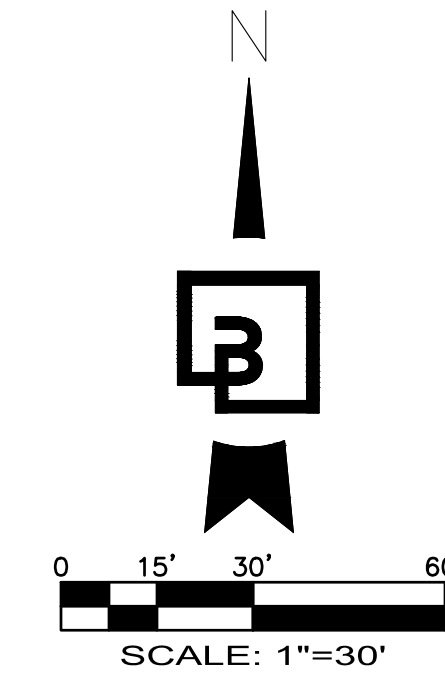
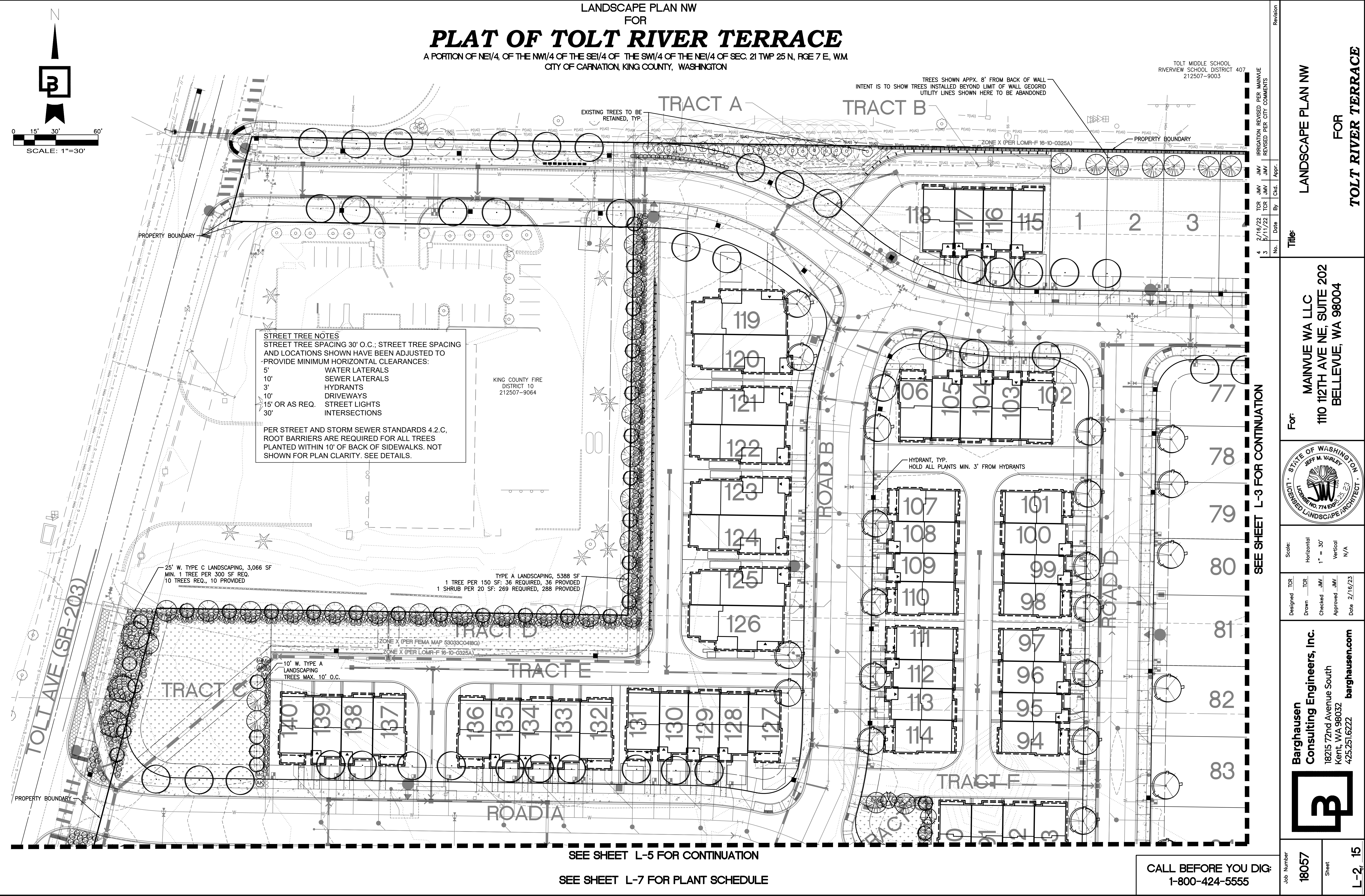


PLAT OF TOLT RIVER TERRACE

SEE SHEET L-7 FOR PLANT SCHEDULE

**CALL BEFORE YOU DIG:
1-800-424-5555**

\\18000s\18057\engineering\18057-L.dwg 2/16/2023 9:56 AM TROBERTS



LANDSCAPE PLAN NW
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF THE NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM.
CITY OF CARNATION, KING COUNTY, WASHINGTON

STREET TREE NOTES
STREET TREE SPACING 30' O.C.; STREET TREE SPACING
AND LOCATIONS SHOWN HAVE BEEN ADJUSTED TO
-PROVIDE MINIMUM HORIZONTAL CLEARANCES:
5' WATER LATERALS
10' SEWER LATERALS
3' HYDRANTS
10' DRIVEWAYS
15' OR AS REQ. STREET LIGHTS
30' INTERSECTIONS

PER STREET AND STORM SEWER STANDARDS 4.2.C,
ROOT BARRIERS ARE REQUIRED FOR ALL TREES
PLANTED WITHIN 10' OF BACK OF SIDEWALKS. NOT
SHOWN FOR PLAN CLARITY. SEE DETAILS.

KING COUNTY FIRE
DISTRICT 10
212507-9064

TYPE A LANDSCAPING, 5388 SF
1 TREE PER 150 SF: 36 REQUIRED, 36 PROVIDED
1 SHRUB PER 20 SF: 269 REQUIRED, 288 PROVIDED

25' W. TYPE C LANDSCAPING, 3,066 SF
MIN. 1 TREE PER 300 SF REQ.
10 TREES REQ., 10 PROVIDED

10' W. TYPE A
LANDSCAPING
TREES MAX. 10' O.C.

ZONE X (PER FEMA MAP 53033C0418Q)
ZONE X (PER LOMR-F 16-10-0325A)

TREES SHOWN APPX. 8' FROM BACK OF WALL
INTENT IS TO SHOW TREES INSTALLED BEYOND LIMIT OF WALL GEGRID
UTILITY LINES SHOWN HERE TO BE ABANDONED

TOLT MIDDLE SCHOOL
RIVERVIEW SCHOOL DISTRICT 407
212507-9003

HYDRANT, TYP.
HOLD ALL PLANTS MIN. 3' FROM HYDRANTS

SEE SHEET L-3 FOR CONTINUATION

SEE SHEET L-5 FOR CONTINUATION

SEE SHEET L-7 FOR PLANT SCHEDULE

CALL BEFORE YOU DIG:
1-800-424-5555

Job Number 18057		Sheet L-2 of 15	
P:\18000s\18057\Engineering\18057-L.dwg 2/16/2023 9:56 AM TROBERTS			
For: MAINUE WA LLC 110 112TH AVE NE, SUITE 202 BELLEVUE, WA 98004			
Title: LANDSCAPE PLAN NW FOR TOLT RIVER TERRACE			
Revision 4 2/16/22 TOR JMW 3 5/11/22 TOR JMW 2 2/16/23 JMW 1 2/16/23 JMW 0 2/16/23 JMW			
Scale: Horizontal 1" = 30' Vertical N/A			
Designed TOR Draw TOR Checked JMW Approved JMW Date 2/16/23			
Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com			
STATE OF WASHINGTON JEFF M. VARLEY LICENSED LANDSCAPE ARCHITECT LICENSE NO. 774 EXPIRES 12/23			

LANDSCAPE PLAN N
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON

SEE SHEET L-1 FOR CONTINUATION

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TOLT MIDDLE SCHOOL
RIVERVIEW SCHOOL DISTRICT 407
212507-9003

PROPERTY BOUNDARY

OFFSITE TREES TO BE RETAINED, TYP.

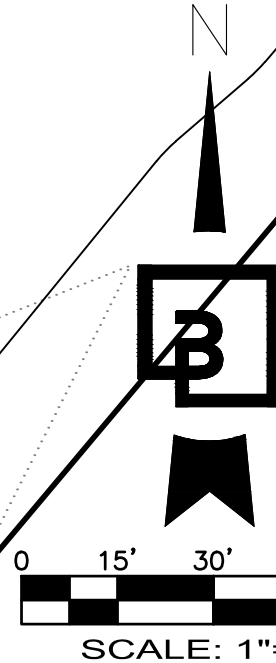
HYDRANT, TYP.
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3' FROM ALL HYDRANTS

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15' OR AS REQ. STREET LIGHTS
30' INTERSECTIONS

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TEMPORARY GRADING IMPACT IN CMZ BUFFER
(HATCHED AREA WITHIN DASHED LINE):
ALL DISTURBED AREAS TO BE STABILIZED
AND SEEDING WITH AN EROSION CONTROL MIX

TEMPORARY GRADING IMPACT IN CMZ BUFFER (HATCHED AREA WITHIN DASHED LINE):
ALL DISTURBED AREAS TO BE STABILIZED AND SEEDING WITH AN EROSION CONTROL MIX



SEE SHEET L-6 FOR CONTINUATION

SEE SHEET L-7 FOR PLANT SCHEDULE

CALL BEFORE YOU DIG:
1-800-424-5555

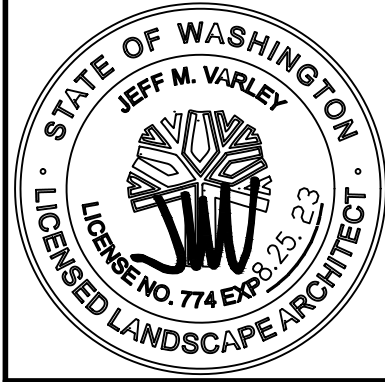
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4	2/16/22	JMW	TCR	JMW
3	5/11/22	JMW	TCR	JMW

IRRIGATION REVISED PER MAINUE
REVISED PER CITY COMMENTS

Job Number
18057

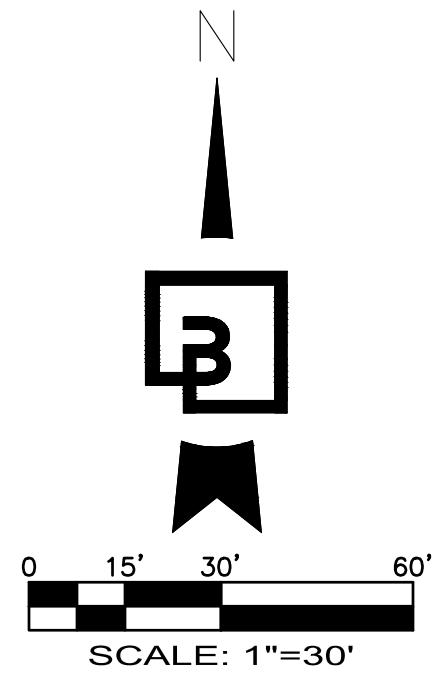
Sheet
L-3 of **15**

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



For:
MAINUE WA LLC
110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004

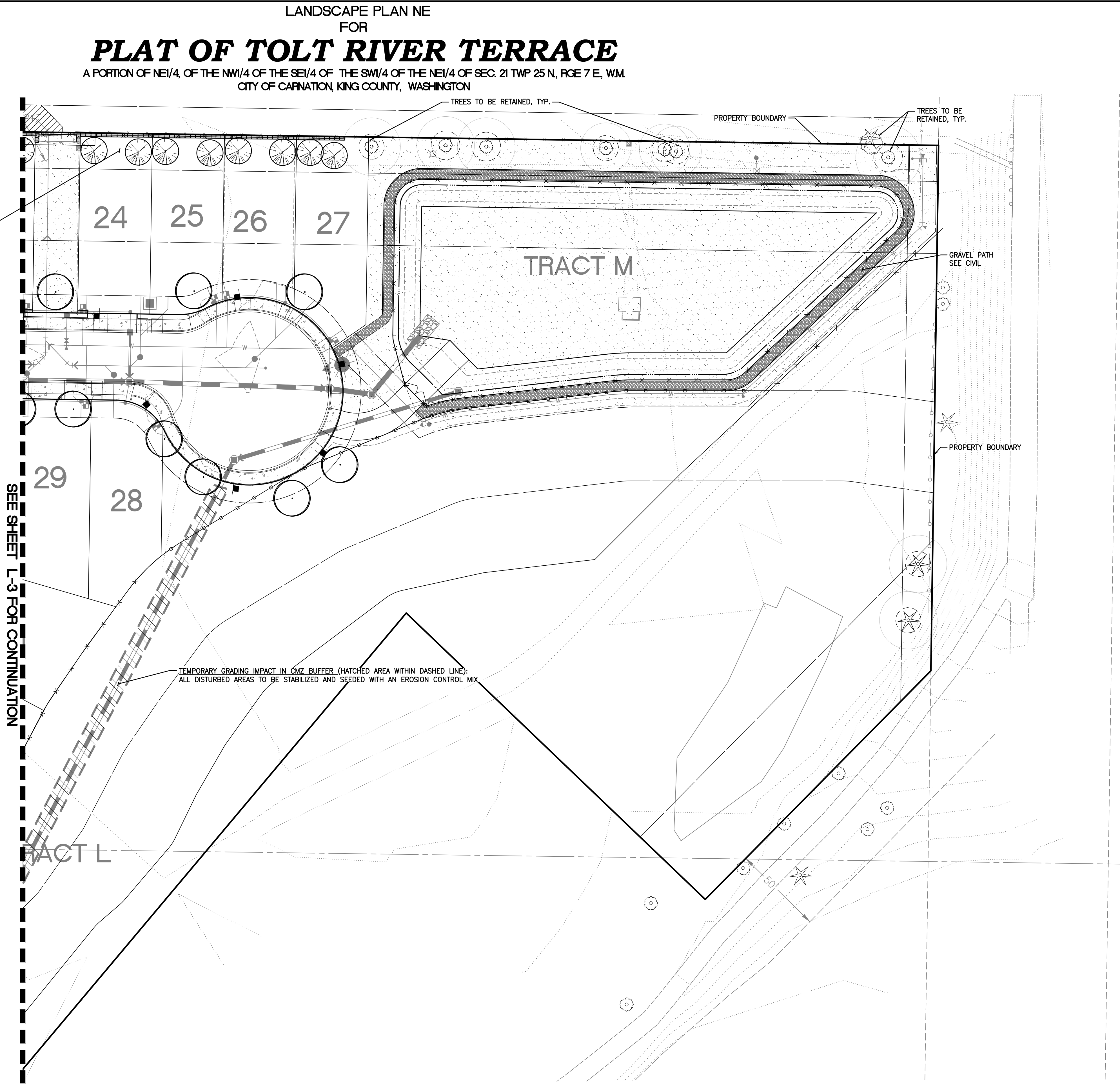
Title:
LANDSCAPE PLAN N
FOR
TOLT RIVER TERRACE



STREET TREE NOTES
STREET TREE SPACING 30' O.C.; STREET TREE SPACING
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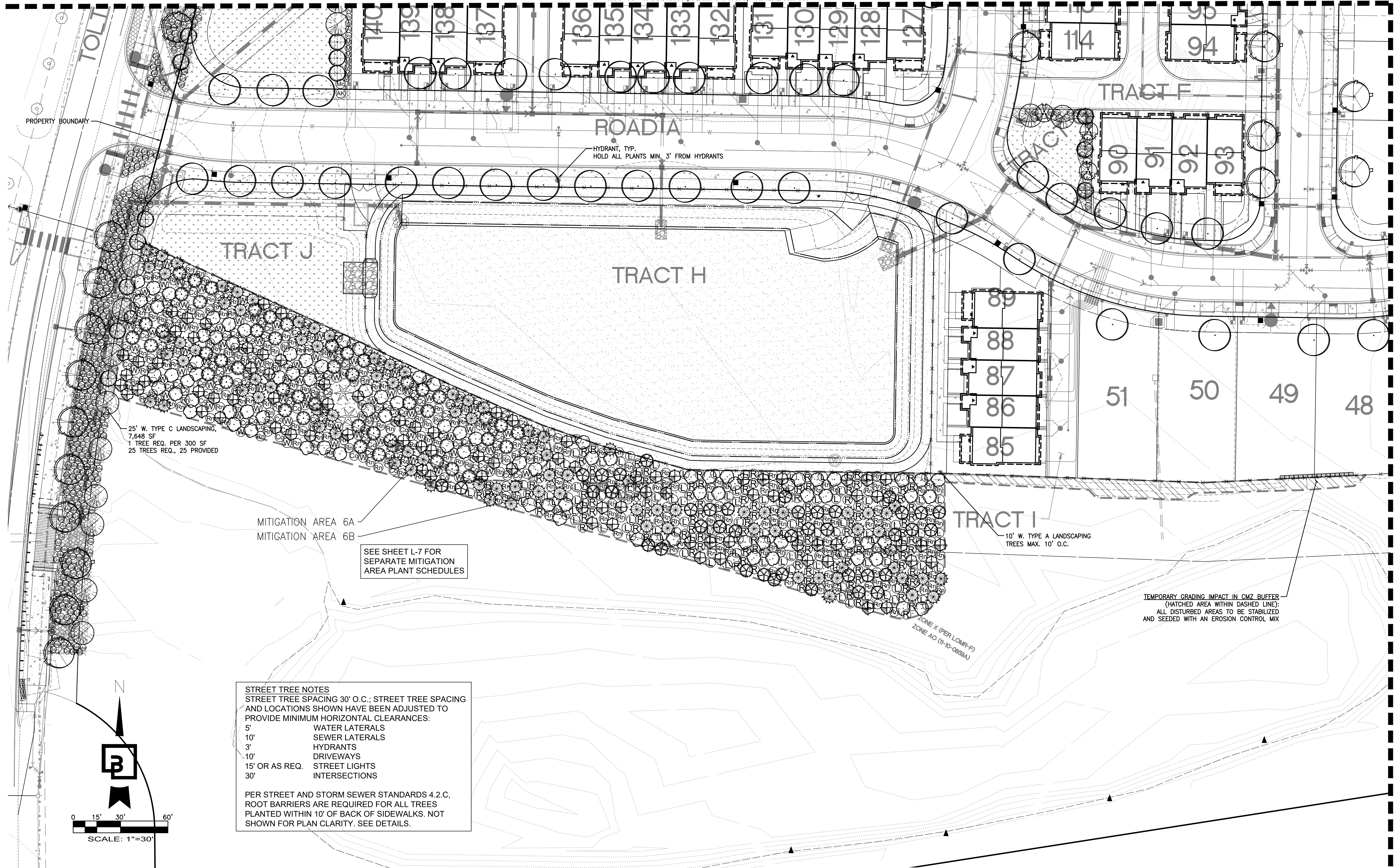


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CALL BEFORE YOU DIG:
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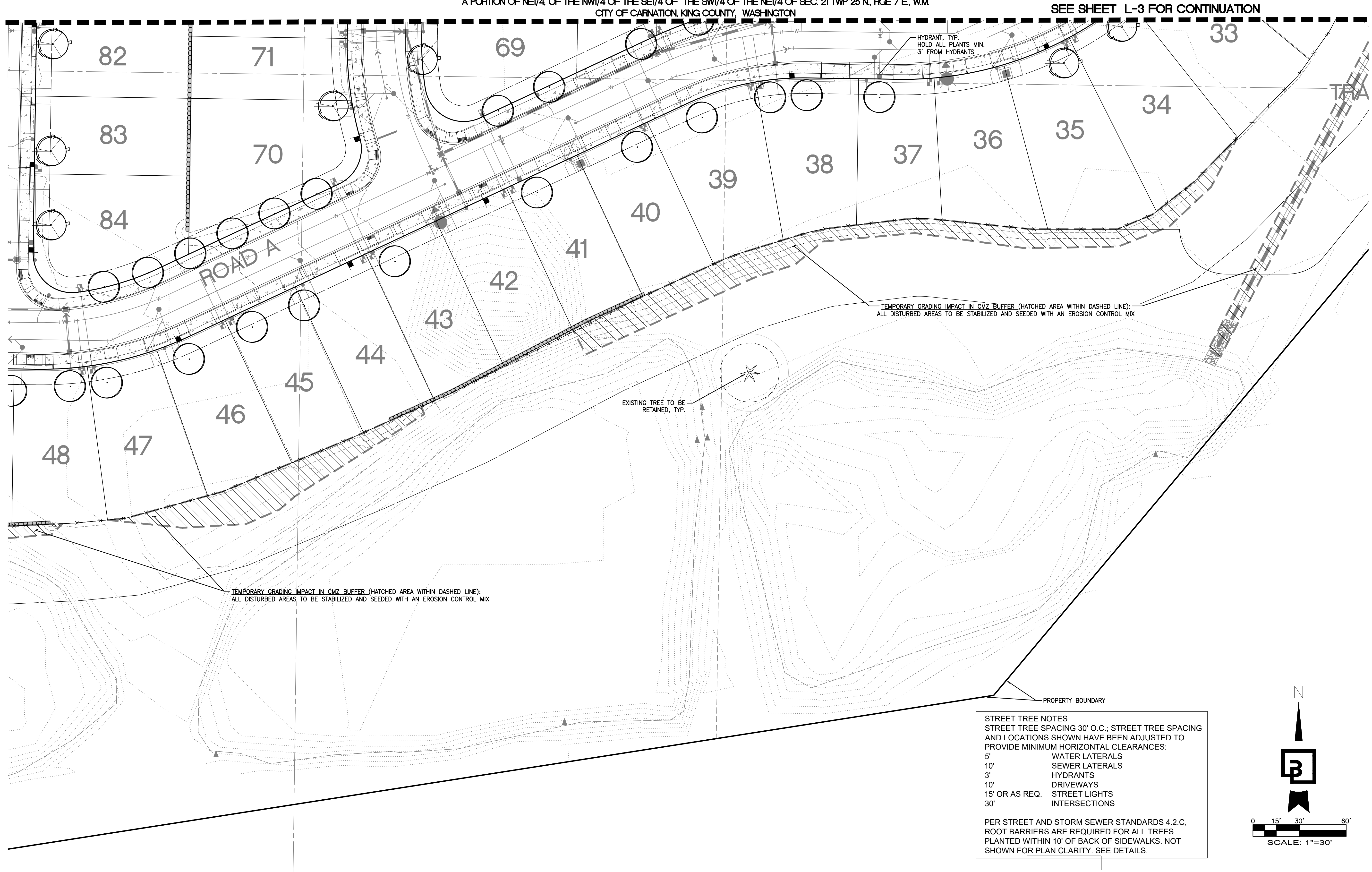
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LANDSCAPE PLAN SW
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON



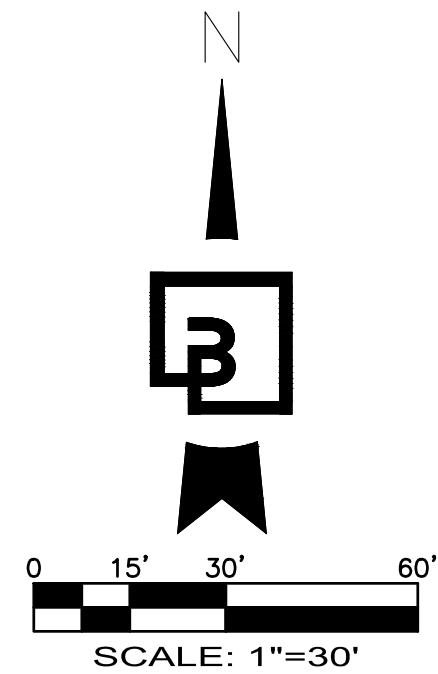
Revision	
No.	Date
4	2/16/22
3	5/11/22
2	1/11/22
1	1/11/22
IRRIATION REVISED PER MAINVUE REVISED PER CITY COMMENTS	
Title: LANDSCAPE PLAN SW FOR TOLT RIVER TERRACE	
For: MAINVUE WA LLC 1110 112TH AVE NE, SUITE 202 BELLEVUE, WA 98004	
Professional Seal: STATE OF WASHINGTON JEFF M. VARLEY LICENSED LANDSCAPE ARCHITECT LICENSE NO. 774 EXPI. 12-23	
Scale: Horizontal 1" = 30' Vertical N/A	
Designed TOR Draw TOR Checked JMW Approved JMW Date 2/16/23	
Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com	
Job Number 18057	Sheet L-5 of 15

LANDSCAPE PLAN S
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM.
CITY OF CARNATION, KING COUNTY, WASHINGTON



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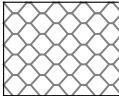
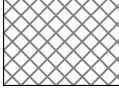
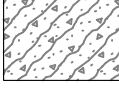
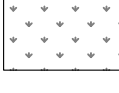
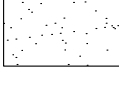
SEE SHEET L-7 FOR PLANT SCHEDULE

CALL BEFORE YOU DIG:
1-800-424-5555

Revision	
4 2/16/22 TOR JMW JMW IRRIGATION REVISED PER MAINUE	
3 5/11/22 TOR JMW JMW REVISED PER CITY COMMENTS	
No.	Date
Title: LANDSCAPE PLAN S FOR TOLT RIVER TERRACE	
For: MAINUE WA LLC 1110 112TH AVE NE, SUITE 202 BELLEVUE, WA 98004	
Scale:	Horizontal 1" = 30' Vertical N/A
Designed TOR	Drawn TOR
Checked JMW	Approved JMW
Date 2/16/23	
Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com	
Job Number 18057	Sheet L-6 of 15

PLANT SCHEDULE
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON

PLANT SCHEDULE

DECIDUOUS TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	FOLIAGE	QTY *	MATURE SIZE (HT. X WTH.)
	ACER CIRCINATUM / VINE MAPLE NURSERY GROWN, FULL AND MATCHING. STAKE AND GUY ONE GROWING SEASON.	B & B	2" CAL OR 3" TOTAL MULTISTEM	LOW	NATIVE	DECIDUOUS	3	15'-20' x 5'-10'
EVERGREEN TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	FOLIAGE	QTY *	
	PINUS CONTORTA CONTORTA / SHORE PINE NURSERY GROWN, UNCUT LEADER. STAKE AND GUY ONE GROWING SEASON.	B & B	6' MIN. HT.	LOW	NATIVE	EVERGREEN	91	40'-50' x 20'-25'
	THUJA PLICATA 'EXCELSA' / WESTERN RED CEDAR NURSERY GROWN, UNCUT LEADER. STAKE AND GUY ONE GROWING SEASON.	B & B	6' MIN. HT.	LOW	NATIVE	EVERGREEN	38	35' x 15'
STREET TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	FOLIAGE	QTY *	
	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE APPROVED MED. COLUMNAR TREE. NURSERY GROWN FOR STREET TREE USE, BRANCHING AT 5'. STAKE AND GUY ONE GROWING SEASON.	B & B	2" CAL	LOW	ADAPTIVE	DECIDUOUS	118	40' x 30'
	OXYDENDRUM ARBOREUM / SOURWOOD APPROVED MED. COLUMNAR TREE. NURSERY GROWN FOR STREET TREE USE, BRANCHING AT 5'. STAKE AND GUY ONE GROWING SEASON.	B & B	2" CAL	LOW	ADAPTIVE	DECIDUOUS	58	50' x 30'
SHRUBS	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	FOLIAGE	SPACING		
	GAULTHERIA SHALLON / SALAL	2 GAL., 16" MIN. HT.	MEDIUM	NATIVE	EVERGREEN	1 PER 20 SF	249	40' x 25'
	MAHONIA AQUIFOLIUM / OREGON GRAPE	2 GAL., 16" MIN. HT.	LOW	NATIVE	EVERGREEN	1 PER 20 SF	97	
	MAHONIA AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE	2 GAL., 16" MIN. HT.	LOW	NATIVE	EVERGREEN	1 PER 20 SF	101	
	MAHONIA NERVOSA / OREGON GRAPE	2 GAL., 16" MIN. HT.	LOW	NATIVE	EVERGREEN	1 PER 20 SF	61	
	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	2 GAL., 16" MIN. HT.	LOW	NATIVE	EVERGREEN	1 PER 20 SF	6	
	RHODODENDRON X 'ANAH KRUSCHKE' / RHODODENDRON	2 GAL., 16" MIN. HT.	MEDIUM	ADAPTIVE	EVERGREEN	AS SHOWN	2	
	SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY	2 GAL., 16" MIN. HT.	LOW	NATIVE	DECIDUOUS	1 PER 20 SF	302	
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL., 16" MIN. HT.	MEDIUM	NATIVE	EVERGREEN	1 PER 20 SF	37	
FERNS AND GRASSES	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	FOLIAGE			
	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS	2 GAL.	LOW	ADAPTIVE	GRASS/GRASS-LIKE	AS SHOWN	3	
GROUND COVERS	BOTANICAL / COMMON NAME	CONT.	WATER USE	ORIGIN	FOLIAGE	SPACING	QTY *	
	ARCTOSTAPHYLOS UVA-URSI 'MASSACHUSETTS' / KINNIKINNICK	1 GAL.	LOW	NATIVE	EVERGREEN	24" o.c.	11,804	
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL.	MEDIUM	NATIVE	EVERGREEN	24" o.c.	82	
	MAHONIA REPENS / CREEPING OREGON GRAPE	1 GAL.	LOW	NATIVE	EVERGREEN	24" o.c.	418	
	TURFGRASS LAWN, SOD OR HYDROSEED COUNTRY GREEN PREMIUM SOD SEED MIX OAE, 5-6 LBS. PER 1,000 SF					21,000 SF		
	PACIFIC NW NATIVE EROSION-CONTROL HYDROSEED DIRECT SEED SALES NATIVE EROSION CONTROL MIX OAE, APPLY PER MANUFACTURER INSTRUCTIONS					104,000 SF		

*QUANTITIES IN PLANT SCHEDULE ABOVE DO NOT INCLUDE AREA 6A AND 6B PLANT MATERIAL
QUANTITIES SHOWN IN 'MITIGATION PLANT SCHEDULE' TO THE RIGHT

TOTAL TREES = 308
INCLUDES TREE SPECIES LISTED ABOVE:
VINE MAPLE, SHORE PINE, CEDAR, RED MAPLE, AND SOURWOOD

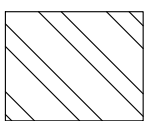
NATIVE TREES = 132 (43.0%)
INCLUDES TREE SPECIES LISTED ABOVE:
VINE MAPLE, SHORE PINE, AND CEDAR

TOTAL SHRUBS = 858 (ALL SHRUBS IN PLANT SCHEDULE ABOVE)
NATIVE SHRUBS = 853 (99.4%) (ALL SHRUBS EXCLUDING CALAMAGROSTIS)

TREE RETENTION AND REPLACEMENT	
TOTAL SIGNIFICANT ONSITE TREES:	139
TOTAL SIGNIFICANT ONSITE TREES TO BE RETAINED:	28
REPLACEMENT TREES REQUIRED, 1:1 RATIO:	111
REPLACEMENT TREES PROVIDED:	308

MITIGATION AREA PLANT SCHEDULE

NOTE: SEE AREAS 6A / 6B PLANTING PLAN, SHEET L-7 AND TEMPORARY CMZ AREA PLANS, SHEETS L-3 - L-6
PLANT QUANTITIES SHOWN IN THIS PLANT SCHEDULE DO NOT INCLUDE QUANTITIES IN PLANT SCHEDULE TO THE LEFT

MITIGATION TREES	BOTANICAL / COMMON NAME	CONT.		QTY
	ALNUS RUBRA / RED ALDER	1 GAL. OR 18" BAREROOT		50
	PICEA SITCHENSIS / SITKA SPRUCE	2 GAL.		48
	POPULUS TRICHOCARPA / BLACK COTTONWOOD	1 GAL. OR 18" BAREROOT		47
	THUJA PLICATA / WESTERN RED CEDAR	2 GAL.		49
MITIGATION SHRUBS	BOTANICAL / COMMON NAME	CONT.	SPACING	QTY
	CORNUS SERICEA / RED TWIG DOGWOOD	1 GAL. OR 12" BAREROOT	72" o.c.	128
	ROSA NUTKANA / NOOTKA ROSE	1 GAL. OR 12" BAREROOT	72" o.c.	141
	SALIX SITCHENSIS / SITKA WILLOW	1 GAL. OR 12" BAREROOT	72" o.c.	69
MITIGATION TREES	BOTANICAL / COMMON NAME	CONT.		QTY
	ALNUS RUBRA / RED ALDER	1 GAL. OR 18" BAREROOT		41
	POPULUS TRICHOCARPA / BLACK COTTONWOOD	1 GAL. OR 18" BAREROOT		40
	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	2 GAL.		40
	THUJA PLICATA / WESTERN RED CEDAR	2 GAL.		40
MITIGATION SHRUBS	BOTANICAL / COMMON NAME	CONT.	SPACING	QTY
	LONICERA INVOLUCRATA / TWINBERRY	1 GAL. OR 12" BAREROOT	72" o.c.	112
	ROSA NUTKANA / NOOTKA ROSE	1 GAL. OR 12" BAREROOT	72" o.c.	111
	RUBUS SPECTABILIS / SALMONBERRY	1 GAL. OR 12" BAREROOT	72" o.c.	105
	TEMPORARY CMZ HYDROSEED PACIFIC NW NATIVE EROSION-CONTROL MIX DIRECT SEED SALES NATIVE EROSION CONTROL MIX OAE, APPLY PER MANUFACTURER INSTRUCTIONS			15,000 SF

Revision

4 2/16/22 TCR JMW JMW JMW JMW IRRIGATION REVISED PER MAINVUE
3 5/11/22 TCR JMW JMW JMW JMW REVISED PER CITY COMMENTS

By Date No.

Title:

PLANT SCHEDULE
FOR
TOLT RIVER TERRACE

For:

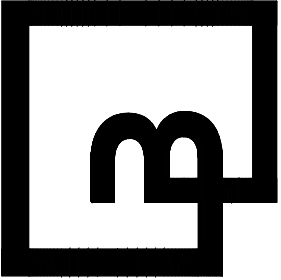
MAINVUE WA LLC
110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004

Scale:

Horizontal
N/A
Vertical
N/A

Designed TOR
Drawn TOR
Checked JMW
Approved JMW
Date 2/16/23

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



Job Number
18057

Sheet
L-7 of 15

CALL BEFORE YOU DIG:
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LANDSCAPE NOTES AND DETAILS
FOR

PLAT OF TOLT RIVER TERRACE

A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING 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.

IRRIGATION SYSTEM:

LANDSCAPE CONTRACTOR TO VERIFY AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK ON THE PROPOSED IRRIGATION SYSTEM. PROVIDE WRITTEN RESULTS OF WATER PRESSURE TO LANDSCAPE ARCHITECT

REPAIR OF IRRIGATION SYSTEM:

DURING THE COURSE OF WORK, REPAIR ANY DAMAGE TO THE IRRIGATION SYSTEM TO MATCH CONDITIONS PRIOR TO THE DAMAGE.

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 COMPLETION OF PROJECT (ACCEPTANCE) OF FACILITY BY OWNER. 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; "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.
- 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 SOLIDLY 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.
- 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:

SOIL IMPROVEMENT PER DEPARTMENT OF ECOLOGY BMP T5.13 'POST-CONSTRUCTION SOIL QUALITY AND DEPTH':

- SOIL RETENTION, RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.
- SOIL QUALITY. 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:

- A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. 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.

- MULCH PLANTING BEDS WITH 3-4 INCHES OF ORGANIC MATERIAL

- USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:

- THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BMP T7.30: BIORETENTION CELLS, SWALES, AND PLANTER BOXES, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE.

THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1.

THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.

- CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

- IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:

- LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
- AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
- STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
- IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

MAINTENANCE

- ESTABLISH SOIL QUALITY AND DEPTH TOWARD THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECT FROM COMPACTION, SUCH AS FROM LARGE MACHINERY USE, AND FROM EROSION.

- PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA AFTER INSTALLATION.

- LEAVE PLANT DEBRIS OR ITS EQUIVALENT ON THE SOIL SURFACE TO REPLENISH ORGANIC MATTER.

- REDUCE AND ADJUST, WHERE POSSIBLE, THE USE OF IRRIGATION, FERTILIZERS, HERBICIDES AND PESTICIDES, RATHER THAN CONTINUING TO IMPLEMENT FORMERLY ESTABLISHED PRACTICES.

ORGANIC 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 2 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 NOT COVERED BY LAWN AND/OR SEED. APPLY SUFFICIENT QUANTITY TO PROVIDE A 3-4-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, RESETTING 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.

IRRIGATION MAINTENANCE:

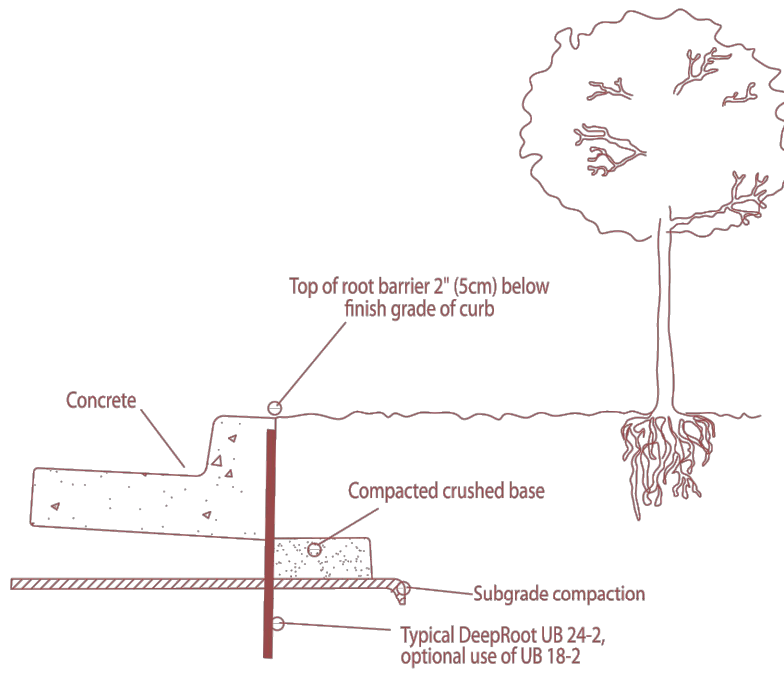
THE IRRIGATION SYSTEM TO BE MAINTAINED INCLUDING ADJUSTMENTS FOR BALANCED WATER DISTRIBUTION AND PRECIPITATION. FAILED OR MALFUNCTIONING IRRIGATION EQUIPMENT SHALL BE REPLACED AND/OR CORRECTED. PLANTING AND IRRIGATION MAINTENANCE TO INCLUDE THOSE OPERATIONS NECESSARY TO THE PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR TO PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.

Linear Application of DeepRoot Tree Root Barriers at Time of Installing Concrete Sidewalks and Curbs

TYPICAL SECTION OF CURB AND GUTTER WITH DEEPROOT TREE ROOT BARRIER INSET INTO CONCRETE. BARRIER INSTALLED IN A TRENCH IN SUBGRADE WHICH IS THEN COMPACTED. BARRIER IS SET SO THAT TOP EDGE WILL BE 2" (5CM) BELOW FINISH GRADE OF CURB, AND SET FLUSH WITH EDGE OF CURB. BARRIER RIBS FACE TOWARD TREE ROOTS.

INSTALLATION SEQUENCE:

- Prepare base and subgrade
- Trench to appropriate depth for installation of root barrier so that top of barrier is 2" (5cm) below finish grade of top of curb.
- Place root barrier in trench, vertical ribs must face toward tree roots.
- Backfill and compact to requirements.
- Place form material against barrier (It may be nailed from the outside of the form)

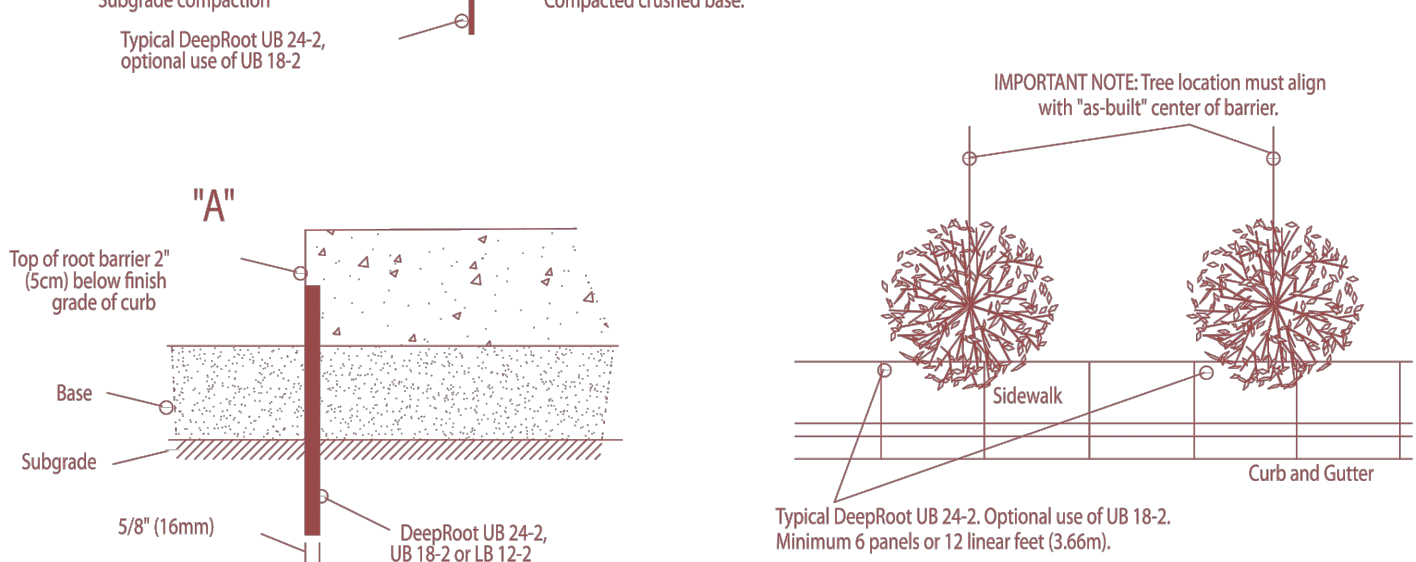


TYPICAL SECTION OF CURB, GUTTER AND SIDEWALK WITH DEEPROOT TREE ROOT BARRIER INSET INTO CONCRETE

BARRIER INSTALLED IN A TRENCH IN SUBGRADE WHICH IS THEN COMPACTED. BARRIER IS SET SO THAT TOP EDGE WILL BE 2" (5CM) ABOVE COMPACTED BASE (or halfway between base and finish grade of SW). BARRIER RIBS FACE TOWARD TREE ROOTS.

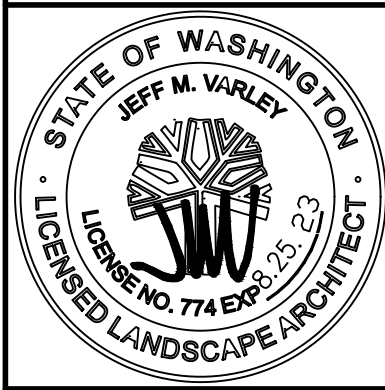
INSTALLATION SEQUENCE:

- Prepare base and subgrade
- Trench to appropriate depth for installation of root barrier so that top of barrier is 2" (5cm) below finish grade of top of sidewalk (or halfway between top of compacted base and finish grade of SW)
- Place root barrier in trench, vertical ribs must face toward tree roots.
- Backfill and compact to requirements.
- Place form material against barrier (It may be nailed from the outside of the form)



Revision									
4	2/16/22	TCR	JMW	JMW	JMW	JMW	JMW	JMW	IRRIGATION REVISED PER MAINVIEW
3	6/11/22	TCR	JMW	JMW	JMW	JMW	JMW	JMW	REVISED PER CITY COMMENTS

Title:		LANDSCAPE NOTES AND DETAILS	
For:		MAINVIEW WA LLC 1110 112TH AVE NE, SUITE 202 BELLEVUE, WA 98004	



Scale:	Horizontal	
	N/A	
Scale:	Vertical	
	N/A	

Designed	TCR	Drawn	TCR	Checked	JMW	Approved	JMW	Date	2/16/23
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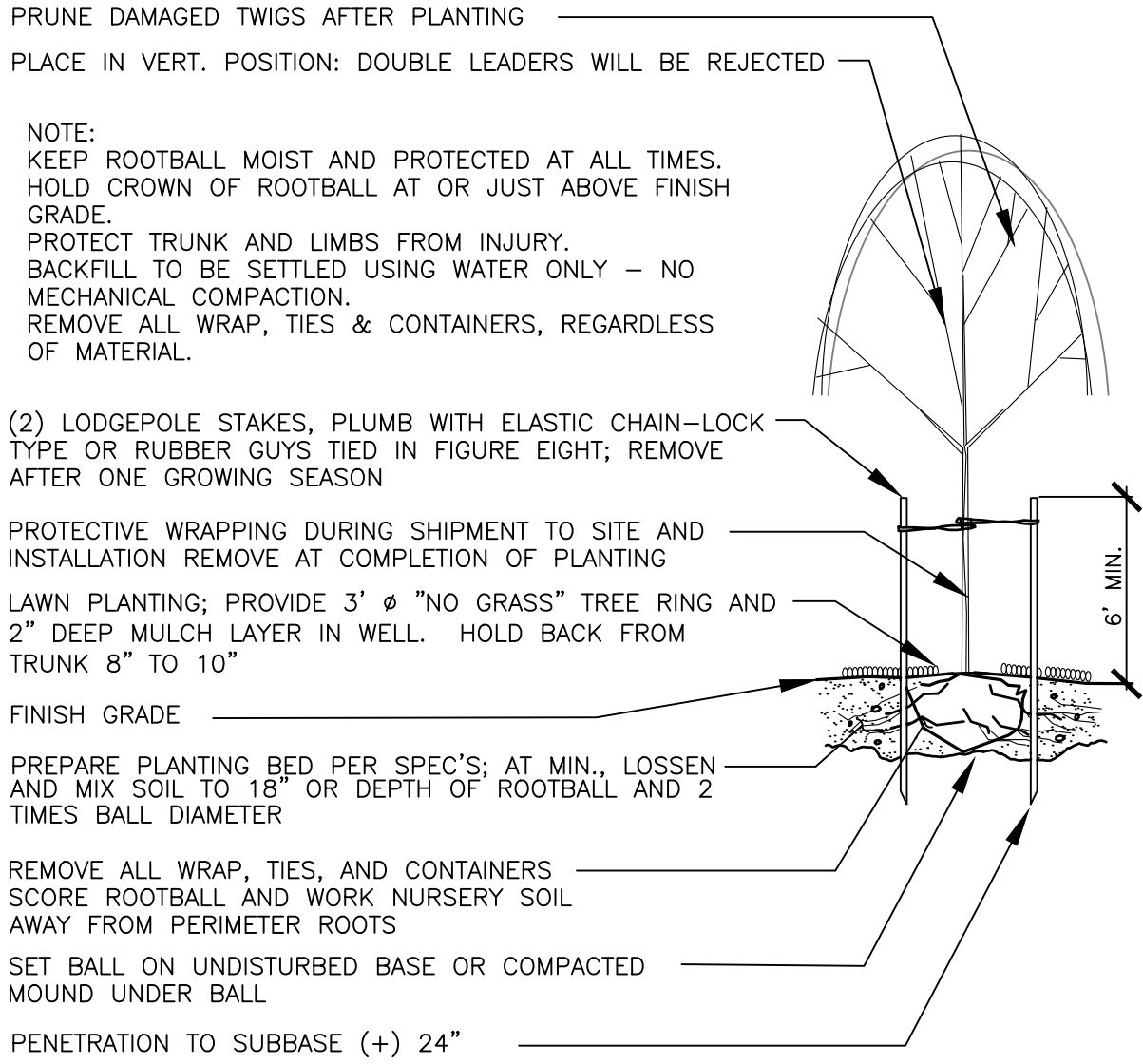
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Kent, WA 98032
425.251.6222

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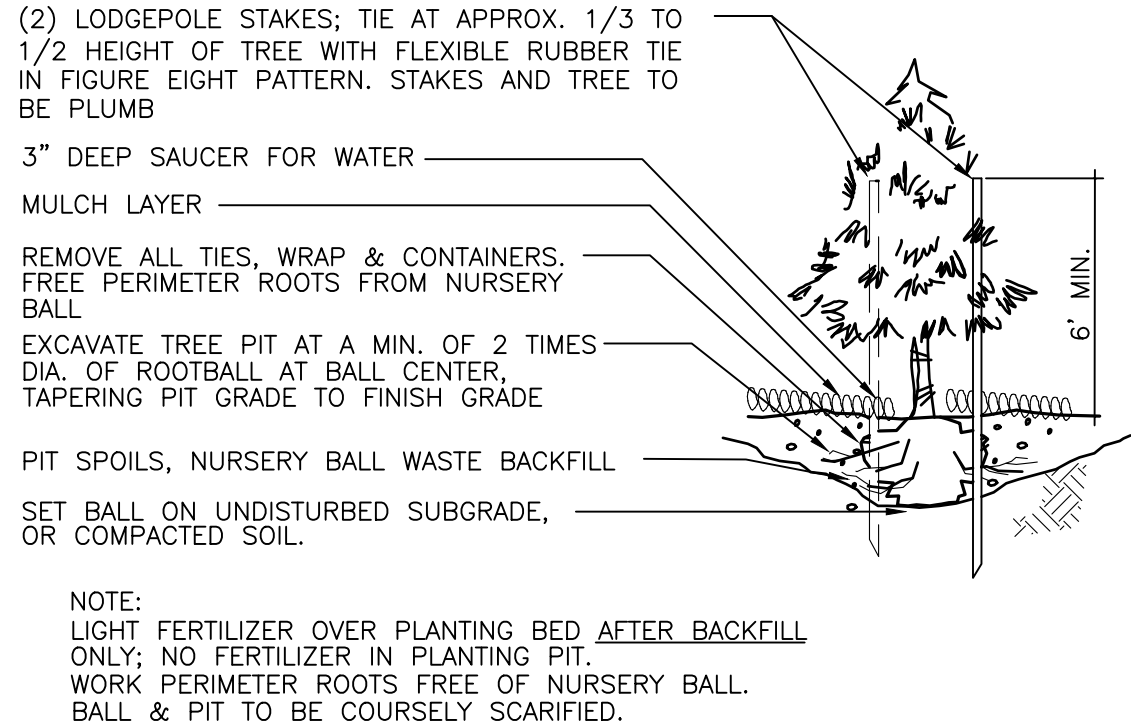
Job Number	18057	Sheet	L-8	15
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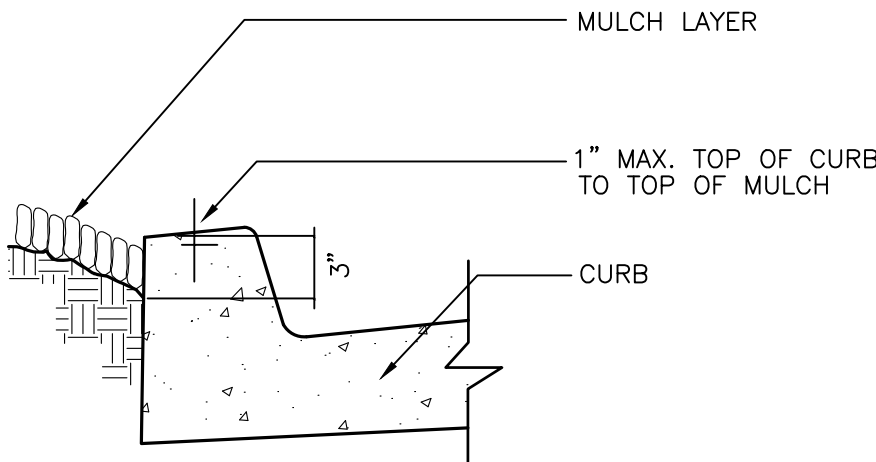
LANDSCAPE DETAILS
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON



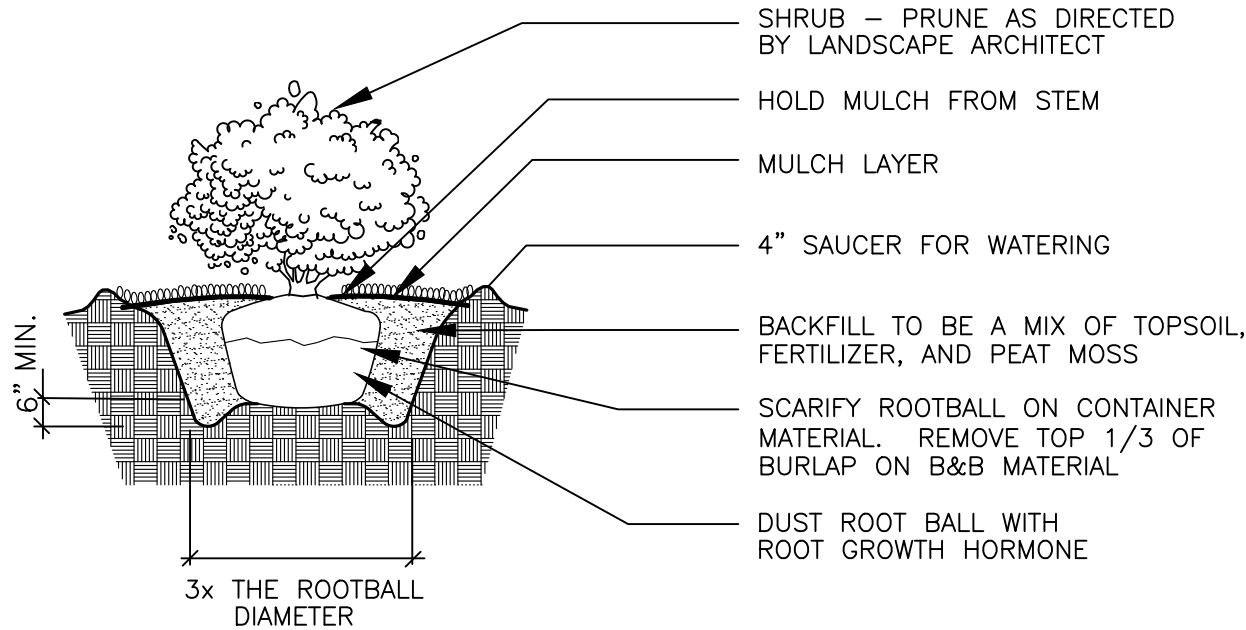
DECIDUOUS TREE PLANTING/STAKING DETAIL
NOT TO SCALE



EVERGREEN TREE PLANTING/STAKING DETAIL
NOT TO SCALE



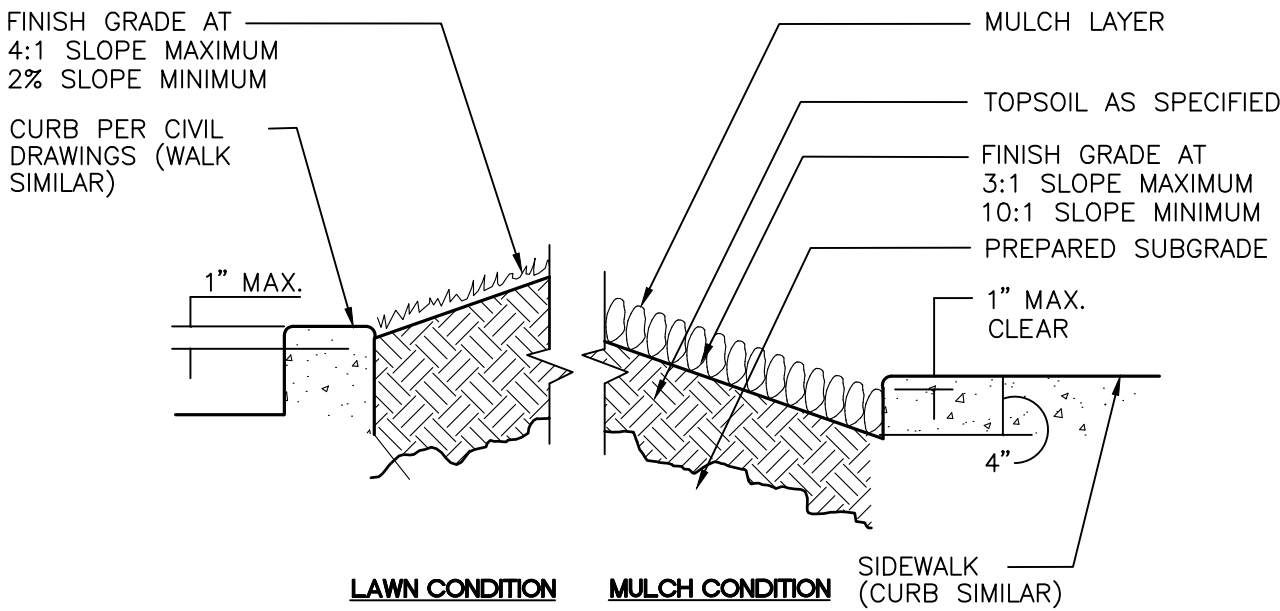
MULCH AT CURB DETAIL
NOT TO SCALE



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

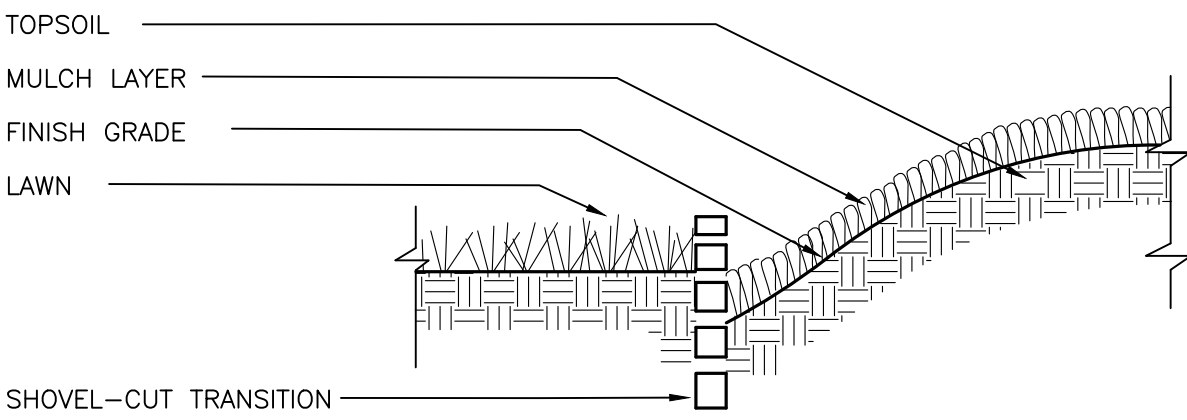
SHRUB PLANTING DETAIL

NOT TO SCALE



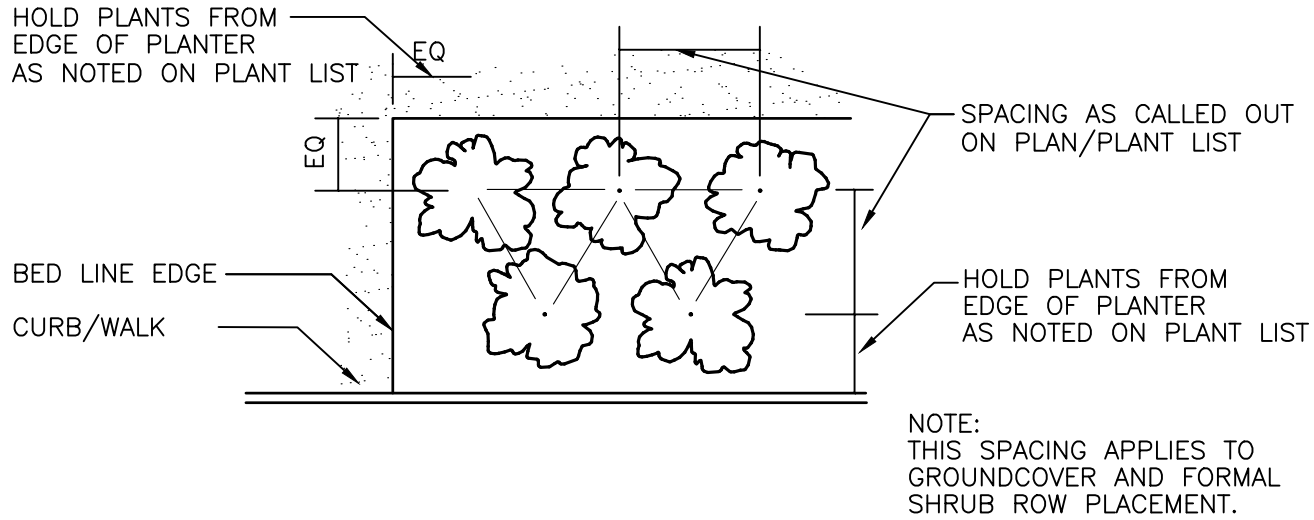
PLANTER SECTION DETAIL

NOT TO SCALE



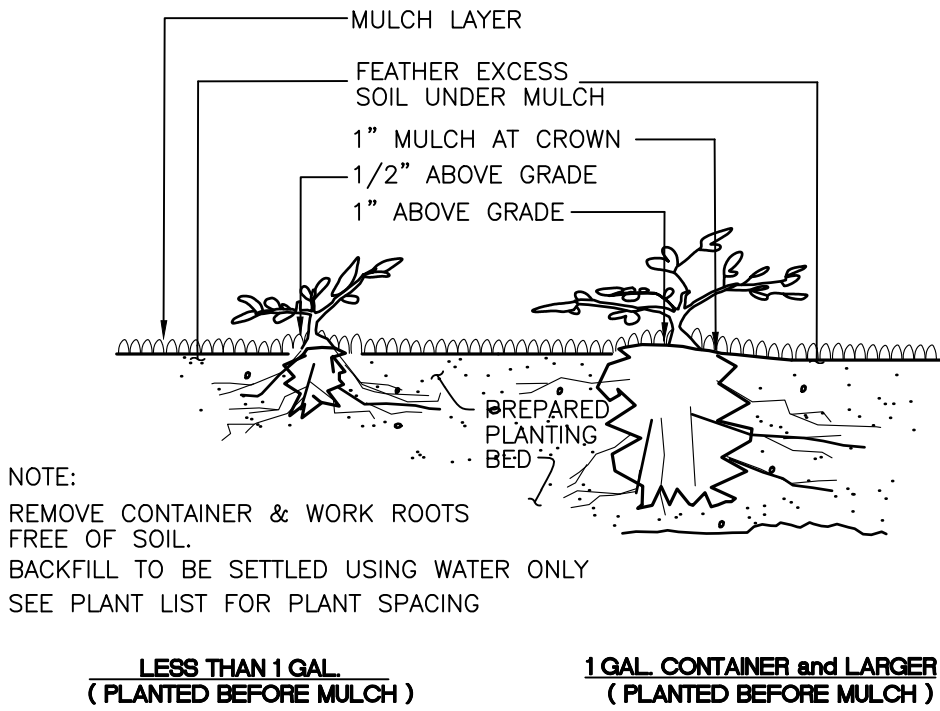
PLANTING BED ADJACENT TO LAWN DETAIL

NOT TO SCALE



PLANT MATERIAL SPACING DETAIL

NOT TO SCALE



GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

Revision	No.	Date	By	Ckd.	Appr.
4	2/16/22	TCR	JMW	JMW	JMW
3	5/11/22	TCR	JMW	JMW	JMW

IRRIGATION REVISED PER MAINVUE
REVISED PER CITY COMMENTS

Title:

LANDSCAPE DETAILS

FOR

TOLT RIVER TERRACE

For:

MAINVUE WA LLC
1110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004



Scale:

Horizontal

N/A

Vertical

N/A

Designed

Drawn

Checked

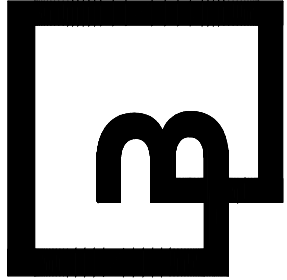
Approved

Date

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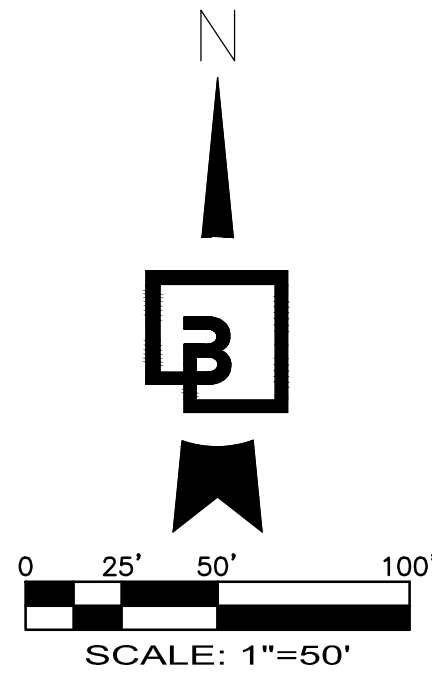
Job Number

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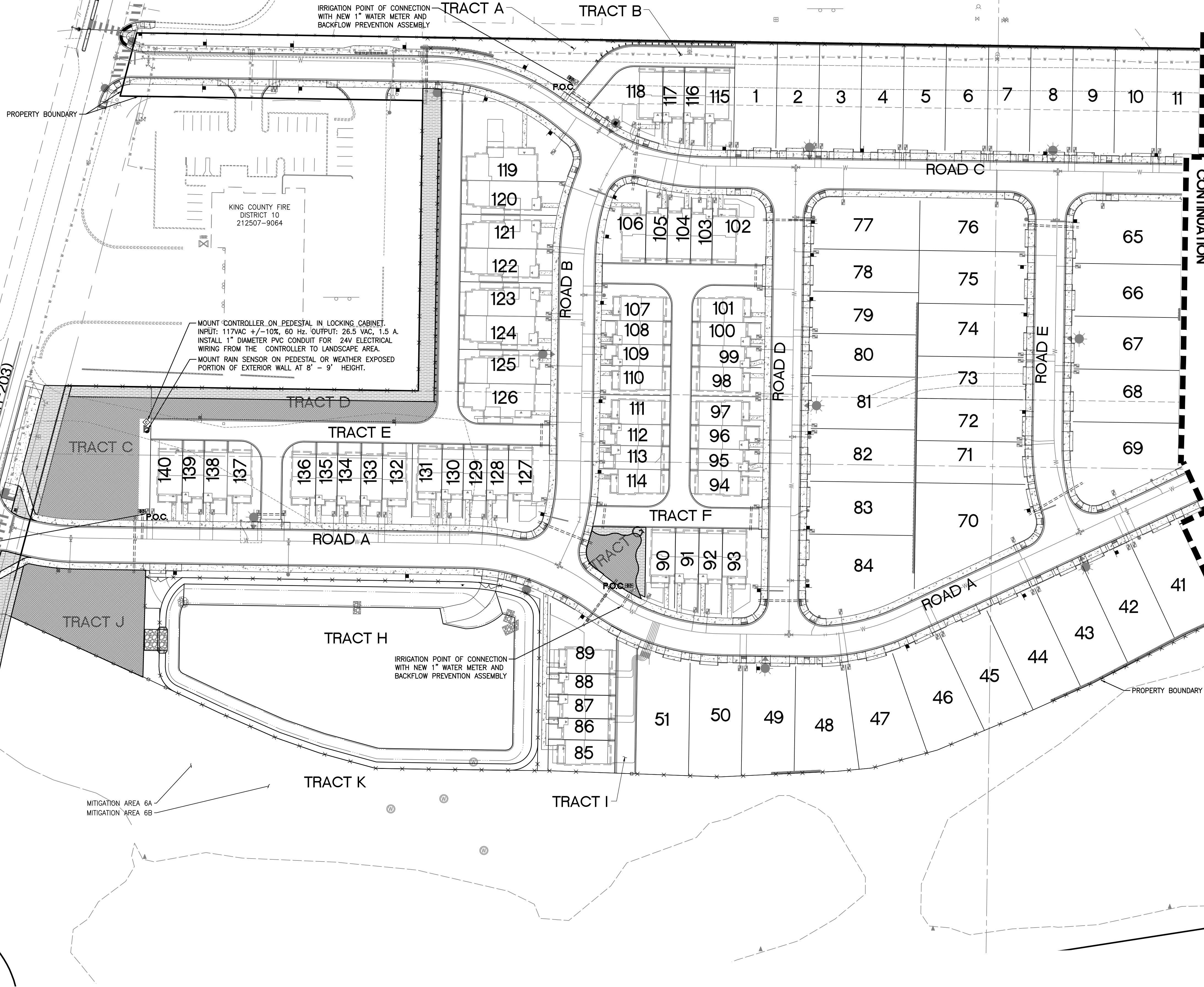
L-9, 15

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IRRIGATION PLAN WEST
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON

TOLT MIDDLE SCHOOL
RIVERVIEW SCHOOL DISTRICT 407
212507-9003



SEE SHEET L-11 FOR
CONTINUATION

NOTE: BIDDER-DESIGNED IRRIGATION
SYSTEM BY LANDSCAPE CONTRACTOR.
NOTIFY LANDSCAPE ARCHITECT IN
WRITING IF AVAILABLE WATER PRESSURE
IS INSUFFICIENT TO IRRIGATE AREAS
INDICATED.

SEE SHEET L-11 FOR
CONTINUATION

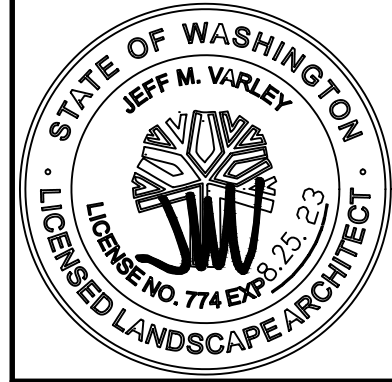
No.	Date	By	Chd.	Appr.
4	2/16/22	TCR	JMW	JMW
3	5/11/22	TCR	JMW	JMW

IRRIGATION REVISED PER MAINUE
REVISED PER CITY COMMENTS

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IRRIGATION PLAN WEST
FOR
TOLT RIVER TERRACE

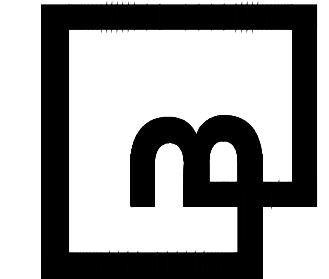
For:
MAINUE WA LLC
1110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004



Scale:
Horizontal
1" = 50'
Vertical
N/A

Designed TOR
Drawn TOR
Checked JMW
Approved JMW
Date 2/16/23

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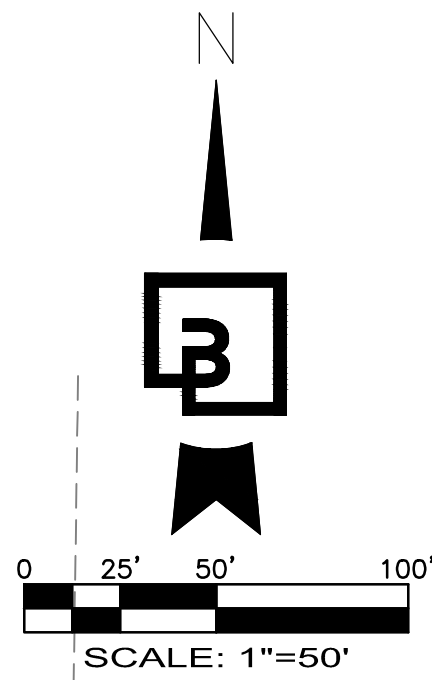


Job Number
18057
Sheet
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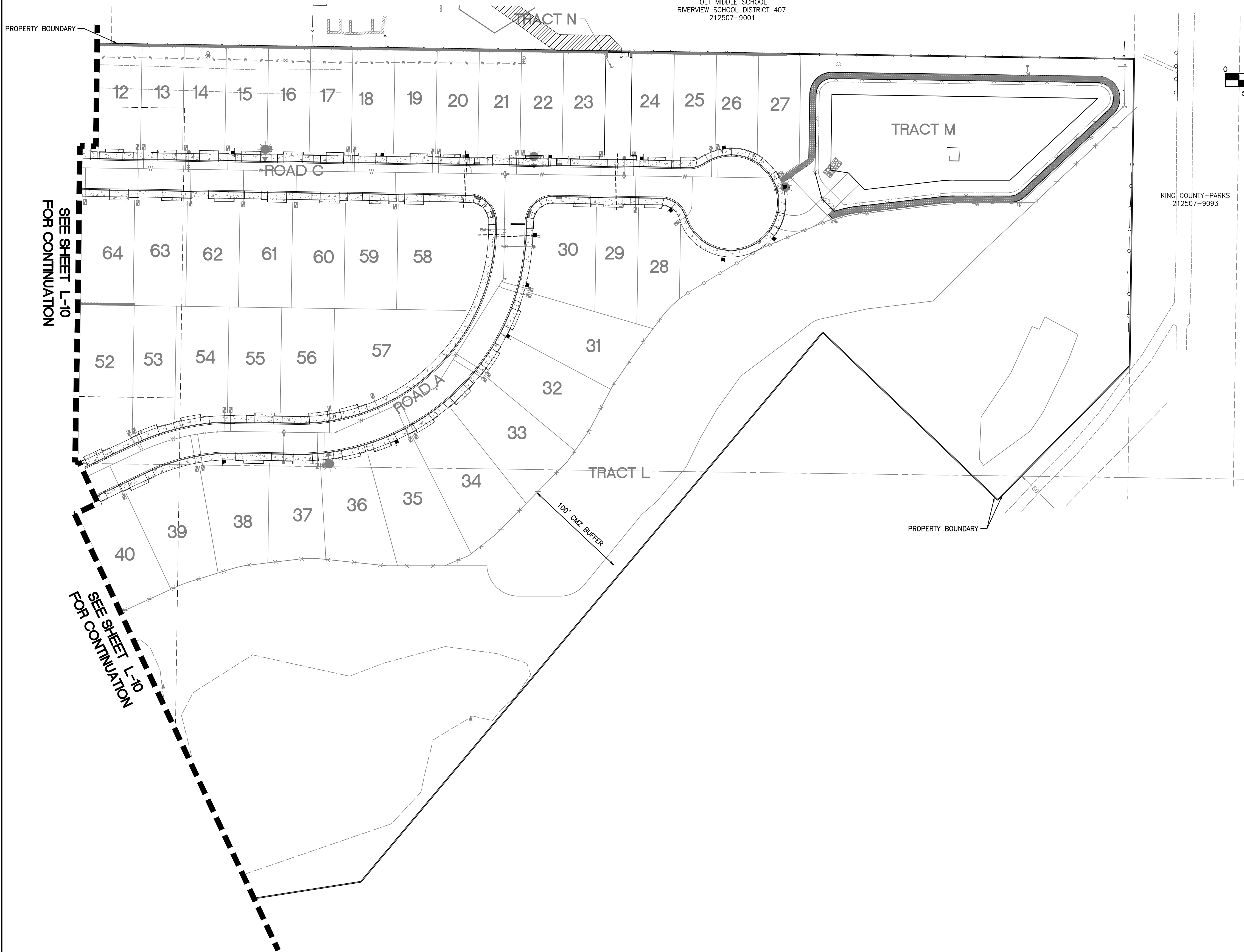
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CITY OF CARNATION, KING COUNTY, WASHINGTON

TOLT MIDDLE SCHOOL
RIVERVIEW SCHOOL DISTRICT 407
212507-9001



NOTE: BIDDER-DESIGNED IRRIGATION
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NOTIFY LANDSCAPE ARCHITECT IN
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INDICATED.



Revision	
No.	Date
4	2/16/22
3	5/11/22

IRRIGATION REVISED PER MAINVUE
REVISED PER CITY COMMENTS

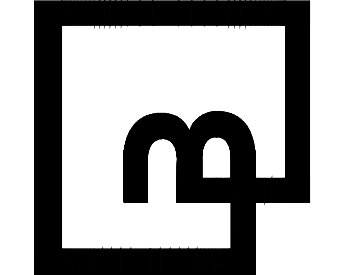
Title	
IRRIGATION PLAN EAST FOR TOLT RIVER TERRACE	

For: **MAINVUE WA LLC**
1110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004



Scale:	
Horizontal	1" = 50'
Vertical	N/A

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Job Number	
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Sheet	
L-11 of 15	

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IRRIGATION NOTES AND SCHEDULE
FOR
PLAT OF TOLT RIVER TERRACE
A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
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IRRIGATION NOTES

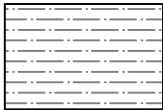
1. GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
A) INSTALLATION OF 110V ELECTRICAL SERVICE FROM ELECTRICAL SOURCE TO AUTOMATIC CONTROLLER, INCLUDING WIRE HOOK-UP INTO MOUNTED CONTROLLER. IRRIGATION CONTRACTOR WILL MOUNT CONTROLLER PER DESIGN AND COORDINATE WITH GENERAL CONTRACTOR.
B) INSTALLATION 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.
C) 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.
D) INSTALLATION OF SLEEVING.
2. 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.
3. COORDINATE IRRIGATION INSTALLATION WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, LANDSCAPE CONTRACTOR, OWNER, ARCHITECT, AND LANDSCAPE ARCHITECT.
4. LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK. PROVIDE WRITTEN TEST RESULTS TO LANDSCAPE ARCHITECT.
5. ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
6. CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, FEES, AND REQUIRED CITY INSPECTIONS.
7. SUBMITTALS:
A) SUBMIT EACH ITEM LISTED BELOW FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL,
B) PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED,
C) CONTROL WIRING PATH DIAGRAM,
D) "AS-BUILT" DRAWINGS.
E) OPERATION AND MAINTENANCE MANUALS.
8. PROVIDE AND KEEP UP TO DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS WHICH ARE TO BE CORRECTED DAILY WITH 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:
A) CONNECTION TO WATER LINES (P.O.C.),
B) CONNECTIONS TO ELECTRICAL POWER,
C) GATE VALVE, QUICK COUPLERS, AND REMOTE CONTROL VALVE,
D) ROUTING OF MAINLINE (DIMENSION MAXIMUM 100' ALONG ROUTING),
E) ROUTING OF CONTROL WIRING,
F) OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.
9. PREPARE AND PROVIDE PRIOR TO COMPLETION OF CONSTRUCTION, A THREE RING BINDER CONTAINING THE FOLLOWING INFORMATION:
A) 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,
B) CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS, CONTRACT,
C) GUARANTEE STATEMENT,
D) COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.
E) CONSTRUCTION DETAILS FROM THE PROJECT,
F) COMPLETE TROUBLE-SHOOTING GUIDE TO COMMON IRRIGATION PROBLEMS,
G) WINTERIZATION AND SPRING START-UP PROCEDURES,
H) CHART OF APPROXIMATE WATERING TIMES FOR SPRING, SUMMER, AND FALL,
I) A COPY OF THE "AS-BUILT" DRAWINGS AND CONTROLLER CHART.
10. 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.
11. 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.
12. 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.
13. FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
14. SPRINKLERS ON RISERS WILL NOT BE ALLOWED UNLESS NOTED ON PLANS.
15. 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.
16. 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.
17. EACH VALVE BOX TO CONTAIN A MINIMUM OF 1 DECODER, CONNECTED TO JACKETED HUNTER IDWIRE1 (14 GAUGE), RECOMMENDED FOR WIRE PATH LENGTH UP TO 10,000 FT OR HUNTER IDWIRE (12 GAUGE) FOR WIRE PATH LENGTH BEYONE 10,000 FT UP TO 15,000 FEET. THESE MAXIMUM WIRE PATH LENGTHS ARE FOR ACTIVATING UP TO 225 HUNTER DECODERS, 6 P/MV AND UP TO 6 SENSOR DECODERS. AVOID RUNNING POWER CABLES AND DECODER PATH IN PARALLEL. ALL WIRE PATHS AND ITS BRANCHES SHOULD BE ENDED WITH PROPER GROUNDING. NEW CONSTRUCTION CAN RELY ON EXISTING WIRE PATH BY TIEING ON AND EXTENDING OUT TO SERVICE NEW CONSTRUCTION, UP TO A MAXIMUM 225 VALVES.
18. ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
19. 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 INITIAL INSPECTION.
20. 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 TO THE ABOVE DATES, OR AS FREEZE/PRECIPITATION CONDITIONS DETERMINE SERVICE NEED.

21. IRRIGATION SCHEDULING: THE IRRIGATION CONTROLLER CONTAINS A WATER BUDGET FEATURE. PERIODIC (WEEKLY) ADJUSTMENT OF THE WATER SCHEDULE IS INTENDED TO BE MADE VIA BUDGET ADJUSTMENT. RE-ADJUST WATERING DAYS AT 100 PERCENT BUDGET WHEN ADJUSTMENT EXCEEDS 30%. SET CONTROLLER FOR HIGHEST ETO WATER SCHEDULE, BASED ON PUBLISHED LOCAL EVAPOTRANSPIRATION DATA. SYSTEM HAS BEEN DESIGNED FOR 50 TO 80 PERCENT DISTRIBUTION UNIFORMITY. LAWN ZONES SHOULD BE SCHEDULED FOR 100 PERCENT REPLACEMENT FACTOR ON A TYPICAL MINIMUM 3-DAY CYCLE. SHRUB ZONES SHOULD BE PROGRAMMED AT 40 TO 70 PERCENT OF THE MONTHLY LAWN WATER REQUIREMENT ON A ONCE PER WEEK CYCLE. ALL WATERING IN EXCESS OF THE LOCAL Eto ("FIELD RECHARGE") TO BE COMPLETED DURING THE CONSTRUCTION PHASE WHILE THE CONTRACTOR IS ON THE JOB SITE. OVER WATERING OF LANDSCAPE DUE TO CONTROLLER SCHEDULING TO BE GROUNDS FOR CONTRACTOR TO REPAIR ANY RESULTANT DAMAGES AT CONTRACTOR'S OWN EXPENSE.
22. SUBSTITUTION OF IRRIGATION MATERIAL/EQUIPMENT TO BE MADE ONLY UPON WRITTEN APPROVAL OF OWNER'S REPRESENTATIVE.
23. ALL ZONES TO PASS A MINIMUM DISTRIBUTION UNIFORMITY OF 62 PERCENT, AS TESTED THROUGH AN IRRIGATION ASSOCIATION CERTIFIED WATER AUDIT.
24. CLEANUP AND PROTECTION: DURING IRRIGATION WORK, KEEP ALL PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. PROTECT IRRIGATION WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE AND IRRIGATION OPERATIONS AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIOD. TREAT, REPAIR, OR REPLACE DAMAGE LANDSCAPE AND IRRIGATION WORK AS DIRECTED BY THE OWNER.
25. PRIOR TO BACKFILLING IRRIGATION TRENCHES, LANDSCAPE CONTRACTOR SHALL CONDUCT A WATER PRESSURE AND COVERAGE TEST IN THE PRESENCE OF THE LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR TO GIVE 3 (THREE) WORKING DAYS NOTICE PRIOR TO TEST.

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 PRS-40 POP-UP BODY AND CV DRAIN CHECK VALVE, 4" LAWN, 6" SHRUB

SYMBOL	NOZZLE	PSI	GPM	RADIUS
	HUNTER-6Q and 6H H, Q SERIES	40	0.98, 0.51	6'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	40	0.65, 0.48, 0.37, 0.32, 0.16	8'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	40	0.65, 0.48, 0.37, 0.32, 0.16	10'
	HUNTER-1000 8-15 F, TH, TT, H, Q SERIES	40	0.65, 0.48, 0.37, 0.32, 0.16	12'
	HUNTER-2000 13-21 F, TQ, TT, H, Q SERIES	40	1.29, 0.95, 0.74, 0.63, 0.33	15'
	HUNTER ES515, SS530 SERIES	40	1.41, 0.65	5'x30' 5'x15'
	HUNTER-3000 22-30 F, TQ, TT, H, Q SERIES	40	2.88, 2.19, 1.68, 1.44, 0.69	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

WSS-SEN WIRELESS SOLAR SYNC SENSOR WITH WIRELESS RECEIVER. INSTALL PER MANUFACTURER'S SPECIFICATIONS. NOTE: WHENEVER POSSIBLE, HARDWIRE PREFERRED. EXTERIOR MOUNT WITHIN MANUFACTURER'S SPECIFICATIONS FOR DISTANCE

HUNTER ACC2 DECODER IRRIGATION CONTROLLER WITH A2C-75D-SS (POWDER COAT STEEL CABINET, VERIFY COLOR WITH OWNER). WITH ID2BLU TWO-WIRE AND ROAM-XL REMOTE. INSTALL (1) ICD-100 SINGLE STATION DECODER PER VALVE. COORDINATE SOURCE OF ELECTRICITY TO CONTROLLER WITH GENERAL CONTRACTOR.

P.O.C. WILKINS 950 XLT- 1-1/2" 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

HUNTER ICV-200 2" MASTER VALVE (NORMALLY CLOSED) AND FCT-200 2" FLOW-SYNC FLOW SENSOR. ICV SERIES VALVE. SEE DETAIL THIS SET. WIRE FLOW SENSOR BACK TO CONTROLLER WITH PE-39 DATA CABLE.

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, 2-1/2" 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, 4" DIAMETER

IRRIGATION SHOWN DIAGRAMATICALLY 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.)

4 2/16/22 TOR JMW JMW IRRIGATION REVISED PER MAINVUE
3 5/11/22 TOR JMW JMW REVISED PER CITY COMMENTS

Revision

Title: IRRIGATION NOTES AND SCHEDULE
FOR
TOLT RIVER TERRACE

For:

MAINVUE WA LLC
110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004

Scale:

Horizontal
N/A
Vertical
N/A

Designed TOR
Drawn TOR
Checked JMW
Approved JMW
Date 2/16/23

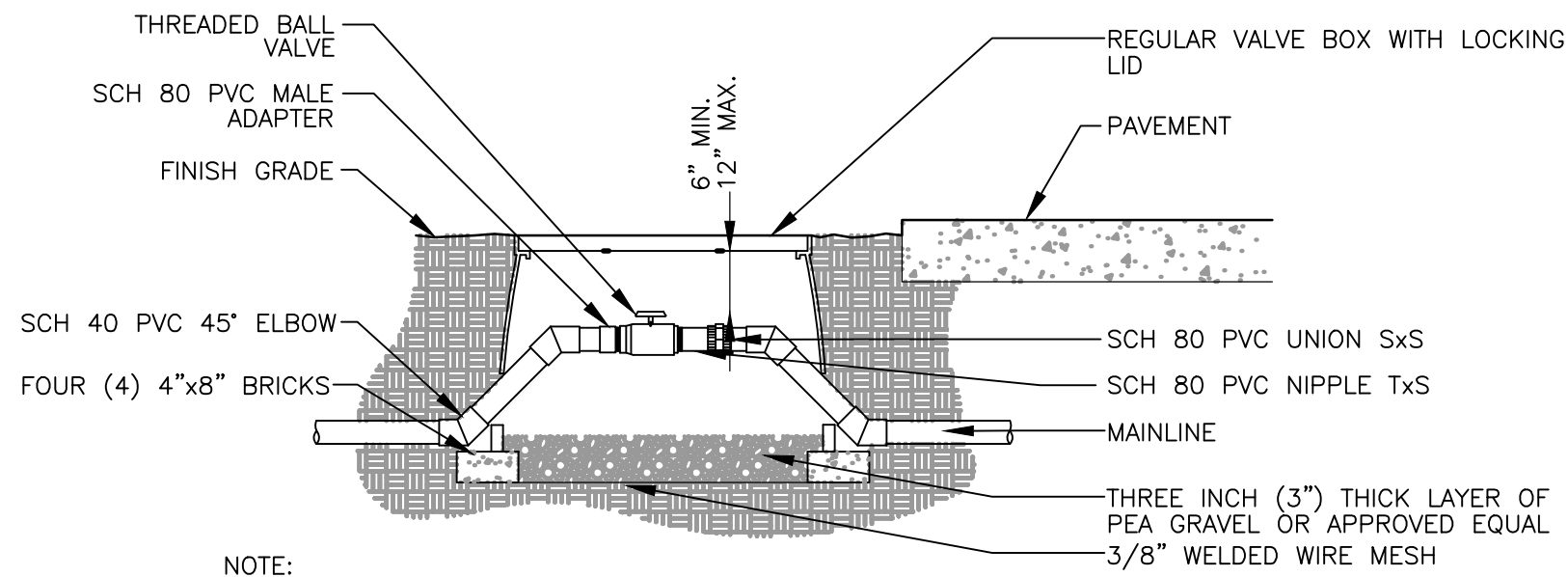
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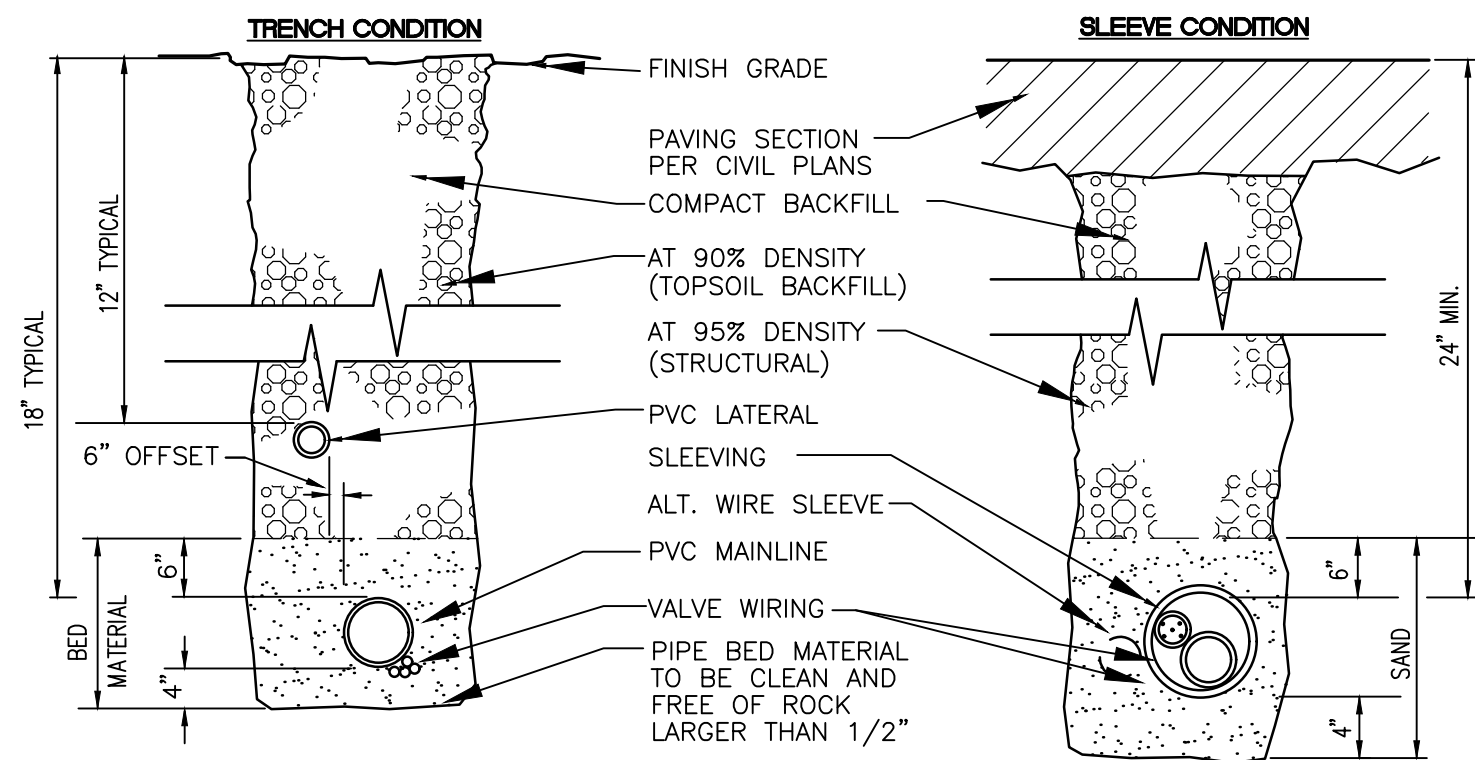
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CITY OF CARNATION, KING COUNTY, WASHINGTON



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

BALL VALVE DETAIL

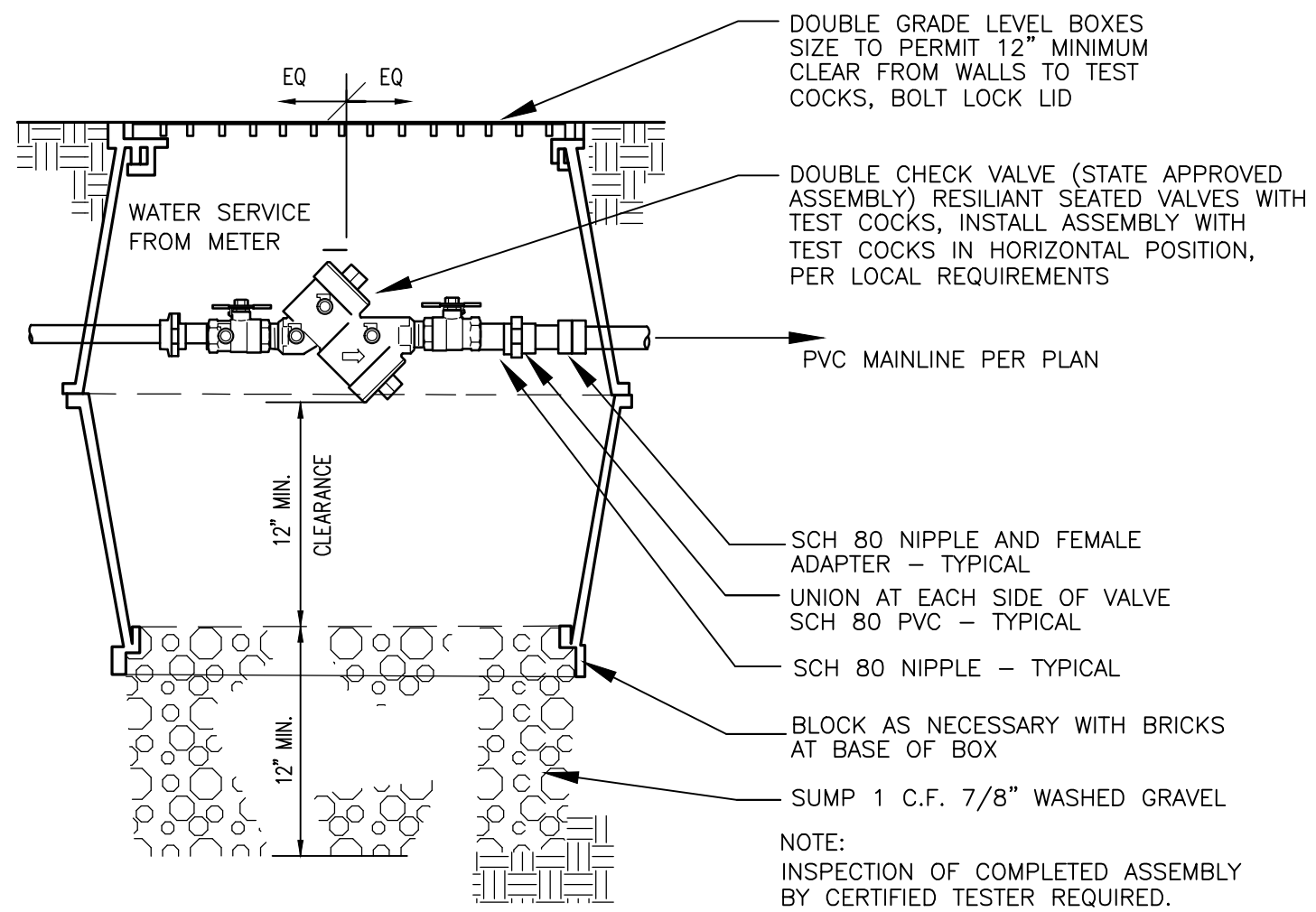
NOT TO SCALE



- NOTE:
SLEEVING MATERIAL SHALL BE PVC SCH. 40
DIMENSIONS ARE MIN. CLEARANCES.
ALL IRREGULAR 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)

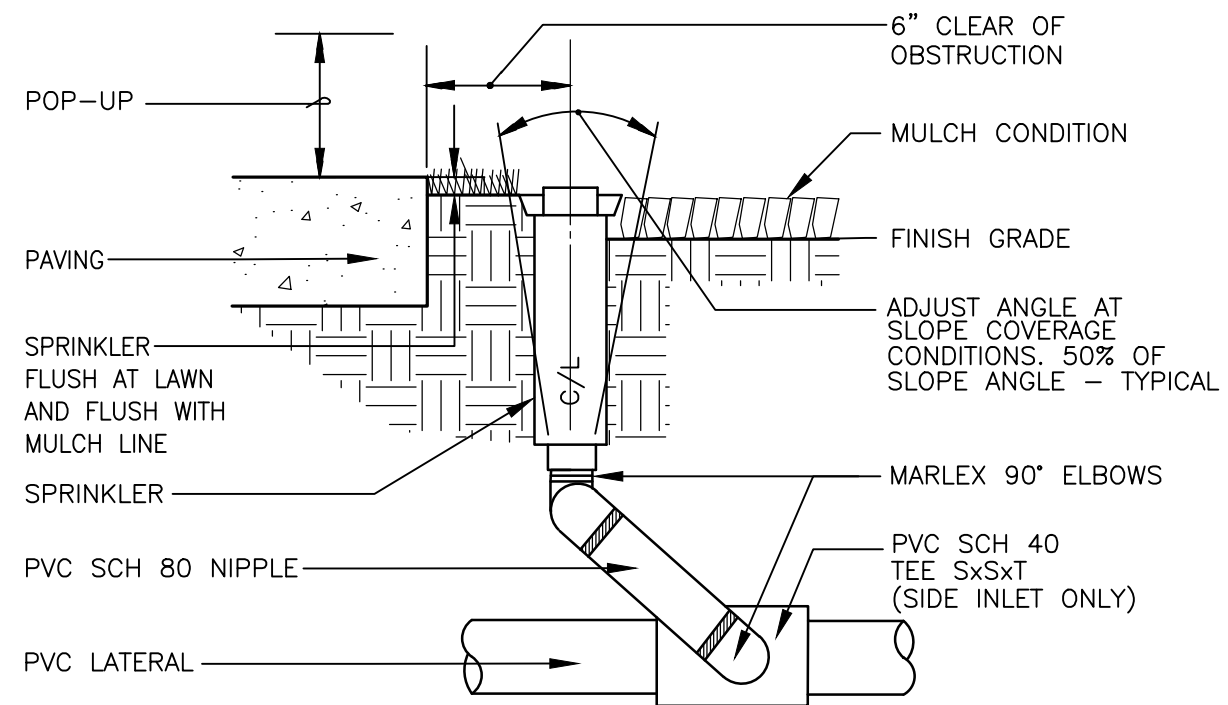
SLEEVE/TRENCHING DETAIL

NOT TO SCALE



CHECK VALVE ASSEMBLY DETAIL

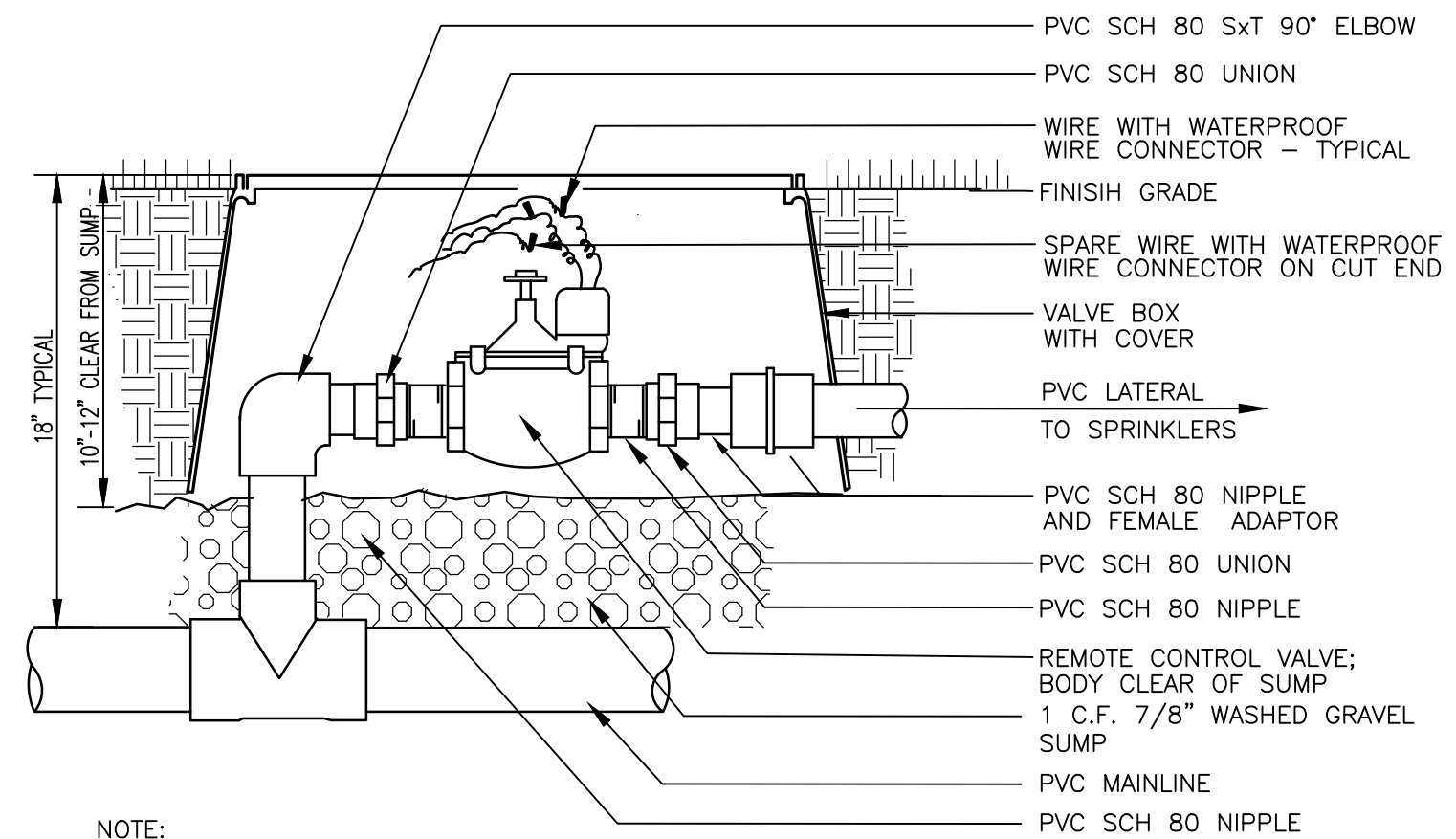
NOT TO SCALE



- 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

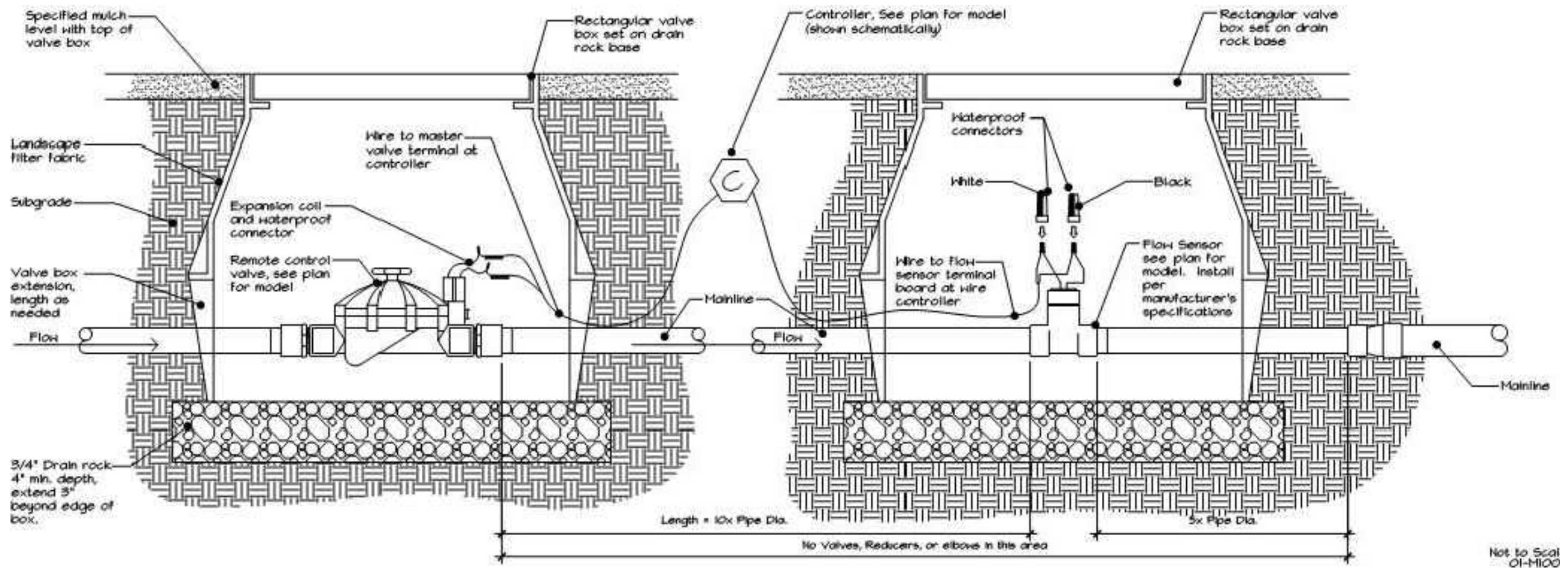
NOT TO SCALE



- 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
MANUFACTURES SPEC'S.

REMOTE CONTROL VALVE ASSEMBLY

NOT TO SCALE

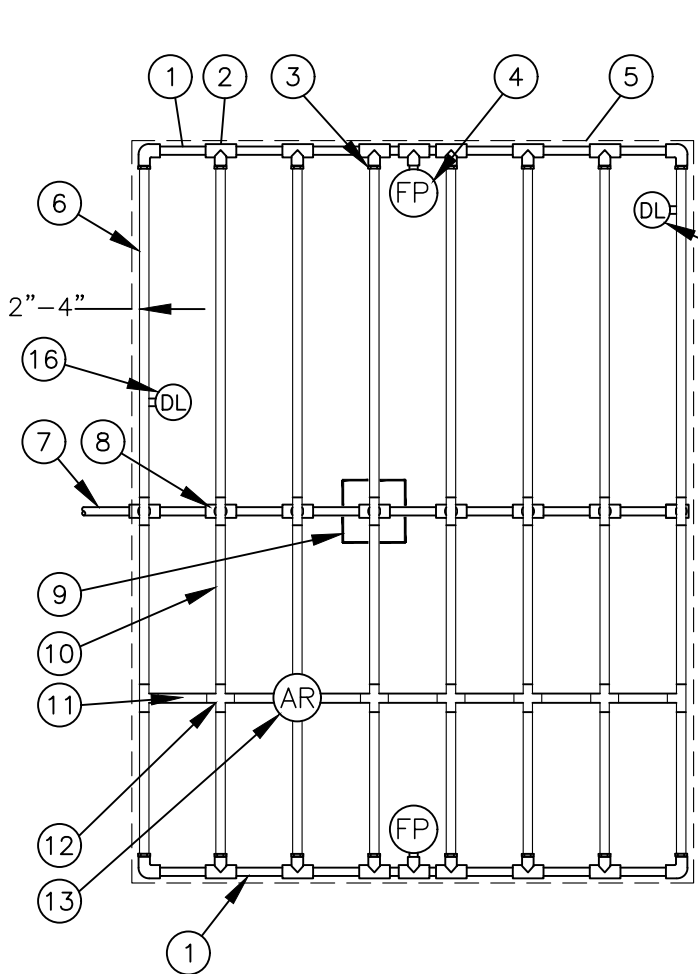


MASTER VALVE and FLOW SENSOR

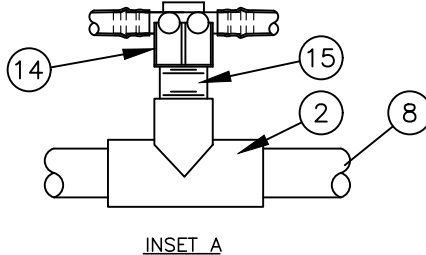
NOT TO SCALE

IRRIGATION DETAILS
FOR
PLAT OF TOLT RIVER TERRACE

A PORTION OF NE1/4, OF THE NW1/4 OF THE SE1/4 OF THE SW1/4 OF THE NE1/4 OF SEC. 21 TWP 25 N, RGE 7 E, WM
CITY OF CARNATION, KING COUNTY, WASHINGTON



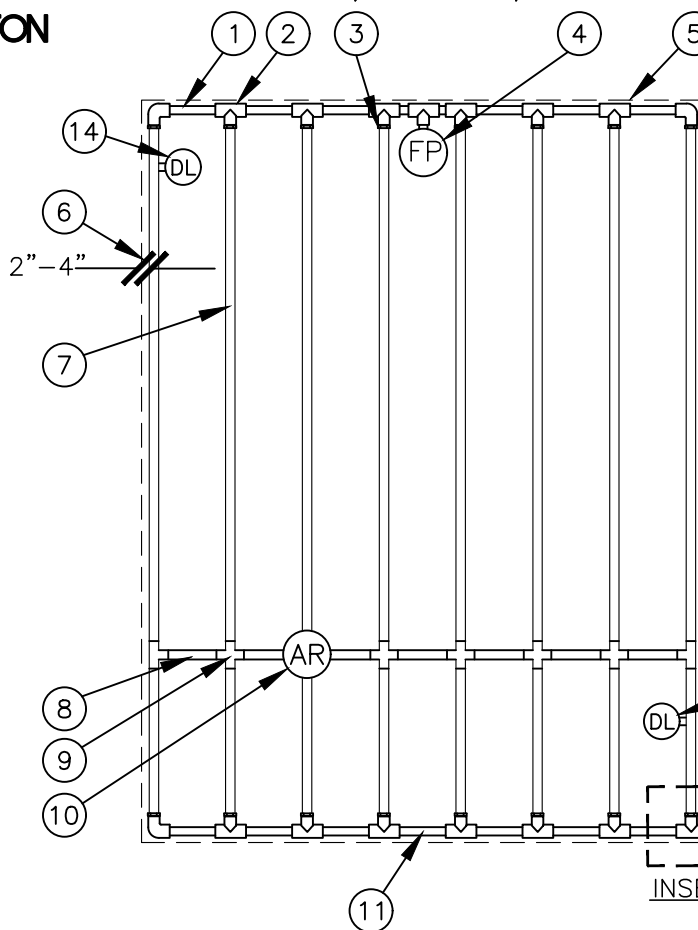
- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING
- 4 FLUSH POINT (TYPICAL)
SEE DETAIL
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 PVC SUPPLY PIPE FROM CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 8 PVC SUPPLY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



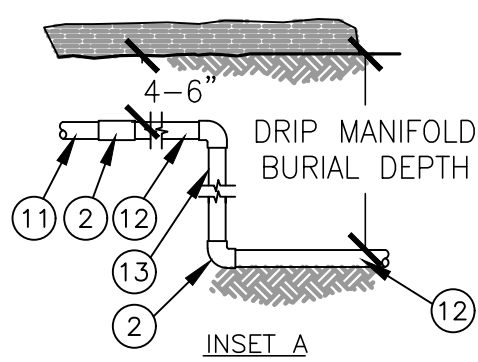
NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE IRRIGATION SCHEDULE FOR SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED 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

Dripline Maximum Lateral Lengths (Feet)						
Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	0.9	Nominal Flow (gph)	0.9	Nominal Flow (gph)	0.9
15	273	155	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



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.

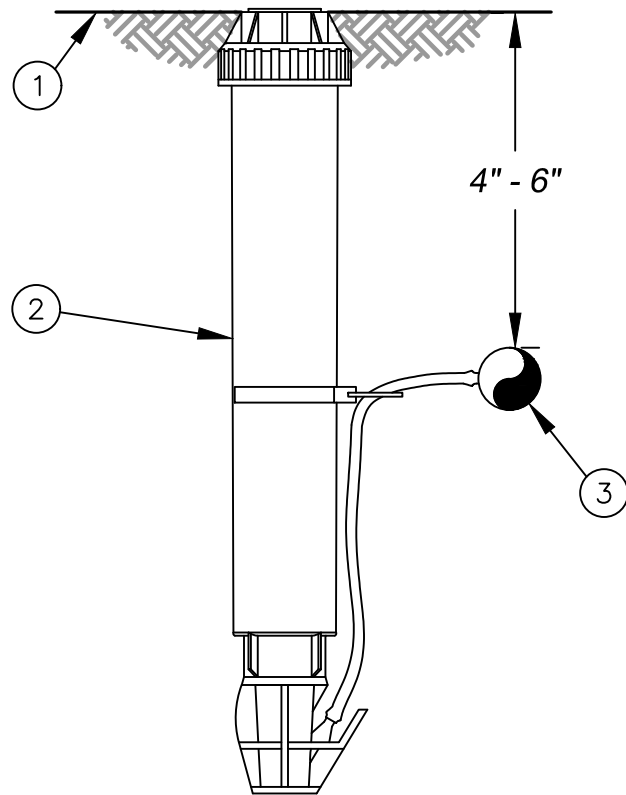


- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING
- 4 FLUSH POINT (TYPICAL)
SEE RAIN BIRD DETAIL 'FLUSH POINT WITH BALL VALVE'
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 SUB-SURFACE DRIPLINE
- 8 BLANK TUBING
- 9 BARB 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

Dripline Maximum Lateral Lengths (Feet)						
Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	0.9	Nominal Flow (gph)	0.9	Nominal Flow (gph)	0.9
15	273	155	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

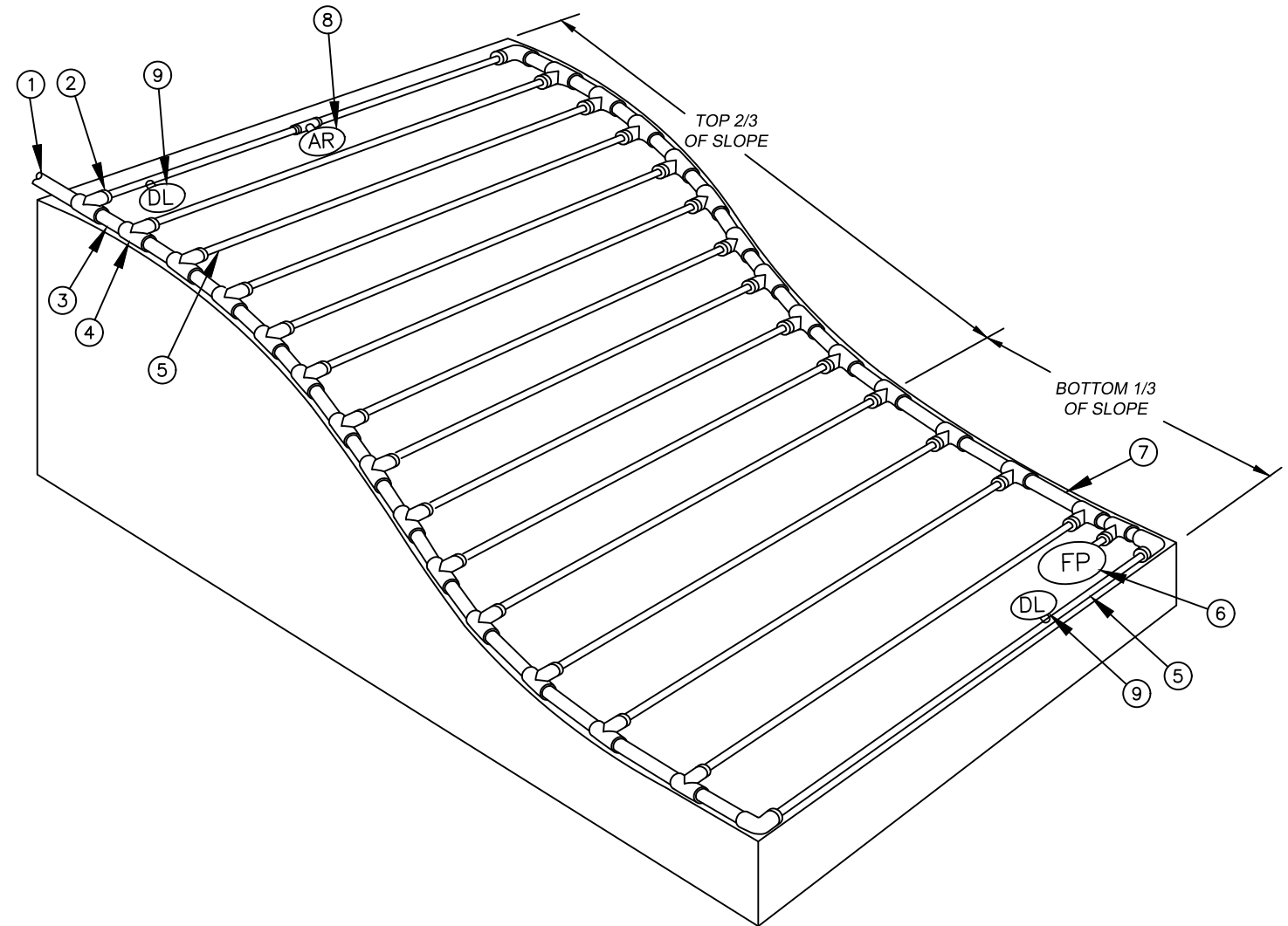


- 1 FINISH GRADE/TURF
- 2 OPERATION INDICATOR
- 3 SUB-SURFACE DRIPLINE:
SEE IRRIGATION SCHEDULE

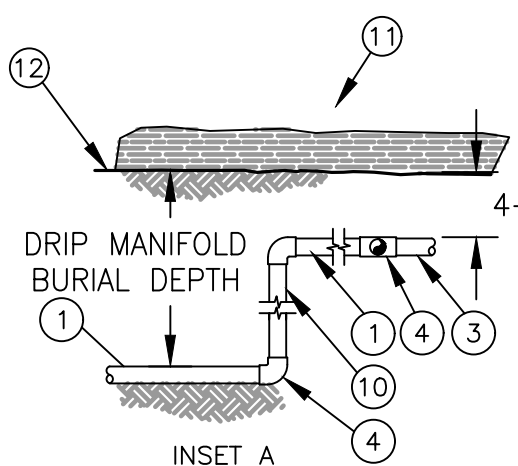
NOTE:
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/4 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

DRIP IRRIGATION DRIPLINE INDICATOR

NOT TO SCALE



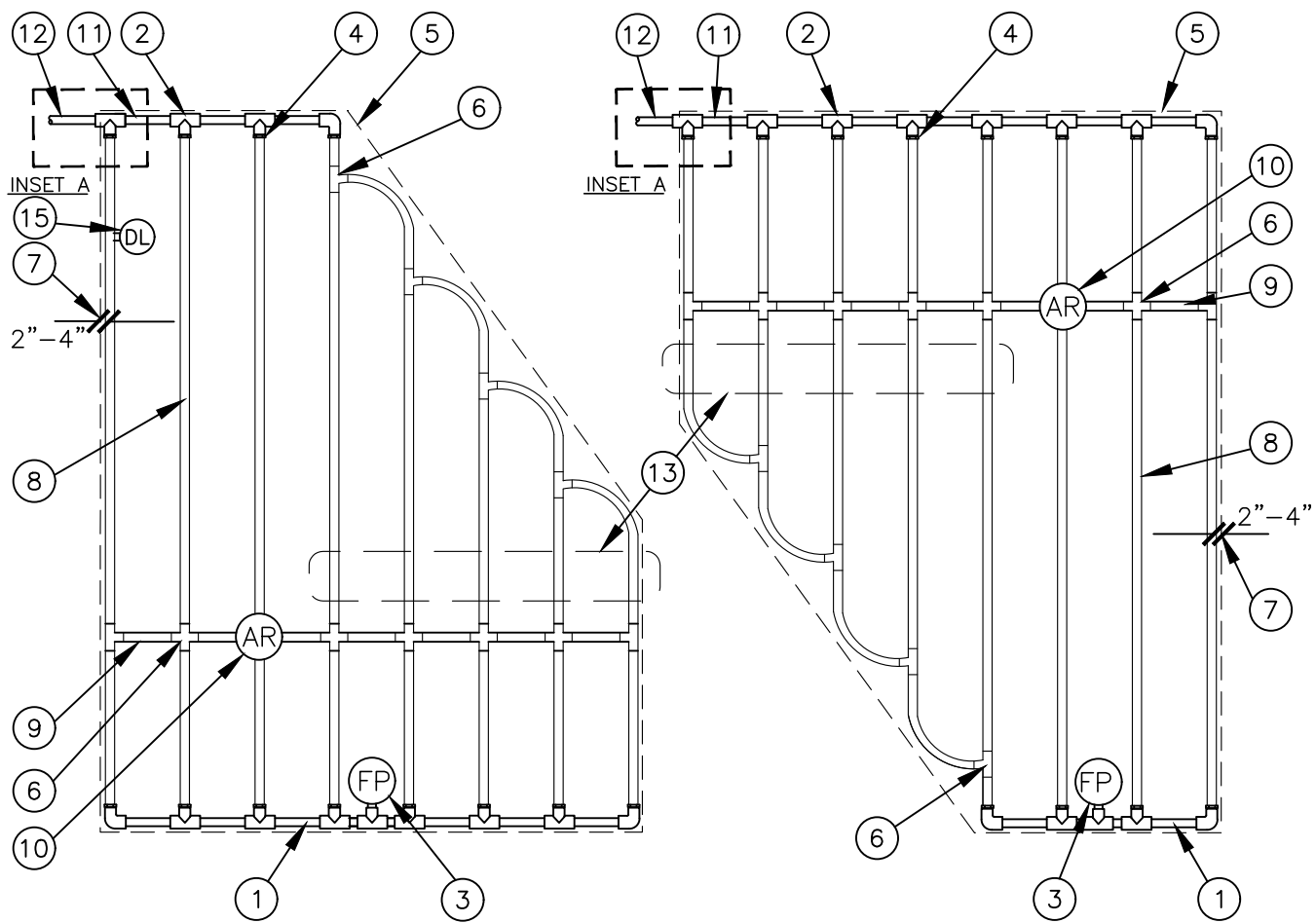
NOTES:
• DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. DISTANCE BETWEEN LATERAL ROWS FOR BOTTOM 1/3 OF SLOPE TO BE SPACED GREATER THAN OPTIMAL ROW DISTANCE. SEE MANUFACTURER DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACING.
• LENGTH 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

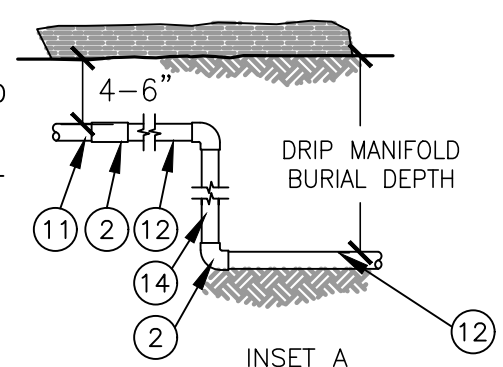
DRIPLINE SLOPED LAYOUT

NOT TO SCALE



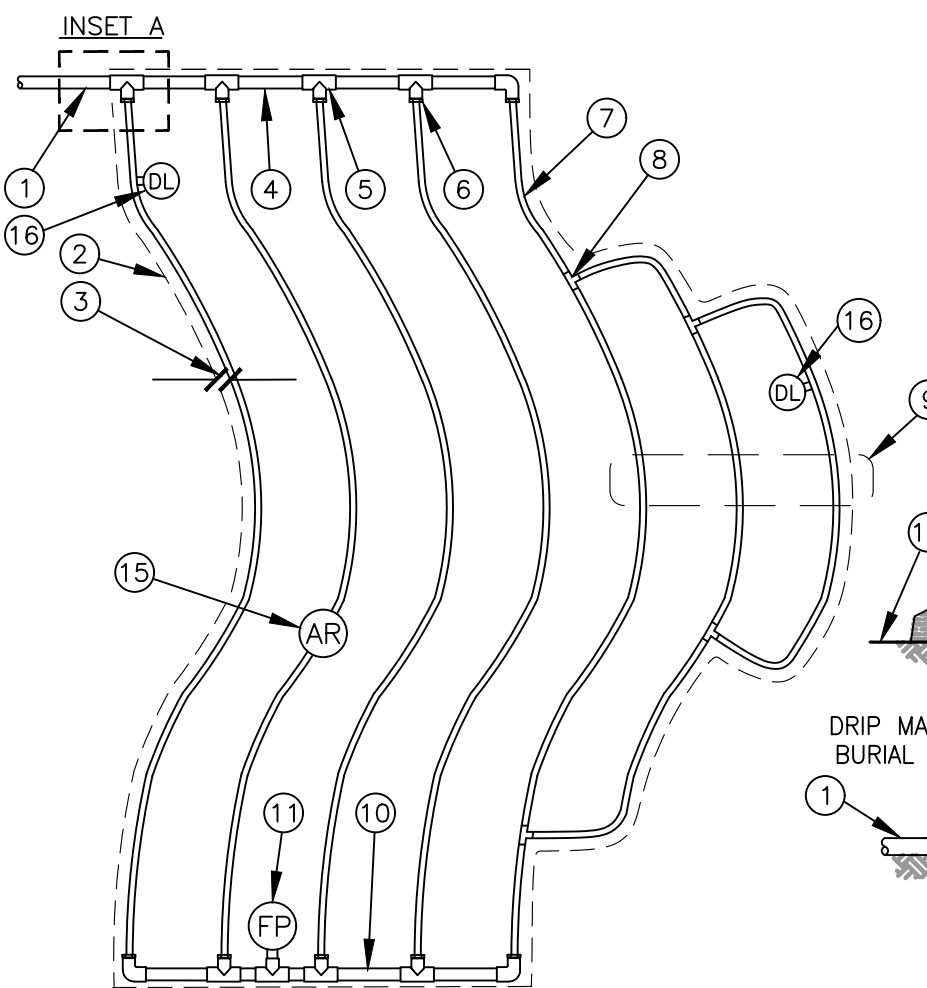
- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 FLUSH POINT (TYPICAL)
SEE DETAIL
- 4 BARB X MALE FITTING
- 5 PERIMETER OF AREA
- 6 BARB X BARB INSERT TEE OR CROSS
- 7 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 8 SUB-SURFACE DRIPLINE:
SEE IRRIGATION SCHEDULE
- 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



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS FOR SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
4. 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

Revision

IRRIGATION REVISED PER MAINUE
REVISED PER CITY COMMENTS

2/16/22 TOR JMW JMW JMW JMW
5/11/22 TOR JMW JMW JMW JMW

No.

Title:

IRRIGATION DETAILS

FOR

TOLT RIVER TERRACE

For: **MAINUE WA LLC**
1110 112TH AVE NE, SUITE 202
BELLEVUE, WA 98004



Scale: Horizontal N/A Vertical N/A

Designed TOR Draw TOR Checked JMW Approved JMW Date 2/16/23

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

Job Number **18057**
Sheet **L-15** of **15**

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