFICATIONS.				
USE HUNTER PLD-LOC FITTINGS FOR CONNECTION BETWEEN PVC LATERAL LINES AND INLINE DRIP TUBING				
SPRINKLER HEADS:				
HUNTER MP ROTATOR WITH PRO-SPRAY POP-UP BODY AND CV DRAIN CHECK VALVE, 4" LAWN, 6" SHRUB				
SYMBOL	NOZZLE	PSI	GPM	RADIUS
	HUNTER-6Q and 6H H, Q SERIES	30	0.98, 0.51	6'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	35	0.65, 0.48, 0.37, 0.32, 0.16	8'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	35	0.65, 0.48, 0.37, 0.32, 0.16	10'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	35	0.65, 0.48, 0.37, 0.32, 0.16	12'
	HUNTER-2000 13-21 F, TQ, TT, H, Q SERIES	30	1.29, 0.95, 0.74, 0.63, 0.33	15'
	HUNTER ES515, SS530 SERIES	35	1.41, 0.65	5'x30' 5'x15'
	HUNTER-3000 22-30 F, TQ, TT, H, Q SERIES	35	2.88, 2.19, 1.68, 1.44, 0.69	0.43 22'

- SPRAY IRRIGATION: HUNTER ICV 101/151G REMOTE CONTROL VALVE, IN VALVE BOX, ONE VALVE PER BOX. MAXIMUM 2 VALVES PER BOX
- DRIP IRRIGATION: ICZ-101/151-XL REMOTE CONTROL DRIP ZONE KIT WITH FILTER AND PRESSURE REGULATOR. MAXIMUM 2 VALVES PER BOX
- HUNTER SOLAR SYNC WIRE RAIN SENSOR COMBO
- HUNTER PRO-C CONTROLLER 3 TO 15 STATIONS, (HARDWIRE CONNECTION); PROVIDE GROUND AND BATTERIES PER MANUFACTURER'S SPECIFICATIONS

- P.O.C.
- WILKINS 950 YLT- 1" DOUBLE CHECK VALVE (STATE APPROVED); TEST AND CERTIFICATION BY LICENSED BACKFLOW TESTER
  - WILKINS 850 - BALL VALVE, SIZE TO MATCH PIPE
  - CARSON INDUSTRIES #1730 (TWO AT P.O.C.) GRADE LEVEL VAULT WITH BOLT LOCK LID
  - PLASTIC BALL VALVE, MATCH LINE SIZE, IN VALVE BOX
  - HUNTER HQ-33DLRC 3/4" QUICK COUPLING VALVE, IN VALVE BOX, PROVIDE TWO KEYS AND SWIVELS

- MAINLINE - SCH 40 PVC (18" COVER); SIZE PER PLAN, 1-1/2" SIZE MINIMUM
- LATERAL - SCH 40 PVC (12" COVER); SIZE PER PLAN, 3/4" SIZE MINIMUM
- SLEEVE - SCH 40 PVC; 24" MINIMUM COVER AT VEHICLE CROSSINGS AND 18" MINIMUM COVER IN LANDSCAPE AREAS, 6" SIZE WHERE IRRIGATION MAINLINE TRAVELS THROUGH PIPE. 4" SIZE WHERE ONLY LATERALS TRAVEL THROUGH PIPE.

IRRIGATION SHOWN DIAGRAMMATICALLY FOR PLAN CLARITY. COMMON TRENCH AND PLACE EQUIPMENT IN LANDSCAPE; MANIFOLD GROUPED VALVES IN ADJACENT SHRUB AREAS WHERE FEASIBLE.

SCH 40 PIPE SIZING CHART

PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
FLOW							
GPM	1-8	8.1-13	13.1-23	23.1-32	32.1-53	53.1-74	GPM (MAX.)

IRRIGATION CALCULATIONS

MAX. RATE OF FLOW: 30 GPM

ANNUAL WATER USAGE  
TOTAL IRRIGATED AREA (NOT INCL. EROSION CONTROL HYDROSEED)  
=52,389 SQUARE FEET

TOTAL LANDSCAPE AREA (INCL. EROSION CONTROL HYDROSEED):  
=55,716 SQUARE FEET

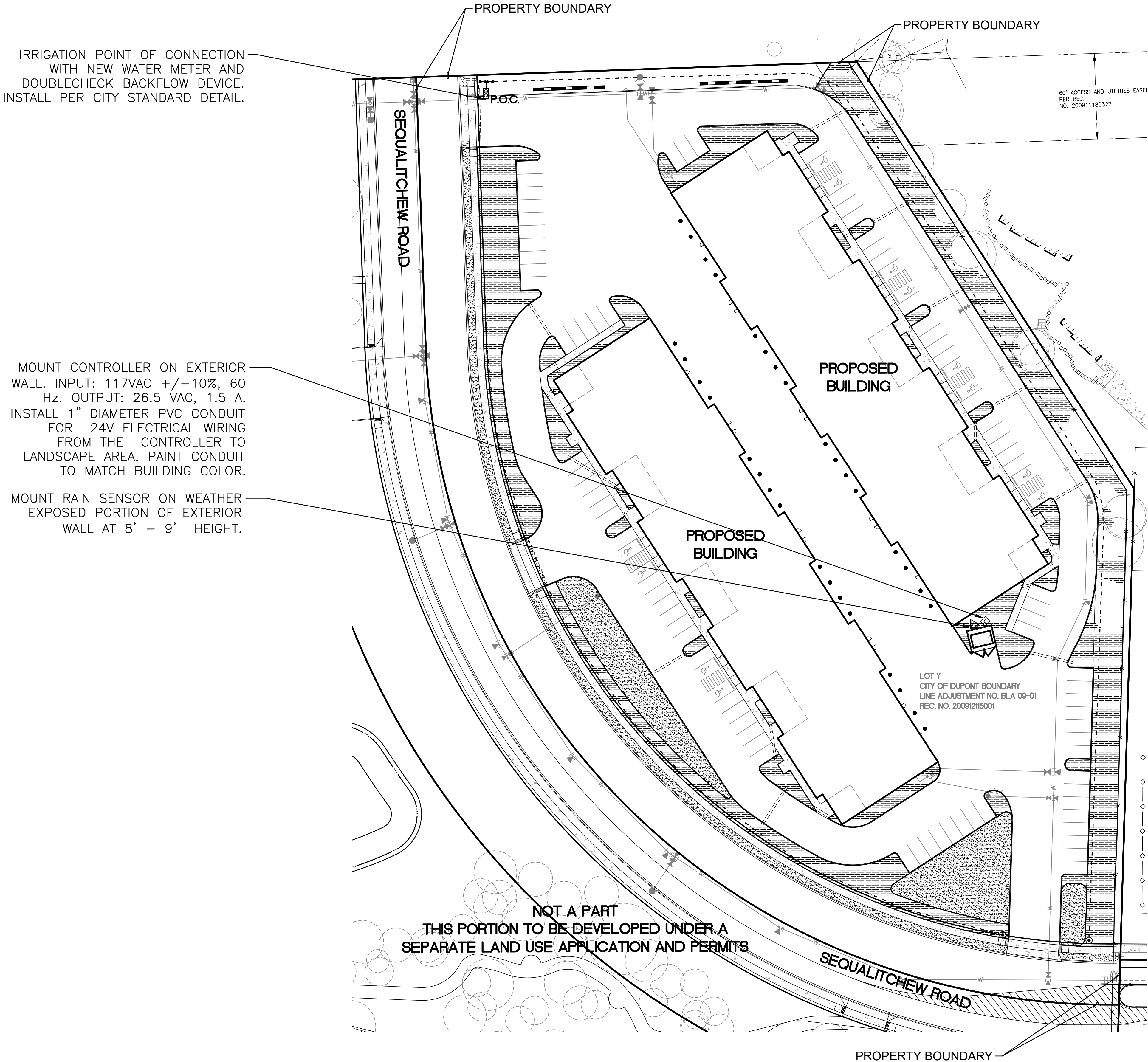
ESTIMATED ANNUAL WATER USAGE (SEE FORMULA BELOW):  
EWU = (14.49 X 0.3 X 52,389 X 0.62) / 0.81  
EWU = 141,195.7 / 0.81  
EWU = 174,315.7 GALLONS PER YEAR  
174,315.7 / 55,716 = 3.13 GAL/SF PER YEAR (DMC 25.90.040.3)

FORMULA:  $EWU = (ET \times PF \times HA \times CF) / IE$   
EWU: ESTIMATED WATER USE  
ET: EVAPOTRANSPIRATION RATE = 14.49 INCHES  
PF: PLANT FACTOR VALUE = 0.3  
HA: LANDSCAPE AREA IN SQUARE FEET = 55,716  
CF: CONVERSION FACTOR OF 0.62 (INCHES TO GALLONS PER SQUARE FOOT)  
IE: IRRIGATION EFFICIENCY VALUE = 0.81

WATER CONSERVATION TECHNIQUES

PER DMC 25.90.040.1

- MULCH SPECIFIED FOR ALL TREE/SHRUB BEDS
- DROUGHT-TOLERANT LAWN, SHRUBS SPECIFIED (SEE PLANT SCHEDULE)
- IRRIGATION SYSTEM PER 25.90.040.1(e)



IRRIGATION POINT OF CONNECTION  
WITH NEW WATER METER AND  
DOUBLECHECK BACKFLOW DEVICE.  
INSTALL PER CITY STANDARD DETAIL.

MOUNT CONTROLLER ON EXTERIOR  
WALL. INPUT: 117VAC +/-10%, 60  
Hz. OUTPUT: 26.5 VAC, 1.5 A.  
INSTALL 1" DIAMETER PVC CONDUIT  
FOR 24V ELECTRICAL WIRING  
FROM THE CONTROLLER TO  
LANDSCAPE AREA. PAINT CONDUIT  
TO MATCH BUILDING COLOR.

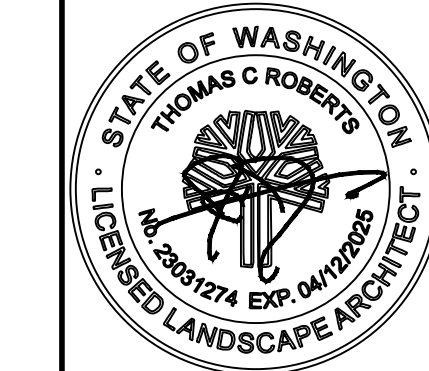
MOUNT RAIN SENSOR ON WEATHER  
EXPOSED PORTION OF EXTERIOR  
WALL AT 8' - 9' HEIGHT.

NOT A PART  
THIS PORTION TO BE DEVELOPED UNDER A  
SEPARATE LAND USE APPLICATION AND PERMITS

PRELIMINARY  
IRRIGATION PLAN  
FOR  
DUPONT BUSINESS PARK

Title:

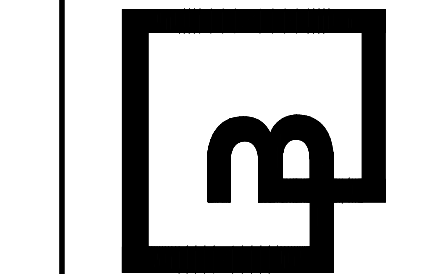
For:  
AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696



Scale:  
Horizontal 1"=40'  
Vertical N/A

Designed: TCR  
Drawn: TCR  
Checked: JMW  
Approved: JMW  
Date: 12/23/24

Barghausen  
Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
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Job Number  
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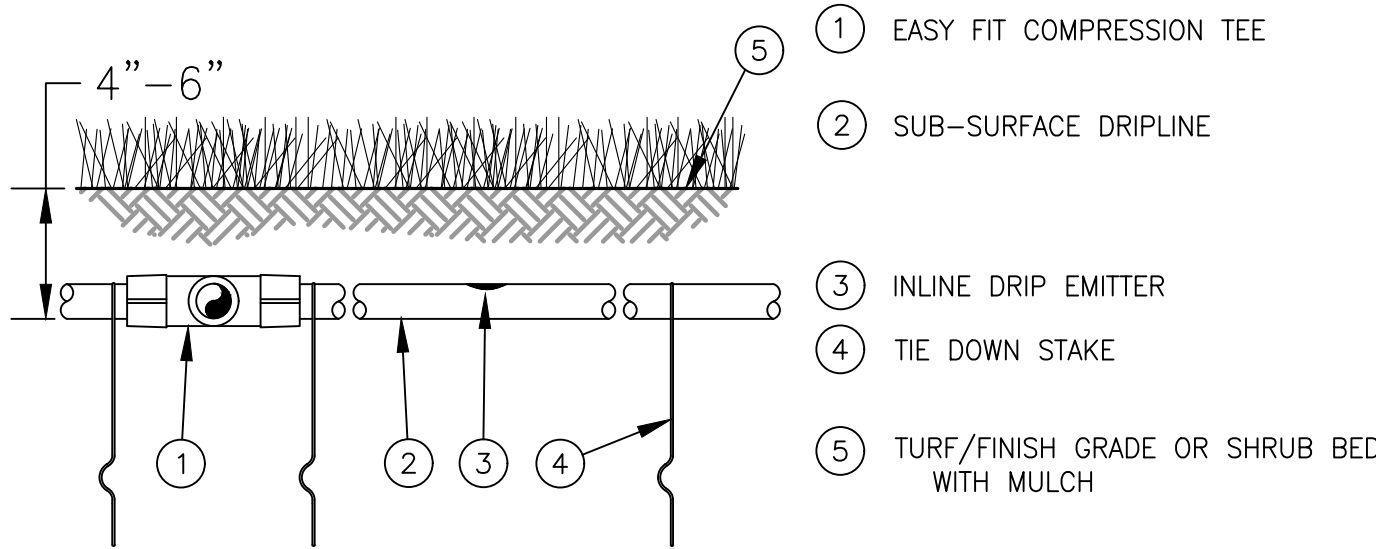
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IRRIGATION NOTES AND DETAILS  
FOR  
DUPONT BUSINESS PARK  
A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

LANDSCAPE IRRIGATION NOTES

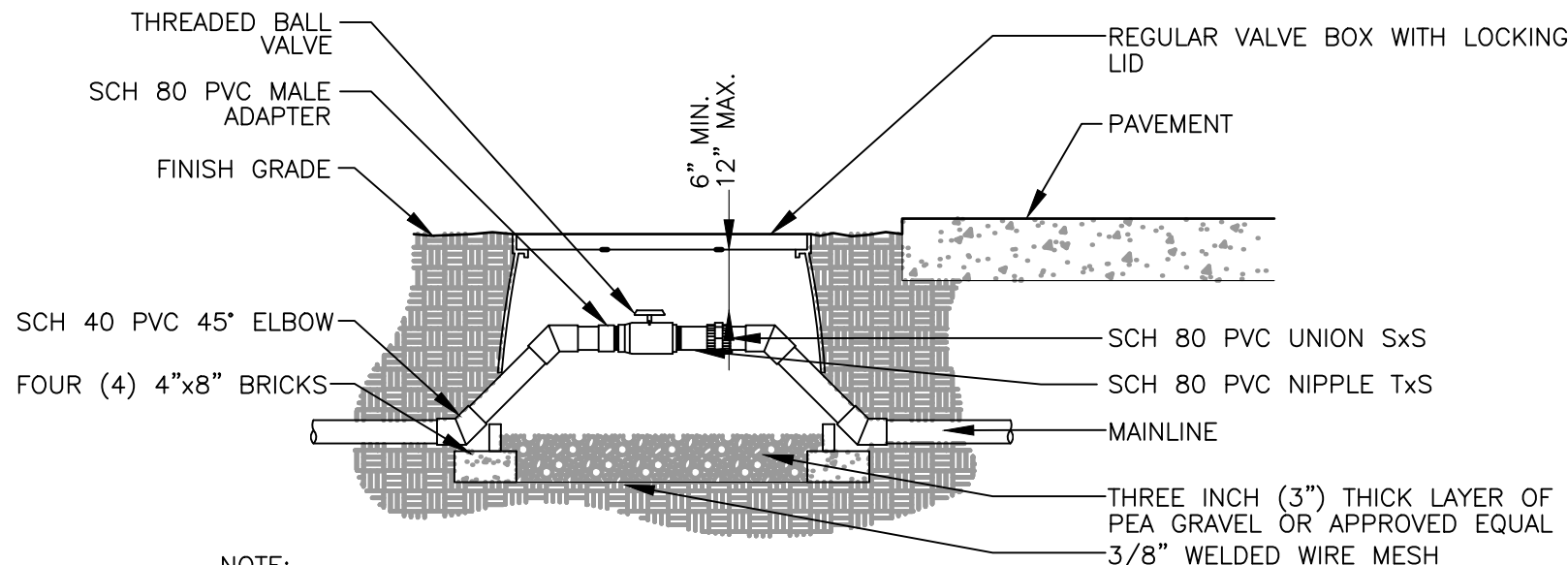
- GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
  - INSTALLATION OF 110V ELECTRICAL SERVICE FROM ELECTRICAL SOURCE TO AUTOMATIC CONTROLLER, INCLUDING WIRE HOOK-UP INTO MOUNTED CONTROLLER. IRRIGATION CONTRACTOR WILL MOUNT CONTROLLER PER DESIGN AND COORDINATE WITH GENERAL CONTRACTOR.
  - INSTALLATION OF IRRIGATION/SERVICE METER AND STUB TO IRRIGATION POINT OF CONNECTION, PER UTILITY PLAN(S). PROVIDE STANDARD THREADED STUB-OUT WITH THREADED CAP ON DISCHARGE SIDE OF METER. STUB-OUT TO BE INSTALLED APPROXIMATELY 18 INCHES BELOW FINISH GRADE.
  - VERIFICATION OF STATIC WATER PRESSURE AT POINT-OF-CONNECTION (P.O.C.) CONTRACTOR SHALL NOTIFY OWNER AND BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY VARIATION IN STATIC PRESSURE OVER 5 PSI GREATER/LESS THAN DESIGN PRESSURE.
  - INSTALLATION OF SLEEVING.
- PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, AND SERVICES NECESSARY TO FURNISH AND INSTALL A COMPLETE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS AND/OR NOTES. PROVIDE A ONE (1) YEAR WARRANTY/GUARANTEE FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS IN MATERIALS, EQUIPMENT, AND WORKMANSHIP.
- COORDINATE IRRIGATION INSTALLATION WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, LANDSCAPE CONTRACTOR, OWNER, ARCHITECT, AND LANDSCAPE ARCHITECT.
- LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK. PROVIDE LANDSCAPE ARCHITECT WITH WRITTEN PSI RESULTS.**
- ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
- CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, FEES, AND REQUIRED CITY INSPECTIONS.
- SUBMITTALS:
  - SUBMIT EACH ITEM LISTED BELOW FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL,
  - PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED,
  - CONTROL WIRING PATH DIAGRAM,
  - "AS-BUILT" DRAWINGS.
  - OPERATION AND MAINTENANCE MANUALS.
- PROVIDE AND KEEP UP TO DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS WHICH ARE TO BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND NOTES AND EXACT "AS-BUILT" LOCATIONS, SIZES AND KIND OF EQUIPMENT. THIS SET OF DRAWINGS ARE TO BE KEPT ON SITE AND ARE TO BE USED ONLY AS THE RECORD SET. ALL WORK IS TO BE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING WORK AS ACTUALLY INSTALLED.  
DIMENSION FORM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, WALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF THE FOLLOWING:
  - CONNECTION TO WATER LINES (P.O.C.),
  - CONNECTIONS TO ELECTRICAL POWER,
  - GATE VALVE, QUICK COUPLERS, AND REMOTE CONTROL VALVE,
  - ROUTING OF MAINLINE (DIMENSION MAXIMUM 100' ALONG ROUTING),
  - ROUTING OF CONTROL WIRING,
  - OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- PREPARE AND PROVIDE PRIOR TO COMPLETION OF CONSTRUCTION, A THREE RING BINDER CONTAINING THE FOLLOWING INFORMATION:
  - INDEX SHEET STATING CONTRACTOR'S ADDRESS, TELEPHONE NUMBER, FAX, E-MAIL AND A LIST OF EQUIPMENT WITH NAME AND ADDRESS OF LOCAL MANUFACTURER'S REPRESENTATIVES,
  - CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS CONTRACT,
  - GUARANTEE STATEMENT,
  - COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.
  - CONSTRUCTION DETAILS FROM THE PROJECT,
  - COMPLETE TROUBLE-SHOOTING GUIDE TO COMMON IRRIGATION PROBLEMS,
  - WINTERIZATION AND SPRING START-UP PROCEDURES,
  - CHART OF APPROXIMATE WATERING TIMES FOR SPRING, SUMMER, AND FALL,
  - A COPY OF THE "AS-BUILT" DRAWINGS AND CONTROLLER CHART.
- ALL VALVES TO BE PLACED IN "CARSON" GRADE LEVEL BOXES WITH BOLT-LOCK LIDS (OR APPROVED EQUIVALENT). SET BOXES 2 INCHES HIGHER THAN FINISH GRADE IN MULCH AREAS AND FLUSH WITH FINISH GRADE IN LAWN AREAS. JUMBO BOX FOR CHECK VALVE, 10" ROUND BOX FOR GATE/QUICK COUPLER/WIRE SPLICES, AND 12" STANDARD FOR CONTROL VALVES. PROVIDE BOX EXTENSIONS AS REQUIRED.
- MAINLINE PIPE TO BE BURIED 18 INCHES, LATERALS 12 INCHES, AND SLEEVES 24" INCHES BELOW FINISH GRADE. NO ROCK OR DEBRIS TO BE BACKFILLED OVER PIPE.
- HEAD AND LINE POSITIONING IS DIAGRAMMATIC ON PLAN. ADJUST IN FIELD AS NECESSARY FOR 100 PERCENT COVERAGE. VALVES TO BE POSITIONED ADJACENT TO PAVEMENT/CURBS, IN SHRUB BEDS WHERE POSSIBLE.
- FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
- SPRINKLERS ON RISERS WILL NOT BE ALLOWED UNLESS NOTED ON PLANS.
- RADIUS REDUCTION TO BE MADE BY USE OF PRESSURE ADJUSTMENT, SCREENS, AND/OR ALTERNATE NOZZLES. IN-NOZZLE ADJUSTMENT IS LIMITED TO 10 PERCENT FOR SPRAY HEADS AND PER MANUFACTURER'S LIMITS FOR OTHER SPRINKLERS. SPRINKLER SPACING NOT EXCEED 60% OF THE DIAMETER OF THE PUBLISHED DATA.
- ALL CONTROL WIRE SPLICES TO BE MADE AT VALVE BOXES WITH WATER TIGHT ELECTRICAL SPLICES, 3M, SCOTT'S LOCK SEAL TACK 3576-78, OR EQUIVALENT.
- EACH VALVE BOX TO CONTAIN A MINIMUM OF TWO (2) SPARE ORANGE CONTROL WIRES FOR JACKETED WIRE. ROUTE SPARE WIRES FROM THE CONTROLLER TO THE LAST VALVE OF EACH MAINLINE BRANCH. COMMON WIRE TO BE WHITE. SINGLE STRAND WIRE TO BE A MINIMUM OF 14 GAUGE.
- ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
- CROSS CONNECTION PROTECTION INSPECTION REQUIRED. THE BACKFLOW DEVICE TO BE TESTED UPON THE ORIGINAL INSTALLATION. THE TESTING TO BE PERFORMED BY A PERSON HOLDING A CURRENT CERTIFICATE AS A BACKFLOW TESTER. THE TEST REPORT TO BE SUBMITTED TO THE LOCAL WATER DISTRICT, OR PURVEYOR, AND OWNER WITH A COPY TO BARGHAUSEN CONSULTING ENGINEERS, INC. CONTRACTOR TO INCLUDE TESTING IN THE SCOPE OF WORK. OWNER IS RESPONSIBLE FOR ANNUAL INSPECTIONS AFTER THE INTIAL INSPECTION.
- CONTRACTOR TO PROVIDE SYSTEM WINTERIZATION/SPRING SERVICE WHEN INSTALLATION HAS BEEN COMPLETED WITHIN 90 DAYS OF NOVEMBER 1 FOR WINTERIZATION, OR MAY 15 FOR SPRING SERVICE. SERVICE TO BE PERFORMED AS NEAR AS PRACTICAL



- NOTES:
- PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
  - AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
  - INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

DRIPLINE BURIAL

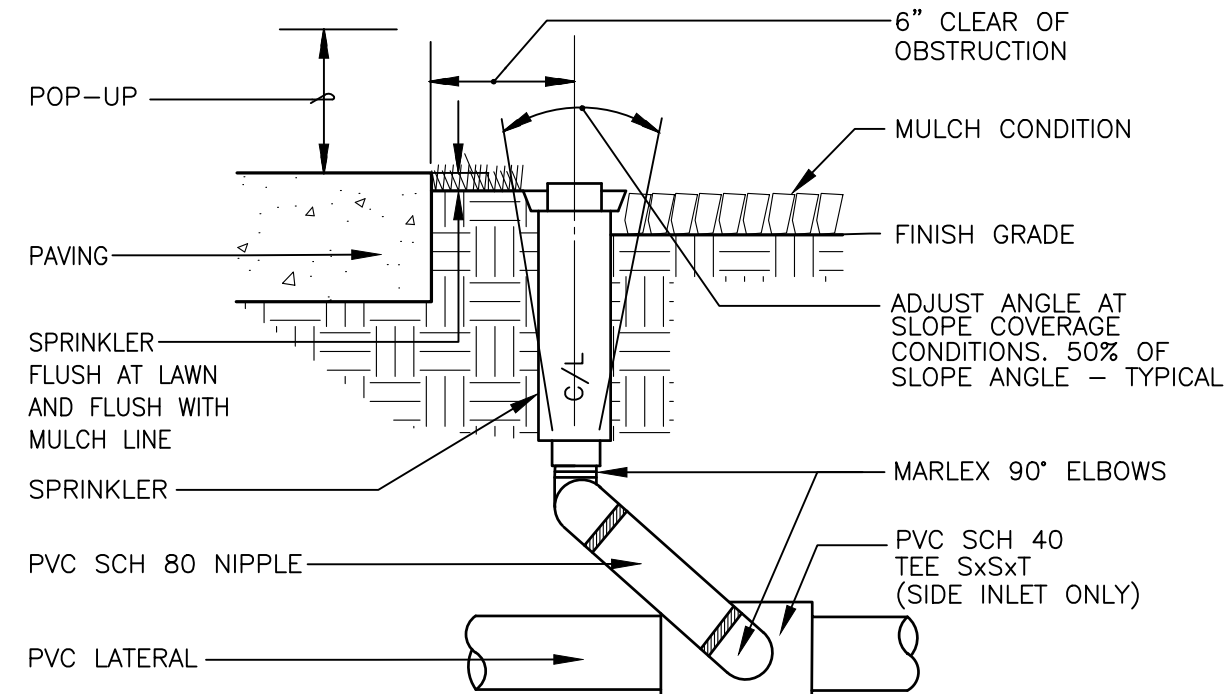
NOT TO SCALE



- NOTE:
- LOCATE VALVE BOXES IN PLANTING AREAS.
  - WRAP VALVE BOX WITH A MINIMUM OF 3 MIL THICK PLASTIC AND SECURE IT USING DUCT TAPE OR ELECTRICAL TAPE.
  - ALL THREADED CONNECTIONS TO BE MADE USING TEFLON TAPE.
  - ALL CHANGES IN ELEVATION SHALL BE MADE USING SCH 40 PVC 45° ELBOWS.

BALL VALVE DETAIL

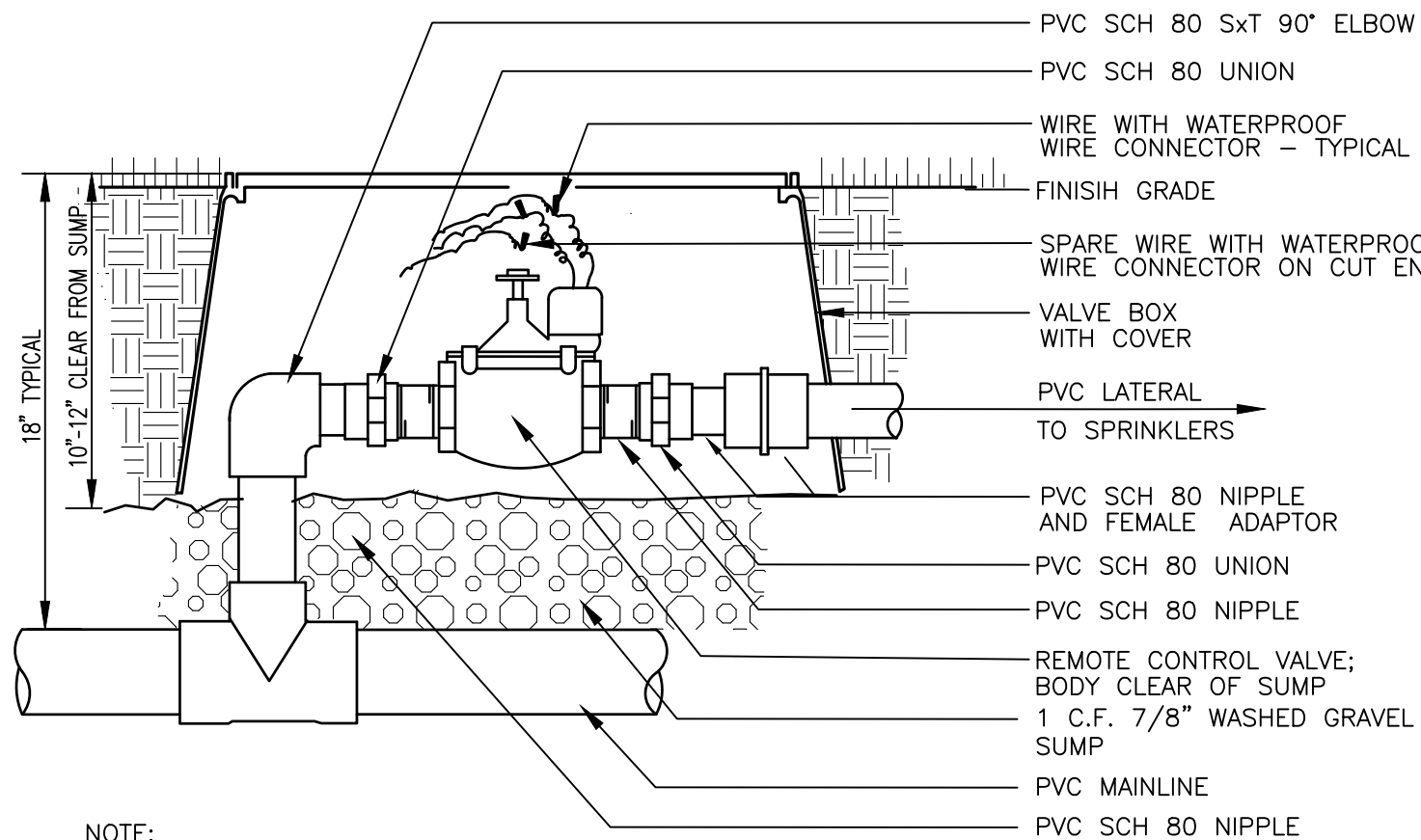
NOT TO SCALE



- NOTE:
- MANUFACTURER'S LIMITS PREVAIL FOR INSTALLATION AND ADJUSTMENTS.
- PROVIDE SWING JOINT RISERS AT WALKS AND CURBS. 24" FLEXIBLE RISERS ACCEPTABLE ELSEWHERE.

POP-UP RISER ASSEMBLY

NOT TO SCALE



- NOTE:
- ONE VALVE PER BOX. PROVIDE EXTRA COILS (18") OF EACH WIRE IN VALVE BOX. COMPACT SOIL AROUND VALVE BOX. USE TEFLON OR FLOWABLE SEALANT IN ALL THREADED FITTINGS, PER MANUFACTURER'S SPEC'S.

REMOTE CONTROL VALVE ASSEMBLY

NOT TO SCALE

APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY OF DUPONT

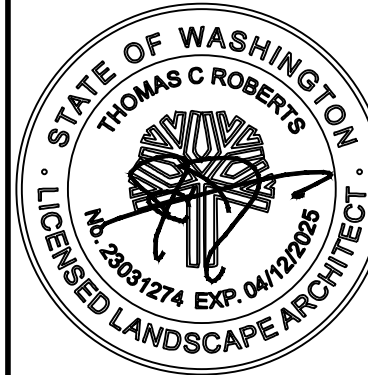
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Revision

1 1/2/23/24 TCR JMW PER SITE PLAN JMW By Ctd. App.

Title:

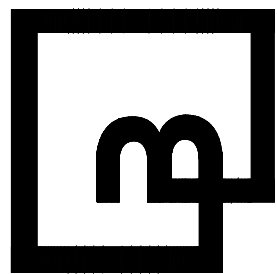
For: AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696



Scale: Horizontal N/A Vertical N/A

Designed: TCR Draw: TCR Checked: JMW Approved: JMW Date: 12/23/24

Barghausen Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



Job Number  
18666

Sheet  
L7 of 9

\\B0005\18666\preliminary\Est\18666--PL.dwg Date/Time: 12/23/2024 3:01 PM Scale: = 1 TROBERTS Xref: 18666



# IRRIGATION DETAILS FOR DUPONT BUSINESS PARK

A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
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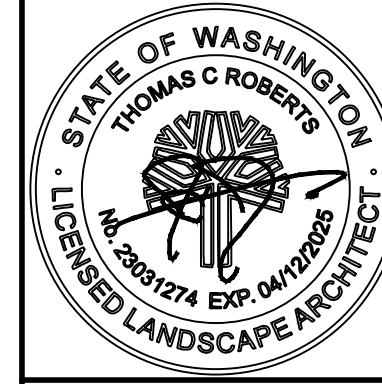
Revision

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No. Date By Ctd. App.

Title:

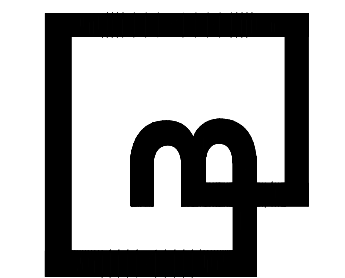
AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696

For:

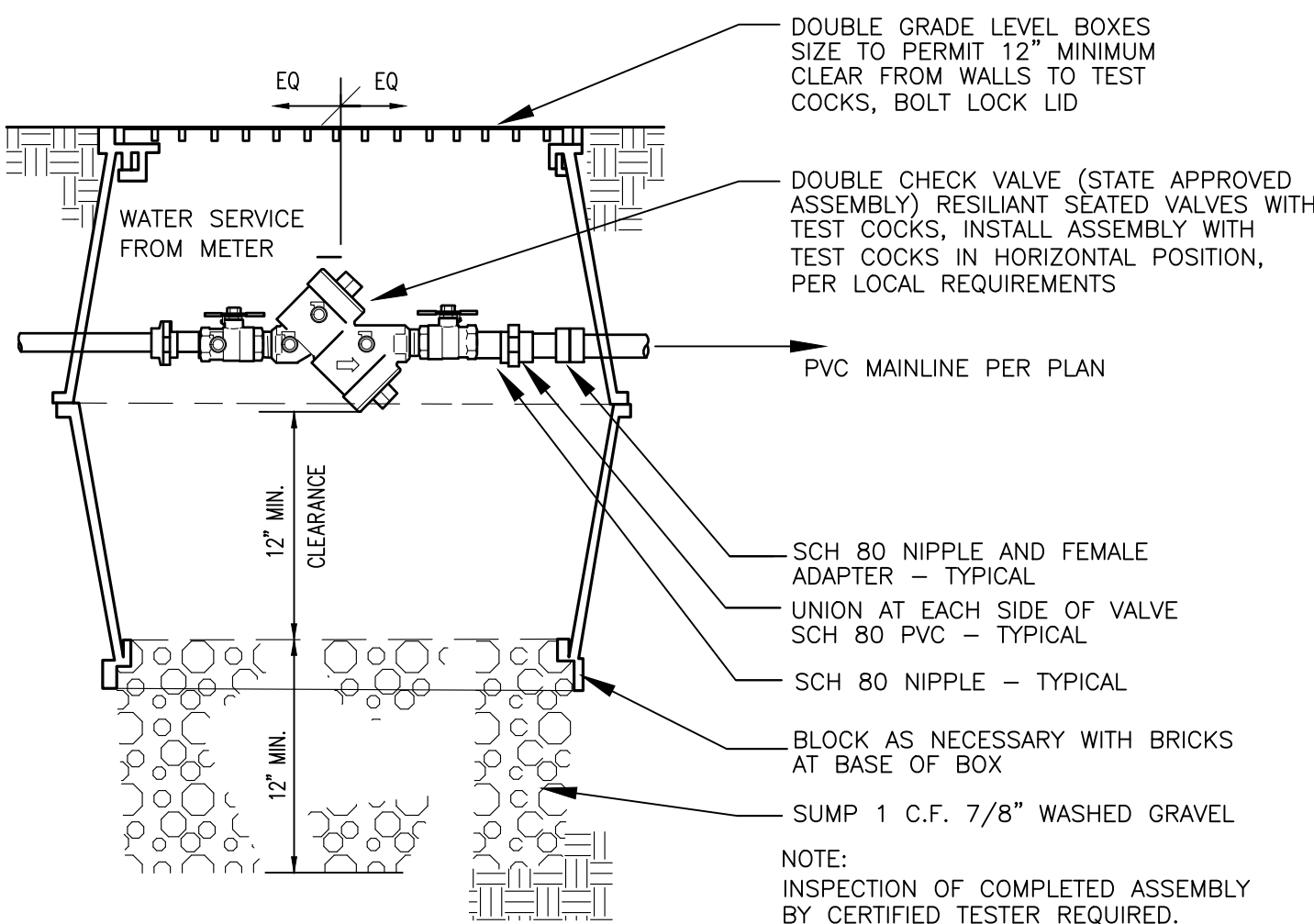


Scale: Horizontal N/A Vertical N/A  
Designed TCR Draw JMV Checked JMV Approved JMV Date 12/23/24

Barghausen Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
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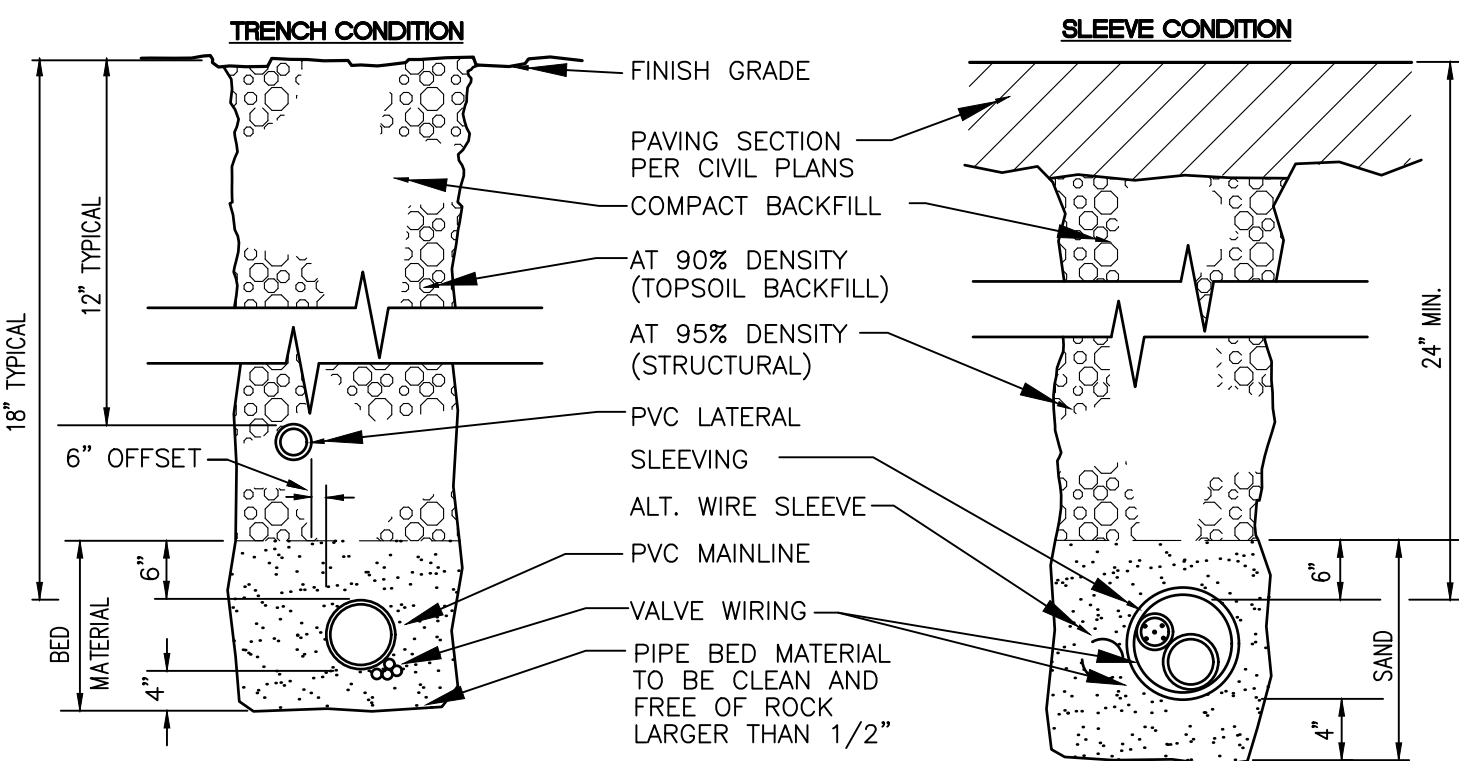


Job Number 18666  
Sheet L8 of 9



CHECK VALVE ASSEMBLY DETAIL

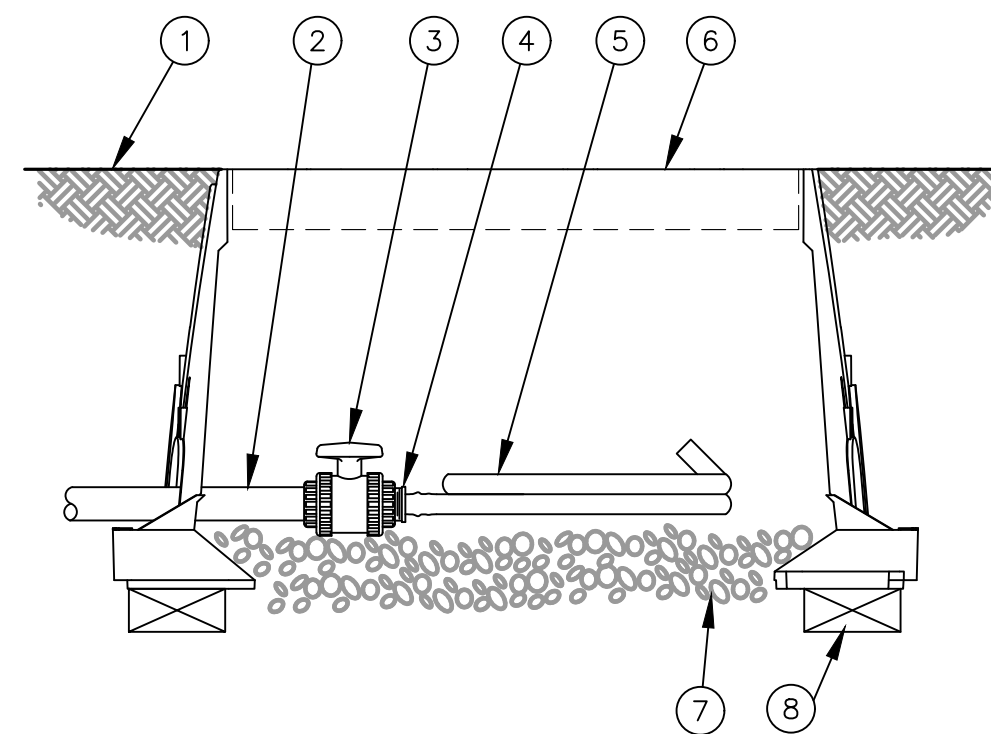
NOT TO SCALE



NOTE:  
SLEEVING MATERIAL SHALL BE PVC CLASS 160(SDR-26).  
DIMENSIONS ARE MIN. CLEARANCES.  
ALL IRRIGATION SLEEVING TRENCH BACKFILL MATERIAL SHALL BE CLASS "B" OR BETTER (MAX. OF 10% PASSING NO.40 SCREEN) AND BE COMPACTED TO MIN. 95% OPTIMUM DENSITY PER ASTM D-1557-70 (MODIFIED PROCTOR)

SLEEVE/TRENCHING DETAIL

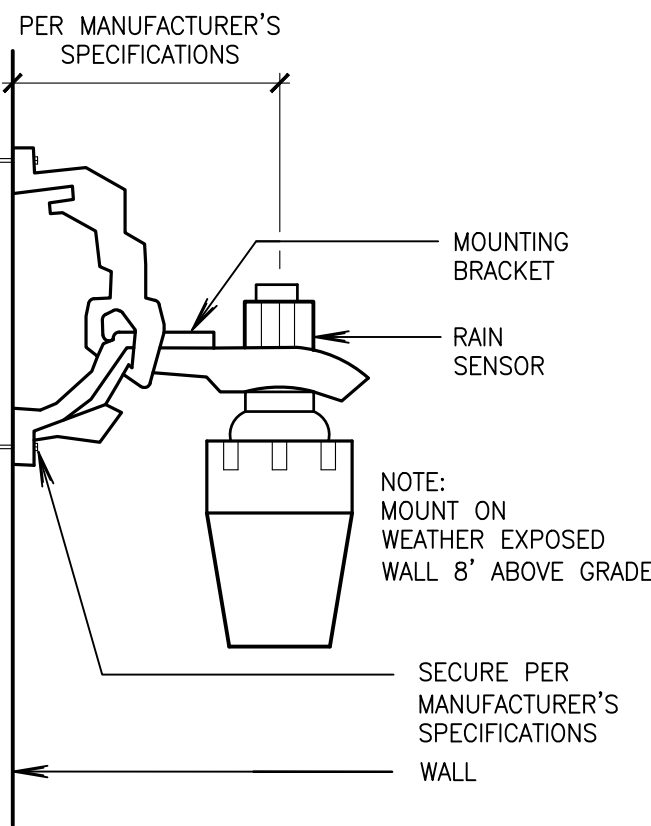
NOT TO SCALE



- 1 FINISH GRADE
- 2 PVC DRIP MANIFOLD PIPE
- 3 PVC 1" X 3/4" TRUE UNION BALL VALVE
- 4 EASY FIT MALE X BARB ADAPTER
- 5 SUB-SURFACE DRIPLINE:
- 6 12-INCH VALVE BOX WITH COVER
- 7 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- 8 BRICK (1 OF 2)

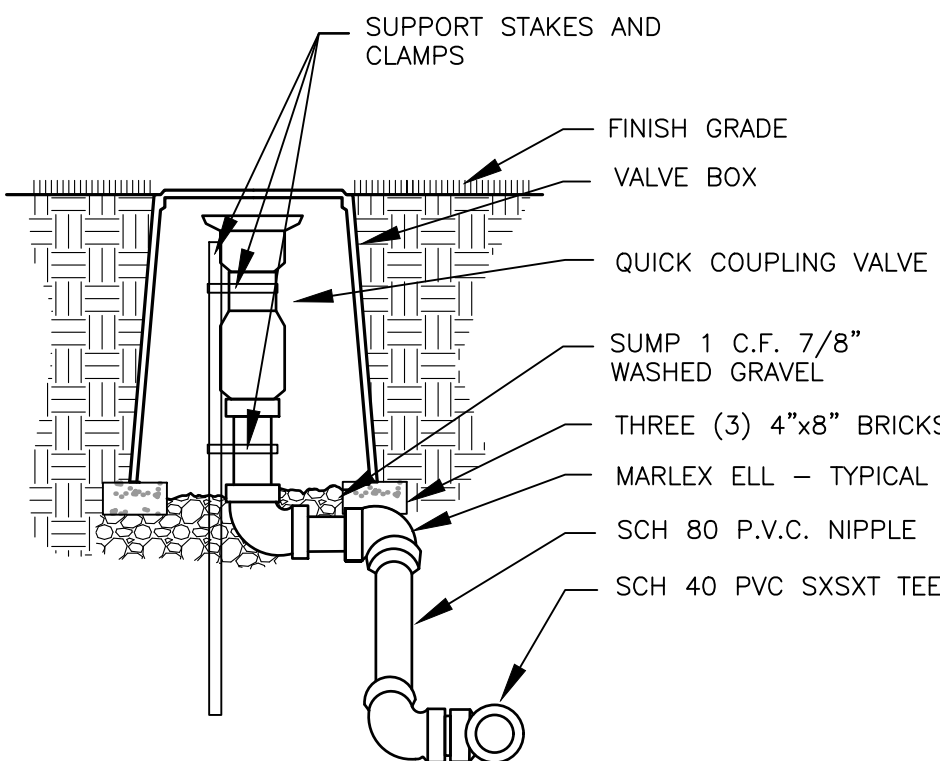
FLUSH POINT WITH BALL VALVE

NOT TO SCALE



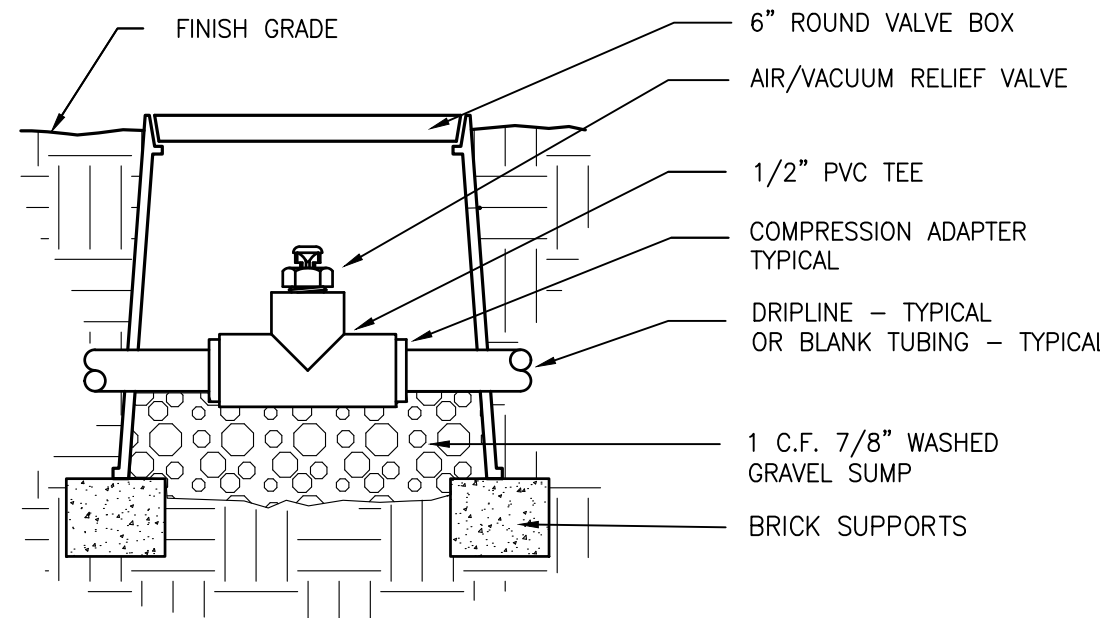
RAIN SENSOR DETAIL

NOT TO SCALE



QUICK COUPLING VALVE DETAIL

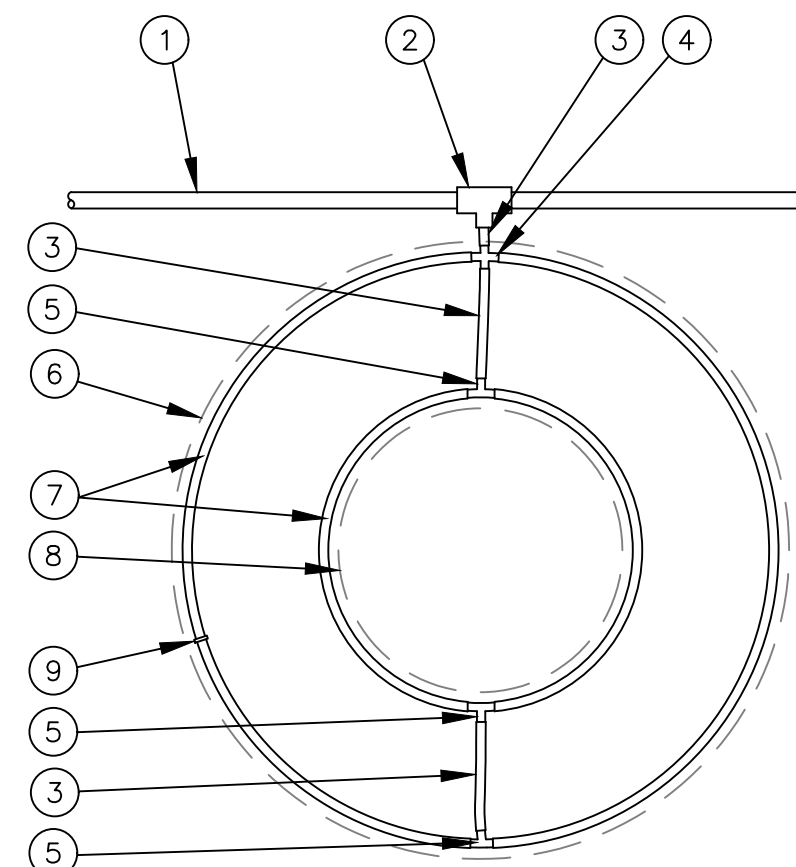
NOT TO SCALE



NOTE:  
AIR/VACUUM RELIEF VALVE CANNOT BE CONNECTED LOWER THAN DRIPLINE LATERALS.  
FOR USE ON ZONES OF 7 GPM OR LESS ONLY (PLUMBED TO TUBING).

1/2" AIR/VACUUM RELIEF VALVE DETAIL

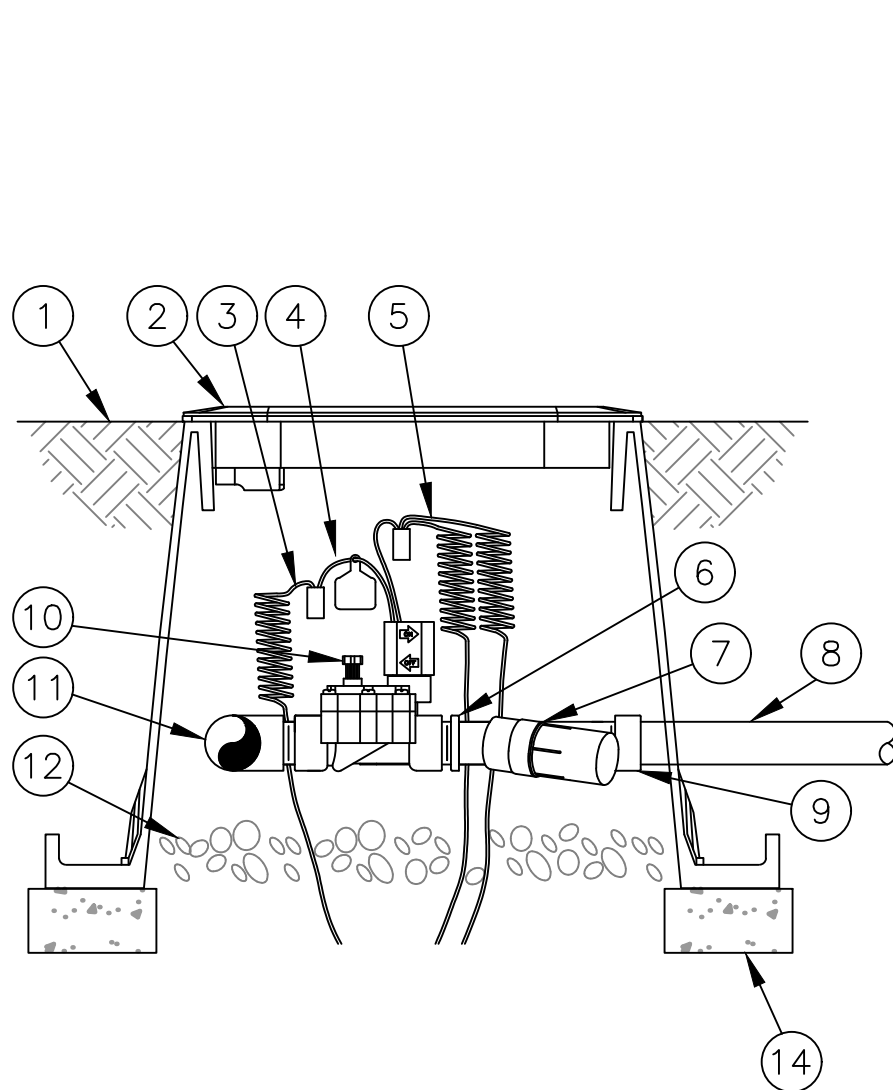
NOT TO SCALE



- NOTES:
1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE MANUFACTURER DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
  2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
  3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

DRIPLINE AROUND TREE

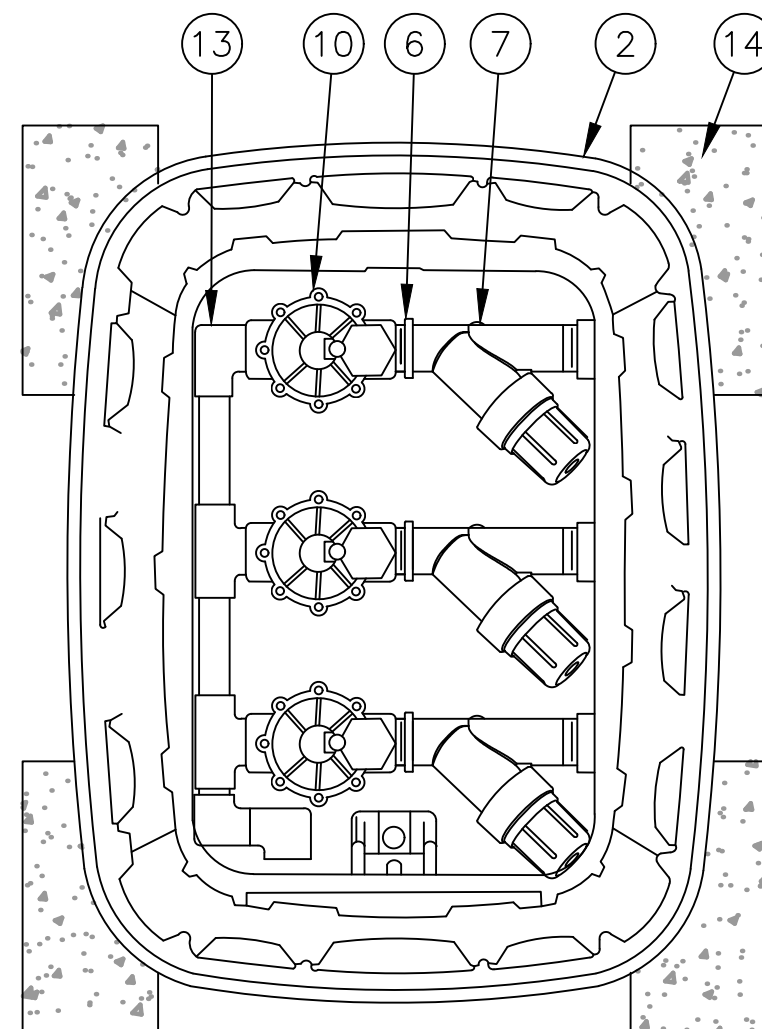
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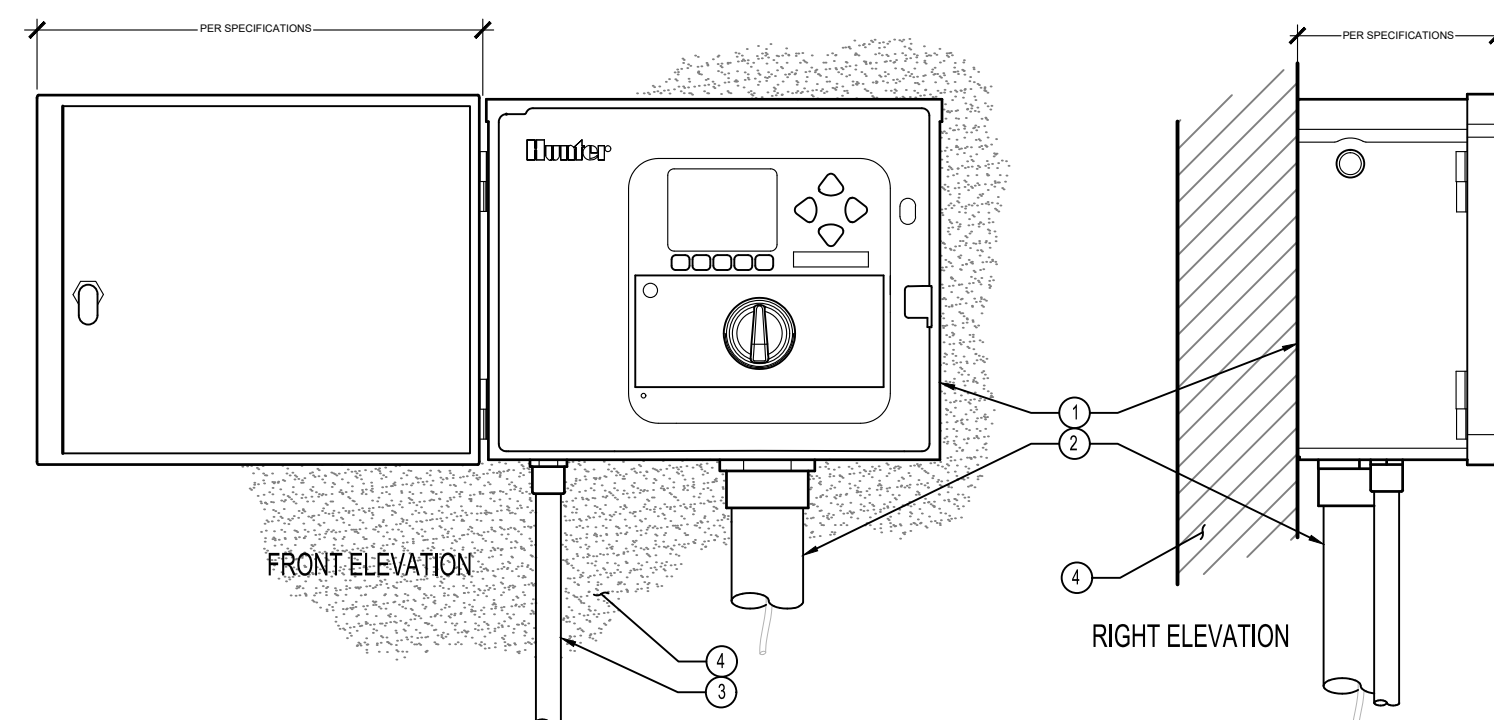
SIDE VIEW

DRIP IRRIGATION VALVE

NOT TO SCALE



TOP VIEW



- NOTE:  
MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL.  
CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

IRRIGATION CONTROLLER, WALL MOUNT

NOT TO SCALE



# IRRIGATION DETAILS FOR DUPONT BUSINESS PARK

A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 19N, RANGE 01E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY OF DUPONT

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS, OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DRAWINGS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.

Revision

1 12/23/24 TCR JMW PER SITE PLAN

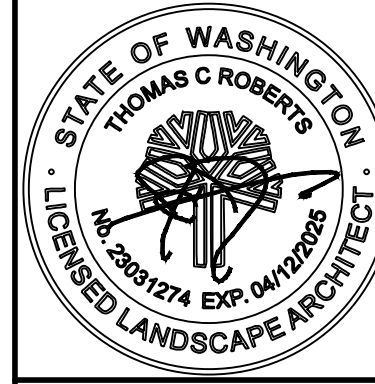
No. Date By Ctd. Appr.

Title:

IRRIGATION DETAILS  
FOR  
DUPONT BUSINESS PARK

AVENUE 55, LLC  
601 UNION STREET, SUITE 2930  
SEATTLE, WA 98101  
(206) 707-9696

For:



Scale:

Horizontal N/A  
Vertical N/A

Designed TCR

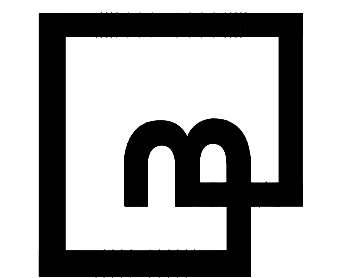
Drawn TCR

Checked JMW

Approved JMW

Date 12/23/24

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

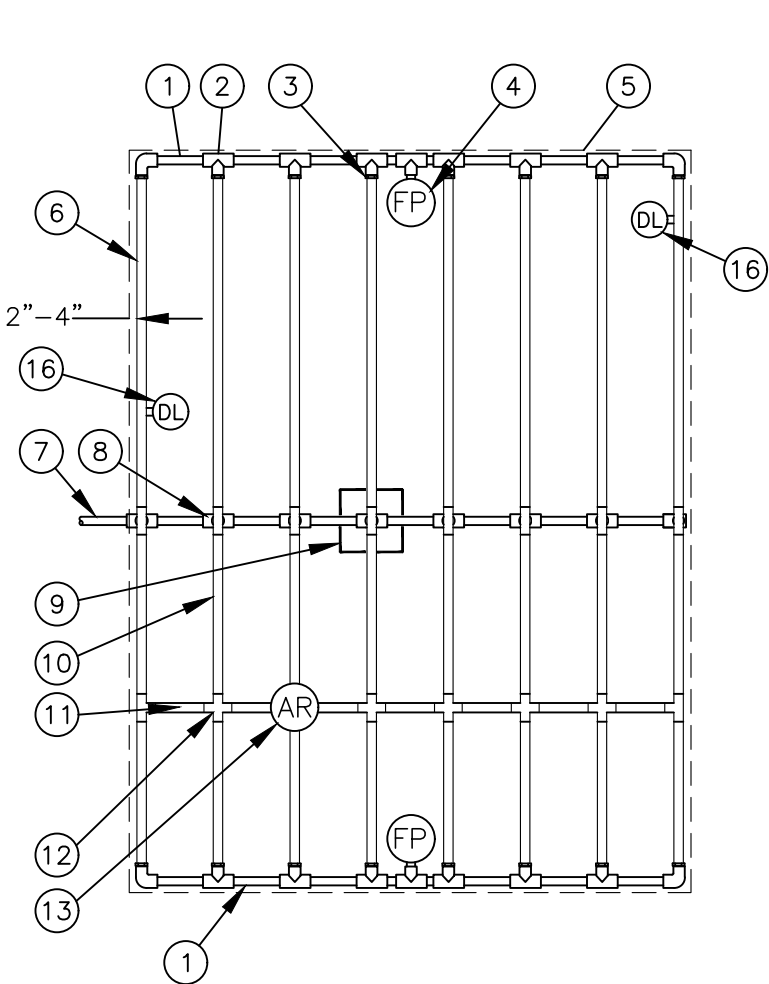


Job Number  
18666

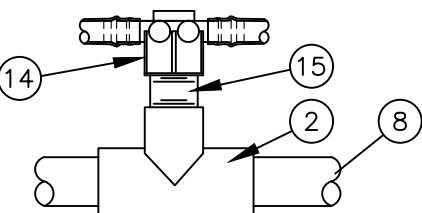
Sheet

L9 of 9

File: P:\180065\18666s Preliminary\East\18666--PL.dwg Date/Time: 12/23/2024 3:01 PM Scale: 1" = 1' TROBERTS Xref: 18666



- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING
- 4 FLUSH POINT (TYPICAL) SEE DETAIL
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 PVC SUPPLY PIPE FROM CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 8 PVC SUPPLY MANIFOLD
- 9 CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL) - SEE INSET A



NOTES:

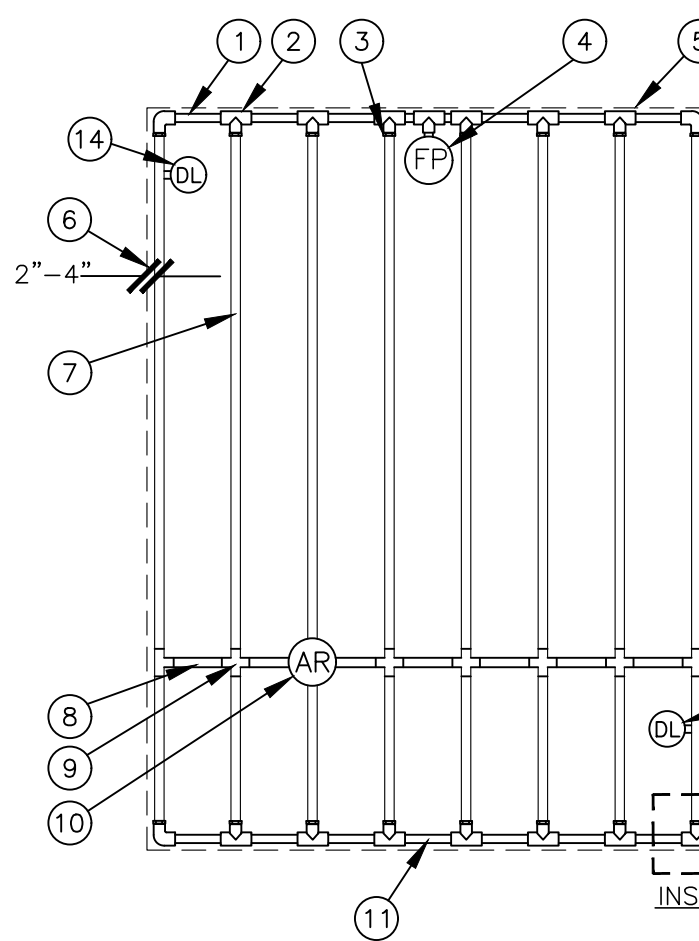
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE IRRIGATION SCHEDULE FOR SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

- 10 SUB-SURFACE DRIPLINE
- 11 BLANK TUBING
- 12 BARB X BARB INSERT TEE OR CROSS:
- 13 1/2" AIR RELIEF VALVE
- 14 BARB X FEMALE FITTING:
- 15 3/4" PVC NIPPLE, LENGTH AS NECESSARY
- 16 DRIPLINE INDICATOR. SEE DETAIL FOR ADDITIONAL INFORMATION

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	165	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

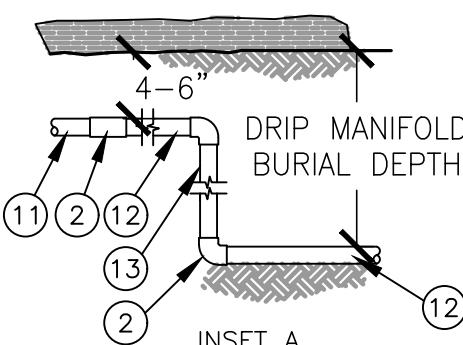
DRIPLINE CENTER FEED LAYOUT

NOT TO SCALE



NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

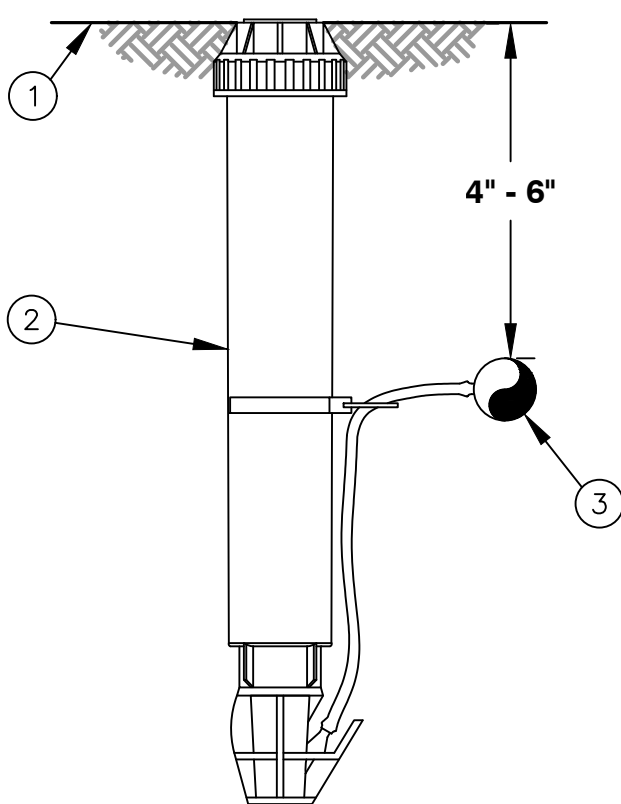


- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING:
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL 'FLUSH POINT WITH BALL VALVE'
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 SUB-SURFACE DRIPLINE
- 8 BLANK TUBING
- 9 BARB X BARB INSERT TEE OR CROSS:
- 10 1/2" AIR RELIEF VALVE
- 11 PVC SUPPLY HEADER
- 12 PVC DRIP MANIFOLD FROM CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 13 PVC SCH 40 RISER PIPE
- 14 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	165	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

DRIPLINE END FEED LAYOUT

NOT TO SCALE

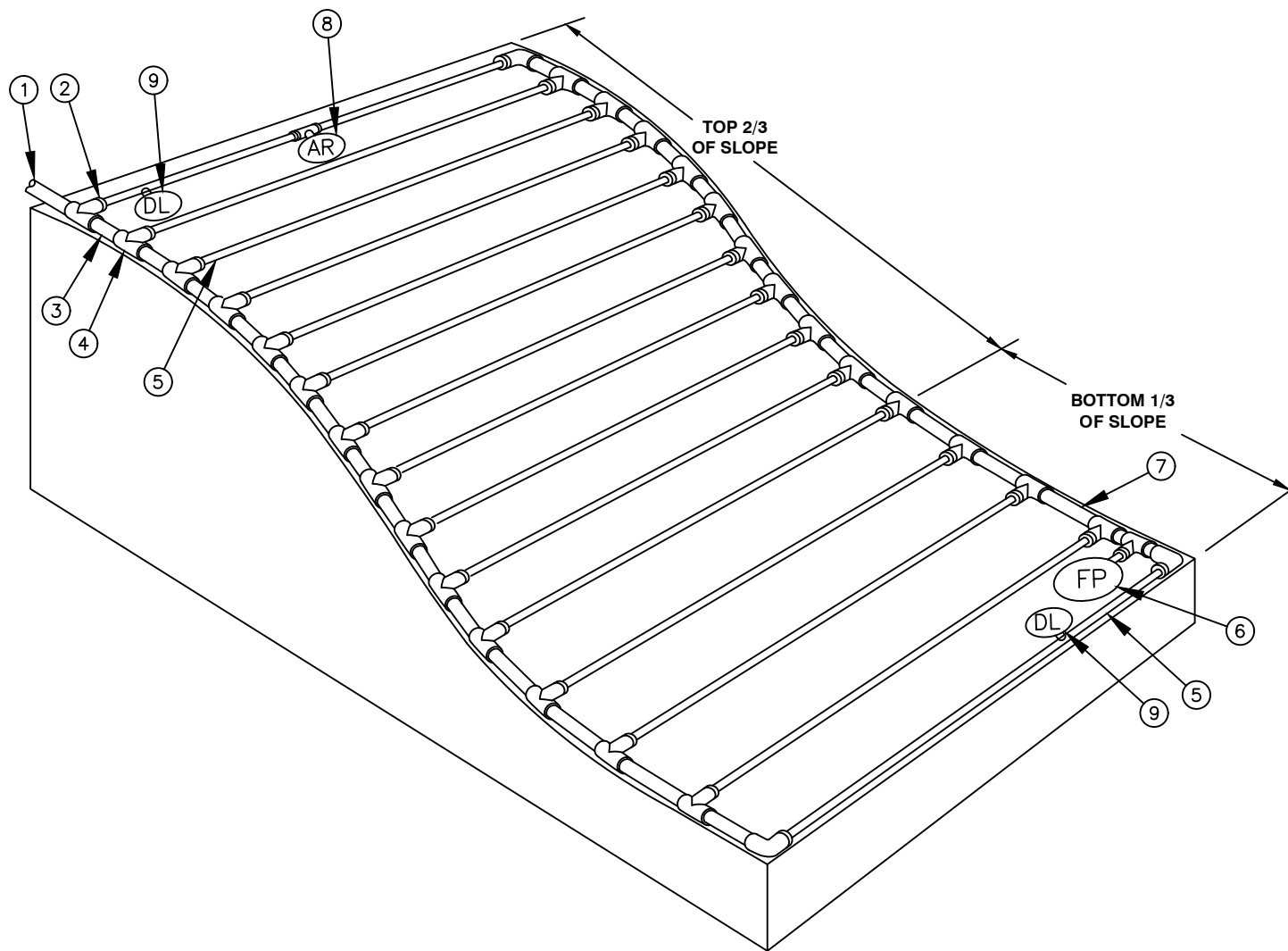


NOTE:

1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/4 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

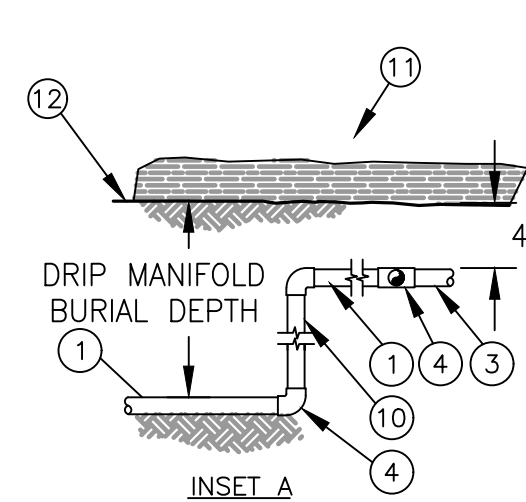
DRIP IRRIGATION DRIPLINE INDICATOR

NOT TO SCALE



NOTES:

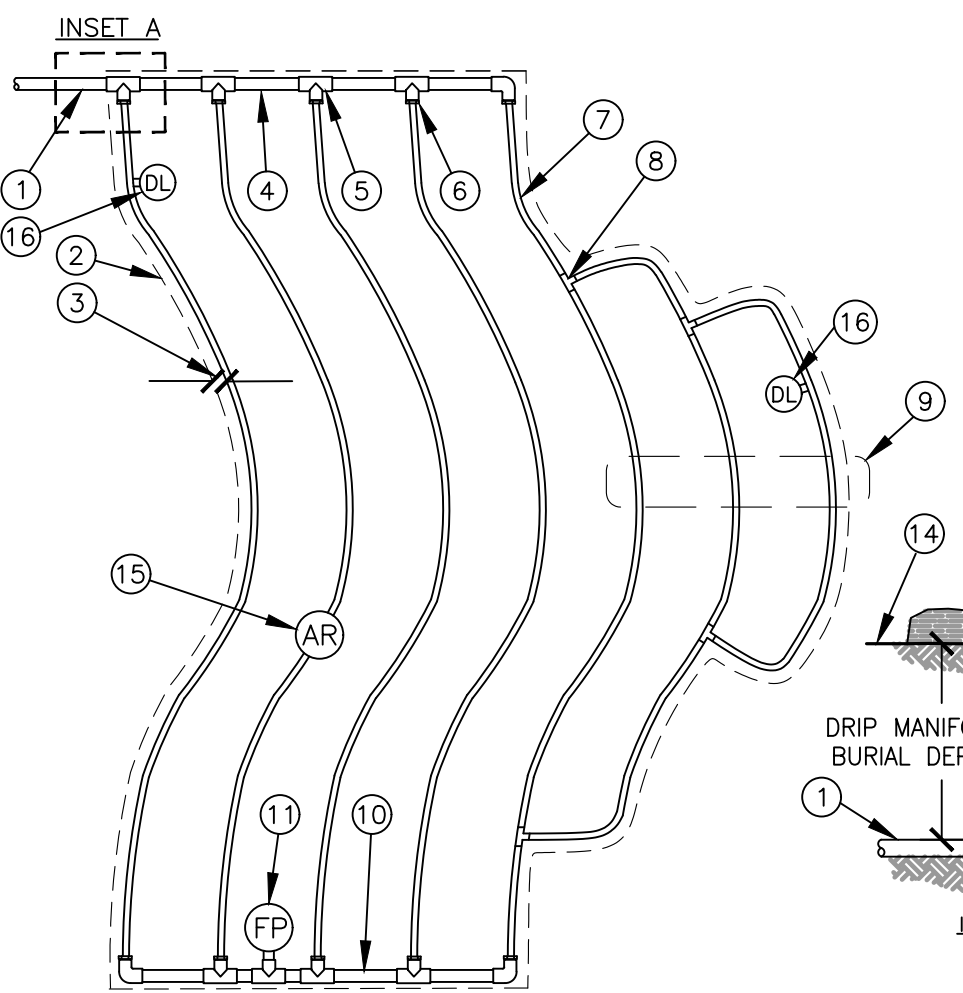
- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. DISTANCE BETWEEN LATERAL ROWS FOR BOTTOM 1/3 OF SLOPE TO BE SPACED GREATER THAN OPTIMAL ROW DISTANCE. SEE MANUFACTURER DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACING.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- WHEN ELEVATION CHANGE EXCEEDS 8 FEET IT IS RECOMMENDED THAT A NEW DRIPLINE ZONE BE CREATED.
- INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.



- 1 PVC DRIP MANIFOLD FROM CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 2 BARB X MALE FITTING
- 3 PVC SUPPLY HEADER
- 4 PVC SCH 40 TEE OR EL (TYPICAL)
- 5 SUB-SURFACE DRIPLINE: SEE IRRIGATION SCHEDULE
- 6 FLUSH POINT: SEE DETAIL
- 7 PVC FLUSH HEADER
- 8 1/2" AIR RELIEF VALVE: RSEE DETAIL
- 9 DRIPLINE INDICATOR. SEE DETAIL FOR ADDITIONAL INFORMATION
- 10 PVC RISER PIPE
- 11 TURF OR MULCH
- 12 FINISH GRADE

DRIPLINE SLOPED LAYOUT

NOT TO SCALE



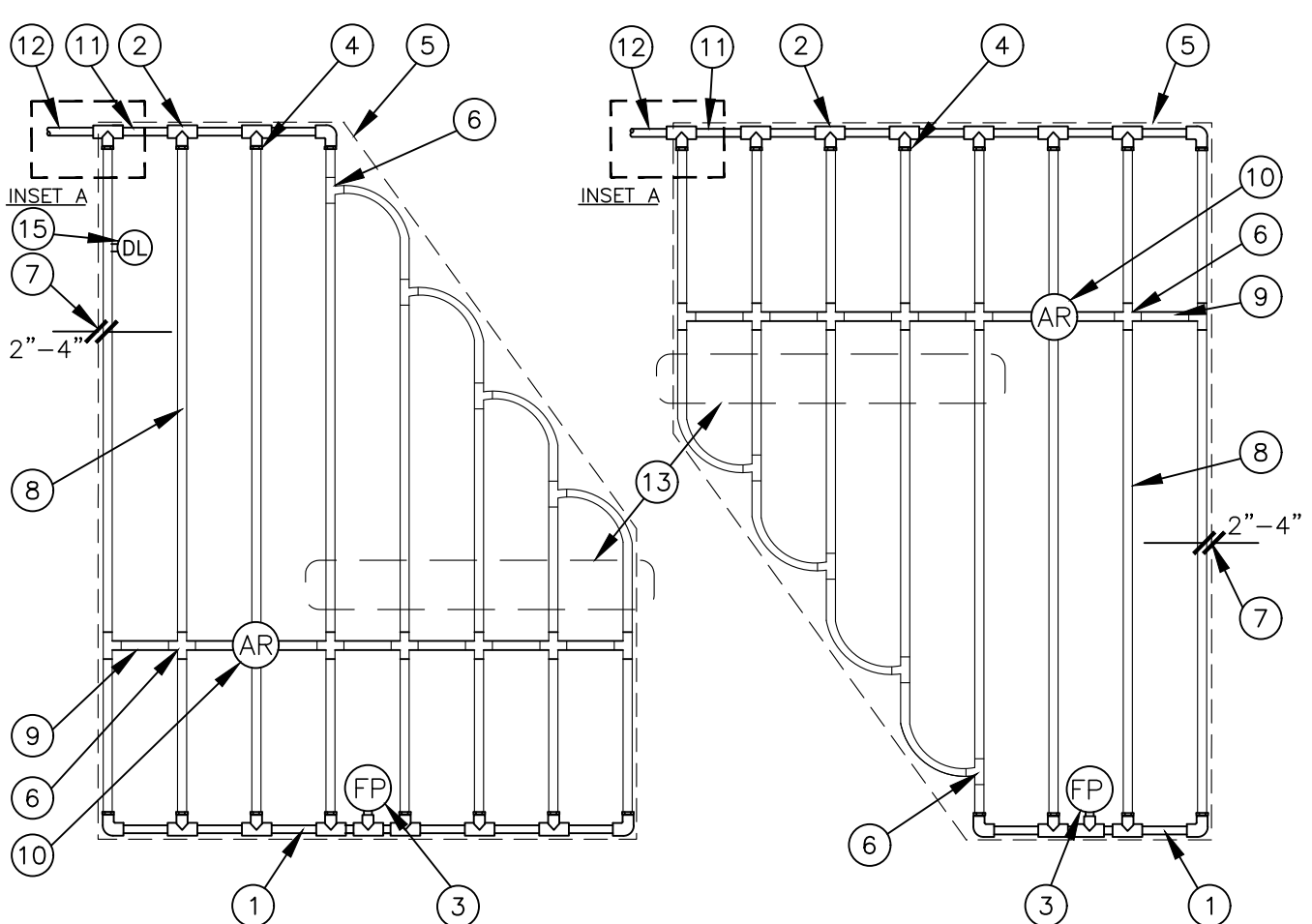
NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS FOR SPACING
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
- INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

- 1 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 2 PERIMETER OF AREA
- 3 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 4 PVC SUPPLY MANIFOLD
- 5 PVC SCH 40 TEE OR EL (TYPICAL)
- 6 BARB X MALE FITTING
- 7 SUB-SURFACE DRIPLINE: SEE IRRIGATION SCHEDULE
- 8 ARB X BARB INSERT TEE
- 9 TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- 10 PVC FLUSH HEADER
- 11 FLUSH POINT: SEE DETAIL
- 12 PVC RISER PIPE
- 13 TURF OR MULCH
- 14 FINISH GRADE
- 15 1/2" AIR RELIEF VALVE: SEE DETAIL
- 16 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO

DRIPLINE ODD CURVES LAYOUT

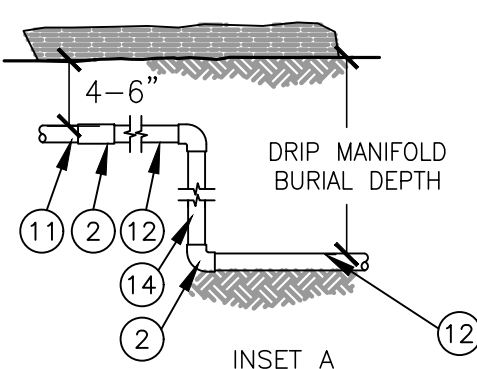
NOT TO SCALE



- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 FLUSH POINT (TYPICAL) SEE DETAIL
- 4 BARB X MALE FITTING
- 5 PERIMETER OF AREA
- 6 BARB X BARB INSERT TEE OR CROSS
- 7 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 8 SUB-SURFACE DRIPLINE: SEE IRRIGATION SCHEDULE
- 9 BLANK TUBING
- 10 1/2" AIR RELIEF VALVE: SEE DETAIL
- 11 PVC SUPPLY MANIFOLD
- 12 PVC SUPPLY PIPE FROM CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 13 TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- 14 PVC SCH 40 RISER PIPE
- 15 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO

NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE MANUFACTURER DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.



DRIPLINE IRREGULAR SHAPED LAYOUT

NOT TO SCALE