

ANALYSIS OF CONCEPT 1- ORRIN ST SE

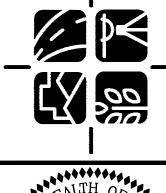
ANALYSIS OF CONCEPT 2- ORRIN ST SE

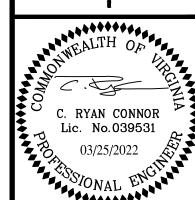
DESCRIPTION	SIDEWALK ALONG ODD SIDE ADDRESS OF ORRIN ST SE. THE SIDEWALK WILL EXTEND FROM THE DELANO DR SE INTERSECTION TO FOLLIN LN SE INTERSECTION. PROPOSED SIDEWALK WILL CONNECT WITH THE EXISTING SIDEWALK ALONG FOLLIN LN SE AND FUTURE SIDEWALK AT DELANO DR SE. THE CONCEPT INCLUDES THE SIDEWALK AND ADA RAMPS AT INTERSECTION WITH DELANO DR SE. THIS WILL ALLOW PEDESTRIAN ACCESS TO THE DELANO DR SE, FOLLIN LN SE, WILDWOOD PARK, ECHOLE'S ST SE, AND TO ALMA ST SE.	SIDEWALK ALONG EVEN SIDE ADDRESS OF ORRIN ST SE. THE SIDEWALK WILL EXTEND FROM THE DELANO DR SE INTERSECTION TO FOLLIN LN SE INTERSECTION. PROPOSED SIDEWALK WILL CONNECT WITH THE EXISTING SIDEWALK ALONG FOLLIN LN SE AND FUTURE SIDEWALK AT DELANO DR SE. THE CONCEPT INCLUDES THE SIDEWALK AND ADA RAMPS AT INTERSECTION WITH DELANO DR SE. THIS WILL ALLOW PEDESTRIAN ACCESS TO THE DELANO DR SE, FOLLIN LN SE, WILDWOOD PARK, ECHOLE'S ST SE, AND TO ALMA ST SE.
TREE IMPACT	RELATIVELY FEW TREES ARE AFFECTED WITH THE ROUTING OF THE SIDEWALK IN CONCEPT 1 ALONG THE SOUTH SIDE OF THE STREET. APPROXIMATELY FIVE TREES WILL NEED TO BE REMOVED, AND AN ADDITIONAL THREE TREES MAY HAVE IMPACTS TO THEIR CRITICAL ROOT ZONES DEPENDING ON THE EXTENT OF GRADING FOR THE WALK ADJACENT TO THEM OF THE TREES TO BE REMOVED, APPROXIMATELY THREE ARE LOCATED AT 501 ORRIN STREET. THESE TREES ARE LOCATED CLOSE TO THE STREET AND UNDERNEATH/ADJACENT TO OVERHEAD POWER LINES.AS A RESULT THEY HAVE BEEN SEVERELY PRUNED BY THE UTILITY COMPANY WHICH NEGATIVELY AFFECTS THEIR OVERALL CONDITION, AND WHILE SMALL, MAKES THEM NOT SUITABLE CANDIDATES FOR TRANSPLANTING.	FOR THE ROUTING OF THE WALK ON THE NORTH SIDE OF ORRIN ST., NINE TREES WOULD NEED TO BE REMOVED, AND AN ADDITIONAL FOUR EITHER REMOVED OR POSSIBLY TRANSPLANTED. AN ADDITIONAL FOUR LARGER TREES MAY SUFFER IMPACTS TO THEIR CRITICAL ROOT ZONES DEPENDING ON THE EXTENT OF GRADING FOR THE CONSTRUCTION OF THE SIDEWALK.
IMPACTS ON VEGETATION (OTHER THAN TREES)	THERE ARE MINIMAL IMPACTS TO OTHER VEGETATION BY THIS CONSTRUCTION. THIS ANALYSIS IS FOCUSED MORE ON THE POTENTIAL CONSTRUCTION IMPACTS TO LARGER TREES. IF THIS CONCEPT IS PURSUED REPLACEMENT VEGETATION AND POSSIBLY TRANSPLANTATION OF PLANTS/ SHRUBS WILL BE CONSIDERED.	THERE ARE MINIMAL IMPACTS TO OTHER VEGETATION BY THIS CONSTRUCTION. THIS ANALYSIS IS FOCUSED MORE ON THE POTENTIAL CONSTRUCTION IMPACTS TO LARGER TREES. IF THIS CONCEPT IS PURSUED REPLACEMENT VEGETATION AND POSSIBLY TRANSPLANTATION OF PLANTS/ SHRUBS WILL BE CONSIDERED.
GRADING IMPACTS	THE AREA WHERE SIDEWALK WOULD BE BUILT IS FLATTER COMPARED TO CONCEPT 2. THE GRADING APPEARS TO BE MINIMAL. THE CONSTRUCTION LIMITS WILL BE DETERMINED DURING LATER STAGES OF DESIGN IF THIS CONCEPT IS PURSUED.	THE GRADING IMPACTS ON THIS CONCEPT IS MINIMAL. THE CONSTRUCTION LIMITS WILL BE DETERMINED DURING LATER STAGES OF DESIGN IF THIS CONCEPT IS PURSUED.
CONSTRUCTABILITY ISSUE	THERE DO NOT APPEAR TO BE SIGNIFICANT CONSTRUCTABILITY ISSUES WITH THIS CONCEPT. THERE ARE MORE UTILITY POLES ALONG THIS CONCEPT. HOWEVER IN THE AREA OF THE UTILITY POLES THERE IS SUFFICIENT CLEARANCE FOR THE SIDEWALK BETWEEN THE BACK OF POLE AND GUY WIRES.	THERE DO NOT APPEAR TO BE SIGNIFICANT CONSTRUCTABILITY ISSUES WITH THIS CONCEPT. IN THE AREA OF THE UTILITY POLES THERE IS SUFFICIENT CLEARANCE FOR THE SIDWALK BETWEEN THE POLE AND GUY WIRES.
COST	THE COST OF THIS CONCEPT IS COMPARABLE TO OTHER ROBINSON SIDEWALK PROJECTS. BOTH THE CONCEPTS WILL HAVE SIMILAR COSTS COMPARED TO EACH OTHER.	THE COST OF THIS CONCEPT IS COMPARABLE TO OTHER ROBINSON SIDEWALK PROJECTS. BOTH THE CONCEPTS WILL HAVE SIMILAR COSTS COMPARED TO EACH OTHER.
CONNECTIVITY	BOTH THE CONCEPTS HAVE SIMILAR CONNECTIVITY TO NEIGHBORRING STREET AND WILDWOOD PARK VIA DELANO DR SE. THIS CONCEPT PROVIDES ACCESS TO MORE HOMEOWNERS COMPARED TO CONCEPT 2.	BOTH THE CONCEPTS HAVE SIMILAR CONNECTIVITY TO NEIGHBORRING STREET AND WILDWOOD PARK VIA DELANO DR SE.
RECOMMENDATION	CONCEPT 1 HAS MINIMUM GRADING IMPACTS AND LESSER NUMBER OF TREES IMPACTS. CONCEPT 1 IS RECOMMENDED.	CONCEPT 1 PROVIDES DIRECT PEDESTRIAN ACCESS TO MORE HOMEOWNERS. HENCE,

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FILE No. RP-2531



Orrin St. SE Vienna, VA

Tree Inventory and Condition Analysis Completed: 01/13/2022 Kevin J. Tankersley, ISA Certified Arborist #MA-5871A

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	SPE	CIES	SIZE	DRIP- LINE	CRITICAL ROOT ZONE	STRUCTURAL ROOT ZONE	CONDITION	CONDITION RATING	STATUS	COMMENTS
	Botanical Name	Common Name	DBH (in)	R (ft.)	R (ft.)	R (ft.)		%	(Remove or Preserve)	
1	Betula nigra	River Birch	16"	10'	16'	8'	Good	62.50		Multi-stem; tree is in ROW/path of potential walk
2	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped due to overhead utility lines; tree is in ROW/path of potential walk
3	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped due to overhead utility lines; tree is in ROW/path of potential walk
4	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped due to overhead utility lines; tree is in ROW/path of potential walk
5	Cercis canadensis	Eastern Redbud	15"	8'	15'	8'	Fair	59.38		Multi-trunk; pruning due to overhead utility lines; tree's critical root zone would be significantly affected.
6	Cercis canadensis	Eastern Redbud	20"	8'	20'	10'	Good	62.50		Multi-trunk; pruning due to overhead utility lines; tree is in ROW/path of potential walk.
7	Cercis canadensis	Eastern Redbud	15"	8'	15'	8'	Good	62.50		Multi-trunk; pruning due to overhead utility lines; tree's critical root zone would be significantly affected.
8	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped; tree is in ROW/path of potential walk
9	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped; tree is in ROW/path o potential walk
10	Cupressus x leylandii	Leyland Cypress	12"	5'	12'	6'	Good	68.75		Severely topped; tree would need to be kept pruned to maintain clearance for potential walk.
11	Liriodendron tulipifera	Tulip Poplar	12"	8'	12'	6'	Good	71.88		Tree is in ROW/path of walk.
12	Cornus florida	Flowering Dogwood	3"	2'	3'	2'	Poor	25.00		Nearly dead; back enough should not be affected by walk.
13	Acer rubrum	Red Maple	14"	16'	14'	7'	Good	71.88		Potential walk would significantly affect critical root zone of tree; recommend walk at back of curb to minimize impact.
14	Pyrus calleryana	Bradford Pear	10"	10'	10'	5'	Good	65.63		Grading may impact critical root zone; recommend walk at back of curb to minimize impact.
15	Magnolia virginiana	Sweetbay Magnolia	12"	4'	12'	6'	Fair	59.38		Multi-stem; one trunk damaged; foliage thin
16	Lagerstroemia indica	Crape Myrtle	20"	8'	20'	10'	Good	68.75		Multi-trunk; tree is back from curb and probably o.k.
17	Acer rubrum	Red Maple	4"	5'	4'	2'	Good	71.88		Trunk cracking; Co-dominant at top.

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TREE NO.	SPEC	SIZE	DRIP- LINE	CRITICAL ROOT ZONE	STRUCTURAL ROOT ZONE	CONDITION	CONDITION RATING	STATUS	COMMENTS	
	Botanical Name	Common Name	DBH (in)	R (ft.)	R (ft.)	R (ft.)		%	(Remove or Preserve)	
18	Cercis canadensis	Eastern Redbud	2"	3'	2'	1'	Good	75.00		New young tree.
19	Acer rubrum	Red Maple	16"	14'	16'	8'	Good	75.00		Recommend locating potential walk at back of curb to limit impact to critical root zone.
20	Cedrus atlantica 'Pendula'	Weeping Atlas Cedar	4"	3'	4'	2'	Good	62.50		Tree is far enough back; will not be affected by walk construction.
21	Acer rubrum	Red Maple	4"	4'	4'	2'	Fair	59.38		New young tree.
22	Thuja occidentalis	Arborvitae	2"	2'	2'	1'	Good	75.00		Move walk towards curb; Will need to be kept pruned
23	Thuja occidentalis	Arborvitae	6"	5'	6'	3'	Good	75.00		Move walk towards curb; Will need to be kept pruned
24	Thuja occidentalis	Arborvitae	6"	5'	6'	3'	Good	75.00		Move walk towards curb; Will need to be kept pruned
25	Thuja occidentalis	Arborvitae	6"	5'	6'	3'	Good	75.00		Move walk towards curb; Will need to be kept pruned
26	Quercus alba	White Oak	6"	8'	6'	3'	Good	71.88		In path of potential walk
27	Acer rubrum	Red Maple	2"	2'	2'	1'	Fair	59.38		Grading may impact; severe deer browse. Recommend replacement
28	Quercus phellos	Willow Oak	2"	5'	2'	1'	Excellent	81.25		Grading may impact; severe deer browse. Recommend replacement
29	Quercus alba	White Oak	1"	1'	1'	1'	Poor	37.50		Grading may impact; severe deer browse. Recommend replacement
30	Cornus florida	Flowering Dogwood	1"	1'	1'	'	Fair	53.13		Grading may impact; severe deer browse. Recommend replacement
31	Unknown	Unknown Small Tree			'	'	Dead	0.00		Dead; Broken off
32	Quercus alba	White Oak	20"	20'	20'	10'	Fair	53.13		Grading may impact edge of critical root zone.
33	Quercus alba	White Oak	18"	18'	18'	9'	Good	65.63		Surface roots exposed; Pruned from overhead wires on street side. Tree is in path of potential walk and grading wi severely impact critical root zone of tree.
34	Quercus phellos	Willow Oak	22"	15'	22'	11'	Excellent	81.25		Pruned from overhead wires on street side.
35	Quercus alba	White Oak	51"	14'	51'	26'	Poor	40.63		Triple Trunk; decay at base
36	Acer rubrum	Red Maple	28"	17'	28'	14'	Fair	50.00		Co-dominant; Heavily pruned from overhead wires on street side. Potential walk will affect critical root

Good

68.75

zone of tree.

Close to path of potential walk

37

Cornus florida

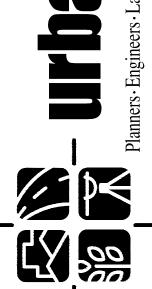
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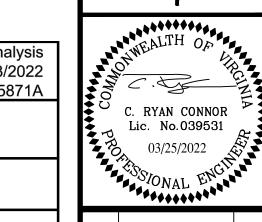
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	Botanical Name	Common Name	DBH (in)	R (ft.)	R (ft.)	R (ft.)		%	(Remove or Preserve)	
38	Lagerstroemia indica	Crape Myrtle	8"	4'	8'	4'	Good	75.00		Multi-stem. Close to path of potential walk.
39	Catalpa bignonioides	Southern Catalpa	20"	10'	20'	10'	Fair	59.38		Surface roots exposed, Co-dominant; Decay in trunk. Critical root zone will be affected by potential walk.
40	Acer rubrum	Red Maple	20"	16'	20'	10'	Poor	46.88		Hollow; Trunk decay; Harsh pruning due to overhead utility wires. Fill on trunk flare probably causing basal decay.
41	Quercus phellos	Willow Oak	12"	10'	12'	6'	Good	78.13		Overhead wires run through canopy
42	Quercus rubra	Red Oak	3"	5'	3'	2'	Good	75.00		New young tree.
43	Quercus phellos	Willow Oak	15"	10'	15'	8'	Excellent	81.25		Guy wires goes into trunk base; potential walk will affect some of critical root zone going behind utility pole.
44	Juniperus virginiana	Eastern Red Cedar	2"	2'	2'	1'	Fair	50.00		In path of potential walk; Leaning
45	Lagerstroemia indica	Crape Myrtle	6"	4'	6'	3'	Good	75.00	•	Multi-trunk; In path of potential walk
46	Lagerstroemia indica	Crape Myrtle	3"	2'	3'	2'	Fair	59.38		Multi-trunk; In path of potential walk
47	Cupressus x leylandii	Leyland Cypress	5"	6'	5'	3'	Good	68.75		In path of potential walk
48	Cupressus x leylandii	Leyland Cypress	4"	4'	4'	2'	Good	62.50		In path of potential walk; One-sided
49	Cupressus x leylandii	Leyland Cypress	8"	6'	8'	4'	Good	75.00		In path of potential walk
50A	llex opaca	American Holly	12"	14'	12'	6'	Fair	59.38		Entwined with 50B; significant impact to critical root zone with potential walk going behind utility pole
50B	Morus spp.	Mulberry	13"	14'	13'	7'	Fair	43.75		Entwined with 50A; significant impact to critical root zone potential walk going behind utility pole.
51	Magnolia soulangeana	Saucer Magnolia	3"	3'	3'	2'	Good	68.75		New young tree, sufficiently back from potential walk.





TREE INVENTORY AND CONDITION ANALYSIS
ORRIN STREET SE
SIDEWALK STUDY
TOWN OF VIENNA
FAIRFAX COUNTY, VIRGINIA

OF

FILE No. RP-2531