



# TREE CONSERVATION PLAN ADJUSTMENT

for

STATE STREET HOMES

for the

RESERVE AT BATTLE CREEK

at

5826 BATTLE CREEK ROAD,  
SALEM, OREGON

Submitted by

Peter van Oss

Registered Consulting Arborist #826

ISA Certified Arborist #PN-8145A

Date Thursday, May 2, 2024

Teragan and Associates, Inc.

Arboricultural Consultants

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## Summary

Teragan and Associates, Inc. has contracted with State Street Homes to assist with the Reserve at Battle Creek project. This report is the tree conservation plan adjustment for the occurrence that resulted in the removal of five trees that were proposed to be retained. The tree plan is in accordance with Chapter 808 – Preservation of Trees and Vegetation of the City of Salem Municipal Code.

## Background

State Street Homes sought help from Teragan & Associates, Inc. to revise a tree preservation plan following the removal of trees during earthwork at the Reserve at Battle Creek Project. Five trees were removed that were supposed to be retained, prompting the city to ask for an adjustment to the tree conservation plan as per Section 808.040. This report contains essential details demonstrating adherence to the City of Salem's regulations concerning minimum tree standards and safeguarding the remaining trees throughout the project's development phase.

## Tree/ Site Assessment

I, Peter van Oss, visited the site on April 25<sup>th</sup>, 2024, to assess the current development progress, the status of the remaining trees, and to verify which five additional trees were removed.

## Purpose and Use of the Report

The purpose of this report is to establish a narrative for tree protection measures that will need to be adhered to during the construction project to ensure a positive outcome of the retention efforts. The owner may use this report to establish communication between the city planning department, the contractors, and sub-contractors regarding the tree protection efforts of the project.

## Limits of the Report

I visually assessed from the ground only, tools were not used to assess any of the tree parts. The project was well underway at the time that State Street Homes contracted Teragan & Associates, Inc. to assist in resolving the code violations. Teragan & Associates, Inc. was not engaged in the project prior to April 25<sup>th</sup>, 2024. The tree protection measures are based on the provided information that was prepared by others. Measurements related to tree protection mitigation must be verified in the field (see appendix C for details). The plans attached in Appendix C of this report are meant as a visual aid only; all tree protection zones are to be measured from the trunk of the trees.

## Observations

The site preparation and grading appeared to have been near completion and the storm water facilities and associated underground utilities were in place at the time of the site visit. The tree protection fencing was mostly placed at the edge of the driplines of the trees and the orange plastic mesh fencing was in poor condition. Now that the five trees that were proposed for retention are removed, there is one Oregon white oak (*Quercus garryana*) towards the center of the property; all other retained trees are along the property boundaries.



The remaining trees appeared to be in good health and structural condition at the time of the site visit. Grading and the installation of the main infrastructure occurred within the tree protection zones of the retained trees, and it did not appear to have significantly impacted the trees. No large roots were visible where the grading cuts or installation of the water treatment facilities, and utilities occurred. It is recommendable to ensure that the trees are periodically assessed for changes in their current health to ensure that appropriate steps can be taken to mitigate the effects of construction impacts that may have occurred. Additional watering or the implementation of a plant health care program may be necessary if the trees in proximity to the site improvements start to show signs of stress. Bi-monthly site visits by the project arborist may allow for changes in the condition of the trees to be observed in a timely manner.

### Mitigation

Sec.808.035 (e) states “Mitigation measures. When less than 30 percent of all trees located on a property are designated for preservation under a tree conservation plan, any combination of one or more of the following mitigation measures shall be provided for each tree removed in excess of 70 percent”.

There were 128 trees located on the property prior to the start of the project according to the provided existing conditions and demo plan labeled G-8 (attached in appendix C). The total number of trees removed from the site including the five additional trees is 59. The following calculation shows that 46% of the existing trees remain on the property.  $59 \div 128 = 0.46$  (46%).

- » No additional mitigation measures need to be taken at this time since the criterion in Sec.808.035 (e) is met.

### Site Specific Tree Protection

#### *During Construction*

The orange mesh fencing that is in place is deteriorated and laying on the ground in most areas and will not adequately protect the trees during the development project. In addition, the fencing locations appear to be placed at the edge of the dripline which may not be far enough away from the trees in some instances. It is recommendable to replace the orange mesh fencing with new material, preferably 4-foot-tall metal fencing with a minimum of 14-gauge wiring, to ensure that the fencing remains effective during the project. The fencing should be moved to the locations shown on the site plan in Appendix C of this report. Placing the fencing at the edge of the critical root zones (CRZ) when the trees are only impacted on one side of the tree or placing the fencing at the tree protection zone (TPZ) when impacts occur on multiple sides of the tree will ensure that root impacts associated with soil compaction, dumping of materials, unauthorized access in the tree protection zones, and other tree protection related violations are avoided. Any future work that occurs within the tree protection zones of the trees must be approved and supervised by the project arborist.

In addition to the fencing being repaired and adjusted, the sign in Appendix E of this report should be placed every 35 feet facing the construction areas to clearly communicate the importance of the tree protection areas. The sign includes the violation fees per City of Salem Code, and it is recommendable to ensure that everyone involved in the project is aware of the tree protection measures set forth in this report. In addition to the City of Salem violation fees, it is recommendable to make the sub-contractors aware that the appraised value of damaged trees may be imposed to the total, if the tree protection measures are not adhered to.

Site plans for the individual homes were not presented to me at this time and it appears that most of the retained trees will be in the backyards of the new homes.

It is recommended that the project arborist (myself or someone from our firm) meets with the landscape contractor prior to the start of their projects to collaborate their needs and approaches and discuss tree protection mitigation. In ground irrigation and significant fill are not allowed within the critical root protection zones. New soil can only be introduced up to a depth of four inches. New plants can be installed within the critical root protection zones if they are pocket planted. Under no circumstances can the existing soil be amended with the use of mechanical equipment within the tree protection zones. If soil amelioration is necessary, the work must be performed by use of pneumatic excavation.

The attached plans in Appendix C have been marked up to scale. The blue circles indicate the tree protection zone at 12X the diameter and the orange circles indicate the critical root zones at 6X the diameter of the tree.

### Additional Tree Protection Mitigation in Appendix D

#### Conclusion

It is my professional opinion that the tree protection measures set forth in this tree plan will suffice in the protection of the trees during construction. It is important to adhere to the standards in this report to ensure that the retention goals are successful.

Please feel free to contact me with any questions or concerns.

Sincerely,

*Peter van Oss*

Peter van Oss | Senior Associate

 **RCA #826**  
Registered Consulting Arborist®

*ISA Certified Arborist PN-8145A*

*Tree Risk Assessment Qualified*

*Member, American Society of Consulting Arborists*

#### Enclosures:

- Appendix A: Certification of Performance
- Appendix B: Assumptions and Limiting Conditions
- Appendix C: Site Plan Fencing Placement and Proposed Removals
- Appendix D: Tree Protection Standards
- Appendix E: Vegetation Protection Signage

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## Appendix A: Certification of Performance

I, Peter van Oss, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of the Assignment.
- I have no current or prospective interest in the vegetation or the property that is subject to this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own and are based on current professional procedures and facts.
- My analysis, opinions and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated in the report.
- My compensation is not contingent upon reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member of, and certified as an arborist by the ISA. I have been involved in the arboricultural field in a full- time capacity for a period of 18 years.

Peter van Oss | Senior Associate



**asca** RCA #826  
Registered Consulting Arborist®

*ISA Certified Arborist PN-8145A*

*Tree Risk Assessment Qualified*

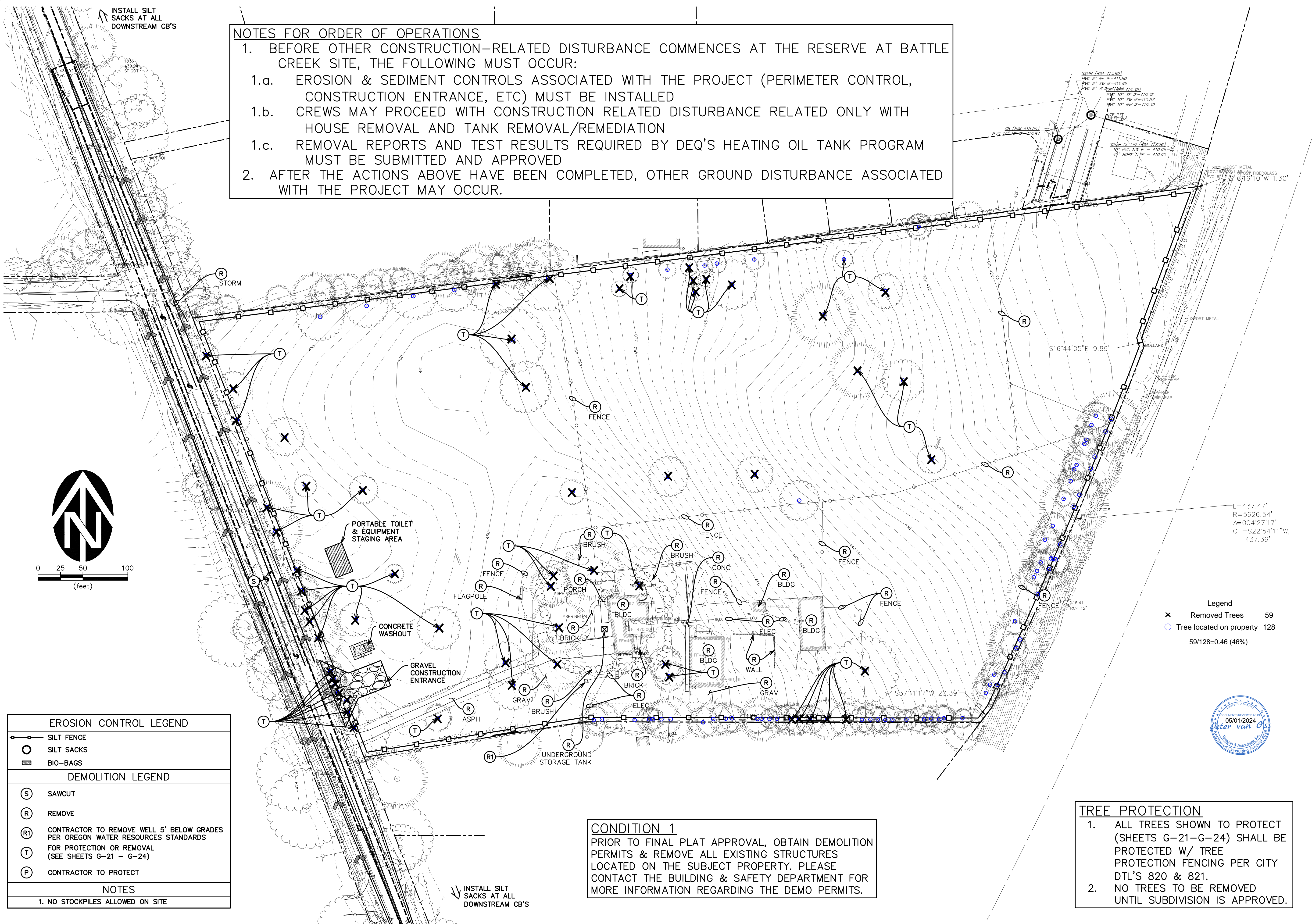
*Member, American Society of Consulting Arborists*

## Appendix B: Assumptions and Limiting Conditions

1. A field examination of the site was made. My observations and conclusions are as of that date.
2. Care has been taken to obtain all information from a reliable source, however the arborist can neither guarantee nor be responsible for accuracy of information provided by others.
3. Unless stated otherwise, information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection. The inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee that problems or deficiencies of the subject tree may not arise in the future.
4. This report and any values/opinions expressed herein represents my opinion as an arborist. Inaction on the part of those receiving the report is not the responsibility of the arborist.
5. Loss or alteration of this report invalidates the entire report.
6. Any legal description provided to the consultant/ appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. All property is appraised or evaluated as free and clear, under responsible ownership and competent management.
7. The consultant/ appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment for such services.
8. Possession of this report does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written consent of the consultant/ appraiser.



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E:\WE Projects\Battlecreek & Landau Subdivision\3063.0000\01\Plots\G-8 - Erosion Control Plan - Demolition & Clearing.dwg, (G-8 tab)



#### NOTES FOR ORDER OF OPERATIONS

- BEFORE OTHER CONSTRUCTION-RELATED DISTURBANCE COMMENCES AT THE RESERVE AT BATTLE CREEK SITE, THE FOLLOWING MUST OCCUR:
  - EROSION & SEDIMENT CONTROLS ASSOCIATED WITH THE PROJECT (PERIMETER CONTROL, CONSTRUCTION ENTRANCE, ETC) MUST BE INSTALLED
  - CREWS MAY PROCEED WITH CONSTRUCTION RELATED DISTURBANCE RELATED ONLY WITH HOUSE REMOVAL AND TANK REMOVAL/REMEDICATION
  - REMOVAL REPORTS AND TEST RESULTS REQUIRED BY DEQ'S HEATING OIL TANK PROGRAM MUST BE SUBMITTED AND APPROVED
- AFTER THE ACTIONS ABOVE HAVE BEEN COMPLETED, OTHER GROUND DISTURBANCE ASSOCIATED WITH THE PROJECT MAY OCCUR.



0 25 50 100  
(feet)

#### EROSION CONTROL LEGEND

- SILT FENCE
- SILT SACKS
- BIO-BAGS

#### DEMOLITION LEGEND

- (S) SAWCUT
- (R) REMOVE
- (R1) CONTRACTOR TO REMOVE WELL 5' BELOW GRADES PER OREGON WATER RESOURCES STANDARDS
- (T) FOR PROTECTION OR REMOVAL (SEE SHEETS G-21 - G-24)
- (P) CONTRACTOR TO PROTECT

#### NOTES

- NO STOCKPILES ALLOWED ON SITE

#### CONDITION 1

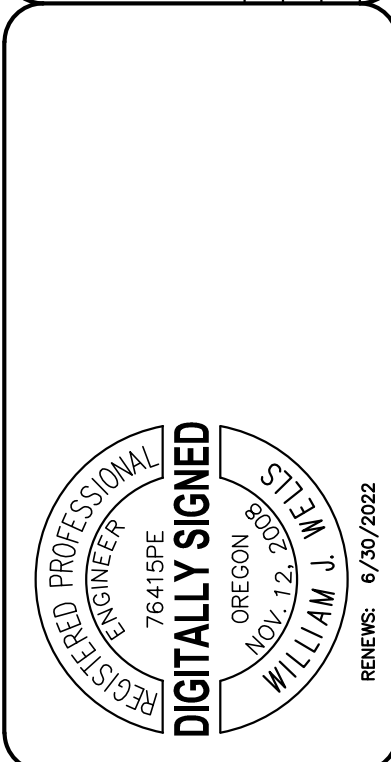
PRIOR TO FINAL PLAT APPROVAL, OBTAIN DEMOLITION PERMITS & REMOVE ALL EXISTING STRUCTURES LOCATED ON THE SUBJECT PROPERTY. PLEASE CONTACT THE BUILDING & SAFETY DEPARTMENT FOR MORE INFORMATION REGARDING THE DEMO PERMITS.

Legend  
X Removed Trees 59  
O Tree located on property 128  
59/128=0.46 (46%)

#### TREE PROTECTION

- ALL TREES SHOWN TO PROTECT (SHEETS G-21-G-24) SHALL BE PROTECTED W/ TREE PROTECTION FENCING PER CITY DTL'S 820 & 821.
- NO TREES TO BE REMOVED UNTIL SUBDIVISION IS APPROVED.

NO.	DATE	DESCRIPTION	BY
4	12-13-21	PER CITY & COUNTY COMMENTS	RS
3	10-29-21	PER CITY COMMENTS	RS
2	10-14-21	PER CITY COMMENTS	RS
1	9-9-21	PER CITY COMMENTS	AK/RS
NO.	DATE	DESCRIPTION	BY
1	12-13-21	DATE: 12/20/2021	JW



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CONSULTING ENGINEERS AND PLANNERS

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3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302  
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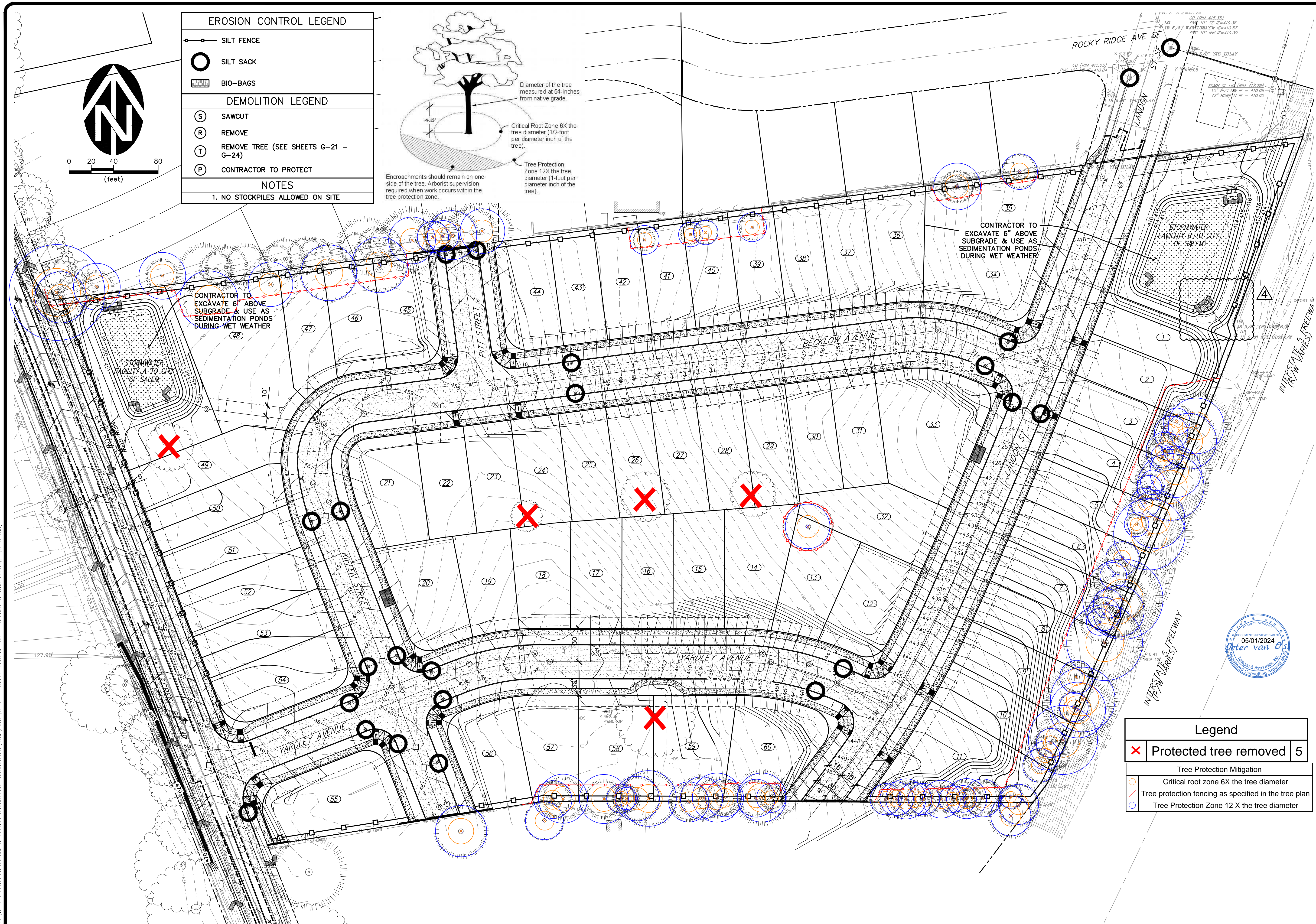
STATE ST HOMES INC  
THE RESERVE AT BATTLECREEK

**EROSION CONTROL PLAN -  
DEMOLITION & CLEARING**

DRAWING  
**G-8**

JOB NUMBER  
3063.0000.0





STATE ST HOMES INC

THE RESERVE AT BATTLECREEK

EROSION CONTROL PLAN -

STREETS & UTILITIES

DRAWING

G-9

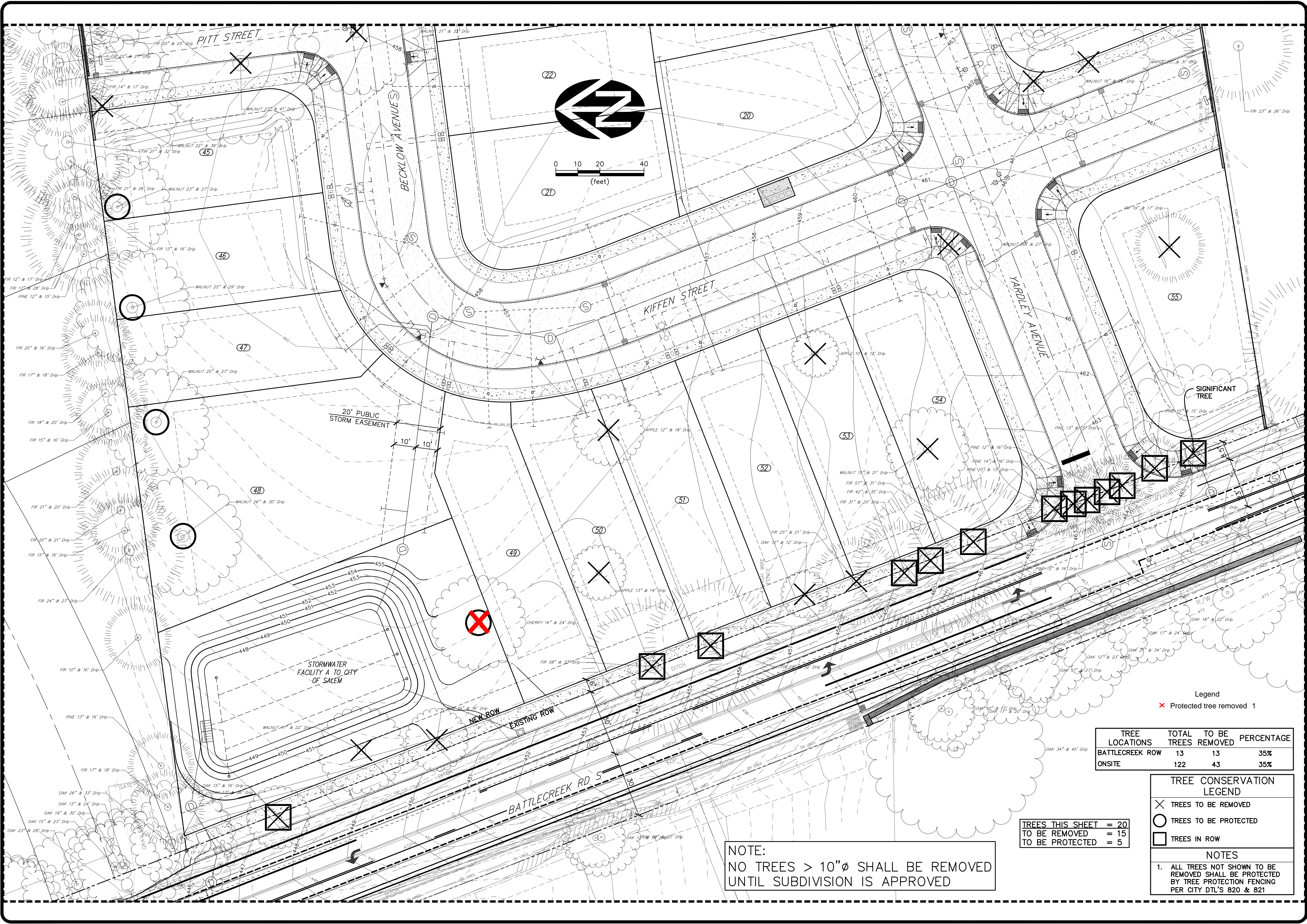
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NOTE:  
NO TREES > 10"Ø SHALL BE REMOVED  
UNTIL SUBDIVISION IS APPROVED

TREES THIS SHEET = 20  
TO BE REMOVED = 15  
TO BE PROTECTED = 5

TREE LOCATIONS	TOTAL TREES	TO BE REMOVED	PERCENTAGE
BATTLECREEK ROW	13	13	35%
ONSITE	122	43	35%

TREE CONSERVATION LEGEND	
X	TREES TO BE REMOVED
○	TREES TO BE PROTECTED
□	TREES IN ROW

NOTES  
1. ALL TREES NOT SHOWN TO BE REMOVED SHALL BE PROTECTED BY TREE PROTECTION FENCING PER CITY DTL'S 820 & 821

STATE ST HOMES INC

THE RESERVE AT BATTLECREEK

TREE CONSERVATION PLAN – WEST

DRAWING  
G-22

JOB NUMBER  
3063.0000.0

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PROFESSIONAL  
REGISTERED  
DIGITALLY SIGNED  
WILLIAM J. KELLS  
OREGON  
NOV 12 2023  
RENEW: 6/30/2027

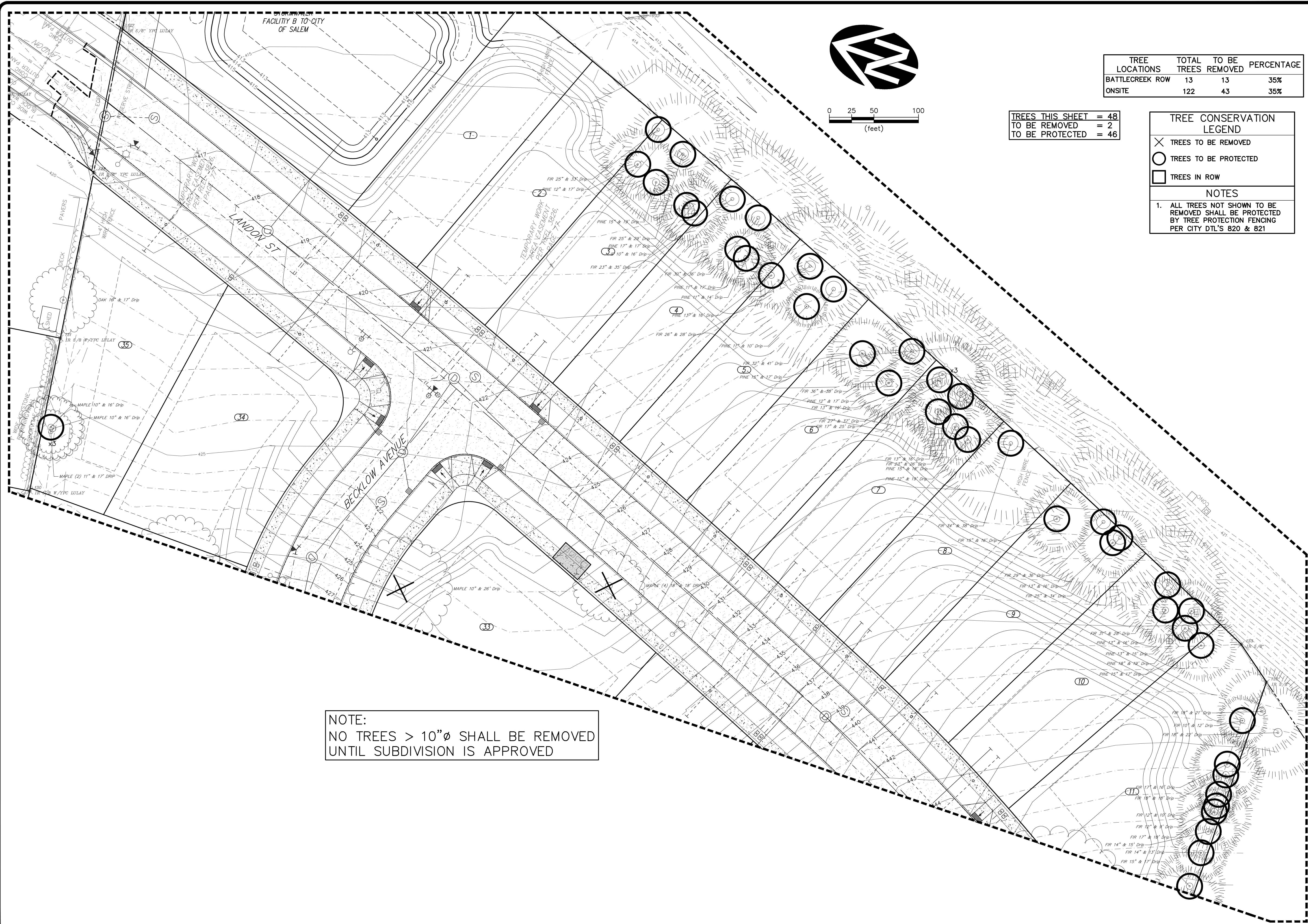
05/01/2024  
Peter van O's  
Documents Reserved  
Professional Association of  
Engineers & Surveyors

DATE: 12/12/2021

NO.	DATE	DESCRIPTION	BY
1	9.9.21	PER CITY COMMENTS	AK/RS
2	10-14-21	PER CITY COMMENTS	RS
3	10-29-21	PER CITY COMMENTS	RS
4	12-13-21	PER CITY & COUNTY COMMENTS	RS

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING  
IF NOT ONE INCH ON  
SHEET, SCALE  
0 10 20 40  
1"








TREE LOCATIONS	TOTAL TREES	TO BE REMOVED	PERCENTAGE
BATTLECREEK ROW	13	13	35%
ONSITE	122	43	35%

TREES THIS SHEET	= 48
TO BE REMOVED	= 2
TO BE PROTECTED	= 46

TREE CONSERVATION  
 LEGEND

-  TREES TO BE REMOVED  
 TREES TO BE PROTECTED  
 TREES IN ROW

## NOTES

1. ALL TREES NOT SHOWN TO BE REMOVED SHALL BE PROTECTED BY TREE PROTECTION FENCING PER CITY DTL'S 820 & 821

STATE ST HOMES INC

# THE RESERVE AT BATTLECREEK

TREE CONSERVATION PLAN –  
CENTRAL

DRAWING  
G-23

JOB NUMBER

3063.0000.0

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REGISTERED PROFESSIONAL  
ENGINEER  
76415PE

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING

DSN.	JW
DRN.	AK

CKD. JW  
DATE: 12/2021

RENEWALS: 6/30/2022

E-mail: [westech@westech-eng.com](mailto:westech@westech-eng.com)



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Legend

TREE LOCATIONS	TOTAL TREES	TO BE REMOVED	PERCENTAGE
BATTLECREEK ROW	13	13	35%
ONSITE	122	45	37%

TREE CONSERVATION  
LEGEND

×

TREES TO BE REMOVED

○

TREES TO BE PROTECTED

□

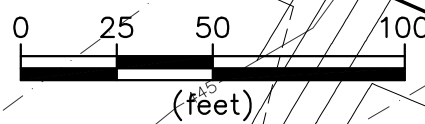
TREES IN ROW

NOTES

1. ALL TREES NOT SHOWN TO BE REMOVED SHALL BE PROTECTED BY TREE PROTECTION FENCING PER CITY DTL'S 820 & 821

TREES THIS SHEET = 54  
TO BE REMOVED = 28  
(1 SIGNIFICANT TREE) = 28  
TO BE PROTECTED = 26

Legend  
× Protected tree removed 4



NOTE:  
NO TREES > 10"Ø  
SHALL BE REMOVED  
UNTIL SUBDIVISION IS  
APPROVED

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING  
IF NOT ONE INCH ON  
SHEET, SCALE  
ACCORDINGLY

DATE: 12/20/2021

05/01/2024  
Peter van Oss  
REGISTERED PROFESSIONAL ENGINEER  
CONSULTING ENGINEERS AND PLANNERS

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	9.9.21	PER CITY COMMENTS	AK/RS
2	10-14-21	PER CITY COMMENTS	RS
3	10-29-21	PER CITY COMMENTS	RS
4	12-13-21	PER CITY & COUNTY COMMENTS	RS

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CONSULTING ENGINEERS AND PLANNERS

STATE ST HOMES INC  
THE RESERVE AT BATTLECREEK

DRAWING  
G-23

JOB NUMBER  
3063.0000.0

PROFESSIONAL  
ENGINEER  
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DIGITALLY SIGNED  
WILLIAM J. KELLS  
OREGON  
NOV 12, 2023 8:51 AM

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## Appendix D: Tree Protection Specifications

It is critical that the following steps be taken to ensure that they are retained and protected.

### Before Construction Begins

1. **Notify all contractors of the tree protection procedures.** For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection. It can only take one mistake with a misplaced trench or other action to destroy the future of a tree.
  - 1.1. Hold a Tree Protection meeting with all contractors to fully explain the goals of tree protection.
  - 1.2. Have all subcontractors sign memoranda of understanding regarding the goals of tree protection. Memoranda to include penalty for violating tree protection plan. Penalty to equal appraised value of tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined by the Council of Tree & Landscape Appraisers current edition of the *Guide for Plant Appraisal*.
2. **Migratory Bird Act of 1918.** If trees are removed between Feb 1 – Aug 1, the trees shall be inspected for the presence of active bird nests. If active nests are present, the proper steps shall be taken to ensure compliance with the Federal Law. Nests with young shall be preserved and a buffer must be created in accordance with the species. If active nests must be moved, a plan prepared by a certified biologist must be enacted and executed under the supervision of the biologist.
3. **Fencing.**
  - 3.1. Establish fencing around each tree or grove of trees to be retained as shown on the tree protection site plan.
  - 3.2. The fencing is to be put in place before the ground is cleared to protect the trees and the soil around the trees from any disturbance at all. The exception is if trees are to be removed that are located within the tree protection zones, they should be removed prior to installing the tree protection fencing without the use of mechanized wheeled or tracked equipment.
  - 3.3. Fencing is to be placed at the edge of the root protection zone as shown on the Tree Protection Plan (Appendix C). Root protection zones are established by the project arborist based on the needs of the site and the tree to be protected.
  - 3.4. “Protection fencing consisting of a minimum 4-foot-high metal chain-link fencing, secured with 6-foot metal posts shall be established at the edge of the root protection zone and permissible encroachment area on the development site as show in Appendix C of this report. Existing structures and/or existing secured fencing at least 3.5 feet tall can serve as the required protective fencing.” If construction fencing is used it is recommended that the panels are secured to prevent movement of the fencing during construction.
  - 3.5. Fencing is to remain in the position that is established by the project arborist and not to be moved without written permission from the project arborist until the end of the project after the final inspection has been completed.

### Signage

- 3.6. All tree protection fencing should have signage clearly indicating that the area is a vegetation protection zone (Signage in Appendix E).
- 3.7. Signage should be placed so as to be visible from all sides of a tree protection area and spaced every 35 feet.

## During Construction

### 4. Protection guidelines within the Root Protection Zone

- 4.1. No traffic shall be allowed within the root protection zone. No vehicles, heavy equipment, or even repeated foot traffic.
- 4.2. No storage of materials including but not limited to soil, construction material, or waste from the site.
- 4.3. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
- 4.4. Construction trailers are not to be parked / placed within the root protection zone without written clearance from the project arborist.
- 4.5. No vehicles shall be allowed to park within the root protection areas.
- 4.6. No activity shall be allowed that will cause soil compaction within the root protection zone.
- 4.7. The use of straw wattles is strongly recommended instead of silt fencing to avoid the need for trenching within the root protection zones.

### 5. Landscaping

- 5.1. Landscaping within the tree protection zones at a distance of 12X the diameter of the tree may commence after approval from the project arborist.
- 5.2. Inground irrigation systems must be avoided, and it is recommended that only above ground irrigation systems are used. Temporary systems and/or drip irrigation are preferred.
- 5.3. Any hardscapes within the tree protection zones shall be approved by the project arborist prior to soil disturbance taking place.
- 5.4. Landscape vegetation can be installed inside of the tree protection zones by pocket planting only. It is not recommended that soils are amended unless laboratory testing indicates that soil amelioration is needed.
- 5.5. No more than 4" of fill is allowed within the tree protection zone measured at a distance of 12X the diameter in circumference of the trees. No more than 25% of the tree protection zone may be impacted without the consent of the project arborist.
- 5.6. It is highly recommended that nutrient rich mulch or arborist woodchips are used in the planter areas. The material may be enriched with nitrogen to enhance the nutrient uptake by the soils.
6. **Tree protection.** Retained trees shall be protected from any cutting, skinning, or breaking of branches, trunks, or roots.
7. **Root pruning.** The roots that are to be cut from existing trees that are to be retained, the project consulting arborist shall be notified to evaluate, document, and oversee the proper cutting of roots with sharp cutting tools. Cut roots are to be immediately covered with soil or mulch to prevent them from drying out.
8. **Grade changes.** No grade change should be allowed within the root protection zone.
9. **Root protection zone changes.** Any necessary deviation of the root protection zone shall be cleared by the project consulting arborist in writing.
10. **Watering.** Provide water to trees during the summer months as needed. Tree(s) that will have had root system(s) cut back will need supplemental water to overcome the loss of ability to absorb necessary moisture during the summer months.
11. **Utilities.** Any necessary passage of utilities through the root protection zone shall be by means of tunneling under roots by hand digging or boring.
12. **Re-inspection of fencing.** Tree protection fencing is subject to inspection by the city. The project arborist highly recommends monthly inspections of tree protection fencing to ensure compliance with the permit and protection of the trees.

### After Construction

13. Fences are to remain standing until the final inspection has been completed by the city for the project.
14. Provide for or ensure that adequate drainage will occur around the retained trees.
15. Pruning of the existing trees should be completed as one of the last steps of the landscaping process before the final placement of trees, shrubs, ground covers, mulch, or turf.
16. Trees that are retained may need to be fertilized as called for by the project arborist if acceptable thresholds are exceeded. Lab analysis may be required.
17. The existing trees should be monitored for decline for a period of three years post construction. Proper care should be prescribed if the trees start to show signs of stress.

**If there are any questions or concerns regarding the proper protection of the trees during the construction process, contact the project arborist.**

## Appendix E – Vegetation Protection Signage

# VEGETATION/TREE PROTECTION ZONE

**DO NOT REMOVE OR ADJUST THIS FENCING.  
THE FENCE LOCATIONS ARE APPROVED TO PROTECT  
VEGETATION AND TREES.**

Contact the project arborist if access within the tree protection fencing is needed. All work within the tree protection zones of the trees must be approved and supervised by the project arborist.



**Project Arborist:** TERAGAN & ASSOCIATES, INC 503-697-1975

Unauthorized access within the tree protection zones, moving and damaging the tree protection fencing, and actions that violate the tree protection measures set forth in the tree protection plan for this project may result in stop work orders, fees and fines in accordance with local municipal codes, and monetary values owed to the owner of the tree in accordance with the Guide for Tree and Plant Appraisal, 10th Edition Revised, trunk formula technique method for the appraised value of the tree when trees are irreparable damaged.