

AGENDA
PLANNING COMMISSION SPECIAL MEETING
AND WORK SESSION
Wednesday, March 3, 2021
7:00 P.M.
Maggie Osgood Library
70 N. Pioneer Street

This meeting will be held electronically through Zoom. Limited seating is available at the Library. Members of the public are encouraged to provide comment or testimony through the following:

- Joining by phone, tablet, or PC. For details, click on the event at www.ci.lowell.or.us.
- In writing, by using the drop box at Lowell City Hall, 107 East Third Street, Lowell, OR 97452
- By email to: jcaudle@ci.lowell.or.us

Special Meeting Agenda

1. Call to Order/Roll Call

Commissioners: Dragt ____ Kintzley ____ Wallace ____

2. Approval of Agenda

3. Approval of Minutes

- a. February 3, 2021

4. Old Business

5. New Business

- a. Review and consider approval of modification of conditions of approval for sidewalk construction, as well as geotechnical report for Crestview Estates, located at tax map number 19011100 and tax lot number 501.

6. Other Business

7. Adjourn

The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours before the meeting to the City Clerk, Joyce Donnell, at 541-937-2157.

Work Session Agenda

Work sessions are held for the Planning Commission to receive background information on City business and to give Planning Commissioners an opportunity to develop recommendations regarding planning, zoning, and development within the City. No decisions are made, and no votes are taken on any agenda item.

Work Session Topic(s)

- 1. Feedback and direction on City of Lowell development code update project.**
 - a. Presentation by Jacob Callister and Henry Hearley with Lane Council of Governments.
 - b. Review proposed code amendments and provide feedback for further direction.

- 2. Adjourn**

**City of Lowell, Oregon
Minutes of the Planning Commission Meeting
February 3, 2021**

The meeting was called to order at 7:02 PM by Commissioner Chair Dragt.

Members Present: Lon Dragt, Mary Wallace, Suzanne Kintzley

Staff Present: CA Jeremy Caudle, City Planner Henry Hearley LCOG, Public Works Director Max Baker

Approval of Minutes: Commissioner Kintzley moved to approve the minutes from January 6, 2021, second by Commissioner Wallace. **PASS 3:0**

Old Business:

- **Land Use File 2019-04 – Sunset Hills Subdivision (Map 19-01-14-21, Tax Lot 05000)**

Close Public Meeting: 7:04 PM

Open Public Hearing: 7:04 PM

- a. **Land Use File 2019-04 – Sunset Hills Subdivision (Map 19-01-14-21, Tax Lot 05000)**

Staff Report – Henry Hearley City Planner, LCOG, presented revised staff report, with two additional pieces of evidence submitted: revised Utility Plan and Resolution List.

Public Hearing Closed: 7:05 PM

Reconvene Public Meeting: 7:05 PM

Commission Deliberation: None

Commission Decision: Commissioner Kintzley moved to send recommendation for Sunset Hills Subdivision to City Council, second by Commissioner Wallace. **PASS 3:0**

New Business:

- **Land Use File 2020-01 – Tristan Ferguson Site Review (Map 19-01-14-22, Tax Lot 2301)**

Close Public Meeting: 7:07 PM

Open Public Hearing: 7:07 PM

- a. **Land Use File 2020-01 – Tristan Ferguson Site Review (Map 19-01-14-22, Tax Lot 2301)**

Staff Report – Henry Hearley City Planner, LCOG, presented report, with recommendation to approve site review with conditions of approval.

Applicants Presentation – Chris Morris of Branch Engineering, representing the applicant responded to Commissioners questions on inspections. Tristan Ferguson requested clarification on boundaries.

Public Testimony – None

Public Hearing Closed: 7:25 PM
Reconvene Public Meeting: 7:25 PM

- **Commission Deliberation:** Commissioner Kintzley inquired if wetlands had been mitigated, Henry Hearley responded with a yes. Public Works Director Max Baker stated that the City will be working closely with Mr. Ferguson on this project.
- **Commission Deliberation – Commissioner Kintzley moved to approve Tristan Ferguson Site Review Application with Conditions of Approval, second by Commissioner Wallace. PASS 3:0**

Other Business: None

Adjourn: 7:28 PM

Approved: _____
Lon Dragt - Chair

Date: _____

Attest: _____
Jeremy Caudle, City Recorder

Date: _____

Agenda Item Sheet

City of Lowell Planning Commission

Type of item:	Other
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Item title/recommended action:

Review modification of conditions of approval for sidewalk construction, as well as geotechnical report for Crestview Estates, located at tax map number 19011100 and tax lot number 501.

Justification or background:

On April 21, 2020, City Council approved LU #2019-06 with several conditions of approval. One of the conditions (#21) requires the Planning Commission to review and approve a geotechnical report prior to final plat approval. The applicant is submitting the geotechnical report for the Commission's review. Another condition (#5) requires sidewalk construction. The applicant is requesting a modification of this condition to construct sidewalks at the time of home construction.

Attachments:

Branch Engineering geotechnical report, dated 7/9/2020; 2/26/2021 email from City engineer.

Meeting date:	03/03/2021
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July 9, 2020

Mr. Phil Velie
McDougal Brothers Inc
600 Dale Kuni Road
Creswell, OR 97426

**RE: GEOTECHNICAL INVESTIGATION
CRESTVIEW ESTATES
TAX MAP 19011100
TAX LOT 501
LOWELL, OREGON
BRANCH ENGINEERING INC. PROJECT NO. 20-255**

Branch Engineering, Inc. (BEI) has conducted a geotechnical foundation investigation for the proposed construction of a 26-lot residential housing subdivision within a 30.86-acre property located at the site address of 40629 Jasper Lowell Road Lowell, Oregon.

The accompanying report presents the results of our site research, field exploration and testing, data analyses, as well as our conclusions and recommended geotechnical design parameters for the project. Based on the results of our study, no geotechnical/geologic hazards were identified at the site that would prohibit the proposed multi-family development or the proposed extension of Goldfish Farm Road. The site is suitable for the planned development and based on our geotechnical/geological perspective, will not adversely impact adjacent properties, provided that the recommendations of this report are implemented in the design and construction of the project.

Sincerely,
Branch Engineering Inc.



EXPIRES: 12/31/2021

Ronald J. Derrick P.E., G.E.
Principal Geotechnical Engineer

EUGENE-SPRINGFIELD

ALBANY-SALEM-CORVALLIS

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1.0 INTRODUCTION

1.1 Purpose and Scope of Work

The purpose of this work is to establish and present geotechnical engineering criteria and requirements related to the site and subsurface conditions that may influence the design and construction of the proposed project. Our field investigation scope of work consisted of a site reconnaissance with subsurface investigation and testing on June 2, 2020.

The subsurface investigation utilized a John Deere 120C metal tracked excavator, equipped with a 3-foot wide, toothed bucket to advance seven (7) exploratory test pits to a maximum depth of 6.5-feet below ground surface (BGS). The soil was visually classified in accordance with the American Society of Testing and Materials (ASTM) Method D-2488, representative soil samples were collected for laboratory in-situ moisture content, and Free Swell (IS 2720) testing. Field log summaries of the site exploratory test pits, including field test results, are presented in Appendix A. Also included in Appendix A are copies of nearby well logs from the Oregon Department of Water Resources on-line database, and the soil survey mapping of the site. Field and laboratory test results are summarized on the test pit log summaries.

Our work scope also included pertinent site research activities, engineering data review, analysis, and preparation of this Report.

1.2 Project Location and Description

The subject site has a total area of 30.86-acres; however, the area investigated was limited to the proposed development area of approximately 10-acres on the west portion of the parcel. The site is located at coordinates of 43.930629° North and 122.782982° West in Lowell, Oregon.

The parcel is rectangular in shape, bordered by North Moss Street on the west, a private gravel driveway and rural single-family residence on the north, undeveloped land to the east, and a rural single-family residence to the south. Site topography is varied, with the area adjacent to North Moss Street being relatively flat before grades of 5- to 11-percent are encountered towards the east. In areas of the site, grades approach 20-percent but are generally shorter than 20-feet in length, with the grade generally increasing towards the eastern portion of the site. Site vegetation is limited to medium sized Ponderosa Pine and young deciduous trees and shrubs, commercially valued timber had recently been logged from the site, and the root masses were removed.

Based on a preliminary drawing provided to BEI by the client, the site will be divided into 26 separate parcels, with the proposed Crestview Drive providing site access off North Moss Street. Specific structural loads were not provided; however, wood-framed, 1- to 2-story single-family residences are expected which typically do not exceed 10-kip column or 1.5 kip/ft line loads on foundations.

1.3 Site Information Resources

The following site investigation activities were performed and literature resources were reviewed for pertinent site information:

- USGS Geologic Map of Oregon, Walker and MacLeod, 1991
- USGS Geologic Map of Quaternary Units in the Willamette Valley, Oregon. Prepared in cooperation with the Oregon Water Resources Department. By Jim E. O'Connor, Andrei Sarna-Wojcicki, Karl C. Wozniak, Danial J. Polette, and Robert J. Fleck, 2001.
- Review of State of Oregon Department of Geology and Mineral Industries. The ORE-BIN. Vol. 19 No.7. Reconnaissance Geology of the Marcola, Leaburg, and Lowell Quadrangles, Oregon. By Herbert G. Schlicker and Hollis M. Dole. July 1957
- Seven exploratory test pits advanced to a maximum depth of 6.5-feet BGS on June 2, 2020 at the approximate locations shown on the attached Figure-1 Site Exploration Map. See attached boring log summaries in Appendix A.
- Review of the Web Soil Survey of Lane County Area, United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS) (attached in Appendix A).
- Oregon Department of Geology and Mineral Industries (DOGAMI) web hazard viewer.
- Oregon Department of Geology and Mineral Industries (DOGAMI) Statewide Landslide Information Database for Oregon (SLIDO) web viewer.
- Review of Oregon Department of Water Resources Well Logs (attached in Appendix A).
- Oregon Structural Specialty Code 2019 (OSSC 2019), applicable building code criteria
- Geology of Oregon, sixth edition by Orr, Orr and Baldwin, 2012.

2.0 SITE SUBSURFACE CONDITIONS

The analyses, conclusions and recommendations contained in this report are based on site conditions as they presently exist and assume that our exploratory test pit findings presented in Appendix A are representative of the subsurface conditions throughout the site. If, during construction, subsurface conditions differ from those encountered in the exploratory test pits; BEI requests that we be informed to review the site conditions and adjust our recommendations if necessary.

2.1 Subsurface Soils

Visual classification of the near surface soils was performed in accordance with the American Society of Testing and Materials (ASTM) Method D-2488 and the Unified Soil Classification System (USCS). Soil samples were collected from the sidewall using a trowel in the top 4-feet of the excavation, and directly from the excavator bucket at deeper depths. Soil samples were taken at depths where noticeable changes in consistency, color, and moisture content were apparent. Subsurface soil conditions were found to be variable because of site topography and depth to bedrock. Test Pits 1 and 2 were generally consistent, with a dark brown silty clay topsoil horizon followed by mottled brown-gray silty clay with scattered fragments of weathered rock. Heavily weathered basalt bedrock was encountered at 4 and 5.5-feet in Test Pits 1 and 2, respectively. Soil in Test Pit 3 consists of approximately 1.5-feet of dark brown silty clay topsoil followed by completely to heavily weathered basalt. Test Pit 4 was excavated in a shallow swale south of the proposed Crestview Drive and soil conditions observed consist of a deeper, dark brown silty clay topsoil horizon to 2-feet BGS, followed by mottled brown-gray silty clay, then high plasticity colluvial gray clay, heavily weathered basalt bedrock was encountered at 5.5-feet BGS. Excavations in Test Pits 5 through 7 were generally consistent and consist of an approximately 1-foot thick horizon of dark brown silty clay topsoil, followed by 2.5- to 3-feet of high plasticity, gray colluvial clay. Completely to heavily weathered basalt was found between 3- to 3.5-feet BGS. The basalt bedrock found in all Test Pit excavations was found to be completely to heavily weathered, the 120C John Deere excavator was able to make limited progress into the bedrock given the time allotted for test pit exploration and was considered to be reasonable refusal at the termination depths.

The NRCS Web Soil Survey for Lane County mapping unit was used to identify soils at the project site and is summarized below, mapped results are shown in Appendix A, soil observed in the site excavations are generally consistent with mapped soil units:

Table 1: Site Soil Unit

<i>Unit Name</i>	<i>Description</i>
Chehulpum silt loam	Silt and clay loam with near surface weathered bedrock found on summit and shoulders of low hills. Derived from a parent material of sedimentary rock colluvium.
Dixonville-Philomath-Hazelair complex	Silty clay loam and silty clay with near surface weathered bedrock found on summit, toeslope and shoulders of hills. Derived from residuum and colluvium of basalt rock.
Ritner cobbly silty clay loam	Organic silty clay and cobbly silty clay loam found on shoulders and summit of hills. Cobbly colluvium derived from basic igneous rock.

2.2 Groundwater

Surface water and perched groundwater seepage was encountered during our site exploration. Well logs from nearby sites, obtained from the Oregon Department of Water Resources online database were reviewed and static water levels measured after drilling were listed between 31 and 130 feet BGS; however, these wells indicate the depth of first encountered water varied from 45- to 223-feet BGS, therefore indicating a confined aquifer condition. Fractured horizons of bedrock

between flows and between alternating horizons of sedimentary and igneous rock are likely the primary water bearing zones. The near surface perched groundwater and surface water encountered on the western half of the site are the result of gray colluvial clay acting as an aquitard above the nearly impermeable bedrock.

We expect that perched ground water lenses are seasonal, and are be expected to be highest during the late winter and spring months when rainstorms are more intense and frequent, and soils are near saturation. Perched water lenses may be encountered should excavation activities take place during the wet season; however, groundwater is not expected to adversely impact site development.

3.0 GEOLOGIC SETTING

The following sections describe the regional and local site geology. Our field findings are consistent with the geologic mapping of the site area by the Oregon Department of Geology and Mineral Industries.

3.1 Regional Geology

The subject site is located in the in the foothills of the west-central portion of the Cascade Mountain Range in Oregon. The foothills of the Cascade Range in the area investigated are characterized by deep set fluvial erosion, thick vegetation and soil cover, heavy precipitation, and a relatively mild climate. During the Eocene the coastline of Oregon was significantly further east than at present. The Coastal Range had yet to form in its current position and much of the Willamette Valley was a shallow inland sea. Along the eastern margins of this sea, volcanism occurred, fed by the convergence of the Farallon oceanic plate North American plate. Varying types, and thickness of deposits occurred and built the western Cascades that are seen today. Mountain building and eruptive activity is believed to have ended approximately 5- to 7.5-million years ago in the western Cascades when a combination of tilting and folding, and the steady eastward migration of eruptive centers due to subduction zone activity led to the formation of the High Cascades.

Deposits of sedimentary rocks and volcanic tuffs known as the Fisher and Eugene formations represent the earliest rocks formed by erosion of the Western Cascades. These were preceded by and followed by, volcanism characterized by andesites, basaltic andesites, and dacites, Little Butte flows and tuffs, and a period lasting approximately 10-million years of pyroclastic events yielding ash flow tuffs, interbedded lava flows, and volcanic breccias. The decline in volcanic activity in the Western Cascades was followed by the onset of Columbia River basalt eruptions and formation of the High Cascades. Coinciding with the formation of the High Cascades grabens and a period of faulting, the Western Cascades were elevated and fluvial action of entrenched streams such as the Middle Fork Willamette, McKenzie River, and the Santiam Rivers became the dominant geomorphic process.

3.2 Site Geology

The subject site is mapped on the boundary between two geologic formations, the Mehama volcanics and Miocene-Pliocene volcanics. The Mehama volcanics are described as basaltic and

basaltic andesite lava flows and breccia that grade laterally into bedded palagonitic tuff and breccia. The Miocene-Pliocene volcanics in the site vicinity are described as sedimentary and volcanoclastic rocks. Lapilli tuff, mudflow deposits, flow breccia, and volcanic conglomerate, mostly of basaltic and dacitic composition. The tuff and breccia grade laterally into lava flows of basaltic and basaltic andesite.

Bedrock was exposed in every test pit excavation, with varying depths and degrees of weathering. Predominantly, the rock was basaltic and basaltic andesite, however sedimentary and volcanoclastic rocks were also found. Based on the site excavations and mapping, the underlying geology at the site is likely basaltic and basaltic andesite. Sedimentary and volcanoclastic rocks, which are mapped on the eastern site boundary, were found in near surface soil and were likely deposited via gravity and hillslope runoff.

The nearest mapped faults to the site are approximately 5-miles to the north and 7-miles to the south east. These faults are not known to be active; however, seismic activity is not uncommon in the Willamette Valley as evidenced by the 1993 Scotts Mills Earthquake east of Salem that registered a 5.7 Richter magnitude, and most recently a 4.2 magnitude earthquake about 12-miles east of Eugene on July 4, 2015.

4.0 CONCLUSIONS

Based on our field observations, subsurface explorations, and data analyses, we conclude that the site is geologic and geotechnically suitable for the proposed development provided that the recommendations of this report are incorporated into the design and construction of the project. Our investigation did not reveal any specific site features or subsurface conditions that would impede the proposed design and construction of the project.

5.0 RECOMMENDATIONS

The following sections present site-specific recommendations for site preparation, drainage, foundations, utility excavations, and slab/pavement design. General material and construction specifications for the items discussed herein are provided in Appendix B.

Our investigation did reveal subsurface conditions that will require specific consideration. Much of the western portion of the site has high plasticity, gray clay underlying the topsoil (see Figure-1). The gray clay has high shrink/swell characteristics that make it unsuitable as a subgrade for paved areas and foundations loads. Geotechnical recommendations addressing the area of concern are included in the following sections.

5.1 Site Preparation and Foundation Subgrade Requirements

The following recommendations are for earthwork in the building foundation areas, public roadway, and private parking areas. Earthwork shall be performed in general accordance with the standard of practice as generally described in Appendix J of the 2019 Oregon Structural Specialty Code and as specified in this report.

All areas intended to directly or laterally support structures, roadways, or pavement areas shall be stripped of vegetation, organic soil, unsuitable fill, and/or other deleterious material such as moisture softened exposed soil. These stripping's shall be removed from the site or reserved for use in landscaping or non-structural areas. In areas of existing trees, vegetation, or previously placed fill the required depth of site clearing/stripping may be increased.

The subsurface conditions observed in our site investigation test pits are consistent; however, the test pits only represent those specific locations on the site. Should soft or unsuitable soils extend to a depth greater than that described herein, or areas of distinct soil variation be discovered, this office shall be notified to perform site observation and additional excavation may be required.

Residential Building Pad Subgrade Preparation

Within the area of the proposed building foundations we recommend that all organic soil, expansive soil, and soft, or wet material be removed from structural areas. The depth to suitable subgrade for foundations varies throughout the site. In the relatively flat western portion of the site, (see Figure-1 high plasticity/expansive clay delineation), suitable subgrade is anticipated at 2.5-feet BGS. We recommend a minimum of 18-inches of compacted granular fill be placed on building pads in areas of high plasticity expansive clay. Suitable subgrade in the eastern portion of the site, from approximately the toe of the slope to the eastern boundary will vary from in depth from 1.5- to 2-feet BGS and shall be founded on either weathered bedrock or medium stiff to stiff silty clay. If foundations are placed directly on weathered bedrock, we recommend a leveling course of 4-inches of granular fill material to facilitate even curing of concrete. For building pads excavated into silty clay material, a minimum of 8-inches of compacted granular fill material shall be placed under foundations. Prior to placing fill or foundation concrete forms, exposed subgrade materials shall be observed and proof-rolled, if necessary, using a loaded, tandem-axle dump truck. Areas yielding more than 1.5-inches shall be scarified and re-compacted, or otherwise improved at the discretion and direction of the geotechnical engineer of record (GER). Placement of granular fill material shall proceed in a timely manner to mitigate moisture fluctuations in the soil, the placement of the compacted aggregate shall extend a minimum of 6-inches horizontally beyond footing perimeters. Improvement methods may include excavation and fill and/or placement of geotextile fabric or geogrid composites. A BEI representative shall approve exposed subgrade materials and observe proof-rolling activities.

Pavement Area Subgrade Preparation

In pavement areas, topsoil, high plasticity/expansive clay, and organics shall be removed to an anticipated depth of 12- to 18-inches in the areas not delineated in Figure -1. In the area delineated on Figure-1 as high plasticity gray clay, we recommend complete removal of the clay, expected to range from 3- to 3.5-feet BGS. During the dry season, we recommend that the subgrade be proof-rolled with a loaded 10cy haul-truck, or equipment of equivalent ground pressure, to assess the subgrade consistency and identify potential soft or wet areas. Should pavement area preparation occur during the wet season, proof-rolling atop to base rock layer is recommended but would require removal of base rock if areas of "pumping" are found. Prior to the placement of compacted aggregate base rock in pavement areas we recommend that the GER, or designated representative, visit the site to observe the subgrade; excavation of areas of unsuitable areas of soil may be recommended to pass subsequent proof-roll. Recommendations for subgrade depth, aggregate base rock thickness, compaction, and asphalt concrete (AC) thickness are presented below in Section 5.12 of this report.

Site Grading and Slopes

Due to the existing site topography, we anticipate that cut and fill slopes may be required in order to construct the residential building pads and Crestview Drive. We recommend that structural fill material placed on the site consist of compacted granular fill material in accordance with section 5.2 of this report and the City of Lowell Public Works Design Standards Division 2, Section 207. On-site materials consisting of the organic soils overlaying the bedrock should not be used as structural fill; however, the excavated bedrock may be used for structural fill provided it is broken into 2-inch diameter or smaller pieces.

Cut and or fill slopes may be constructed up to a slope of 2:1 (H:V) and should be protected from erosion. Fill shall be placed on competent subgrade consisting of horizontal and level benches excavated into native material on slopes. All fill slopes in excess of 4-feet in height shall contain a keyway with a sub-drain at the base of the fill slope. Cut slopes should be protected from erosion and runoff should not be allowed to flow over the top of slopes or faces. Seasonal seeps and springs may be encountered within site cut slopes.

5.2 Geotechnical Construction Site Observations

Periodic site observations by a geotechnical representative of BEI are recommended during the construction of the project; the specific phases of construction that should be observed are shown in Table 1 below:

Table 1:

Recommended Construction Phases to be Observed by the Geotechnical Engineer	
At completion of subgrade excavation	Subgrade observation by the geotechnical engineer before geogrid and aggregate placement.
Imported fill material	Observation of material or information on material type and source.
Placement or Compaction of fill material	Observation by geotechnical engineer or test results by qualified testing agency.

5.3 Structural Fill Recommendations

All engineered fill placed on the site shall consist of homogenous material and shall meet the following recommendations.

- Prior to placement on-site the granular material to be used as structural fill shall be approved by the GER, if no Proctor curve (moisture-density relationship) for the material performed within the last 12-months is on file, a material sample will be required for

testing to determine the maximum dry density and optimum moisture content of the aggregate or fill material.

- The structural fill shall be moisture conditioned within +/- 2% of optimum moisture content and compacted in lifts with loose lift thickness not exceeding 6- inches.
- Periodic visits to the site to verify lift thickness, source material, and compaction efforts shall be conducted by the GER, or designated representative, and documented.
- The recommended compaction level for crushed aggregate or soil fill in building pad areas is 90% relative compaction, respectively, as determined by ASTM D-1557 (modified Proctor). Compaction shall be measured by testing with nuclear densometer ASTM D-6938, or D-1556 sand cone method on structural fill in excess of 12-inches in thickness.
- If on-site or imported non-granular material is approved for structural fill placement, a sample of the material shall be collected for a modified Proctor testing to be used for field compaction test comparison. If, due to the nature of the on-site material compaction testing is not possible due to factors as oversize rock content and variable material, proof rolls with a fully loaded 10cy haul-truck, or equivalent equipment, shall be observed at regular intervals. Observed areas of soft soil will require over-excavation and replacement with suitable material.
- All fill materials used on-site shall be in accordance with the City of Lowell Public Works Design Standards, Division 2 Section 207.

5.4 Excavations

We expect excavations into the surface soils will stand near-vertical to depths of at least 5 feet BGS. The site soils are classified as OSHA Type A, heavy equipment or stored materials should not be placed within 10 feet of open excavations. To remove the underlying bedrock material, we recommend that adequate equipment is used to facilitate efficient progress. The underlying bedrock is not monolithic; however, there are zones of rock with varying hardness. To remove the underlying bedrock material, we recommend that adequate equipment is used to facilitate efficient progress. Large excavators equipped with toothed buckets may be able efficiently excavate the bedrock; however, hydraulic rock hammers, or dozers with single-shank ripper may be required. It is unlikely that drilling and blasting will be required, but may facilitate efficient removal of the basalt rock.

5.5 Drainage

A site drainage system is expected to be engineered for this project. Alteration of existing grades for this project will likely change drainage patterns but should not adversely affect adjacent properties. Footing drains on the upslope perimeters of building pads should be considered. Perimeter landscape and hardscape grades shall be sloped away from the foundations and water shall not be allowed to pond adjacent to footings during or after construction. Infiltration testing was not performed at part of our site investigation; however, the near surface bedrock forms a

horizon of very low to nearly impermeable material that will only accept the vertical flow of water through fracture/joints in the rock.

5.6 Soil Bearing Capacity

Conventional perimeter style foundations and spread footings for column loads are suitable for the proposed building construction and we recommend that loads are distributed evenly to mitigate the potential for differential settlement. If foundation areas are prepared as described in Section 5.1 of this report, an allowable bearing capacity of 1,500 psf can be used for foundations founded on silty clay, and 3,000 psf for foundations founded on the weathered bedrock, and may be increased by 1/3 for short term loading, such as wind or seismic events.

5.7 Settlement

After preparation of the foundation subgrade as described in Section 5.1 the total and differential settlement of the structure after completion is not expected to exceed ¾-inch or ½-inch, respectively, between equivalently loaded footings.

5.8 Slabs-On-Grade

After site preparation to expose subgrade free of topsoil or soft soil, load bearing concrete slabs shall be underlain by a minimum of 12 inches of compacted, crushed aggregate. A modulus of subgrade reaction of 200 pci may be used for design in the areas underlain by bedrock, and 110 pci for areas underlain by medium stiff brown clay (CL) with silt. A free draining aggregate is recommended beneath structural slabs. If plastic clay is encountered under concrete slab areas, we recommend excavating to consistent subgrade material and increasing the amount of aggregate as necessary to fill low subgrade areas.

5.9 In-Situ Moisture Content & Soil Shrink/Swell Potential

Samples of the site soil were collected for in-house in-situ moisture content and Free Swell (IS 2720) testing. In-situ moisture content of the soil ranged from 29.3% to 48.0% in soil samples taken from between 2- to 3.5-feet. Free Swell Testing results in the high plasticity gray clay ranged from 100% to 110% shrink/swell potential. Samples taken in the brown-gray mottled silty clay ranged from 40% to 50% shrink/swell potential. These results are considered to be moderate to very high values.

5.10 Friction Coefficient and Earth Pressures

For use in design of subsurface structures or retaining walls the following allowable parameters are given based on an internal angle of friction of 25° for the brown clay (CL) with silt material overlying the bedrock. The design parameters assume no hydrostatic pressure or surcharge loads.

- Active Earth Equivalent Fluid Pressure (K_a) for unrestrained wall = 40 pcf
- At-Rest Earth Equivalent Fluid Pressure (K_o) for unrestrained wall = 55 pcf
- Passive Earth Equivalent Fluid Pressure (K_p) for native subgrade = 250 pcf
- Friction coefficient for concrete poured neat on native soil = 0.3

- Friction coefficient for concrete poured on 12-inches of compacted aggregate = 0.45

The following design parameters are given for retaining wall structures with angular, drainage rock backfill and a subgrade consisting of bedrock prepared as described above. The design parameters assume no hydrostatic pressure or surcharge loads. Passive resistance can be employed at 6-inches below the surface of a freshly exposed bedrock surface.

- Active Earth Equivalent Fluid Pressure (K_a) for angular drainage rock = 28 pcf
- At-Rest Earth Equivalent Fluid Pressure (K_o) for angular drainage rock = 40 pcf
- Passive Earth Equivalent Fluid Pressure (K_p) for basalt subgrade = 600 pcf
- Friction coefficient for concrete poured on fractured basalt = 0.5
- Friction coefficient for concrete poured on compacted aggregate = 0.5

5.11 Wet Weather/Dry Weather Construction Practices

The near surface site material is moisture sensitive and will soften with prolonged exposure to precipitation. BEI recommends that foundation subgrade preparation and general site earthwork be performed during the dry season as much as possible, generally May through October. Construction during the wet season may require special drainage considerations, such as covering of excavations, pumping to mitigate standing water in excavations. Construction of an adequate compacted aggregate work area, or staging area will likely allow work to proceed through periods of wet weather without additional excavation.

Equipment traffic on saturated soil will result in deeper disturbance and saturation of the soil and should be avoided. Subgrade soils should be covered with compacted aggregate in a timely manner after excavation to limit fluctuations of the in-situ moisture content.

5.12 Pavement Design Recommendations

The correlated CBR for the clay and silty clay material found below the topsoil is 4, which is a “poor” classification. Our recommendations used the guidance of the 1993 AASHTO Guide for Design of Pavement Structures, the 2003 revised Asphalt Pavement Design Guide, published by the Asphalt Pavement Association of Oregon, and engineered structural pavement sections developed for sites with similar soils and anticipated traffic loads. Based on an estimated equivalent 18-kip single axle loading (ESAL) of 50,000 over 20 years, a subgrade resilient modulus of 4000 psi, and 90% reliability, a structural number of 2.5 has been used for the design of the pavement sections. Pavement may consist of 3-inches of Asphalt Concrete (AC) over 12-inches of aggregate base rock.

The above recommended structural pavement sections are designed for the type of vehicle use on the site after construction completion, not for construction vehicle traffic which is generally heavier, occurs over a short time, and impacts the site before full pavement sections are constructed. The construction traffic may cause subgrade failures and the site contractor should consider over-building designated haul routes through the site to mitigate soft areas at the time of final paving.

The depth to pavement subgrade will vary throughout the site. The high plasticity/expansive gray clay found in Test Pits 5 through 7 is likely present throughout the western portion of the site and

is not suitable for pavement subgrade. We recommend complete removal of the gray, high plasticity clay where it is found to subgrade consisting of weathered bedrock, found in site excavations at 3- to 3.5-feet BGS. From the approximate area of Test Pit 3 (see Figure-1) east, suitable subgrade consisting of mottled brown-gray medium stiff silty clay or weathered bedrock basalt was found at approximately 18- to 22-inches BGS. The Pavement subgrades shall be observed and proof-rolled with a fully loaded 10 CY haul truck prior to placement of base rock if conditions allow, if the subgrade is too soft to support a loaded haul truck for a proof roll additional base rock placement should be discussed or the subgrade evaluated by a proof roll as base rock is placed. The base rock shall be compacted to at least 95% of the material's maximum dry density as determined by AASHTO T-180/ASTM D-1557 (modified Proctor). BEI recommends using a geotextile separation fabric between the subgrade and base rock. The base rock shall be tested to measure compliance with this compaction standard prior to placement of asphalt concrete.

The following recommendations are presented for roadway sections:

The GER, or designated representative, should visit the site to approve the subgrade soil prior to the placement of the base rock. Proof rolls with a loaded 10cy haul-truck, or equivalent equipment, shall be observed on the subgrade or compacted base rock prior to pavement installation and any areas of deflection under wheel loads shall be corrected by over-excavation and replacement with additional compacted aggregate.

The ABM shall be compacted to at least 95% relative compaction as determined by ASTM 1557/AASHTO T-180 (modified Proctor). The base rock shall be tested to measure compliance with this compaction standard prior to placement of AC.

The above recommended structural pavement sections are designed for the type of vehicle use on the site after construction completion, not for construction vehicle traffic which is generally heavier, occurs over a short time, and impacts the site before full pavement sections are constructed. The construction traffic may cause subgrade failures and the site contractor should consider over-building designated haul routes through the site to mitigate soft areas at the time of final paving.

Subgrade Preparation & Protection During Construction

The site soil is moisture sensitive, but generally only the upper 4-inches of exposed soil will soften with exposure to prolonged rainfall. The proposed street subgrade should be covered with 4- to 6-inches of compacted, crushed aggregate for support of light construction traffic during the wet season and up to 12-inches for heavy equipment traffic. Should site work continue throughout the wet season, additional aggregate may be required to mitigate rutting.

Provisions for Wet Weather Construction

Dry season construction is recommended; however, excavation to subgrade can proceed during periods of light to moderate rainfall provided that the subgrade remains covered with aggregate; a total aggregate thickness consisting of a minimum of 12-inches may be necessary to protect the subgrade from heavy construction traffic. Construction traffic should not be allowed directly on the subgrade only atop a sufficient compacted rock thickness to mitigate subgrade "pumping". If the subgrade becomes wet and "pumps" no construction traffic shall be allowed on the road

alignment. Positive site drainage away from the street shall be maintained if site paving will not occur before the on-set of the wet season. Construction traffic haul routes will require thicker rock sections to mitigate subgrade failure.

Mitigation of Wet and Soft Subgrade, if Encountered

Depending on the timing for the project, any soft subgrade found during proof-rolling or by visual observation can either be removed and replaced with compacted crushed aggregate, removed and dried or dried in-place and recompacted, or an area of sufficient size (generally at least 6-feet beyond the edge of soft material) may be covered with a bi-axial geogrid and covered with compacted crushed aggregate.

5.13 Seismic Site Classification and Hazards

Based on the soil properties encountered in our site pits and on-site well log information, a Seismic Site Class D designation, stiff soil (Table 20.3-1 ASCE 7) is recommended for design of site structures. OSSC 2014 (1803.5.11) required criteria for hazards the geotechnical investigation shall address for seismic site class designations C through F are listed below.

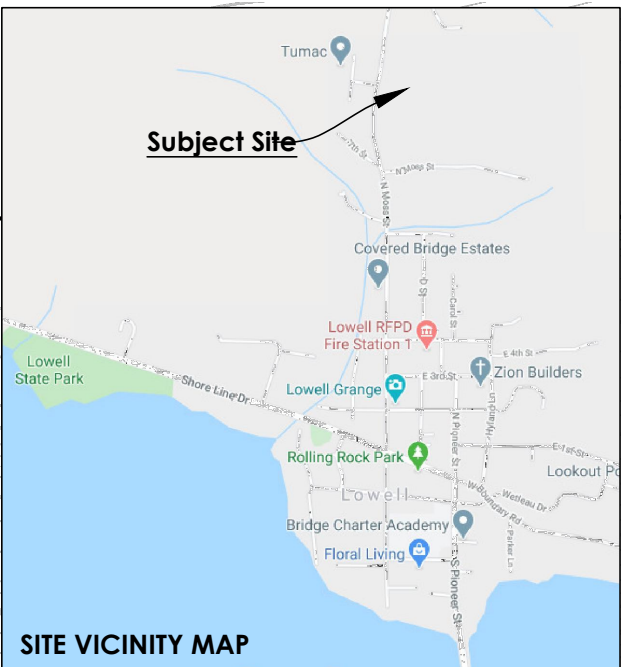
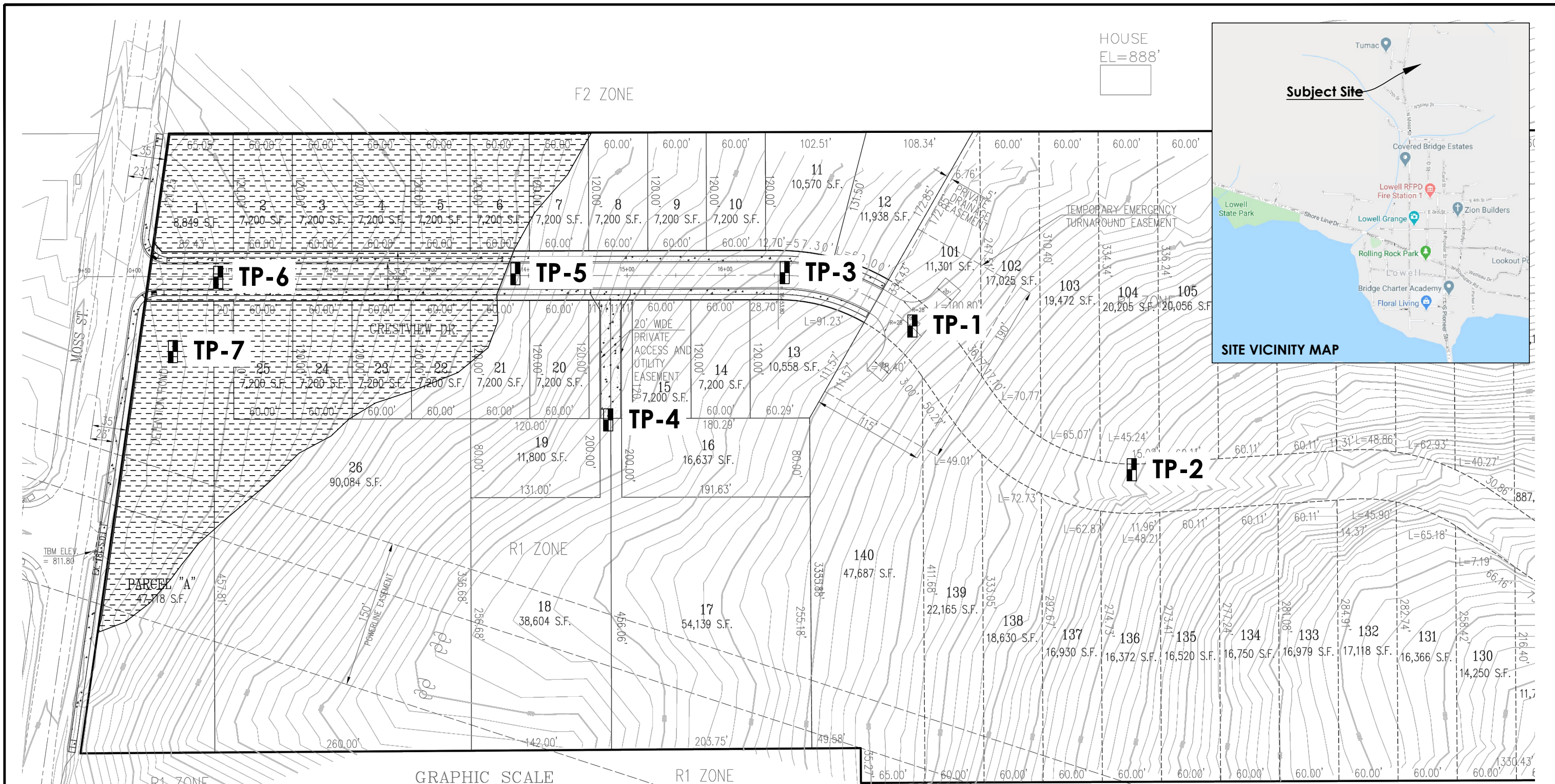
- **Slope Instability:** The site is mapped moderate risk for land sliding. The potential for site landslides is low due to the relatively flat western portion and gently sloping terrain to the east.
- **Liquefaction:** The subsurface soil is mostly fine grain silty clay and clay underlain by near surface bedrock. The risk of liquefaction on the site is low.
- **Total and Differential Settlement:** The estimated amount of total and differential settlement is less than ¼-inch and ½-inch, provided subgrade preparation follows the recommendations in Section 5.1 of this report.
- **Surface Displacement due to faulting or seismically induced lateral spreading or lateral flow:** The closest faults to the site are not known to be active. Surface displacement or seismically induced lateral spreading is not expected at the site.

6.0 REPORT LIMITATIONS

This report has presented BEI's site observations and research, subsurface explorations, geotechnical engineering analyses, and recommendations for the proposed site development. The conclusions in this report are based on the conditions described in this report and are intended for the exclusive use of the McDougal Brothers Inc and their representatives for use in design and construction of the development described herein. The analysis and recommendations may not be suitable for other structures or purposes.

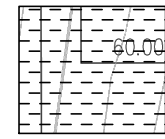
Services performed by the geotechnical engineer for this project have been conducted with the level of care and skill exercised by other current geotechnical professionals in this area. No warranty is herein expressed or implied. The conclusions in this report are based on the site conditions as they currently exist and it is assumed that the limited site locations that were physically investigated generally represent the subsurface conditions at the site. Should site

development or site conditions change, or if a substantial amount of time goes by between our site investigation and site development, we reserve the right to review this report for its applicability. If you have any questions regarding the contents of this report please contact our office.



LEGEND

TP-1 INDICATES APPROXIMATE LOCATION OF EXPLORATORY TEST PIT



APPROXIMATE DELINEATION OF AREA WITH HIGH PLASTICITY, HIGH SHRINK/SWELL POTENTIAL CLAY



SCALE: (11"x17") 1"= 100'
 SITE EXPLORATION MAP - CRESTVIEW ESTATES
 LOWELL, OREGON

APPENDIX A:

- EXPLORATORY TEST PIT LOGS
- OWRD WELL LOGS
- USDA SOIL SURVEY

RELATIVE DENSITY - COARSE GRAINED SOILS

RELATIVE DENSITY	SPT N-VALUE	D&M SAMPLER (140 lbs hammer)	D&M SAMPLER (300 lbs hammer)
VERY LOOSE	< 4	< 11	< 4
LOOSE	4 - 10	11 - 26	4 - 10
MEDIUM DENSE	10 - 30	26 - 74	10 - 30
DENSE	30 - 50	74 - 120	30 - 47
VERY DENSE	> 50	> 120	> 47

USCS GRAIN SIZE

FINES	< #200 (.075 mm)
SAND	Fine #200 - #40 (.425 mm)
	Medium #40 - #10 (2 mm)
	Coarse #10 - #4 (4.75 mm)
GRAVEL	Fine #4 - 0.75 inch
	Coarse 0.75 - 3 inch
COBBLES	3 - 12 inches

CONSISTENCY - FINE GRAINED SOILS

CONSISTENCY	SPT N-VALUE	D&M SAMPLER (140 lbs hammer)	D&M SAMPLER (300 lbs hammer)	POCKET PEN. / UNCONFINED (TSF)	MANUAL PENETRATION TEST
VERY SOFT	< 2	< 3	< 2	< 0.25	Easy several inches by fist
SOFT	2 - 4	3 - 6	2 - 5	0.25 - 0.50	Easy several inches by thumb
MEDIUM STIFF	4 - 8	6 - 12	5 - 9	0.50 - 1.00	Moderate several inches by thumb
STIFF	8 - 15	12 - 25	9 - 19	1.00 - 2.00	Readily indented by thumb
VERY STIFF	15 - 30	25 - 65	19 - 31	2.00 - 4.00	Readily indented by thumbnail
HARD	> 30	> 65	> 31	> 4.00	Difficult by thumbnail

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS		GROUP SYMBOLS AND TYPICAL NAMES			
COARSE-GRAINED SOILS: More than 50% retained on No. 200 sieve	GRAVELS: 50% or more retained on the No. 4 sieve	CLEAN GRAVELS	GW Well-graded gravels and gravel-sand mixtures, little or no fines. GP Poorly-graded gravels and gravel-sand mixtures, little or no fines.		
		GRAVELS WITH FINES	GM Silty gravels, gravel-sand-silt mixtures. GC Clayey gravels, gravel-sand-clay mixtures.		
		CLEAN SANDS	SW Well-graded sands and gravelly sands, little or no fines. SP Poorly-graded sands and gravelly sands, little or no fines.		
			SANDS WITH FINES	SM Silty sands, sand-silt mixtures. SC Clayey sands, sand-clay mixtures.	
	FINE-GRAINED SOILS: Less than 50% retained on No. 200 sieve	SILT AND CLAY	LIQUID LIMIT LESS THAN 50	ML Inorganic silts, rock flour, clayey silts. CL Inorganic clays of low to medium plasticity, lean clays. OL Organic silt and organic silty clays of low plasticity.	
				LIQUID LIMIT 50 OR GREATER	MH Inorganic silts, clayey silts. CH Inorganic clays of high plasticity, fat clays. OH Organic clays of medium to high plasticity.
			HIGHLY ORGANIC SOILS		PT Peat, muck, and other highly organic soil.

MOISTURE CONTENT

DRY: Absence of moisture, dusty, dry to the touch
 DAMP: Some moisture but leaves no moisture on hand
 MOIST: Leaves moisture on hand
 WET: Visible free water, usually saturated

	PLASTICITY	DRY STRENGTH	DILATANCY	TOUGHNESS
ML	Non to Low	Non to Low	Slow to Rapid	Low, can't roll
CL	Low to Med.	Med. to High	None to Slow	Medium
MH	Med. to High	Low to Med.	None to Slow	Low to Med.
CH	Med. to High	High to V.High	None	High

STRUCTURE

STRATIFIED: Alternating layers of material or color > 6mm thick.
 LAMINATED: Alternating layers < 6mm thick.
 FISSURED: Breaks along definite fracture planes.
 SLICKENSIDED: Striated, polished, or glossy fracture planes.
 BLOCKY: Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
 LENSES: Has small pockets of different soils, note thickness.
 HOMOGENEOUS: Same color and appearance throughout.

LIST OF ABBREVIATION & EXPLANATIONS

SPT	Standard Penetration Test split barrel sampler	G	Grab sample
D&M	Dames and Moore sampler	MC	Moisture Content
LL	Atterberg Liquid Limit	MD	Moisture Density
PL	Atterberg Plastic Limit	UC	Unconfined Compressive Strength
PP	Pocket Penetrometer		
VS	Vane Shear		

TABLE A-1





Client: McDougal Brothers Inc	Project Name: Crestview Estates
Project Number: 20-255	Project Location: Lowell, Oregon
Date Started: Jun 02 2020	Completed: Jun 02 2020
Drilling Contractor: Branch Engineering Inc.	Logged By: SPR
Drilling Method: Test Pit Excavation	Checked By: RJD
Equipment: Metal Tracked Excavator	Latitude: _____
Hammer Type: _____	Longitude: _____
Notes: _____	Elevation: _____

Ground Water Levels

▼ _____




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




▼ _____

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.						
2		Brown-Gray Mottled Silty CLAY (CL), Blocky Texture, Moist, Medium Stiff, Scattered Fragments of Weathered Rock.						
3								
4		Gray-Brown BASALT, Heavily Weathered and Fractured, Wet at Contact, Dense to Very Dense.						
5								
6								
7		<u>Grab Sample From 2.5-feet BGS</u>						
8		In-Situ Moisture = 29.3%						
9		Shrink/Swell Potential = 40%						
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Plot Legend: ▲ SPT N-Value ◇ Fines Content ⊗ Moisture Content ●—■ Plastic Limit and Liquid Limit



Client: McDougal Brothers Inc **Project Name:** Crestview Estates
Project Number: 20-255 **Project Location:** Lowell, Oregon
Date Started: Jun 02 2020 **Completed:** Jun 02 2020 **Logged By:** SPR **Checked By:** RJD
Drilling Contractor: Branch Engineering Inc. **Latitude:** _____ **Longitude:** _____ **Elevation:** _____
Drilling Method: Test Pit Excavation **Ground Water Levels**
Equipment: Metal Tracked Excavator 
Hammer Type: _____ 
Notes: _____ 

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.						
2		Gray CLAY (CH), Colluvial, High Plasticity, Moist to Wet, Medium Stiff.						
3								
4		Brown-Gray Mottled CLAY (CH), Moist, Stiff, Scattered Fragments of Weathered Rock.						
5								
6		Gray-Brown BASALT, Heavily Weathered and Fractured, Wet at Contact, Dense to Very Dense.						
7								
8		Grab Sample From 2.0-feet BGS						
9		In-Situ Moisture = 32.3%						
10		Shrink/Swell Potential = 50%						
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Plot Legend: ▲ SPT N-Value ◇ Fines Content ⊗ Moisture Content ●—■ Plastic Limit and Liquid Limit



Client: McDougal Brothers Inc
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Project Number: 20-255
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Logged By: SPR **Checked By:** RJD
Drilling Contractor: Branch Engineering Inc.
Latitude: _____ **Longitude:** _____ **Elevation:** _____
Drilling Method: Test Pit Excavation
Ground Water Levels
Equipment: Metal Tracked Excavator
Hammer Type: _____
Notes: _____

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Medium Stiff, Scattered Rock Fragments.						
2		Brown-Gray Basalt, Completely Weathered to Weathered Rock, Dense to Very Dense.						
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Client: McDougal Brothers Inc **Project Name:** Crestview Estates
Project Number: 20-255 **Project Location:** Lowell, Oregon
Date Started: Jun 02 2020 **Completed:** Jun 02 2020 **Logged By:** SPR **Checked By:** RJD
Drilling Contractor: Branch Engineering Inc. **Latitude:** _____ **Longitude:** _____ **Elevation:** _____
Drilling Method: Test Pit Excavation **Ground Water Levels**
Equipment: Metal Tracked Excavator
Hammer Type: _____
Notes: _____

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.						
2		Brown-Gray Mottled CLAY (CL), Moist, Medium Stiff, Scattered						
3		Fragments of Weathered Rock.						
4								
5		Gray CLAY (CH), Colluvial, High Plasticity, Moist to Wet, Medium						
6		Stiff.						
7		Gray-Brown BASALT, Heavily Weathered and Fractured, Wet at						
8		Contact, Dense to Very Dense.						
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Plot Legend: ▲ SPT N-Value ◇ Fines Content ⊗ Moisture Content ●—■ Plastic Limit and Liquid Limit



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Date Started: Jun 02 2020 Completed: Jun 02 2020	Logged By: SPR Checked By: RJD
Drilling Contractor: Branch Engineering Inc.	Latitude: Longitude: Elevation:
Drilling Method: Test Pit Excavation	Ground Water Levels
Equipment: Metal Tracked Excavator	▼
Hammer Type:	▼
Notes:	▼

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.					10 20 30 40 50 60 70 80 90	
2		Gray CLAY (CH), Colluvial, High Plasticity, Moist to Wet, Medium Stiff.					10 20 30 40 50 60 70 80 90	
3		Gray Brown BASALT, Heavily Weathered and Fractured, Wet at Contact, Dense.						
4								
5								
6		<u>Grab Sample From 2.5-feet BGS</u>						
7		In-Situ Moisture = 42.3%						
8		Shrink/Swell Potential = 100%						
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Project Number: 20-255	Project Location: Lowell, Oregon
Date Started: Jun 02 2020 Completed: Jun 02 2020	Logged By: SPR Checked By: RJD
Drilling Contractor: Branch Engineering Inc.	Latitude: Longitude: Elevation:
Drilling Method: Test Pit Excavation	Ground Water Levels
Equipment: Metal Tracked Excavator	▼
Hammer Type:	▼
Notes:	▼

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.						
2		Gray CLAY (CH), Colluvial, High Plasticity, Moist to Wet, Medium Stiff.						
3								
4		Gray-Brown BASALT, Heavily Weathered and Fractured, Wet at Contact, Dense.						
5								
6		<u>Grab Sample From 2.0-feet BGS</u>						
7		In-Situ Moisture = 48.0%						
8		Shrink/Swell Potential = 110%						
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Project Number: 20-255	Project Location: Lowell, Oregon
Date Started: Jun 02 2020 Completed: Jun 02 2020	Logged By: SPR Checked By: RJD
Drilling Contractor: Branch Engineering Inc.	Latitude: Longitude: Elevation:
Drilling Method: Test Pit Excavation	Ground Water Levels
Equipment: Metal Tracked Excavator	▼
Hammer Type:	▼
Notes:	▼

Depth	Graphic	Material Description	Sample	Recovery % RQD	Blow Counts (N Value)	Pocket Pen. (tsf)	SPT N-Value : ▲	
							MC : ⊗	PL LL: ●—■
							10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
1		Dark Brown Silty CLAY (OL), Topsoil, Moist, Soft.						
2		Gray CLAY (CH), Colluvial, High Plasticity, Moist to Wet, Medium Stiff.						
3		Gray Brown BASALT, Heavily Weathered and Fractured, Wet at Contact, Dense.						
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Plot Legend: ▲ SPT N-Value ◇ Fines Content ⊗ Moisture Content ●—■ Plastic Limit and Liquid Limit

RECEIVED

RECEIVED

Lane 4928

19s/1w/11bc

STATE OF OREGON WATER WELL REPORT

AUG 12 1994

AUG 11 1994

(START CARD) # W69251

Instructions for completing this report are on the back of this form.

(1) OWNER:

Name Joel Goss Address 40535 Jasper-Lowell Rd. City Lowell State OR Zip 97452

(2) TYPE OF WORK

[X] New Well [] Deepening [] Alteration (repair/recondition) [] Abandonment

(3) DRILL METHOD:

[X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Other

(4) PROPOSED USE:

[X] Domestic [] Community [] Industrial [] Irrigation [] Thermal [] Injection [] Livestock [] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [] Yes [X] No Depth of Completed Well 205 ft. Explosives used [] Yes [X] No Type Amount

Table with columns: HOLE (Diameter, From, To), SEAL (Material, From, To), Sacks or pounds. Row 1: 10" 0 25' Cement 0 25' 8 sacks. Row 2: 6" 25' 205'

How was seal placed: Method [] A [] B [X] C [] D [] E [] Other

Backfill placed from ft. to ft. Material Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Casing: 6" +1 1/2' 25' 250 [X] [] [X] [] Liner: [] [] [] [] [] [] [] []

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

Table with columns: From, To, Slot size, Number, Diameter, Material, Tele/pipe size, Casing, Liner. Includes checkboxes for Perforations and Screens.

(8) WELL TESTS: Minimum testing time is 1 hour

Table with columns: Yield gal/min, Drawdown, Drill stem at, Time. Values: 4 1/2, 174', 205', 1 hr. Includes checkboxes for Pump, Bailer, Air, Flowing Artesian.

Temperature of water 57 Depth Artesian Flow Found Was a water analysis done? [] Yes By whom not tested Did any strata contain water not suitable for intended use? [] Too little [] Salty [] Muddy [] Odor [] Colored [] Other Depth of strata:

(9) LOCATION OF WELL by legal description:

County Lane Latitude Longitude Township 19S N or S Range 1W E or W. WM. Section 11 NE 1/4 NW 1/4 Tax Lot 301 Lot Block Subdivision Street Address of Well (or nearest address) 40535 Jasper-Lowell Rd Lowell, OR

(10) STATIC WATER LEVEL:

31 ft. below land surface. Date 7-26-94 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 45'

Table with columns: From, To, Estimated Flow Rate, SWL. Row 1: 45' 47' 2 1/2 gpm 31'. Row 2: 90' 92' 1 gpm 31'. Row 3: 145' 147' 1 gpm 31'.

(12) WELL LOG:

Table with columns: Material, From, To, SWL. Rows: Topsoil (0-2'), Clay (2'-13'), Brown & white sandstone (13'-205'), 31'.

Date started 7-25-94 Completed 7-26-94

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Mike D. WWC Number 1564 Date 7-26-94

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Casey Jones WWC Number 559 Date 7-26-94

RECEIVED

19S/1W/11
57203

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

SEP 21 1994

WATER RESOURCES DEPT. (START CARD) #

2
LANE
5099

Instructions for completing this report are on the last page of this form. SALEM, OREGON

(1) OWNER: Well Number _____
Name TUMAC INC
Address 38940 JASPER-LOWELL RD.
City FALL CREEK State OR Zip 97438

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 265 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
10"	0	19'	CEMENT	0	19'	5
6"	19'	265'				

How was seal placed: Method A B C D E
 Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 6"	+1	19'	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

Perforations Method SAW IN
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
175'	265'	5"	240	4 1/2		<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
25		265	1 hr.

Temperature of water 57° Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County LANE Latitude _____ Longitude _____
Township 19S N or S Range 1W E or W. WM. _____
Section 11 1/4 _____ 1/4 _____
Tax Lot 404 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 1181 INDUSTRIAL WAY
LOWELL, OR 97452 (NEW STREET)

(10) STATIC WATER LEVEL:
31 ft. below land surface. Date 9/13/94
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 233'

From	To	Estimated Flow Rate	SWL
233'	265'	25 GPM	31'

(12) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
BROWN CLAY & GRAVEL	0	1'	
BROWN SANDSTONE	1'	4'	
GRAY SANDSTONE	4'	39'	
BLUE GRAY BASALT	39'	140'	
RED BROWN CLAYSTONE	140'	233'	
GRAY BASALT	233'	265'	31'

Date started 9/12/94 Completed 9/13/94
(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed [Signature] WWC Number 578 Date 9/14/94

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed [Signature] WWC Number 126 Date 9/15/94

WATER WELL REPORT
STATE OF OREGON

150

RECEIVED

JUL 19 1984

State Well No. 195/1W-11d

LANE

State Permit No. 019558

PLEASE TYPE OR PRINT IN INK
WATER RESOURCES DEPT
SALEM, OREGON

(1) OWNER:

Name Doug Bellmore
Address P.O. Box 146
City Lowell State Oregon

(2) TYPE OF WORK (check):

New Well Deepening Reconditioning Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary Air Driven Domestic Industrial Municipal
Rotary Mud Dug Irrigation Test Well Other
 Bored Thermal Withdrawal ReInjection

(4) PROPOSED USE (check):

(5) CASING INSTALLED:

Steel Plastic
Threaded Welded

" Diam. from ft. to ft. Gauge
" Diam. from ft. to ft. Gauge

LINER INSTALLED:

" Diam. from ft. to ft. Gauge

(6) PERFORATIONS:

Perforated? Yes No

Type of perforator used
Size of perforations in. by in.

..... perforations from ft. to ft.
..... perforations from ft. to ft.
..... perforations from ft. to ft.

(7) SCREENS:

Well screen installed? Yes No

Manufacturer's Name Model No.
Type
Diam. Slot Size Set from ft. to ft.
Diam. Slot Size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? Yes No If yes, by whom?
..... gal./min. with ft. drawdown after hrs.
.....
Air test 5 gal./min. with drill stem at 475 ft. 1 hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water 51 Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Special standards: Yes No

Well seal—Material used Cement
Well sealed from land surface to 39 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 10 sacks
How was cement grout placed? Method "C"

Was pump installed? no Type HP Depth ft.
Was a drive shoe used? Yes No Plugs Size: location ft.
Did any strata contain unusable water? Yes No
Type of Water? depth of strata
Method of sealing strata off
Was well gravel packed? Yes No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Lane Driller's well number 1890 - 650/CP
1/4 SE 1/4 Section 11 T. 19 S. R. 1 W. W.M.
Tax Lot # 1000 Lot Blk Subdivision
Address at well location: 850 North Moss
Powell, Oregon

(11) WATER LEVEL: Completed well.

Depth at which water was first found 160 ft.
Static level 130 ft. below land surface. Date 6/6/84
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 495 ft. Depth of completed well 495 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	3	
Brown Clay	3	31	
Blue Shale	31	55	
Brown Shale	55	60	
Blue Shale	60	155	
Blue Brown Shale	155	160	130
Lt. Blue Shale	160	170	
Blue Shale	170	245	
Blue Brown Shale	245	255	
Blue Basalt	255	315	
Blue Red Shale	315	335	
Blue Basalt	335	380	
Lt. Blue Shale	380	392	
Dark Blue Shale	392	495	130

Work started 5/22/ 19 84 Completed 6/6/ 19 84
Date well drilling machine moved off of well 6/7/ 19 84

(unbonded) Water Well Constructor Certification (if applicable):
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] James J. Carter Date 6/6/ 19 84

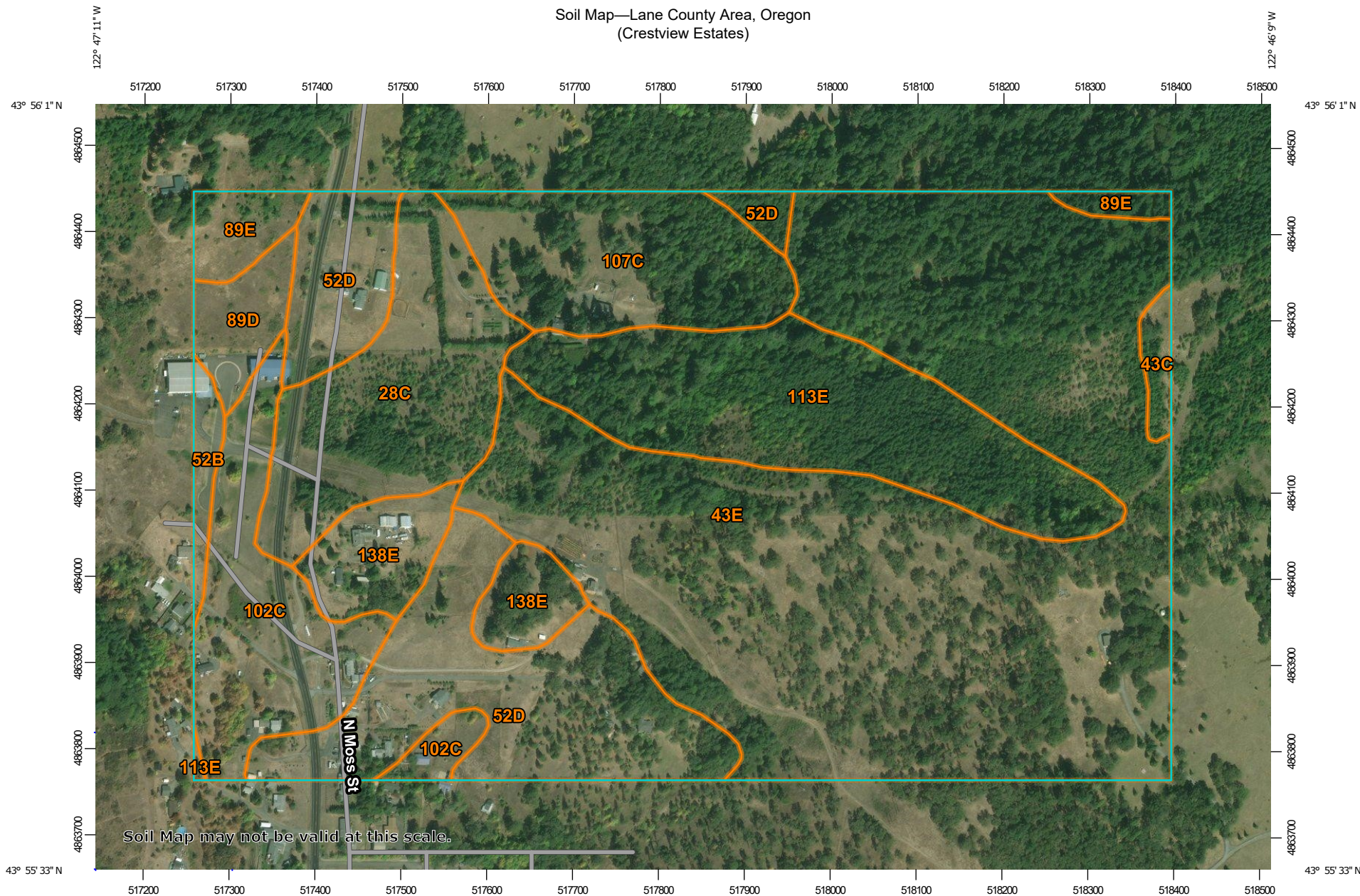
Bonded Water Well Constructor Certification:
Bond U-0307869 Issued by: United Pacific
(number) Surety Company Name
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name Carter's Drilling & Pump Service
(Person, firm or corporation) (Type or print)
Address P.O. Box 46 Springfield, Oregon 97477
[Signed] James J. Carter Water Well Constructor
Date 6/6/ 19 84

NOTICE TO WATER WELL CONSTRUCTOR
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,
SALEM, OREGON 97310
within 30 days from the date of well completion.

SP#45292-690

Soil Map—Lane County Area, Oregon
(Crestview Estates)



Soil Map may not be valid at this scale.

Map Scale: 1:6,260 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters


0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lane County Area, Oregon
Survey Area Data: Version 16, Sep 10, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 18, 2013—Sep 9, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28C	Chehulpum silt loam, 3 to 12 percent slopes	16.3	8.4%
43C	Dixonville-Philomath-Hazelair complex, 3 to 12 percent slopes	1.3	0.7%
43E	Dixonville-Philomath-Hazelair complex, 12 to 35 percent slopes	83.6	43.3%
52B	Hazelair silty clay loam, 2 to 7 percent slopes	1.6	0.8%
52D	Hazelair silty clay loam, 7 to 20 percent slopes	25.9	13.4%
89D	Nekia silty clay loam, 12 to 20 percent slopes	3.5	1.8%
89E	Nekia silty clay loam, 20 to 30 percent slopes	3.5	1.8%
102C	Panther silty clay loam, 2 to 12 percent slopes	14.1	7.3%
107C	Philomath silty clay, 3 to 12 percent slopes	13.5	7.0%
113E	Ritner cobbly silty clay loam, 12 to 30 percent slopes	22.2	11.5%
138E	Witzel very cobbly loam, 3 to 30 percent slopes	7.5	3.9%
Totals for Area of Interest		193.0	100.0%

Lane County Area, Oregon

113E—Ritner cobbly silty clay loam, 12 to 30 percent slopes

Map Unit Setting

National map unit symbol: 233t

Elevation: 400 to 1,800 feet

Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Not prime farmland

Map Unit Composition

Ritner and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ritner

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Interfluve, nose slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Cobbly colluvium derived from basic igneous rock

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material

H₁ - 1 to 8 inches: cobbly silty clay loam

H₂ - 8 to 33 inches: very cobbly silty clay loam

H₃ - 33 to 37 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 30 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (K_{sat}):

Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Forage suitability group: Well Drained > 15% Slopes
(G002XY001OR)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lane County Area, Oregon
Survey Area Data: Version 16, Sep 10, 2019

Lane County Area, Oregon

43E—Dixonville-Philomath-Hazelair complex, 12 to 35 percent slopes

Map Unit Setting

National map unit symbol: 236y

Elevation: 400 to 1,800 feet

Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Dixonville and similar soils: 35 percent

Philomath and similar soils: 30 percent

Hazelair and similar soils: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dixonville

Setting

Landform: Hills

Landform position (two-dimensional): Summit, toeslope, shoulder

Landform position (three-dimensional): Base slope, interfluve, nose slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium and residuum derived from basalt

Typical profile

H1 - 0 to 14 inches: silty clay loam

H2 - 14 to 26 inches: silty clay

H3 - 26 to 36 inches: weathered bedrock

Properties and qualities

Slope: 12 to 35 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Forage suitability group: Well Drained > 15% Slopes
(G002XY001OR)
Hydric soil rating: No

Description of Philomath

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, toeslope, summit
Landform position (three-dimensional): Base slope, interfluve, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum derived from basic igneous rock

Typical profile

H1 - 0 to 6 inches: cobbly silty clay
H2 - 6 to 14 inches: cobbly silty clay
H3 - 14 to 24 inches: weathered bedrock

Properties and qualities

Slope: 12 to 35 percent
Depth to restrictive feature: 12 to 20 inches to paralithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat):
Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Hazelair

Setting

Landform: Hills
Landform position (two-dimensional): Summit, toeslope, shoulder
Landform position (three-dimensional): Base slope, interfluve, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from sedimentary rock

Typical profile

H1 - 0 to 11 inches: silty clay loam
H2 - 11 to 15 inches: silty clay
H3 - 15 to 36 inches: clay
H4 - 36 to 46 inches: weathered bedrock

Properties and qualities

Slope: 12 to 35 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very
low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lane County Area, Oregon

Survey Area Data: Version 16, Sep 10, 2019

Lane County Area, Oregon

28C—Chehulpum silt loam, 3 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2363

Elevation: 400 to 1,200 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Not prime farmland

Map Unit Composition

Chehulpum and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chehulpum

Setting

Landform: Low hills

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Nose slope, interfluve,
crest

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Colluvium derived from sedimentary rock

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 13 inches: clay loam

H3 - 13 to 23 inches: weathered bedrock

Properties and qualities

Slope: 3 to 12 percent

Depth to restrictive feature: 10 to 20 inches to paralithic bedrock

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D

Forage suitability group: Well drained < 15% Slopes
(G002XY002OR)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lane County Area, Oregon
Survey Area Data: Version 16, Sep 10, 2019

APPENDIX B:

Recommended Earthwork Specifications



GEOTECHNICAL SPECIFICATIONS

General Earthwork

1. All areas where structural fills, fill slopes, structures, or roadways are to be constructed shall be stripped of organic topsoil and cleared of surface and subsurface deleterious material, including but limited to vegetation, roots, or other organic material, undocumented fill, construction debris, soft or unsuitable soils as directed by the Geotechnical Engineer of Record. These materials shall be removed from the site or stockpiled in a designated location for reuse in landscape areas if suitable for that purpose. Existing utilities and structures that are not to be used as part of the project design or by neighboring facilities, shall be removed or properly abandoned, and the associated debris removed from the site.
2. Upon completion of site stripping and clearing, the exposed soil and/or rock shall be observed by the Geotechnical Engineer of Record or a designated representative to assess the subgrade condition for the intended overlying use. Pits, depressions, or holes created by the removal of root wads, utilities, structures, or deleterious material shall be properly cleared of loose material, benched and backfilled with fill material approved by the Geotechnical Engineer of Record compacted to the project specifications.
3. In structural fill areas, the subgrade soil shall be scarified to a depth of 4-inches, if soil fill is used, moisture conditioned to within 2% of the materials optimum moisture for compaction, and blended with the first lift of fill material. The fill placement and compaction equipment shall be appropriate for fill material type, required degree of blending, and uncompacted lift thickness. Assuming proper equipment selection, the total uncompacted thickness of the scarified subgrade and first fill lift shall not exceed 8-inches, subsequent lifts of uncompacted fill shall not exceed 8-inches unless otherwise approved by the Geotechnical Engineer of Record. The uncompacted lift thickness shall be assessed based on the type of compaction equipment used and the results of initial compaction testing. Fine-grain soil fill is generally most effectively compacted using a kneading style compactor, such as a sheeps-foot roller; granular materials are more effectively compacted using a smooth, vibratory roller or impact style compactor.
4. All structural soil fill shall be well blended, moisture conditioned to within 2% of the material's optimum moisture content for compaction and compacted to at least 90% of the material's maximum dry density as determined by ASTM Method D-1557, or an equivalent method. Soil fill shall not contain more than 10% rock material and no solid material over 3-inches in diameter unless approved by the Geotechnical Engineer of Record. Rocks shall be evenly distributed throughout each lift of fill that they are contained within and shall not be clumped together in such a way that voids can occur.
5. All structural granular fill shall be well blended, moisture conditioned at or up to 3% above of the material's optimum moisture content for compaction and compacted to at least 90% of the material's maximum dry density as determined by ASTM Method D-1557, or an equivalent method. 95% relative compaction may be required for pavement base rock or in upper lifts of the granular structural fill where a sufficient thickness of the fill section allows for higher compaction percentages to be achieved. The granular fill shall not contain solid particles over 2-inches in diameter unless special density testing methods or proof-rolling is approved by the Geotechnical Engineer of Record. Granular fill is generally considered to be a crushed aggregate with a fracture surface of at least 70% and a maximum size not exceeding 1.5-inches in diameter, well-graded with less than 10%, by weight, passing the No. 200 Sieve.
6. Structural fill shall be field tested for compliance with project specifications for every 2-feet in vertical rise or 500 cy placed, whichever is less. In-place field density testing shall be performed by a competent individual, trained in the testing and placement of soil and aggregate fill placement, using either ASTM Method D-1556/4959/4944 (Sand Cone), D-6938 (Nuclear Densometer), or D-2937/4959/4944 (Drive Cylinder). Should the fill materials not be suitable for testing by the above methods, then observation of placement, compaction and proof-rolling with a loaded 10 cy dump-truck, or equivalent ground pressure equipment, by a trained individual may be used to assess and document the compliance with structural fill specifications.

Utility Excavations

1. Utility excavations are to be excavated to the design depth for bedding and placement and shall not be over-excavated. Trench widths shall only be of sufficient width to allow placement and proper construction of the utility and backfill of the trench.
2. Backfilling of a utility trench will be dependent on its location, use, depth, and utility line material type. Trenches that are required to meet structural fill specifications, such as those under or near buildings, or within pavement areas, shall have granular material strategically compacted to at least the spring-line of the utility conduit to mitigate pipeline movement and deformation. The initial lift thickness of backfill overlying the pipeline will be dependent on the pipeline material, type of backfill, and the compaction equipment, so as not to cause deflection or deformation of the pipeline. Trench backfill shall conform to the General Earthwork specifications for placement, compaction, and testing of structural fill.

Geotextiles

1. All geotextiles shall be resistant to ultraviolet degradation, and to biological and chemical environments normally found in soils. Geotextiles shall be stored so that they are not in direct sunlight or exposed to chemical products. The use of a geotextile shall be specified and shall meet the following specification for each use.

Subgrade/Aggregate Separation

Woven or nonwoven fabric conforming to the following physical properties:

• Minimum grab tensile strength	ASTM Method D-4632	180 lb
• Minimum puncture strength (CBR)	ASTM Method D-6241	371 lb
• Elongation	ASTM Method D-4632	15%
• Maximum apparent opening size	ASTM Method D-4751	No. 40
• Minimum permittivity	ASTM Method D-4491	0.05 s ⁻¹

Drainage Filtration

Woven fabric conforming to the following physical properties:

• Minimum grab tensile strength	ASTM Method D-4632	110 lb
• Minimum puncture strength (CBR)	ASTM Method D-6241	220 lb
• Elongation	ASTM Method D-4632	50%
• Maximum apparent opening size	ASTM Method D-4751	No. 40
• Minimum permittivity	ASTM Method D-4491	0.5 s ⁻¹

Geogrid Base Reinforcement

Extruded biaxially or triaxially oriented polypropylene conforming to the following physical properties:

• Peak tensile strength lb/ft	ASTM Method D-6637	925
• Tensile strength at 2% strain lb/ft	ASTM Method D-6637	300
• Tensile strength at 5% strain lb/ft	ASTM Method D-6637	600
• Flexural Rigidity	ASTM Method D-1388	250,000 mg-cm
• Effective Opening Size rock size	ASTM Method D-4751	1.5x

HEARLEY Henry O

From: Matt Wadlington <Mwadlington@civilwest.net>
Sent: February 26, 2021 8:42 AM
To: HEARLEY Henry O; Max Baker; CAUDLE Jeremy
Cc: Lon Dragt
Subject: RE: Planning Commission Materials for March 3, 2021

CAUTION: This email originated from outside the organization. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi guys,

I can confirm that in most developments sidewalk is put in with the house. However, since this was a condition, I think the City has every right to ask for a bond to cover this work. If sidewalks aren't complete in 3 years, then the City can use the bond to do the work.

--

Matt Wadlington, PE, Principal
Willamette Valley Regional Manager
d 541.982.4373 | c 520.444.4220



Civil West Engineering Services, Inc.
213 Water Ave. NW, Suite 100, Albany, OR 97321
p 541.223.5130
www.civilwest.com

From: HEARLEY Henry O <HHEARLEY@Lcog.org>
Sent: Friday, February 26, 2021 8:34 AM
To: Matt Wadlington <Mwadlington@civilwest.net>; Max Baker <mbaker@ci.lowell.or.us>; CAUDLE Jeremy <JCaudle@ci.lowell.or.us>
Cc: Lon Dragt <dragt2300@gmail.com>
Subject: FW: Planning Commission Materials for March 3, 2021

Max, Matt and Jeremy:

See the note below as to why they'll be requesting to put in sidewalks at the time of home development. You can expect them to request this at the March 3 PC meeting. If allowed, this will be a modification to the condition for sidewalks that say they need to be in place before final plat approval.

Henry

From: ANTHONY J FAVREAU <favreaugroup@msn.com>
Sent: February 26, 2021 8:28 AM
To: HEARLEY Henry O <HHEARLEY@Lcog.org>
Subject: FW: Planning Commission Materials for March 3, 2021

CAUTION: This email originated from outside the organization. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Henry,
I am not sure if you got this, but below are the reasons for waiting until after the homes are built to put in the sidewalk.

Thanks,

Tony Favreau
541-683-7048

From: [Daniel Fisher](#)
Sent: Thursday, February 25, 2021 6:07 PM
To: [Toney Favreau](#)
Subject: Re: Planning Commission Materials for March 3, 2021

On developments like these the sidewalks are almost always put in by the home owner. This project has no green space behind the curb and no predesignated driveway. This portion of the sidewalk with its street drains, aprons and driveway will all be decided by the future home owner. Also any sidewalk that is completed at this time would run a significant risk of damage during the excavation and building faze. With dump trucks, cement trucks and other heavy machinery there would be no way to protect them from significant damage. Typically the sidewalk is one of the very last things to be completed before final. This also insures the city the best possible product and the ability to control that product with it being a required sign off for a final and occupancy. Most building permits issued by a city have the sidewalks as one of their sign offs. If for some reason this is not the case and or the city would like. We can find a way to include this provision in the recorded documentation with this project.

On Feb 25, 2021, at 5:23 PM, ANTHONY J FAVREAU <favreaugroup@msn.com> wrote:

I will forward it to you when I get it.

Thanks,
Tony Favreau
541-683-7048

From: Ron Derrick <rond@branchengineering.com>
Sent: Thursday, February 25, 2021 5:21:57 PM
To: 'ANTHONY J FAVREAU' <favreaugroup@msn.com>
Subject: RE: Planning Commission Materials for March 3, 2021

Ok, send me meeting link

Ron Derrick PE, GE

Branch Engineering Inc
Office 503-779-2577
Cell 541-913-0220

From: ANTHONY J FAVREAU <favreaugroup@msn.com>
Sent: Thursday, February 25, 2021 5:18 PM
To: Ron Derrick <rond@branchengineering.com>
Subject: RE: Planning Commission Materials for March 3, 2021

It is just a formality. They just want to hear the site is suitable.

Thanks,
Tony Favreau
541-683-7048

From: [Ron Derrick](#)
Sent: Thursday, February 25, 2021 5:17 PM
To: '[ANTHONY J FAVREAU](#)'
Subject: RE: Planning Commission Materials for March 3, 2021

What's the issue, isn't that site done? Little late for planning commission isn't it?

Ron Derrick PE, GE
Branch Engineering Inc
Office 503-779-2577
Cell 541-913-0220

From: ANTHONY J FAVREAU <favreaugroup@msn.com>
Sent: Thursday, February 25, 2021 5:09 PM
To: Ron Derrick <rond@branchengineering.com>
Subject: RE: Planning Commission Materials for March 3, 2021

Crestview Estates

Thanks,
Tony Favreau
541-683-7048

From: [Ron Derrick](#)
Sent: Thursday, February 25, 2021 5:06 PM
To: '[ANTHONY J FAVREAU](#)'
Subject: RE: Planning Commission Materials for March 3, 2021

For what project?

Ron Derrick PE, GE
Branch Engineering Inc
Office 503-779-2577
Cell 541-913-0220

From: ANTHONY J FAVREAU <favreaugroup@msn.com>
Sent: Thursday, February 25, 2021 5:05 PM
To: Ron Derrick <rond@branchengineering.com>
Cc: Daniel Fisher <daniel@mcdougalbros.com>
Subject: FW: Planning Commission Materials for March 3, 2021

Ron,

We need you to attend the zoom meeting for a brief presentation of your report. March 3, 7 – 8 pm. Let me know if this is a problem.

Thanks,
Tony Favreau
541-683-7048

From: [HEARLEY Henry O](#)
Sent: Thursday, February 25, 2021 4:47 PM
To: [CAUDLE Jeremy](#)
Cc: [ANTHONY J FAVREAU](#); [CALLISTER Jacob \(LCOG\)](#)
Subject: RE: Planning Commission Materials for March 3, 2021

Thanks, Jeremy. I just got off the phone with the applicant's engineer – they're going to get back to us ASAP to see if that's a go.

Henry

From: Jeremy Caudle <JCaudle@ci.lowell.or.us>
Sent: February 25, 2021 4:46 PM
To: HEARLEY Henry O <HHEARLEY@Lcog.org>
Subject: RE: Planning Commission Materials for March 3, 2021

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Henry:

I've decided to wait until Monday to send out agendas. I know there was something about putting a geotechnical report on for next week.

If they still want to do that, I get can it all scheduled and sent out on Monday. Just let me know.

--JC

From: HEARLEY Henry O <HHEARLEY@Lcog.org>
Sent: Thursday, February 25, 2021 4:34 PM
To: CALLISTER Jacob (LCOG) <jcallister@lcoog.org>; Jeremy Caudle <JCaudle@ci.lowell.or.us>; Lon Dragt <dragt2300@gmail.com>
Subject: RE: Planning Commission Materials for March 3, 2021

Checking now..

From: CALLISTER Jacob (LCOG) <jcallister@lcog.org>
Sent: February 25, 2021 1:25 PM
To: CAUDLE Jeremy <JCaudle@ci.lowell.or.us>; Lon Dragt <dragt2300@gmail.com>
Cc: HEARLEY Henry O <HHEARLEY@Lcog.org>
Subject: Re: Planning Commission Materials for March 3, 2021

I think that Henry said there was an application related item.

Can you confirm or deny Henry?

Jake

<image001.png>

From: Jeremy Caudle <JCaudle@ci.lowell.or.us>
Sent: Thursday, February 25, 2021 1:18 PM
To: CALLISTER Jacob (LCOG) <jcallister@lcog.org>; Lon Dragt <dragt2300@gmail.com>
Cc: HEARLEY Henry O <HHEARLEY@Lcog.org>
Subject: RE: Planning Commission Materials for March 3, 2021

CAUTION: This email originated from outside the organization. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Got it. Do we have any land use application items to put on the agenda?

If so, let me know. I'm hoping to get everything out today.

Thanks!~

Jeremy

From: CALLISTER Jacob (LCOG) <jcallister@lcog.org>
Sent: Thursday, February 25, 2021 1:13 PM
To: Jeremy Caudle <JCaudle@ci.lowell.or.us>; Lon Dragt <dragt2300@gmail.com>
Cc: HEARLEY Henry O <HHEARLEY@Lcog.org>
Subject: Planning Commission Materials for March 3, 2021

Hello Chair Dragt and Jeremy,

Attached are materials for the March 3rd Planning Commission meeting.

Please share with PC members.

I assume that since we are joining your PC meeting, you will have a link for us (and PC members).

Henry and I will be supporting the meeting and plan to share a PowerPoint – focused on the Code Amendments themselves.

Cheers,

Jacob Callister
541 682-4114

Agenda Item Sheet

City of Lowell Planning Commission

Type of item:	Text Amendment
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Item title/recommended action:

Feedback and direction on City of Lowell development code update project.

Justification or background:

The City, in collaboration with Lane Council of Governments and ODOT's Transportation and Growth Management Program, is preparing development code updates as part of the 2019 "Downtown Master Plan." Since this project involves amendments to the City's development code, Planning Commission review and recommendations are required prior to City Council adoption. Staff are presenting updates on this project for Planning Commission feedback and direction.

Attachments:

"Lowell Development Code Update: Introduction to Code Concepts" memo from LCOG, dated March 3, 2021

Code amendment summary table

Meeting date:	03/03/2021
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Lowell Planning Commission Agenda Item Summary

TO: Lowell Planning Commission
DATE: March 3, 2021
FROM: Lane Council of Governments
Jacob Callister, Principal Planner, 541 682-4114, jcallister@lcog.org
Henry Hearley, Associate Planner, 541 682-3089, hhearley@lcog.org
RE: **Lowell Development Code Update: Introduction to Code Concepts**

I. Introduction/Background

The City of Lowell secured grant funding through the Oregon Transportation and Growth Management (TGM) Program (a partnership between Oregon Department of Transportation and Oregon Department of Land Conservation and Development) to amend the City of Lowell’s Land Development Code and implement the recently adopted Downtown Master Plan (2019) and a number of other amendments.

The Downtown Master Plan lays out the community’s vision for Lowell’s downtown and enumerates goals, patterns, and policies. It establishes a “Regulating Plan” which will guide the realization of the vision and goals through Lowell’s Development Code. This effort to incorporate the Plan into the City’s Development Code is among the first of many specific projects outlined over the next 15 years in the Plan.

The materials presented in this meeting have been vetted by an appointed Lowell Development Code Committee, and was presented at a virtual open house in January (held open through early February – a recording of which is available at: www.ci.lowell.or.us/code-amendments)

II. Transportation and Growth Management (TGM)

The Project supports the TGM mission of integrated land use and transportation planning. In May of 2019, the Lowell City Council passed and signed a letter of resolution expressing the desire for specific TGM assistance and noted support of TGM principles, including promoting a transportation system and development pattern that results in a balanced, multi-modal system that enhances opportunities for people to walk, bike, and use transit.

Consistent with TGM principles, the Downtown Master Plan guides the City to “increase walkability, improve connectivity to . . . parks, encourage housing diversity, and link community benefits to all aspects of development” (Downtown Master Plan, p. 6).

III. Scope of Work

The scoped objective of this Project is to update the Development Code as follows:

- Implement the Downtown Master Plan (with the exception of parking, noted below), including:
 - *Zoning map updates*
 - *Building standards*
 - *Street section standards*

- *Site Plan Review criteria*
- *Parking standards (except that minimum off-street parking for residential uses will be evaluated for potential decrease)*
- *Other implementation measures required by the Downtown Master Plan*
- Evaluate minimum lot sizes for potential reduction
- Create mixed-use development standards
- Create development standards for middle housing types (including cottage housing, townhomes, and accessory dwelling units)
- Amend language for access and driveway standards to improve clarity and specificity
- Add or revise definitions for “half-street,” “development of property,” “structure.”
- Reconcile inconsistent language for “non-conforming structures.”
- Streamline application procedures by establishing application types I-IV.
- Clarify setbacks in all zoning districts.
- Clarify driveway and flag lot paving requirements.
- Reconcile inconsistencies and clarify language for Section 9.516 (Access) and Section 9.517 (Streets), including half streets.
- Allow City Administrator to issue determinations on non-conformities.
- Establish procedure for lot consolidation.
- Address parking and storage of recreational vehicles and trailers in the public right-of-way.
- Up to five graphics to illustrate standards in the Development Code.

IV. Key Update Themes

LCOG and City staff have been working on update concepts through the Fall. Attachment A is a first draft of the Code Amendment Summary Table. It outlines proposed update concepts in the context of existing code language. You are encouraged to review this document. Following are several key concepts that staff feel would be good to focus on at the Code Committee meeting on December 14th. Any topic (beyond this list) is open for discussion.

- **Development standards for downtown zones will focus on form, not just use.** The Downtown Development Plan establishes a vision for downtown Lowell as “a quaint downtown with a central park, multi-story mixed use buildings, a variety of homes, and wide sidewalks connecting to Dexter Lake’s recreational opportunities” (Downtown Master Plan, p. 20). In order to achieve the walkable, quaint downtown envisioned in the Plan, Code amendments will be guided by the Downtown Regulating Plan, which establishes several new downtown zones and provides specific building types and layouts allowed in each. This focus on built form rather than use will help guide future development to create a desired aesthetic, sense of place and an active town center in downtown Lowell.
- **This project will address the need for new housing types in Lowell.** New housing types and increased housing choice will help Lowell residents to age in place and provide important community members like firefighters and school employees opportunities to live in the community in which they work. Code amendments that remove barriers and allow relevant needed housing to be developed in Lowell are needed as part of this process. Increasing housing diversity in Lowell will ensure that community members continue to have options as their needs change.

- **Concepts presented in the Code Matrix are not final.** Although the scope of work, Downtown Master Plan and City Council Resolution provide a solid framework for Lowell’s Code Updates, the Code Amendment Summary Table itself includes general concepts and some initial draft language for the committee to consider. We will be working to incorporate your feedback as we develop these concepts into the final Codes over the next few months. Once the concepts are finalized, we will work to ensure that the new and updated Codes are integrated seamlessly into the existing Land Development Code and that no inconsistencies or conflicts remain.
- **Code amendments are intended to streamline, simplify, and clarify.** In some cases, this may involve additional Code language, defined terms, procedures, or zones that help to clarify and simplify implementation of the Code. Graphics will also be incorporated into the Code to help illustrate key elements of the Code to ensure that it is straightforward, user-friendly, and leads to the kind of development described in adopted plans and desired by the community.

LCOG, TGM and City of Lowell staff will introduce the Planning Commission to the Amendment Summary Table (Attachment A) in more detail and will be available to answer questions and discuss concerns. The goal of the meeting will be to obtain Planning Commission feedback and direction on the next step of using the Amendment Summary Table to draft up the actual amendments. We will return to the group with draft those draft amendments in Spring, 2021.

CITY OF LOWELL CODE AMENDMENT SUMMARY TABLE – Community Meeting #1 Version (January 2021)

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
<p>Section 9.202 Pre-Application Conference with Affected Agencies</p>	<p><i>Within 30 days after the pre-application consultation, the City Administrator may schedule a pre-application conference with the applicant and representatives of the City and other affected public and private agencies to further clarify the conditions and requirements necessary in the preparation of the application...</i></p>	<p><u>(a) Changes in the law. Due to possible changes in federal, state, regional, and local law, the applicant is responsible for ensuring that the application complies with all applicable laws on the day the application is deemed complete.</u></p> <p><u>(b) Disclaimer. Failure of the Planning Official or City Administrator, or his or her designee to provide any of the information required for a pre-application consultation, as outlined in Section 9.201, shall not constitute a waiver of any of standards, criteria or requirements for the application.</u></p>	<p><i>Reasoning: Best Practice. Increasing clarity and reducing City liability.</i></p>
<p>Section 9.203 Application Procedure</p>	<p><i>(n) The specific requirements and decision process for each application procedure are contained in the Sections of this Article which follow.</i></p>	<p>(n) The specific requirements and decision process for each application procedure are contained in <u>Table 1 below the Sections of this Article which follow.</u></p> <p><u>Table 1 Summary of Approvals by Type of Review Procedure</u> <i>(table created in separate word doc)</i></p>	<p><i>Source: Oregon Small City Model Code.</i></p> <p><i>Reasoning: Best Practice. Increases process clarity and convenience. Is increasingly common among Oregon communities.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><u>(m) All land use and development permit applications and approvals shall be decided by using the procedures contained in Table 1. The procedure “type” assigned to each application governs the decision-making process for that permit or approval.</u></p> <p><u>(1) Type I Procedure (Administrative). Type I decisions are made by the City Administrator, or someone he or she officially designates, without public notice and without a public hearing. The Type I procedure is used when there are clear and objective approval criteria and applying City standards and criteria that requires no use of discretion. Type I process is further outlined in Section 9.206.</u></p> <p><u>(2) Type II Procedure (Administrative). Type II decisions are made by the City Administrator or his or her designee, with public notice, and an opportunity for a public hearing if appealed. Type II decisions may be heard by Planning Commission. The appeal of a Type II decision is heard by the Planning Commission. Type II process is further</u></p>	<p><i>Table 1 will outline what applications fall under which Type process. This is currently a work in progress. Table 1 will be developed further by the Code Committee and shared with the Community at the next Community Meeting.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><u>outlined in Section 9.206.</u></p> <p><u>(3) Type III Procedure (Quasi-Judicial). Type III decisions are made by the Planning Commission after a public hearing, with appeals reviewed by the City Council. Type III decisions generally use discretionary approval criteria. The Type III process is further outlined in Section 9.206.</u></p> <p><u>(4) Type IV Procedure (Legislative). Type IV procedures apply to legislative matters. Legislative matters involved the creation, revision, or large-scale implementation of public policy (e.g., adoption of land use regulations, zone changes, and comprehensive plan amendments that apply to entire districts, not just one property). Type IV matters are considered initially by the Planning Commission for a recommendation, with a final decision made by the City Council. Appeals are submitted to the Oregon State Land Use Board of Appeals (LUBA). The Type IV process is further outlined in Section 9.206.</u></p>	

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
<p><u>Section 9.206</u> <u>Application Types</u> <u>Process</u></p>	<p><i>New Section to outline process and procedures for all Types of application. This will replace Sections 9.306 and 9.307.</i></p>	<p><i>New Section to outline process and procedures for all Types of application. This will replace Sections 9.306 and 9.307. Will need to cross check and remove all previous references to Sections 9.306 and 9.307. Coburg has a good starting point for draft language.</i></p>	<p><i>Reasoning: Best Practices. This section will further explain the Types process.</i></p>
<p><u>Section 9.211</u> <u>Property Line</u> <u>Adjustments and</u> <u>Lot</u> <u>Consolidations</u></p>	<p><i>(a) Purpose. A property line adjustment is a relocation of a common property line between abutting properties when both parties agree. A property line adjustment shall not create an additional lot or parcel, reduced a lot or parcel in size below the minimum size specified for the zone, or create a violation of development standards on either lot or parcel.</i></p> <p><i>(b) Application. A property line adjustment may be submitted for review by the City Administrator without preliminary consultation, a land division conference, or a hearing where the adjustment complies with Section 9.212 and 9.213...</i></p>	<p><i>(a) Purpose. A property line adjustment is a relocation of a common property line between abutting properties when both parties agree. A property line adjustment shall not create an additional lot or parcel, reduced a lot or parcel in size below the minimum size specified for the zone, or create a violation of development standards on either lot or parcel. <u>A lot consolidation is the legal incorporation of two or more existing parcels of land to form a single, larger parcel.</u></i></p> <p><i>(b) Application. A property line adjustment or <u>lot consolidation</u> may be submitted for review by the City Administrator without preliminary consultation, a land division conference, or a hearing where the adjustment complies with Section 9.212 and 9.213.</i></p>	<p><i>Reasoning: Best Practices. Lot consolidations are very similar in nature to lot line adjustments but are often not explicitly noted in codes. This addition increases clarity and convenience for applicants and the City.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
<p>Section 9.212 Property Line Adjustment and Lot Consolidation Requirements</p>	<p><i>All property line adjustment requests shall contain the following information:</i></p> <p>...</p> <p><i>(c) The title "Property Line Adjustment for,," the date and northpoint.</i></p> <p>...</p> <p><i>(g) Existing conditions for land within the properties to be adjusted:</i></p> <p>...</p> <p><i>(c) The approximate location of buildings, public and private utilities, drainage ways and other significant features that would affect development of the adjusted properties.</i></p>	<p>All property line adjustment and or lot consolidation requests shall contain the following information:</p> <p>(c) The title "Property Line Adjustment for,," or "Lot Consolidation for...," the date and northpoint.</p> <p>(g) Existing conditions for land within the properties to be adjusted:</p> <p>(3)-(e) The approximate location of buildings, public and private utilities, drainage ways and other significant features that would affect development of the adjusted properties.</p>	
<p>Section 9.213 Decision Criteria</p>	<p><i>A Property Line Adjustment may be approved based upon compliance with the submittal requirements specified above and the following findings:</i></p> <p><i>(a) The adjustment will not create an additional unit of land.</i></p> <p><i>(b) The adjustment will not create a land-locked parcel.</i></p>	<p>A Property Line Adjustment may be approved based upon compliance with the submittal requirements specified above and the following findings:</p> <p><u>The City Administrator shall approve or deny a request for a Property Line Adjustment or Lot Consolidation in writing, based on all of the following criteria:</u></p>	<p>Best Practices.</p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p><i>(c) The existing unit of land reduced in size by the adjustment complies with applicable City Ordinances and this Code and will not create a non-conforming lot or non-conforming development.</i></p> <p><i>(d) The adjustment shall comply with any previous Conditions of Approval attached to the properties to be adjusted.</i></p> <p><i>(e) The adjustment shall comply with all state and county recording requirements.</i></p>	<p><u>(a) Property Line Adjustment</u></p> <p>(a) (1) The adjustment will not create an additional unit of land.</p> <p>(b) (2) The adjustment will not create a land-locked parcel.</p> <p>(c) (3) The existing unit of land reduced in size by the adjustment complies with applicable City Ordinances and this Code and will not create a non-conforming lot or non-conforming development.</p> <p>(d) (4) The adjustment shall comply with any previous Conditions of Approval attached to the properties to be adjusted.</p> <p>(e) (5) The adjustment shall comply with all state and county recording requirements.</p> <p><u>(b) Lot Consolidation</u></p> <p><u>(1) Each property is a lawfully established unit of land, or the consolidation is intended to rectify previous unlawful establishment of units of land.</u></p> <p><u>(2) The resulting number of parcels will be less than the existing number.</u></p> <p><u>(3) All affected properties would comply</u></p>	

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><u>with the minimum lot depth, width and area standards of the applicable zone after the proposed consolidation.</u></p> <p><u>(4) Existing structures on any affected property would comply with the minimum and maximum setbacks standards of the applicable zone after the proposed consolidation.</u></p> <p><u>(5) If the resulting aggregation of affected properties is eligible for additional development under existing zoning, the proposed consolidation will not:</u></p> <p><u>(i) Preclude the opportunity for such additional development; or</u></p> <p><u>(ii) Reconfigure the properties in a pattern which might avoid or reduce the need to install public improvements typically required as a condition of such additional development.</u></p>	
<p><u>Section 9.243</u> <u>Proposed</u> <u>Changes in</u> <u>Approved Plans</u> <u>for Subdivisions</u> <u>or Land Partitions</u></p>	<p><i>Newly added section to address how minor and major modifications to tentatively approved subdivision or partitions plat will be handled.</i></p>	<p><u>(a) Major Changes. Major changes in the approved tentative plat shall be considered a new application and shall comply with the procedures for approval. Anything not listed below as a Minor Change is considered a Major Change.</u></p>	<p><i>Reasoning: Improve clarity and reduce subjectivity. Will explain what is considered a Major and Minor change for</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><u>(b) Minor Changes. Minor changes in an approved Tentative Plat may be approved by the City Administrator, provided that such changes:</u></p> <ul style="list-style-type: none"> <u>(1) Do not change the character of the development or the population density.</u> <u>(2) Do not change the boundaries of the proposed land division.</u> <u>(3) Do not change any use, such as residential to commercial.</u> <u>(4) Do not change the location or amount of land devoted to a specific land use.</u> <u>(5) Do not relax dimensional standards or other specific requirements established by the City as a condition of approval.</u> 	<p><i>subdivision or partition plans.</i></p>
<p>Section 9.250 Site Plan Review</p>	<p><i>(b) Decision Criteria. After an examination of the Site and prior to approval, the Planning Commission must make the following findings:</i></p> <p>...</p>	<p><u>(8) That developments within Lowell’s Downtown, as defined by the Regulating Plan included in the Downtown Master Plan, are consistent with the policies of the Lowell Downtown Master Plan.</u></p>	<p><i>Source: Downtown Master Plan. This provision has actually been adopted already but needs to be codified (incorporated into the written code).</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
Section 9.254 Annexations	<i>The annexation of land to the City of Lowell shall... in conformance with Statewide Planning Goal 14 and approval from Lane County and the Boundary Commission as well as ...</i>	The annexation of land to the City of Lowell shall ... in conformance with Statewide Planning Goal 14 and approval from Lane County, and the Boundary Commission as well as ...	Reasoning: <i>Housekeeping. The Boundary Commission has not existed for years.</i>
Section 9.306 Quasi-Judicial Public Hearing Procedures	<i>Section deleted. Section 9.206 will replace this section.</i>	<i>Section deleted. Section 9.206 will replace this section.</i>	Reasoning: No longer necessary with an adopted "Types Process"
Section 9.307 Legislative Public Hearing Procedures	<i>Section deleted. Section 9.206 will replace this section.</i>	<i>Section deleted. Section 9.206 will replace this section.</i>	Reasoning: See Above
Section 9.401 Classification of Land Use Districts	<p><i>For the purpose of this Code the following Primary Land Use Districts are hereby established:</i></p> <p>PRIMARY DISTRICTS ABBREVIATION</p> <p>Single-family Residential R-1</p> <p>Multiple-family Residential R-3</p> <p>General Commercial C-1</p> <p>Downtown Commercial C-2</p> <p>Light Industrial I-1</p> <p>Public Lands PL</p>	<p>For the purpose of this Code the following Primary Land Use Districts are hereby established:</p> <p>PRIMARY DISTRICTS ABBREVIATION</p> <p>Single-family Residential R-1</p> <p>Multiple-family Residential R-3</p> <p>Downtown Flex- Use 2- General Commercial</p> <p>———— C-1-D ————— DF2</p> <p>Downtown Flex-Use 1-Downtown</p> <p>Commercial — C-2-D ————— DF1</p>	<p>Source: Downtown Master Plan</p> <p>Reasoning: <i>Implements new "zones" as indicated in the Regulating Plan of the Downtown Master Plan. The Downtown Master Plan targets specific areas for zoning with a "form" (look and feel) focus rather than a</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><i><u>Downtown Townhome/Single-Family Attached</u> DRA</i></p> <p><i><u>Downtown Residential/Single-Family Detached</u> DRD</i></p> <p><i>Light Industrial I-1</i></p> <p><i>Public Lands PL</i></p>	<p>traditional “use” based approach.</p>
<p>Section 9.408 Nonconforming Use</p>	<p><i>It is the intent of the nonconforming use sections of this Code to permit pre-existing uses and structures which do not conform to the use or dimensional standards of this Code to continue under conditions specified herein. However, alteration or expansion of these nonconforming uses and structures that could cause potentially adverse effects in the immediate neighborhood or in the City as a whole, are not permitted as outlined in this section.</i></p> <p>...</p>	<p><u>(h) City Administrator Determination. The City Administrator may make a determination as to whether a use or lot or structure is nonconforming based on the specific facts related to that particular use, lot, structure or history of the lot. The City Administrator shall issue a written decision, complete with the findings of fact in support of the determination. City Administrator’s decision may be appealed to Planning Commission, pursuant to Section 9.309(b). A determination shall follow a TYPE II process and notice shall be sent pursuant to Section 9.304(c).</u></p>	<p><i>Source: Staff.</i></p> <p><i>Reasoning: Allows City Administrator to investigate and make a determination on non-conformities. Best Practices as seen in similar codes.</i></p>
<p>Section 9.411 Single Family Residential District R-1</p>	<p><i>(b) Permitted Uses. In an R-1 District, the following uses and their accessory uses are permitted subject to the standards, provisions and exceptions set forth in this Code:</i></p>	<p>(4) Accessory buildings subject to the following standards:</p> <p>A. Accessory buildings shall not be used for dwelling purposes. <u>Accessory buildings, except for permitted</u></p>	<p><i>Source: Local and TGM Staff</i></p> <p><i>Reasoning: Allows more housing choices by enabling different</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>...</p> <p>(4) Accessory buildings subject to the following standards:</p> <p>A. Accessory buildings shall not be used for dwelling purposes.</p>	<p><u>accessory dwelling units, shall not be used for dwelling purposes.</u></p> <p><u>(5) Accessory Dwelling Units (ADUs) subject to standards in Article 9.7.</u></p> <p><u>(6) Duplexes, subject to the standards as listed in Article 9.7.</u></p> <p><u>(7) Cottage clusters, subject to the standards as listed in Article 9.7.</u></p>	<p>options in low density zones (outside downtown). Enabling ADUs, Duplexes and Cottage clusters represents a best practice for creating aging in place options and housing options for workforce. Is increasingly common in small cities throughout Oregon.</p>
	<p>(c) Conditional Uses. In an R-1 District, the following uses and their accessory uses may be permitted in conformance with the conditional use provisions of Section 9.251 and the applicable Use Standards of Article 9.7.</p> <p>...</p> <p>(7) Duplexes on corner lots which have a minimum of 10,000 square feet in area</p>	<p>(7) Duplexes on corner lots which have a minimum of 10,000 square feet in area</p> <p><i>Allow Duplexes to be permitted outright on lots or parcels zoned for residential use that allow for the development of detached single-family dwellings.</i></p>	<p>Source: Local and TGM staff</p> <p>Reasoning: Best practice. Investment in housing choices is best supported by clear and objective processes. Uses permitted outright provide a non-subjective pathway for development – encouraging such development.</p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>(d) Development Standards.</p> <p>(1) Minimum lot area: 7,000 square feet.</p> <p>(2) Minimum lot width: 60 feet, except for corner lots which must have no less than 65 feet on any property line adjoining a street.</p> <p>...</p> <p>(4) Maximum Building coverage including accessory buildings, provided that any patio structure used solely for open space and swimming pool not structurally covered shall not be counted as a structure for ascertaining coverage: 35%</p> <p>(5) Maximum building height – 2 stories, excluding basements/daylight basements, or 30 feet, whichever is lower. Accessory buildings are limited to one story.</p> <p>...</p>	<p>(1) Minimum lot area: 7,000 <u>6,000</u> square feet.</p> <p>(2) Minimum lot width: 60-50-feet, except for corner lots which must have no less than 65 <u>55</u> feet on any property line adjoining a street.</p> <p>...</p> <p>(4) Maximum Building coverage including accessory buildings, provided that any patio structure used solely for open space and swimming pool not structurally covered shall not be counted as a structure for ascertaining coverage: 35%. <u>Accessory Dwelling Units placed or constructed on lots may have a lot coverage expanded to a maximum of 50%.</u></p> <p>(5) Maximum building height – 2 stories, excluding basements/daylight basements, or 30 feet, whichever is lower. Accessory buildings are limited to one story, <u>with the exception of accessory dwelling units.</u></p> <p><i>(7) Recommend ADU standards get placed under Article 9.7.</i></p>	<p><i>Source: Staff Reasoning: Best Practice. Also, Lowell has approved several variances to lot size minimums in recent years – calling into question the City’s mandated minimum lot size. Smaller lot size minimums do not mandate a specific lot size but enable it where desired. Smaller lots can increase affordability and manageability as well as efficiency of urban lands.</i></p>
<p>Section 9.412 Multiple-Family</p>	<p>(b) Permitted Uses. In an R-3 District, the following uses and their accessory uses are permitted subject to the Site</p>	<p>(1) Duplexes, apartments, and <u>other</u> multiple-family dwellings, <u>including</u></p>	<p><i>Source: Staff Reasoning:</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
<p>Residential District R-3</p>	<p><i>Plan Review provisions of Section 9.250, single-family and duplexes excepted, and other standards and provisions set forth in this Code:</i></p> <p><i>(1) Duplexes, apartments, and multiple-family dwellings.</i></p> <p>...</p> <p><i>(5) Accessory buildings subject to the following standards:</i></p> <p style="padding-left: 20px;"><i>A. Accessory buildings shall not be used for dwelling purposes.</i></p> <p>....</p> <p><i>(5) Court Apartments</i></p>	<p><u>Triplexes and Quadplexes subject to the standards as listed in Article 9.7.</u></p> <p>(5) Accessory buildings subject to the following standards:</p> <p style="padding-left: 20px;">A. Accessory buildings shall not be used for dwelling purposes. <u>Accessory buildings, except for permitted accessory dwelling units, shall not be used for dwelling purposes.</u></p> <p><u>(6) Accessory Dwelling Units, subject to the standards as listed in Article 9.7</u></p> <p><u>(7) Single-Family Attached, subject to the standards as listed in Article 9.7</u></p> <p><u>(8) Townhomes, subject to the standards as listed in Article 9.7</u></p> <p><u>(9) (5) Court Apartments</u></p> <p><u>(10) Cottage Clusters, subject to the standards as listed in Article 9.7</u></p>	<p><i>Best Practice. Best practice. Investment in housing choices is best supported by clear and objective processes. The current allowed housing types in the R-3 zone include “apartments” and “court apartments.” Proposed are more traditional and definable R-3 housing types. Townhomes and condominiums are added as well (proposed as an outright permitted type). They are a very standard housing type for an R-3 zone. Outright allowance provides a clearer and more objective pathway for development – encouraging such development.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>(c) Conditional Uses. In an R-3 District, the following uses and their accessory uses may be permitted in conformance with the conditional use provisions of Section 9.251 and the applicable Use Standards of Article 9.7.</p> <p>...</p> <p>(4) Townhouses/condominiums (5) Manufactured Dwelling Parks (6) Bed and Breakfast</p>	<p>(4) Townhouses/condominiums</p> <p><u>(4)</u> (5) Manufactured Dwelling Parks</p> <p><u>(5)</u> (6) Bed and Breakfast</p>	<p><i>Reasoning:</i> See above</p>
	<p>(d) Development Standards.</p> <p>(1) Minimum lot area - 7,000 square feet.</p> <p>(2) Minimum lot width - 60 feet, except for corner lots which must have no less than 65 feet on any property line adjoining a street</p> <p>...</p> <p>(4) Maximum Building coverage including accessory buildings - 40%, provided that any patio structure used solely for open space and swimming pool not structurally covered shall not be counted as a structure for ascertaining coverage.</p>	<p>(1) Minimum lot area - 7,000 <u>5,500</u> square feet.</p> <p>(2) Minimum lot width - 60 <u>50</u> feet, except for corner lots which must have no less than 65 <u>55</u> feet on any property line adjoining a street.</p> <p>(4) Maximum Building coverage including accessory buildings - 40%, provided that any patio structure used solely for open space and swimming pool not structurally covered shall not be counted as a structure for ascertaining coverage. For <u>lots on which permitted Accessory Dwelling Units are placed or constructed,</u></p>	<p><i>Source:</i> Staff</p> <p><i>Reasoning:</i> Best Practice. Smaller lot size minimums do not mandate a specific lot size but enable it where desired. Smaller lots can increase affordability and manageability as well as efficiency of urban lands. R-3 is a very limited zone in Lowell.</p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>(5) Maximum building height – 3 stories or 45 feet, whichever is lower. Accessory building are limited to one story. For R-3 development within 50 foot of an abutting R-1 district side or rear yard, R-1 height standards apply.</p>	<p><u>building coverage may be expanded to a maximum of 60%.</u></p> <p>(5) Maximum building height – 3 stories or 45 feet, whichever is lower. Accessory building are limited to one story, <u>with the exception of accessory dwelling units.</u> For R-3 development within 50 feet of an abutting R-1 district side or rear yard, R-1 height standards apply.</p>	
<p><u>Section 9.413</u> <u>Downtown</u> <u>Townhome/Single-Family Attached (DRA)</u></p>	<p><i>New Downtown Townhome/Single-Family Attached (DRA) zoning designation.</i></p>	<p><u>(a) Purpose. The Downtown Townhome/Single-Family Attached District (DRA) is intended to provide a variety of homes, with a mix of sizes that are available to a wide range of income, within walking distance of the Downtown core for convenient, pedestrian-friendly access to shopping, employment and recreational activities.</u></p> <p><u>(b) Permitted Uses. In a DRA District, the following uses and their accessory uses are permitted, subject to the Site Plan Review provisions of Section 9.250 and the standards, provisions and exceptions set forth in this Code.</u></p>	<p><i>Source: Downtown Master Plan</i> <i>Reasoning: DRA is a new zone outlined in the Downtown Plan. It introduces standards that are unique and necessitate a distinct zone. The zone allows townhomes and other single-family attached. Types. Standards seen in the zone are directly from the Regulating Plan/Downtown Plan. More details need to</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p><u>(1) Townhomes</u> <u>(2) Single-Family Attached</u> <u>(c) Conditional Uses.</u> <u>(1) Home Occupation</u> <u>(d) Development Standards</u> <u>(1) Minimum lot area: 4,000 square feet</u> <u>(2) Minimum lot width: 40 feet</u> <u>(3) Minimum lot depth: 60 feet</u> <u>(4) Height:</u> <u>(i) minimum number of floors: 2.</u> <u>(ii) Maximum number of floors: 3.</u> <u>(iii) Finished ground floor level: 18 inches minimum above sidewalks.</u> <u>(5) Placement:</u> <u>(i) Front required build-to-line (RBL): 5 to 15 feet, where RBL is indicated on the Regulating Plan.</u> <u>(ii) Primary entries must occur where designated on the Regulating Plan along the RBL.</u> <u>(iii) Side setback: 5 feet</u> <u>(iv) Rear setback: 20 feet</u> <u>(6) Coverage:</u> <u>(i) Primary street façade built to RBL: 80%</u> <u>(ii) Lot coverage: 60% maximum</u> <u>(7) Façade Transparency:</u> <u>(i) Percent of façade area (ground</u></p>	<p><i>be developed, including more building design standards and nuances around uses. These will follow. Key objectives include bringing development closer to streets and creating walkable and "human scaled" developments. Lot Development Standards are still being evaluated for further reduction. What you see here is a starting point.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>floor):40% minimum along RBLs <u>(ii) Percent of façade area (upper floors):40% minimum</u> <u>(8) Parking.</u> <u>(i) Parking shall be accessed from the rear, using alleys; no front access garages.</u> <u>(ii) See Section 9.514 for additional parking standards.</u></p>	
<p><u>9.414 Downtown Residential / Single-Family Detached (DRD)</u></p>	<p><i>New Downtown Single-Family Detached Residential (DRD) zoning designation.</i></p>	<p><u>(a) Purpose. The Downtown Single-Family Detached Residential District (DRD) is intended to provide residential units, with accessory dwelling units as a permitted use, within walking distance Downtown core for convenient, pedestrian friendly, access to shopping, employment and recreational activities.</u> <u>(b) Permitted Uses. In a DRD District, the following uses and their accessory uses are permitted, subject to the Site Plan Review provisions of Section 9.250 and the standards, provisions and exceptions set forth in this Code.</u> <u>(1) Single-Family Detached units</u> <u>(2) Accessory Dwelling units, subject to the standards contained in Article 9.7.</u> <u>(3) Add Cottage Clusters and Duplexes?</u></p>	<p><i>Source: Downtown Master Plan</i> <i>Reasoning: The proposed DRD zone is intended to support Single-family detached, ADUs, Cottage Clusters, and Duplexes over time in the small are of downtown that has been more traditional residential. Standards seen in the zone are directly from the Regulating Plan/Downtown Plan. More details need to</i></p>

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		<p><u>(c) Conditional Uses.</u></p> <p><u>(1) Home Occupation.</u></p> <p><u>(d) Development Standards.</u></p> <p><u>(1) Minimum lot area: corner lot 6,000 square feet. Not a corner lot 5,000 square feet.</u></p> <p><u>(2) Minimum lot width: corner lot 50 feet. Interior lot: 40 feet.</u></p> <p><u>(3) Minimum lot depth: 60 feet.</u></p> <p><u>(4) Height:</u></p> <p><u>(i) Minimum number of floors: 1</u></p> <p><u>(ii) Maximum number of floors: 3</u></p> <p><u>(5) Placement:</u></p> <p><u>(i) Front setback: 10 to 30 feet</u></p> <p><u>(ii) Side setback: 5 feet</u></p> <p><u>(iii) Rear setback: 20 feet</u></p> <p><u>(6) Coverage:</u></p> <p><u>(i) Lot coverage: 50%. Except when a lot contains an ADU, lot coverage shall be expanded to not exceed 60%.</u></p> <p><u>(7) Façade Transparency:</u></p> <p><u>(i) Percent of façade area (ground floor): 40% minimum</u></p> <p><u>(ii) Percent of façade area (upper floor): 40% minimum</u></p> <p><u>(8) Parking.</u></p> <p><u>(i) Parking shall be accessed from the</u></p>	<p><i>be developed, including more building design standards and nuances around uses. These will follow.</i></p> <p><i>Lot Development Standards are still being evaluated for further reduction.</i></p> <p><i>Note that nuisance code will continue to provide enforceable standards related to noise, emissions, etc. A guide for Building "Forms" will be developed with the code committee and presented in draft to the community at Community Meeting #2.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>rear, using alleys. <u>(ii) See Section 9.514 for additional parking standards.</u> <u>(9) Porch.</u> <u>(i) Required covered stoop or porch: minimum six feet by six feet (6X6) for the primary entry that can extend beyond the front setback provided it does not encroach on the public right-of-way.</u></p>	
<p><u>Section 9.423</u> <u>Downtown Flex-Use 1 District</u></p> <p><u>Section 9.421</u> <u>General Commercial District C-1</u></p>	<p><i>(a) Purpose. The General Commercial District is intended to provide areas appropriate for the full range of commercial activities to serve the needs of area residents and employees. The C-1 District is well suited for areas having access from the City's major thoroughfares that are free from conflict with non-compatible land uses.</i></p> <p><i>(b) Permitted Uses. In a C-1 District, the following uses and their accessory uses are permitted subject to the Site Plan Review provisions of Section 9.250 and the standards, provisions and exceptions set forth in</i></p>	<p><i>This will be a new zoning designation for Downtown Flex-Use 1 (DF1) that will be subject to the Regulating Plan. Areas shown as Flex-Use 1 on the Regulating Plan, will be rezoned to DF1 (Downtown Flex-Use 1). The C-1 zone will be removed entirely and replaced with Flex Use 1 and 2, respectively.</i></p> <p><u>(a) Purpose. The Flex-Use 1 zone allows a mix of commercial and residential uses that are encouraged to locate Downtown. Mixed-use buildings support active town centers by allowing for a mix of users in a small footprint. Buildings along main streets have ground floor commercial or retail uses with offices or residential units above.</u></p>	<p><i>Source: Downtown Master Plan</i></p> <p><i>Reasoning:</i> <i>DF1 is a new mixed-use zone outlined in the Downtown Plan and Regulating Plan. It replaces the general commercial zone and emphasizes look and feel in a targeted area in order encourage, over time, certain types of desired development that realize the City's vision</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p><i>this Code, provided all operations except off street parking and temporary activities shall be conducted entirely within an enclosed building:</i></p> <ul style="list-style-type: none"> <i>(1) Retail stores or shops.</i> <i>(2) Personal or business service.</i> <i>(3) Repair shops (See 3 (b) below).</i> <i>(4) Eating or drinking establishments.</i> <i>(5) Offices, business or professional.</i> <i>(6) Financial institutions.</i> <i>(7) Indoor commercial amusement or recreation establishments.</i> <i>(8) Hotels and Motels.</i> <i>(9) Semi public buildings and uses.</i> <i>(10) Residential Care Facility for 15 or less people as provided in ORS 197.660 – 670.</i> <i>(11) Group Child Care Center for 13 or more children as provided in the applicable provisions of ORS 657 A.</i> <i>(12) Second story residences located above a ground floor commercial use in accordance with Section 9.720 (b).</i> <i>(13) Conversion of residence to a</i> 	<p><u>Ground-floor retail store fronts have large, clear windows to encourage transparency and a sense of place along the pedestrian realm in the Downtown core of Lowell.</u></p> <p><u>(b) Permitted Uses. All development in the Downtown Flex-Use 1 District is subject to Section 9.250 Site Plan Review.</u></p> <ul style="list-style-type: none"> <u>(1) Commercial.</u> <u>(2) Mixed Use.</u> <u>(3) Residential.</u> <p><u>(d) Development Standards.</u></p> <ul style="list-style-type: none"> <u>(1) Height:</u> <ul style="list-style-type: none"> <u>(i) Minimum number of floors:2 (or 30 feet in height)</u> <u>(ii) Maximum number of floors:3</u> <u>(iii) Finished ground floor level: 0 (zero) inches minimum above sidewalk.</u> <u>(2) Placement:</u> <ul style="list-style-type: none"> <u>(i) Front required built-to-line (RBL): 0 (zero) feet, where RBL is indicated on the Regulating Plan.</u> <u>(ii) Primary entries must occur where designated on the Regulating Plan along the RBL.</u> 	<p><i>for a look and feel in their downtown. Standards seen in the zone are directly from the Regulating Plan/Downtown Plan. Note that nuisance code will continue to provide enforceable standards related to noise, emissions, etc. A guide for Building “Forms” will be developed with the code committee and presented in draft to the community at Community Meeting #2.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>permitted commercial use in accordance with Section 9.720 (a) (c) Conditional Uses. In a C-1 District, the following uses and their accessory uses may be permitted in conformance with the conditional use provisions of Section 9.251 and the applicable Use Standards of Article 9.7.</p> <p>(1) Automotive, truck, RV, equipment or other repair shops which possess nuisance characteristics or emissions potentially detrimental to Public health, safety and general welfare of the community such as noise, vibrations, smoke, odor, fumes, dust, heat, glare or electromagnetic interference shall not be permitted unless additional safeguards are specified by the Planning Commission. The applicant shall accurately specify the extent of emissions and nuisance characteristics relative to the proposed use.</p> <p>(2) Permitted uses listed in (2) above, requiring open display or storage, including but not limited to,</p>	<p>(iii) Side setback: 0 (zero) feet</p> <p>(iv) Rear setback: 0 (zero) feet</p> <p>(3) Coverage:</p> <p>(i) Primary street façade built to RBL: 90%</p> <p>(ii) Lot Coverage: 100% maximum</p> <p>(4) Façade Transparency:</p> <p>(i) Percent of façade area (ground floor): 75% minimum along RBLs</p> <p>(ii) Percent of façade area (upper floors): 40% minimum</p> <p>(5) Parking.</p> <p>(i) Parking shall occur in the parking envelope shown on the Regulating Plan.</p> <p>(ii) No off-street parking is required.</p> <p>(iii) See Section 9.513 and Table 2 of 9.514 for additional parking standards.</p>	

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	<p>automobile or equipment sales.</p> <p>(3) Light industrial uses identified in Section 9.421 (c) which have no emissions or nuisance characteristics, as identified in Section 9.204 discernible without instruments outside any building, contain no outdoor storage and for which no other significant impacts to adjoining commercial and residential uses have been identified.</p> <p>(d) Development Standards. Lots within a General Commercial District are approved by the Planning Commission as part of the Site Plan Review procedures of Sections 9.250. Lots are required to be large enough and developed to accommodate the building, sewage disposal system, required parking, service access and pedestrian circulation including persons with disabilities.</p> <p>(1) Minimum lot area: None established</p> <p>(2) Yards:</p> <p>(A) Front yard setbacks – none required. See Section 9.509 to 9.512 for additional street setbacks.</p>		

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	<p>(B) Side yard setbacks</p> <p>—A. None required between commercially or industrially zoned property</p> <p>B. 10 feet when abutting residentially zoned property.</p> <p>C. none required for street side yard.</p> <p>C. Rear yard:.</p> <p>1. None required between commercially or industrially zoned property.</p> <p>2. 10 feet when abutting residentially zoned property.</p> <p>(3) Maximum building height: There is no building height limitation except when the property abuts a residential zone, in which case the building height is limited to the height allowed in the adjacent residential zone for a distance of 50 feet.</p> <p>(4) Lot Size: There is no minimum lot size or lot dimension.</p> <p>(5) Lot Coverage and Density: There is no lot coverage or density requirements except as provided in yard setback and on-site parking requirements.</p> <p>(6) Access shall be designed to cause</p>		

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	<p>a minimum interference with traffic and may be subject to the review and approval of the County Engineer or State Department of Transportation. The dedication of additional right-of-way and construction of street improvements by the applicant may be required in order to facilitate traffic circulation</p> <p>(7) See Article 9.5 for additional General Development Standards, Article 9.6 for Special Development Standards and Article 9.7 for Use Standards that may apply in the C-1 District.</p>		
<p><u>Section 9.424</u> <u>Downtown Flex-Use 2 District</u></p> <p>Section 9.422 Downtown Commercial District C-2</p>	<p>(a) Purpose. Downtown Lowell is intended to provide a central shopping center for the community to serve the needs of area residents and employees. Downtown Lowell is well suited for a central compact commercial center that includes public buildings and facilities. Downtown Lowell can become Lowell's central feature supporting easy access, convenient pedestrian circulation and attractive amenities for all users.</p>	<p><i>This will be a new zoning designation for Downtown Flex-Use 2 (DF2) that will be subject to the Regulating Plan. Areas shown as Flex-Use 2 on the Regulating Plan, will be rezoned to DF2 (Downtown Flex-Use 2). The C-1 zone will be removed entirely and replaced with Flex Use 1 and 2, respectively.</i></p> <p><u>(a) Purpose. The Downtown Flex-Use 2 zone allows a mix of commercial and residential uses that are encouraged to locate Downtown and along the</u></p>	<p><i>Source: Downtown Master Plan</i></p> <p><i>Reasoning:</i></p> <p><i>DF2 is a new mixed-use zone outlined in the Downtown Plan and Regulating Plan. It replaces the downtown commercial zone and emphasizes look and feel in a targeted area in order</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>(b) Permitted Uses. The following uses and their accessory uses are permitted subject to the Site Plan Review provisions of Section 9.250 and the standards, provisions and exceptions set forth herein. Site Plans shall clearly show compliance with the intent and requirements for downtown revitalization.</p> <p>(1) Retail stores or shops.</p> <p>(2) Small Repair Shops</p> <p>(3) Personal or business service establishments.</p> <p>(4) Eating or drinking establishments.</p> <p>(5) Offices, business or professional establishments.</p> <p>(6) Financial institutions.</p> <p>(7) Indoor commercial amusement or recreation establishments.</p> <p>(8) Public or semi-public buildings and uses.</p> <p>(9) Second and third-story residences located above a ground floor commercial use in accordance with Section 9.720 (b)</p> <p>(10) Conversion of residence to commercial use in accordance with Section 9.720 (a).</p>	<p><u>commercial corridor along North Moss. Mixed-use buildings support active town centers by allowing for a mix of users in a small footprint. The mix of commercial and required residential allow residents to meet their daily shopping and employment needs, all within walking distance of the Downtown core.</u></p> <p><u>(b) Permitted Uses. All development in the Downtown Flex-Use 2 District is subject to Section 9.250 Site Plan Review.</u></p> <p><u>(1) Commercial</u></p> <p><u>(2) Mixed-Use</u></p> <p><u>(3) Required Residential. Developments must contain a residential element containing dwelling unit(s).</u></p> <p><u>(4) Homes entirely above the ground floor should have a balcony at least four feet deep.</u></p> <p><u>(c) Conditional Uses. Home Occupation, subject to Conditional Use Permit and standards contained in Section 9.251.</u></p>	<p><i>encourage, over time, certain types of desired development that realize the City's vision for a look and feel in their downtown. It is distinguished from the DF1 zone primarily by height requirements and not requiring residential. Standards seen in the zone are directly from the Regulating Plan/Downtown Plan. Note that nuisance code will continue to provide enforceable standards related to noise, emissions, etc. A guide for Building "Forms" will be developed with the code committee and presented in draft to the community at Community Meeting #2.</i></p>

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	<p>(11) Convenience and Decorative Elements including landscaping, benches, temporary banners or signs</p> <p>(c) Conditional Uses. Uses and accessory uses similar to those specifically listed in Item (2) above may be permitted in conformance with the conditional use provisions of Section 9.251.</p> <p>(d) Non Permitted Uses. The following uses and their accessory uses are not permitted:</p> <p>(1) Large Equipment Sales or Repair.</p> <p>(2) Trucking Operations</p> <p>(3) Auto Storage, Towing or Wrecking Yards.</p> <p>(4) Automotive Service or Sales</p> <p>(5) Adult Video or Goods.</p> <p>(6) Indoor or outdoor storage and warehousing facilities not directly in support of downtown businesses.</p> <p>(e) Development Standards.</p> <p>(1) Lot area and configuration—Lots within the Downtown District are approved by the Planning Commission as part of the Site Plan Review procedures of Sections 9.250.</p>	<p><u>(d) Development Standards:</u></p> <p><u>(1) Height:</u></p> <p><u>(i) Minimum number of floors: 1</u></p> <p><u>(ii) Maximum number of floors: 3</u></p> <p><u>(iii) Finished ground level: Refer to component building type</u></p> <p><u>(2) Placement:</u></p> <p><u>(i) Front required build-to-line (RBL): 0 (zero) to 10 feet, where RBL is indicated on the Regulating Plan.</u></p> <p><u>(ii) Primary entries must occur where designated on the Regulating Plan along the RBL.</u></p> <p><u>(iii) Side setbacks: 5 feet</u></p> <p><u>(iv) Rear setbacks: 20 feet</u></p> <p><u>(3) Coverage:</u></p> <p><u>(i) Primary street façade built to RBL:80% minimum</u></p> <p><u>(ii) Lot coverage: 70% maximum</u></p> <p><u>(4) Façade Transparency:</u></p>	

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	<p>Lots are required to be large enough to accommodate the building, required parking, service access and pedestrian circulation including persons with disabilities.</p> <p>(2) Yards:</p> <p>A. Exterior yard setbacks—none required. Buildings are encouraged to front onto wide sidewalks that include landscaping and pedestrian amenities.</p> <p>B. Interior yard setbacks—5 feet where abutting residential property and zero where abutting commercial property subject the requirements for building construction specified in the Oregon Structural Specialty Code.</p> <p>(3) Maximum building height—3 stories</p> <p>(4) Access shall be designed to encourage pedestrian and bicycle use and shall facilitate vehicular movements with minimum interference or hazards for through traffic. The dedication of additional right of way and construction of street improvements by an applicant may be required in compliance with</p>	<p><u>(i) Percent of façade area (ground floor): 70% minimum along RBLs</u></p> <p><u>(ii) Percent of façade area (upper floors): 40% minimum</u></p> <p><u>(5) Parking.</u></p> <p><u>(i) Parking shall occur in the parking envelop shown on the Regulating Plan.</u></p> <p><u>(ii) No off-street parking is required.</u></p> <p><u>(iii) See Section 9.513 and Table 2 of 9.514 for additional parking standards.</u></p>	

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p>the standards herein.</p> <p>(5) Development in the Downtown area may be conditional upon an agreement to comply with reasonable exterior building modifications and street and sidewalk standards established as a part of a future Downtown Development Plan.</p> <p>(f) See Article 9.5 for additional General Development Standards, Article 9.6 for Special Development Standards and Article 9.7 for Use Standards that may apply to the C-2 District.</p>		
<p>Section 9.513 Parking</p>	<p>(3) Parking areas for other than single-family and two-family dwellings shall be served by a service driveway and turnaround so that no backing movements or other maneuvering shall occur within a street other than an alley. Design for parking lots shall conform to the Parking Diagram contained in Figure 9.5-1. Two-way driveways shall have a minimum width of 20 feet and a maximum width of 30 feet. One-way</p>	<p><i>Note: The Parking Diagram referenced as Figure 9.5-1 is missing in the current Code, and has not been located by searching. A new diagram likely needs to be created to replace it.</i></p> <p>(b) Location Standards for Parking Lots:</p> <p>(1) Required off-street parking shall be provided on the development site unless a Variance is approved by the City or in the case of the <u>Downtown Flex-Use 1</u></p>	<p><i>Source:</i> Downtown Master Plan, and more broadly (outside downtown) by staff.</p> <p><i>Reasoning:</i> Best practice shows that parking requirements generally are excessive and have negative impacts on project feasibility as</p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p><i>driveways shall have a minimum width of 12 feet and a maximum width of 16 feet.</i></p> <p><i>(4) A Parking space shall conform to the Parking Diagram contained in Figure 9.5-1.</i></p> <p><i>(b) Location Standards for Parking Lots:</i></p> <p><i>(1) Required off-street parking shall be provided on the development site unless a Variance is approved by the City or in the case of the Downtown Commercial Zone, a master parking plan has been developed or the applicant has demonstrated that adequate public parking is available.</i></p> <p>....</p> <p><i>(8) All off-street parking areas within or abutting residential districts or uses shall be provided with a sight-obscuring fence, wall or hedge as approved by the City to minimize disturbances to adjacent residents.</i></p> <p>...</p> <p><i>(f) In the event several uses occupy a single structure or property, the total requirements for off-street parking</i></p>	<p><u>and Flex-Use 2 zones, Downtown Commercial Zone</u>, a master parking plan has been developed, <u>and is consistent with the Regulating Plan of the Downtown Master Plan</u>, or the applicant has demonstrated on the <u>Site Plan</u> that adequate public parking is available.</p> <p>(8) All off-street parking areas within or abutting residential districts or uses shall be provided with a sight-obscuring fence, wall or hedge as approved by the City to minimize disturbances to adjacent residents, <u>unless alternate plans are approved as part of Site Plan Review for developments proposed in the Downtown Districts, as shown on the Regulating Plan.</u></p> <p>...</p> <p><u>(9) For Developments in the DF1 or DF2 zone, the proposed parking plan shall conform to the Regulating Plan in terms or parking zone, entry zone and entry point, where applicable.</u></p> <p>(f) Clarify that no off-street parking is required in Flex Use zones.</p>	<p><i>well as walkability, and form (look and feel). General reduction of off-street parking requirements across the board and clean-up of parking standards.</i></p>

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	<i>shall be the sum of the requirements of the several uses computed separately.</i>		
Section 9.514 Off-Street Parking Requirements	<p><u>Use</u> <u>Space Requirement</u> (a) Residential (1) One- and two-family dwellings Studio – Space for one car per unit 1 Bedroom – Space for one car per... 2 Bedroom – Space for two cars per... 3 Bedroom – Space for two cars per... unit (2) Multiple family dwelling – 1.5 Spaces per unit. (3) Rooming or boarding – Spaces equal to 80% of the house, transient lodging.... number of guest accommodations plus one additional space for each owner, manager, or employee</p>	See attached (Revised) Parking Standards Table. This is tentatively identified as Table 2.	<i>(See above)</i> <i>Table 2 is a work in progress and will be developed further by the Code Committee and then shared at Community Meeting #2.</i>
Section 9.707 Reserved	<i>Sections 9.707 through 9.709 reserved for expansion</i>	<p>Recommendation: Use this reserved section for Accessory Dwelling Unit (ADU) standards. Many communities in Oregon and across the U.S. are choosing to allow ADU</p>	Source: <i>Downtown Master Plan in downtown – Staff for other areas.</i>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>development as a means to meet housing need. ADUs provide affordable housing options that help residents remain in their community as they age and enable important community members like firefighters and school employees to live in the community in which they work. To avoid creating logistical or financial barriers to the development of ADUs, a community should apply the same or less restrictive development standards to ADUs as those for other accessory buildings. It is not recommended to mandate minimum lot sizes for ADUs (in other words, ADU development would be allowed on any legal lot or parcel as long as the ADU meets required setbacks and lot coverage limits). Standards for ADUs should be clear and objective, and special design standards are not recommended.</p> <p>Following best practices, Lowell can choose to allow one unit (detached or attached) or two units (one detached and one attached) that are 75-80% of the primary dwelling's floor area or 800-900 square feet, whichever is smaller. ADUs should meet all other development standards applicable in the zoning district, with several exceptions:</p>	<p><i>Reasoning: Section reserved for ADU standards to be further developed based on best practice and public/committee feedback.</i></p> <p><i>A community can allow a use but render it functionally impossible by instituting too many restrictions. These should be carefully considered by Lowell.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>1) property owners may convert a legal non-conforming structure to an ADU provided that it does not increase non-conformity, 2) off-street parking should not be required for an ADU, 3) properties with two ADUs should be allowed greater lot coverage than the zone in which they are located, and 4) ADUs should not be included in density calculations.</p>	
<p>Section 9.708 Reserved</p>	<p><i>Sections 9.707 through 9.709 reserved for expansion</i></p>	<p>Recommendation: Use this reserved section for standards for Duplexes. Following current best practices in Oregon, duplexes would be permitted outright on lots or parcels zoned for residential use that allow for the development of detached single-family dwellings. Duplexes would be subject to the same approval process and standards as those for detached single family dwellings in the same zone (e.g., lot size, setbacks, and building height). Standards should be clear and objective, but a process for discretionary approval can be considered for applicants who wish to submit an application for a duplex subject to discretionary standards. Duplexes should not be subject to maximum densities and</p>	<p>Source: <i>Downtown Master Plan in downtown – Staff for other areas.</i></p> <p>Reasoning: <i>Section reserved for Duplex standards to be further developed based on best practice and public/committee feedback. A community can allow a use but render it functionally impossible by instituting too many restrictions. These</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>minimum lot sizes, minimum front setbacks greater than 20 feet or rear setbacks greater than 15 feet, nor any off-street parking requirement. Any design standards that apply only to duplexes and not to detached single-family homes in the same zone would be invalid.</p>	<p><i>should be carefully considered by Lowell.</i></p>
<p>Section 9.709 Reserved</p>	<p><i>Sections 9.707 through 9.709 reserved for expansion</i></p>	<p>Recommendation: Use this reserved section for standards for Triplexes and Quadplexes.</p> <p>Following best practices in Oregon, triplexes (three units) and quadplexes (four units) would be required to meet most clear and objective standards that apply to detached single-family dwellings in the same zone (e.g., lot size and dimensions, setbacks, and building heights), except where they conflict with this section. A jurisdiction should not impose additional standards that apply only to triplexes or quadplexes. Additionally, the following would not apply to triplexes or quadplexes: the zone’s pre-existing density maximums, minimum front or rear setbacks greater than 10 feet, or maximum building heights of less than 35 feet or three stories. One or</p>	<p>Source: <i>Downtown Master Plan in downtown – Staff for other areas.</i></p> <p>Reasoning: <i>Section reserved for triplex and quadplex standards to be further developed based on best practice and public/committee feedback.</i></p> <p><i>A community can allow a use but render it functionally impossible by instituting too many restrictions. These should be carefully considered by Lowell.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		<p>two off-street parking spaces would be required depending on the minimum lot size in the zone, and on-street parking spaces that meet certain requirements are counted toward the minimum off-street parking requirement. A limited number of design standards apply to entryway orientation, windows, garages and off-street parking areas, and driveway approaches. Visual examples would illustrate design standards.</p>	<p><i>A guide for Building “Forms” will be developed with the code committee and presented in draft to the community at Community Meeting #2.</i></p>
<p>Section 9.710 Manufactured Dwelling Standards</p>	<p><i>Section 9.710 currently houses Manufactured Dwelling Standards. Keep Manufactured Dwelling Standards but move down so that it comes after Middle Housing standards.</i></p>	<p>Recommendation: Insert standards for Townhouses below standards for Triplexes and Quadplexes. Section 9.710 currently houses Manufactured Dwelling Standards. Standards for Townhouses (this section) and Cottage Clusters (the following section) should be inserted after Section 9.709, and the following sections (starting with Manufactured Dwelling Standards) should be renumbered.</p> <p>Following best practices in Oregon, townhouses would be permitted outright in areas zoned for residential use that allow for the development of detached single-family dwellings, subject to the same</p>	<p>Source: Downtown Master Plan in downtown – Staff for other areas.</p> <p>Reasoning: Section reserved for Townhome and Cottage Cluster standards to be further developed based on best practice and public/committee feedback.</p> <p><i>A community can allow a use but render</i></p>

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		<p>approval process as that for detached single family dwellings in the same zone. Standards should be clear and objective, but a process for discretionary approval can be considered for applicants who wish to submit an application for a townhouse project subject to discretionary standards.</p> <p>Existing development standards of the applicable base zone related to lot dimensions, lot coverage, landscape or open space area, or the siting or design of dwellings would not apply to townhouses. Standards specific to townhouses would include maximum density that varies based on the minimum lot size in the zone; setbacks; building height; required off-street parking and on-street credits; and responsibility for areas owned in common. Additional design standards for townhouses would include entry orientation, unit definition, windows, and driveway access and parking. Visual examples would illustrate design standards.</p>	<p><i>it functionally impossible by instituting too many restrictions. These should be carefully considered by Lowell.</i></p>
<p>Section 9.711 General Manufactured Dwelling Provisions</p>	<p><i>Section 9.711 currently houses General Manufactured Dwelling Provisions. Keep General Manufactured Dwelling Provisions but</i></p>	<p>Recommendation: Insert standards for Cottage Clusters below standards for Townhouses. Section 9.711 currently houses General Manufactured Dwelling Provisions. Standards for Townhouses (the</p>	<p>Reasoning: <i>Housekeeping (to accommodate new standards).</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p><i>move down so that it comes after Middle Housing standards.</i></p>	<p>previous section) and Cottage Clusters (this section) should be inserted after Section 9.709, and the following sections (starting with Manufactured Dwelling Standards) should be renumbered.</p> <p>“Cottage Cluster” means a grouping of no fewer than four detached dwelling units per acre, each with a footprint of less than 900 square feet, located on a single lot or parcel that includes a common courtyard. Cottage clusters may also be known as “cluster housing,” “cottage housing,” “bungalow court,” “cottage court,” or “pocket neighborhood.”</p> <p>Following current best practices in Oregon, Cottage Cluster projects should be permitted outright in residential zones that allow for detached single-family dwellings and be subject to the same approval process. Existing development standards of the applicable base zone related to lot coverage, landscape or open space area, or the siting or design of dwellings should not apply to cottage clusters. Cottage clusters should meet the minimum lot size, width, and depth standards that apply to detached single family dwellings in the same zone. Standards specific to cottage</p>	

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		<p>clusters would include maximum density, setbacks, average unit size, and required off-street parking and on-street credits. Additional design standards for cottage clusters would include cottage orientation, common courtyard design standards, community buildings, pedestrian access, windows, parking design, and existing structures on the parcel or lot to be used for the cottage cluster project. Visual examples would illustrate design standards.</p>	
<p>Section 9.720 Residential Structures in Commercial Districts</p>	<p><i>(a) Existing Houses: In commercial districts pre-existing residential structures may be occupied by commercial uses permitted in the commercial district provided the structure meets minimum building and safety standards as provided in the Building Code and provided further that the City approves a development plan for vehicular access and parking, signing, and exterior lighting in accordance with the Site Plan Review provisions of Section 9.250.</i></p> <p><i>(b) Second Story Residences: Single-family or Multi-family housing may be</i></p>	<p><i>Integrate these standards into the Code for Flex Use zones where relevant rather than providing a standalone section; delete what is no longer applicable.</i></p>	<p><i>Source: Downtown Master Plan.</i></p> <p><i>Reasoning: The standards in this section are no longer relevant because the Commercial Districts will be replaced by the new downtown zones according to the Downtown Development Plan and Regulating Plan. A guide for Building “Forms” will be</i></p>

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	<p><i>permitted above or behind a commercial business in the C-1 and C-2 Districts in accordance with the Conditional Use provisions of Section 9.251 and the standards contained herein. Setback and siting standards of the single-family or multi-family District shall apply when located behind the commercial business.</i></p> <p><i>(1) On-site Parking shall be provided for both the commercial and residential uses in accordance with Section 9.514.</i></p> <p><i>(2) There are no yard setbacks or open space required for second story residences.</i></p>		<p><i>developed with the code committee and presented in draft to the community at Community Meeting #2.</i></p>
<p>Section 9.516 Access</p>	<p><i>(a) Every property shall abut a street other than an alley for a minimum width of 16 feet, of which 12 foot must be paved, except where the City has approved an access to multiple lots sharing the same access in which case the total width must be at least 16 feet. No more than two properties may utilize the same access unless more are approved with the tentative plan.</i></p> <p><i>(b) The following access alternatives to</i></p>	<p>(a) Every property shall abut a street other than an alley for a minimum of <u>continuous and usable</u> width of 16 feet, of which 12 foot must be paved, except where the City has approved an access to multiple lots sharing the same access in which case the total <u>paving</u> width must be at least 16 feet. No more than two properties may utilize the same access unless more are approved with the tentative plan.</p> <p>(b) The following access alternatives to</p>	<p>Source: Staff Reasoning: General language cleanup of Access section for clarity. Issues have emerged over years of subdivision and others land use application reviews.</p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
	<p><i>Panhandle properties may be approved by the City:</i></p> <p><i>(1) Approval of a single access road easement to serve proposed parcels. The City may require a provision for conversion to a dedicated public road right-of-way at some future date, in which case the easement shall have the same width as a required right-of-way.</i></p> <p><i>(2) Approval of a road right-of-way without providing the road improvements until the lots are developed. This places the burden for road improvements on the City although the City can assess all of the benefiting properties when improvements are provided in the future. As a condition of approval, the City may require an irrevocable Waiver of Remonstrance to be recorded with the property.</i></p>	<p>Panhandle properties may be approved by the City:</p> <p>(1) Approval of a single access road easement to serve proposed parcels. The City may require a provision for conversion to a dedicated public road right-of-way at some future date, in which case the easement shall have the same width as a required right-of-way.</p> <p>(2) Approval of a road right-of-way without providing the road improvements until the lots are developed. This places the burden for road improvements on the City although the City can assess all of the benefiting properties when improvements are provided in the future. As a condition of approval, the City may shall require an irrevocable Waiver of Remonstrance to be recorded with the property.</p> <p><u>(c) For the portion of a panhandle tract used to access the main portion of the tract, the City may require such road improvements and design as necessary to provide safe and adequate access to the main portion of the tract.</u></p>	

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		<p><u>(1) Panhandle lots shall be paved up until at least the crest of the panhandle. The crest of the panhandle is defined as the area in which the lot width increases and opens up into the main portion of the lot.</u></p> <p><u>(d) Lots or parcels that take access off of a private road easement shall have a legal right appurtenant to use that easement. A legal right to use the easement may be evidenced by:</u></p> <ul style="list-style-type: none"><u>(1) An express grant or reservation of an easement in a document recorded with the County Recorder.</u><u>(2) A decree or judgment issued by a court of competent jurisdiction.</u><u>(3) An order from a court of competent jurisdiction that establishes a statutory way of necessity or gateway road; or</u><u>(4) An express easement set forth in an approved and recorded subdivision or partition.</u> <p><u>(e) Driveway and road approaches on City streets shall be located where they do not create undue interference or hazard to the free movement of highway and pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted</u></p>	

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		<p><u>sight distance or at points that interfere with the placement and proper functioning of signs, lighting, guardrail, or other traffic control devices shall not be permitted.</u></p> <p><u>(1) Driveway approaches or aprons, abutting paved city rights-of-way, shall be paved.</u></p>	
<p>Section 9.517 Streets</p>	<p><i>(a) Half Street: Half streets, while generally not acceptable, may be approved where essential to the reasonable development of the subdivision or partition when in conformity with the other requirements of these regulations and when the Planning Commission finds it will be practical to require the dedication of the other half when the adjoining property is divided. Whenever a half street is adjacent to a tract to be divided, the other half of the street shall be provided within such tract. Reserve strips and street plugs may be required to preserve the objectives of half streets.</i></p>	<p>(a) Half Street: Half streets, while generally not acceptable, may be approved where essential to the reasonable development of the subdivision or partition when in conformity with the other requirements of these regulations and when the Planning Commission finds it will be practical to require the dedication of the other half when the adjoining property is divided. Whenever a half street is adjacent to a tract to be divided, the other half of the street shall be provided within such tract. Reserve strips and street plugs may be required to preserve the objectives of half streets. <u>Half street improvements shall include, but not limited to, sidewalk, curb and gutter or as deemed necessary by the City Engineer.</u></p>	<p><i>Source: Staff Reasoning: General language cleanup of Streets section for clarity. Issues have emerged over years of subdivision and others land use application reviews.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
<p>Section 9.511 Drainageway Setbacks</p>	<p><i>(a) The shore of Dexter Reservoir and any year-round flowing streams shall have a minimum setback of 25 feet from the top of each bank. Additional setbacks may be required for riparian areas and wetlands existing along the shore of Dexter Reservoir and such streams. Alteration of these areas by grading or placement of structures or impervious surfaces is prohibited unless approved by the City in accordance with the procedures of city ordinances and state law.</i></p> <p><i>(b) All other drainageways and watercourses identified as significant by the City shall have a setback of 15 feet from the center of the drainageway. Additional setbacks may be required for identified wetlands. Alteration of these areas by grading or placement of structures or impervious surfaces is prohibited unless approved by the City in accordance with the procedures of city ordinances and state law.</i></p>	<p>(a) The shore of Dexter Reservoir and any year-round flowing streams shall have a minimum setback of 25 feet from the top of each bank. Additional setbacks may be required for riparian areas and wetlands existing along the shore of Dexter Reservoir and such streams. Alteration of these areas by grading or placement of structures or impervious surfaces is prohibited unless approved by the City in accordance with the procedures of city ordinances and state law. <u>For purposes of drainageway setbacks, a fence is not considered a structure and may be permitted within the drainageway setback. Fencing standards still apply as listed in Section 9.528 (c).</u></p> <p>(b) All other drainageways and watercourses identified as significant by the City shall have a setback of 15 feet from the center of the drainageway. Additional setbacks may be required for identified wetlands. Alteration of these areas by grading or placement of structures or impervious surfaces is prohibited unless approved by the City in accordance with the procedures of city</p>	<p><i>Source: Staff</i> <i>Reasoning: General language cleanup of section for clarity. Issues have emerged over years of land use application reviews.</i></p>

Code Section	Current Code Language or Description	Potential Amendments	Additional Notes (all items were scoped in Grant contract)
		ordinances and state law. <u>For purposes of drainageway setbacks, a fence is not considered a structure and may be permitted within the drainageway setback. Fencing standards still apply as listed in Section 9.528 (c).</u>	
Section 9.190 Definitions	<i>Add a new definition that defines what "development" is.</i>	<u>Development: means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, land clearing, grading, paving, excavation, or drilling operations, but not including maintenance such as grass mowing or planting, vegetation control, removal of noxious plants or nonnative vegetation, tree thinning for fire control or diseases, and removal of dangerous trees or materials.</u>	<i>Source: Staff Reasoning: General language cleanup of definitions section for clarity. Issues have emerged over years of questions and land use application reviews. Clear definitions are crucial to clear and objective standards.</i>
	<i>Add a new definition that defines what "lot consolidation" is</i>	<u>Lot Consolidation: means the legal incorporation of two or more existing parcels of land to form a single, larger parcel.</u>	
	<i>Add a new definition that defines Require Build to Line (RBL)</i>	<u>Required Build to Line (RBL): means a set building line on a lot, measured parallel from the front and/or corner side lot line, where the structure must be located. The building facade must be located on the</u>	<i>From the Downtown Master Plan</i>

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		<u>build-to line. Facade articulation, such as window or wall recesses and projections are not counted as the building façade line, which begins at the applicable façade wall.</u>	