Unique History … Vibrant Future

CITY OF DUPONT
Department of Community Development
1700 Civic Drive, DuPont, WA 98327
Telephone: (253) 964-8121
www.dupontwa.gov

STAFF REPORT & RECOMMENDATION

Patriot's Landing Memory Care Facility
City File Nos. PLNG 2017-030, -031, -032, -039, -040, and -045

SUMMARY OF REQUEST: City approval is required for a Conditional Use Permit (PLNG 2017-030), Design Review (PLNG 2017-031), Road Standards Variance Application (PLNG 2017-032), Tree Modification (PLNG 2017-039), Site Plan Review (PLNG 2017-040), and Short Plat (PLNG 2017-045).

PROJECT DESCRIPTION: Development of a one-story, 42,200-square foot, 60-bed memory care facility located on top of structured underground parking.

LOCATION: South of McNeil Street, along the west side of Garry Oaks Ave., Pierce County Tax Parcel No. 0119345001, Section 34, Township 19N, Range 1E, W.M.

APPLICANT: Mr. Mike Campeau, Careage Development Company

APPLICANT'S AGENT: Matt Reider, ESM Consulting Engineers, LLC

CITY CONTACT:
Jeffrey S. Wilson, AICP
Community Development Director
City of DuPont
1700 Civic Drive
DuPont, WA 98327-9603
Office: (253) 912-5393
Fax: (253) 964-1455
jwilson@dupontwa.gov
www.dupontwa.gov

SUMMARY OF RECOMMENDATION: Staff Recommends approval of the applications subject to conditions listed in Section F.

A. SUMMARY OF RECORD

The following attachments to the Staff Report constitute the administrative record for the application:

1. Application Plans and Documents

   a. Land Use Application Site Plan Review dated August 28, 2017
   b. Conditional Use Permit (CUP) Application dated August 28, 2017
   c. Road Standards Variance Application dated Oct. 19, 2017
   d. Tree Modification Type III application dated Oct. 19, 2017, including Request Letter dated Oct. 23, 2017

e. Short Plat application form dated November 1, 2017
f. Title Report dated August 28, 2017
g. Letter from ESM Consulting Engineers dated September 1, 2017, re: Pre-application Meeting Comments
h. Letter from ESM Consulting Engineers dated September 1, 2017, re: CUP Cover Letter
i. Memo from ESM Consulting Engineers dated September 1, 2017, re: Design Responses
j. Letter from ESM Consulting Engineers dated September 1, 2017, re: PW Design Standards Variance
k. SEPA Checklist dated September 1, 2017
l. Trip Generation Report, submitted Sept. 1, 2017, author unknown
m. Geotechnical Report prepared by Golder Associates dated June 13, 2011
n. Preliminary Stormwater Site Plan Report prepared by ESM Consulting Engineers dated September 1, 2017.
o. Preliminary Site Plan, Storm and Utilities Plans, and Grading Plans prepared by ESM Consulting Engineers dated September 1, 2017
p. Schematic Floor and Roof Plans, Building Elevations, and Sections prepared by HDI Architects dated September 1, 2017
q. Letter of Sewer Availability dated August 1, 2017
r. Letter of Water Availability dated November 29, 2017
s. 300-foot radius map
t. Completed Agent Affidavit dated October 17, 2017
u. Letter from ESM Consulting Engineers dated October 23, 2017, re: Alternative Parking
v. Approval from LeMay, Inc. for refuse enclosure location dated October 5, 2017
w. ESM Consulting Memorandum regarding Tree Modification dated January 22, 2018
x. Revised Tree Retention Plans (TR-01 and TR-02) and Landscape Plan dated January 22, 2018
y. Short Plat Plans stamped November 1, 2017
z. Short Plat Lot Closure Calculations dated October 30, 2017
aa. ESM Consulting Memorandum regarding Employee Shift Count dated January 11, 2018

2. Notices and Comments

a. Approved Boundary Line Adjustment plans dated January 11, 2018 (recording date undetermined)
b. Notice of Complete Application for CUP dated November 8, 2017
c. Notice of Application and Optional DNS dated December 21, 2017
d. SEPA Mitigated Determination of Non-significance dated January 9, 2018
e. Notice of Public Hearing dated January 23, 2018
f. Department of Ecology comment letter dated January 23, 2018
g. Department of Archaeology and Historic Preservation (DAHP) dated January 22, 2018
h. Affidavits of Posting Notice of Application
i. Affidavits of Posting Notice of Public Hearing
j. Building Dept. Comment Letter on CUP/PLNG2017-030 dated September 19, 2017
k. Building Dept. Comment Letter on Land Use App/PLNG2017-031 dated September 21, 2017
l. Building Dept. Comment Letter on Short Plat PLNG2017-045 dated December 28, 2017
m. Engineering Dept. Comment Letter PLNG2017-031 dated October 6, 2017, as amended by email thread dated January 25-26, 2018
n. Engineering Dept. Comment Letter Short Plat dated January 25, 2018
o. Engineering Dept. Comment Letter Street Standards Variance Request dated January 25, 2018
p. Fire Dept. Comment Letter PLNG2017-030 dated September 18, 2017

q. Fire Dept. Comment Letter PLNG2017-031 dated September 18, 2017
r. City Water Quality Department Comment email dated September 19, 2017
s. Traffic Consultant Comment Memorandum dated September 27, 2017
t. Engineering Dept. Comment email approving BLA dated January 13, 2018
u. Nisqually Tribe comment letter dated February 1, 2018

B. FINDINGS OF FACT

1. Procedural Requirements

a. The required pre-application meetings occurred on June 28, 2017 (PLNG2017-020 and -021). The City received a complete application for processing on December 8, 2017. The notice of Application and Optional DNS were issued on December 21, 2017. The end of the 14-day SEPA comment period was January 4, 2018. The SEPA MDNS was issued on January 9, 2018, and the end of the appeal period was January 23, 2018. No appeals were filed. The notice of public hearing was issued on January 23, 2018. Copies of all notices and the SEPA Determination are provided as Attachments 2(b) through 2(e). The affidavits of posting are provided as Attachments 2(h) and 2(i). Affidavits of publication in the News Tribune have not been received as of this writing.

b. Three comments were received. One comment was from Department of Ecology dated January 23, 2018, regarding potential contamination of the property (Attachment 2(f)). Ecology recommended certain conditions of approval prior to issuance of any site development permits or the initiation of grading, filling, or clearing. The recommended conditions were already included as mitigation measures in the SEPA MDNS.

c. The other agency comments were from Washington State Department of Archaeology and Historic Preservation (DAHP) dated January 22, 2018 (Attachment 2(g)) and the Nisqually Indian Tribe dated February 1, 2018 (Attachment 2(u)). Both are requesting that an archaeological survey occur prior to construction activities due to the potential presence of precontact archaeological resources and/or human burial. The mitigation measures in the SEPA MDNS were all related to construction monitoring and did not include the advance preparation of an archaeological survey. DMC Chapter 25.80 Cultural, Historical and Archaeological Resources allows that "if historical data indicate probable presence of cultural resources which may be disturbed by excavation, the mayor or his or her designee shall meet the developer and may impose conditions on any plat, site plan or permit to assure that such resources are protected, preserved or collected." Accordingly, the requested survey is included as a recommended condition of approval in this staff report. The Tribe letter also requested that an Inadvertent Discovery Plan be in place for the project. Construction monitoring by a professional archaeologist is listed as SEPA Mitigation Measure No. 14.

d. The property is located in the R-5 Zoning District. Memory Care Facilities are similar to several listed Conditional Use types, including "Assisted living with up to 120 units" and Nursing homes with up to 180 beds." Conditional uses are processed as Type III procedures, which require approval from the hearing examiner following a public hearing. The project is required to meet the review criteria for CUPs in DMC 25.135.030.

e. The application proposes to remove two Landmark Oregon white oak trees, which requires a Type III approval, per DMC 25.120.050.

f. Site Plan approval is required per DMC 25.45.040. It would typically follow a Type II process; however, per DMC 25.175.010, it is being consolidated with the Type III process.

g. Although not technically a multi-family project, the design and use of the facility is similar and the City has determined that Design Review approval is required per DMC 25.20.050(7). The applicant is required to meet the intent of the Multi-family Design Regulations and Guidelines found in DMC 25.65. Design Review is typically a Type I process; however, per DMC 25.175.010, it is being consolidated with the Type III process

h. A Short Plat is requested to subdivide Parcel No. 0119345001 into two lots. The process is typically a Type I procedure, but it is being consolidated with the Type III process per DMC 25.175.010.

i. A Boundary Line Adjustment (BLA) has been submitted separate to this application, has been approved by the City (PLNG2017-044), and is in the process of recording with Pierce County. Upon recording, the boundary lines will be consistent with the parcel boundary lines reflected in the Short Plat and Site Plan Review application. See attachments 2.a and 2t.

j. Access is provided by three driveways that extend from Marshall Circle, which extends south from McNeil Street. Marshall Circle is a private road. Garry Oaks Avenue is identified as the frontage road along the parcel; however, this street name will be changed to Marshall Circle and is used interchangeably in this report.

k. A variance from City Public Works Standards Section 3.1.2 is required for driveway separation to accommodate the reduced spacing of four driveways (PLNG2017-032). Variances are granted by the Public Works Director upon evidence that such variances are consistent with the City's Comprehensive Plans, are in the public interest, and that requirements for safety, function, fire protection, appearance, and maintainability based on sound engineering judgement are fully met. The approval is consolidated with the Type III process, per DMC 25.175.010.

2. Site and Project Description

a. The property is located on Pierce County Tax Parcel No. 0119345001, which is 7.23 acres in size before the approved BLA is recorded and 7.26 acres in size after the BLA is recorded. The parcel is largely vacant land with the exception of six duplex units at the northeast end. The site was previously cleared and graded; however, several landmark and specimen trees remain. To the north is the existing Patriot's Landing Assisted Living project and to the south is Joint Base Lewis-McChord property. Property to the west is vacant land.

b. The project is for the development of a one-story, 42,200-square foot, 60-bed memory care facility. A total of 49 parking spaces are provided, 38 of which are located in an underground structured parking garage. The applicant will be licensing the facility as an assisted living facility through Washington State.

c. Access is provided by Marshall Circle, which extends south from McNeil Street. Marshall Circle is a private road. Four driveways are proposed.

C. ANALYSIS AND CONCLUSIONS OF CONSISTENCY WITH CITY OF DUPONT COMPREHENSIVE PLAN

The City of DuPont Comprehensive Plan (2015 with recent amendments for this area in 2017 (Ordinance 17-1029), designates the subject property as being within the Residential 5 (R-5) zoning district and within Yehle Park Village. Yehle Park Village has developed since 1997 as a mix of residential lot sizes and housing to encourage variety, densities, and affordability. The Village includes Patriot's Landing, a 21-acre continuing care and retirement complex.

The R-5 zoning district is described in the Comprehensive Plan as follows:

> *"The purpose of the R-5 district is to implement the single-family land uses where single-family density averages five units per acre. This district is appropriate for Palisade Village, Yehle Park Village, and Edmond Village."*

R-5 is the primary land use in Yehle Park Village. Additionally, DuPont Powderworks Park is located in Yehle Park Village. The water resources and DuPont Powderworks Park provide passive and active recreation opportunities for the community. The description of the Yehle Park Village includes specific mention of the existing and planned Patriot's Landing projects, which will eventually include a variety of housing types, neighborhood-scaled retail/services, medical offices, and multi-family housing. Patriot's Landing is planned as a complete, walkable community district with a full range of housing that is particularly designed to attract and serve the needs of seniors and retirees. The Yehle Park Village has "a long-term City goal to provide a variety of housing options for seniors, retirees, and those who are close to retirement that are affordable, walkable, and celebrate an active community lifestyle." Additionally, "The Patriot's Landing Village Center provides opportunity to address the City's goal to provide diversified housing options."

Relevant goals and policies that are consistent with the proposal include the following:

1. Land Use Goals and Policies

   a. LU-1.1: Ensure neighborhoods or "villages" are sized according to a pedestrian/walking scale of distance and are defined by natural features, parks, open spaces, and streets.

   b. LU-1.2: Encourage new urbanism types of development rather than typical suburban development, which is less efficient in its use of land and often results in disconnected auto oriented enclaves and sprawl.

   c. LU-2.1: Explore opportunities for design centered development controls while allowing flexibility in uses.

   d. LU-4.2: Orientation of retail, residential, public structures, and commercial buildings (outside the Research Park and Business and Technology Park) should be to the front near the street Right of Way, rather than being separated from the street. Churches and other symbolic structures should be located in a way that promotes their visual prominence.

e. LU-4.3: Design standards should address integration of amenities for the pedestrian within the streetscape, such as street trees, landscaping, benches, lighting, trash receptacles, signage, and bicycle parking.

f. LU-4.4: Development standards for commercial structures should encourage on street parking and parking at the rear or secondarily on the sides of developments to enhance the pedestrian environment.

Staff Analysis: The Patriot's Landing Memory Care Facility project is generally consistent with the land use goals and policies of the DuPont Comprehensive Plan. The site is defined to the south by Eagle Pride Golf Course and to the east by vacant vegetated area. The project will include building modulation and a variety of materials and treatments that comply with City building architectural design standards. The proposed building is oriented toward Garry Oaks Avenue, which promotes the structure's visual prominence. The design includes streetscape enhancement (street trees). Sidewalks are provided on the east side of Garry Oaks Avenue with two designated Garry Oaks Avenue crosswalks. The majority of parking stalls will be in an underground structured parking garage, with 11 surface parking spaces at the main entrance of the building.

2. Economic Development Goals and Policies

a. ED-2.2: Recognize and balance the long-term interests of the citizens with the fiscal benefits of business growth.

Staff Analysis: The Patriot's Landing Memory Care Facility project is generally consistent with the economic development goals and policies of the DuPont Comprehensive Plan. The Patriot's Landing Memory Care Facility project seeks to provide employment for approximately 70 people, while providing a local memory care facility that can be of long-term interest and amenity to the community.

3. Natural Environment Goals and Policies

a. NE-2.3: Protect and retain significant trees and vegetation in public and privately dedicated areas.

b. NE-4: Minimize adverse effects of development on the environment.

c. NE-4.3: Site preparation activities should be designed to minimize extensive grading and to retain a portion of significant trees and vegetation. Development standards should implement guidelines and define extensive grading to clarify the circumstances when extensive grading may be appropriate.

Staff Analysis: The Patriot's Landing Memory Care Facility project is generally consistent with the natural environment goals and policies of the DuPont Comprehensive Plan. A tree retention plan has been prepared to meet City standards, which includes a Type III Tree Modification Approval. Minimal grading will be required, as the site was previously cleared and graded.

4. Housing Goals and Policies

a. H-2.4: Encourage housing for the elderly, such as accessory dwelling units on residential lots and encourage a mix of generations within the social fabric of the City by allowing for senior housing and long-term care facilities to integrate within residential villages and DuPont Station.

Staff Analysis: The Patriot's Landing Memory Care Facility project is generally consistent with the housing goals and policies of the DuPont Comprehensive Plan. The Patriot's Landing Memory Care Facility project is a senior and long-term care facility that is integrated into Yehle Park Village. The project will include building modulation and a variety of materials and a treatment that are compatible with Yehle Park Village establish styles.

D. ANALYSIS AND CONCLUSIONS OF CONSISTENCY WITH DEVELOPMENT REGULATIONS

The proposal has been reviewed to ensure that the project is carried out in a manner consistent with the DMC and existing ordinances concerning public utilities, traffic, facilities, protection of sensitive areas, and services, and provides unified site design, access, landscaping, screening, building design and placement, and parking. In order to obtain approval, all of the applicable development regulations and criteria specified in the Residential District must be satisfied, in addition to any general development requirements in DMC Chapters 25.75 through 25.95 and 25.105 through 254.125, as well as DMC 25.65 (Multifamily Design Regulations and Guidelines) and 25.135 (Conditional Uses). The following sections present staff analyses for consistency review.

1. PLANNING DEPARTMENT REVIEW – SITE PLAN REVIEW (PLNG2017-040)

DMC Chapter 25.150 Site Plans requires review and approval of the project for consistency with the development regulations and criteria specified in DMC Chapter 25.20 Residential District, in addition to any general development requirements in DMC Chapters 25.75 through 25.95 and 25.105 through 25.125.

a. Chapter 25.20 – Residential District

The proposal is located in the R-5 zoning district and is therefore required to comply with Chapter 25.20 Residential Districts. The purpose of the R-5 District is to implement the single-family land uses called for in the land use tables of the Comprehensive Plan, where single-family density averages five units per gross acre. Assisted living and nursing homes with up to 180 beds are conditional uses in Residential Districts. The Residential District provides bulk regulations for single-family and multi-family type uses only; therefore, the City applies the multi-family regulations as being more appropriate than single-family for the memory care facility. The following compares the multi-family regulations in DMC 25.20.050 against the proposal:

Table 1 – Consistency with DMC 25.20.050 Multifamily Residences

Regulation	Requirement	Consistency Analysis
Location and Size Limit	Shall not exceed 120 units and projects with more than 80 units shall be separated from one another by at least 250 feet, regardless of the district in which the multi-family project is located.	The requirement relates to units, which is a clear multi-family related requirement. The memory care facility is 60 beds, less than the limitation provided for the type of use in the R-5 District.

Height	45 feet for MFR buildings separated from a single-family residence by another building, a public street, or at least 100 feet of open land, or 55 feet for MFR buildings that include parking under the building for a minimum of 75 percent of the building ground floor area. Otherwise, the height limitation is 35 feet.	The project is separated from a single-family residence by more than 100 feet of open land and also includes underground parking. The proposed building height is 26 feet.
Front, Side, and Rear Setbacks	Same as for the single-family district, which is: Front yard: 20 feet Rear yard: 15 feet Side yard: 5 feet, and the 2 sides must total 20 feet Corner lot side yards: 14 feet	Front: 20 feet provided Side: a total of two 10-foot setbacks provided Rear: a combination of 15- and 20-foot setbacks is noted on the site plan.
Lot Coverages	35 percent	30 percent of the 3.26-acre site will be covered by buildings, as measured at the building foundation.
Fences	No fences in the front setback area. No fence shall exceed 6 feet, except may be increased to 8 feet through the CUP process.	No fences are proposed in the front setback area. Fences around the rear and sides of the building are provided without height details.

Staff Analysis: The applicant did not request fence heights taller than 6 feet with the proposal; therefore, they will be limited to 6 feet unless they apply separately for a CUP. The proposal is compliant with the required Residential district bulk regulations.

b. Chapter 25.75 Commute Trip Reduction

The requirements for commute trip reduction apply to employers who employ 100 or more employees. The applicant estimates approximately 70 employees. If the employee count should increase, they will be required to comply with Chapter 25.75.

c. Chapter 25.80 Cultural, Historical and Archaeological Resources

This chapter is intended to encourage identification, protection, preservation, and/or restoration of cultural resource sites of documented significance.

DMC 25.80.040: Construction within areas of potential historical or cultural resources. If historical data indicate probable presence of cultural resources which may be disturbed by excavation, the mayor or his or her designee shall meet the developer and may impose conditions on any plat, site plan, or permit to assure that such resources are protected, preserved, or collected.

The City received comment letters from Department of Archaeology and Historic Preservation (DAHP) dated January 22, 2018 and the Nisqually Tribe dated February 1, 2018, that requested an archaeologic survey be completed prior to any ground disturbing activities due to the potential for precontact archaeological resources and/or human burials. The Tribe also requested an Inadvertent Discovery Plan be in place, which is SEPA Mitigation Measure #14 in the MDNS.

Staff Analysis: The requested survey is included as a recommended condition of approval in this staff report.

d. Chapter 25.90 Landscaping

DMC 25.90.020: Requires that 30 percent of the project area be for landscaping. Landscaped area is defined as land with permeable soils covered with plantings, grasses, or vegetation native to the area.

The Landscape Plan Sheet LA-02 indicates that 43 percent of the site will be landscaping.

Staff Analysis: The proposal is compliant.

DMC 25.90.030: Requires that street trees be provided within the right-of-way in accordance with the City's Public Works Standards. They shall be provided, at least one per 40 to 50 feet of frontage, depending on the tree species, and be of the same species as other trees in the same streetscape. Spacing shall accommodate sight distance requirements for driveways. The trees shall be at least 2-inch caliper or have a minimum branch height of 6 feet.

Street trees are provided along the property frontage at intervals of 25 feet, except where driveways intervene. The species is intended to match those planted on the opposite side of the street; however, the specific species is not identified. Caliper sizes are not identified on the landscape plans.

Staff Analysis: The landscape plans require further review at the time of site development permit for compliance with street tree type, size, and how they accommodate sight distance requirements at the driveways.

DMC 25,90.030(2): Requires that surface parking lots with 10 or more stalls be landscaped with at least one tree per six stalls.

The two surface parking areas located on either side of the front entry door are separate and provide less than 10 stalls each.

Staff Analysis: This section of code is not applicable.

DMC 25,90.030(3)(a): Requires a moderate buffer be provided between parking lots and any adjacent public right-of-way.

The property is not adjacent to a public right of way.

Staff Analysis: This section of code is not applicable.

DMC 25.90.040: Requires water conservation measures and minimal irrigation.

Water conservation was provided on Sheet LA-02.

Staff Analysis: The irrigation plan and water conservation details will be reviewed at the time of site development permit for compliance.

e. Chapter 25.95 Off-Street Parking

DMC 25.95.030: Stipulates a minimum and maximum allowed number of parking spaces based on types of uses. Most similar to the proposed memory care facility is the "hospital and residential health care facilities" type of use, which requires between 0.2 and 0.4 parking spaces per bed. Other similar type uses listed include "housing reserved for senior citizens," which allows a minimum of 0.5 spaces per dwelling unit with no maximum. DMC 25.95.030 states that the administrator shall determine parking requirements for uses not listed on a case-by-case basis.

The proposal seeks to provide a total of 49 parking spaces, 38 of which are located in an underground structured parking garage. Two of the 11 spaces located at the front entry are within the front yard setback area, which is not allowed.

If the project was similar to a hospital or residential health care facility, no more than 24 spaces would be allowed (60 beds multiplied by the maximum of 0.4 spaces per bed), which the proposal exceeds by 25 (including nonconforming) spaces. If similar to senior citizen housing, the proposal would be compliant with City parking code as the minimum required spaces would be 30 and the maximum would be unlimited, assuming that "beds" are equivalent or similar to "dwelling units."

We have received two memorandums from the applicant specific to parking (Attachments 1(u) and 1(aa)). The first dated October 23, 2017, provides examples of other City parking code requirements for assisted living facilities that are based on beds or sleeping units. One example, the City of Lakewood, requires one space per three beds plus one per employee, with no stated maximum amount of parking provided. The City of Lakewood would likely require a minimum of 77 spaces, at least 28 more than the Patriot's Landing proposal (60 beds requires 20 spaces and one per employee requires 57 spaces (see employee count, below)).

The second memorandum dated January 11, 2018, provides staffing per shift information from the applicant. Approximately 30 employees are anticipated in the day shift, 21 in the evening shift, and 6 in the nocturnal shift. During the peak shift change period, a total of 48 employees are anticipated. The January 11, 2018, memorandum did not account for visitor numbers, as the number is unknown; however, residents are allowed to have guest visitors at any time of day. It is reasonable to assume that during the peak shift change period; there would likely also be visitors, however most visitors occur in the evening hours after the shift change when 21 staff are present. It is also reasonable to assume that the peak parking demand during the shift change is a relatively short period of time.

DMC 25.95.030 allows the administrator to determine parking requirements for uses not listed on a case-by-case basis. Due to the differences of a memory care facility from the uses listed in the City's parking code, the administrator determination of required parking for the memory care facility is appropriate. The parking provided is designed to accommodate the parking needs at the peak staff levels and a small amount of visitor parking. From time to time it is likely that during the peak period there would be some use of on-street parking.

Staff Analysis: The intent of the off-street parking regulations is to assure that the supply of off-street parking reasonably satisfies the demand at all but the peak demand times of year; avoids over-reliance on on-street parking; retains enough scarcity so drivers have an incentive to

utilize modes of transportation other than single-occupancy vehicles; and so permeable soils are not unnecessarily paved over. The administrator has determined that for the proposed use, the proposed quantity of parking is generally necessary for efficient operations and to accommodate visitor parking. This quantity will meet the overall intent of the parking quantity restrictions by avoiding over-reliance on on-street parking. Some parking may occur on Marshal Circle during the shift change; however Marshall Circle is a private street and located within an area of compatible/similar uses. It is not likely that staff would benefit from transit use, as there is no public transportation in the vicinity of the site (other than a commuter line intended to service locations outside of the City to the north). Most of the parking provided (38 spaces) will be located in an underground facility, and therefore minimizes unnecessary surface paving. Given that two spaces are currently non-conforming to code, there is the potential for either redesign or loss of parking prior to final permit approvals. The required minimum amount of parking for the facility should be no less than 48 (commensurate with peak demand),and no more than 49 spaces.

DMC 25.95.040: Location. Requires off-street parking spaces be located within 500 feet walking distance from an entrance to the building served, that the spaces not be located within a vision clearance triangle.

Staff Analysis: The parking areas meet the distance requirements and are located away from the driveway entrance so as not to impede sight distance.

DMC 25.95.040(3): requires parking spaces in residential areas be located outside of required front yards.

One parking stall on each side of the front parking lot is located within the required 20-foot front yard setback.

Staff Analysis: There are several options available to comply with DMC 25.95.040(3). (1) The front parking area could be redesigned to relocate the parking spaces outside of the required front yard setback, which may or may not eliminate one or two parking spaces; or (2) the applicant could request a variance to the front yard setback, pursuant to DMC 25.160; or (3) a shared parking agreement could be provided demonstrating that a commensurate number of parking spaces are available for use in the adjacent parking lot.

If the driveway locations are modified to shift the two parking spaces outside of the front yard setback, administrative approval for a modification to the Road Standards Variance Decision and a Minor Site Plan Amendment (DMC 25.150.050) will be required. If the changes result in less than 48 parking spaces, which is the Director's recommended minimum per the Staff Analysis in Section 1(e), above, the administrator should be given the authority to evaluate and possibly approve the lower parking count based upon compelling applicant justification.

DMC 25.95.040: Development standards. Requires driveway widths of at least 10 feet per lane and located so as not to endanger or impede traffic; incorporate maneuvering room to avoid backing onto a public street, be surfaced with a dust-free, durable material; and other dimensional requirements.

Staff Analysis: The driveway widths and parking lot design are in conformance with the dimensional requirements. Staff recommends that the driveway and parking lot design details be reviewed further for conformity during the site development and building permit review.

DMC 25.95.060: Preferential parking and high-occupancy vehicles. Requires disabled parking per state law. For land uses that require a minimum number of parking spaces per employee, at least one of every 20 employee spaces is to be reserved for high-occupancy vehicles. In addition, locational priority shall be given for disabled parking, high-occupancy vehicles and bicycles.

Staff Analysis: The required amount and location of disabled parking spaces are compliant. No high occupancy vehicles or bicycle parking areas are noted on the plans. The use does not require a minimum number of parking spaces per employee and therefore the high occupancy vehicle requirement is not applicable. The DMC does not require bicycle parking. Staff finds the proposal is compliant with DMC 25.95.060.

DMC 25.95.070: Loading. Requires loading facilities be located on the same lot as the structure, ensure loading vehicles will not project into the public street, and specific loading berth dimensions.

There are no loading spaces identified on the plans. It appears as though loading is intended to occur in the underground parking structure.

Staff Analysis: Staff recommends the plans be reviewed at the time of site development permit for compliance with DMC 25.95.070.

f. Chapter 25.100 Recycling

DMC 25.100.020-040: Location and Accessibility. Requires at least one storage enclosure for refuse and recycling receptacles; it be located outside of required yards or buffer areas; compliance with DMC 25.70 (Commercial and Mixed Use Design Regulations and Guidelines); be easily accessible to users; and have adequate vertical and turning clearances for collection equipment.

The refuse and recycling enclosure is located at the rear of the building where it is outside of required yards and buffer areas, easily accessible. The enclosure location and design have been reviewed by the solid waste service provider and confirmed to be acceptable (see Attachment 1(v)).

Staff Analysis: The location of the refuse and recycling enclosure is compliant with DMC 25.100.020-040.

DMC 25.100.050: Design. Requires the enclosure be designed to match the primary building in terms of design and materials and be sized for both general refuse and recycling bins; be located on a flat and level area of a minimum of 100 square feet, surfaced with concrete and at the same grade as service vehicle access; have a service opening 10 feet wide and not visible from public streets, on-site access route or parking area, or the enclosure shall be fully gated.

The enclosure is 12 feet deep by 24 feet wide and located on a flat concrete surface area that exceeds 100 square feet. The surface opening is 17 feet 4 inches. It is located at the rear of the building and not visible from a public street. It is fully gated. Elevations, colors, and materials were not provided so it is not possible to assess if the enclosure is designed to match the primary building.

Staff Analysis: The refuse and recycling enclosure is compliant with all dimensional requirements of DMC 225.100.050. Staff recommends the enclosure design be reviewed for compliance with DMC 25.100.050(2) at the time of building permit.

g. Chapter 25.105 Sensitive Areas, Chapter 25.110 Setback-Street Corners

The property does not contain sensitive areas and the property is not situated on a street corner.

Staff Analysis: Chapters 25.105 and 25.110 are not applicable.

h. Chapter 25.115 Transportation Concurrency Review

Projects requiring Site plan and design review are also required to undergo Transportation Concurrency Review. Per DMC 25.115.020 the city shall not issue a development permit until the test has been completed and a certificate of concurrency has been issued. Per DMC 25.115.040, the finding of concurrency may occur at the building permit application phase.

Staff Analysis: The project will be required to complete the Transportation Concurrency requirements at the time of building permit application. Indications are that the project will meet concurrency requirements. The applicant submitted a trip generation analysis (Attachment 1(l)), which was reviewed by the City's Traffic Engineering Consultant (Attachment 2(s)) and found that due to the small number of trips no further analysis is required.

i. Chapter 25.116 Sign Code

An application for sign permit was not submitted with the application.

Staff Analysis: A permit is required for any building or other signage in accordance with the requirements of DMC 25.116.

j. Chapter 25.125 Wireless Communication Facilities

The application does not contain a request for a wireless communication facility.

Staff Analysis: Chapter 25.125 is not applicable.

2. PLANNING DEPARTMENT REVIEW – TREE MODIFICATION (PLNG2017-039)

Chapter 25.120 Tree Retention applies to all new development projects that require site plan approval. The City regulates trees based on type and size and defines trees as either Landmark Tree or Specimen Tree.

"Landmark tree: means an existing healthy, well-formed tree which poses no safety hazard due to potential collapse and that is of the following species, trunk type, and minimum diameter measured at breast height:

Table 2 – Landmark Tree Per DMC 25.10.120L		
Trunk-Type	Oregon white oak, pacific yew, or madrona	Douglas fir, western red cedar, western hemlock, or big leaf maple
Single Trunk	24 inches	30 inches
Multi-trunk (sum of diameters)	30 inches	45 inches

"Specimen tree," per DMC 25.10.190S, means an existing healthy tree which poses no safety hazard due to potential collapse and is of the following species and minimum diameter measured at breast height; provided, that the measure of multi-trunk trees shall be the sum of the diameters:

- Douglas fir, western red cedar, western hemlock, or big leaf maple: 15 inches
- Oregon white oak, Pacific yew, or madrona: 12 inches
- Historic fruit trees: no size limit.

Table 3 summarizes the existing tree types on the property and those that are proposed to be removed and retained. The "project area" for the purposes of tree retention is that area defined as the final lot configuration following recording of the submitted short plat application, which is 3.26 acres in size.

Table 3 – Tree Types and Proposed Tree Retention			
Total Trees			
Tree Type	**Landmark**	**Specimen**	**Total**
Fir	1	7	8
Oak	2	5	7
Maple	1	1	2
Total	4	13	17
Total Trees Retained			
Tree Type	**Landmark**	**Specimen**	**Total**
Fir	1	4	5
Oak	0	2	2
Maple	0	0	0
Total	1	6	7
Total Trees Removed			
Tree Type	**Landmark**	**Specimen**	**Total**
Fir	0	3	3
Oak	2	3	5
Maple	1	1	2
Total	3	7	10

a. DMC 25.120.030(2): Requires all landmark Oregon white oak trees be retained.

The plan proposes to remove all of the landmark oak trees (2), which is the reason for the Type III Tree Modification. The cumulative diameter of the landmark oaks to be removed is 119

inches. The landscape plans identify replacement with a total of 40, 3-inch caliper Oregon white oak trees, which provide an equivalent diameter of the removed oak trees to mitigate for their loss. The plans provide for specific installation instructions and include the required tree protection measures in DMC 25.120.030(5).

Staff Analysis: DMC 25.120.050 allows for modifications of the provisions of the Tree Retention requirements based on special circumstances pertaining to the land or the trees on it. The proposed development is constrained by steep topography along the south, the location of the existing private roadway to the north, and the narrow parcel configuration that precludes tree retention within the development footprint. The overall intent of the City's tree retention requirements is to protect natural habitats, air quality, and groundwater recharge; improve the appearance of the community; provide shade and wind protection; reduce stormwater discharge; and conserve water supplies. The City seeks to balance tree retention without reducing developmental densities indicated in the comprehensive plan. Staff finds that the site is uniquely constrained, that the development footprint has been minimized to the greatest extent possible as evidenced by the underground parking structure, and the proposed tree replacement will meet the City's intended results.

b. DMC 25.120.030(2): Requires at least half of all other (non-oak) landmark trees be retained.

There are 2 non-oak landmark trees located onsite, so the requirement is that at least one non-oak landmark tree shall be retained.

Staff Analysis: One tree is planned to be retained, and is therefore code-compliant.

c. DMC 25.120.030(3): Requires a minimum of 4 trees per acres be retained, but nothing shall require the retention of more than half of the existing non-oak trees.

The calculation for the subject property requires 4 trees per 3.26 acres, for a total of 13 trees to be retained. However, there are 10 existing non-oak trees, half of which is 5. Therefore, a minimum of 5 non-oak trees is required to be retained.

Staff Analysis: A total of 5 fir trees are being retained and is therefore code-compliant.

3. PLANNING DEPARTMENT REVIEW – DESIGN REVIEW (PLNG2017-031)

As described above, the City interprets the multi-family regulations of the Residential District as being most appropriate to apply to the proposed memory care facility. Chapter 25.20.050 (7) requires Design Review for all multifamily projects. The alternative would be to apply the Commercial and Mixed use Design Regulations found in Chapter 25.70, however, because the project is located within the Residential district, this was deemed less appropriate than multifamily. Accordingly, the application of the Design Review requirements for the memory care project is anticipated to require some flexibility due to the unique differences between a health care facility and a multi-family facility.

a. DMC 25.65.020(2)(a) and (b): Modulation. Modulation is required along the facades facing and visible from public rights-of-way. Modulation with bays and recesses at least six feet wide and no more than 25 feet wide and at least two feet deep is required. Walls up to 36 feet wide

may be allowed without modulation on up to half of the building width when approved alternate means are incorporated to provide visual variety.

The front/east façade of the building is somewhat visible from McNeil Street, the nearest public right-of-way located approximately 800 feet to the northeast, and requires modulation. Modulation is provided, however the two sides of the building on either side of the entry feature a 73-foot wide face without modulation and the two ends of the buildings have 30 feet spans without modulation. These longer spans feature fiber cement painted siding.

Staff Analysis: The applicant has explained that wider bays and recesses are needed to accommodate the necessary equipment and ADA access for residents. The variation of colored fiber cement siding will provide the needed visual variety and interest. The overall intent is met in that visual variety on the street face is provided. Additionally, as viewed from the public right of way, located more than 800 feet from the proposed building, the appearance of modulation and aesthetics of the building will be somewhat diminished. The proposal is compliant with the overall intent for modulation of facades facing public rights of way.

b. DMC 25.65.020(2)(c): Articulation. Horizontal facades longer than 25 feet shall be articulated into smaller units using one or more of the following methods: distinctive roof forms, changes in materials, window patterns, and color differentiation.

The roof forms feature a variety of peaks and valleys. A mix of painted fiber-cement lap and panel siding are used and the main entrance is surrounded by stone veneer. Vinyl-framed windows are used throughout the building and the plan for multiple shades of color blend with the stone veneer to provide color differentiation.

Staff Analysis: The articulation requirements are met.

c. DMC 25.65.030(2) (a)(i): Pitched Roof Forms. Pitched roofs with slopes between 4:12 and 12:12 are required.

A variety of roof pitches are illustrated on the elevations without specific dimensions.

Staff Analysis: Although it appears that the roof pitch requirements are met, the calculations are not provided. Staff recommends a condition of approval that roof pitches be reviewed for compliance during building permit review.

d. DMC 25.65.030(2) (a)(ii): Required roof forms. Flat or lower sloped roof portions shall have parapets or edge details that provide visual interest.

The only flat portions of roof are located within the interior of the site, where they would not be visible. The plans do not provide details about parapets or other edge details within this interior flat roof area.

Staff Analysis: Staff finds that because the area of the roof that is flat is interior to the building and surrounded by pitched roofs on all side. The roof would not be visible; therefore the required edge treatment requirements are not required. The proposal is compliant.

e. DMC 25.65.030(2)(b): Encouraged roof forms. Each façade facing a street is encouraged to have a gabled roof form or other roof forms, such as hip roofs, dormers and overhangs. Dormers less than half the façade length may be pitched at shallower slopes or flat when appropriate.

A variety of these elements can be found on the building elevations. Dormers present on the building depict a shallower pitched roof.

Staff Analysis: The proposal is compliant.

f. DMC 25.65.040(2)(a): Entrance and front porch requirements. All entries shall have a weatherproof roof covering, appropriate to the size and importance of the entry but at least four feet deep and four feet wide. Primary entries shall provide visible access directly to dwelling units or through elevator lobbies, stairwells, and corridors.

The entry roof covering extends over 82 feet from the building entrance. The front doors enter into a lobby where stairs and elevators will be accessible to residents, staff, and visitors.

Staff Analysis: The proposal is compliant.

g. DMC 25.65.040(2)(b): Porches are Encouraged.

Front porches are not included due to the nature of the safety and security requirements of the memory care facility. Interior courtyards are provided for residents who would like to sit outside and where they can be observed.

Staff Analysis: Staff finds that the porch requirement is more applicable to a multifamily project rather than the proposed memory care facility where safety and supervision is closely monitored. The inclusion of courtyards meets the overall intent for outdoor spaces and gathering.

h. DMC 25.65.050(1)(a): Window Requirements. Windows facing streets shall be transparent. Windows and doors shall be surrounded by at least four-inch stock. The trim at the top of the window is encouraged to be wider when it reflects the style of the building.

The windows facing the streets are transparent and the applicant states that the top trim is wider than the vertical trim where the stone veneer is applied. Trim details and dimensions are not provided to fully evaluate that this requirement is met.

Staff Analysis: The wider trim is intended to provide an architectural distinction along the building façade. Staff recommends a condition of approval that window trims be reviewed for compliance during building permit review.

i. DMC 25.65.050(1)(b): Encouraged window and door treatments. Facades should include windows of varying size and shape; cantilevered bay windows are encouraged and may be allowed to project up to 18 inches into required setbacks; and divided windows are encouraged, where appropriate to the style of the building.

The elevations indicate that windows of varying size and shape are provided and that the windows are divided.

Staff Analysis: The proposal is compliant.

j. DMC 25.65.060: Color. Bright, intense colors shall be reserved for minor accent trim, with the body of the building to be a more muted color. The building will incorporate natural tones and varying shades of color that are similar to existing colors used in Yehle Village. Bright colors will not to be used on the building or any future signage.

Staff Analysis: While the applicant's narrative stated that the requirement is met, specific colors were not provided for review. Staff recommends that colors be reviewed during building permit for compliance with DMC 25.65.060.

k. DMC 25.65.070 Building design variety.

Staff Analysis: This section is intended for projects with multiple buildings and is not applicable.

l. DMC 25.65.080 Spaces between buildings and adjacent streets. Buildings shall face a street and avoid a twisted orientation. The area shall also contain a variety of landscape design elements shall be used to create a sense of formality, repetition and demarcation between public and private use. Spaces shall be designed to frame the streets, emphasize building entrances, and define private courtyards and include at least two of the following: (i) ornamental trees at least two-inch caliper, with regular spacing parallel to the street; (ii) hard-surfaced area containing seating in the form of benches and/or low ledges; (iii) formal beds of seasonal plantings; (iv) low hedges.

The building faces Marshall Circle (a private street) and the building attractively mimics the circular orientation of the street. The building entry is prominent with the circular drop-off/pick-up loop and the extended entry cover. Landscaping at the entry includes ornamental trees that vary in type and size that are spaced regularly parallel to the street. There are several that will range from five to eight-feet in height at planting (caliper size is not provided) and there are some with a stated 1.5-inch caliper size, which is below the two-inch caliper requirement. Formal beds of seasonal plantings are provided along the street frontage and surrounding the entry drive.

Staff Analysis: The proposal generally meets the intent for providing a contribution to the overall townscape and is therefore compliant. It is recommended that the tree caliper sizes be provided on the landscape plans to verify compliance with the minimum size requirements of DMC 25.65.080(2)(b).

4. PLANNING DEPARTMENT REVIEW – SHORT PLAT REVIEW (PLNG2017-045)

The proposal is to subdivide parcel 0119345001 into two lots. After recording, Lot 1 will be 3.26 acres and Lot 2 will be 4.0 acres. Proposed Lot 1 is currently vacant land but the subject of the land use applications for the Patriot's Landing 60-bed memory care facility. Proposed Lot 2 contains 6 single family (duplex) residences.

As required by DMC 24.06.060, the short plat has been reviewed for compliance with applicable adopted plans, policies, and regulations. Upon review, it has been found to be consistent with these regulations. The new parcel configuration and boundaries do not preclude the property from meeting the required setbacks or other bulk regulations for development as described in DMC 25.20.

Staff Analysis: The application has been reviewed for compliance with DMC 24.06 Short Subdivisions and specifically, DMC 24.06.060(b) and (f), and found to be consistent with the requirements of these regulations.

5. PLANNING DEPARTMENT REVIEW – CONDITIONAL USE PERMIT (PLNG2017-030)

The proposed use is listed as a conditional use in the Residential District and therefore is therefore required to meet the following Conditional Use Criteria for Approval.

a. That the use is listed as a conditional use, or that listing for conditional uses contains the language permitting similar land uses in the district where the conditional use is proposed. For the use to be determined "similar" the majority of the aspects of use shall be the same or lesser than those of listed conditional uses;

Staff Analysis: Chapter 25.20 Residential District describes both nursing facilities and assisted living as conditional uses. The memory care facility is very similar to both uses and would have similar aspects.

b. That the granting of such conditional use permit will not be detrimental to the public health, safety, comfort, convenience and general welfare, will not adversely affect the established character of the surrounding neighborhood, and will not be injurious to the property or improvements in the vicinity and/or district in which the property is located;

Staff Analysis: As described throughout this staff report, the proposal has been evaluated and determined it will not be detrimental to the public health, safety, comfort, convenience, and general welfare and will not adversely affect the existing character of the neighborhood. The memory care facility is consistent with the uses and character of the surrounding neighborhood and meets an important health care need for DuPont and the larger Pierce County region.

c. That the proposed use is properly located in relation to the other land uses and to transportation and service facilities in the vicinity; and further, that the use can be adequately served by such public facilities and street capacities without placing an undue burden on such facilities and streets;

Staff Analysis: The use will be adequately service by public facilities and street capacities without placing an undue burden.

d. That the site is of sufficient size to accommodate the proposed use and all yards, open spaces, walls and fences, parking, loading, landscaping and other such features required by the DMC.

Staff Analysis: As described in this staff report and following review of the project for consistency with the DMC, in both the current parcel size and following recording of the short

plat, the project is of sufficient size to accommodate the proposed use and all yards, walls and fences, parking, loading, landscaping and other such features required by the DMC.

e. That the proposed use is consistent with the goals and policies of the DuPont comprehensive plan.

Staff Analysis: As described in Section 3, the proposed use is consistent with the goals and policies of the DuPont comprehensive plan and the intended mix of uses for the Yehle Park Village. The use complements the existing assisted living facilities in the neighborhood and provides a "continuum of care".

6. PLANNING DEPARTMENT REVIEW – ROAD STANDARDS VARIANCE (PLNG2017-032)

Access is provided by three driveways that extend from Marshall Circle, which extends south from McNeil Street. Marshall Circle is a private road. A variance from City Public Works Standards Section 3.1.2 is required for driveway separation to accommodate the reduced spacing of the three driveways. Variances are granted by the Public Works Director upon evidence that such variances are consistent with the City's Comprehensive Plans, in the public interest and that requirements for safety, function, fire protection, appearance, and maintainability based upon sound engineering judgement are fully met. The Planning Department is not consulted for review of the variance unless it affects street width, street classification, or plat design. The subject road variance does not affect either of those details and therefore does not require planning department review. See Section 8, below for the Public Works Director's evaluation and determination.

7. ENGINEERING DEPARTMENT REVIEW

The City Engineer has reviewed the applications and provided comments dated October 7, 2017 and January 25, 2018 regarding the land use applications, the short plat and the street standards variance (Attachments 2(m), 2(n), and 2(o)). Where applicable, the comments are incorporated as recommended Conditions of Approval in Section 6.

8. ENGINEERING DEPARTMENT REVIEW – ROAD STANDARDS VARIANCE (PLNG2017-032)

The applicant has requested a reduction in the required 150-foot spacing at the following four driveway locations within Patriot's Landing Phase 1. Three driveways (i.e., northern, central, and southern) will access parking areas for the proposed Patriots Landing Memory Care Facility project. The northern driveway will be provided for fire department access. The two central driveways will be utilized for drop-off and pick-up circulation and additional vehicular access and parking. The southern driveway will be utilized for access to underground parking and service utilities.

a. Reduction of spacing to 72 feet from the northern driveway approach on the east side of Garry Oaks Avenue to the northern central driveway approach on the west side.

b. Reduction of spacing to 67 feet between the two central driveway approaches on the west side of Garry Oaks Avenue.

c. Reduction of spacing to 130 feet from the southern central driveway approach to the southern driveway approach on the west side of Gary Oaks Avenue.

d. Reduction of spacing from the fire department access driveway approach to the intersection of Marshall Circle and Garry Oaks Avenue.

The City Public Works Standards Section 3.1.2.1 states, "driveways may not be located closer than 150 feet to any street intersection or to any other driveway." The Driveway Spacing Exhibit shows spacing from driveway centerline to centerline. Assuming 25-foot wide driveway approaches, in accordance with the City's Standard Driveway Approach (Drawing No. 3.1-1) detail, the spacing between driveways would be as follows:

a. Reduction of spacing to 47 feet (72-25) from the northern driveway approach on the east side of Garry Oaks Avenue to the northern central driveway approach on the west side.

b. Reduction of spacing to 42 feet (67-25) between the two central driveway approaches on the west side of Garry Oaks Avenue.

c. Reduction of spacing to 105 feet (130-25) from the southern central driveway approach to the southern driveway approach on the west side of Gary Oaks Avenue.

d. Reduction of spacing from the fire department access driveway approach to the intersection of Marshall Circle and Garry Oaks Avenue.

Variances are granted by the Public Works Director upon evidence that such variances are consistent with the City's Comprehensive Plans, in the public interest and that requirements for safety, function, fire protection, appearance, and maintainability based upon sound engineering judgement are fully met. The City's engineering consultant, Gray & Osborne, Inc. provided the review and recommendation of the Road Standards Variance request on behalf of the City's Public Works Director (see comment letter dated January 25, 2018 (Attachment 2(o)), and recommends that approval based on the following findings and recommended conditions:

a. Consistency with the comprehensive plan - Patriots Landing Memory Care Facility is subject to a City-approved Conditional Use Permit. The reduction in driveway spacing on Garry Oaks Avenue is consistent with the Comprehensive Plan for the project.

b. Public interest - The variance request pertains to a portion of Garry Oaks Avenue, which is a Private Road. The reduction in driveway spacing is not anticipated to produce measurable traffic impacts to Marshall Circle or Garry Oaks Avenue.

c. Safety requirements - The reductions in driveway spacing still provides for adequate sight distance for the safety of motorists and pedestrians. The supporting traffic information indicates that the anticipated traffic volumes will not result in unsafe turning movements into and out of the driveways during peak periods of travel.

d. Function - The supporting traffic information demonstrates that the reduction in driveway spacing will not adversely affect the function of Garry Oaks Avenue, Marshall Circle, or the adjacent intersections.

e. Fire protection - The reductions in driveway spacing are not anticipated to impact fire protection.

f. Appearance - The reduction in driveway spacing is not anticipated to negatively impact the appearance of the roads, sidewalks, and access points within the project.

g. Maintainability - The reduction in driveway spacing is not anticipated to impact the maintenance of the right-of-way improvements by the City.

The City Engineer recommends that the City grant the requested variance in full with the following conditions. These are replicated in the Recommendations Section F, below:

i. Entering and stopping sight distance requirements, per the City's Street Standards, shall be provided at the four (4) driveway ingress/egress locations where the spacing requirements have been reduced.

ii. Crosswalks shall be located 20 feet clear from all driveway approaches per City Street Standards Section 3.1.2.13.

iii. A signage plan shall be provided, which includes provisions for safe pedestrian mobility for the proposed crosswalks. The mid-block crossings shall be evaluated for sight line distance, provided with current City Standard curb ramps, and marked in accordance with the recommendations of the current WSDOT Design Manual and Traffic Manual.

iv. Upon development of the parcel to the west, the fire department access driveway approach location will need to be reviewed to determine if adequate driveway spacing is provided to the west.

9. FIRE DEPARTMENT REVIEW

The City Fire Department submitted comments regarding review of the application dated September 19, 2017 (Attachments 2(p) and 2(q)), which have been incorporated included in the summary of record and made conditions of approval, where warranted.

10. BUILDING DEPARTMENT REVIEW

The City Building Department submitted comments regarding review of the application dated September 19, 2017, September 21, 2017 and Dec. 28, 2017 and which have been included in the summary of record (Attachments 2(j), 2(k) and 2(l)) and made conditions of approval, where warranted.

11. WATER QUALITY REVIEW

The City Water Quality Department submitted comments regarding review of the applications in an email dated September 19, 2017, which have been incorporated in the summary or record (Attachment 2(r)) and made conditions of approval, where warranted.

E. CONCLUSIONS

In accordance with DMC 25.175.040, staff finds that, subject to the recommended conditions below, the proposal is consistent the DMC and existing ordinances concerning public utilities, traffic, facilities, and

services, and provides access, landscaping, screening, building placement, parking lot layout, and protection of sensitive areas, subject to the recommended conditions of approval listed below.

F. RECOMMENDATION

Based on the findings and conclusions in this report, DuPont staff recommends approval of the Patriot's Landing Memory Care project, PLNG 2017-030, -031, -032, -039, -040, & -045, subject to the following conditions:

1. All mitigation measures in the January 9, 2018, SEPA Mitigated Determination of Non-significance are incorporated herein as conditions of approval.

2. A permit is required for any building or other signage in accordance with the requirements of DMC 25.116.

3. Upon development of the parcel to the west, the fire department access driveway approach location will need to be reviewed to determine if adequate driveway spacing is provided to the west.

4. The comments from Gray & Osborne regarding the short plat drawings dated January 25, 2018 are incorporated herein as conditions of approval of the short plat application.

Prior to Application for Any Site Development Permits

5. As requested by the Washington State Department of Archaeology and Historic Preservation (DAHP), a professional archaeological survey of the project disturbance area shall be completed prior to ground disturbing activities due to the potential presence of precontact archaeological resources and/or human burial. The survey shall be prepared in accordance with industry standards and submitted to the City, The Nisqually Tribe, and DAHP for review prior to issuance of site development or grading permits. The City shall be provided a copy of DAHP's and the Tribe's acceptance of the study's findings and incorporate any additional requirements into the construction permits.

6. The front parking area shall either be (1) redesigned to relocate the parking spaces outside of the required front yard setback; or (2) the applicant shall request a variance, pursuant to DMC 25.160 to retain them within the setback; or (3) the applicant shall provide a shared parking agreement demonstrating that parking spaces are available for use in the adjacent parking lot.

   If the driveway locations are relocated to retain the two spaces outside the front yard setback, an administrative modification to the Road Standards Variance Decision and a Minor Site Plan Amendment (DMC 25.150.050) will be required. No less than 48 and no more than 49 parking spaces shall be provided without additional justification, evaluation and administrative approval through the Minor Site Plan Amendment process.

7. Roof pitches shall be reviewed for compliance with DMC 25.65.030(2)(a).

8. Unless separately applied for through a conditional use permit process, fences will be limited to six feet per DMC 25.20.040(6).

9. The landscape plans shall be reviewed for compliance with DMC 25.90.030(1) specific to tree type, size and how they accommodate sight distance requirements at the driveways. Tree caliper sizes shall be included on the plant schedule.

10. The irrigation and water conservation plans shall be reviewed for compliance with DMC 25.90.040.

11. The fire RPDA's may be more than 4 feet tall and shall be reviewed for compliance with sight distance at its selected location.

12. The accessibility requirements of WAC 51-50-005 (or newly adopted edition if applicable) must be incorporated into the construction plans for the site and related structure, to include, but not be limited to the provision of a minimum of (1) one van accessible parking space, and provisions for accessible route(s) of travel within the site and providing connectivity with adjacent improvements.

13. All easements identified in the title report shall be shown and labeled on the Plans.

14. A signage plan shall be provided, which includes provisions for safe pedestrian mobility for the proposed crosswalks. The mid-block crossings shall be evaluated for sight line distance, provided with current City Standard curb ramps, and marked in accordance with the recommendations of the current WSDOT Design Manual and Traffic Manual.

15. Entering and stopping sight distance requirements, per the City's Street Standards, shall be demonstrated at the four (4) driveway ingress/egress locations where the spacing requirements have been reduced.

16. Crosswalks shall be located 20 feet clear from all driveway approaches per City Street Standards Section 3.1.2.13.

17. The project is required to be designed and constructed following the requirements of the 2012 Department of Ecology Stormwater Management Manual for Western Washington (as amended 2014 and Appendix 1 of the National Pollution Discharge Elimination System (NPDES) Phase II genera permit).

18. The Stormwater Pollution Prevention Plan and Operations and Maintenance Manual must be included with the final Stormwater Site Plan. The stormwater plans shall address the comments provided in the Engineering Dept. comment letter dated October 6, 2017.

19. The project proposes a stormwater biofiltration swale and infiltration pond which borders Parcel Nos. 0119341004 and 0119345001. Stormwater from the Marshall Circle right-of-way should be conveyed to a separate stormwater facility with an easement dedicated to the City for maintenance. Stormwater from the private section of Garry Oaks Avenue (Parcel No. 0119345004) should be conveyed to a private stormwater facility. Stormwater from the proposed development (Parcel No. 0119345001) should be conveyed to an onsite stormwater system. All impervious road surfaces shall drain to appropriate facilities.

20. The Stormwater Site Plan states that an infiltration rate of 20 in/hr was used for design of the infiltration facilities. The DOE Manual requires infiltration tests for each infiltration facility – refer to Section 3.3 in Volume III of the Manual. The location of the storm facility shown on Figure 2

(Exploration Plan) does not appear to be consistent with the construction plans. Confirm and show the test pit locations on the Plans.

21. Plans for the parking and loading areas shall be reviewed at the time of site development permit for compliance with DMC 25.95.050, 060 and 070.

22. The applicant will work with the Public Works Department for proper forms and process for the release of the existing 49-foot wide road easement, which shall be recorded prior to site development permit approval. The Applicant will be required to submit a request for release of the easement. Upon City approval, the document shall be recorded with Pierce County and a hard copy distributed to the City for record.

23. The applicant will work with the Public Works Department for proper forms and process for an easement granting the City rights for maintenance and access to all existing utilities within the Marshall Circle/Garry Oaks Avenue private roadway. Upon City approval, the document shall be recorded with Pierce County and a hard copy distributed to the City for record.

During Construction

24. During construction, on-site infiltration tests will be required for validation of the design infiltration rate.

Prior to issuance of a Building Permit

25. Window trims shall be reviewed for compliance with DMC 25.65.050(1)(a).

26. Building colors shall be reviewed for compliance with DMC 25.65.050(1)(a).

27. An application for Transportation Concurrency shall be applied for and a transportation concurrency certificate received.

28. The refuse and recycling enclosure design and materials shall be reviewed for compliance with DMC 25.100.050(2) at the time of building permit.

29. The proposed structure will be required to comply with the requirements of the building construction codes that are in effect at the time of building permit application submittal. The following codes are currently enforced by the City of DuPont: the 2015 International Building Code, the 2015 International Fire Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, the 2015 Uniform Plumbing Code (each as amended and adopted by the State of Washington); and the 2015 Washington State Energy Code.

30. The project (or each portion of project) will be required to receive all land use and civil construction approvals prior to issuance of building permit for the proposed structures.

31. All applicable Fire Impact fees assessed for the proposed development will be required to be paid prior to the issuance of building permit(s) associated with the proposed project.

32. Also prior to issuance of a building permit for the structure, the applicant shall provide a copy of Pierce County Sewer Service Permits for City record. This permit (and authorization to connect to

sewer service) is/may be independent from any sewer system extension that may also apply to the project. All sewer connection and permitting requirements must be coordinated with the utility purveyor. (Please note that Pierce County Sewer Utility requires a pre-treatment review and approval be completed prior to their issuance of sewer extension or sewer service connection permit(s). Each subsequent tenant, for multi-tenant buildings, must also complete a separate pre-treatment review and provide copy of sewer service permitting, where applicable, prior to obtaining a building permit for associated improvements.)

33. The project will be required to comply with the requirements for provision of as-built drawings contained in DMC Chapter 24.10, GIS. As-built drawings and project close out submittals must be submitted and approved prior to issuance of a Certificate of Occupancy for the building, or portions thereof.

34. Separate Building, Plumbing, and Mechanical Permits will be required for the structure associated with the development project. Plans showing the details for construction for each shall be submitted to the city for review and approval prior to permit issuance. (Note: Electrical permits may be obtained through Washington State L&I.; sewer service and permitting through Pierce County Utilities.)

35. Underground Fire Supply, Fire Suppression, and Fire Alarm permits associated with the structure must be obtained through DuPont Fire Department prior to initiating any such work. All alarms systems will be required to obtain an alarm registration permit with the city, prior to full activation of the alarm system for operation; forms may be obtained at city hall.

36. Fire flow requirements and requirements for on –site hydrants and site access provisions will be determined by the DuPont Fire Chief or designee. Such requirements may be subject to additional review and requirements as future submittals come forward.

37. Addressing for the buildings within the project area will be assigned as the project scope progresses, and may be obtained from the building department as needed. Addresses for existing buildings on Garry Oaks Ave may need to be revised to reflect the renaming of the private road to Marshall Circle.

38. The project proposal appears to indicate an emergency generator. The type and quantity of fuel stored for the emergency generator is to be quantified. Permitting and installation shall conform to State of Washington WAC 296-46B and Department of Labor & Industries requirements. The proposed generator shall comply with DMC Chapter 9.09 for off-site noise generation. Separate permitting or other additional requirements pertaining to the installation of fuel or battery storage associated with the generator may be required through DuPont Fire Department.

39. Emergency Planning and Preparedness shall conform to the requirements of Chapter 4 of the International Fire Code.

40. The fire hydrant located by the northeast entrance off Garry Oaks Ave shall be relocated to the other side of the access road by the FDC.

41. A standpipe system shall be installed in the underground parking garage. Three (3) set of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be

submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work.

42. An automatic fire sprinkler system shall be installed. The system shall comply with NFPA 13 Standard for Automatic Fire Sprinkler System. Three (3) sets of plans, hydraulic calculations, and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work.

43. Prior to Fire Department approval for occupancy, an underground fire line shall be installed. The system shall comply with NFPA 24 Standard for Installation of Private Fire Service Mains. Three (3) sets of plans, material specifications sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval, and permits issued prior to commencing work. The FDC shall be a minimum of 50 feet or 1&1/2 times the height of the structure away from the building. The FDC shall be within 50 feet of a hydrant and be 5 inch with a locking cap. (Fire Department approval for location)

44. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall follow Section D105 of the 2015 International Fire Code where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet. (D105.2 Width. A minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.)

45. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall have approved "No Parking" striping or signs.

46. An automatic fire alarm system shall be installed. The system shall comply with NFPA 72 Standard for Fire Alarm System. Three (3) sets of plans, material specifications sheet for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work.

47. A Knox key box system shall be required. Knox applications may be picked up at the DuPont Fire Department located at 1780 Civic Drive DuPont, WA 98327. A key shall be required to be placed in the Knox key box.

48. Fire extinguishers are required to be installed as directed by City of DuPont Fire Department. Prior to installation, the client is directed to request a fire inspection to confirm the locations of the fire extinguishers.

49. All new building shall have approved emergency responder radio coverage per section 510 of the 2015 International Fire Code.

50. A memory care facility is a medical facility as categorized by the Washington Department of Health Office of Drinking Water which is a High Health Hazard and shall have a reduced pressure backflow preventer on all water services prior to entering the building, including the fire service.

51. The project proposal appears to indicate an emergency generator. The type and quantity of fuel stored for the emergency generator is to be quantified. Permitting and installation shall conform to State of Washington WAC 296-46B and Department of Labor & Industries requirements. The proposed generator shall comply with DMC Chapter 9.09 for off-site noise generation. Separate

permitting or other additional requirements pertaining to the installation of fuel or battery storage associated with the generator may be required through DuPont Fire Department.

52. Emergency Planning and Preparedness shall conform to the requirements of Chapter 4 of the International Fire Code.

53. Retaining walls exceeding four feet in height, measured from the bottom of the footing, or retaining a surcharge shall obtain a separate building permit.

54. Pursuant to RCW 19.122.033, the applicant shall consult with all utility and pipeline companies.

Prior to Certificate of Occupancy

55. Based on the Stormwater Site Plan, the project proposes a stormwater biofiltration swale and infiltration pond which borders Parcel Nos. 0119341004 and 0119345001. Following construction and prior to final acceptance of this project, the Applicant will be required to execute an Agreement for Inspection and Maintenance of Privately Maintained Storm Drainage Facilities. The Agreement shall include the Owners of all legal lots which benefit from the onsite stormwater system and provided after construction of the storm drainage system to reflect "as-built" conditions. A copy of the form of the agreement is included in the City Public Works Standards.

Based on the Findings of Fact and Conclusions provided above, I hereby recommend approval of the applications for Conditional Use Permit (PLNG 2017-030), Design Review (PLNG 2017-031), Road Standards Variance (PLNG 2017-032), Tree Modification (PLNG 2017-039), Site Plan Review (PLNG 2017-040), and Short Plat (PLNG 2017-045), subject to the Recommendations cited in Section "F" above.

Jeffrey S. Wilson, AICP — Date
Community Development Director
City of DuPont

c: File No. 2017-030, -031, -032, -039, -040, and -045

City of DuPont
Planning Division
Land Use Application

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone: (253) 912-5393
Fax: (253) 964-1455

City File Number: PLNG 2017-031

All information listed in this application, or by applicable ordinance, must be submitted in order for a land use application to be determined complete. Only a complete land use application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Patriots Landing Memory Care Facility

Applicant name: Mike Campeau C/o Careage, Inc

Address: 4411 Point Fosdick Drive, STE 203, Gig Harbor, WA 98335

Phone number: (253) 853-4457 Fax number:

Applicant's representative: Laura Bartenhagen, P.E. c/o ESM Consulting Engineers, LLC

Address: 33400 8th Ave S, STE 205

Phone number: (253) 838-6113 Fax number: (253) 838-7104

Description of proposal. Be specific.

The project is located to the south of Marshal Circle, near the existing Patriots Landing facility. The site is currently within Pierce County tax parcel numbers 0119341004 and ~~0119345001. The boundary for the site will be established by a BLA and short plat and~~ will be 3.26 acres. A conditional use permit is required to develop the new memory care building on the property that is zoned R-5.

Site Information:

Assessor's Parcel Number(s):

Area of site in square feet: 142,006 sf

Area of streets and alleys: 18,740 sf

Area of storm drainage improvements and conveyance lines: 14,770 sf

Area of open space and neighborhood green tracts: 0

Area of critical areas and buffers: 0

Area of building floors: 42,143 sf

Area of impervious surfaces: 69,696 sf

Area of landscaping: 72,310 sf

Building height: Highest Roof Peak is 26'

Number of dwelling units: 60 BEDS

Number of employees:

Number of disabled, compact and standard parking stalls:

Description and area of all proposed tracts:

Attachment 1a

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Plans shall be no larger than 24 by 36 inch sheet size)

1. [X] Vicinity Map (include as part of site plan).
2. [X] Site Plan drawn at 1 inch = 20 feet extending 100 feet beyond the property lines (eight copies).
3. [X] Landscape Plans identifying: location, size and species of all landmark, historic and specimen trees; trees to be retained, specific tree protection measures drawn at 1 inch = 20 feet (seven copies).
4. [X] Grading Plan with estimated dimensions and quantities of work involved drawn at 1 inch = 20 feet horizontal with 2' contour intervals (seven copies).
5. [X] Storm Drainage and Utility Plan drawn at 1 inch = 20 feet (seven copies).
6. [X] Preliminary Stormwater Management Report and calculations (three copies).
7. [X] Roadway cross sections, (seven copies of single line drawing with dimensions).
8. [X] One each 8 by 11 inch reduction of all drawings.
9. [X] Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual (two copies).
10. [X] Building Elevations drawn at ¼ inch = 1 foot or larger. Identify building materials and colors (eight copies).
11. [X] Title report of subject lot that is less than 30 days old to identify all encumbrances (two copies).
12. [X] Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable (two copies).
13. [X] Letter of Sewer Availability from Pierce County (two copies).
14. [X] Letter of Water Availability from City of DuPont (two copies).
15. [X] One site drawing showing the refuse enclosure(s) that is approved via signature and date by LeMay, Inc. Contact person is Charlie Maxwell, Public Relations Director, 253-537-8687.
16. [X] Completed Environmental Checklist (two copies).
17. [X] Completed Land Use Application (one copy).
18. [ ] ~~Completed Agent Affidavit (one copy).~~ N/A
19. [X] Filing fee(s).

Note:

Fill out and return this application with all material listed in the Required Plans, Information and Fee section. Submittal of all required plans, information and fees constitutes a complete application. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

X Mike Campeau 8/28/17 Mike Campeau

(Applicant Signature) (Date) (Print name)

RECEIVED

SEP 0[illegible]

CITY OF DUPONT

City of DuPont
Planning Division
Conditional Use Permit Application

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone: (253) 912-5393
Fax: (253) 964-1455

City File Number: PLNG2017-030

All information listed in this application, or by applicable ordinance, must be submitted in order for a Conditional Use Permit land use application to be determined complete. Only a complete application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Patriots Landing Memory Care Facility

Applicant name: Mike Campeau C/o Careage, Inc

Address: 4411 Point Fosdick Drive, STE 203, Gig Harbor, WA 98335

Phone number: (253) 853-4457 Fax number: _____

Applicant's representative: ESM Consulting Engineers, LLC

Address: 33400 8th Ave S, STE 205

Phone number: (253) 838-6113 Fax number: (253) 838-7104

Description of proposal. Be specific.

The project is located to the south of Marshal Circle, near the existing Patriots Landing facility. The site is currently within Pierce County tax parcel numbers 0119341004 and 0119345001. The boundary for the site will be established by a BLA and short plat and will be 3.26 acres. A conditional use permit is required to develop the new memory care building on the property that is zoned R-5.

Site Information:

Area of site in square feet: 142,006 sf

Area of streets and alleys: 18,740 sf

Area of storm drainage improvements and conveyance lines: 14,770 sf

Area of open space and neighborhood green tracts: 0

Area of critical areas and buffers: 0

Area of building floors: 42,143 sf

Attachment 1b

Area of impervious surfaces: 69,696 sf

Area of landscaping: 72,310 sf

Building height: Highest Roof Peak is 26'

Number of dwelling units: 60

Number of employees: _____

Number of disabled, compact and standard parking stalls: _____

Description and area of all proposed tracts: _____

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Plans shall be no larger than 24 by 36 inch sheet size)

1. [X] Vicinity Map (include as part of site plan).
2. [X] Site Plan drawn at 1"=20'. (seven copies)
3. [X] Landscape Plans identifying: location, size and species of all landmark, historic and specimen trees; trees to be retained, specific tree protection measures drawn at 1"=20'. (seven copies)
4. [X] Grading Plan with estimated dimensions and quantities of work involved drawn at 1"=20' horizontal with 2' contour intervals. (seven copies)
5. [X] Storm Drainage and Utility Plan drawn at 1"=20'. (seven copies)
6. [X] Preliminary Stormwater Management Report and calculations. (three copies)
7. [X] Roadway cross sections, (single line dimension). (seven copies)
8. [X] One each 8 by 11 inch reduction of all drawings.
9. [X] Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual. (two copies)
10. [X] Building Elevations drawn at ¼"=1' or larger. Identify building materials and colors (seven copies)
11. [X] Title report of subject lot that is less than 30 days old to identify all encumbrances. (two copies)
12. [ ] ~~Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable. (two copies)~~ N/A
13. [X] Letter of Sewer Availability from Pierce County. (two copies)
14. [X] Letter of Water Availability from City of DuPont. (two copies)
15. [ ] Letter of Refuse Enclosure Approval from LeMay Inc. (one copy) Contact person is Dick Rehn, Service Coordinator, 253-537-8687
16. [X] Completed environmental checklist. (two copies)

17. ☒ Prestamped envelopes addressed to all property owners within 300 feet of the subject site and list of addresses. (one set)

18. ☒ Completed Conditional Use Permit Application. (one copy)

19. ☒ Written answers to each of the five decisional criteria of DuPont Municipal Code 25.135.030. (one copy paper and one copy in Word format) — Part of Cover Letter

20. ☐ ~~Completed Agent Affidavit.~~ N/A

21. ☒ Filing fee(s).

Note:
Fill out and return this application with all material listed in the Required Plans, Information and Fee section. All plans must be folded to 8½ by 11 inch size. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

X _____ 8/28/17 Mike Campeau
(Applicant Signature) (Date) (Print name)

City of DuPont
Planning Division
Land Use Application

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone: (253) 912-5393
Fax: (253) 964-1455

City File Number: _____

All information listed in this application, or by applicable ordinance, must be submitted in order for a land use application to be determined complete. Only a complete land use application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Memory Care CUP - Road Variance Request

Applicant name: Mike Campeau c/o Careage, Inc

Address: 4411 Fosdick Drive, Ste 203, Gig Harbor, WA 98335

Phone number: (253) 853-4457 Fax number: email: mcampeau@careage.com

Applicant's representative: Matt Reider c/o ESM Consulting Engineers, LLC

Address: 33400 8th AVE S, Ste 205, Federal Way, WA 98003

Phone number: 253-838-6113 Fax number: email: matt.reider@esmcivil.com

Description of proposal. Be specific.
Road Standards Variance to reduce spacing between driveways.

See letter date 9/1/17 RE: Memory Care Facility, Request for Variance to the City of DuPont Public Works Standards.

Site Information:

Assessor's Parcel Number(s): 0119345001

Area of site in square feet: 142,006 SF

Area of streets and alleys: 18,740 SF

Area of storm drainage improvements and conveyance lines: 14,770 SF

Area of open space and neighborhood green tracts: 0

Area of critical areas and buffers: 0

Area of building floors: 42,143 SF

Area of impervious surfaces: 69,696 SF

Area of landscaping: 72,310 SF

Building height: 26' at highest roof peak

Number of dwelling units: 60 beds

Number of employees: 26 employees

Number of disabled, compact and standard parking stalls: 2 surface, 2 lower level = 4

Description and area of all proposed tracts: _____

Attachment 1c

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Plans shall be no larger than 24 by 36 inch sheet size)

1. ☐ Vicinity Map (include as part of site plan).
2. ☐ Site Plan drawn at 1 inch = 20 feet extending 100 feet beyond the property lines (eight copies).
3. ☐ Landscape Plans identifying: location, size and species of all landmark, historic and specimen trees; trees to be retained, specific tree protection measures drawn at 1 inch = 20 feet (seven copies).
4. ☐ Grading Plan with estimated dimensions and quantities of work involved drawn at 1 inch = 20 feet horizontal with 2' contour intervals (seven copies).
5. ☐ Storm Drainage and Utility Plan drawn at 1 inch = 20 feet (seven copies).
6. ☐ Preliminary Stormwater Management Report and calculations (three copies).
7. ☐ Roadway cross sections, (seven copies of single line drawing with dimensions).
8. ☐ One each 8 by 11 inch reduction of all drawings.
9. ☐ Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual (two copies).
10. ☐ Building Elevations drawn at ¼ inch = 1 foot or larger. Identify building materials and colors (eight copies).
11. ☐ Title report of subject lot that is less than 30 days old to identify all encumbrances (two copies).
12. ☐ Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable (two copies).
13. ☐ Letter of Sewer Availability from Pierce County (two copies).
14. ☐ Letter of Water Availability from City of DuPont (two copies).
15. ☐ One site drawing showing the refuse enclosure(s) that is approved via signature and date by LeMay, Inc. Contact person is Charlie Maxwell, Public Relations Director, 253-537-8687.
16. ☐ Completed Environmental Checklist (two copies).
17. ☐ Completed Land Use Application (one copy).
18. ☐ Completed Agent Affidavit (one copy).
19. ☐ Filing fee(s).

Note:

Fill out and return this application with all material listed in the Required Plans, Information and Fee section. Submittal of all required plans, information and fees constitutes a complete application. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

Matthew Reider 10/19/17 Matthew Reider

(Applicant Signature) (Date) (Print name)

City of DuPont
Planning Division
Land Use Application

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone: (253) 912-5393
Fax: (253) 964-1455

City File Number: _____

All information listed in this application, or by applicable ordinance, must be submitted in order for a land use application to be determined complete. Only a complete land use application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Memory Care CUP - Request for Tree Modification (Type III)

Applicant name: Mike Campeau c/o Careage, Inc

Address: 4411 Fosdick Drive, Ste 203, Gig Harbor, WA 98335

Phone number: (253) 853-4457 Fax number: Email: mcampeau@careage.com

Applicant's representative: Matt Reider c/o ESM Consulting Engineers, LLC

Address: 33400 8th AVE S, STE 205, Federal Way, WA 98003

Phone number: 253-838-6113 Fax number: email: matt.reider@esmcivil.com

Description of proposal. Be specific.
Tree Modification Request pursuant to DMC 25.120.010

Site Information:

Assessor's Parcel Number(s): 0119345001

Area of site in square feet: 142,006 SF

Area of streets and alleys: 18,740 SF

Area of storm drainage improvements and conveyance lines: 14,770 SF

Area of open space and neighborhood green tracts: 0

Area of critical areas and buffers: 0

Area of building floors: 42,143 SF

Area of impervious surfaces: 69,696 SF

Area of landscaping: 72,310 SF

Building height: Highest Roof Peak is 26'

Number of dwelling units: 60 beds

Number of employees: 26 Employees

Number of disabled, compact and standard parking stalls: 2 surface, 2 lower level

Description and area of all proposed tracts: _____

Attachment 1d

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Plans shall be no larger than 24 by 36 inch sheet size)

1. ☐ Vicinity Map (include as part of site plan).
2. ☐ Site Plan drawn at 1 inch = 20 feet extending 100 feet beyond the property lines (eight copies).
3. ☐ Landscape Plans identifying: location, size and species of all landmark, historic and specimen trees; trees to be retained, specific tree protection measures drawn at 1 inch = 20 feet (seven copies).
4. ☐ Grading Plan with estimated dimensions and quantities of work involved drawn at 1 inch = 20 feet horizontal with 2' contour intervals (seven copies).
5. ☐ Storm Drainage and Utility Plan drawn at 1 inch = 20 feet (seven copies).
6. ☐ Preliminary Stormwater Management Report and calculations (three copies).
7. ☐ Roadway cross sections, (seven copies of single line drawing with dimensions).
8. ☐ One each 8 by 11 inch reduction of all drawings.
9. ☐ Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual (two copies).
10. ☐ Building Elevations drawn at ¼ inch = 1 foot or larger. Identify building materials and colors (eight copies).
11. ☐ Title report of subject lot that is less than 30 days old to identify all encumbrances (two copies).
12. ☐ Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable (two copies).
13. ☐ Letter of Sewer Availability from Pierce County (two copies).
14. ☐ Letter of Water Availability from City of DuPont (two copies).
15. ☐ One site drawing showing the refuse enclosure(s) that is approved via signature and date by LeMay, Inc. Contact person is Charlie Maxwell, Public Relations Director, 253-537-8687.
16. ☐ Completed Environmental Checklist (two copies).
17. ☐ Completed Land Use Application (one copy).
18. ☐ Completed Agent Affidavit (one copy).
19. ☐ Filing fee(s).

Note:

Fill out and return this application with all material listed in the Required Plans, Information and Fee section. Submittal of all required plans, information and fees constitutes a complete application. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

Matthew Reider 10/19/17 Matthew Reider

(Applicant Signature) (Date) (Print name)

ESM CONSULTING ENGINEERS, LLC

October 23, 2017

Job No. 845-021-017

Mr. Jeffrey S. Wilson, A.I.C.P.
Planning Director
City of DuPont
Community Development Department
1700 Civic Drive
DuPont, WA 98327

RE: **Patriots Landing Memory Care Facility**
Conditional Use Permit – Type III Application
Request for a Tree Retention Modification

Dear Mr. Wilson:

As requested in your Letter of Incompleteness for the Patriots Landing Memory Care Facility dated September 28, 2017, ESM Consulting Engineers, LLC, is hereby requesting a modification for the requirement set forth in the City of DuPont Municipal Code (DMC) Chapter 25.120.

The proposed Memory Care Facility project consists of a one-story 60-unit building totaling 79,106 square feet (Lower Level: 32,373 SF & Ground Level 46,733 SF) on 3.26 acres within Parcel 0119345001 zoned Residential 5 in Yehle Park Village.

The proposed development is constrained by existing site topography and the adjacent existing Garry Oaks Avenue and Marshall Circle roadways. As shown on the Tree Retention Plan sheets submitted with the Conditional Use Permit, the existing trees are located mostly along the southern and eastern portions of the project site, including 1 landmark fir tree, 1 landmark maple tree, 5 specimen Oregon white oak trees, 1 specimen maple trees, and 6 specimen fir trees, for a total of 14 trees.

With the proposed development, 1 landmark fir tree, 2 specimen Oregon white oak trees and 3 specimen fir trees, for a total of 6 trees will be retained. Additional trees will be retained with the overall campus of Patriots Landing Village.

Pursuant to the City of DuPont's Land Use Code Section 25.120.050 Modifications, we are requesting a modification from Section 25.120.030(2), based on DMC 25.120.010 as outlined below. Since the modification will be processed as a Type III application, an additional completed Land Use Application is attached.

ESM Federal Way
33400 8th Ave S, Ste 205
Federal Way, WA 98003
253.838.6113 tel
800.345.5694 toll free
253.838.7104 fax

ESM Everett
1010 SE Everett Mall Way, Ste 210
Everett, WA 98208
425.297.9900 tel
800.345.5694 toll free
425.297.9901 fax

Civil Engineering
Land Surveying
3D Laser Scanning
Land Planning
Landscape Architecture
GIS

www.esmcivil.com

DMC Section 25.120.010.

The purpose of this portion of code is to protect the natural environment. To the extent possible, a project shall retain various species of trees without reducing the developmental densities allowed and/or approved by the City. The proposed development will retain 6 trees with the proposed development trees along the southern and eastern boundaries of the project site; however, it is not possible to retain the landmark maple tree due to its location. Retaining any additional trees would result in making the proposed Memory Care Facility development not feasible and would therefore reduce the developmental densities from those indicated in the comprehensive plan.

DMC 25.120.030(2).

The objective of Section 25.120.030(2) is to protect and preserve landmark trees, White Oak or non-White Oak, to the extent possible. There are no landmark Oregon white oak trees, 1 landmark fir tree and 1 landmark maple tree located on the project site. The 1 landmark fir tree will be retained. Retaining the landmark maple tree would render the proposed Memory Care Facility unfeasible and would therefore reduce the developmental densities from those indicated in the comprehensive plan.

We appreciate your time and effort in consideration of this request. If you have questions, please feel free to contact me at (253) 838-6113.

Sincerely,

ESM CONSULTING ENGINEERS, LLC

LAURA G. BARTENHAGEN, PE, LEED® AP
Principal

Enclosures

g:\esm-jobs\845\021\017\document\letter-008.docx

RECEIVED

NOV 2 6 2017

CITY OF DUPONT

City of DuPont Preliminary Short Plat Application

www.ci.dupont.wa.us

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone 253-912-5393
Fax 253-964-1455

City File Number: _____

All information listed in this application, or by applicable ordinance, must be submitted in order for a preliminary plat application to be determined complete. Only a complete application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Memory Care Facility - Short Plat (in conjunction with Memory Care CUP)

Owner name: Careage, Inc c/o Mike Campeau

Address: 4411 Fosdick Drive, Ste 203, Gig Harbor, WA 98335

Phone number: (253) 853-4457 Fax number: (email) mcampeau@careage.com

Authorized representative: ESM Consulting Engineers, LLC c/o Matt Reider

Address: 33400 8th AVE South, Ste 205, Federal Way, WA 98003

Phone number: (253) 838-6113 Fax number: (email) matt.reider@esmcivil.com

Location and Description of proposal. Be specific.

The project is located to the south of Marshal Circle, near the existing Patriots Landing facility. The site is currently within Pierce County tax parcel numbers 0119341004 and 0119345001.

Site Information:

Site acreage: 7.26 Acres

Number of lots: 2

Average lot size: 3.63 acres or 158,122.8 Square Feet

Acreage of lots: Lot 1: 3.26 acres Lot 2: 4 acres

Acreage of public streets: Not Public: 0.43 Acres

Acreage of storm drainage improvements: 0.34 acres

Acreage of critical areas and buffers: None

Attachment 1e

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Engineering related plans shall be no larger than 24 by 36 inch sheet size) **Short Plat Site Plat shall be on 18inch by 24 inch sheets.**

- Vicinity Map (include as part of site plan),
- Short Plat Site Plan drawn at one inch equals 20 feet (1:20 scale, 7 each),
- Topographic information at two foot elevation (1:20 scale, 7 each)
- Existing Tree Plan identifying location, size and species of all landmark, historic and specimen trees and trees to be retained (1:20 scale, 7 each),
- Grading Plan with estimated dimensions and quantities of work involved (1:20 scale horizontal and two foot contour interval vertical, 7 each),
- A Temporary Erosion and Sediment Control (TESC) Plan shall be provided, including details and City Standard TESC notes.
- Storm Drainage and Utility Plan (1:20 scale, 7 each), Existing utilities and easements shall be shown.
- Preliminary Stormwater Management Report and calculations (3 each),
- Roadway cross sections, (single line dimension, 7 each),
- One each 8 by 11 inch reduction of all drawings,
- Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual (2 each),
- Title report of subject site that is less than 30 days old,
- Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable (2 each),
- Letter of Sewer Availability from Pierce County (2 each),
- Letter of Water Availability from City of DuPont (2 each),
- Completed environmental checklist (2 each),
- Pre-stamped envelopes addressed to all property owners within 300 feet of the subject site and list of addresses (1 each). Be sure to include envelopes for the applicant and applicant's representative.
- Completed Preliminary Short Plat Application (1 each),
- Completed Agent Affidavit (1 each),
- Filing fee(s). — check $1,500

Note:

Fill out and return this application with all material listed in the Required Plans, Information and Fee section. All plans must be folded to 8½ by 11 inch size. Submittal of all required plans, information and fees constitutes a complete application. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

Matthew Reider 11/1/17 Matt Reider

(Applicant Signature) (Date) (Print name)

SUBDIVISION

Issued By:

CHICAGO TITLE INSURANCE COMPANY

Guarantee/Certificate Number:

0107118-TC

CHICAGO TITLE INSURANCE COMPANY
a corporation, herein called the Company

GUARANTEES

E S M Consulting Engineers, LLC

herein called the Assured, against actual loss not exceeding the liability amount stated in Schedule A which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

LIABILITY EXCLUSIONS AND LIMITATIONS

1. No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in Schedule A or with respect to the validity, legal effect or priority of any matter shown therein.
2. The Company's liability hereunder shall be limited to the amount of actual loss sustained by the Assured because of reliance upon the assurance herein set forth, but in no event shall the Company's liability exceed the liability amount set forth in Schedule A.

Please note carefully the liability exclusions and limitations and the specific assurances afforded by this guarantee. If you wish additional liability, or assurances other than as contained herein, please contact the Company for further information as to the availability and cost.

Chicago Title Insurance Company

By:

President

Chicago Title Company of Washington
4717 South 19th Street, Suite 101
Tacoma, WA 98405

Countersigned By:

Authorized Officer or Agent

Attest:

Secretary

Attachment 1f

ISSUING OFFICE:
Title Officer: Tacoma Commercial Unit Chicago Title Company of Washington 4717 South 19th Street, Suite 101 Tacoma, WA 98405 Main Phone: (253)671-6623 Email: CTIPierceCountyCommercialTitle@ctt.com

SCHEDULE A

Liability	Premium	Tax
$1,000.00	$350.00	$35.35

Effective Date: August 28, 2017 at 08:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matter relative to the following described property:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Title to said real property is vested in:

Patriots Landing Investment, LLC, a Washington Limited Liability Company, as to Lot X; And
Patriots Landing Investment II, LLC, a Washington Limited Liability Company, as to Lot Y

subject to the matters shown below under Exceptions, which Exceptions are not necessarily shown in the order of their priority.

END OF SCHEDULE A

EXHIBIT "A"

Legal Description

Lot X and Lot Y, Boundary Line Adjustment 200711215001, according to the survey thereof recorded November 21, 2007, and by affidavit of minor correction of survey recorded under recording no. 200803310989, records of Pierce County Auditor.

Situate in the City of Dupont, County of Pierce, State of Washington.

SCHEDULE B

GENERAL EXCEPTIONS

H. Reservations and exceptions in United States Patents or in Acts authorizing the issuance thereof.

SCHEDULE B
(continued)

SPECIAL EXCEPTIONS

1. Reservations of oil, coal, gas and minerals and/or mineral rights of any nature, and right of entry to explore same, contained in the deed

   Grantor: Weyerhaeuser Company
   Recording Date: December 9, 1991
   Recording No.: 9112090237

   No determination has been made as to the current ownership or other matters affecting said reservations.

   Said instrument has been modified by instrument recorded under recording no. 9405130746.

2. Covenants, conditions, restrictions, liability for assessments and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

   Recording Date: August 24, 1992
   Recording No.: 9208240297

   Modification(s) of said covenants, conditions and restrictions

   Recording Date: January 10, 1995
   Recording No.: 9501100462

   Modification(s) of said covenants, conditions and restrictions

   Recording Date: March 15, 1995
   Recording No.: 9503150368

   Modification(s) of said covenants, conditions and restrictions

   Recording Date: January 9, 1996
   Recording No.: 9601090368

   Modification(s) of said covenants, conditions and restrictions

   Recording Date: January 26, 1996
   Recording No.: 9601260346

   Modification(s) of said covenants, conditions and restrictions

   Recording Date: March 12, 1996
   Recording No.: 9603120707

SCHEDULE B
(continued)

Modification(s) of said covenants, conditions and restrictions

Recording Date: September 11, 1996
Recording No.: 9609110555

Modification(s) of said covenants, conditions and restrictions

Recording Date: December 24, 1996
Recording No.: 9612240420

Modification(s) of said covenants, conditions and restrictions

Recording Date: October 17, 1997
Recording No.: 9710170646

Modification(s) of said covenants, conditions and restrictions

Recording Date: March 17, 1998
Recording No.: 9803170310

Modification(s) of said covenants, conditions and restrictions

Recording Date: July 7, 1998
Recording No.: 9807070025

Modification(s) of said covenants, conditions and restrictions

Recording Date: December 22, 1999
Recording No.: 9912220109

Modification(s) of said covenants, conditions and restrictions

Recording Date: December 6, 2000
Recording No.: 200012060263

Said instrument is a re-recording of instrument recorded under recording no. 200011080374.

Modification(s) of said covenants, conditions and restrictions

Recording Date: September 18, 2002
Recording No.: 200209180938

Modification(s) of said covenants, conditions and restrictions

Recording Date: April 4, 2003
Recording No.: 200304041434

SCHEDULE B
(continued)

Modification(s) of said covenants, conditions and restrictions

Recording Date: December 5, 2005
Recording No.: 200512050081

Modification(s) of said covenants, conditions and restrictions

Recording Date: December 21, 2007
Recording No.: 200712210490

Modification(s) of said covenants, conditions and restrictions

Recording Date: August 15, 2008
Recording No.: 200808150280

In these connections we note:

Assignment of right to submit property to Northwest Landing Residential Covenants, Conditions and Restrictions, recorded January 28, 2000 under recording number 200001281029.

Assignment of Declarant rights under Declaration of Covenants, Conditions and Restrictions for Northwest Landing Commercial Property, recorded January 8, 2002 under recording number 200201080843.

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Power & Light Company
Purpose: Electric transmission and/or distribution line, together with necessary appurtenances
Recording Date: April 19, 1990
Recording No.: 9004190543
Affects: Portion of said premises

Note: Consent for use of Puget Sound Energy, Inc. Transmission Line Right of Way is recorded under recording no. 9909090471.

4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Pierce County
Purpose: Sanitary sewer
Recording Date: September 9, 1999
Recording No.: 9909090470
Affects: Portion of said premises

5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Dupont
Purpose: Water transmission line
Recording Date: November 9, 1999
Recording No.: 9911090330
Affects: Portion of said premises

SCHEDULE B
(continued)

In this connection we note survey recorded under recording no. 9909035001.

6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Dupont
Purpose:	Storm Water
Recording Date:	December 7, 2000
Recording No.:	200012070866
Affects:	Southwesterly portion of Lot Y

7. Agreement for Right of Way and Landscaping Maintenance, including the terms and provisions thereof:

Recording Date:	March 16, 2001
Recording No.:	200103160634 and 200103160636

The property herein described is bound by the terms and provisions of said agreement and not by the right of way as described.

8. Covenants, conditions, restrictions, easements, maintenance provisions, notes and dedications, and other matters as set forth in Pierce County Large Lot No. 200403055001.

9. Terms and conditions of Covenants, conditions, restrictions, easements, maintenance provisions, notes and dedications, and other matters as set forth in Pierce County Short Plat No. 200403055002.

Any obligation to convey Tract X to the City of Dupont.

10. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Comcast of Puget Sound, Inc.
Purpose:	Broadband communications services
Recording Date:	December 21, 2004
Recording No.:	200412211460
Affects:	Portion of said premises

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Puget Sound Energy, Inc.
Purpose:	One or more utility systems
Recording Date:	February 11, 2005
Recording No.:	200502111047
Affects:	Portion of said premises

12. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Boundary Line Adjustment :

Recording No: 200505245001

SCHEDULE B
(continued)

13. Memorandum of Restrictive Covenants, including the terms and provisions thereof:

Recording Date: October 20, 2005
Recording No.: 200510200257

14. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Boundary Line Adjustment :

Recording No: 200711215001

Said instrument is amended by Affidavit of Minor Correction of Survey recorded under recording no. 200803310989.

15. Notice of Furnishing Professional Services, and the terms and conditions thereof:

Recording Date: June 17, 2003
Recording No.: 200306170046

16. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year:	2017
Tax Account No.:	0119345001
Levy Code:	055
Assessed Value-Land:	$1,622,600.00
Assessed Value-Improvements:	$776,300.00
General and Special Taxes:	
Billed:	$26,857.19
Paid:	$13,428.59
Unpaid:	$13,428.60
Affects:	Lot X

17. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year:	2017
Tax Account No.:	0119341004
Levy Code:	055
Assessed Value-Land:	$495,100.00
Assessed Value-Improvements:	$0.00
General and Special Taxes:	
Billed:	$5,551.84
Paid:	$2,775.92
Unpaid:	$2,775.92
Affects:	Lot Y

SCHEDULE B
(continued)

18. A deed of trust to secure an indebtedness in the amount shown below,

Amount:	$25,000,000.00
Dated:	July 14, 2010
Trustor/Grantor:	Patriots Landing Investment, LLC, a Washington Limited Liability Company
Trustee:	Chicago Title Insurance Company
Beneficiary:	Nationwide Health Properties, Inc.
Recording Date:	July 14, 2010
Recording No.:	201007140206
Affects:	Lot X and other property

19. A deed of trust to secure an indebtedness in the amount shown below,

Amount:	$30,000,000.00
Dated:	August 1, 2017
Trustor/Grantor:	Patriots Landing Investment, LLC, a Washington Limited Liability Company
Trustee:	Chicago Title Insurance Company
Beneficiary:	Protective Life Insurance Company, a Tennessee corporation
Recording Date:	August 1, 2017
Recording No.:	201708010386
Affects:	Lot X and other property

20. Assignment of Rents and Leases

Assigned to:	Protective Life Insurance Company, a Tennessee corporation
Assigned by:	Patriots Landing Investment, LLC, a Washington Limited Liability Company
Recording Date:	August 1, 2017
Recording No.:	201708010387
Affects:	Lot X and other property

21. A financing statement as follows:

Debtor:	Patriots Landing Investment, LLC
Secured Party:	Protective Life Insurance Company
Recording Date:	August 1, 2017
Recording No.:	201708010388
Affects:	Lot X and other property

22. A financing statement as follows:

Debtor:	Patriots Landing-Operations, LLC
Secured Party:	Protective Life Insurance Company
Recording Date:	August 1, 2017
Recording No.:	201708010389
Affects:	Lot X and other property

23. Any unrecorded leaseholds, right of vendors and holders of security interests on personal property installed upon the Land and rights of tenants to remove trade fixtures at the expiration of the terms.

END OF EXCEPTIONS

SCHEDULE B
(continued)

NOTES

The following matters will not be listed as Special Exceptions in Schedule B of the policy. There will be no coverage for loss arising by reason of the matters listed below because these matters are either excepted or excluded from coverage or are not matters covered under the insuring provisions of the policy.

Note A: FOR INFORMATIONAL PURPOSES ONLY:

The following may be used as an abbreviated legal description on the documents to be recorded, per Amended RCW 65.04.045. Said abbreviated legal description is not a substitute for a complete legal description within the body of the document:

Lots X and Y, Boundary Line Adjustment 200711215001
Tax Account No.: 0119-34-5-001 and 0119-34-1-004

Note B: Any map furnished with this Commitment is for convenience in locating the land indicated herein with reference to streets and other land. No liability is assumed by reason of reliance thereon.

END OF NOTES

END OF SCHEDULE B

ESM CONSULTING ENGINEERS, LLC

September 1, 2017

Job No. 845-021-017

Jeffrey S. Wilson, AICP
Planning Director
City of DuPont
Department of Community Development Planning Services
1700 Civic Drive, DuPont, WA 98327

RECEIVED
SEP 01 2017
CITY OF DUPONT

RE: **Patriots Landing Memory Care Facility**
Conditional Use Permit PLNG2017-021
Pre-application Meeting City Comment Letter

Dear Jeff:

On behalf of Careage Development Company, ESM Consulting Engineers, LLC is submitting the following responses to the planning, building, engineering, and fire comments received in the Pre-Application Meeting held on June 28, 2017. The original comments are shown below in *italics* with our responses in **bold.**

PLANNING DEPARTMENT COMMENTS, Jeff Wilson – July 13, 2017

1. The property is located in the R-5 zoning district and designated as the Yehle Park Village planning area by the Comprehensive Plan. The proposed use is for a memory care facility, which is considered an "assisted living project" or a "nursing home", both of which are allowed as a conditional use for a maximum of 120 beds for assisted living and 180 beds for nursing home.

   Correct. Careage, Inc will be licensing the memory care facility as an assisted living facility (ALF) through Washington State. Specifically, the state issues a license pursuant to WAC 388-78A, Boarding Home Licensing.

2. The assisted living/nursing home project will be required to meet the performance standards listed in 25.20.050 which are:

   a) Front setback: 20 feet. Bay windows, and eaves my extend 2 feet into the setback area. The building frontage along Garry Oaks Avenue (east facing) will be considered the front. It appears the northern corner of the building may encroach in this 20 foot setback (when measured perpendicular to property line). Provide setback dimensions with your application.

   The architectural site plan has been updated which eliminates the intrusion into the required 20 foot front yard setback.

b) Side setback: Per DMC 25.20.050(3)(b), the minimum side yard setback is 5 feet, and the 2 sides must total 20 feet. The south end of the building meets this requirement. The northerly side lot line shows a building crossing the lot line, which is not allowed.

This comment has been acknowledged and the site plan has been updated to conform to DMC 25.20.050(3)(b).

c) Rear setback: Per DMC 25.20.040(3) the minimum rear setback is 20 feet. Bay windows, and eaves my extend 2 feet into the setback area. The site plan appears compliant.

The rear setback has been incorporated on the preliminary site plan.

d) Maximum building height varies from 35 - 55 feet as described in DMC 25.20.05 and is dependent upon the building's location and/or use of underground parking.

The building height will be 22 feet tall as measured from nearest adjacent grade.

e) Maximum lot coverage is 35%, based on lot width over 60 feet. You appear to be meeting this requirement. Please show calculations with your submittal.

The lot coverage is 30%
Building footprint: 42,143 SF
Site Size: 142,006 SF
42,143/142,006= 0.297

3. Conditional Uses are processed as a Type III procedure, which requires approval from the Hearing Examiner. The project will be required to meet the review criteria as stated in DMC 25.135.030.

The completed Conditional Use Permit submittal meets this criteria.

4. Site Plan approval is required per DMC 25.45.040. Site Plan approval would be a Type II process, however, per DMC 25.175.010 it may be consolidated with the Conditional Use Permit, which is a Type III process.

This comment has been noted.

5. Design Review will be required. The project will need to meet DMC Chapter 25.65, Multifamily Design Regulations and Guidelines. We understand that the project is not a multifamily project and that some flexibility in the guidelines will be needed. Provide a narrative with your application describing how the project meets either the requirement or the intent of the requirement.

A separate memo, "Re: MCF Multifamily Design Regulations Responses" has been included with the CUP application.

6. Landscaping shall be provided as required per DMC 25.90. At least 30 percent of the lot shall be covered with landscape area. Interior parking lot landscaping and a moderate buffer between parking lots and the public right of way are required. Please review DMC 25.90.040 for water conservation requirements.

   Water Conservation Calculations have been provided on Landscape Sheet LA-02.

7. If the site contains trees, you will be required to submit a landscape plan that includes a tree plan identifying location, size and species of all landmark, historic and specimen trees existing on site and trees to be retained. Tree retention is required per DMC 25.120. All landmark Oregon white oak trees shall be retained, along with any native understory with a protection zone one and one-half times the radius of the oak's canopy. In the R-5 zone, 4 trees per acre shall be retained; provided half of the required four retained trees per acre may be satisfied by installing new trees; further provided, the cumulative diameter at breast height of the new trees equals that of the trees that would otherwise be retained but which are to be removed.

   Tree Retention has been provided on sheets TR-01 and TR-02.

8. You are proposing 12 surface parking spaces and approximately 40 spaces in an underground parking garage. DMC Chapter 25.95 lists the parking requirements. The required number of parking spaces is determined based on use. Residential health care facilities require a minimum of 0.2 spaces and a maximum of 0.4 spaces per bed. Based on 60 beds, a minimum of 12 spaces and a maximum of 24 spaces would be required. Exceeding the maximum parking requirement for the use would be reviewed through the General Variance process per DMC 25.160.040. This is a Type III application and would be approved by the hearing examiner at the same time as the CUP. The submittal requirements include a response to the review criteria listed in DMC 25.160.050, supporting information explaining the need for the variance, and the application fee of $3,000.

   We respectfully disagree with the City's classification of this project. As mentioned in Pre-App comment #1, the memory care facility is considered an ALF. The Residential Health Care facility definition can be found in DMC 25.10.180: *"Residential care facility" means a facility that cares for at least five but not more than 15 functionally disabled persons that are not licensed pursuant to Chapter 70.128 RCW, Adult Family Home.*

   The definition of ALF can be found in DMC 25.10.010: *"Adult retirement community," "adult assisted living facility," "adult congregate care," "adult continuing care," or "independent senior housing" means a planned multifamily development designed for persons, who at least one is more than 62 years old and emphasizes social and recreational activities, and may also provide personal services, limited health facilities, and transportation.*

   The juxtaposition between the two definitions is clear. The two major differences are 1) the classification of the project as defined in the City of DuPont municipal code and 2) number of beds provided. Furthermore, because Assisted Living

facilities are defined as multifamily development, the proposed memory care facility should be considered as multifamily development.

The parking requirements identified in DMC Chapter 25.95 gives "multifamily development" a larger parking count per dwelling unit. We ask that the proposed bed count be considered same as proposed dwelling unit size and as such the minimum parking to provide would be 30, while the maximum parking count is not applicable.

9. Parking shall not be located within required front yards or within five feet of any property line. See DMC 25.95.050 for parking development standards.

This requirement has been complied with on the proposed site plan.

10. Per DMC 25.100, recycling and refuse receptacles may not be located in yards or landscape buffers and shall comply with DMC 25.70.

This requirement has been complied with on the proposed site plan.

11. New signage will require a sign permit. See DMC 25.116 for the sign code requirements.

This comment has been noted.

12. Per WAC 197-11-800(1)(iii) SEPA Environmental Review will be required as the project exceeds the exemption threshold of 4,000 sq. ft. for a new building. Please submit a completed SEPA Checklist along with a geotechnical report, traffic study and the tree information described above.

The property is located in the Tacoma Smelter Plume area. With your SEPA application also submit current soil sampling information specific to the Department of Ecology guidelines found at the following link: http://www.ecy.wa.gov/proorams/tcp/sitesbrochure/tacoma smelter/2011/techAssist.html.

The current MTCA cleanup level for arsenic is 20 parts per million (ppm) and lead is 250 ppm.

Alternatively, submit a Letter of No Further Action from Department of Ecology verifying the soils are below the cleanup levels.

Geotechnical and soil sampling reports from Golder Associates have been provided with the submittal. Per the report dated June 13, 2011, "Concentrations of arsenic and lead detected in all soil samples were either below laboratory detection limits or consistent with natural background concentration for the Puget Sound region. The detected concentrations of arsenic were all less than the MTCA Method A cleanup of 20 mg/kg. The detected concentrations of lead were all less than the MTCA Method A cleanup level of 250 mg/kg."

13. The site was previously cleared and graded, however new soil disturbance is proposed. With the SEPA application include a copy of the closing report prepared by the project archaeologist or the Nisqually Tribe.

SEPA has been provided with attached Geotechnical report documenting findings.

14. Application submittal requirements for the CUP include the following:

a) Land Use Application Form, including the list of requirements provided on page 2.
b) $9,000 in fees, which is comprised of a CUP Type III application fee ($3,000) plus a SEPA application fee ($1,500) and Design Review application fee ($1,500) and a Type III Variance application fee of $3,000 (if needed). Note that Design Review can be deferred to a later date if preferred.

Included is $6,750 in fees, which is comprised of a CUP Type III application fee ($3,000) plus a SEPA application fee ($1,500) and Design Review application fee ($1,500) and a Road Standards Variance application fee of $750.

a) SEPA Checklist, including current ITE manual trip generation estimates and the studies identified above.
b) Per DMC 25.65.010(2) applications for Design review are required to submit the following:

i. Building elevations at a minimum scale of one inch equals eight feet including exterior building materials and color;
ii. Site plan at a minimum scale of one inch equals 20 feet;
iii. Conceptual landscape plan at a minimum scale of one inch equals 20 feet;
iv. No drawing shall be larger than 24 inches by 36 inches in size.
v. All elements of a development project permit application, DMC 25.175.020, except subsections (2)(c), legal description, (2)(e), water availability, (2)(f), sewer availability, and (2)(h), material submitted as a result of preapplication review.

The submittal requirements are included.

15. The Type III approval process will involve the following milestones.
a) Following determination of a complete application, the City will publish a Notice of Application with a 14-day public comment period. The notice will be published in the News Tribune and posted on the city's notice board. You will be responsible for posting a notice board on the site and payment of the newspaper publication fees.
b) City staff will review the project for consistency with city development regulations and the comprehensive plan. We may have questions or comments based on that review.
c) The City will issue a SEPA Determination on the project, which includes a 14 day comment and 14 day appeal period. We may attempt to issue the

SEPA Determination under the Optional DNS process, (per WAC 197-11-355), but it is not known at this time if that will be possible or appropriate.

d) A staff report will be prepared by staff, including a recommendation for approval, approval with conditions or disapproval. The report will be forwarded to the City's hearing examiner.

e) A notice of public hearing will be issued with the similar noticing requirements as the Notice of Application.

f) Following the public hearing, the hearing examiner will issue a decision within ten working days. The decision is subject to a 21-day appeal period per DMC 25.175.060(6).

The estimated milestones have been reviewed and noted.

BUILDING COMMENTS, Bill Anderson – June 22, 2017

1. The proposed structure will be required to comply with the requirements of the building construction codes that are in effect at the time of building permit application submittal. The following codes are currently enforced by the City of DuPont: the 2015 International Building Code, the 2015 International Fire Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, the 2015 Uniform Plumbing Code and the 2015 Washington State Energy Code; (each as amended and adopted by the State of Washington).

   The proposed building will be designed to comply with the applicable codes listed.

2. The project (or each portion of project) will be required to receive all land use and civil construction approvals prior to issuance of building permit for the proposed structures.

   This comment has been noted.

3. All applicable Fire Impact fees assessed for the proposed development will be required to be paid prior to the issuance of building permit(s) associated with the proposed project.

   The fees will be paid as required.

4. Also prior to issuance of a building permit for the structure, the applicant shall provide a copy of Pierce County Sewer Service Permits for City record. This permit (and authorization to connect to sewer service) is/may be independent from any sewer system extension that may also apply to the project. All sewer connection and permitting requirements must be coordinated with the utility purveyor. (Please note that Pierce County Sewer Utility requires a pre-treatment review and approval be completed prior to their issuance of sewer extension or sewer service connection permit(s). Each subsequent tenant, for multi-tenant buildings, must also complete a separate pretreatment review and provide copy of sewer service permitting, where applicable, prior to obtaining a building permit for associated improvements.)

The permits will be obtained as required.

5. The project will be required to comply with the requirements for provision of as-built drawings contained in DMC Chapter 24.10, GIS. As-built drawings and project close out submittals must be submitted and approved prior to issuance of a Certificate of Occupancy for the building, or portions thereof.

   The proposed building will comply with requirements for provision of as-built drawings.

6. The accessibility requirements of WAC 51-50-005 (or newly adopted edition if applicable) must be incorporated into the construction plans for the site and related structure, to include, but not be limited to the provision of a minimum of (1) one van accessible parking space, and provisions for accessible route(s) of travel within the site and providing connectivity with adjacent improvements.

   The proposed building and site designs will provide for required accessible parking and accessible routes of travel.

7. Separate Building, Plumbing, and Mechanical Permits will be required for the structure associated with the development project. Plans showing the details for construction for each shall be submitted to the city for review and approval prior to permit issuance. (Note: Electrical permits may be obtained through WA St. L&I.; sewer service and permitting through Pierce County Utilities.)

   The required separate building, plumbing and mechanical permits will be secured in accordance with applicable permitting procedures.

8. Underground Fire Supply, Fire Suppression and Fire Alarm permits associated with the structure must be obtained through DuPont Fire Department prior to initiating any such work. All alarms systems will be required to obtain an alarm registration permit with the city, prior to full activation of the alarm system for operation; forms may be obtained at city hall.

   The permits will be obtained as required.

9. Fire flow requirements and requirements for on-site hydrants and site access provisions will be determined by the DuPont Fire Chief or designee. Such requirements may be subject to additional review and requirements as future submittals come forward.

   This comment has been noted.

10. Addressing for building within the project area will be assigned as the project scope progresses, and may be obtained from the building department as needed. (Please note that in establishing and providing this information, the department will need to verify a clear scope and layout for the proposal - as minor adjustments to primary access points, inter-relation of use(s) of the buildings, or changes in building frontage may affect preliminary addressing assignment(s).)

This comment has been noted.

11. Permit forms for future submittals associated with the project may be obtained either at city hall or may be downloaded through the city's website. Assistance in completing applications is available by contacting permit staff.

This comment has been noted.

12. Per WAC 51-50-009, Recyclable Materials and Solid Waste Storage, (code citation included in the Washington State Amendments to the IBC) " All local jurisdictions shall require that space be provided for storage of recycled materials and solid waste for all new buildings" that is "designed to meet the needs of the occupancy, efficiency of pickup, and shall be available to occupants and haulers."

The proposed building will include space for storage of recyclable materials and solid waste as required.

13. Retaining walls exceeding four feet in height, measured from the bottom of the footing, or retaining a surcharge shall obtain a separate Building Permit.

This comment has been noted.

14. Pursuant to RCW 19.122.033, the applicant shall consult with all utility and pipeline companies.

The applicant will consult with the applicable utility companies.

ENGINEERING COMMENTS, Dominic Miller – June 27, 2017

SHORT PLAT

1. It appears the Applicant is requesting a short plat of Parcel No. 0119345001 into two parcels. For a complete application, the Applicant shall submit information and documents as required by DMC 24.06.030. Once received, we will review for adequacy of access, storm drainage facilities, water supply, survey accuracy, feasibility for building sites and for compliance with the Public Works Standards in accordance with DMC 24.06.060(a) and 24.06.070. The lots will need to be legally created prior to issuance of a construction permit.

2. Pierce County shall review the Short Plat for adequacy of the sewer system (DMC 24.06.060(c)). Documentation of Pierce County Public Works and Utilities approval of the sanitary sewer plans for development of the lots will be required prior to issuance of a Construction Permit for said lots.

3. It appears development is proposed within the Marshall Circle right-of-way and the adjacent parcel to the northwest (Parcel No. 0119341004), which are outside of the northerly portion of the subject parcel (Parcel No. 0119345001) proposed to be short platted. The proposal includes the northerly portion of the building, a 20-foot wide fire department vehicle access road, sidewalk, driveway approach, and elimination of the southwest leg of the Marshall Circle/Gary Oaks Avenue

intersection. A right-of-way vacation at the Applicant's expense will be required for elimination of the Marshall Circle right-of-way. The Applicant shall clarify the intent.

A Boundary Line adjustment will follow the Conditional Use Permit. After the BLA has been submitted and is nearing approval, a short plat will be applied for so that Memory Care is located on its own 3.26 acre parcel.

PRELIMINARY SITE PLAN

4. The site plan should reflect all easements, site restrictions and encumbrances from any recorded documents.

   The site plan has been updated to reflect this information.

5. As part of the frontage improvements, this project shall fulfill the approved Patriots Landing Phase 1 street variance condition, "Where the sidewalk is eliminated along Garry Oaks Avenue, a 10-foot-wide planter strip shall be provided behind the curb."

   Sidewalk is proposed on the west side of Garry Oaks, along the property frontage.

6. A City right-of-way permit, including applicable bonding requirements, will be required for any proposed construction within City right-of-way.

   This comment has been noted.

7. On the corner of the subject property, the curb ramps will be required to be replaced in accordance with current City and ADA Standards. In addition, the existing curb ramps both across Garry Oaks Avenue will be required to be replaced.

   The curb ramps will be retrofitted as requested.

8. Curb ramps and interfaces between pedestrian and vehicle areas shall be retrofitted with detectable warning patterns, per City Public Works Standards, to meet current ADA requirements approved by the City. As part of the frontage improvements, the existing curb ramps adjacent to the project site shall be improved to current City Standards, which includes the existing curb ramps within the right-of-way's adjacent to the property and the opposite side of the road (i.e. the curb ramps at the southwest and southeast corners of the Garry Oaks Avenue/Marshall Circle intersection). The information may be provided as part of the architectural site plan for the project.

   The curb ramps will be retrofitted as requested.

9. A traffic impact analysis (TIA) will be required. The scope of the traffic study shall be coordinated with the City's Transportation Engineer, Ms. Geri Reinart at (206) 285-9035.

Per previous discussions with the City of DuPont Transportation Engineer, Ms. Geri Reinart, a traffic impact analysis is required if PM Peak hour trips exceed 25. The included Trip Generation PM Peak hour trips for the proposed Memory Care Facility is 12 trips.

10. The road classification and ownership (i.e. public or private) of Garry Oaks Avenue and Marshall Circle shall be labeled on the plans.

The road classification has been labeled on the plans.

11. The proposed north access driveway to the building on Garry Oaks Avenue should be aligned with the driveway across the street in accordance with City Standards. If the driveway is not aligned with the driveway across the street, it must be offset a minimum of 150 feet from that driveway.

The architectural site plan has been updated to show that the new driveway will align to the existing driveway.

12. Section 3.1.2.1 of the Street Standards requires that "Driveways that serve any use other than detached dwelling units may not be located closer than 150 feet to any street intersection or to any other driveway, whether on or off the subject property." The four (4) proposed driveway approaches on Gary Oaks Avenue will require a variance from the City's Street Standards.

The request for variance is included with this submittal.

13. Entering and stopping sight distance requirements, per the City's Street Standards, shall be provided at the driveway locations. Sight distance requirements shall be demonstrated at all accesses along Garry Oaks Avenue. An analysis of sight distance triangles to verify that safe stopping and turning movements to and from the site will be required.

The sight distance requirements have been addressed in this submittal.

14. Turning movement drawings will be required to allow the City to determine the feasibility of the site layout. The site plan shall include supplemental exhibits to demonstrate that the City Fire Department's large apparatus can navigate the site (lane width, radius), including access to FDCs and hydrants. The Fire Department will confirm the adequacy of vehicle access points.

The turning movement drawings have been included in this submittal.

15. The proposed development shall be provided with fire lanes, as required by the City of DuPont Fire Department.

The fire lanes have been provided.

16. The two mid-block crossings along Gary Oaks Avenue are generally undesirable in terms of safety. If permitted, midblock crossings shall be evaluated for sight line distance, provided with current City Standard curb ramps, and marked in

accordance with the recommendations of the current WSDOT Design Manual and Traffic Manual.

The mid-block crossings will be evaluated as the design moves forward.

17. The dimensions of the parking lot stalls and access aisles must comply with City of DuPont Ordinance No. 03-752.

Dimensions on parking lot stalls comply with ordinance 03-752 per Architectural Design sheets A-1 through A-3

18. A parking lot lighting plan, which includes a photometric exhibit showing the lighting levels within the parking lot, will be required to demonstrate that parking areas are lit in accordance with City code requirements.

The parking lot lighting plan will be provided with construction plans.

19. Building setbacks in accordance with the current zoning of the subject property should be shown and labeled on the drawings.

The building setbacks have been labeled on the plans.

20. The project proposes retaining walls along the southerly side of the building as part of the design. Retaining walls shall comply with Section 5.5 of the DuPont City Public Works Standards. Structural design calculations, prepared by a professional engineer licensed in the State of Washington, shall be submitted to the City for all proposed retaining walls over 4 feet in height. A metal handrail shall be installed where the retaining wall is 3 feet or greater in height.

The retaining walls have been removed from the plans.

21. The Applicant shall submit a preliminary utility plan identifying the existing and proposed water, storm, and sewer systems, to allow the City to determine the feasibility of the lot layout. The utility plan shall include the pipe sizes, routing, proposed points of connection for the utilities and location for the fire department connections (FDCs) and hydrants. City GIS information for the City's water and stormwater system are available upon request.

The preliminary utility plan has been provided.

22. The Applicant shall obtain a copy of the City's Water Availability Form, complete the top half, including the estimated peak day water usage in gallons per day, and submit the form to the City for review and approval. Project Water Usage under Part A shall reflect the estimated peak day water usage in gallons per day.

The form has been included with this submittal.

23. Separate water connections with backflow prevention devices will be required for domestic, fire, and irrigation. Such devices shall be located in underground vaults with easements granted to the City of DuPont for access. The locations of the

meters and backflow devices for the water service connections (i.e. domestic, fire, and irrigation) should be shown and labeled for review of site feasibility. Meter sizing calculations will be required for domestic and fire water services.

The location has been shown on the plans, and the calculations will be provided with construction plans.

24. The proposed layout of the water system for the property shall include the proposed fire hydrant locations, sizes of proposed mains, and proposed points of connection to the existing water system. Upon receipt of this information, we can update the City's Water System Model and provide information for both static pressure and available fire flow for the property.

This information has been provided as requested.

25. Should the proposed improvements at the Marshall Circle/Garry Oaks Avenue intersection be allowed by the City, any existing water and storm stubouts shall be eliminated, if not incorporated into the design.

The existing water and storm stubouts have been incorporated in the design.

26. All water mains and appurtenances to be owned and operated by the City, up to and including water meters, backflow assembly vaults, and fire hydrants, shall be located in 15-foot-wide easements dedicated to the City.

The easements will be provided.

27. A Stormwater Site Plan, in accordance with the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), will be required for this project. Infiltration of rooftop areas shall be utilized where feasible.

A preliminary Stormwater Site Plan is provided with this submittal and will be finalized with construction plans.

28. The conveyance of the stormwater at the Marshal Circle/Garry Oaks Avenue intersection shall be addressed. Surface drainage of the Fire Access road shall be routed directly to the offsite stormwater facility or to an offsite catch basin or manhole.

This comment will be addressed in the preliminary and final Stormwater Site Plan documents.

29. The City's Stormwater System Development Charge (SDC) will apply to the proposed development. The SDC is $1,000 per 1,900 square feet of impervious surface.

This comment has been noted.

30. Any existing stormwater systems within or adjacent to the tracts that were installed as part of the underlying plat for temporary erosion and sediment control shall be incorporated into the storm water system design or removed at the Applicant's expense, if not utilized.

The existing stormwater system, including piping, swale, and temporary infiltration pond, will be relocated as proposed on the plans.

31. Following construction, a City of DuPont Agreement for Inspection and Maintenance of Privately Maintained Storm Drainage Facilities will be required for any onsite stormwater system.

This requirement will be met as requested.

32. A Stormwater Pollution Prevention Plan (SWPPP) and a Temporary Erosion and Sediment Control (TESC) Plan shall be prepared for the project. The project activities shall comply with the requirements of the Washington State Department of Ecology National Pollutant Discharge Elimination System (NPDES) general permit for stormwater discharges associated with construction activity.

The documents will be provided with construction plans.

33. Per DMC 25.70.060(10)(c), all on-site service areas (i.e. loading zones, dumpster, transformer, utility vaults, etc.) shall be located in an area not visible from a public street or open space. If not possible, the area must be screened from public view.

This requirement will be met as requested.

34. Documentation from LeMay, Inc. of their approval of any proposed trash and recycle enclosures shall be furnished by the Applicant.

Documentation has been included with this submittal.

35. All proposed signs relevant to development of this project site, including areas on the adjacent streets and on private property, shall be in accordance with the MUTCD and require separate permits. The sign locations and language shall be shown on the plans.

These requirements will be met as requested.

36. Landscape and irrigation plans that demonstrate compliance with the City of DMC and current City of DuPont Public Works Standards shall be submitted for review and approval. The Applicant will be required to demonstrate compliance with the substantive requirements identified in Chapter 25.90 Landscaping. The irrigation of the landscaping shall meet the requirements of DMC 25.90.040. Documentation that the requirements will be met shall be added to the landscape and irrigation plans for land use approval.

Landscape sheets La-01 and LA-02 demonstrate compliance with DMC 25.90.

37. Prior to final approval of the project, as-builts and Geographic Information System (GIS) documentation will be required, in accordance with City of DuPont Municipal Code Chapter 24.10 and Ordinance No. 97-559.

These requirements will be met as requested.

FIRE COMMENTS, Mike Turner – June 20, 2017

1. An automatic fire sprinkler system shall be installed. The system shall comply with NFPA 13 Standard for Automatic Fire Sprinkler System. Three (3) sets of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. Separate Permit Required.

   The permit documents will be submitted as requested.

2. One Additional fire hydrant shall be required and located on the property for fire ground operations. The fire hydrant shall be a minimum of 50 feet or 1 &1/2 times the height of the structure away from the building. (Fire. Department approval for location)

   Two fire hydrants have been provided on the plans.

3. Prior to Fire Department approval for occupancy, an underground fire line shall be installed. The system shall comply with NFPA 24 Standard for Installation of Private Fire Service Mains. Three (3) sets of plans, material specifications sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval, and permits issued prior to commencing work. The FDC shall be a minimum of 50 feet or 1&1/2 times the height of the structure away from the building. The FDC shall be within 50 feet of a hydrant and be 5 inch with a locking cap. (Fire Department approval for location). Separate Permit required.

   These requirements will be met as requested.

4. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall follow Section D105 of the 2015 International Fire Code where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet. (D105.2 Width. A minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.)

   Section D105 criteria triggering increased fire lane width and other requirements for Aerial Fire Apparatus Access Roads will not be applicable based on the vertical distance between grade plane and roof height. The proposed site plan was developed to comply with fire apparatus access roads per IFC Section D103.

5. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall have approved "NO Parking" striping or signs.

The signs have been provided on the plans.

6. An automatic fire alarm system shall be installed. The system shall comply with NFPA 72 Standard for Fire Alarm System. Three (3) sets of plans, material specifications sheet for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. Separate Permit Required.

   An automatic fire alarm system per NFPA 72 will be provided as part of the separate building permit submittal.

7. A Knox key box system shall be required. Knox applications may be picked up at the DuPont Fire Department located at 1780 Civic Drive DuPont, WA 98327. A key shall be required to be placed in the Knox key box.

   A Knox key box system will be provided as part of the separate building permit submittal.

8. Fire extinguishers are required to be installed as directed by City of DuPont Fire Department. Prior to installation the client is directed to request a fire inspection to confirm the locations of the fire extinguishers.

   Fire extinguishers will be provided as part of the separate building permit submittal.

9. All new building shall have approved emergency responder radio coverage per section 510 of the 2015 International Fire Code.

   Emergency responder radio coverage will be addressed as part of the separate building permit submittal.

10. Ladder pads with proper climbing angle for fire ground operations shall be required on the west side of the structure between the two fire lanes.(Fire Department approval for location)

    Ladder pads will be provided as part of the separate building permit submittal.

If you have any questions, please feel free to contact me at (800) 345-5694.

Sincerely,

ESM CONSULTING ENGINEERS, LLC

LAURA G. BARTENHAGEN, PE, LEED® AP
Principal

Enc.
\\esm8\engr\esm-jobs\845\021\017\document\letter-002.docx

ESM CONSULTING ENGINEERS, LLC

September 1, 2017

Job No. 845-021-017

RECEIVED
SEP 01 2017
CITY OF DUPONT

Jeffrey S. Wilson, AICP
Planning Director
City of DuPont
Department of Community Development Planning Services
1700 Civic Drive, DuPont, WA 98327

RE: Patriots Landing Memory Care Facility
Conditional Use Permit PLNG2017-021
Cover Letter

Dear Jeff:

On behalf of Careage Development Company, ESM Consulting Engineers, LLC is submitting the Patriots Landing Memory Care Facility Conditional Use Permit PLNG2017-021– Type III Application and associated documentation for review and approval.

The proposed project will consist of a one-story 60-unit Memory Care Facility located on top of structured underground parking that daylights on the rear of the building. The proposed building totals 42,143 square feet on a 3.26 acre portion of Parcel 0119345001 zoned Residential 5 in Yehle Park Village.

Per the City of DuPont Municipal Code (DMC) section 25.135.030, the following items must be satisfied for a conditional use permit approval:

(1) *That the use is listed as a conditional use, or that that listing for conditional uses contains the language permitting similar land uses in the district where the conditional use is proposed. For the use to be determined "similar" the majority of the aspects of use shall be the same or lesser than those of conditional uses;*

The proposed Patriots Landing Memory Care Facility is a use similar to an Assisted Living Project.

DuPont Municipal Code 25.10.010 defines "Adult Assisted Living Facility" as multifamily development designed for persons, who at least one is more than 62 years old and emphasizes social and recreational activities, and may also provide personal services, limited health facilities and transportation. The proposed project is similar to this definition.

ESM Federal Way
33400 8th Ave S, Ste 205
Federal Way, WA 98003
253.838.6113 tel
800.345.5694 toll free
253.838.7104 fax

ESM Everett
1010 SE Everett Mall Way, Ste 210
Everett, WA 98208
425.297.9900 tel
800.345.5694 toll free
425.297.9901 fax

Civil Engineering
Land Surveying
3D Laser Scanning
Land Planning
Landscape Architecture
GIS
www.esmcivil.com

Attachment 1h

The Proposed Patriots Landing Memory Care Facility is a multifamily development designed for persons not limited to 62 years old; however, this facility emphasizes social and recreational activities, provides personal services, limited health facilities and transportation. The proposed Patriots Landing Memory Care Facility will provide the above-mentioned services catered to those who suffer from a memory related illness or disability.

Furthermore, DuPont Municipal Code 25.20.030(2)(c) permits Assisted Living Projects with up to 120 units. The proposed Patriots Landing Memory Care Facility will provide 60 beds.

(2) *That the granting of such conditional use permit will not be detrimental to the public health, safety, comfort, convenience and general welfare, will not adversely affect the established character of the surrounding neighborhood, and will not be injurious to the property or improvements in such vicinity and/or district in which the property is located;*

The proposed Patriots Landing Memory Care Facility has been designed to match the existing development and neighborhood character of Yehle Park Village. The facility will be a one-story complex with structured underground parking that will daylight at the rear of the building. This design utilizes the existing topography of the site and will not be visible from most of McNeil Street.

There will be little impact to the existing road infrastructure because Assisted Living projects generate less vehicle trips than typical multifamily projects. Most if not all of the residents at the Patriots Landing Memory Care Facility will rely on alternative modes of transportation rather than their own personal vehicles.

(3) *That the proposed use is properly located in relation to the other land uses and to transportation and service facilities in the vicinity; and further, that the use can be adequately served by such public facilities and street capacities without placing an undue burden on such facilities and streets;*

The proposed Patriots Landing Memory Care Facility will be owned and operated by Careage, Inc who also owns and operates the adjacent Assisted Living Facility known as Patriots Landing. This Patriots Landing Memory Care Facility is an extension of Patriots Landing. As mentioned before, the nature of Assisted Living produces less vehicle trips than that of traditional multifamily development. There will be an insignificant impact to street capacities. The use will be served by fire, EMS, and police services that already serve the surrounding neighborhood. No impact to transportation service is anticipated because Patriots Landing provides private transport services via shuttle service for their residents.

(4) *That the site is of sufficient size to accommodate the proposed use and all yards, open spaces, walls and fences, parking, loading, landscaping and other such features required by the DMC;*

The proposed Patriots Landing Memory Care Facility will be located on a 3.26-acre parcel that provides adequate room for required building setbacks, fire apparatus access, and stormwater facilities. Some surface parking will be available in the front of the building while a majority will be provided in the parking structure underneath.

(5) *That the proposed use is consistent with the goals and policies of the DuPont comprehensive plan.*

Goal LU-2 Encourage economic development that is balanced with maintaining the small town character of the City.

Patriots Landing provides employment and a tax base to Yehle Village. The Patriots Landing Memory Care Facility would do the same.

Goal 2 Preserve and develop housing throughout the City to meet the needs of all age groups and economic segments of the community.

The proposed development of housing will supplement the growing needs of the senior population as well as the military/veteran population across various economic levels.

H-2.4 Encourage housing for the elderly, such as accessory dwelling units on residential lots and encourage a mix of generations within the social fabric of the City by allowing for senior housing, and long-term care facilities to integrate within residential villages and DuPont Station.

Patriots Landing is an integrated senior living community offering a variety of care options, located in the center of Yehle Park Village. By approving the Patriots Landing Memory Care Facility, Patriots Landing can offer more services to an aging population.

Included in the Memory Care Facility submittal are the following documents:

- Conditional Use Permit – Type III Application
  - Pre-Application Response Letter (1 copy)
  - Memo Describing Compliance with DMC 25.65 (2 copies)
  - Land Use Application (1 copy)
  - Environmental Checklist (2 copies)
  - Preliminary Stormwater Management Report (3 copies)
  - Trip Generation Report (2 copies)
  - Title Report (2 copies)

  - Letter of Sewer Availability (2 copies)
  - Water Availability Form (2 copies)
  - Letter of Refuse Enclosure Approval (2 copies)
  - Request for Variance to the City of DuPont Street Standards (2 copies)
  - 8-1/2 x 11 Reduction of Drawings (1 copy each)

- Architectural Drawings (3 sheets, 7 full size 24" x 36" copies)
  - Site Plan (1 sheet)
  - Building Elevations (2 sheets)

- Civil and Landscaping Drawings (12 sheets, 7 full size 24" x 36" copies)
  - Cover Sheet with Vicinity Map (1 sheet)
  - Preliminary Site Plan (1 sheet)
  - Preliminary Storm Drainage and Utility Plan (3 sheets)
  - Preliminary Grading Plan (2 sheets)
  - Fire Truck Turning Movements (1 sheet)
  - Preliminary Landscape Plan (2 sheets)
  - Tree Retention Plan (2 sheets)

• Prestamped Envelopes and List of Addresses	(1 set)
• Type III Application Fee	$ 3,000.00
• Design Review Fee	$ 1,500.00
• Environmental Checklist Review (SEPA) Fee	$ 1,500.00
• Street Standards Variance	$ 750.00
Total	$ 6,750.00 (1 check) 4 checks

The draft of proposed covenants and a completed agent affidavit documents are not applicable for this project and are not included with the application.

We understand that these materials meet the requirements of a complete Type III application to begin processing the Conditional Use Permit. Please contact me immediately if anything else is required, or if you have any questions regarding this project.

Thank you for your time in reviewing this application and we look forward to working with you on this upcoming project.

Sincerely,

ESM CONSULTING ENGINEERS, LLC

Laura Bartenhagen

LAURA G. BARTENHAGEN, PE, LEED® AP
Principal

Enc.

\\esm8\engr\esm-jobs\845\021\017\document\letter-005.docx

ESM CONSULTING ENGINEERS LLC
33400 8th Avenue South, Suite 205
Federal Way, WA 98003

MEMORANDUM

RECEIVED
SEP 01 2017
CITY OF DUPONT

TO: JEFF WILSON, DIRECTOR OF PLANNING

FROM: MATT REIDER, PLANNER

RE: MCF MULTIFAMILY DESIGN REGULATIONS RESPONSES
RE: CONDITIONAL USE PERMIT APPLICATION

DATE: SEPTEMBER 1, 2017

The City of DuPont requires that the proposed Memory Care Facility (MCF) meet the DuPont Municipal Code Chapter 25.65, Multifamily Design Regulations and Guidelines.

The applicant requests that planning staff consider flexibility to some of the design guidelines as this project is not a multifamily housing development, but rather an assisted living development. The following represents responses to each item listed under DMC 25.65.

25.65.010 Administration.

1. Design Review Required. All applications for multifamily site plan permits in the residential, commercial and mixed use land designations or districts are subject to the regulations and guidelines in this chapter.
   Careage, Inc has included Architectural Design sheets with schematic floor and roof plans, building elevations and building sections (Sheets A-1 – A-3). As such, an application fee for Design Review ($1,500) has been included with the CUP application.

2. Application. An application for a design review subject to this chapter shall be submitted to the city for processing together with an application for site plan review. Design review shall be processed with a Type I procedure as set forth in DMC 25.175.010 with a filing fee per DMC 2.03.010. A complete application shall consist of:
   a. Building elevations at a minimum scale of one inch equals eight feet including exterior building materials and color;
   b. Site plan at a minimum scale of one inch equals 20 feet;
   c. Conceptual landscape plan at a minimum scale of one inch equals 20 feet;

Attachment 1i

d. No drawing shall be larger than 24 inches by 36 inches in size;
e. All elements of a development project permit application, DMC 25.175.020, except subsections (2)(c), legal description, (2)(e), water availability, (2)(f), sewer availability, and (2)(h), material submitted as a result of pre-application review.

The elements of a complete application for Design Review have been included with the CUP application.

25.65.020 Articulation and overall massing/bulk of buildings.

1. Intent. To provide visual variety along the street face.

2. Standards Required.
   a. Buildings shall include modulation along the facades facing and visible from public rights-of-way.
   The Memory Care Facility (MCF) has been designed to include building modulation along the front facing façade. T his design element is displayed on the Architectural Design sheets A-1 and A-3 at a birds-eye view, as well on sheet A-2 at "Alternative East (Front) Elevation".

   b. Walls facing streets shall be modulated with bays and recesses at least six feet wide and no more than 25 feet wide and at least two feet deep. Walls up to 36 feet wide may be allowed without modulation on up to half of the building width when approved alternate means are incorporated to provide visual variety. Most modulation shall extend to the roof, except at balconies. The purpose is not to create a regular rigid solution but rather to break up the mass in creative ways.
   On average the building modulations are 31.36 feet wide and 8.43 feet deep. The recesses are approximately 27.37 feet wide. The design of the building is for assisted living and thus requires wider bays and recesses to accommodate the necessary equipment and ADA access for residents. The building does not have a rigid, rectangular appearance. The longest wall without modulation is 146.95 feet wide from apex to nearest bay. The building includes architectural elements that create a visually appealing façade where there is an expanse of wall without modulation.

   c. Horizontal façades longer than 25 feet shall be articulated into smaller units, reminiscent of the residential scale of the neighborhood. At least one of the following methods shall be included:

i. Distinctive roof forms;

The building uses a variety of peaks and valleys on the roof.

ii. Changes in materials;

A mix of painted Fiber-Cement Lap and Panel Siding are used on the building. The main entrance is surrounded by stone veneer.

iii. Window patterns; and

Vinyl-framed windows are used throughout the building to accommodate the necessity for regular use. The window design and functionality are consistent throughout the building to provide ease-of-use for residents and caretakers.

iv. Color differentiation.

The building will use multiple shades of color and stone veneer to provide color differentiation.

25.65.030 Pitched roof forms.

1. Intent.
   a. To maintain and continue the historic image of the city and its residential neighborhoods.
   b. To enhance access to views of the surrounding hills and forests.
   The building's highest roof peak is 26 feet above nearest adjacent grade. Views of the surrounding forest and hills will remain.

2. Standards.
   a. Required:
      i. Structures shall incorporate pitched roof forms having slopes between 4:12 and 12:12.

      A variety of roof pitches between 4:12 and 12:12 have been incorporated.

      ii. Flat or lower sloped roof portions shall have parapets or edge details that provide visual interest.

No parapets are provided; however, edge details and fascia boards are used to match similar details found on the existing buildings nearby.

b. Encouraged:
   i. Each facade facing a street is encouraged to have a gabled form roof, or other roof forms, such as hip roofs, dormers and overhangs.

   A variety of these elements can be found on the included building elevation sheets.

   ii. Dormers less than half the facade length may be pitched at shallower slopes or flat when appropriate.

   Dormers present on the building will have a shallower pitched roof.

25.65.040 Entrance and front porch.

1. Intent. To provide a safe and welcoming entry and to encourage social interaction among neighbors.
The proposed MCF will be designed to provide assisted living to residents who suffer from a memory related illness. Social interactions among neighbors will be encouraged; however, due to the nature of the MCF, designs have been modified to allow safe social interaction which prevents residents from wandering off-site into possibly dangerous situations.

1. Standards.
   a. Required:
      i. All entries shall have a weatherproof roof covering, appropriate to the size and importance of the entry but at least four feet deep and four feet wide.

      Roof covering the entry extends approximately 82.13 feet from entrance of building.

      ii. Primary entries shall provide visible access directly to dwelling units or through elevator lobbies, stairwells, and corridors.

      The front doors to the MCF will enter into a lobby where stairs and elevators will be accessible to residents.

b. Encouraged. Front porches are encouraged and should include architectural features to enhance their appearance and functionality:
   i. Depth of at least six feet capable of accommodating seating or alcoves;
   ii. Distinctive roof forms;
   iii. Architectural details such as decorative columns, brackets, or trim;
   iv. Change in elevation – three steps up are recommended unless the unit is specifically designed as ADA accessible;
   v. Railings.

Front porches are not included due to the nature of a Memory Care Facility. Interior courtyards are provided for residents who would like to sit outside (see Sheet A-1 of Schematic Floor and Roof Plans).

25.65.050 Window and door.

1. Intent. To maintain a lively and active street face.
The MCF has been designed to match the character of the Patriots Landing property.

   a. Required:
      i. Windows facing streets shall be transparent.

      Windows that face streets are transparent.

      ii. Windows and doors shall be surrounded by at least four-inch stock. The trim at the top of the window is encouraged to be wider when it reflects the style of the building.

      Where stone veneer has been applied, windows and doors have top trim that is wider than vertical trim. This is to provide architectural distinction along the building façade.

   b. Encouraged:
      i. Facades should include windows of varying size and shape.
      ii. Where there are public spaces adjacent to the street or sidewalk building facades are encouraged to have more and larger areas of transparent glass.
      iii. Cantilevered bay windows are encouraged and may be allowed to project up to 18 inches into required setbacks.
      iv. Divided windows are encouraged, appropriate to the architectural style of the building.

v. Windows in existing buildings with historic character are encouraged to be maintained and restored. Replacement windows shall be sensitive to the original architectural style of historic structures.

As mentioned before, windows provided are consistent and similar in size to provide ease-of-use for both residents and staff.

25.65.060 Color.

1. Intent. To create a lively, visually interesting streetscape with a range of compatible colors and to avoid dull or monotonous colors.
The MCF will incorporate painted fiber-cement panels and siding, as well as stone veneer accent walls.

1. Standards.

a. Required: Generally, bright, intense colors shall be reserved for minor accent trim; with the body of the building a more muted color. Bright colors are not discouraged, but should be used sparingly to emphasize particular architectural features. A color palette that includes more intense color may be considered by the city upon review of a fully colored depiction of the building prepared by a licensed architect or a graphic designer.

The MCF will incorporate natural tones and varying shades of color that are similar to existing colors used in Yehle Village.

b. Not Allowed: Bright colors shall not be used for commercial purposes to draw attention to a building, even for a temporary use such as a sales office.

Bright colors will not be used on the building or any future signage.

25.65.070 Building design variety.

1. Intent. To avoid monotonous repetition of the same building forms, materials, and colors in larger developments.
The MCF will provide a variety of architectural detail that fits in with the surrounding character yet is distinguishable from afar.

2. Standards.
    a. Projects submitted for review containing more than three buildings with dwelling units shall display variety in building facades, rooflines, materials, and colors. This does not mean that adjacent facades must exhibit completely different architectural styles (e.g., Colonial next to Craftsman). Nor does it mean that the development cannot be all of one architectural style.

    b. Multiple buildings within a subdivision shall be designed to employ a "family" of roof forms, façade compositions, windows and doors, trim, materials, and color schemes that convey individuality within an overall sense of visual continuity.
    The proposed MCF will be one building that incorporates a contemporary craftsman exterior.

25.65.080 Spaces between buildings and adjacent streets.

1. Intent. To ensure that spaces located between buildings and adjacent streets contribute to the overall townscape, and reinforce building style rather than merely to provide foundation planting.
The MCF will incorporate landscaping that matches the surrounding neighborhood.

2. Standards.
    a. Buildings shall face a street or open space and avoid a twisted orientation.
    The MCF will be oriented to face Gary Oaks Ave, a private street that connects to Marshall Circle.

    b. A variety of landscape design elements shall be used to create sense of formality, repetition and demarcation between public and private use. In order to achieve this, "suburban" landscape designs involving freeform, curvilinear planting beds, with random clusters of trees and shrubs, and patches of lawn are not desired. Rather, such spaces shall be designed to frame the streets, emphasize building entrances, and define private courtyards. At least two of the following features shall be used:
        i. Ornamental trees, at least two-inch caliper, with regular spacing, parallel to the street.
        ii. Hard-surfaced area containing seating in the form of benches and/or low ledges.

iii. Formal beds of seasonal plantings.
iv. Low hedges.

The landscape plans (LA-01 and LA-02) included with the CUP application reflect these elements (see Sheets 9 and 10 of 12).

\\esm8\engr\esm-jobs\845\021\017\document\memo-003.docx

ESM CONSULTING ENGINEERS, LLC

September 1, 2017

Job No. 845-009-010

Mr. Gus Lim
Public Works Director
City of DuPont
Department of Community Development Planning Services
1700 Civic Drive, DuPont, WA 98327

RE: **Memory Care Facility**
Request for Variance to the City of DuPont Public Works Standards

Dear Gus:

On behalf of Careage Development Company, LLC, ESM Consulting Engineers, LLC is requesting a variance to the City of DuPont Public Works Standards for the proposed Memory Care Facility development. This variance is requested to the Public Works Standards Section 3.1.2 as it relates to driveway spacing.

The proposed Memory Care Facility project is located on the west side of the private local access street Garry Oaks Avenue with three driveways proposed along Garry Oaks Avenue and one driveway proposed at Marshall Circle for fire department vehicle access. Section 3.1.2.1 of the Street Standards require driveways that serve any use other than detached dwelling units to be spaced a minimum of 150 feet from any street intersection or another driveway.

The request for a variance consists of reducing the spacing between driveways as follows:

1. Spacing between the existing northern driveway on the east side and the north central project driveway is reduced to 72 feet.
2. Spacing between two central project driveways on the west side of Gary Oaks Avenue is reduced to 67 feet.
3. Spacing between the south central and south project driveways on the west side of Garry Oaks Avenue is reduced to 130 feet.
4. Providing a fire department access driveway at the proposed tee intersection with Marshall Circle.

As shown on the attached exhibit, the proposed southern driveway along Garry Oaks Avenue is lined up to match the existing driveway location of the Patriots Landing retirement community. The purpose of the two central driveways are to allow drop-off and pick-up circulation and provide additional vehicular access which is necessary for the memory care facility operations. Since the southern driveway was aligned to match the existing driveway, the central driveways were spaced such as to balance the separation from existing driveways and Marshall Circle.

The proposed Memory Care Facility is intended to be a complimentary use to the existing Patriots Landing retirement community, to better serve the community as a whole. Therefore, we believe that the proposed reduction of driveway spacing at each location does not impede safety, function, appearance, and maintainability for the project site or the adjacent Patriots Landing retirement community. Furthermore, it allows for additional accessibility for fire protection.

In summary, this variance to the City of DuPont Public Works Standards can be allowed, because the proposed Memory Care Facility is consistent with the goals and policies for Yehle Park Village within the DuPont comprehensive plan and therefore in the public's best interest and the proposed driveway locations are essential for the function of the facility.

A $750.00 check is included with this submittal for the Street Variance Fee. If you have questions please feel free to contact me at (253) 838-6113.

Sincerely,

ESM CONSULTING ENGINEERS LLC

LAURA G. BARTENHAGEN, PE, LEED® AP
Principal

Enclosures

\\esm8\engr\esm-jobs\845\021\017\document\letter-006.docx

RECEIVED
SEP 01 2017
CITY OF DUPONT

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:
Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [help]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND [HELP]

1. Name of proposed project, if applicable: [help]
Patriots Landing Memory Care Facility

Attachment 1k

2. Name of applicant: [help]
Careage, Inc

3. Address and phone number of applicant and contact person: [help]

Applicant:
Mr. Mike Campeau
President of Construction & Development
Careage Development Company
4411 Point Fosdick Drive NW
Gig Harbor, WA 98335
Phone: (253) 853-4457
Main Fax: (253) 853-5280

Contact Person:
Matt Reider
ESM Consulting Engineers, LLC
33400 8th AVE S. , suite 205
Federal Way, WA 98003
Phone: (253) 838-6113
Main Fax: (253) 838-7104

4. Date checklist prepared: [help]
September 1, 2017

5. Agency requesting checklist: [help]
The City of DuPont Planning Department

6. Proposed timing or schedule (including phasing, if applicable): [help]
The conditional use permit application process is estimated to be completed January 2018. The construction of the Memory Care Facility would commence January 2018 and is expected to be developed in one phase. The anticipated date of completion is Summer/Fall 2018.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
Phase I Environemntal Site Assessment Careage NWL Phase II, Dated 12/13/99
Results of Preliminary Geotechnical investigation Northwest Landing Phase II Dupont, WA dated 12/17/99
Geotechnical Addendum Reports 03/23/2012 and 04/12/2012
Geotechnical Investigation Report Patriot's Landing Skilled Nursing Facility 02/17/2012
Soil Sampling Report Patriot's Landing Skilled Nursing Facility South Parcel 07/15/2011
Geotechnical Investigation Report Patriot's Landing Skilled Nursing (South Parcel) 06/13/2011

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
Yes, a Comprehensive Plan Amendment and Zoning Code Text Amendment is currently in the workshop stage with the City of DuPont Planning Commission with an anticipated adoption date of October 2017. These amendments would allow for the creation of an overlay district applicable to this property which would allow for additional uses and

development regulations permitted through a Master Planned Development/Community permit.

10. List any government approvals or permits that will be needed for your proposal, if known. [help]

Conditional Use Permit	**City of DuPont**
Building Permit	**City of DuPont**
Grading Permit	**City of DuPont**
Sewer Line Extension Permit	**Pierce County**
Sewer Service Permit	**Pierce County**
Boarding Home License	**State of Washington**
DSHS	**State of Washington**
DOH	**State of Washington**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]
The Conditional Use Permit application is for the development of a one-story, 60-bed Memory Care Facility located on top of structured underground parking that daylights on the rear of the building. The project site is 3.26 acres.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]
The proposed development is located in Section 34, Township 19 North, Range 1 East, W.M., more specifically within the City of DuPont, Yehle Park Village, south of McNeil Street, along the west side of Garry Oaks Avenue.

B. ENVIRONMENTAL ELEMENTS [HELP]

1. Earth [help]

a. General description of the site: [help]
The topography of the proposed site generally slopes to the south.

(circle one): Flat, (rolling) hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)? [help]
The steepest slope on the site is approximately 50% and located on the south side of Garry Oaks Avenue.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

Based on the Soil Survey of the Pierce County Area, as provided by the United States Department of Agriculture (USDA) Natural Resources Conservation Service, the type of soils located on the project site is Spanaway gravelly sandy loam. Spanaway soils are typically nearly level, moderately rapid in permeability, slow in surface runoff, minimally susceptible to erosion, and somewhat excessively drained soils that were formed in glacial outwash.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
None known.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]
Grading will occur for the construction of building, parking area and utilities. Cut and fill quantities based on the preliminary grading plan are estimated at approximately 16,500 cubic yards of cut and 5,700 cubic yards of fill resulting in an approximate net export of 10,800 cubic yards within this project which will be obtained from a suitable offsite source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]
Yes. As always, clearing and construction associated with development could contribute to the likelihood of erosion. Best Management Practices to control erosion and sedimentation during construction as required by the City of DuPont will be used to minimize impacts. In addition, the existing soils have a high infiltration rate that helps reduce runoff and the potential for erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]
Approximately 50 percent of the site will be covered with impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]
An erosion/sediment control plan will be prepared and approved by the City of DuPont prior to commencement of construction activities for the proposed development.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Some dust and equipment fumes during construction of the roadways, utilities and buildings can be expected. Automobile emissions can be expected when the developments are complete.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
None known.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

If necessary, a water truck will be used during construction activities to suppress dust.

3. **Water** [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
There are no surface water bodies located on or in the immediate vicinity of the project site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]
No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]
No filling in or dredging from any wetlands will be done as part of the proposed development activities.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
No surface water withdrawals or diversions are planned as part of the proposed activities.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]
No. Stormwater runoff from roadways and parking areas as well as irrigation water runoff will be collected and conveyed to a temporary offsite water quality and infiltration facility designed in accordance with the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), as adopted by the City of DuPont.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]
No groundwater will be withdrawn from a well. Municipal Water will be supplied by the City of DuPont.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system,

the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]
Pierce County Utilities will be responsible for collecting all domestic sewage in a piping network for routing to a regional treatment facility.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]
Stormwater and irrigation water from the proposed Memory Care Facility and associated parking area are the only anticipated sources of runoff. An onsite storm drainage system will be designed to collect and convey the runoff to a temporary offsite water quality and infiltration facility. Stormwater runoff from the proposed building will not generate pollutants, therefore this runoff is considered clean and will be infiltrated directly on the project site.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
Common pollutants from parked vehicles may collect on impervious surfaces and be washed into the storm drainage system. Common pesticides and nutrients from landscaping areas may also enter the storm drainage system. See item 3.a.6) above.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
The guidelines and Best Management Practices developed in the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), will be adhered to, as adopted by the City of DuPont.

4. **Plants** [help]

a. *Check the types of vegetation found on the site: [help]*

_√_*deciduous trees: alder, maple, aspen, other*
_√_*evergreen trees: fir, cedar, pine, other*
_√_*shrubs*
_√_*grass*
____*pasture*
____*crop or grain*
____ *Orchards, vineyards or other permanent crops.*
____ *wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other*
____*water plants: water lily, eelgrass, milfoil, other*
____*other types of vegetation*

b. What kind and amount of vegetation will be removed or altered? [help]
It is estimated that 100 percent of the area for site, parking, landscaping, and utilities will need to be cleared for construction of the Memory Care Facility. The

majority of the site area was previously cleared as a result of the I-5 ramp project, which utilized the material from this site as structural fill. There are five landmark Oregon white oak trees, 5 specimen white oak trees, three specimen fir trees, 2 specimen maple trees, and one landmark maple tree within the south central portion of the project site which will be removed. For more information, see the attached Tree Retention Plan and the attached Request for a Tree Retention Modification.

c. List threatened and endangered species known to be on or near the site. [help]
No threatened or endangered species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
All roadway cuts/fills and areas cleared for the proposed building, driveways, parking and utilities shall at a minimum be re-seeded upon completion of construction activities. New landscaping is anticipated to supplement any areas disturbed by construction activities. Current City of DuPont policy and Northwest Landing Development Guidelines encourage the use of native and drought tolerant plant materials within new landscape areas.

e. List all noxious weeds and invasive species known to be on or near the site. [help]
None known to be on the site.

5. **Animals** [help]
a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Hawk, Eagle, Songbirds, and deer have been observed at the site.

b. List any threatened and endangered species known to be on or near the site. [help]
No endangered animal species have been identified as having home territory within the site.

c. Is the site part of a migration route? If so, explain. [help]
The Nisqually River Delta is located approximately 1 mile southwesterly of the site and is a nesting and feeding area for migratory waterfowl. The site is located within the Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any: [help]
It is not anticipated that the proposed project will impact wildlife habitat or cause disturbance such that mitigation measures will be needed.

e. List any invasive animal species known to be on or near the site. [help]
None are known to be on or near the site.

6. **Energy and Natural Resources** [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
The use and incorporation of electrical or gas heating and cooking is anticipated with the proposed Memory Care Facility. Electricity for street, parking lots, and other lighting is also anticipated in connection with the roadways and parking areas.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
No. It is unlikely that use of solar energy by adjacent properties would be affected considering the proposed use of the site and City limitations on heights of the structures.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]
General design guidelines developed for the Northwest Landing master planned community encourage energy conservation and the use of energy efficient construction and apply to all developments.

7. **Environmental Health** [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe. [help]
The proposed development will require construction activities which have potential environmental health hazards associated with the use and operation of heavy construction equipment. No other environmental health hazards are anticipated to occur as a result of this project.

1) Describe any known or possible contamination at the site from present or past uses. [help]
None known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]
None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
None known.

4) Describe special emergency services that might be required. [help]
None anticipated other than those emergency services currently available from the City of DuPont.

5) Proposed measures to reduce or control environmental health hazards, if any: [help]

Best Management Practices shall be implemented during all construction activities.

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
Ambient noise levels from Interstate 5 are anticipated to have minimal impact on the site due to the separation distance. Other local streets surrounding and within the site are typical of those associated with the types of development proposed.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-
cate what hours noise would come from the site. [help]
Localized noise of short duration commonly associated with construction of a project of this type and the operation of construction equipment is likely to occur as a result of this project. Noise from the construction equipment will occur during daylight hours.

3) Proposed measures to reduce or control noise impacts, if any: [help]
Contractors shall be required to comply with City of DuPont limitations for operating hours of construction equipment.

8. **Land and Shoreline Use** [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
North: Single-family residential, McNeil St;
East: Single-family residential, private road;
West: Single-family residential, vacant property;
South: Eagles Pride Golf Course.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
None known other than possible grazing by cattle over portions of the site in the past.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
No impact.

c. Describe any structures on the site. [help]
There are currently no existing structures on the site.

d. Will any structures be demolished? If so, what? [help]
No.

e. What is the current zoning classification of the site? [help]
The current zoning classification of the site is Residential 5.

f. What is the current comprehensive plan designation of the site? [help]
Residential 5.

g. If applicable, what is the current shoreline master program designation of the site? [help]
Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]
No.

i. Approximately how many people would reside or work in the completed project? [help]
It is anticipated that the development of the proposed Memory Care Facility will have up to 60 residents and 70 employees.

j. Approximately how many people would the completed project displace? [help]
None.

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]
Not Applicable

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]
The proposed development meets the definition of a "Assisted Living" per DMC 25.10.010, which is allowed in the underlying Residential 5 zone as a conditional use and is consistent with the goals and policies for Yehle Park Village within the City of DuPont Comprehensive Land Use Plan.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [help]
None proposed.

9. **Housing** [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]
The proposed Memory Care Facility project will provide 60 beds. The high, middle, or low-income housing designation is not applicable.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]
None.

c. Proposed measures to reduce or control housing impacts, if any: [help]
None are proposed.

10. **Aesthetics** [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]

The tallest height of the proposed building is 22 feet from closest adjacent grade. The proposed building materials consist of the following elements:

- **Modified asphalt/fiberglass shingle roof,**
- **Fiber cement panel and lap siding**
- **Cultured Stone**
- **Painted wood and synthetic wood trim,**
- **Vinyl Windows Insulated low-e glazing**
- **Exposed Concrete at underground parking structure and foundation**

b. What views in the immediate vicinity would be altered or obstructed? [help]
Views within the project site are anticipated to be altered to the extent that a new building and associated parking development will replace vacant land; however, it is not anticipated that the development of the site will obstruct views from surrounding sites due the distance of separation to adjacent developments.

b. Proposed measures to reduce or control aesthetic impacts, if any: [help]
The proposed development is subject to Design Review by the City of DuPont- a tytpe I process. Any elements that are determined to impact the surrounding natural and built environment will be mitigated for as necessary.

11. **Light and Glare** [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]
Light from the interior of the building as well as streetlights along public roadways and within the parking lot will occur during hours of darkness.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
No. The lighting would be designed to increase safety within the project site and minimize glare to surrounding development.

c. What existing off-site sources of light or glare may affect your proposal? [help]
Light and glare from the existing Garry Oaks Avenue is anticipated to have minimal impact on the site.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
Street and parking lot luminaries will be designed to control impacts.

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
Existing pedestrian trails and other natural and historical attractions are available within the Northwest Landing community including Sequalitchew Creek and Edmonds Marsh trails. In addition, the City of DuPont has several parks that provide active recreational opportunities, including DuPont PowderWorks Park and Clocktower Park which are located approximately one to one and a half miles easterly of the site. The Eagles Pride Golf Course (private) is located adjacent to the south of the site and the Home Course is located approximately one mile northwesterly of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
No adverse impacts on recreation are anticipated and no mitigation is necessary.

13. **Historic and cultural preservation** [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. [help]
No evidence of historic, archaeological, scientific, or cultural importance has been identified on or near the proposed project site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
Several known and possibly unknown historical/archeological sites exist within the Northwest Landing project area. Extensive field investigations have been made within and adjacent to the proposed project area by archeological consultants for the Northwest Landing project.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]
Review of the Washington Information System for Architectural and Archeological Records Data (WISAARD) resulted in no determination of low to moderate risk of Archaeological factors.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]
The site is subject to an existing cultural resources agreement signed by the City of DuPont, the State Office of Archeological and Historical Preservation (DAHP) and Weyerhaeuser Real Estate Company. The cultural resources management plan discusses ongoing actions to protect the identified important resources and to provide contingency plans to protect resources discovered during other activities at the site.

14. **Transportation** [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]
The site is currently served from Center Drive to McNeil Street and to the private local access street Garry Oaks Avenue.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]
The site is not currently served by transit. Sound Transit and Pierce Transit provide bus service to DuPont Station, located approximately 1 mile from the site at the intersection of Palisade Boulevard and Wilmington Drive. Shuttle buses may be provided to transport residents to City of DuPont recreational areas, the Patriot's Landing retirement community facility, regional doctors, shopping, or to special events. These buses will be owned and maintained by the developer.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]
The proposed project consists of 36 parking stall and 2 disabled parking stall in the parking garage. There will be 11 additional parking stalls locate near the building entrance (9 visitor parking, 2 disabled parking stalls).

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]
The proposed project includes a fire access lane along the northern property line.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]
Air, water and rail transportation are available in the DuPont-Steilacoom, Olympia, and Tacoma areas, but not in the immediate vicinity of the project site. It is not anticipated that the proposed development will directly use these facilities.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
Based on the Institute of Transportation Engineers Trip Generation Manual, the proposed Memory Care Facility generates 126 average daily trips and a maximum of 12 peak-hour trips.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
No.

h. Proposed measures to reduce or control transportation impacts, if any: [help]
None proposed other than construction of the internal parking lot circulation.

15. **Public Services** [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
Yes, the proposed project will result in an increased need for, fire, emergency medical and police protection as well as increased street and utility maintenance.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
All necessary utility main extensions will be extended from the existing available connections along Garry Oaks Avenue and Marshall Circle. Also, the City of DuPont currently has ordinances requiring all new structures to be sprinkled for fire protection to reduce the impacts to the fire department.

16. **Utilities** [help]

a. Circle utilities currently available at the site: [help]
~~electricity~~, natural gas, water, refuse service, telephone, ~~sanitary sewer~~, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]
Electricity - Puget Sound Energy
Natural Gas - Puget Sound Energy
Water (domestic, fire, and irrigation) - City of DuPont
Refuse Service - LeMay Inc
Telephone/Fiber Optics – Century Link
Cable TV - Comcast
Sanitary Sewer - Pierce County
The general construction activities associated with utilities are extensions into the project site from the existing connections along Garry Oaks Avenue and Marshall Circle.

C. SIGNATURE [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee: **Mike Campeau, President of Construction & Development**

Position and Agency/Organization: **Careage Development Company**

Date Submitted: **September 1, 2017**

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS [HELP]

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

RECEIVED
SEP 01 2017
CITY OF DUPONT

TRIP GENERATION REPORT

Based on the Trip Generation Volume 1 of 3, 6th Edition by the Institute of Transportation Engineers (see attached exerpts) We have also verified the ITE 9th Edition, and it appears to be consistent.

	6th Edition 60 Beds
Average Daily Trips on a Weekday	**126**
Peak Hour Trips (7am to 9am)	3.5
Peak Hour Trips (4pm to 6pm)	10
Peak Hour Trips (am)	9
Peak Hour Trips (pm)	**12**

Summary

The proposed Memory Care Facility generates 126 average daily trips and a maximum of 12 peak hour trips. Since this is less than 250 daily trips and 25 peak hour trips, a traffic study is not required.

6th edition 80 B	9th Edition 80 Beds	9th Edition 60 Beds	6th Edition 60 Beds
170	**162**	**121**	**126**
4.8	5	4	3.5
13.5	19	14	10
12	5	3	9
16.5	**13**	**11**	**12**

Land Use: 252
Congregate Care Facility

Description

Congregate care facilities typically consist of one or more multiunit buildings designed for elderly living. They may also contain dining rooms, medical facilities, and recreational facilities.

Additional Data

Vehicle ownership levels, in general, are very low at congregate care facilities.

The sites were surveyed in 1981 in Portland, Oregon.

Source Number

155

Congregate Care Facility
(252)

Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday

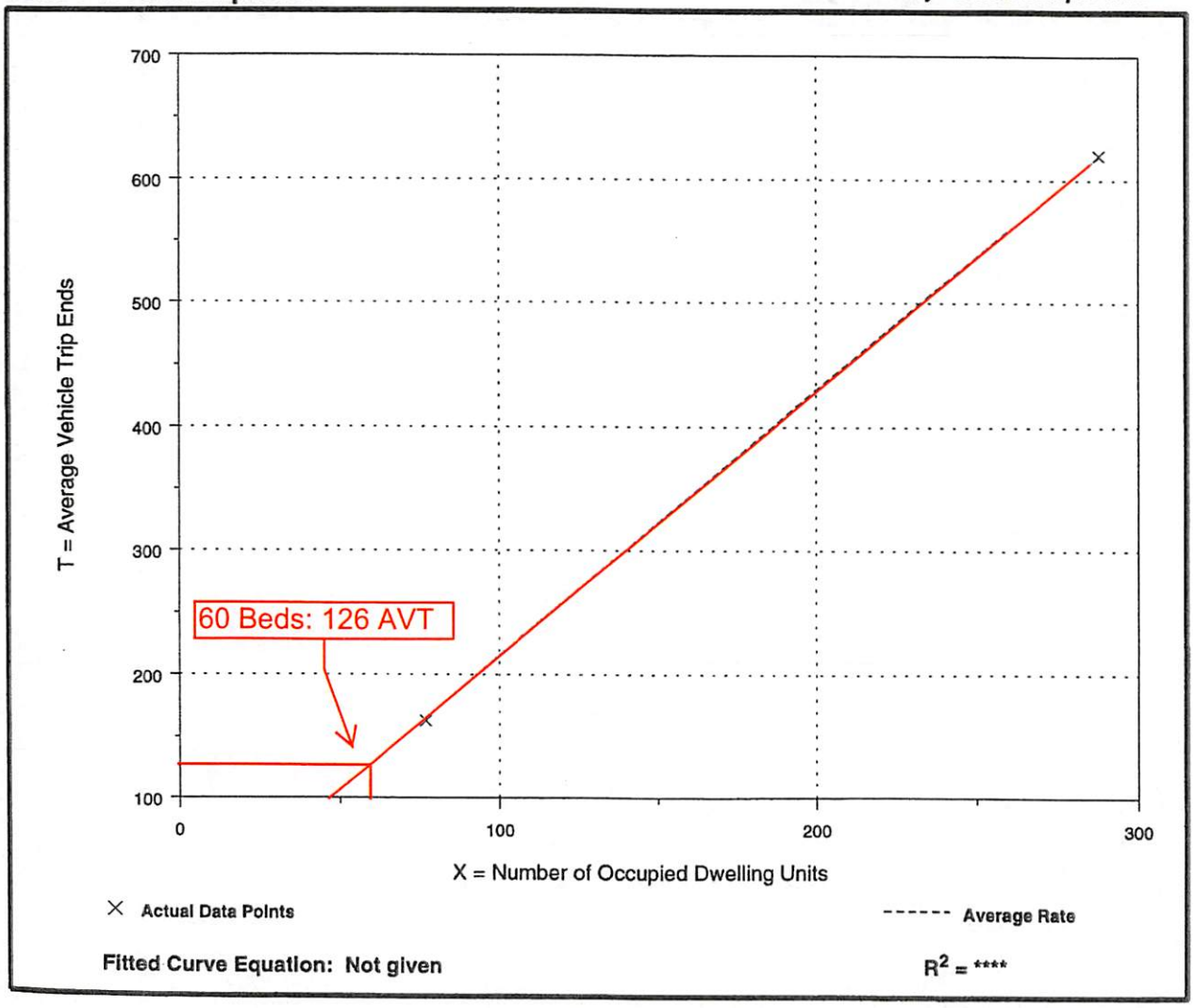
Number of Studies: 2
Avg. Num. of Occupied Dwelling Units: 183
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
2.15	2.12 - 2.15	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

Congregate Care Facility
(252)

Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

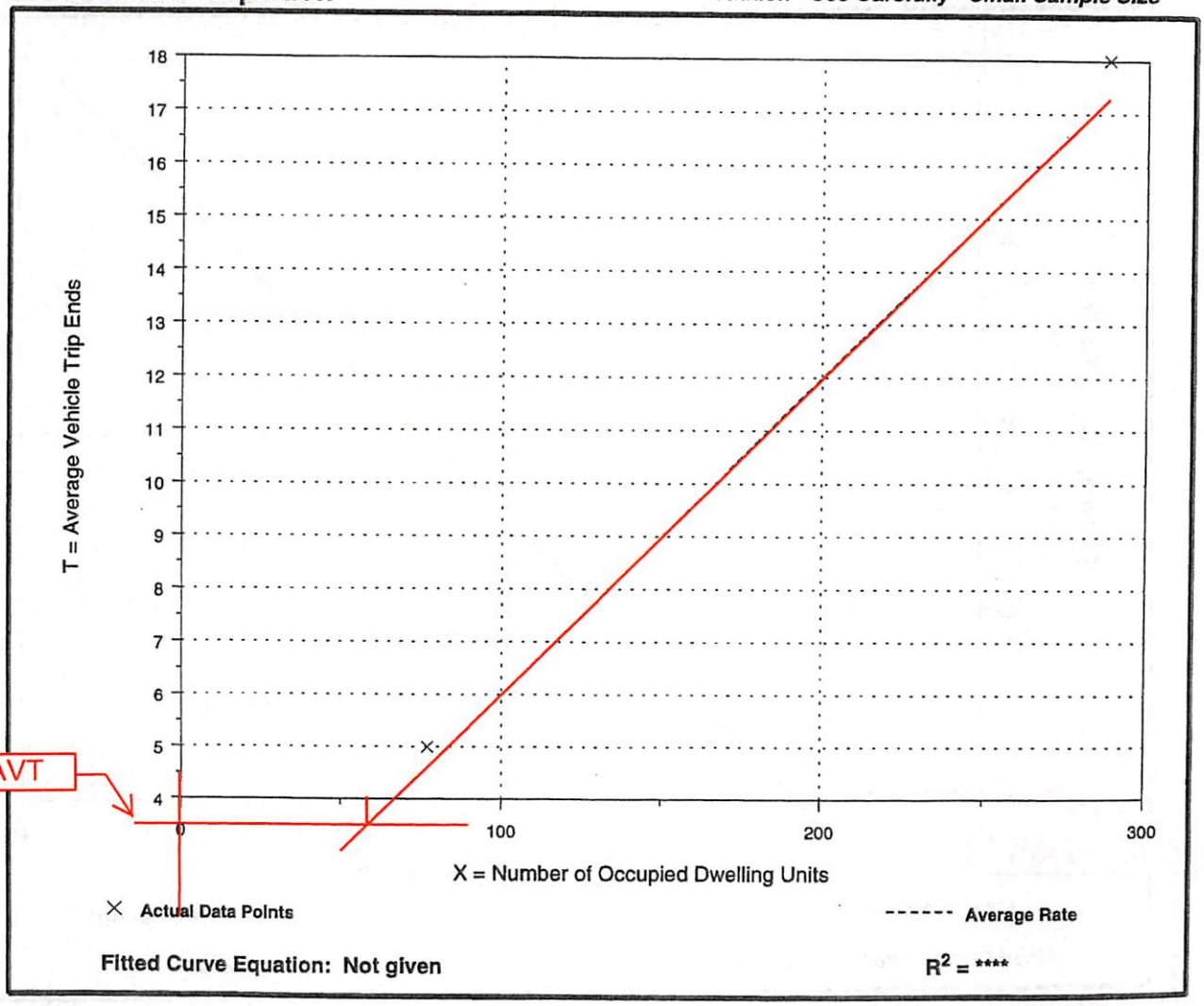
Number of Studies: 2
Avg. Num. of Occupied Dwelling Units: 183
Directional Distribution: 61% entering, 39% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.06	0.06 - 0.06	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

Congregate Care Facility
(252)

Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

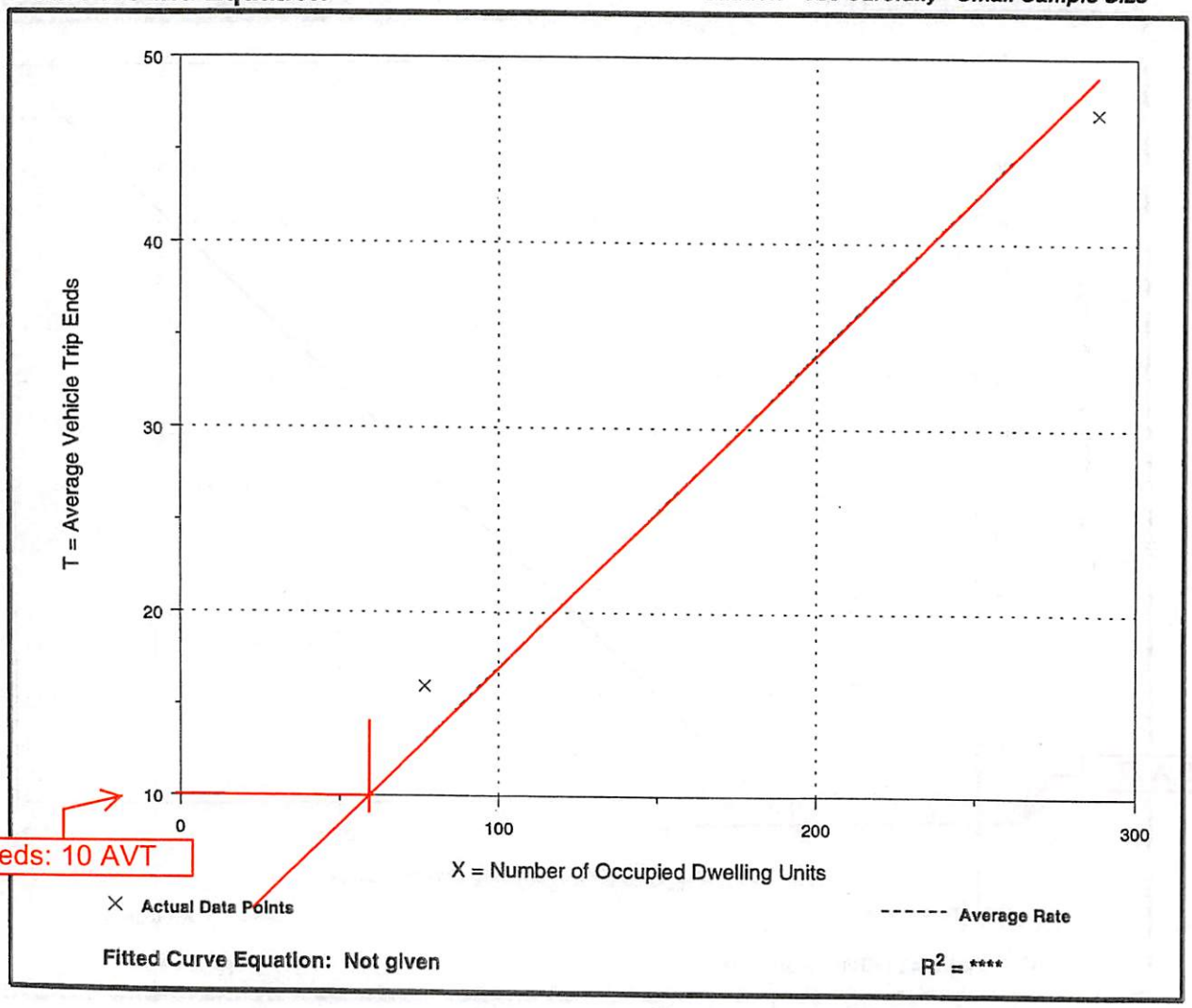
Number of Studies: 2
Avg. Num. of Occupied Dwelling Units: 183
Directional Distribution: 56% entering, 44% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.17	0.16 - 0.21	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Congregate Care Facility
(252)

Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
A.M. Peak Hour of Generator

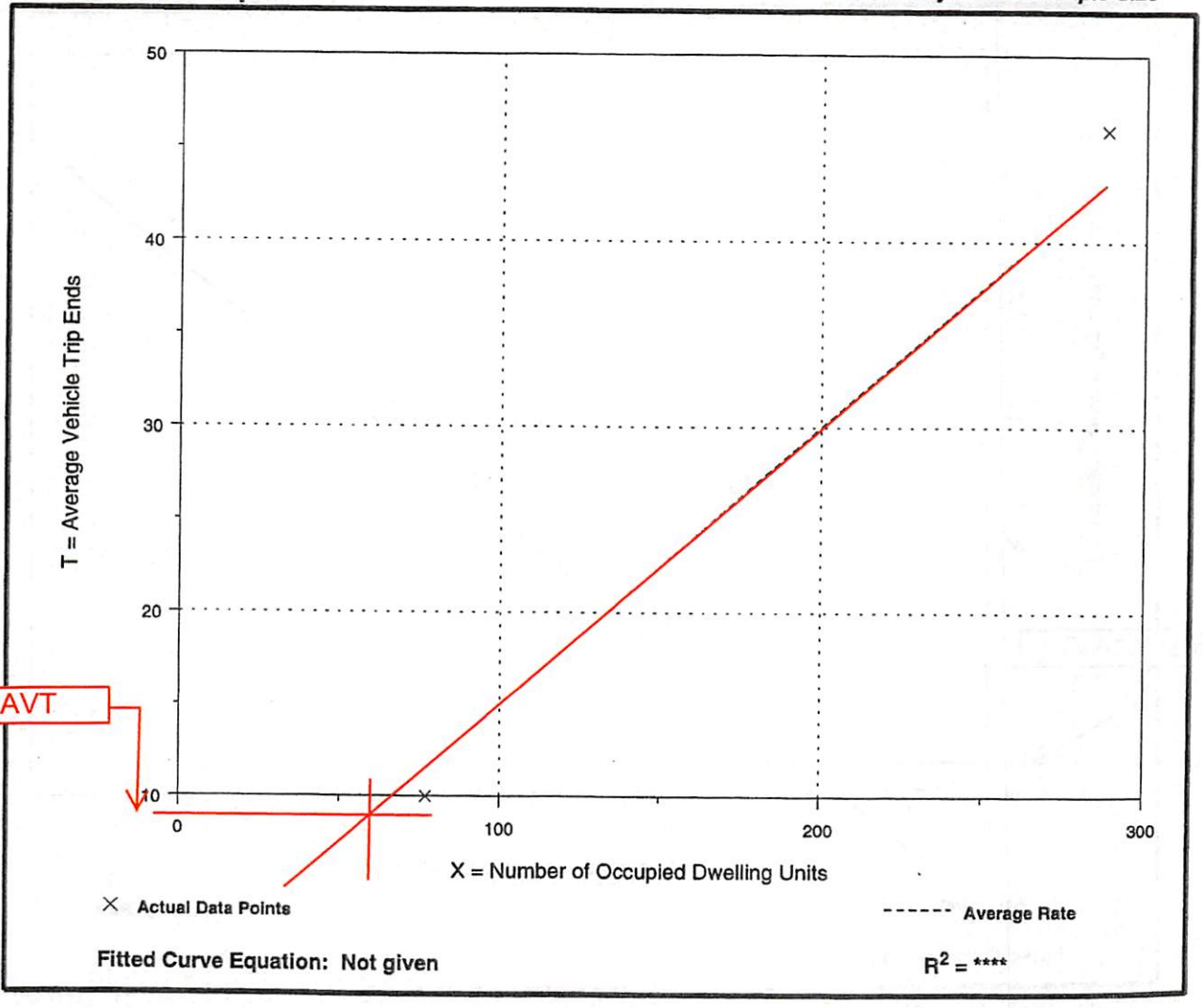
Number of Studies: 2
Avg. Num. of Occupied Dwelling Units: 183
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.15	0.13 - 0.16	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

Congregate Care Facility
(252)

Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
P.M. Peak Hour of Generator

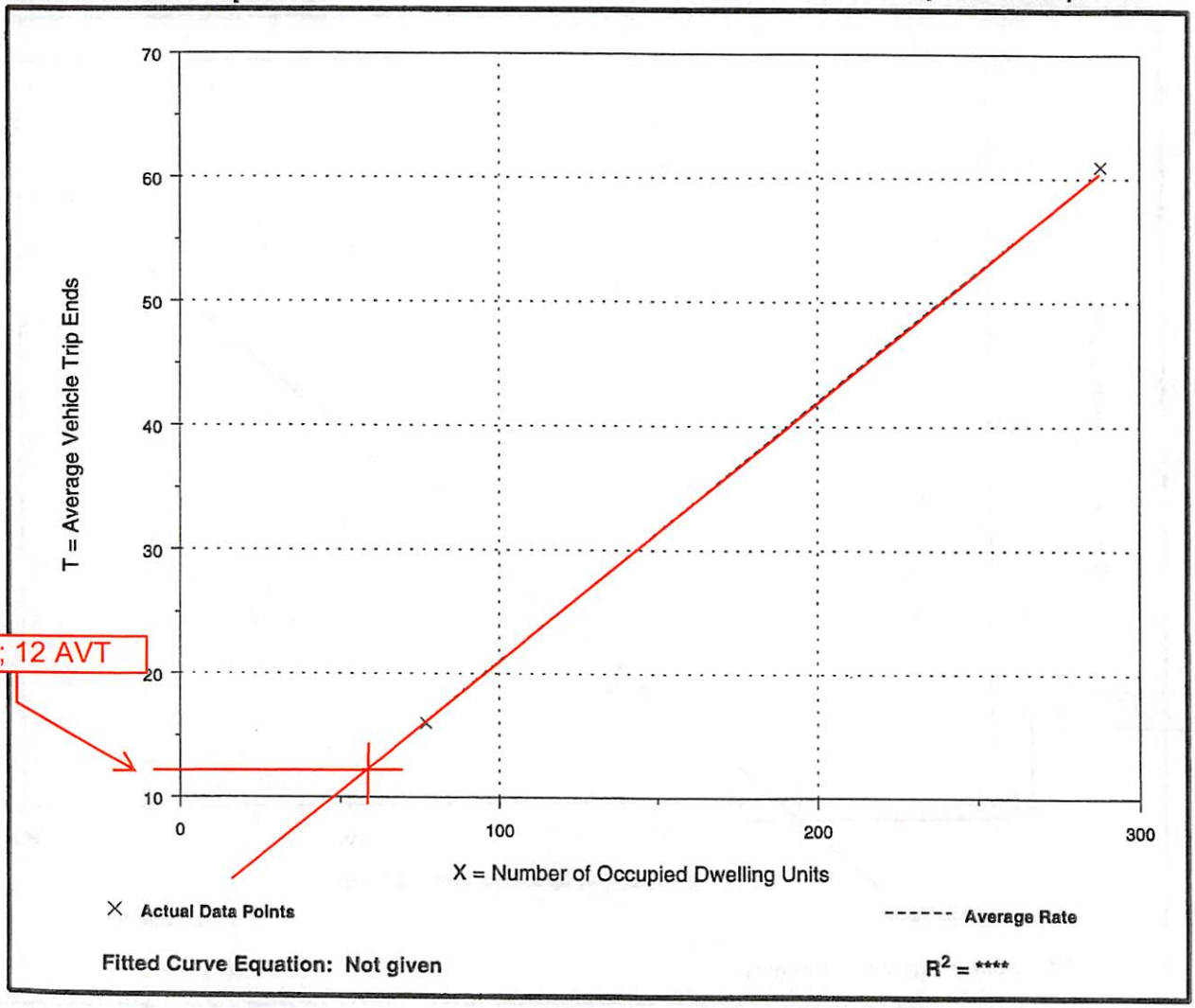
Number of Studies: 2
Avg. Num. of Occupied Dwelling Units: 183
Directional Distribution: 60% entering, 40% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.21	0.21 - 0.21	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



REPORT

GEOTECHNICAL INVESTIGATION REPORT

PATRIOT'S LANDING SKILLED NURSING FACILITY (SOUTH PARCEL)

1600 Marshall Circle

DuPont, Washington 98327

Submitted To: Mr. Jeff Elseth
Careage Development Company, L.L.C.
4411 Pt. Fosdick Drive
P.O. Box 1969
Gig Harbor, Washington 98335

Submitted By: Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA

Distribution:

June 13, 2011 **103-93529.100**

A world of capabilities delivered locally

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

Attachment 1m

Table of Contents

1.0 INTRODUCTION 1
1.1 Site Description 1
1.2 Project Description 1
2.0 FIELD INVESTIGATION 3
3.0 SUBSURFACE CONDITIONS 4
3.1 Geologic Setting 4
3.2 Soils 4
3.3 Groundwater 5
3.4 Laboratory Testing 5
3.5 Geologic Hazards 6
3.5.1 Steep Slopes 6
4.0 STORMWATER COLLECTION FACILITY 7
4.1 Grain Size Analyses and Infiltration Rate Correlation 7
5.0 ENGINEERING RECOMMENDATIONS 8
5.1 General 8
5.2 Seismic Criteria 8
5.2.1 Liquefaction Hazards 9
5.3 Foundations 9
5.4 Building slabs 10
5.5 Permanent Slopes 11
5.6 Retaining Wall Design Criteria 11
5.6.1 Backfilled Walls 11
5.6.2 Rockery Facing Recommendations 11
5.7 Permanent Drainage Provisions 12
5.8 Roadway Design 12
6.0 CONSTRUCTION RECOMMENDATIONS 14
6.1 General 14
6.2 Construction Drainage 14
6.3 Erosion Control 14
6.4 Site Preparation and Stripping 15
6.5 Earthworks 15
6.5.1 Fill Materials and Placement 15
6.6 Subgrade 16
6.7 Temporary Slopes 16
6.8 Utilities 17
6.9 Construction Geotechnical Monitoring 17
7.0 USE OF REPORT 18

Golder Associates

8.0 CLOSING 19
9.0 REFERENCES 20

List of Tables

Table 3-1 Laboratory Testing Results
Table 4-1 Grain Size Analyses and Infiltration Rate Correlation
Table 5-1 Capillary Break Gradation
Table 5-2 Recommended Pavement Sections

List of Figures

Figure 1 Vicinity Map
Figure 2 Site Exploration Plan

List of Appendices

Appendix A Soil Classification Legend
Test Pit Logs
Appendix B Laboratory Test Results

1.0 INTRODUCTION

Golder Associates Inc. (Golder) is pleased to present this geotechnical investigation report for the proposed skilled nursing facility to be located on an undeveloped parcel at 1600 Marshall Circle in Dupont, Washington, as shown on the Vicinity Map (Figure 1). The scope of services for this geotechnical investigation was performed in accordance with our Proposal No. P03-93529.200 dated May 16, 2011.

The purpose of this investigation was to characterize the subsurface conditions and address the potential for infiltration within the proposed infiltration pond area. Our scope of work consisted of performing a subsurface exploration program, laboratory testing, and preparation of this report containing geotechnical recommendations for the proposed building foundations, retaining walls, earthworks, infiltration pond and suggested pavement sections.

1.1 Site Description

The site is located at 1600 Marshall Circle in DuPont, Washington, as shown in Figure 1. The site is located approximately south and west of the intersection of Marshall Circle and Gary Oaks Avenue. The site is bordered to the east by Gary Oaks Avenue with an adjoining business park, undeveloped properties to the north and west, and Joint Base Lewis-McCord to the south.

The site is irregularly-shaped and covers approximately 4.3 acres. The site appears to have been previously logged, cleared, and graded. A large stockpile covers the majority of the western portion of the project site. The south side of the stockpile contains a steep slope (about 30 degrees, 58 percent slope). An approximately 8-foot deep drainage swale is located near the northeast corner of the project site. A grove of mature second-growth trees is located along the southern side of the property boundary.

1.2 Project Description

Site development plans include the construction of an extended care facility building and associated roadways, parking areas, and utilities (ESM 2010). The proposed building will consist of three wings radiating out from a central hub, as shown on the Site Exploration Plan (Figure 2). The building wings will be one-story, wood-frame construction with a slab-on-grade floor at elevation 234.28 feet. The central hub will be two stories with the finish floor of the lower level at 222.28 feet. The main entrance will be located between the east and south wings at about elevation 234. A parking lot will be situated on the west side of the north and south wings at about elevation 222 feet. Three rockery walls are planned for the project. One is located along the west side of the north wing and will be up to approximately 9 feet in height and 150 feet in length. Another rockery is planned along the west side of the south wing wrapping around the south side. This rockery will be up to approximately 10 feet in height and 225 feet in length. We understand the rockeries along the proposed buildings will serve as an architectural finish in front of a structural stem wall supporting the buildings. The rockeries will not support structural loads. The third

rockery is planned approximately 40 feet from the east side of the east wing and will be up to approximately 4 feet in height and 115 feet in length.

Cuts of up to 16 feet will be needed in order to achieve floor slab grades in the north wing and central hub, while fills of up to 12 feet will be needed in the south wing. The east wing will need cuts of about 6 feet. Embankment fills up to about 8 feet in thickness will be needed to support driveways on the north and south sides of the building. A stormwater infiltration pond is planned to the west of the building in a low area at about elevation 210 feet. There are also three infiltration trenches planned around the building for handling rooftop runoff.

2.0 FIELD INVESTIGATION

Golder's field investigation was completed on May 24, 2011 and consisted of excavating ten test pits (G-TP-1 through G-TP-10). The approximate exploration locations are shown in Figure 2. Locations are based on a 2008 Trimble GeoXT Global Positioning System (GPS). Exploration locations were selected based on existing site conditions, accessibility of the excavator, and existing underground utilities. A Soil Classification Legend and summary logs of the test pits are contained in Appendix A.

The test pits were excavated by Active Construction Inc. of Puyallup, Washington using a Hitachi 160 tracked excavator. The test pits were logged by Golder senior project geologist, John deLaChapelle, in general accordance with Golder's Technical Procedures appropriate to the test pit excavation and logging.

Each test pit was first excavated to a depth of four feet. At that depth, Golder's geologist would enter the test pit and directly log and sample the soil materials as exposed on the test pit walls. Soil characteristics, such as density/cohesiveness, grain size, structure, and color was documented. Other pertinent geotechnical characteristics of the subsurface, such as groundwater seepage and caving of soil was noted.

The test pit was then excavated to various depths based on location with regards to the planned development and materials encountered. Soil characteristics below four feet deep were logged by examining the spoils pile and visual observation of the test pit walls as observed from the ground surface. Soil samples were collected from each soil unit encountered in the test pits. All soil samples were returned to our laboratory for further visual observation and laboratory testing.

Soil characteristics such as density/cohesiveness or structure could only be directly observed in the upper four feet of each test pit. Density/cohesiveness below four feet was logged from the behavior, or excavation performance of the trackhoe. Structure below four feet was logged by visual observation of the test pit, or from large "intact" pieces of the soil material in the spoils pile.

At the conclusion of the excavation to observe soil and groundwater conditions, the test pit was backfilled with the cuttings generated and tamped into place by the excavator. Some settlement should be expected in the test pit backfill.

3.0 SUBSURFACE CONDITIONS

3.1 Geologic Setting

The recent geologic history of the Puget Sound Lowland region has been dominated by several glacial episodes. The most recent, the Vashon Stade of the Fraser Glaciation (about 12,000 to 20,000 years ago), is responsible for most of the present day geologic and topographic conditions. As worldwide sea levels lowered and the Puget lobe of the Vashon Stade advanced southward from British Columbia into the Puget Sound Lowland, sediments composed of proglacial lacustrine silt and clay, advance outwash, lodgment till, and recessional outwash were deposited upon either bedrock or older Pre-Vashon sediments. The older Pre-Vashon deposits include predominantly glacial and nonglacial sediments deposited during repeated glacial and interglacial periods during the past 2 million years. As the Puget Lobe of the Vashon Stade glacier retreated northward, it deposited a discontinuous veneer of recessional outwash and local deposits of ablation till upon the glacial landscape. The sculpted landscape revealed by the retracting glacier was characterized by elongated north-south oriented uplands, and intervening valleys. Post glacial deposits include: alluvium deposited within active stream channels; modern lacustrine deposits; organic silt and local peat deposits within kettle depressions, drainages, and outwash channels; and landslide deposits.

The Geologic map of the south half of the Tacoma quadrangle, Washington (Walsh 1987) was reviewed for this report. The geologic map indicates that the site is underlain by Vashon drift, described as chiefly recessional and proglacial stratified outwash consisting of sand and gravel and local areas of lacustrine deposits consisting of silt and clay.

3.2 Soils

Most of the project site, with the exception of a strip about 100 feet side along the southern boundary, has been cleared and disturbed by prior grading activities for development of the adjacent sites. A review of *Google Earth Pro 2010* historical images shows that the site was undeveloped and forested through about 1990. Between 1990 and 2002 the north portion of the site was graded and a large stockpile of material was placed in a similar configuration as the present stockpile. Based on these observations one would anticipate fill materials at the surface over most of the site. The thickest fills are present in the stockpile area under the proposed north wing of the building. No fill is anticipated in the forested area along the southern boundary as indicated by the approximate fill limit line shown in Figure 2.

Nine of ten test pits (G-TP-1 through G-TP-8 and G-TP-10), encountered fill overlying sand and gravel soils consistent with the recessional outwash deposits of the Vashon drift description by Walsh. The generalized descriptions of the soil units encountered are described below. Refer to the test pit logs in Appendix A for more detailed descriptions.

- Fill: The fill unit refers to soils placed by human activity. Fill was encountered in all test pits, except, G-TP-9, extending 2 to 8 feet below ground surface (bgs). The upper 0.5 to 1 foot of fill materials consisted of dark brown, gravel and sand with organics. The upper fill horizon with a higher organic content extended to 6 feet bgs in G-TP-3 and not encountered in G-TP-8, and G-TP-10. The underlying material generally consisted of loose, light brown to gray, gravel and sand with little cobbles and trace organics.
- Buried Topsoil: A buried topsoil layer was encountered underlying the fill materials in test pits G-TP-6, G-TP-7, and G-TP-8 to depths ranging from 3.5 to 6 feet bgs. This material consisted of dark brown, gravel with some organics.
- Recessional Outwash – Recessional outwash is a fluvial deposit laid down during the retreat of the Vashon-age glacier. This material encountered in all ten test pits, underlying the topsoil or fill to the depth explored, 4 to 18 feet bgs. The recessional outwash generally consisted of loose to compact, gravel and sand with some cobbles and trace silt. Our experience in the vicinity indicates that the recessional outwash deposit extends under the entire project site.

3.3 Groundwater

Groundwater was not encountered in any of the test pits. There were no indications that seasonal high groundwater reached the soil observed in any of the test pits excavated for this study. Indications of the regional groundwater elevation can be made from elevations of nearby ponds that are likely within this recessional outwash unit. The closest surface water features, including Hodge Lake, located within about 1,000 feet of the site indicate that regional groundwater is approximately 30 feet lower in elevation than the project site.

Golder reviewed the database of known well logs in Washington State that is maintained by the Washington State Department of Ecology (WSDOE) for information related to the project site. Twenty-five well logs were reviewed within a 1 mile radius of the project site. No groundwater information was presented on any of the logs reviewed.

3.4 Laboratory Testing

Laboratory testing of selected soil samples was completed in Golder's Redmond, Washington laboratory. 13 grain size analyses were completed in accordance with American Society for Testing and Materials (ASTM) D421 / D422 / D4318. The natural moisture content of these soil samples was determined in accordance with ASTM D2216-90. Table 3-1 contains a summary of the results and soil type based on the United Soil Classification System (USCS). Test pit logs are included in Appendix A, and the laboratory test results are contained in Appendix B.

Table 3-1: Laboratory Testing Results

Exploration Number	Depth (ft bgs)	Percent Gravel and Cobbles	Percent Sand	Percent Fines	Moisture Content (%)	USCS
G-TP-1	12	67	32	1	2.8	GP
G-TP-2	18	83	16	1	2.5	GW
G-TP-3	11	60	38	2	3.5	GW/SW
G-TP-4	7	79	19	2	2.2	GW
G-TP-5	4	67	32	1	1.6	GP/SP
G-TP-5	9	38	61	1	3.3	SP
G-TP-6	4	83	15	1	1.7	GP
G-TP-6	10	30	69	1	3.7	SP/GP
G-TP-7	5	56	33	11	8.4	GP-GM
G-TP-7	8	61	38	1	2.8	GP/SP
G-TP-8	6	27	72	1	4.3	SP
G-TP-9	2	73	27	0	2.2	GW
G-TP-10	10	69	31	0	2.2	GP/SP

3.5 Geologic Hazards

Geologic hazards in the Pacific Northwest include landslides, debris and mudflows, severe erosion, and seismic induced slope movement. We observed no signs of shallow or deep-seated slope instability on the site. Signs of slope instability commonly include abundant groundwater seepage, hummocky terrain, abrupt topographic changes, tension cracks, back-tilted or "pistol butted" trees, and ponded water.

3.5.1 Steep Slopes

The south side of the existing stockpile contains a moderate to steep slope, about 30 degrees, 58 percent slope. In our experience some jurisdictions may consider this a steep slope under a critical areas ordinance. However, some jurisdictions consider man-made slopes exempt from any steep slope ordinances. According to current project plans, the stockpile will be removed along with the steep slope. Care must be taken by the contractor during the removal of the stockpile to ensure that no failures or slumps occur during removal.

4.0 STORMWATER COLLECTION FACILITY

A stormwater infiltration pond is planned to the west of the site in a low area at about elevation 210 feet. About 3.5 to 4 feet of fill materials and buried topsoil were encountered at the ground surface in the area of the planned pond. Physical infiltration testing was not performed. Instead, infiltration rates are estimated based on the grain size distribution of the site soils, in accordance with the Stormwater Management Manual for Western Washington (DOE 2005). Evidence of seasonal high groundwater conditions were not observed during the excavation of the test pits.

In our opinion, the area of the planned stormwater collection facility appears to be underlain by infiltrable soils. Based on the test pit information, it appears that the permeable soils extend beneath the proposed pond. We recommend that the subsurface conditions be verified during construction.

The Stormwater Management Manual for Western Washington (DOE 2005) requirements state that the exploration must extend a minimum of six feet beyond the bottom of the planned stormwater facility. Neither groundwater nor mottling (iron-oxide staining), indicating a seasonal high groundwater elevation, was observed in any of the explorations.

Results of the laboratory testing from the samples collected in the test pits G-TP-5, G-TP-6, and G-TP-7 supports an average Infiltration Rate of a maximum long-term rate of 9-inches/hour based on Table 3.8 in the Stormwater Management Manual for Western Washington (DOE 2005).

4.1 Grain Size Analyses and Infiltration Rate Correlation

One of the infiltration rate determination methods described in the Stormwater Management Manual for Western Washington (DOE 2005) correlates material gradations and long-term infiltration rates. Using our grain size analyses results from the materials encountered in the test pits in the planned infiltration pond, G-TP-5, G-TP-6, and G-TP-7, the results of this correlation are presented in the Table 4-1.

Table 4-1: Grain Size Analyses and Infiltration Rate Correlation

Exploration Number	Depth (ft bgs)	D10 Size from ASTM D422 Soil Gradation Test (mm)	Estimated Long-Term (Design) Infiltration Rate (inches/hour)*
G-TP-5	4	0.88	9
G-TP-5	9	0.49	9
G-TP-6	4	1.16	9
G-TP-6	10	0.45	9
G-TP-7	5	n/a**	n/a
G-TP-7	8	0.4	9

Notes:
*Based on Table 3.8 in the Stormwater Management Manual for Western Washington (DOE 2005).
**n/a: A D10 was not able to be determined.

5.0 ENGINEERING RECOMMENDATIONS

This section of the report provides engineering recommendations based on our interpretation of the geotechnical data obtained during the investigation. The recommendations provided are intended for the guidance of the design engineers and are intended for this project only. The data may not be sufficient for construction and where comments are made on construction, they are provided only to highlight aspects of construction which could affect the design of the project. Contractors bidding on or undertaking the works must make their own interpretation of the subsurface information provided as it affects their proposed construction methods, costs, equipment selection, scheduling, and safety.

5.1 General

Based on our subsurface exploration and investigation, the site is feasible for development from a geotechnical standpoint utilizing conventional spread footings and conventional site development procedures. The main geotechnical issues at the site are:

- The presence of previously placed, fill materials.

We encountered previously placed, fill materials covering the majority of the project site extending up to 10 feet bgs. We recommend removing the existing stockpile and fill soils to expose native soils at the start of construction. From a geotechnical standpoint, the fill materials appear suitable for reuse as structural fill.

It might be possible to found shallow footings on existing fill in some areas of the site. Additional investigation and analysis, outside of our existing scope of work, will be required to delineate and provide recommendations for areas of existing fill. If you want to pursue this option, please contact Golder for a proposal to complete the additional investigation and analysis.

5.2 Seismic Criteria

The *2009 International Building Code* (IBC) seismic design section provides a series of site classes that are used as a basis for seismic design of structures. Based on the encountered soil conditions, Site Class D, Stiff Soil profile as identified in the IBC should be used for design. This conclusion is based on an assumed average "N-value" of 15 to 50 in the upper 100 feet of the site.

The following design parameters are based on the 0.2 second spectral acceleration (S_s) and the 1.0 second spectral acceleration (S_1) for the project site latitude of North 47.094341, longitude West 122.657520. The interpolated probabilistic ground motion values were obtained from the USGS java application "Seismic Hazard Curves and Uniform Hazard Response Spectra Version 5.1.0 – 02/10/2011" (http://earthquake.usgs.gov/hazards/designmaps/javacalc.php). The following (un-modified) interpolated

probabilistic ground motion values (2 percent probability of exceedance in 50 years) can be used for seismic design:

- 0.2 sec SA S_s = 1.179g
- 1.0 sec SA S_1 = 0.417g

Note that these numbers correspond to Site Classification B and must be adjusted to Site Classification D using IBC procedures.

5.2.1 Liquefaction Hazards

Liquefaction is a phenomenon in which soils lose all shear strength for short periods of time during an earthquake. Ground shaking of sufficient duration results in the loss of grain-to-grain contact and rapid increase in pore water pressure, causing the soil to behave as a fluid. To have a potential for liquefaction, a soil must be cohesionless with a grain size distribution of a specified range (generally sand and silt); it must be loose to compact; it must be below the groundwater table; and it must be subject to sufficient magnitude and duration of ground shaking. The effects of liquefaction may be large total and/or differential settlement for structures founded in the liquefying soils. It is our opinion that the risk of liquefaction on this site is low due to the depth to groundwater.

5.3 Foundations

Conventional shallow isolated or continuous spread footings may be used throughout the site provided they are founded on compacted structural fill or on undisturbed native soil evaluated during construction. Footings should not be founded on loose surficial soils, soft organic soils, or existing uncontrolled fill. Based on the test pit data collected on the majority of the project site, the depth to suitable bearing soils was highly variable ranging from 2 to over 10 feet below existing site grades. The actual depth to suitable bearing soils should be determined in the field. Where areas of unsuitable soils are encountered at the footing subgrade elevation, the footing area should be over-excavated, extending out at a 1H:1V, and replaced with properly placed and compacted structural fill as described in the Earthworks subsection. Alternatively, footings may be deepened to bear directly on compact native soils.

Foundations should be designed based on the following parameters:

Maximum Allowable Bearing Pressures (factor of safety = 3.0):

Structural fill or compact to dense native soils.....2,000 psf

The bearing capacity values may be increased by 1/3 for short-term wind or seismic loading.

Allowable Passive Pressure (factor of safety = 1.5):.....250 pcf

Minimum Embedment for Frost Protection:

Perimeter footings .....18 inches
Interior footings (below exterior grades).....12 inches

Minimum Footing Widths:

Perimeter footings.....24 inches
Interior isolated footings.....24 inches

Settlement (due to building loads):

Total Settlement.....less than 1 inch
Differential Settlement.....less than 3/4 inch

Footings size should be limited to a maximum width of 72 inches to limit settlement. Settlement is expected to occur as the building is constructed. Consolidation (long term, after construction) settlement is not expected at the site.

A representative from Golder should observe the foundation bearing soils prior to placement of forms and rebar to verify the foundation bearing soils are consistent with the soils encountered at the time of this study.

5.4 Building slabs

Conventional slab-on-grade floors can be supported on a subgrade of the native bearing soils as noted above, or on structural fill placed and compacted as noted in the Earthworks subsection of this report. Slab-on-grade floors should not be founded on organic soils, loose native soils, or un-compacted or uncontrolled fills. We recommend that slabs be underlain by a capillary break material, consisting of a minimum of four inches of clean, free draining gravel, or crushed rock containing less than three percent fines passing the US No. 200 sieve (based on the minus US No. 4 sieve fraction) meeting the following specification:

Table 5-1: Capillary Break Gradation

Sieve Size or diameter (in)	Percent Passing
1 inch	100 Percent Passing
No. 4	0 Percent – 20 Percent
No. 200	0 – 3 Percent

Vapor transmission through floor slabs is an important consideration in the performance of floor coverings and controlling moisture in structures. Floor slab vapor transmission can be reduced through the use of suitable vapor retarders such as plastic sheeting placed between the capillary break and the floor slab, and/or specially formulated concrete mixes. Framed floors should also include vapor protection over any

areas of bare soils and adequate crawl space ventilation and drainage should be provided. The identification of alternatives to prevent vapor transmission is outside of our expertise. A qualified architect or building envelope consultant can make recommendations for reducing vapor transmission through the slab, based on the building use and flooring specifications.

5.5 Permanent Slopes

Long-term permanent cut slopes should be 2H:1V (Horizontal: Vertical) or flatter assuming proper drainage and erosion control. Long term permanent fill slopes should be 2H:1V or flatter assuming proper compaction, drainage and erosion control. In our experience, 2H:1V and steeper slopes are significantly more likely to experience erosion or sloughing during the first winter season, until vegetation is well established. Aggressive erosion control measures, including plastic sheeting are sometimes needed to prevent significant slope damage. In general, 3H:1V slopes or gentler are preferred for ease of maintenance and application of landscaping.

5.6 Retaining Wall Design Criteria

We understand the project plans include constructing reinforced concrete cast-in-place walls to support grade changes between the parking lot on the west side of the north and south wings of the proposed buildings. The walls will support the building loads and earth pressures associated with the grade changes. We understand a rockery facing will be constructed in front of the concrete walls as an architectural finish. The rockery facing will not support earth pressures or structural loads.

The following section contains geotechnical recommendations for design of walls.

5.6.1 Backfilled Walls

Earth Pressures for backfilled walls:

Restrained Walls (Equivalent Fluid Weight)	60 pcf
Cantilevered Walls (Equivalent Fluid Weight)	40 pcf
Allowable Passive Earth Pressure ((FS 1.5 ignore upper 1 foot of embedment)	250 pcf

The earth pressure values provided in this section are based on the assumption wall backfill will be horizontal and the walls will be fully drained. Surcharges due to backfill slopes, hydrostatic pressures, traffic, structural loads, seismic loads, or other surcharge loads should be added to the above pressures.

5.6.2 Rockery Facing Recommendations

We understand that a rockery facing will be constructed in front of the concrete wall along the west side of the north and south wings of proposed buildings. Although the rockery will not support any earth pressures or structural loads, we recommend constructing the rockery facing using guidelines presented

in Federal Highway Administration (FHWA) "Rockery Design and Construction Guidelines," Publication No. FHWA-CFL/TD-06-006, November 2006.

5.7 Permanent Drainage Provisions

Permanent control of surface water should be incorporated in the final grading design and vegetative protection should be established. It is important to separate all surface water drainage including roof downspouts from any building underdrain systems. Surface drainage and building footing or under-slab drains must be conveyed in two separate systems.

Foundation drains should include:

- **WALL DRAINS**: Retaining walls and backfilled walls should include a permanent drainage system. This should include a wall footing drain consisting of at least a 4-inch diameter perforated heavy walled PVC pile surrounded by at least 6 inches of drainage gravel. We recommend that a geotextile (Mirafi 140N or approved equivalent) be placed between the drain rock and native soils. The backfill against the wall should consist of at least a 12 inch thickness of drainage gravel or a suitable geocomposite drain board. A relatively fine grained soil should be placed within a foot of the ground surface and the slope behind the wall should be graded to drain away from the wall.
- **FOOTING DRAINS**: Exterior footing drains as described above should be provided for all buildings. Roof drainage should be collected and conveyed in a system separate from the footing drain system.
- **CRAWL SPACE DRAINAGE**: If a raised floor and crawl space is used, footing drains should be used with the drain invert lower than the crawl space. Alternatively, the crawl space could be graded to drain towards one or more low points with drains installed at the low points with a positive gravity discharge point.
- **SLAB AND PAVEMENT UNDERDRAINS**: If it is determined that the finished slab grades for some building or pavement areas will be within about 2 feet of the anticipated post-grading water table, slab or pavement underdrains are recommended. The design criteria for these drains can be developed once their need is evaluated.

5.8 Roadway Design

We recommend over-excavating all undocumented fill materials under the planned roadways to remove all organic material that may cause potential settling. Structural fill may be used to bring the over-excavated areas to the planned roadway subgrade elevation.

The recommended pavement structure thickness for roadway subgrade consisting of a minimum 2 feet of structural fill is shown in Table 5-2. These sections are based on our experience with similar soils under similar traffic conditions. Further analysis may be necessary if requested by the City of DuPont. Pavement subgrade recommendations are presented in the subsection Earthworks.

Table 5-2: Recommended Pavement Sections

Alternative	Asphalt Concrete (Class B) Thickness (inches)	Asphalt Treated Base Thickness (inches)	Crushed Aggregate Base Thickness (inches)
I	3	N/A	6
II	2	4	N/A

The pavement section should also be in accordance with the City of DuPont requirements.

6.0 CONSTRUCTION RECOMMENDATIONS

6.1 General

Excavating and compacting fill on the site will require careful site preparation, surface drainage control, soil handling procedures, dust control, and sequencing on the part of the earthworks contractor.

We recommend during stripping activities that the upper organic zone encountered in the fill materials be removed and stockpiled for later use as landscaping fill. This material should not be used as structural fill material due to the high organic content.

6.2 Construction Drainage

The grading contractors should channel all surface drainage into approved surface water collection systems. Surface water drainage from the site must be controlled during and after construction to avoid erosion and uncontrolled runoff.

In wet areas, where seeps are encountered or where existing drainage swales/ravines will be covered with structural fill, drains consisting of a suitably sized PVC pipe surrounded by clean, free draining gravel and wrapped in filter fabric should be installed and drained by gravity to a positive discharge. Prior to structural fill placement, the geotechnical engineer of record should visit the site to provide recommendations for drain installation.

6.3 Erosion Control

Erosion control for the site will include Best Management Practices (BMP's) incorporated into the civil design drawings and may contain the following recommendations:

- Limit exposed cut slopes.
- Route surface water through temporary drainage channels around and away from exposed slopes.
- Use silt fences, straw berms, and temporary sedimentation ponds to collect and hold eroded material on the site.
- Seeding or planting vegetation on exposed areas where work is completed and no buildings are proposed.
- Retaining existing vegetation to the greatest possible extent.

We recommend that the contractor sequence excavations so as to provide constant positive surface drainage for rainwater and any groundwater seepage that may be encountered. This will require grading slopes, constructing temporary ditches, sumps and/or berms. Permanent slopes shall not be graded steeper than 2H:1V and, until vegetation is established, should be protected with plastic sheeting during adverse weather conditions.

6.4 Site Preparation and Stripping

Site preparation should begin with the removal of loose topsoil and previously placed, undocumented fill in the planned roadway areas and within the building footprint. The topsoil should be stripped and either removed from the site or stockpiled for future use as landscaping cover. Based on our explorations, we estimate up to one foot of loose, organic, topsoil will need to be removed in planned structural areas and may be used for landscaping cover. The fill should be excavated from the planned roadway areas. Provided that the organic materials and any other debris that may be within the fill is removed, the material may be stockpiled and used as structural fill.

6.5 Earthworks

Careful earthworks planning and subgrade protection by the contractor and implementation of the recommendations presented below will help minimize unanticipated costs.

Prior to the placement of any structural fill, the subgrade should be evaluated by Golder.

6.5.1 Fill Materials and Placement

Structural fill should be free of organic and inorganic debris, be near the optimum moisture content, and be capable of being compacted to the required specifications listed below. If the on-site soils do not meet the above criteria, or cannot be reworked to be suitable, we recommend using imported granular fill consisting of well graded material free of organic material, with less than five percent fines (that portion of the soil that passes the # 200 sieve). Other fill materials may be used with approval of the geotechnical engineer.

Maximum Lift Thickness:

- On-site native soils or imported granular materials - 12 inches loose.

Minimum Compaction Requirements:

- Beneath Building Foundations - The structural fill should be compacted to at least 95 percent of the ASTM D1557 maximum dry density value (modified Proctor value) for the material. The structural fill beneath footings should at a minimum extend laterally at a 1H:1V slope projected down and away from the bottom footing edge.
- Beneath Roadways, Slabs and Pavements – Structural fill should be compacted to at least 90 percent of the ASTM D 1557 maximum dry density value for the material, up to three feet below final grade. Within about three feet of subgrade elevation, the fill should be compacted to at least 95 percent of the ASTM D 1557 maximum dry density value for the material.
- Utility Trench Backfill - The fill should generally be compacted to at least 90 percent of the ASTM D 1557 maximum dry density value for the material, except within three feet of subgrade elevation, where the fill should be compacted to at least 95 percent of the

ASTM D 1557 maximum dry density value for the material. The local utility district may have more stringent requirements.

- Non-structural/Landscaped Areas - Firmly compact the soil to prevent excessive settlement and sloughing. Topsoil and surficial soils generated during stripping of the site would likely be suitable for these areas.

Structural fill should be compacted with equipment suitable to achieve proper compaction. If density tests taken in the fill indicate that compaction is not being achieved due to high moisture content, then the fill should be scarified, moisture-conditioned, and re-compacted. If the required densities cannot be met then the material can be replaced or a soil admixture used to dry the soil.

6.6 Subgrade

Subgrade preparation will consist of cuts into undisturbed native soil or more likely compacted structural fill. The subgrade should be firm and judged adequate for the intended loads by the geotechnical engineer of record, Golder. The subgrade should be prepared in accordance with the recommendations in this Section. Prior to paving the subgrade should be observed during a "proof-roll" completed by a fully loaded dump truck, or other heavy equipment. Proof-rolling should be observed by a representative from Golder. Soft or excessively yielding areas should be remediated or removed and replaced prior to paving.

Pavement and foundation subgrade shall be maintained in a well compacted state and protected from degradation prior to paving or concrete placement. Any disturbed areas, or wet areas shall be remediated by a method determined suitable, based on the observed field conditions. The options may include excavation and replacement of the disturbed soil, placement of a geotextile separation fabric (such as Mirafi 500x or 600x), chemical stabilization and/or drainage improvements. Protection measures may include restricted traffic, perimeter drain ditches, or placement of a protective gravel layer on the subgrade.

6.7 Temporary Slopes

Safe temporary slopes are the responsibility of the contractor and should comply with all applicable OSHA and WISHA standards. Temporary stable cut slopes less than eight feet in height can generally be constructed in the native site soils, using the following recommendations:

- Uncontrolled Fill – 1.5H:1V
- Recessional Outwash – 1.5H:1V

Temporary cuts that encounter any groundwater seepage should be sloped at 2H:1V or flatter (as recommended by Golder at the time of construction) to reduce caving or sloughing. Temporary cuts in the recessional outwash are expected to have some raveling of the sands and gravels at the cut face. Temporary cut slopes in any uncontrolled fill may need to be laid back flatter if there is a change in material type or debris is encountered.

In the event that groundwater seepage is encountered during excavation, the contractor must install temporary drainage measures to protect the cut face and prevent degradation of the excavation area until permanent drainage measures can be constructed.

6.8 Utilities

Maintaining safe utility excavations is the responsibility of the utility contractor. The soil and groundwater conditions in the utility excavations will vary across the site. We expect excavations in the recessional outwash soils to cave easily and occasional boulders and cobbles may be encountered. Excavation of the Vashon till will be difficult in places because it can be very dense and occasional boulders and cobbles may be encountered. As appropriate, trench shoring should be employed by the utility contractor.

6.9 Construction Geotechnical Monitoring

Critical aspects of the foundation and earthwork should be observed and tested by Golder. These aspects of the project may include but not be limited to foundation subgrade verification, construction of retaining walls, permanent drain provision in wet areas, installation of under drains, pavement subgrade verification, and placement and compaction of structural fills.

7.0 USE OF REPORT

This report has been prepared exclusively for the use of Careage Development Company, L.L.C. and their consultants for the project site. We encourage review of this report by bidders and/or contractors as it relates to factual data only (test pit logs, laboratory test results, conclusions, etc.). The conclusions and recommendations presented in this report are based on the explorations and observations completed for this study, conversations regarding the existing site conditions, and our understanding of the planned development. The conclusions are not intended, nor should they be construed to represent, a warranty regarding the development. But they are included to assist in the planning and design process.

Judgment has been applied in interpreting and presenting the results. Variations in subsurface conditions outside the exploration locations are common in glacial environments such as those encountered at the site. Actual conditions encountered during construction might be different from those observed in the explorations. When the site project plans are finalized, we recommend that Golder be given the opportunity to review the plans and specifications to verify that they are in accordance with the conditions described in this report.

The explorations were advanced and logged in general accordance with locally accepted geotechnical engineering practice, subject to the time limits and financial and physical constraints applicable to the services for this project, to provide information for the areas explored. There are possible variations in the subsurface conditions between the borehole locations and variations over time.

The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site. The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous site activities and/or resulting from the introduction of materials from off-site sources are outside the scope of services for this report and have not been investigated or addressed.

8.0 CLOSING

We trust that this report meets your needs. If you have questions or comments, please contact us at (425) 883-0777. We appreciate the opportunity to provide our services for this project.

GOLDER ASSOCIATES INC.

6/15/11

Alison J. Dennison, LG
Project Geologist

Joshua L. Hanson, PE
Senior Project Engineer

JOSHUA L. HANSON
STATE OF WASHINGTON
41816
REGISTERED
PROFESSIONAL ENGINEER

James G. Johnson, LG, LEG
Principal

AJD/JLH/JGJ/kkm

State of Washington
2716
Licensed Geologist
Alison J. Dennison

9.0 REFERENCES

ESM Consulting Engineers LLC. 2010. Skilled Nursing Facility. Federal Way, Washington. October 5.

IBC. 2003. International Building Code. International Code Council, Country Club Hills, Illinois.

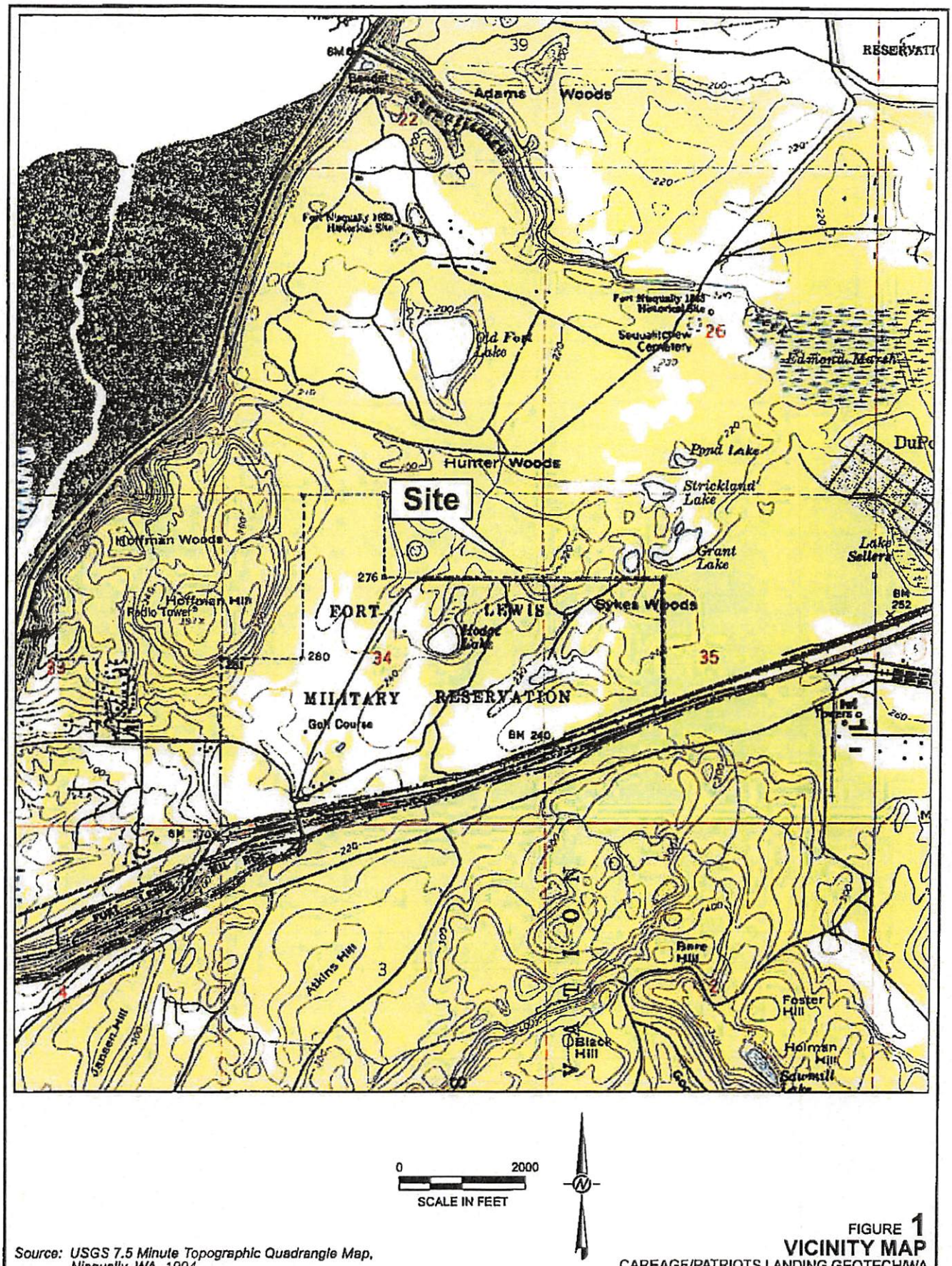
USGS java application *Seismic Hazard Curves and Uniform Hazard Response Spectra Version 5.1.0 – 02/10/2011* http://earthquake.usgs.gov/hazards/designmaps/javacalc.php (accessed June 10, 2011).

Walsh, T.J. 1987. *Geologic map of the south half of the Tacoma quadrangle, Washington*: Washington Division of Geology and Earth Resources, Open File Report 87-3, scale 1:100000.

Washington State Department of Ecology Water Quality Program. February 2005. *Stormwater Management Manual for Western Washington*. Washington. Section 3.3.6. Page 3-77.

Washington State Department of Ecology (DOE). 2010. Washington State Well Log Viewer. Online: http://apps.ecy.wa.gov/welllog/ (accessed June 10, 2011).

FIGURES



Source: USGS 7.5 Minute Topographic Quadrangle Map, Nisqually, WA, 1994

FIGURE 1
VICINITY MAP
CAREAGE/PATRIOTS LANDING GEOTECH/WA

LEGEND

G-TP-1 Number and Approximate Location of Test Pit

Approximate Limits of Fill

Planned Rockery Walls

MARSHALL CIRCLE

GARY OAKS AVENUE

G-TP-1

G-TP-2

G-TP-3

G-TP-4

G-TP-5

G-TP-6

G-TP-7

G-TP-8

G-TP-9

G-TP-10

INFILTRATION TRENCH

NORTH WING

EAST WING

SOUTH WING

MAIN ENTRANCE

CENTRAL HUB

PLANNED INFILTRATION POND

0 50 100

SCALE IN FEET

Source: Site plan based on drawings provided by ESM Consulting Engineers LLC. dated October 5, 2010.

FIGURE 2

SITE EXPLORATION PLAN

Careage/Patriots Landing Geotech/WA

K:\CAD\Projects\2010\10393529\000\10393529_Figure2_SitePlan.dwg | Site Plan | Mod: 06/14/2011, 14:23 | Plotted: 06/14/2011, 16:56 | adennison

Golder Associates

APPENDIX A

SOIL CLASSIFICATION LEGEND/TEST PIT LOGS

Unified Soil Classification System (USCS)

Criteria for Assigning Group Symbols and Names			Soil Classification Generalized Group Descriptions	
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 Sieve	CLEAN GRAVELS Less than 5% fines	GW	Well-graded Gravels
			GP	Poorly-graded gravels
		GRAVELS WITH FINES More than 12% fines	GM	Gravel and Silt Mixtures
			GC	Gravel and Clay Mixtures
	SANDS 50% or more of coarse fraction passes No. 4 Sieve	CLEAN SANDS Less than 5% fines	SW	Well-graded Sands
			SP	Non-plastic and Low-Poorly-graded Sands
		SANDS WITH FINES More than 12% fines	SM	Sand and Silt Mixtures
			SC	Sand and Clay Mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50	INORGANIC	CL	Low-plasticity Clays
			ML	Non-plastic and Low-Plasticity Silts
		ORGANIC	OL	Non-plastic and Low-Plasticity Organic Clays Non-plastic and Low-Plasticity Organic Silts
	SILTS AND CLAYS Liquid limit greater than 50	INORGANIC	CH	High-plasticity Clays
			MH	High-plasticity Silts
		ORGANIC	OH	High-plasticity Organic Clays High-plasticity Organic Silts
HIGHLY ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor		PT	Peat

Based on ASTM D2487-00

Component Definitions by Gradation

Component	Size Range
Boulders	Above 12 in.
Cobbles	3 in. to 12 in.
Gravel	3 in. to No. 4 (4.76mm)
Coarse gravel	3 in. to 3/4 in.
Fine gravel	3/4 in. to No. 4 (4.76mm)
Sand	No. 4 (4.76mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.76mm) to No. 10 (2.0mm)
Medium sand	No. 10 (2.0mm) to No. 40 (0.42mm)
Fine sand	No. 40 (0.42mm) to No. 200 (0.074mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

Sample Types

Symbol	Description
SS	SPT Sampler (2.0" OD)
HD	Heavy Duty Split Spoon
SH	Shelby Tube
CA	California Sampler
B	Bulk
C	Cored
G	Grab
P	Pitcher Sampler

Cohesionless Soils (a)		
Density	N, blows/ft.[(c)]	Relative Density (%)
Very loose	0 to 4	0 - 15
Loose	4 to 10	15 - 35
Compact	10 to 30	35 - 65
Dense	30 to 50	65 - 85
Very Dense	over 50	>85

Cohesive Soils[(b)]		
Consistency	N, blows/ft.[(c)]	Undrained Shear Strength (psf) [(d)]
Very soft	0 to 2	<250
Soft	2 to 4	250-500
Firm	4 to 8	500-1000
Stiff	8 to 15	1000-2000
Very Stiff	15 to 30	2000-4000
Hard	over 30	>4000

(a) Soils consisting of gravel, sand, and silt, either separately or in combination, possessing no characteristics of plasticity, and exhibiting drained behavior.
(b) Soils possessing the characteristics of plasticity, and exhibiting undrained behavior.
(c) Refer to text of ASTM D 1586-84 for a definition of N; in normally consolidated cohesionless soils. Relative Density terms are based on N values corrected for overburden pressures.
(d) Undrained shear strength = 1/2 unconfined compression strength.

Laboratory Tests

Test	Designation
Moisture	(1)
Density	D
Grain Size	G
Hydrometer	H
Atterberg Limits	(1)
Consolidation	C
Unconfined	U
UU Triax	UU
CU Triax	CU
CD Triax	CD
Permeability	P

(1) Moisture and Atterberg Limits plotted on log.

Silt and Clay Descriptions

Description	Typical Unified Designation
Silt	ML (non-plastic)
Clayey Silt	CL-ML (low plasticity)
Silty Clay	CL
Clay	CH
Plastic Silt	MH
Organic Soils	OL, OH, Pt

Qualitative Descriptive Terminology for Moisture Content

Dry	No discernible moisture present
Damp	Enough moisture present to darken the appearance but no moisture on materials adheres to the hand
Moist	Will moisten the hand
Wet	Visible water present on materials

Descriptive Terminology Denoting Component Proportions

Descriptive Terms	Range of Proportion
Trace	0-5%
Little	5-12%
Some or Adjective (a)	12-30%
And	30-50%

(a) Use Gravelly, Sandy or Silty as appropriate.

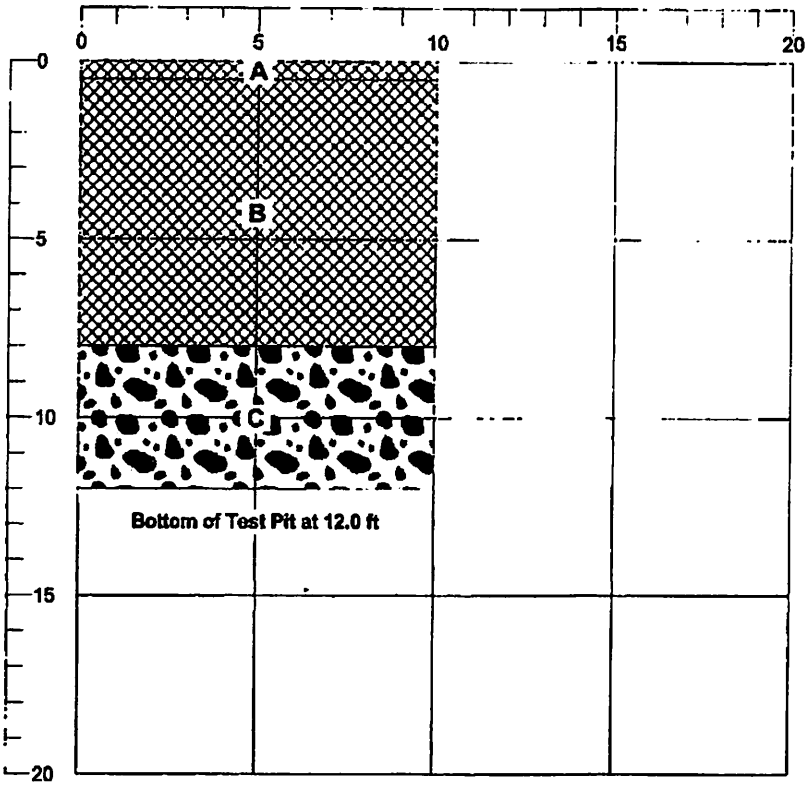
SOIL CLASSIFICATION LEGEND

Golder Associates

LOG OF TEST PIT G-TP-1

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 246.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	
2	12.0	2.8

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 8.0 ft: Very loose, gray and light brown, slightly stratified, medium to coarse sandy fine to coarse GRAVEL, little cobbles, damp. (GW) (FILL)

C 8.0 - 12.0 ft: Compact, light brown, non-stratified, medium to coarse sandy fine to coarse GRAVEL, little cobbles, trace rootlets in upper foot, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

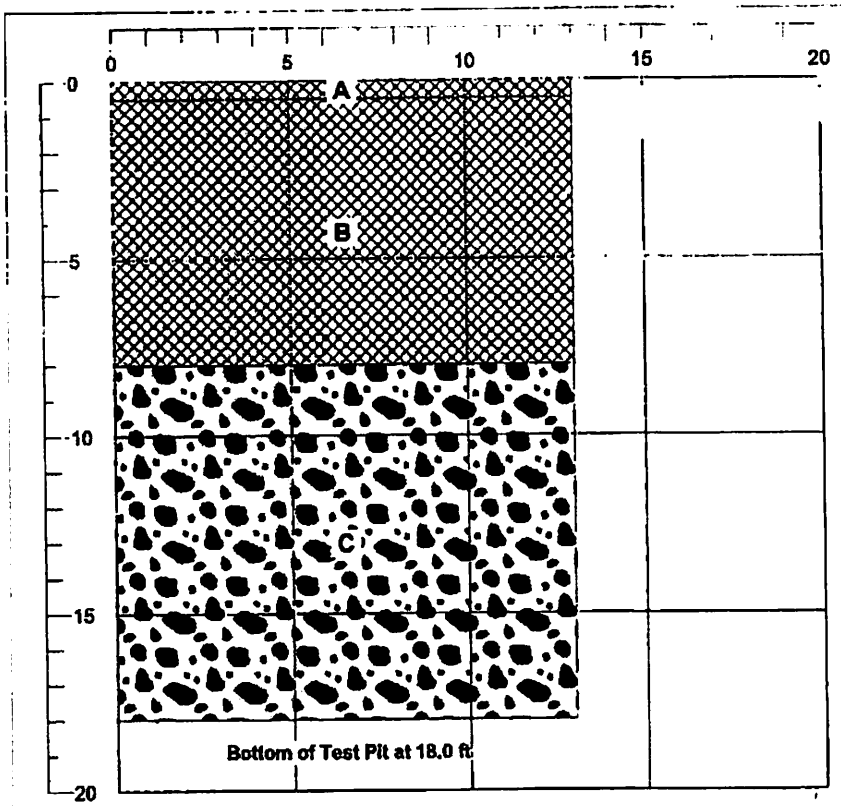
SPECIAL NOTES:
Moderate test pit caving was observed. No groundwater seepage was observed.

LOG OF TEST PIT 103-93529 TEST PIT LOGS.GPJ GLDR_WA.GDT 8/14/11

LOG OF TEST PIT G-TP-2

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	
2	18.0	2.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 8.0 ft: Very loose, gray and light brown, slightly stratified, medium to coarse sandy fine to coarse GRAVEL, little cobbles, subrounded, damp. (GW) (FILL)

C 8.0 - 18.0 ft: Compact, light brown, non-stratified, fine to coarse GRAVEL, little to some fine to coarse sand, little cobbles, subrounded, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

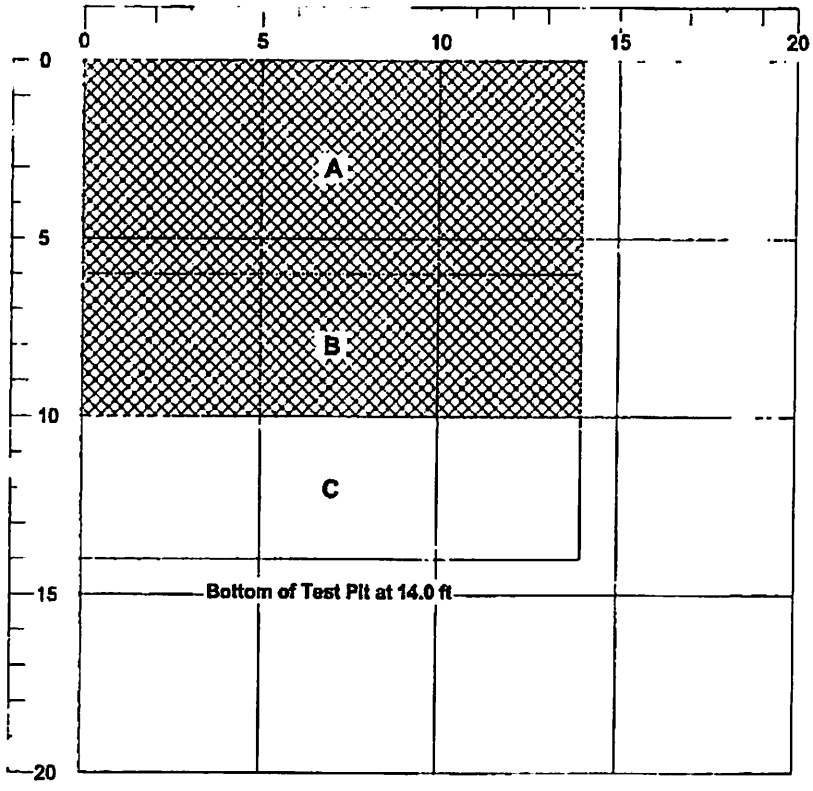
SPECIAL NOTES:
Moderate to major test pit caving was observed.
No groundwater seepage was observed.

LOG OF TEST PIT 103-93529 TEST PIT LOGS.GPJ GLOR_WA.GDT 6/14/11

LOG OF TEST PIT G-TP-3

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	8.0	
3	11.0	3.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 6.0 ft: Compact, dark brown, heterogeneous, fine to coarse gravelly fine to coarse SAND, little silt, some organics, roots, damp. (SP-SM) (FILL)

B 6.0 - 10.0 ft: Compact to dense, orange brown, heterogeneous, fine to coarse SAND and fine to coarse GRAVEL, little cobbles, damp. (SP-GP) (FILL)

C 10.0 - 14.0 ft: Compact, gray, non-stratified, fine to coarse gravelly medium to coarse SAND, damp. (SP) (RECESSIONAL OUTWASH)

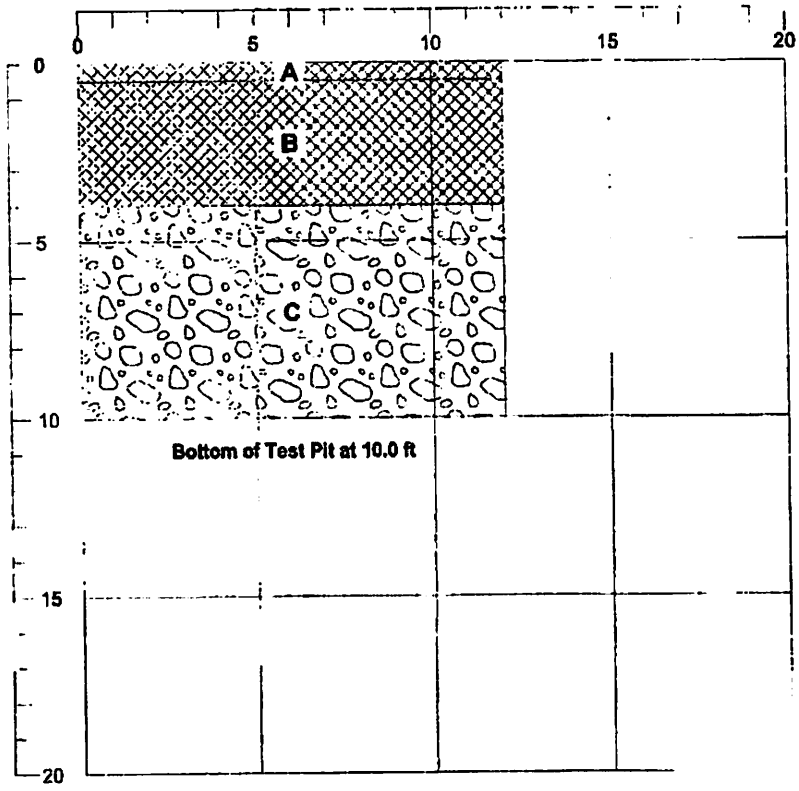
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
--			

SPECIAL NOTES:
Low to moderate test pit caving was observed 0 to 10 ft bgs.
Major test pit caving was observed 10 to 14 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-4

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES

NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	7.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 4.0 ft: Very loose to loose, gray and light brown, crudely stratified, alternating layers of fine to medium GRAVEL and fine to medium gravelly medium to coarse SAND, trace cobbles, subrounded, damp. (GP/SP) (FILL)

C 4.0 - 10.0 ft: Compact, light brown, non-stratified, medium to coarse sandy GRAVEL, little cobbles, damp. (GP) (RECESSIONAL OUTWASH)

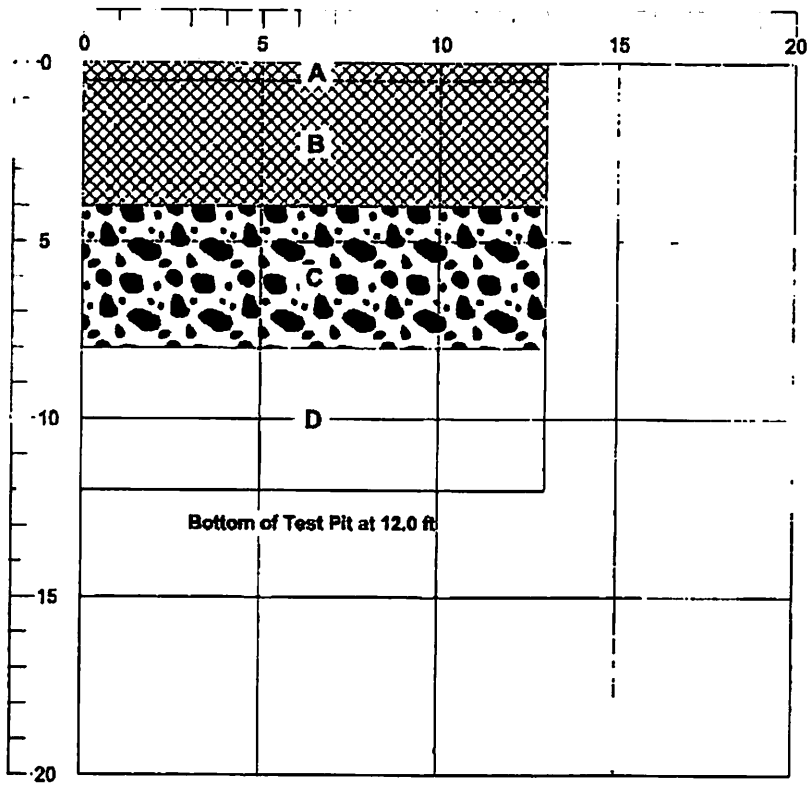
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:
Moderate test pit caving was observed 0 to 4 ft bgs.
Major test pit caving was observed 4 to 10 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-5

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 209.0 ft Datum Local Job 103-93529.100
Location



SAMPLES

NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	1.6
2	9.0	3.3

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 4.0 ft: Compact, dark brown and light brown, layered, medium to coarse sandy fine to coarse GRAVEL, trace cobbles, little to some organics, damp. (GW) (FILL)

C 4.0 - 8.0 ft: Compact, light brown, fine to coarse GRAVEL, little cobbles, little to some fine to coarse sand, damp. (GW) (RECESSIONAL OUTWASH)

D 8.0 - 12.0 ft: Loose, brown-gray, medium to coarse SAND, little to some fine to coarse gravel, damp. (SP) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

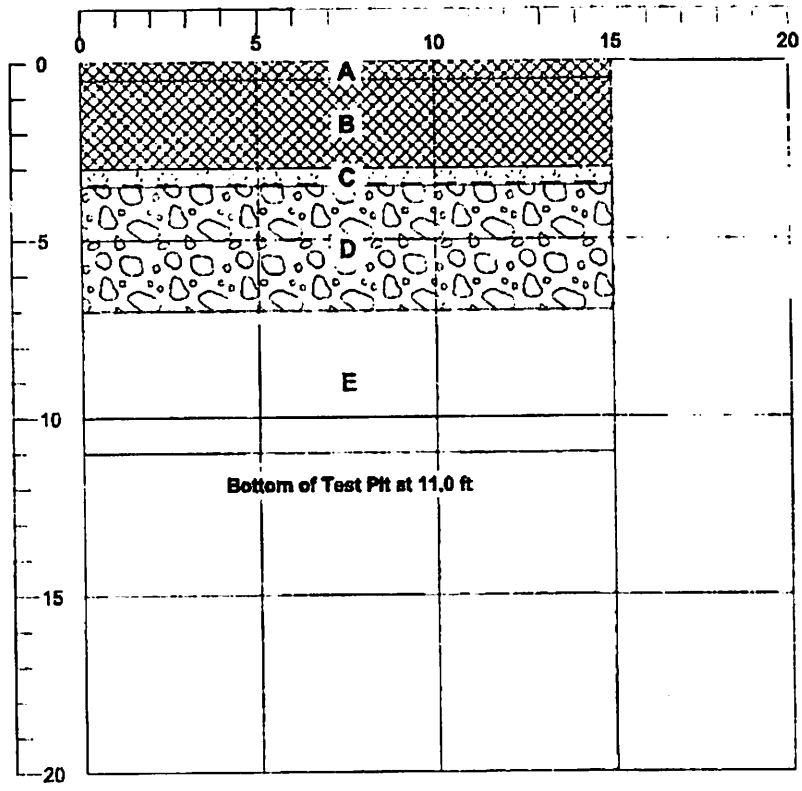
Moderate test pit caving was observed 0 to 4 ft bgs.
Major test pit caving was observed 4 to 12 ft bgs.
No groundwater seepage was observed. Test pit was open for 1 hr to observe any possible groundwater, none observed.

LOG OF TEST PIT 103-93529 TEST PIT LOGS.GPJ GLDR_WA.GDT 6/14/11

LOG OF TEST PIT G-TP-6

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 209.0 ft Datum Local Job 103-93529.100
Location



SAMPLES

NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	1.7
2	10.0	3.7

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 3.0 ft: Compact, dark brown and light brown, stratified, medium to coarse sandy fine to coarse GRAVEL, some pockets of organics, damp. (GW) (FILL)

C 3.0 - 3.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (BURIED TOPSOIL)

D 3.5 - 7.0 ft: Loose to compact, gray and light brown, stratified, fine to coarse GRAVEL, little medium to coarse sand and medium to coarse SAND, little fine gravel, slightly iron-oxide stained with rootlets from 3.5 to 6 feet, damp. (GP/SP) (RECESSIONAL OUTWASH)

E 7.0 - 11.0 ft: Loose, gray, slightly stratified, medium to coarse SAND, little to some fine to coarse gravel, damp. (SP) (RECESSIONAL OUTWASH)

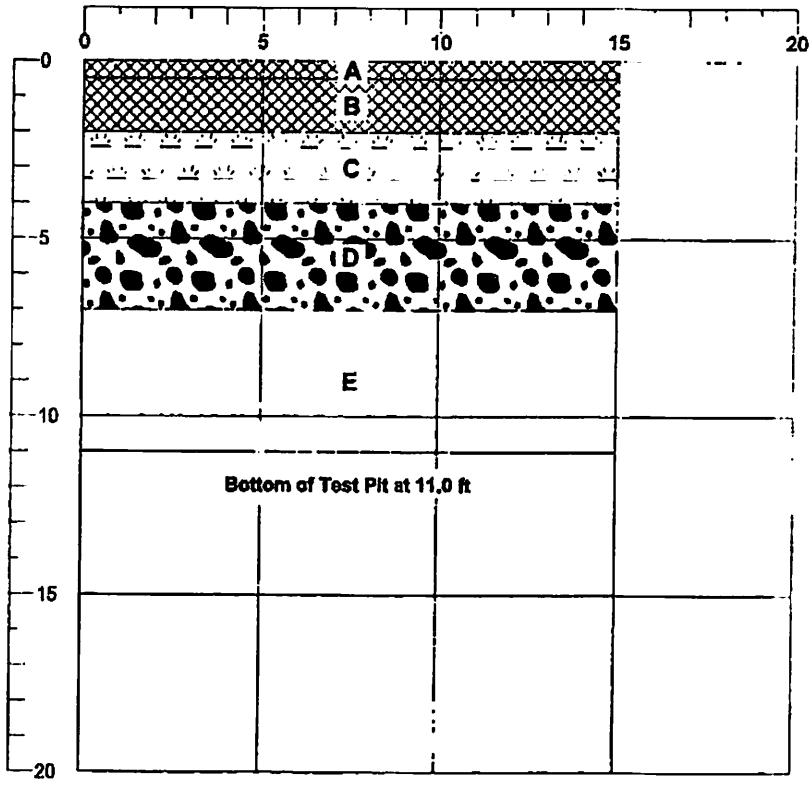
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:
Moderate test pit caving was observed 0 to 3.5 ft bgs.
Moderate to major test pit caving was observed 3.5 to 11 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-7

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 209.0 ft Datum Local Job 103-93529.100
Location



SAMPLES

NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	8.4
2	5.0	2.8
3	8.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 2.0 ft: Loose, light brown, heterogeneous, medium to coarse sandy fine to coarse GRAVEL, damp. (GW) (FILL)

C 2.0 - 4.0 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (BURIED TOPSOIL)

D 4.0 - 7.0 ft: Loose to compact, light brown, slightly stratified, fine to coarse GRAVEL, little to some medium to coarse sand, trace cobbles, trace roots, damp. (GW) (RECESSIONAL OUTWASH)

E 7.0 - 11.0 ft: Loose, gray to light brown, slightly stratified, medium to coarse SAND, little to some fine to coarse gravel, damp. (SP) (RECESSIONAL OUTWASH)

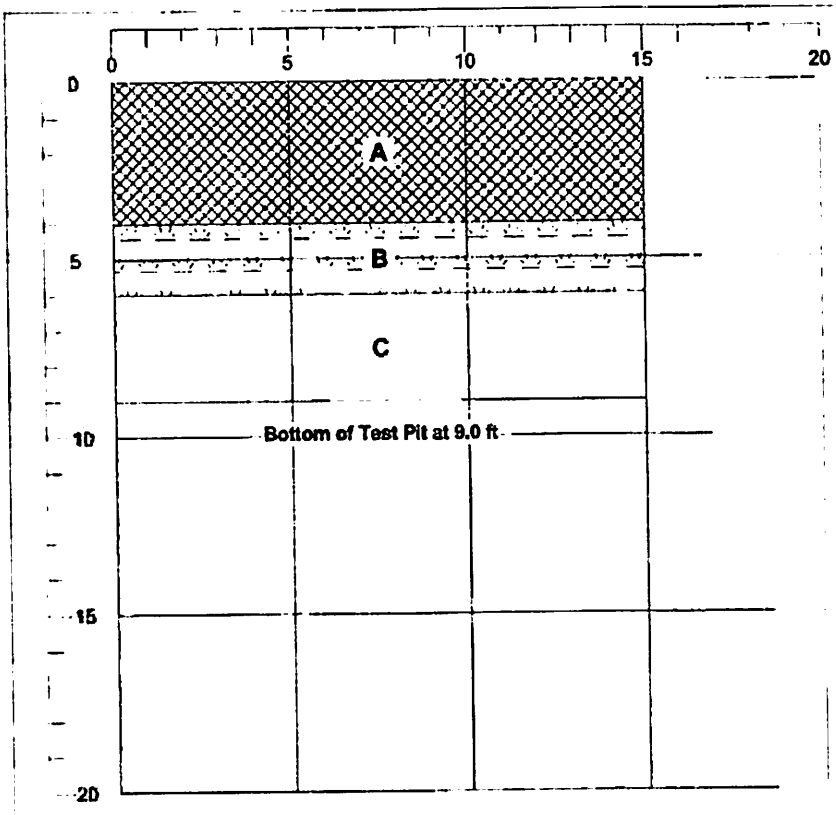
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:
Moderate test pit caving was observed 0 to 4 ft bgs.
Major test pit caving was observed 4 to 11 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-8

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 224.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
6	1.0	4.3

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 4.0 ft: Loose to compact, dark brown to light brown, fine to coarse GRAVEL, little to some medium to coarse sand, trace to little cobbles, damp. (GW) (FILL)

B 4.0 - 6.0 ft: Compact, dark brown, heterogeneous, fine to coarse SAND, little fine to coarse gravel, some organics, damp. (SW) (BURIED TOPSOIL)

C 6.0 - 9.0 ft: Loose, light brown, non-stratified, medium to coarse SAND, trace fine to medium gravel, damp. (SP) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

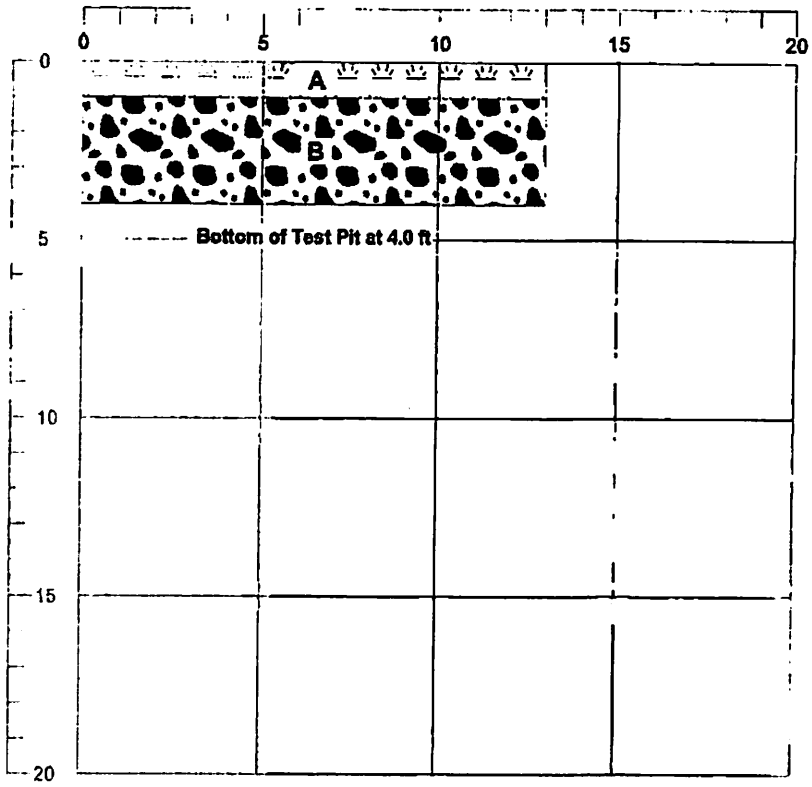
SPECIAL NOTES:
Moderate test pit caving was observed 0 to 6 ft bgs.
Major test pit caving was observed 6 to 9 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT 103-93529 TEST PIT LOGS.GPJ GLDR_WA.GDT 6/14/11

LOG OF TEST PIT G-TP-9

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 226.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, heterogeneous, fine to coarse GRAVEL, some fine to coarse sand, trace to little silt, moist. (GW/GW-GM) (TOPSOIL)

B 1.0 - 4.0 ft: Loose, light brown, non-stratified, fine to coarse GRAVEL, some medium to coarse sand, trace cobbles, damp. (GW) (RECESSIONAL OUTWASH)

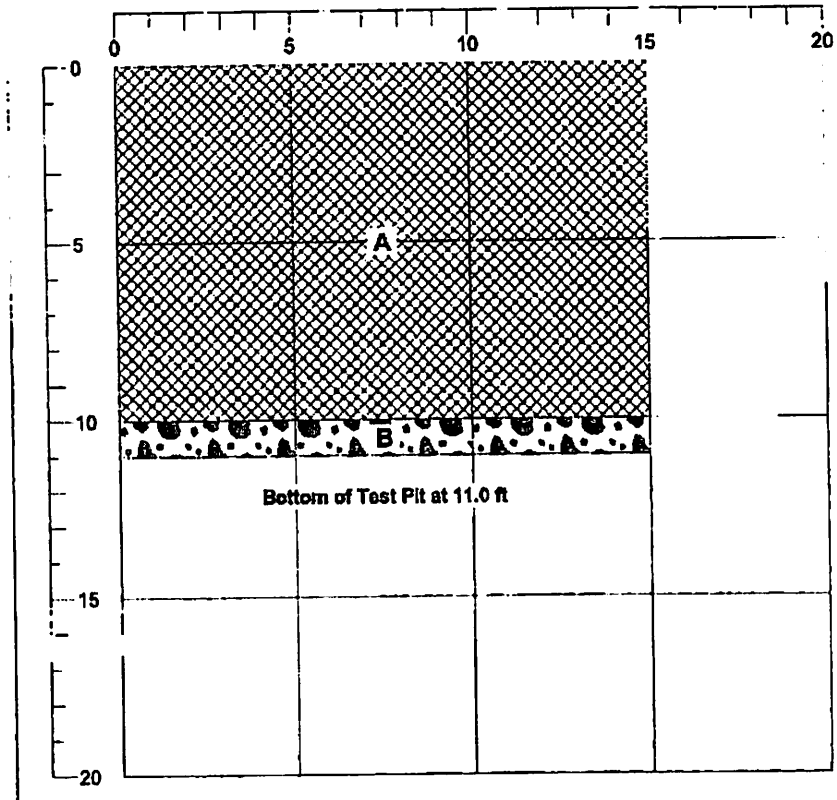
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:
Moderate test pit caving was observed 0 to 4 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-10

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Albert Jaques
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES

NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	
2	10.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 10.0 ft: Very loose, dark brown, heterogeneous, coarse GRAVEL, trace fine to coarse sand, damp. (GP) (FILL)

B 10.0 - 11.0 ft: Loose, light brown, non-stratified, fine to coarse GRAVEL, little to some medium to coarse sand, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:
Major test pit caving was observed 0 to 11 ft bgs.
No groundwater seepage was observed.

APPENDIX B

LABORATORY TEST RESULTS

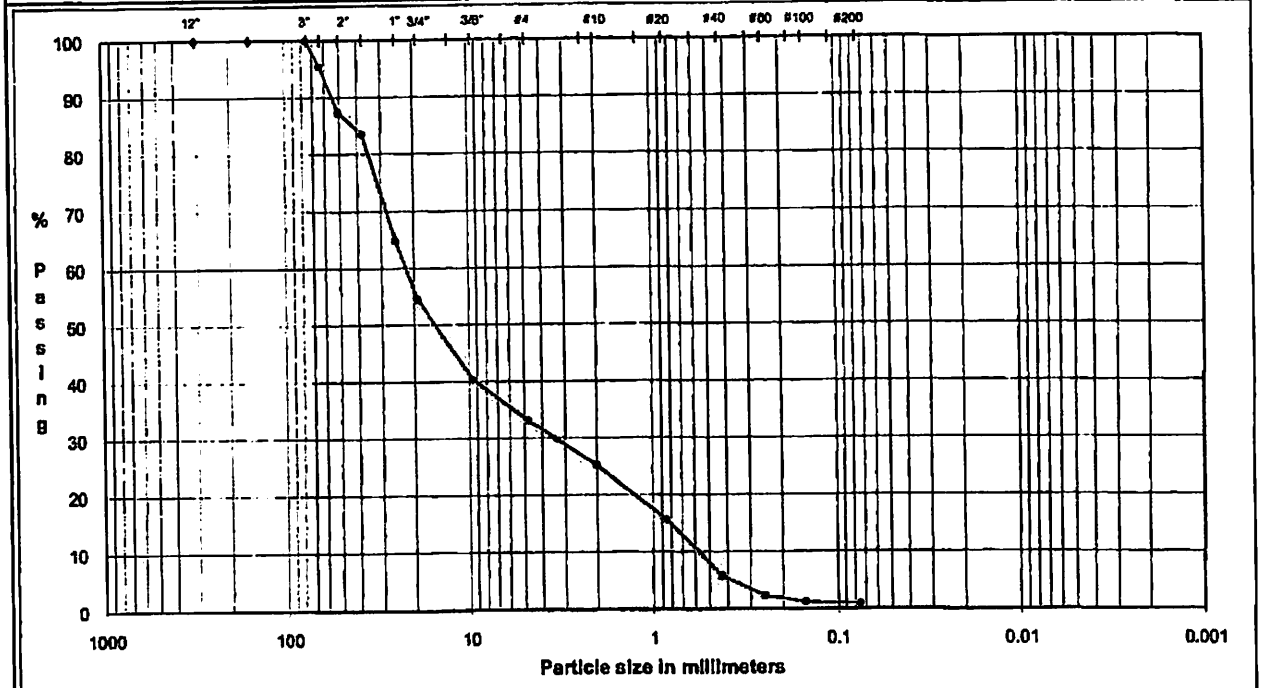
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Carenge / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-1 S-2 Depth: 12ft
TYPE: Grab



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	95.4		
2.0"	50	87.2		
1.5"	37.5	83.4		
1.0"	25	64.8		
0.75"	19	54.6	Coarse Gravel	45.4
0.375"	9.5	40.3		
#4	4.75	33.1	Fine Gravel	21.4
#10	2.00	25.1	Coarse Sand	8.0
#20	0.85	15.7		
#40	0.43	5.8	Medium Sand	19.4
#60	0.25	2.3		
#100	0.15	1.3		
#200	0.075	0.9	Fine Sand	4.9
			Fines	0.9

Moisture Content: 2.8

D_{60}= 21.99	D_{30}= 3.38	D_{10}= 0.57
Cu = D60/D10 =	38.5	> 4
Cc = D30^2/(D10*D60) =	0.9	< 1

DESCRIPTION: fine to coarse GRAVEL
some fine to coarse sand

USCS: GP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

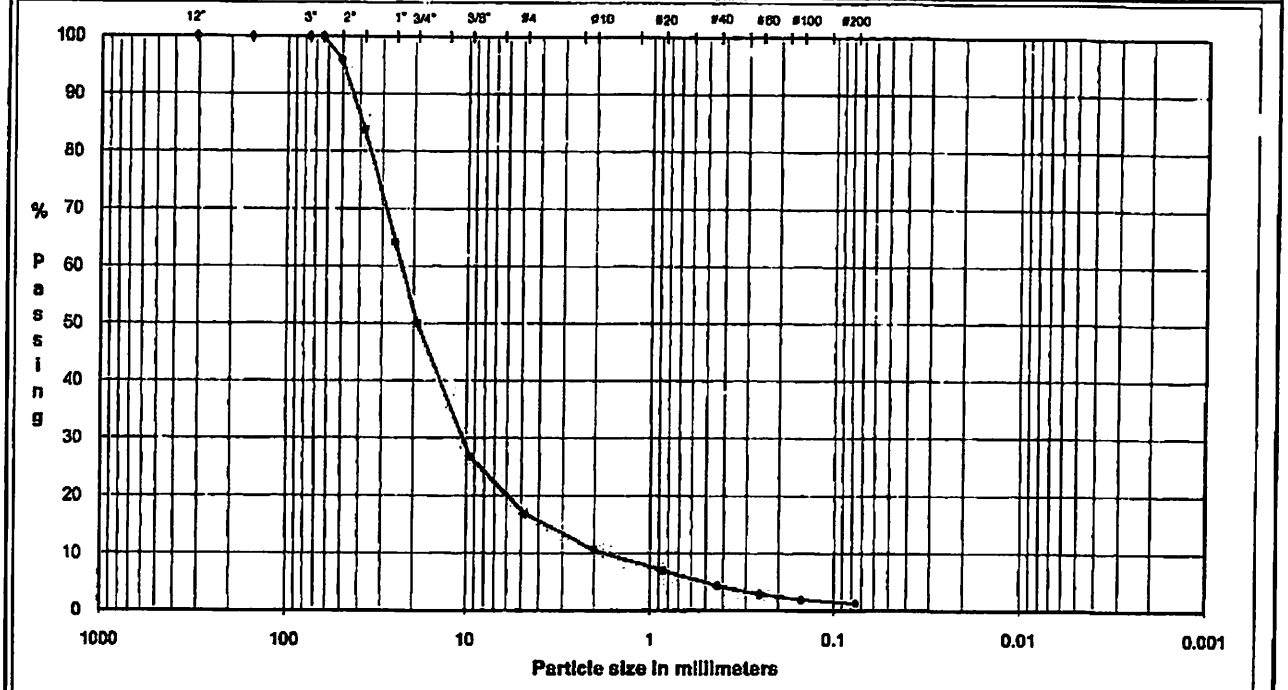
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Acreage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-2 S-2 Depth: 18ft
TYPE: Grab



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Particle Size Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	95.9		
1.5"	37.5	83.7		
1.0"	25	64.1		
0.75"	19	50.1	Coarse Gravel	49.9
0.375"	9.5	26.7		
#4	4.75	16.8	Fine Gravel	33.4
#10	2.00	10.5	Coarse Sand	6.3
#20	0.85	7.0		
#40	0.43	4.3	Medium Sand	6.2
#60	0.25	2.9		
#100	0.15	1.9		
#200	0.075	1.3	Fine Sand	3.0
			Fines	1.3

Moisture Content: 2.5

D_{60}= 23.08	D_{30}= 10.48	D_{10}= 1.77
Cu = D60/D10 =	13.1	> 4
Cc = (D30^2)/(D10*D60) =	2.7	> 1

DESCRIPTION: fine to coarse GRAVEL
some fine to coarse sand, trace silt

USCS: GW

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

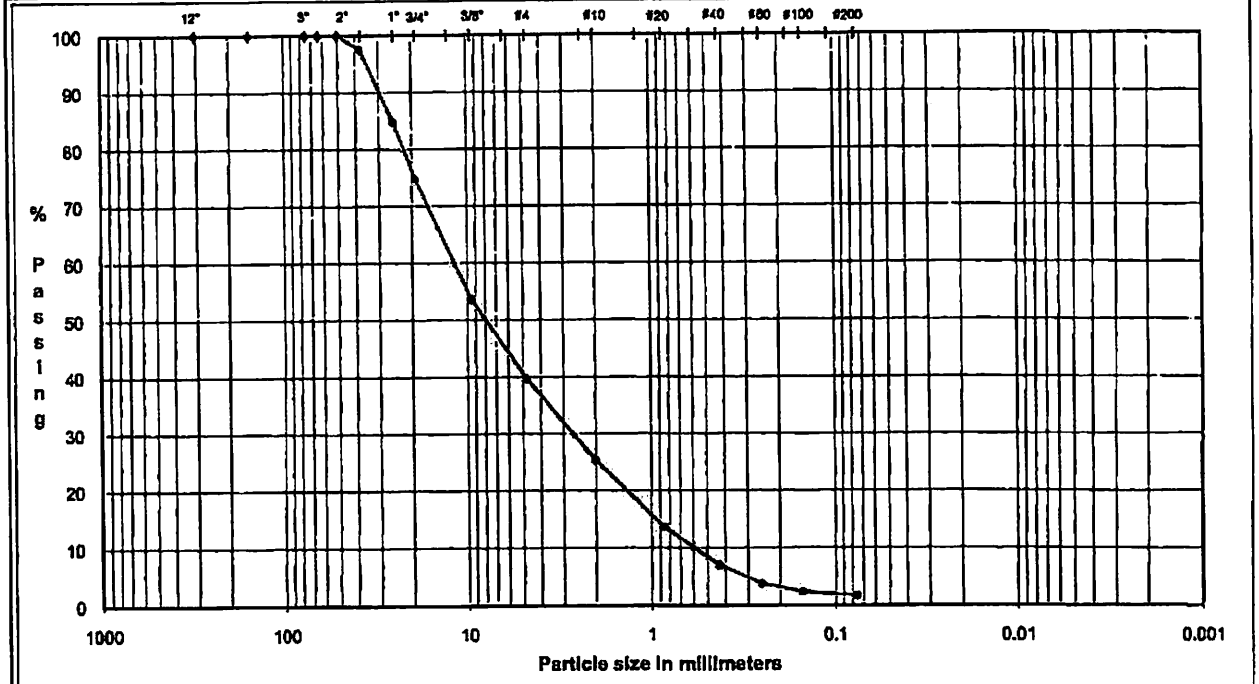
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-3 S-3 Depth: 11ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	100.0		
1.5"	37.5	97.5		
1.0"	25	84.8		
0.75"	19	74.6	Coarse Gravel	25.4
0.375"	9.5	53.6		
#4	4.75	39.7	Fine Gravel	35.0
#10	2.00	25.3	Coarse Sand	14.3
#20	0.85	13.5		
#40	0.43	6.9	Medium Sand	18.4
#60	0.25	3.7		
#100	0.15	2.3		
#200	0.075	1.6	Fine Sand	5.3
			Fines	1.6

Moisture Content: 3.5

D_{60}= 11.72	D_{30}= 2.65	D_{10}= 0.59
Cu = D60/D10 =	20.0	> 4
Cc = D30^2/(D10*D60) =	1.0	> 1

DESCRIPTION: fine to coarse GRAVEL and fine to coarse SAND
trace silt

USCS: GW/SW

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

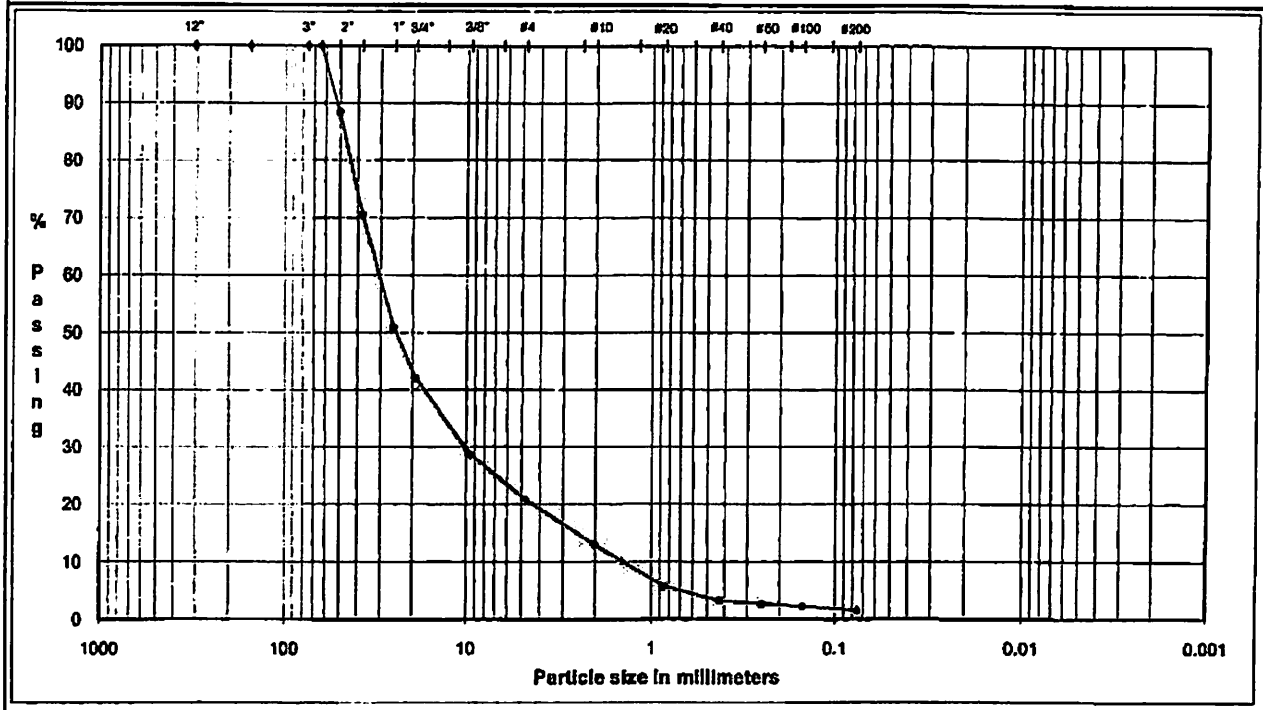
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-4 S-2 Depth: 7ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers	Particle Size (mm)	% Passing	Particle Size Classification	Particle Size Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	88.4		
1.5"	37.5	70.4		
1.0"	25	50.8		
0.75"	19	42.0	Coarse Gravel	58.0
0.375"	9.5	28.6		
#4	4.75	20.8	Fine Gravel	21.2
#10	2.00	12.8	Coarse Sand	7.9
#20	0.85	5.6		
#40	0.43	3.2	Medium Sand	9.7
#60	0.25	2.6		
#100	0.15	2.2		
#200	0.075	1.5	Fine Sand	1.7
			Fines	1.5

Moisture Content: 2.2

D_{60}= 30.23	D_{30}= 10.19	D_{10}= 1.43
Cu = D60/D10 =	21.2	∴ 4
Cc = (D30^2)/(D10*D60) =	2.4	∴ 1

DESCRIPTION: fine to coarse GRAVEL
some fine to coarse sand, trace silt

USCS: GW

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

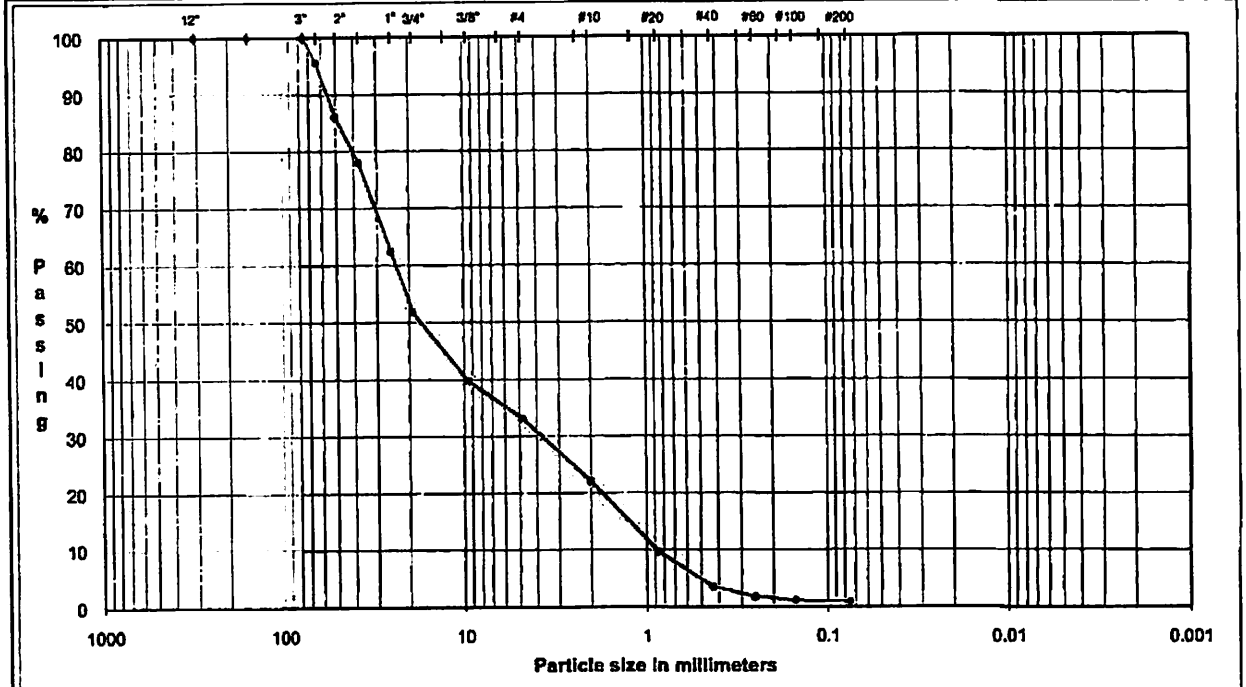
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Carcage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-5 S-1 Depth: 4ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	95.6		
2.0"	50	86.1		
1.5"	37.5	78.0		
1.0"	25	62.4		
0.75"	19	51.8	Coarse Gravel	48.2
0.375"	9.5	39.8		
#4	4.75	33.1	Fine Gravel	18.7
#10	2.00	22.0	Coarse Sand	11.1
#20	0.85	9.6		
#40	0.43	3.5	Medium Sand	18.6
#60	0.25	1.8		
#100	0.15	1.1		
#200	0.075	0.9	Fine Sand	2.6
			Fines	0.9

Moisture Content: 1.6

D_{60}= 23.51	D_{30}= 3.72	D_{10}= 0.88
Cu = D60/D10 =	26.9	> 4
Cc = D30^2/(D10*D60) =	0.7	< 1

DESCRIPTION: fine to coarse GRAVEL and medium to coarse SAND

USCS: GP/SP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

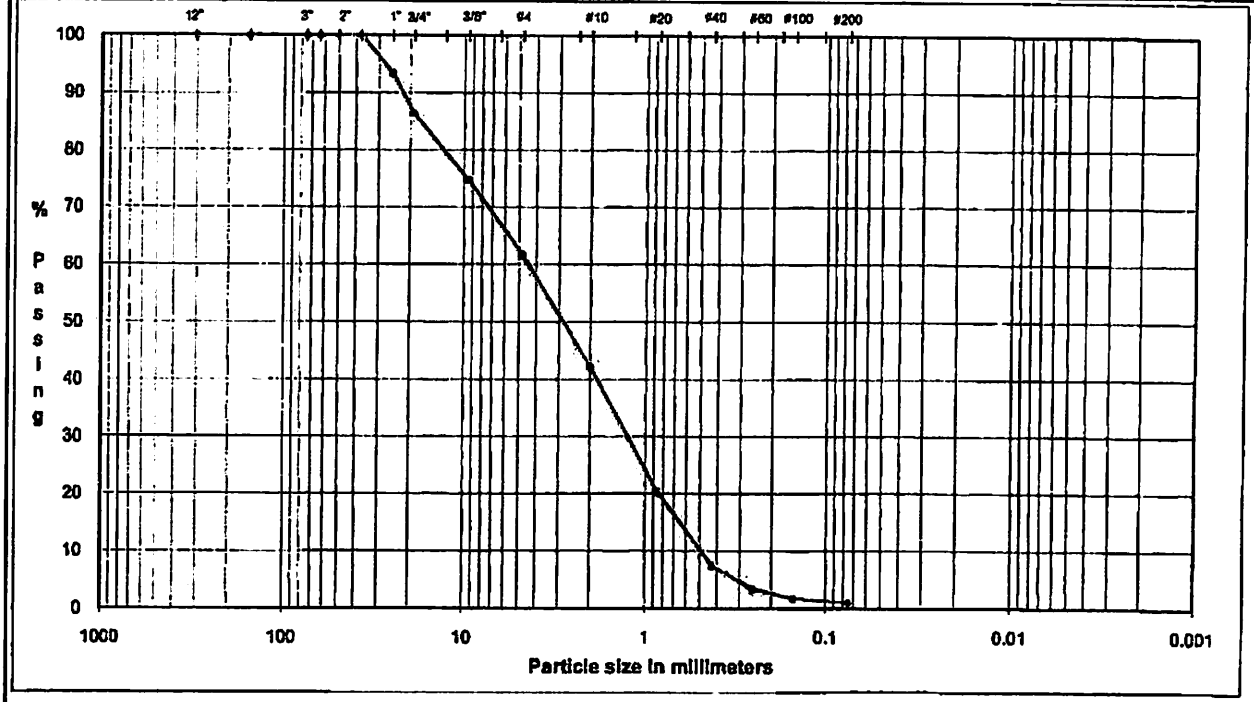
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-5 S-2 Depth: 9ft
TYPE: Grab



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing
12.0"	304.8	100.0
6.0"	154.2	100.0
3.0"	75	100.0
2.5"	63.5	100.0
2.0"	50	100.0
1.5"	37.5	100.0
1.0"	25	93.4
0.75"	19	86.3
0.375"	9.5	74.7
#4	4.75	61.6
#10	2.00	42.1
#20	0.85	20.1
#40	0.43	7.4
#60	0.25	3.3
#100	0.15	1.7
#200	0.075	1.0

Particle Size Classification	Percentage
Cobbles	0.0
Coarse Gravel	13.7
Fine Gravel	24.7
Coarse Sand	19.5
Medium Sand	34.7
Fine Sand	6.4
Fines	1.0

Moisture Content: 3.3

D_{60}= 4.42	D_{30}= 1.25	D_{10}= 0.49
Cu D60/D10	9.0	> 6
Cc D30 2/(D10*D60)	0.7	< 1

DESCRIPTION: fine to coarse SAND and fine to coarse GRAVEL

USCS: SP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

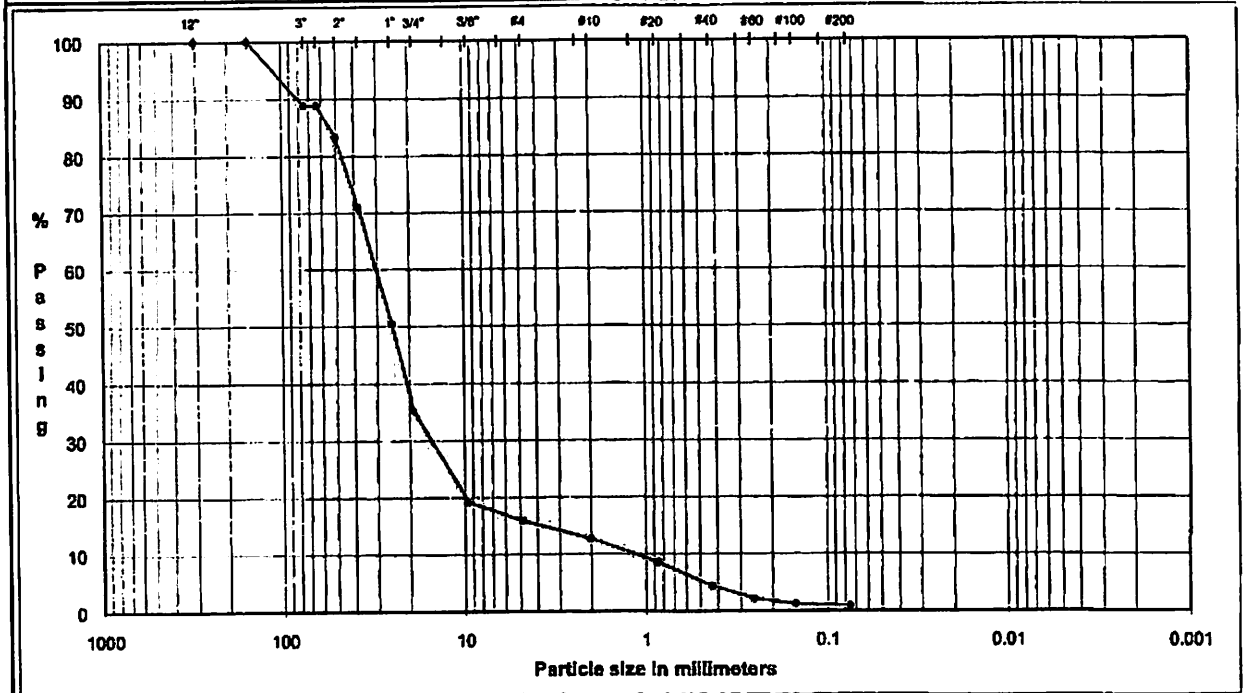
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-6 S-1 Depth: 4ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	88.9	Cobbles	11.1
2.5"	63.5	88.9		
2.0"	50	83.2		
1.5"	37.5	70.8		
1.0"	25	50.5		
0.75"	19	35.3	Coarse Gravel	53.6
0.375"	9.5	19.1		
#4	4.75	15.8	Fine Gravel	19.5
#10	2.00	12.6	Coarse Sand	3.2
#20	0.85	8.5		
#40	0.43	4.3	Medium Sand	8.3
#60	0.25	2.0		
#100	0.15	1.2		
#200	0.075	0.8	Fine Sand	3.5
			Fines	0.8

Moisture Content: 1.7

D_{60}= 30.21	D_{30}= 15.12	D_{10}= 1.16
Cu D60/D10 =	26.0	> 4
Cc = D30^2/(D10*D60) =	6.5	> 3

DESCRIPTION: fine to coarse GRAVEL
some fine to coarse sand, little cobbles

USCS: GP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

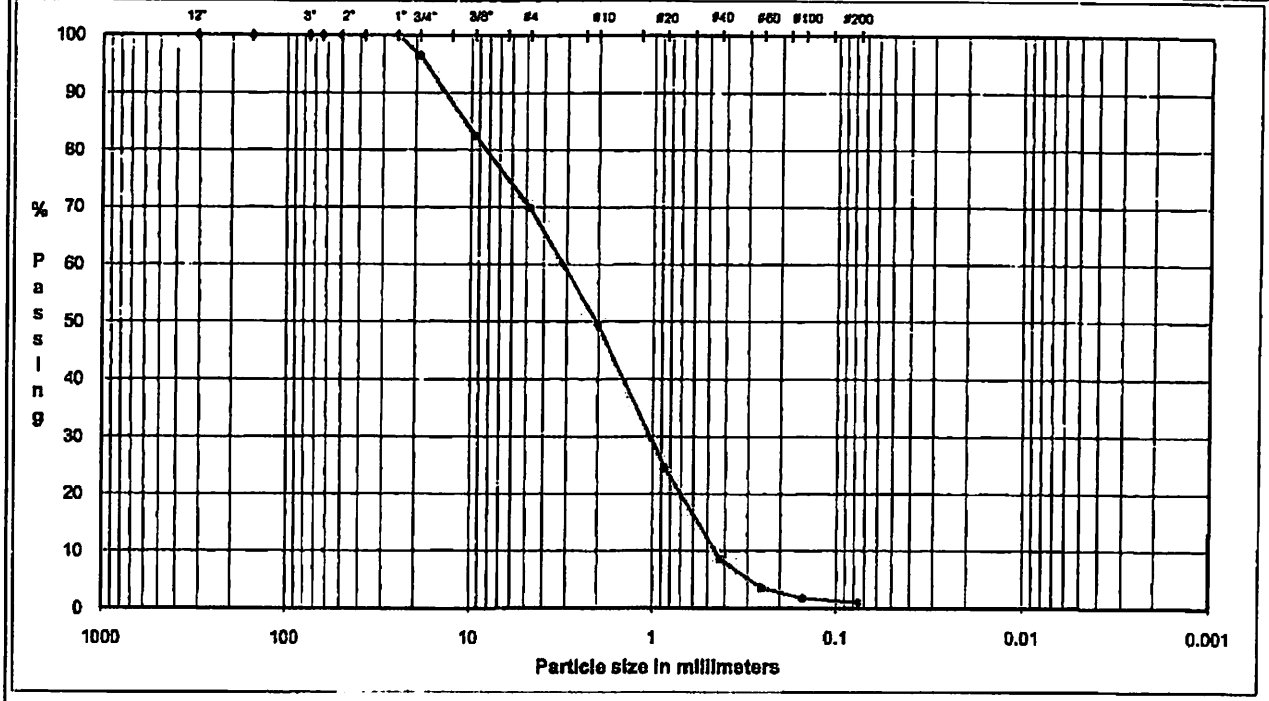
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-6 S-2 Depth: 10ft
TYPE: Grab



COBBLES	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	100.0		
1.5"	37.5	100.0		
1.0"	25	100.0		
0.75"	19	96.5	Coarse Gravel	3.5
0.375"	9.5	82.3		
#4	4.75	69.7	Fine Gravel	26.8
#10	2.00	49.4	Coarse Sand	20.3
#20	0.85	24.4		
#40	0.43	8.6	Medium Sand	40.8
#60	0.25	3.5		
#100	0.15	1.7		
#200	0.075	1.0	Fine Sand	7.6
			Fines	1.0

Moisture Content: 3.7

D_{60}= 3.14	D_{30}= 1.03	D_{10}= 0.45
Cu = D60/D10	6.9	> 6
Cc = D30^2/(D10*D60)	0.7	< 1

DESCRIPTION: fine to coarse SAND and fine to coarse GRAVEL

USCS: SP/GP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

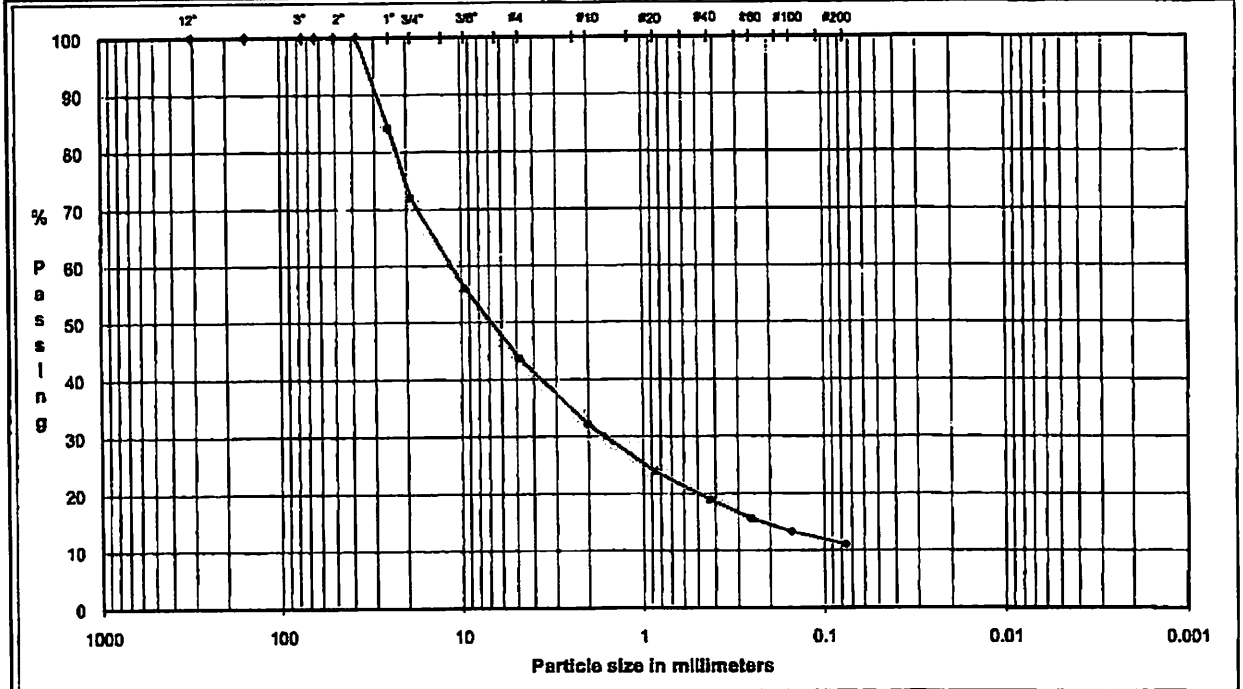
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-7 S-1 Depth: 5ft
TYPE: Grab



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	100.0		
1.5"	37.5	100.0		
1.0"	25	84.1		
0.75"	19	72.1	Coarse Gravel	27.9
0.375"	9.5	55.9		
#4	4.75	43.6	Fine Gravel	28.4
#10	2.00	32.1	Coarse Sand	11.6
#20	0.85	23.8		
#40	0.43	18.9	Medium Sand	13.2
#60	0.25	15.5		
#100	0.15	13.2		
#200	0.075	11.0	Fine Sand	7.9
			Fines	11.0

Moisture Content: 8.4

D_{60}= 11.33	D_{30}= 1.61	D_{10}= #N/A
Cu - D60/D10 =	#N/A	#N/A
Cc - D30^2/(D10*D60) =	#N/A	#N/A

DESCRIPTION: fine to coarse GRAVEL and fine to coarse SAND
little silt

USCS: GP-GM

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

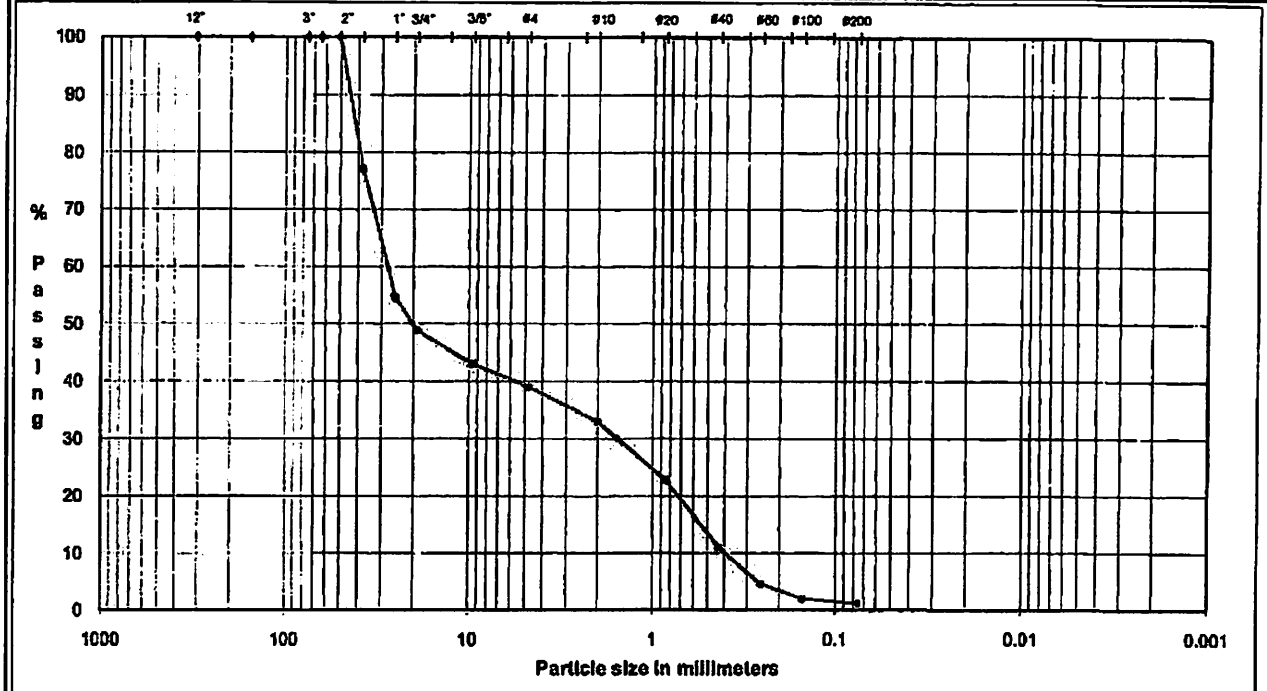
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-7 S-2 Depth: 8ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	100.0		
1.5"	37.5	76.9		
1.0"	25	54.6		
0.75"	19	48.8	Coarse Gravel	51.2
0.375"	9.5	42.9		
#4	4.75	39.0	Fine Gravel	9.8
#10	2.00	32.9	Coarse Sand	6.1
#20	0.85	22.8		
#40	0.43	10.8	Medium Sand	22.1
#60	0.25	4.5		
#100	0.15	2.0		
#200	0.075	1.1	Fine Sand	9.8
			Fines	1.1

Moisture Content: 2.8

D_{60}= 27.57	D_{30}= 1.56	D_{10}= 0.40
Cu = D60/D10 =	69.5	> 4
Cc = D30^2/(D10*D60) =	0.2	< 1

DESCRIPTION: fine to coarse GRAVEL and fine to coarse SAND
trace sand

USCS: GP/SP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

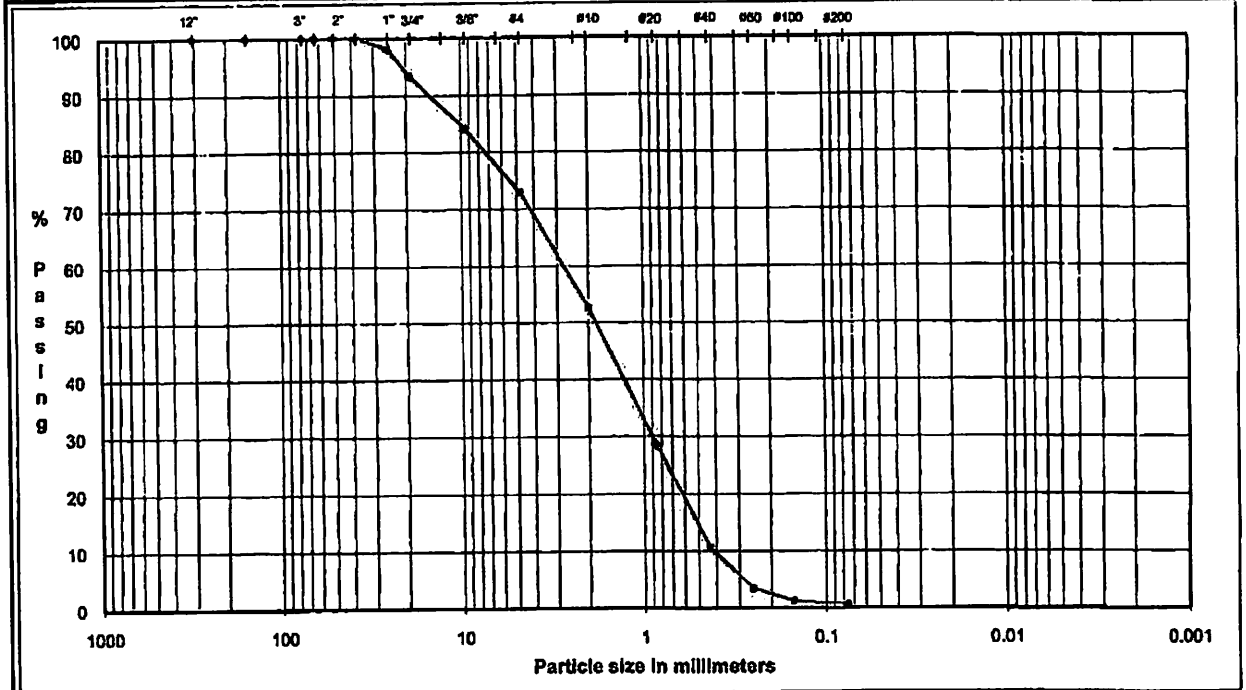
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-8 S-1 Depth: 6ft
TYPE: Grab



COBBLES	GRAVEL		SAND			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	100.0		
1.5"	37.5	100.0		
1.0"	25	98.1		
0.75"	19	93.3	Coarse Gravel	6.7
0.375"	9.5	84.1		
#4	4.75	72.9	Fine Gravel	20.4
#10	2.00	52.7	Coarse Sand	20.2
#20	0.85	28.5		
#40	0.43	10.4	Medium Sand	42.3
#60	0.25	3.3		
#100	0.15	1.2		
#200	0.075	0.6	Fine Sand	9.9
			Fines	0.6

Moisture Content: 4.3

D_{60}= 2.73	D_{30}= 0.90	D_{10}= 0.41
Cu = D60/D10 =	6.6	> 6
Cc = D30^2/(D10*D60) =	0.7	< 1

DESCRIPTION: fine to coarse SAND
some fine to coarse gravel

USCS: SP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

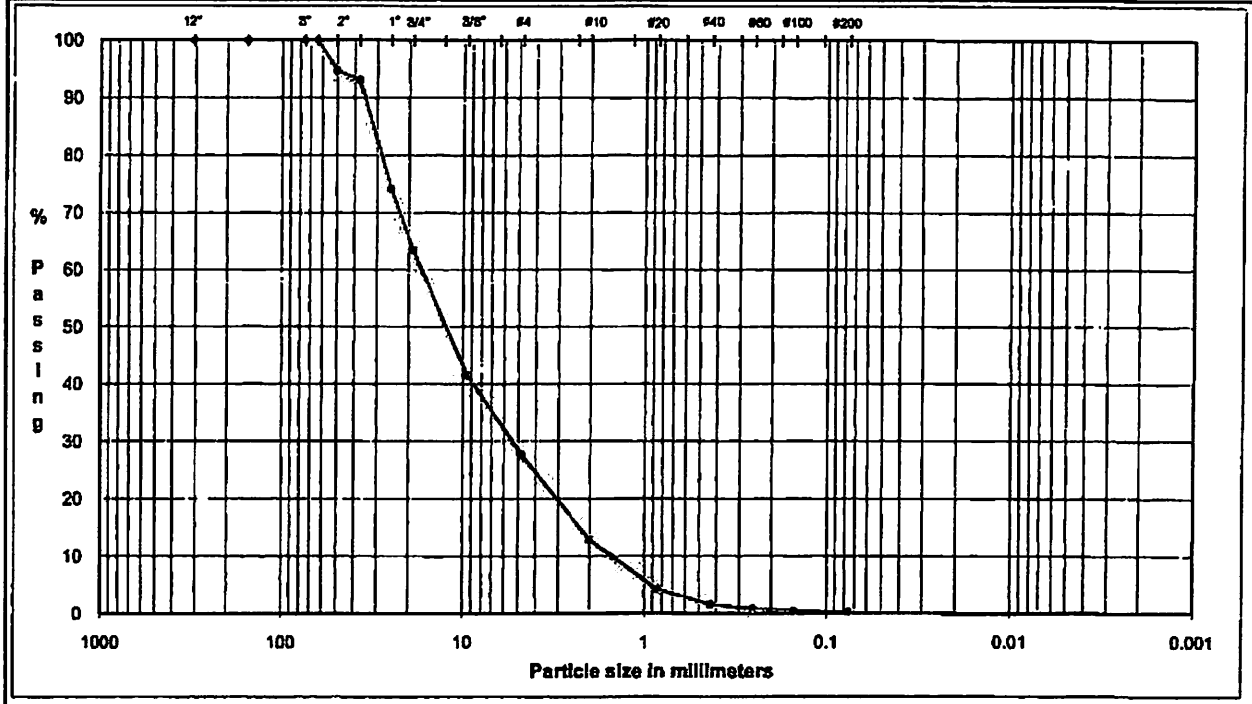
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-9 S-1 Depth: 2ft
TYPE: Grab



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	100.0	Cobbles	0.0
2.5"	63.5	100.0		
2.0"	50	94.7		
1.5"	37.5	93.0		
1.0"	25	74.1		
0.75"	19	63.5	Coarse Gravel	36.5
0.375"	9.5	41.4		
#4	4.75	27.5	Fine Gravel	35.9
#10	2.00	12.8	Coarse Sand	14.7
#20	0.85	4.2		
#40	0.43	1.5	Medium Sand	11.3
#60	0.25	0.7		
#100	0.15	0.4		
#200	0.075	0.3	Fine Sand	1.2
			Fines	0.3

Moisture Content: 2.2

D_{60}= 17.04	D_{30}= 5.37	D_{10}= 1.52
Cu - D60/D10 -	11.2	> 4
Cc - D30^2/(D10*D60) -	1.1	> 1

DESCRIPTION: fine to coarse GRAVEL
some medium to coarse sand

USCS: GW

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

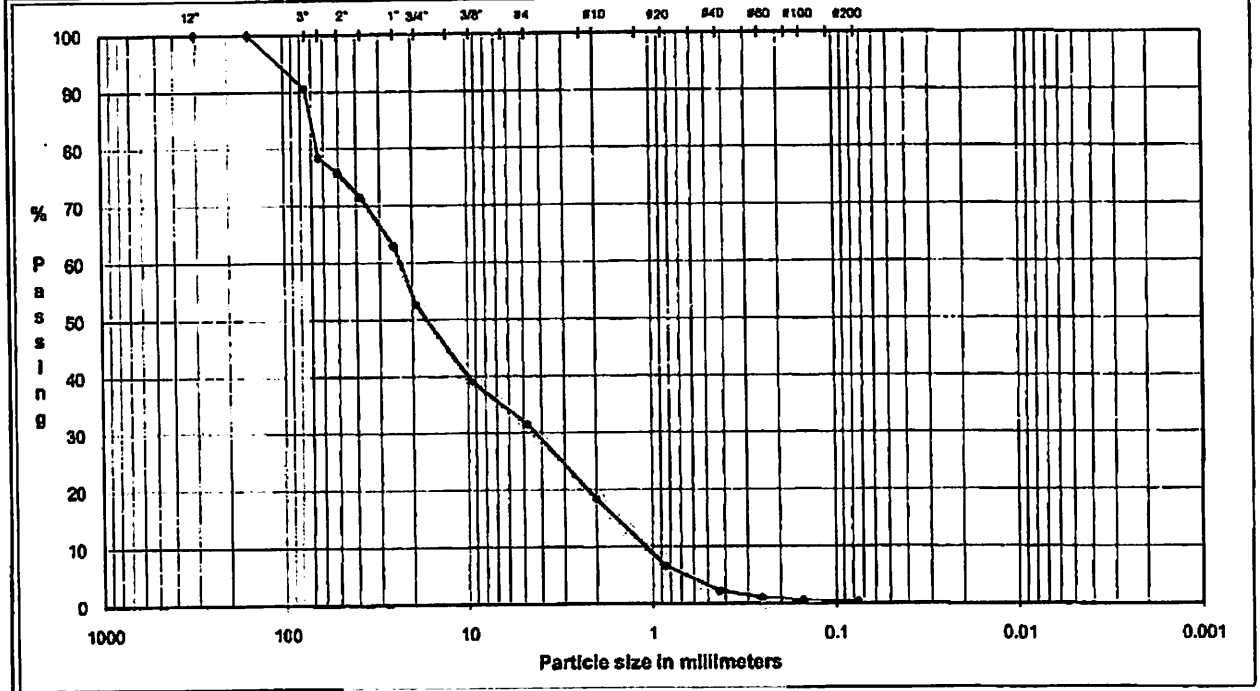
6/8/11

103-93529.100

PARTICLE SIZE DISTRIBUTION

ASTM D421, D422, D4318

PROJECT NAME: Careage / Patriots Landing Geotech / WA
SAMPLE ID: G-TP-10 S-2 Depth: 10ft
TYPE: Grab



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
6.0"	154.2	100.0		
3.0"	75	90.5	Cobbles	9.5
2.5"	63.5	78.4		
2.0"	50	75.8		
1.5"	37.5	71.3		
1.0"	25	62.8		
0.75"	19	52.6	Coarse Gravel	37.9
0.375"	9.5	39.1		
#4	4.75	31.5	Fine Gravel	21.2
#10	2.00	18.4	Coarse Sand	13.1
#20	0.85	6.6		
#40	0.43	2.2	Medium Sand	16.2
#60	0.25	1.0		
#100	0.15	0.5		
#200	0.075	0.3	Fine Sand	1.8
			Fines	0.3

Moisture Content: 2.2

D_{60}= 23.16	D_{30}= 4.31	D_{10}= 1.09
Cu = D60/D10 =	21.3	> 4
Cc = (D30^2)/(D10*D60) =	0.7	< 1

DESCRIPTION: fine to coarse GRAVEL and medium to coarse SAND

USCS: GP/SP

TECH	TCM
DATE	6/8/11
CHECK	TCM
REVIEW	AJD

Golder Associates Inc.

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+27 11 254 4800
Asia	+852 2562 3658
Australasia	+61 3 8862 3500
Europe	+356 21 42 30 20
North America	+1 800 275 3281
South America	+55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, **WA 98052 USA**
Tel: (425) 883-0777
Fax: (425) 882-5498

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

REPORT

DRAFT

SOIL SAMPLING REPORT PATRIOT'S LANDING SKILLED NURSING FACILITY (SOUTH PARCEL)

1600 Marshall Circle
DuPont, Washington 98327

Submitted To: Mr. Jeff Elseth
Careage Development Company, L.L.C.
4411 Pt. Fosdick Drive
P.O. Box 1969
Gig Harbor, Washington 98335

Submitted By: Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA

Distribution: 1 Electronic Copy, Careage Development Company L.L.C.

June 20, 2011

103-93529.200

A world of capabilities delivered locally

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

Table of Contents

1.0 INTRODUCTION 1
1.1 Site Description 1
1.2 Background 1
2.0 FIELD INVESTIGATION 3
2.1 Soil Units 3
3.0 ANALYTICAL RESULTS 4
4.0 CONCLUSIONS 5
5.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS 6
6.0 REFERENCES 7

List of Table

Table 1 Soil Sample Locations and Results

List of Figures

Figure 1 Vicinity Map
Figure 2 Site Plan

List of Appendices

Appendix A Analytical Laboratory Test Results
Appendix B Soil Classification Legend
Test Pit Logs for G-TP-1, G-TP-3, G-TP-4, and G-TP-9

1.0 INTRODUCTION

Golder Associates Inc. (Golder) is pleased to present the results of the soil sampling services for the proposed Patriots' Landing Skilled Nursing Facility (Subject Property) located on an undeveloped parcel at 1600 Marshall Circle in DuPont, Washington, as shown in Figure 1. The scope of services for this sampling program was performed in accordance with our Proposal No. P03-93507 dated January 7, 2010.

The purpose of the soil sampling program was to address the requirements of the City of DuPont for development plan submittal. The Subject Property is located within the Tacoma Smelter Plume and near the former DuPont Powder Works.

Our scope of work included:

- Visually review the site and note areas of soil disturbance, areas of relatively undisturbed soil, and relative ages of soil disturbance.
- Collect up to 12 near-surface composite soil samples (composited soil sample from within a 10 foot radius at each of the 12 sample locations) from various locations across the site (approximately four soil samples per acre).
- Approximately locate each sample location using a handheld GPS receiver.
- Submit the soil samples for laboratory analysis for total lead and arsenic using EPA Method 6010B/6020.
- Compare the analytical results to applicable cleanup levels for lead and arsenic.
- Prepare this report presenting our findings, results, sample location plan, and an opinion and recommendation on whether further sampling or remedial action is needed.

1.1 Site Description

The Subject Property is located at 1600 Marshall Circle in DuPont, Washington, as shown in Figure 1. The Subject Property is located approximately south and west of the intersection of Marshall Circle and Garry Oaks Avenue. The site is bordered to the east by Garry Oaks Avenue with an adjoining business park, undeveloped properties to the north and west, and a gravel road to the south, part of the Joint Base Lewis-McCord. During development of the adjacent property, material was stockpiled near the northwestern side of the site. The southernmost portion of the Subject Property was left undisturbed.

1.2 Background

The Subject Property is located within the Tacoma Smelter Plume, an area identified by Department of Ecology (DOE) as potentially having shallow soil impacted by lead and arsenic that resulted from deposition from smelter stack emissions from the former Asarco Smelter located to the northeast in Ruston north of Tacoma. The Subject Property is also located near the former DuPont Powder Works, where high explosives were manufactured during World War II. The former DuPont Powder Works also potentially caused lead and arsenic impact to shallow soil. Information obtained from the Washington

State Department of Ecology Tacoma Smelter & Plume website suggests concentrations of arsenic in the topsoil at the Patriot's Landing proposed building site could range from 20 to 40 milligrams per kilogram (mg/kg).

2.0 FIELD INVESTIGATION

Golder's field investigation was completed on May 24, 2011. Golder collected 12 composite soil samples. The approximate sample locations are shown in Figure 2. Locations were determined using a 2008 Trimble GeoXT Global Positioning System (GPS). Location coordinates, sample collection depth, and analytical results are provided in Table 1.

Four samples, E2, E7, E8, and E9, were collected from the sidewalls of test pits being excavated concurrently for the geotechnical investigation, G-TP-1, G-TP-3, G-TP-4, and G-TP-9, in Appendix B. When the depth of the test pit reached four feet below ground surface (bgs), soil was scraped from the full length of the sidewalls and composited for chemical analysis. However, sample E9 was only collected from the upper 0.5 foot topsoil layer. Additionally, eight surficial soil samples, E1, E3, E4, E5, E6, E10, E11, and E12, were collected from the top six inches of soil by scraping away the plant matter and compositing the top six inches of soil from several locations within a five foot radius, and then placing four-ounces of the composite sample into a laboratory-provided glass jar for chemical analysis.

2.1 Soil Units

During the geotechnical phase of the project, three soil units were encountered; fill, topsoil, and native recessional outwash. The fill unit was typically two horizons, an upper surfical organic fill layer and an underlying sand and gravel fill layer. Four of the soil samples, E3, E5, E6, and E12, were from this upper suficial organic fill layer. Five of the soil samples, E2, E7, E8, E10, and E11, were collected from the sand and gravel fill layer. Samples E2, E3, E5, E6, E7, and E8 were collected in the stockpile. The remaining three samples, E1, E4, and E9, were collected from a topsoil layer underlain by native recessional outwash sands and gravels.

3.0 ANALYTICAL RESULTS

Golder submitted 12 soil samples to OnSite Environmental Inc., a Washington-certified environmental laboratory located in Redmond, Washington for analysis of total arsenic and lead using EPA Method 6010B/6020. The analytical results for the soil samples are summarized in Table 1 and the laboratory analytical reports are provided in Appendix A.

Concentrations of arsenic and lead detected in all soil samples were either below laboratory detection limits or consistent with natural background concentrations for the Puget Sound region. The detected concentrations of arsenic were all less than the MTCA Method A cleanup level of 20 mg/kg. The detected concentrations of lead were all less than the MTCA Method A cleanup level of 250 mg/kg.

4.0 CONCLUSIONS

Analytical results for shallow soil samples collected at 12 randomly selected locations on the Subject Property did not show concentrations of arsenic or lead above natural background concentrations anticipated for the Puget Sound region or exceeding MTCA Method A cleanup levels. No evaluation of groundwater was performed during this assessment and no other areas of the subject property were evaluated. No further investigation for arsenic and lead in soil is indicated at the Subject Property based on the findings of Golder's investigation.

5.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

This report is respectfully submitted to Careage Development Company, L.L.C. We trust that this report meets your needs. If you have questions or comments, please contact us at (425) 883-0777. We appreciate the opportunity to provide our services for this project.

GOLDER ASSOCIATES INC.

DRAFT

Alison J. Dennison, LG
Project Geologist

DRAFT

Shannon D. Daugherty
Geochemist

DRAFT

Neil R. Gilham, LG
Senior Environmental Geologist

SDD/AJD/NRG/sb

6.0 REFERENCES

Washington State Department of Ecology (DOE). *Tacoma Smelter Plume - Studies and Maps.* http://www.ecy.wa.gov/programs/tcp/sites_brochure/dirt_alert/studies_and_maps/s_and_m.html Accessed June 14, 2011.

DOE. 1994. *Natural Background Soil Metals Concentrations in Washington State (#94-115)*, October 1994.

TABLE

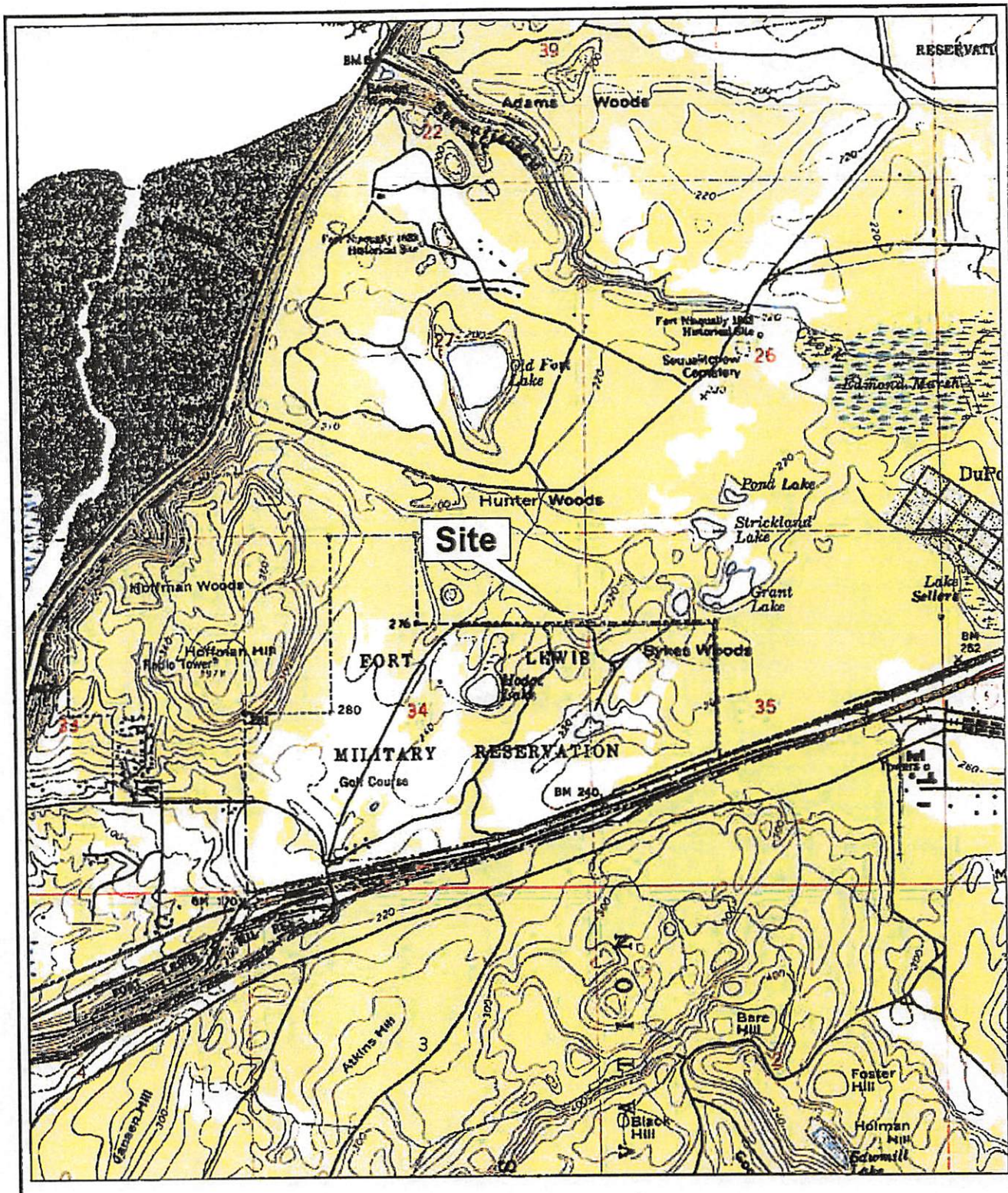
Table 1: Soil Sample Locations and Results

Sample Number	Sample Depth (ft bgs)	Sample Location		Analytical Test Results		Notes	Lithology of Material Sample Collected From
		Latitude	Longitude	As (mg/kg)	Pb (mg/kg)		
E1	0.1 to 0.5	N47.09380	W122.65775	<13	9.5	Surface sample; organic soil covered with lots of brush and trees	Topsoil
E2	0 to 4	N47.09415	W122.65757	<10	<5.2	Sampled from sidewalls of test pit G-TP-4; gravelly, no organics	Fill*
E3	0.1 to 0.5	N47.09430	W122.65866	<11	<5.3	Sampled from top of stockpile; organic soil	Surficial Organic Fill Layer*
E4	0.1 to 0.5	N47.09381	W122.65893	<11	<5.4	Surface sample; organic soil covered with lots of brush and trees	Topsoil
E5	0.1 to 0.5	N47.09492	W122.65892	<12	23	Sampled from top of stockpile; organic soil	Surficial Organic Fill Layer*
E6	0.1 to 0.5	N47.09468	W122.65898	<12	18	Sampled from top of stockpile; organic soil	Surficial Organic Fill Layer*
E7	0 to 4	N47.09452	W122.65792	<11	<5.3	Sampled from sidewalls of test pit G-TP-1; gravelly, no organics	Fill*
E8	0 to 4	N47.09451	W122.65748	<13	22	Sampled from sidewalls of test pit G-TP-3; gravelly, no organics	Fill*
E9	0.1 to 0.5	N47.09383	W122.65676	19	26	Sampled from sidewalls of test pit G-TP-9; very organic-rich topsoil layer.	Topsoil
E10	0.1 to 0.5	N47.09492	W122.65816	<10	<5.2	Surface sample; gravelly and very difficult to dig in	Fill
E11	0.1 to 0.5	N47.09490	W122.65769	<11	6.2	Surface sample; gravelly and very difficult to dig in	Fill
E12	0.1 to 0.5	N47.09473	W122.65705	<11	12	Sampled from top of stockpile; organic soil	Surficial Organic Fill Layer
MTCA Method A Cleanup Level				19	250		

Notes: *Samples collected in area of stockpile on Subject Property.

Golder Associates

FIGURES

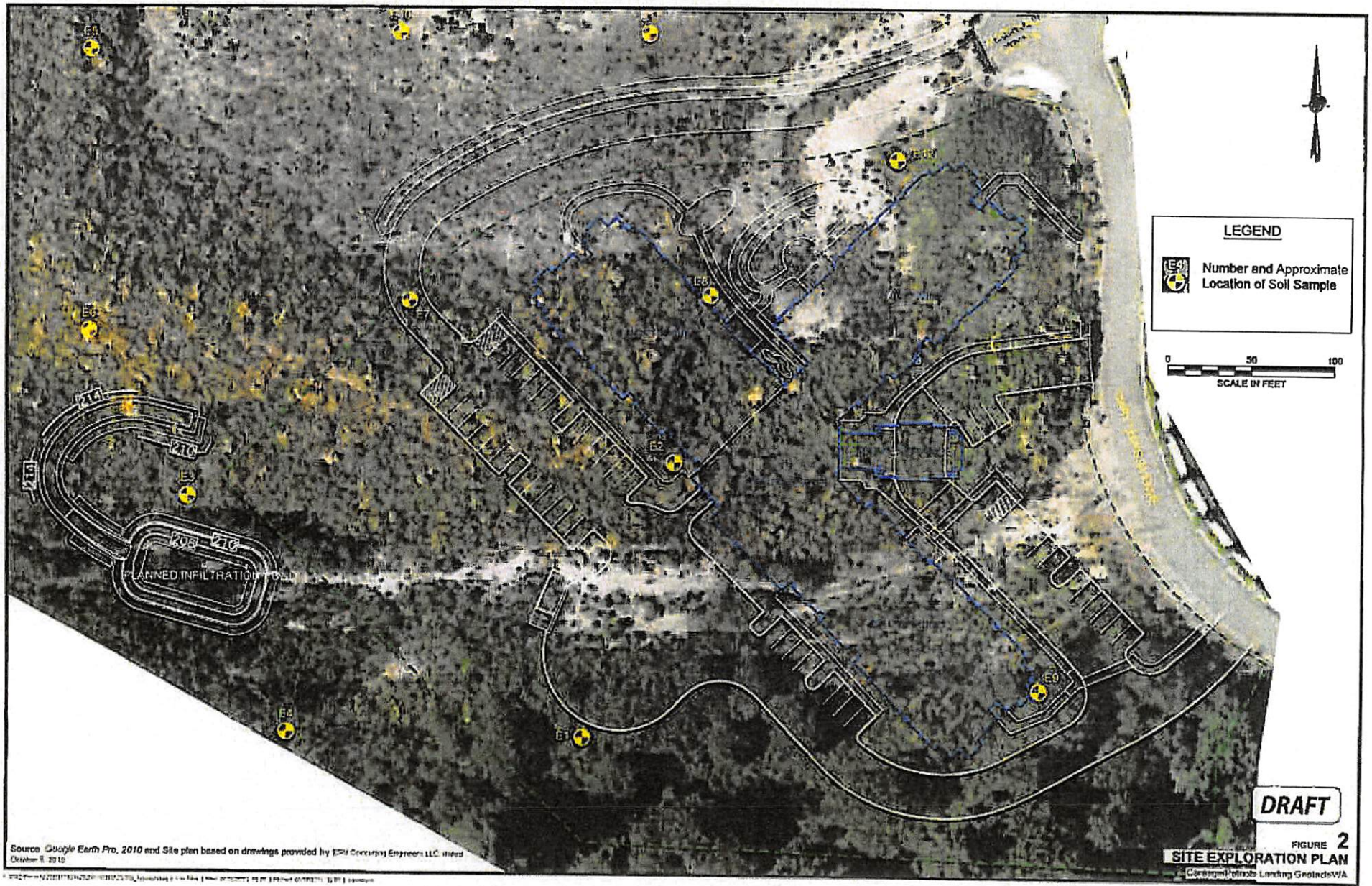


DRAFT

FIGURE 1
VICINITY MAP
CAREAGE/PATRIOTS LANDING GEOTECH/WA

Source: USGS 7.5 Minute Topographic Quadrangle Map, Nisqually, WA, 1994

Golder Associates



Source: *Google Earth Pro, 2010* and Site plan based on drawings provided by [illegible] Consulting Engineers LLC, dated October 8, 2010

FIGURE 2
SITE EXPLORATION PLAN
Conagra/Lamb Weston Landing Geotech/WA

Golder Associates

APPENDIX A
ANALYTICAL LABORATORY TEST RESULTS

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 31, 2011

Alison Dennison
Golder Associates Inc.
18300 NE Union Hill Road
Suite 200
Redmond, WA 98052-3333

Re: Analytical Data for Project 103-93529
Laboratory Reference No. 1105-207

Dear Alison:

Enclosed are the analytical results and associated quality control data for samples submitted on May 25, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

Case Narrative

Samples were collected on May 24, 2011 and received by the laboratory on May 25, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

TOTAL METALS
EPA 6010B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-207-07					
Client ID:	E7					
Arsenic	ND	11	6010B	5-25-11	5-26-11	
Lead	ND	5.3	6010B	5-25-11	5-26-11	
Lab ID:	05-207-08					
Client ID:	E8					
Arsenic	ND	13	6010B	5-25-11	5-26-11	
Lead	22	6.4	6010B	5-25-11	5-26-11	
Lab ID:	05-207-09					
Client ID:	E9					
Arsenic	19	13	6010B	5-25-11	5-26-11	
Lead	26	6.6	6010B	5-25-11	5-26-11	
Lab ID:	05-207-10					
Client ID:	E10					
Arsenic	ND	10	6010B	5-25-11	5-26-11	
Lead	ND	5.2	6010B	5-25-11	5-26-11	
Lab ID:	05-207-11					
Client ID:	E11					
Arsenic	ND	11	6010B	5-25-11	5-26-11	
Lead	6.2	5.5	6010B	5-25-11	5-26-11	
Lab ID:	05-207-12					
Client ID:	E12					
Arsenic	ND	11	6010B	5-25-11	5-26-11	
Lead	12	5.3	6010B	5-25-11	5-26-11	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

TOTAL METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-25-11
Date Analyzed:	5-26-11
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0525S2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	10
Lead	6010B	ND	5.0

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

TOTAL METALS
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 5-25-11
Date Analyzed: 5-26-11

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-207-10

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Lead	ND	ND	NA	5.0	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

TOTAL METALS
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 5-25-11
Date Analyzed: 5-26-11

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-207-10

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	89.6	90	90.7	91	1	
Lead	250	225	90	229	92	2	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2011
Samples Submitted: May 25, 2011
Laboratory Reference: 1105-207
Project: 103-93529

% MOISTURE

Date Analyzed: 5-26-11

Client ID	Lab ID	% Moisture
E1	05-207-01	24
E2	05-207-02	4
E3	05-207-03	5
E4	05-207-04	7
E5	05-207-05	19
E6	05-207-06	14
E7	05-207-07	5
E8	05-207-08	22
E9	05-207-09	25
E10	05-207-10	3
E11	05-207-11	9
E12	05-207-12	6

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Golder Associates
Project Number: 103-93529
Project Name: Patriots Landing
Project Manager: Alison Dennison
Sampled by: Shannon Daugherty

Turnaround Request (in working days)
(Check One)
Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
(other) _____

Laboratory Number: 05-207

	Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	Pb, AS							% Moisture
1	E1	E1	5/24 ~~5/17~~	4:00	Soil	1																X							X
2	E2	E2	5/24 ~~5/17~~	9:15	Soil																	X							X
3	E3	E3	5/24 ~~5/17~~	2:25	Soil																	X							X
4		E4	5/24 ~~5/17~~	2:31	Soil																	X							X
5		E5	5/24 ~~5/17~~	1:32	Soil																	X							X
6		E6	5/24 ~~5/17~~	5:00	Soil																	X							X
7		E7	5/24 ~~5/17~~		Soil																	X							X
8		E8	5/24 ~~5/17~~	10:42	Soil																	X							X
9		E9	5/24 ~~5/17~~	3:00	Soil																	X							X
10		E10	5/24 ~~5/17~~	11:17	Soil																	X							X

	Signature	Company	Date	Time
Relinquished	Shannon Daugherty	Golder	5/25	9:54a
Received		GSDS	5/25/11	954
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Labels say incorrect date – Chain is correct Sampled 5/24.

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 05-207

Company: Golder
Project Number: 103-93529
Project Name: Patriots Landing
Project Manager: Alison Dennison
Sampled by: Shannon Daugherty

Turnaround Request (in working days)
(Check One)
Same Day ☐ 1 Day
2 Days ☐ 3 Days
☒ Standard (7 Days)
(TPH analysis 5 Days)
☐ (other) _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	Pb + As						% Moisture
11	E11 5/24	5/24	11:03	Soil	1																X						10
12	E12 5/24	5/24	1:18	Soil	↓																X						6

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Shannon Daugherty	Golder	5/25	9:54am	
Received		GDS	5/25/11	954	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Data			Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

APPENDIX B
SOIL CLASSIFICATION LEGEND
TEST PIT LOGS FOR G-TP-1, G-TP-3, G-TP-4, AND G-TP-9

Unified Soil Classification System (USCS)

Criteria for Assigning Group Symbols and Names			Soil Classification Generalized Group Descriptions	
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 Sieve	CLEAN GRAVELS Less than 5% fines	GW	Well-graded Gravels
			GP	Poorly-graded gravels
		GRAVELS WITH FINES More than 12% fines	GM	Gravel and Silt Mixtures
			GC	Gravel and Clay Mixtures
	SANDS 50% or more of coarse fraction passes No. 4 Sieve	CLEAN SANDS Less than 5% fines	SW	Well-graded Sands
			SP	Non-plastic and Low-Poorly-graded Sands
		SANDS WITH FINES More than 12% fines	SM	Sand and Silt Mixtures
			SC	Sand and Clay Mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50	INORGANIC	CL	Low-plasticity Clays
			ML	Non-plastic and Low-Plasticity Silts
		ORGANIC	OL	Non-plastic and Low-Plasticity Organic Clays Non-plastic and Low-Plasticity Organic Silts
	SILTS AND CLAYS Liquid limit greater than 50	INORGANIC	CH	High-plasticity Clays
			MH	High-plasticity Silts
		ORGANIC	OH	High-plasticity Organic Clays High-plasticity Organic Silts
HIGHLY ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor		PT	Peat

Based on: ASTM D2487-00

Component Definitions by Gradation

Component	Size Range
Boulders	Above 12 in.
Cobbles	3 in. to 12 in.
Gravel	3 in. to No. 4 (4.76mm)
Coarse gravel	3 in. to 3/4 in.
Fine gravel	3/4 in. to No. 4 (4.76mm)
Sand	No. 4 (4.76mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.76mm) to No. 10 (2.0mm)
Medium sand	No. 10 (2.0mm) to No. 40 (0.42mm)
Fine sand	No. 40 (0.42mm) to No. 200 (0.074mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

Sample Types

Symbol	Description
SS	SPT Sampler (2.0" OD)
HD	Heavy Duty Split Spoon
SH	Shelby Tube
CA	California Sampler
B	Bulk
C	Cored
G	Grab
P	Pitcher Sampler

Cohesionless Soils (a)		
Density	N, blows/ft.(c)	Relative Density (%)
Very loose	0 to 4	0 - 15
Loose	4 to 10	15 - 35
Compact	10 to 30	35 - 65
Dense	30 to 50	65 - 85
Very Dense	over 50	>85

Cohesive Soils(b)		
Consistency	N, blows/ft.(c)	Undrained Shear Strength (psf) (d)
Very soft	0 to 2	<250
Soft	2 to 4	250-500
Firm	4 to 8	500-1000
Stiff	8 to 15	1000-2000
Very Stiff	15 to 30	2000-4000
Hard	over 30	>4000

(a) Soils consisting of gravel, sand, and silt, either separately or in combination, possessing no characteristics of plasticity, and exhibiting drained behavior.
(b) Soils possessing the characteristics of plasticity, and exhibiting undrained behavior.
(c) Refer to text of ASTM D 1586-84 for a definition of N; In normally consolidated cohesionless soils. Relative Density terms are based on N values corrected for overburden pressures.
(d) Undrained shear strength = 1/2 unconfined compression strength.

Laboratory Tests

Test	Designation
Moisture	(1)
Density	D
Grain Size	G
Hydrometer	H
Atterberg Limits	(1)
Consolidation	C
Unconfined	U
UU Triax	UU
CU Triax	CU
CD Triax	CD
Permeability	P

(1) Moisture and Atterberg Limits plotted on log.

Silt and Clay Descriptions

Description	Typical Unified Designation
Silt	ML (non-plastic)
Clayey Silt	CL-ML (low plasticity)
Silty Clay	CL
Clay	CH
Plastic Silt	MH
Organic Soils	OL, OH, Pt

Qualitative Descriptive Terminology for Moisture Content

Dry	No discernible moisture present
Damp	Enough moisture present to darken the appearance but no moisture on materials adheres to the hand
Moist	Will moisten the hand
Wet	Visible water present on materials

Descriptive Terminology Denoting Component Proportions

Descriptive Terms	Range of Proportion
Trace	0-5%
Little	5-12%
Some or Adjective (a)	12-30%
And	30-50%

(a) Use Gravelly, Sandy or Silty as appropriate.

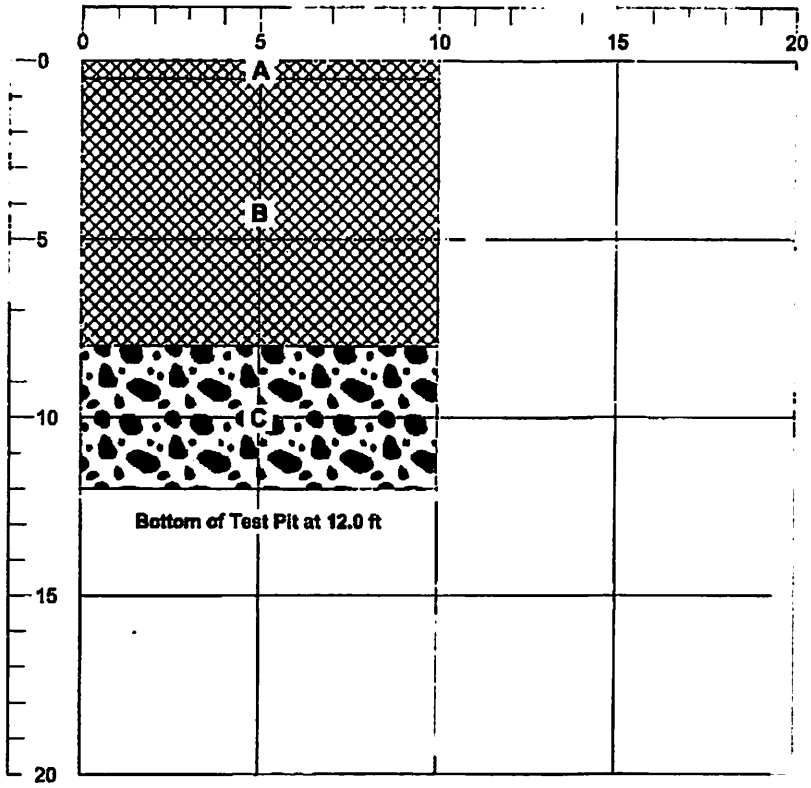
SOIL CLASSIFICATION LEGEND

Golder Associates

LOG OF TEST PIT G-TP-1

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 246.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	
2	12.0	2.8

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 8.0 ft: Very loose, gray and light brown, slightly stratified, medium to coarse sandy fine to coarse GRAVEL, little cobbles, damp. (GW) (FILL)

C 8.0 - 12.0 ft: Compact, light brown, non-stratified, medium to coarse sandy fine to coarse GRAVEL, little cobbles, trace rootlets in upper foot, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

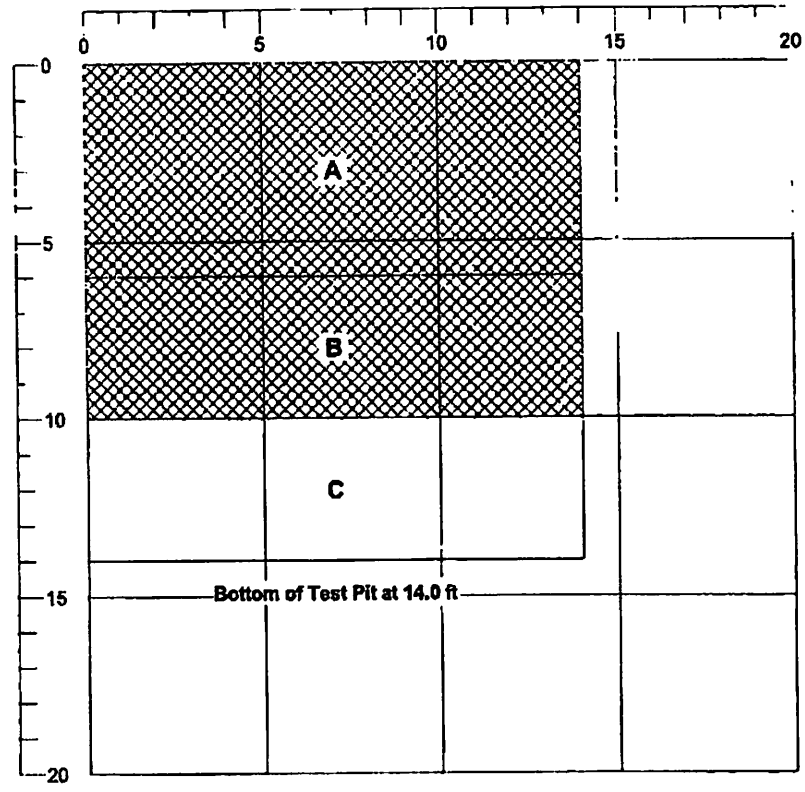
SPECIAL NOTES:
Moderate test pit caving was observed. No groundwater seepage was observed.

LOG OF TEST PIT 103-93529 TEST PIT LOGS.GPJ GLDR_WA.GDT 6/20/11

LOG OF TEST PIT G-TP-3

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	8.0	
3	11.0	3.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 6.0 ft: Compact, dark brown, heterogeneous, fine to coarse gravelly fine to coarse SAND, little silt, some organics, roots, damp. (SP-SM) (FILL)

B 6.0 - 10.0 ft: Compact to dense, orange brown, heterogeneous, fine to coarse SAND and fine to coarse GRAVEL, little cobbles, damp. (SP-GP) (FILL)

C 10.0 - 14.0 ft: Compact, gray, non-stratified, fine to coarse gravelly medium to coarse SAND, damp. (SP) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

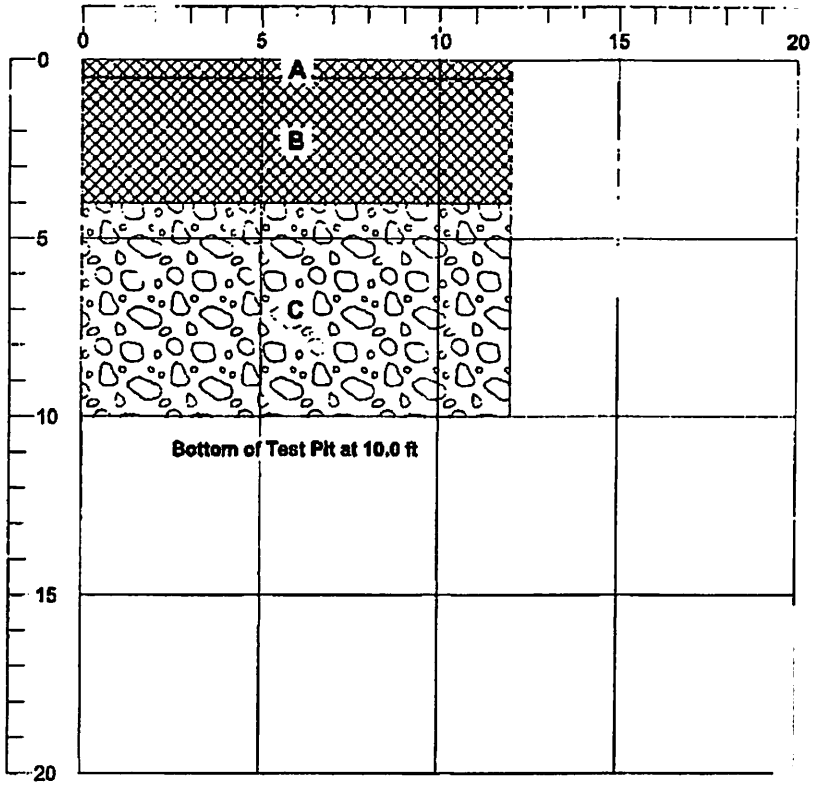
SPECIAL NOTES:

Low to moderate test pit caving was observed 0 to 10 ft bgs.
Major test pit caving was observed 10 to 14 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-4

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 236.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	7.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Very loose, dark brown, heterogeneous, fine to coarse sandy fine to coarse GRAVEL, trace cobbles, subrounded, little to some organics and roots, damp. (GW) (FILL)

B 0.5 - 4.0 ft: Very loose to loose, gray and light brown, crudely stratified, alternating layers of fine to medium GRAVEL and fine to medium gravelly medium to coarse SAND, trace cobbles, subrounded, damp. (GP/SP) (FILL)

C 4.0 - 10.0 ft: Compact, light brown, non-stratified, medium to coarse sandy GRAVEL, little cobbles, damp. (GP) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

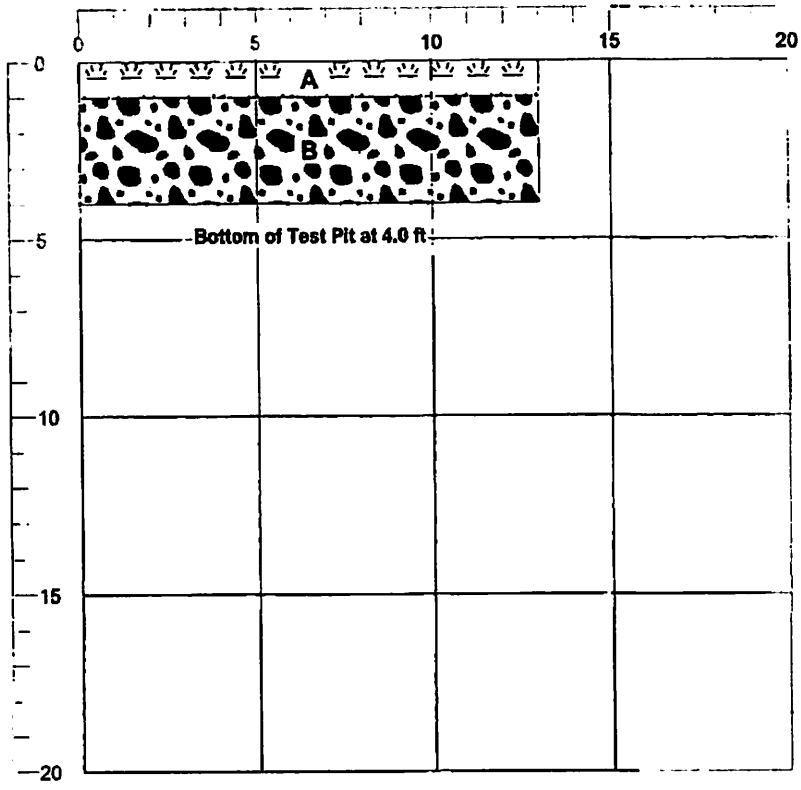
SPECIAL NOTES:

Moderate test pit caving was observed 0 to 4 ft bgs.
Major test pit caving was observed 4 to 10 ft bgs.
No groundwater seepage was observed.

LOG OF TEST PIT G-TP-9

Golder Associates

Temp 60-70 °F Weather Partly Cloudy Engineer J. deLaChapelle Operator Dave Rankin
Equipment Hitachi160 Trackhoe Contractor Active Construction Inc. Date 5/24/11
Elevation 226.0 ft Datum Local Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, heterogeneous, fine to coarse GRAVEL, some fine to coarse sand, trace to little silt, moist. (GW/GW-GM) (TOPSOIL)

B 1.0 - 4.0 ft: Loose, light brown, non-stratified, fine to coarse GRAVEL, some medium to coarse sand, trace cobbles, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

Moderate test pit caving was observed 0 to 4 ft bgs.
No groundwater seepage was observed.

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, **WA** 98052 USA
Tel: (425) 883-0777
Fax: (425) 882-5498

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

Patriots Landing
Memory Care Facility
Preliminary Stormwater Site Plan Report

September 1, 2017

Prepared for

Careage Development Company
4411 Point Fosdick Drive NW
Gig Harbor, WA 98335



9/1/17

Submitted by

ESM Consulting Engineers, LLC
33400 8th Avenue S, Suite 205
Federal Way, WA 98003

253.838.6113 tel
253.838.7104 fax

www.esmcivil.com

Attachment 1n

TABLE OF CONTENTS

1.	**PROJECT OVERVIEW**	**1-1**
2.	**DISCUSSION OF MINIMUM REQUIREMENTS**	**2-1**
3.	**EXISTING CONDIDITON SUMMARY**	**3-1**
4.	**OFF-SITE ANALYSIS REPORT**	**4-1**
5.	**PERMANENT STORMWATER CONTROL PLAN**	**5-1**
6.	**CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN**	**6-1**
7.	**SPECIAL REPORTS AND STUDIES**	**7-1**
8.	**OTHER PERMITS**	**8-1**
9.	**OPERATIONS AND MAINTENANCE MANUAL**	**9-1**
10.	**BOND QUANTITIES WORKSHEET**	**10-1**

LIST OF FIGURES

1. Vicinity Map
2. Basin Map
3. Soils Map

APPENDIX

Stormwater Calculations

1. PROJECT OVERVIEW

The proposed project will consist of a one-story 60-unit Memory Care Facility located on top of structured underground parking that daylights on the rear of the building. The proposed building totals 42,143 square feet on a 3.26 acre portion of Parcel 0119345001 zoned Residential 5 in Yehle Park Village.

The proposed Memory Care Facility is located south of McNeil Street and along the west side of Garry Oaks Avenue. Please see the attached Exhibit 1 - Vicinity Map for the specific location and Exhibit 2 –Basin Map for the proposed site plan.

The site is currently undeveloped and has been previously cleared and graded. The site has been evaluated for development for the past 17 years, multiple times, with associated engineering plans and reports that were developed by ESM. This Stormwater Site Plan incorporates some of the original storm drainage design parameters for the project site, following the 2012 Department of Ecology Stormwater Management Manual for Western Washington with 2014 amendments (2014 SMMWW).

According to the Soil Survey of Pierce County Area provided by the United States Department of Agriculture (USDA) Soil Conservation Service (Exhibit 3 – Soils Map) the type of soil located in the project area is A. There have been multiple geotechnical investigations completed over the past 17 years on the project site, that confirm the USDA soil type A evaluation. For more information, see Section 7.

The project site storm drainage basin (3.26 acres) consists of a portion of the overall drainage basin of Patriots Landing (Basin 'C', 28.52 acres) in the Stormwater Site Plan completed for Patriots Landing in October 2003. At that time, Basin 'C' had been reduced to 19.92 acres to exclude the northern portion of Patriots Landing and a 0.74 acre portion of this basin was developed at that time and conveyed to a temporary biofiltration swale and infiltration pond located at the southwest corner of the Marshall Circle and Garry Oaks Avenue intersection.

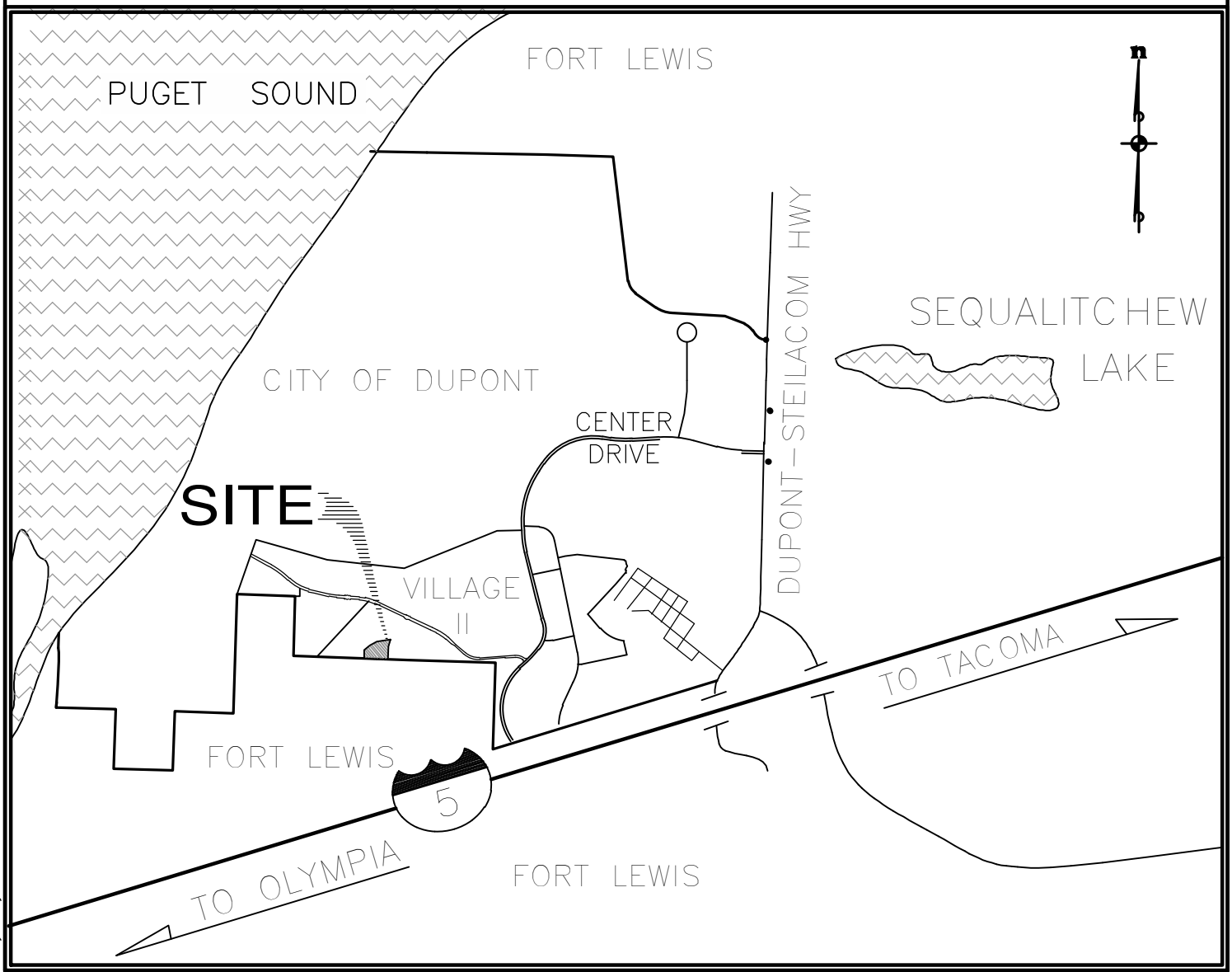
This existing temporary biofiltration swale and infiltration pond are proposed to be removed, and stormwater runoff from the existing developed portion of Basin 'C' (0.74 acres), from the project paved and landscaped areas (2.23 acres), will be collected in catch basins and conveyed to a proposed temporary biofiltration swale and infiltration pond to be located on the west side of the project site. The ultimate location of the water quality and infiltration facilities for the entire Basin 'C' will be developed at a later date with future development.

Stormwater runoff from the proposed Memory Care Facility building (1.03 acres) will not generate pollutants and will be infiltrated on site through the use of two proposed infiltration trenches.

Stormwater runoff from the frontage improvements along the south side of Garry Oaks Avenue (0.12 acres) will continue to drain to existing catch basins, matching the original designed ratio of impervious and pervious areas. This area is a portion of the overall drainage Basin "B" (10.82 acres) which was also designed in the Stormwater Site Plan completed for Patriots Landing in October 2003.

Exhibit 1
Vicinity Map

EXHIBIT 1 - VICINITY MAP



NTS

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900

www.esmcivil.com

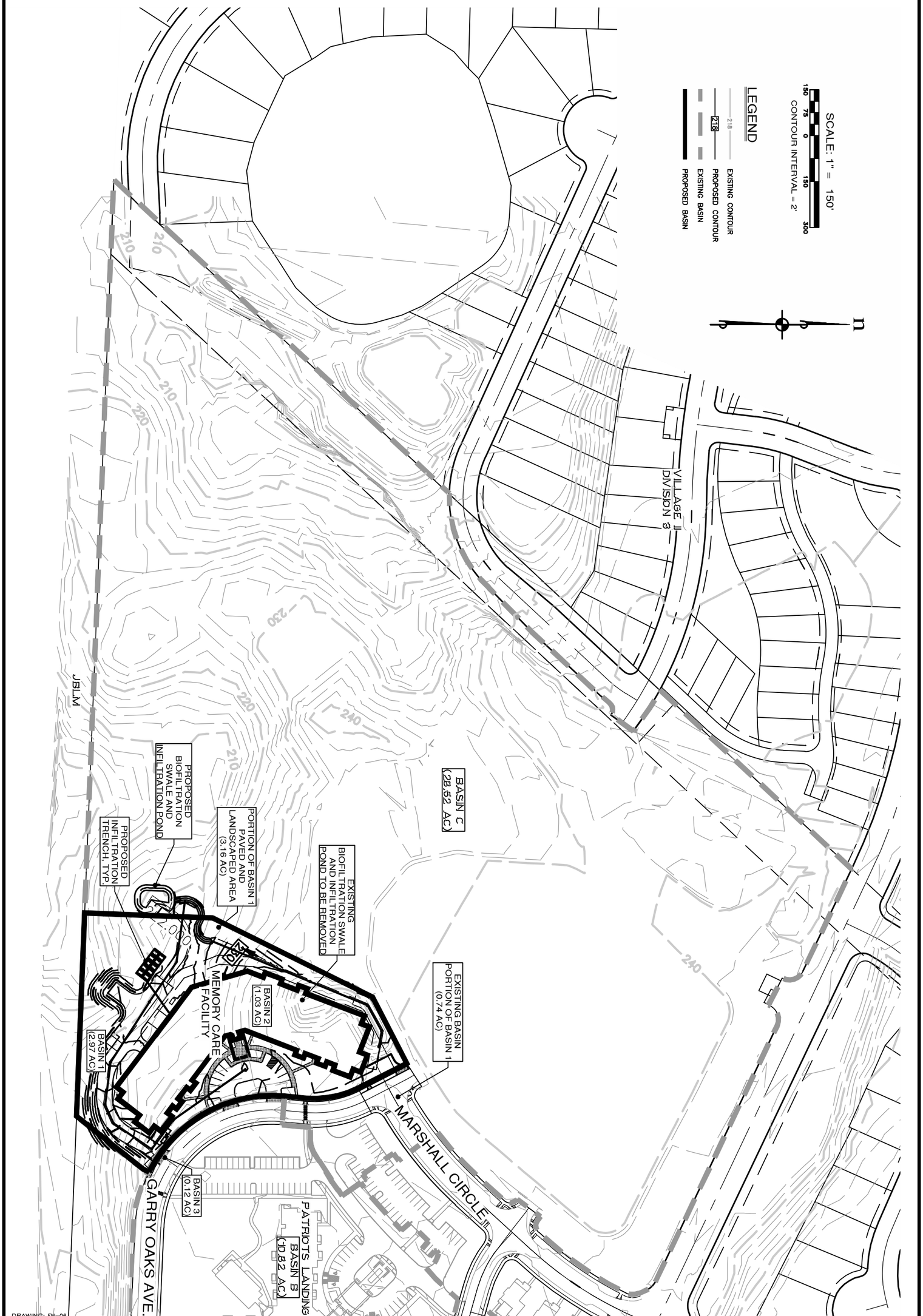
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO.	845-021-017
DRAWING NAME :	EN-06
DATE :	09-01-2017
DRAWN :	TMA
SHEET 1 OF 1	

File: \\Esm8\engr\ESM-JOBS\845\021\017\exhibits\EN-06.dwg
Plotted: 8/30/2017 12:11 PM
Plotted By: Tony Ableman

Exhibit 2
Basin Map

File: \\Esm8\engr\ESM-JOBS\845\021\017\exhibits\EN-06.dwg
Plotted: 8/31/2017 10:51 AM Plotted By: Tony Ableman



DRAWING: EN-06

ESM CONSULTING ENGINEERS LLC
181 S 333rd St, Bldg C, Suite 210
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
ELLENSBURG (509) 962-2608
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 845-021-017	DATE: 2017-09-01
DRAWN: TMA	SHEET 1 OF 1

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

BASIN EXHIBIT

Exhibit 3
Soils Map



Map Scale: 1:822 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

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 1:24,000.

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: Pierce County Area, Washington
Survey Area Data: Version 11, Sep 9, 2016

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

Date(s) aerial images were photographed: Apr 1, 2016—Sep 27, 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

Pierce County Area, Washington (WA653)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
41A	Spanaway gravelly sandy loam	1.0	37.8%
3112	Everett-Spanaway-Spana complex, 0 to 30 percent slopes	1.6	62.2%
Totals for Area of Interest		**2.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

2. CONDITIONS AND REQUIREMENTS SUMMARY

The proposed project will address the minimum requirements #1 through #9 as documented below of the 2014 SMMWW.

Minimum Requirement #1: Preparation of a Stormwater Site Plans
This report meets this minimum requirement.

Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)
The Construction Stormwater Pollution Prevention Plan (CSWPPP) report will be completed with final Stormwater Site Plan.

Minimum Requirement #3: Source Control of Pollution
Temporary Erosion and Sedimentation Control (TESC) plans will be provided with final construction plans.

Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls
The proposed natural drainage pattern of stormwater runoff flowing to the south and infiltrating will be maintained.

Minimum Requirement #5: On-Site Stormwater Management
The project will utilize the infiltration On-Site Stormwater management Best Management Practice (BMP) for the building in two infiltration trenches and the remaining project area in an infiltration pond.

Minimum Requirement #6: Runoff Treatment
Runoff treatment for the project site will be provided in a bio-filtration swale. For more information, see Section 5.

Minimum Requirement #7: Flow Control
Flow control will be provided in a proposed infiltration pond. For more information, see Section 5.

Minimum Requirement #8: Wetlands Protection
Wetlands will not be impacted by the proposed project improvements.

Minimum Requirement #9: Operation and Maintenance
The Operations and Maintenance Manual will be provided with the final Stormwater Site Plan.

3. EXISTING CONDITIONS SUMMARY

The project area has been cleared and graded in the past and the soils onsite generally slope to the south. The steepest slope on the site is approximately 50% (previously graded) and located on the south side of Garry Oaks Avenue.

According to the Soil Survey of the Pierce County Area provided by the USDA Soil Conservation Service, the type of soils located on the project site is Spanaway gravelly sandy loam. Spanaway type soils typically have high infiltration rates and consist of somewhat excessively drained sands and gravels. The hydrologic soil group for Spanaway type soil is A.

4. OFF-SITE ANALYSIS REPORT

UPSTREAM ANALYSIS

The upstream basins for the project are Basins "B" and "C" per the Stormwater Site Plan completed for Patriots Landing in October 2003. A 0.74 acre portion of Basin 'C' is currently being conveyed to a temporary biofiltration swale and infiltration pond located at the southeast corner of the intersection of Marshall Circle and Garry Oaks on the proposed site of the Skilled Nursing Facility. The biofiltration swale and infiltration pond will be removed and another temporary facility will be provided on the west side of the project site.

DOWNSTREAM ANALYSIS

Stormwater runoff from the existing developed portion of Basin 'C' (0.74 acres) and the project paved and landscaped areas (2.23 acres) will be collected in catch basins and conveyed to a proposed temporary biofiltration swale and infiltration pond to be located on the west side of the project site.

Stormwater runoff from the proposed Memory Care Facility building (1.03 acres) will not generate pollutants and will be infiltrated on site through the use of two infiltration trenches.

Stormwater runoff from the frontage improvements along the south side of Garry Oaks Avenue (0.12 acres) will continue to drain to existing catch basins, matching the original designed ratio of impervious and pervious areas. This area is a portion of the overall drainage Basin "B" (10.82 acres) which was also designed in the Stormwater Site Plan completed for Patriots Landing in October 2003.

5. PERMANENT STORMWATER CONTROL PLAN

METHODOLOGY

The stormwater design standards for the proposed project are based on the 2014 SMMWW, which requires water quality and infiltration facilities be sized utilizing the Western Washington Hydrology Model (WWHM2012). This model uses rainfall/runoff relationships developed for specific basins in the Puget Sound region to all parts of western Washington.

DEVELOPED SITE HYDROLOGY

The proposed project consists of three drainage basins.

Basin 1 collects 0.74 acres of stormwater runoff from the existing developed portion of Basin 'C' and 2.23 acres of stormwater runoff from the proposed project paved and landscaped areas.

Basin 2 collects 1.03 acres of stormwater runoff from the proposed building, which is considered clean runoff and can infiltrate onsite through the use of two infiltration trenches. The proposed rooftop infiltration system is depicted on the preliminary plans. The final configuration and sizing will be provided as part of the Stormwater Site Plan.

Basin 3 collects 0.12 acres of stormwater runoff from the frontage improvements along the south side of Garry Oaks Avenue (0.12 acres) that will continue to drain to existing catch basins, matching the original designed ratio of impervious and pervious areas.

The proposed parking lot and building roofs were assumed to be 100 percent impervious and the landscaped areas were assumed to be 100 percent pervious. The impervious and pervious areas are shown in Table 1 below.

Table 1 – Basin Areas (acres)	**Total Area**	**Impervious Area**	**Pervious Area**
Existing Developed Portion of Basin 'C'	0.74	0.52	0.22
Memory Facility Paved and Landscaped Areas	2.23	0.57	1.66
Total Basin 1	**2.97**	**1.09**	**1.88**
Skilled Nursing Facility Building	1.03	1.03	0.00
Total Basin 2	**1.03**	**1.03**	**0.00**
Garry Oaks Frontage	0.12	0.07	0.05
Total Basin 3	**0.93**	**0.07**	**0.05**

The resulting basin stormwater flows are shown in Table 2.

Table 2 – Runoff for Design Events (cfs)	Basin 1	Basin 2	Basin 3
Water Quality 15-minute time steps	0.16	N/A	N/A
2 year 24 hour	0.39	0.36	0.02
5 year 24 hour	0.52	0.48	0.03
10 year 24 hour	0.62	0.57	0.04
25 year 24 hour	0.75	0.70	0.05
50 year 24 hour	0.86	0.80	0.05
100 year 24 hour	**0.98**	**0.90**	**0.06**

WATER QUALITY TREATMENT BIOFILTRATION SWALE DESIGN

Water quality treatment for stormwater runoff from Basin 1 will be provided using a temporary biofiltration swale. The swale has been designed to treat the WWHM water quality flow and contain the 100 year 15 minute peak flow. The biofiltration swale design summary is shown in Table 3 below and detailed calculations are attached in the appendix.

Table 3 – Biofiltration Swale Design	Basin 1
Length (ft)	104
Manning's n	0.24
Slope, s (feet/feet)	0.01 – 0.05
Side Slope, Z (feet/feet)	3:1
Bottom Width (feet)	3
Total Depth, including Freeboard (feet)	1.00
Residence Time (min)	13.71
Water Quality Peak Flow	0.16
100 year Peak Flow	0.98

FLOW CONTROL INFILTRATION POND AND TRENCH DESIGN

An infiltration rate of 20 inches per hour was used for the design of the infiltration pond trenches, based on previous geotechnical investigation completed at Patriots Landing as outlined in the Stormwater Site Plan dated October 2003.

The proposed infiltration pond for Basin 1 has been preliminary designed to contain the 100 year 24 hour storm event with a required volume of 1926 cubic feet and a provided volume of 4,900 cubic feet, allowing for a significant factor of safety.

The two proposed infiltration trenches for Basin 2 has been preliminary designed to contain the 100 year 24 hour storm event with a required volume of 2,479 cubic feet. Each of the proposed infiltration trenches are 50 feet long, 10 feet wide, 8 feet deep and assume a 33 percent void ratio, with an available volume of 2,640 cubic feet. For more detail, see the attached WWHM calculations.

Overflow for storms larger than the 100 year 24 hour from the proposed infiltration trenches will be connected to the proposed site storm drainage conveyance system and directed to the proposed biofiltration swale and infiltration pond.

CONVEYANCE SYSTEM

Stormwater runoff from Basin 1 is proposed to flow to proposed grated inlets and be conveyed through 12 inch diameter storm drainage pipes to a temporary biofiltration swale and infiltration pond.

Stormwater runoff from Basin 2 will be collected in downspouts and conveyed to two proposed infiltration trenches.

Stormwater runoff from Basin 3 will be collected to existing grated inlets along Garry Oaks Avenue.

The stormwater drainage conveyance and backwater analysis will be completed to convey the 25 year 24 hour design storm event and to contain the 100 year 24 hour design storm event as part of the final Stormwater Site Plan.

Table 4 shows the general parameters that will be used for the conveyance calculations.

Table 4 – Conveyance System	
Manning's Roughness Coefficient, n	0.013
Time of Concentration, Tc (min)	10
Minimum Pipe Slope (%)	0.5

TESC DESIGN

The TESC plans will be completed with the final construction plans in accordance with the 2014 SMMWW. The site is estimated to be cleared and interceptor ditches will be constructed to convey the runoff to a sediment trap or a pond, then overflow and infiltrate though the existing vegetation to the south.

6. CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

The Construction Stormwater Pollution Prevention Plan will be provided with the final Stormwater Site Plan.

7. SPECIAL REPORTS AND STUDIES

A Stormwater Site Plan, dated October 2003, including a geotechnical investigation, was completed for the original Patriots Landing development. Pertinent excerpts have been attached following this section.

Furthermore, the most recent geotechnical investigation on the project site, including infiltration evaluation, was completed in the Addendum Report of the Patriots Landing Skilled Nursing Facility by Golder and Associates on March 23, 2012. The report is attached following this section.

This Stormwater Site Plan was prepared for:

Careage Development, LLC
Attn: Granville Brinkman
4411 Pt. Fosdick Drive, Suite 203
Gig Harbor, WA 98335
(253) 853-4457

Prepared by:

ESM Consulting Engineers, L.L.C.
729 South 348th Street
Federal Way, WA 98003
1 (800) 345-5694

October, 2003

Job No. 845-03-990-102

g:\esm-jobs\845\01\990\001\document\ssp.doc

II. PRELIMINARY CONDITIONS SUMMARY

The design standards, methodology and design criteria for the proposed Patriots Landing project are based on the Stormwater Management Manual for the Puget Sound Basin (February 1992, Department of Ecology).

- The Santa Barbara Urban Hydrograph (SBUH) methodology was utilized to design the preliminary stormwater management facilities. This method incorporates much of the Soil Conservation Service approach to level pool routing.

- A biofiltration swale was designed for water quality treatment prior to the stormwater infiltration ponds. The biofiltration swale shall be designed for the treatment of the runoff for the 6 month/ 24 hour design storm.

- The developed drainage basins were based on the proposed road profiles, existing topography of the area, and the storm drain system.

- The soils include:

Type	Hydrologic Soil Group Classification
41A - Spanaway Gravelly Sandy Loam	"A"
13D - Everett Gravelly Sandy Loam	"A"

  See attached hydrologic soil group classifications, runoff curve numbers, and soils map on Figures 3, 4, and 5, respectively.

- Typical runoff curve numbers for these type of soils are based on the SCS Western Washington Runoff Curve Numbers (see attached Figure 6).

- Design Storm rainfall totals (based on NOAA Maps):

6 Month/ 24 Hour ((64% x 2.2 inches) 2 year/ 24 hour volume)	1.41 inches
10 year/ 24 hour	3.0 inches
25 year/ 24 hour	3.5 inches
100 year/ 24 hour	4.2 inches
100 year/ 7 day	10.0 inches

- Infiltration rates of 20 inches per hour were utilized based on the Geotechnical testing completed for Patriots Landing.

IV. DEVELOPED SITE HYDROLOGY

A. DEVELOPED CONDITIONS

The developed site of Patriots Landing – Phase I contains approximately 17 acres. The developed site will be divided into three developed basins.

The overall developed drainage basin for Basin 'A' is approximately 8.5 acres, of which, approximately 2.08 acres is being developed at this time as part of Patriots Landing – Phase 1. Basin "A" will be conveyed through the storm drainage system and discharge into an existing biofiltration swale, located north of McNeil Street at Station 549+00. (McNeil Street Extension Drainage Basin 'C'). The swale is located west of the 90' power easement and west of the future Village II – Division 7 subdivision. Village II – Division 7 will intercept these flows prior to discharging into the existing swale and routing the runoff to the Village II & IV Regional Stormwater Facility.

Basin "B" is approximately 10.82 acres, including 1.84 acres of building roof area. Basin "B" will be routed through an existing biofiltration swale then to an infiltration pond located south of Wetland No. 9. The biofiltration swale and infiltration pond were previously approved as part of the McNeil Street Extension plans. (McNeil Street Extension Drainage Basin 'D').

The overall developed drainage basin for Basin "C" is approximately 19.92 acres. However, at this time approximately 0.74 acres will be developed. The area of 0.74 acres will be conveyed to a temporary biofiltration swale and infiltration pond. Ultimately these flows and the overall Basin "C" will be routed through the storm drainage system conveyed to the existing biofiltration swale and infiltration pond, located in Village II – Division 3. The existing pond, located Village II – Division 3, has been previously reviewed and approved to receive the future developed flows.

Basin "A"

Basin 'A' is the drainage basin for the northern portion of Marshall Circle and McNeil Street from the existing high point at Station 549+50 to 560+00. The drainage system was adequately sized to convey the overall developed flows from Patriots Landing to the existing biofiltration swale located north of McNeil Street at Station 549+00.

The existing biofiltration swale was sized based on the following developed flowrates, which describes the full buildout of Basin "A":

Flowrates	Design (cfs)	Actual (cfs)
$Q_{25yr/24hr}$	4.59	4.57
$Q_{100yr/24hr}$	6.17	5.84

Based on the above information the biofiltration swale will be able to convey the flows from Patriots Landing without modifications. (See attached Biofiltration Swale Basin 'C' calculations from McNeil Street Extension).

Basin "B"

Basin 'B' is the primary drainage basin for Patriots Landing – Phase I. The surface runoff from the site and McNeil Street will be conveyed to the existing biofiltration swale located south of McNeil Street at Station 565+50. The biofiltration swale discharges to the infiltration pond (SF-9) as approved under the McNeil Street Extension plans.

It was determined that the as-built biofiltration swale and infiltration pond are adequate for treating and infiltrating the following design flowrates:

Flowrates	Design (cfs)	Actual (cfs)*
$Q_{25yr/24hr}$	6.58	8.70
$Q_{100yr/24hr}$	8.86	11.18

* - The actual biofiltration swale and infiltration pond was constructed larger than the design and these additional flows were conveyed through the actual pond and swale to verify that these facilities functioned as initially designed.

The roof area for the building is being conveyed to an infiltration trench for the 25 year / 24 hour storm. However, the roof area was included in the basin area for the 25 year/ 24 hour flows. The existing infiltration pond sizing assumes the roof top infiltration trench is not functioning and is being conveyed to the infiltration pond for the 100 year/ 24 hour design storm.

Basin "C"

Basin 'C' is primarily the drainage basin for the lower portion of Marshall Circle as well as a small portion of the parking area for the commercial building. This drainage basin is being conveyed to a temporary biofiltration swale and infiltration pond located on-site. The future flows for this basin will be conveyed to the existing biofiltration swale and infiltration pond located in Village II – Division 3.

The proposed biofiltration swale was sized for the following flowrates:

Flowrates	Actual (cfs)
$Q_{6mo/24hr}$	0.17
$Q_{25yr/24hr}$	0.46
$Q_{100yr/24hr}$	0.56

The infiltration pond was analyzed based on the proposed flows the following is the results:

Flowrates	Design Peak Stage
$Q_{100yr/24hr}$	226.59

REPORT

ADDENDUM REPORT

Patriot's Landing Skilled Nursing Facility
1600 Marshall Circle
DuPont, Washington 98327

Submitted To: Mr. George Stephan
Careage Development Company, L.L.C.
4411 Pt. Fosdick Drive
P.O. Box 1969
Gig Harbor, Washington 98335

Submitted By: Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA

March 23, 2012

103-93529-10.200

A world of capabilities delivered locally

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

Table of Contents

1.0 INTRODUCTION 1
1.1 Site and Project Description 1
2.0 FIELD INVESTIGATION 2
2.1 SUBSURFACE CONDITIONS 2
2.1.1 Soil 2
2.1.2 Groundwater 2
3.0 INFILTRATION ANALYSIS 3
3.1 Field Infiltration Testing Procedure 3
3.2 Field Infiltration Testing Calculations and Results 4
3.3 Mounding analysis 5
4.0 STORMWATER POND EMBANKMENT 6
4.1 Background 6
4.2 Embankment Stability 6
4.3 Embankment Construction Recommendations 6
4.3.1 Subgrade Preparation 6
4.3.2 Fill Material and Placement 6
4.3.3 Erosion Control 7
4.3.4 Construction Observations 7
5.0 USE OF REPORT 8
6.0 CLOSING 9
7.0 REFERENCES 10

List of Tables

Table 3-1 Field Data Analysis
Table 3-2 Design Infiltration Analysis

List of Figures

Figure 1 Site Vicinity Map
Figure 2 Stormwater Pond Site Exploration Plan

List of Appendices

Appendix A Soil Classification Legend
Test Pit Logs

1.0 INTRODUCTION

Golder Associates Inc. (Golder) is pleased to provide this geotechnical addendum report for the Patriot's Landing Skilled Nursing Facility addition project located at 1600 Marshall Circle in DuPont, Washington. Golder completed a previous geotechnical report for this project titled, *Geotechnical Investigation Report – Patriot's Landing Skilled Nursing Facility – 1600 Marshall Circle – DuPont, Washington 98327 (Golder 2012)*. The purpose of this addendum is to provide additional geotechnical recommendations for the design of the stormwater infiltration pond including infiltration rates and construction recommendations for the berm and the adjacent steep slope. This addendum is to be used in conjunction with the previously referenced report. The reports used together present all of our geotechnical recommendations. If any recommendations between the reports are in conflict, this addendum should override any previous recommendations.

1.1 Site and Project Description

The site address is 1600 Marshall Circle in DuPont, Washington. The site is located south of the intersection of Marshall Circle and Garry Oaks Avenue, on the east and west sides of Garry Oaks Avenue, as shown in Figure 2. The west side of Garry Oaks Avenue appears to have been previously logged, cleared, and graded. The area of planned development on the east side of Garry Oaks Avenue is relatively level and developed with an asphalt parking area, sidewalks, an indoor pool, and landscaped areas.

Site development plans include removal of the asphalt parking area, sidewalks, and landscaped areas and construction of an extended care facility building addition with associated parking areas, utilities, and a stormwater collection pond (ESM 2010). The stormwater infiltration pond is planned at the southwest corner of the proposed parking area with a bottom of the pond elevation of approximately 222 feet. Our investigation was limited to the open areas under the existing power lines as shown on the Vicinity Map, Figure 1. Our investigation was conducted south of the residential development as shown on the Site Exploration Plan, Figure 2.

We previously conducted a geotechnical investigation for this project that included excavating seven test pits in the planned development area on the west side of Gary Oaks Avenue and advancing five borings in the planned development area on the east side of Gary Oaks Avenue. We presented these results in our Geotechnical Investigation report (Golder 2012). The location of the previously excavated test pits, in the area of the planned infiltration pond are shown in Figure 2.

2.0 FIELD INVESTIGATION

The field investigation was completed on March 12, 2012 and consisted of conducting three field infiltration tests. The approximate test locations are labeled PIT-1 through PIT-3 in Figure 2. Infiltration test locations were located within the planned infiltration cell in areas accessible by the excavator. The infiltration test pits were excavated by Active Construction Inc. of Puyallup, Washington using a Hitachi 160 tracked excavator. Copies of our previous test pit explorations are shown in Appendix A.

2.1 SUBSURFACE CONDITIONS

2.1.1 Soil

Our infiltration test locations encountered soils consistent with our previous explorations. The native soils consisted of Vashon recessional outwash at the planned infiltration pond elevation from the ground surface to the maximum depth explored (12 feet below ground surface [bgs]). The outwash consisted of compact to dense, sand and gravel with trace to little cobbles, trace boulders, and trace silt.

2.1.2 Groundwater

Groundwater was not encountered in any of the infiltration test locations, test pits, or borings. There were no indications that seasonal high groundwater reached the soil observed in any of the test pits excavated for this study. Indications of the regional groundwater elevation can be made from elevations of nearby ponds that are likely within this recessional outwash unit. The closest surface water features, including Hodge Lake, located within about 1,000 feet of the site indicate that regional groundwater is approximately 30 feet lower in elevation than the project site.

3.0 INFILTRATION ANALYSIS

The City of DuPont refers to the 2005 Edition of the State of Washington Department of Ecology's *Stormwater Management Manual for Western Washington* (Ecology 2005). However, Golder received permission to use the testing methodology described in King County's *Surface Water Design Manual* (Design Manual; 2009) (Miller 2012). Information collected regarding the planned stormwater pond are described below, including explorations near the pond locations, field infiltration testing, grain size analyses of selected soil samples, results, and conclusions.

3.1 Field Infiltration Testing Procedure

Testing procedures followed guidelines presented by King County in the *Surface Water Design Manual* (2009), in section titled Reference 6-A, Single-Ring Percolation Test Procedure. The test procedure is briefly described in the following paragraph.

The test pits were excavated approximately 3 feet bgs to the planned stormwater pond bottom elevation. The test pits were a minimum of 4-feet wide by 4-feet long and were leveled using a flat bucket on the trackhoe. A 3-foot-diameter, corrugated, galvanized metal ring was then imbedded approximately 6 inches into the soil. The procedure requires a test hole be soaked for 4 hours prior to testing. However, the test procedure allows deletion of the 4-hour soak period for highly permeable soils. The test procedure states that if, after filling the ring twice with 6 inches of water and the water drains out completely in less than 10 minutes the test can precede without the 4-hour soaking period. All three infiltration tests met the criteria for deletion of the 4-hour soak period. After the soaking period is completed (or deleted) the test may proceed. The test requires the ring to be filled with 6 inches of water and level measurements made at 10-minute intervals for a 1-hour period. However, if the first 6-inches of water added seeps away in less than 30 minutes the test is complete. The last water level drop is used to calculate the percolation rate.

The percolation rate is calculated for each test by dividing the time interval used between measurements by the magnitude of the last water level drop, resulting in an infiltration rate in minutes per inch. This can be converted to a more useful unit such as inches per hour. The reported infiltration rate was calculated by dividing 6-inches by the final recorded time, and converted into inches per hour. The test information is presented in Table 3-1.

Table 3-1: Field Data Analysis

Infiltration Test Number	Depth of Test (ft bgs)	Elevation of Infiltration Test (ft)	Last Water Level Drop (inches)	Time Interval (minutes:seconds)	Percolation Rate (minutes/inch)	Infiltration Rate (inches/hour)
PIT-1	3	222	6	07:26	1.2	48.4
PIT-2	3	221	6	03:23	0.6	106.4
PIT-3	3	224	6	04:03	0.7	88.9
					Average:	**81.2**

Notes: Percolation rate = (magnitude of the last water level drop)*(time interval)
Planned Elevation of bottom of Pond: 222 ft

3.2 Field Infiltration Testing Calculations and Results

Based on the field infiltration test results, the design infiltration rates were calculated, in accordance with the Design Manual. Data generated during testing is shown in Table 3-2. Pond geometry is to be determined by the civil engineer. The $F_{geometry}$ parameters presented below are based on estimates of the pond as provided in Figure 2. Accordingly, we anticipate that the $F_{geometry}$ values may change as the design progresses. The design infiltration, I_{design}, rate was calculated based on the following factors for the planned pond:

- $I_{measured}$ = measured infiltration rate in inches/hour.
- $F_{testing}$ = 0.30 (United States Environmental Protection Agency (EPA) Falling Head Percolation Test [King County 2009]).
- $F_{geometry}$ = 0.25 = 4 D/W+0.05 (D = depth from the bottom of the proposed facility to the maximum wet-season water table or the nearest impervious layer = 5 feet; W = width of the facility = 100 feet average).
- $F_{plugging}$ =1.0 (coarse sands or cobbles).
- Calculated design infiltration rate cannot exceed 20 inches/hour.

The table below provides all calculation inputs and results.

Table 3-2: Design Infiltration Analysis

Infiltration Test Number	$I_{measured}$ (inches/hour)	$F_{testing}$ [1]	$F_{geometry}$ [2]	$F_{plugging}$ [3]	I_{design} [4] (inches/hour)
PIT-1	48.43	0.30	2.17	1.00	31.49
PIT-2	106.40	0.30	2.17	1.00	69.19
PIT-3	88.89	0.30	2.17	1.00	57.80
Average:	**81.24**				**52.83**

Notes: 1 Correction factor accounts for uncertainties in testing method. For falling head percolation test $F_{testing}$ = 0.3.
2 $F_{geometry}$ = 4 (D/W) + 0.05, where D is the depth from the bottom of the proposed facility to the nearest impervious layer, minimum of 9 feet. W is the pond width, 17 feet. $F_{geometry}$ must be between 0.25 and 1.0.
3 Correction factor for long-term reduction in infiltration due to plugging of soil. $F_{plugging}$ = 1.0 for cobbles and course sands
4 $I_{design} = I_{measured} \times F_{testing} \times F_{geometry} \times F_{plugging}$, where I_{design} must not exceed 20 inches/hour.

Infiltration test results in the proposed stormwater pond location support the maximum allowed design infiltration rate of 20 inches per hour. The design infiltration rate calculation includes many factors that can reduce the rate of stormwater infiltration over time. In our experience, the factor most likely to cause a reduction in infiltration rates over time is plugging. Although the Design Manual prescribes a value of 1.0 for clean sands and gravels for plugging, our experience has shown that regular pond maintenance is needed to avoid plugging. If the pond is to be used during construction, it should be left 6 to 12 inches above the design grade. Once construction is completed, the 6 to 12 inches should be removed and the pond should be excavated to the planned elevation. It should be inspected and cleaned (if necessary) prior to being put on line. It will require regular inspection and cleaning (removing silt and vegetation) to maintain its infiltration characteristics. Future development surrounding the site may also effect the groundwater flow, and hence the infiltration characteristics of the pond.

3.3 Mounding analysis

The King County Design Manual (2005) suggests that a mounding analysis be performed to determine if the maximum storm event will result in mounding of the groundwater table below the infiltration facility causing a reduction in the infiltration capacity. This calculation assumes that the pond is underlain by a shallow seasonal water table or a soil zone that restricts vertical infiltration. King County requirements also state that the bottom of the stormwater facility must have a minimum of 3 feet of permeable soil and be a minimum of 3 feet above any maximum wet-season water table. We anticipate clean sandy and gravelly outwash soils extend a minimum of 9 feet below the floor of the infiltration pond. Neither groundwater nor iron-oxide staining, indicating a seasonal high groundwater elevation, was observed in any of the explorations in the vicinity of the proposed infiltration pond. Due to the small size of this pond relative to the thickness of unsaturated receptor soils and lack of restrictive soil layers, it is our professional opinion that a mounding analysis is not necessary.

4.0 STORMWATER POND EMBANKMENT

4.1 Background

In general, a fill embankment will be required along the southern side of the planned pond as shown on sheet 9 of 11 (ESM 2012). The embankment will have a maximum height of about 5 feet, a top crest width of 5 feet, and have interior and exterior side slopes of 4H:1V (horizontal:vertical) and 3H:1V, respectively. The base of the embankment will be about 35 feet wide. The existing ground surface within the footprint of the pond area sloped down to the southwest at approximately 15H:1V (3.9 degrees). The existing ground surface just to the southwest of the edge of the pond slopes down at approximately 6H:1V (about 9.7 degrees).

The 100-year storm design water level elevation is 225.05 feet which corresponds to 3 feet of water in the pond. A 3-foot wide bioswale about 115 linear feet with a 1.5 percent slope is planned from the storm drain outlet to the entrance to the infiltration area of the pond.

4.2 Embankment Stability

Based on the current plans for the pond embankments, it is our opinion that the slopes are stable as currently designed. A stability analysis was not performed.

4.3 Embankment Construction Recommendations

4.3.1 Subgrade Preparation

The ground surface below the footprint of the embankment should be scarified to remove vegetation, topsoil, and possible fill soils to expose competent outwash soils. Once scarified, the subgrade should be proof rolled with a 20 ton rubber-tired vehicle. Proof rolling should be observed by a qualified person. Areas of soft, loose or wet soils should be removed and replaced with fill structural fill meeting the recommendations presented below. Areas observed to rut or pump should be compacted and conditioned (if necessary) to produce a firm base. A keyway is not required for this embankment. Surface water should be directed away from the working area.

4.3.2 Fill Material and Placement

The embankment fill should consist of materials with a lower permeability than the bottom of the pond. The native outwash materials should not be used to construct the embankment. The fill materials encountered on site in our previous explorations had a slightly higher silt content than the outwash soils and can be considered during construction. The silt content of the actual soil should be confirmed during construction with a gradation analysis in accordance with American Society for Testing and Materials (ASTM) D421 / D422 / D4318. If the on-site soils are not suitable, we recommend using imported granular fill free of organic material consisting of 20 to 40 percent silt and clay and less than 15 percent gravel.

Embankment fill should be compacted to 95 percent of the maximum dry density as determined by ASTM D1557.

4.3.3 Erosion Control

Erosion control is the responsibility of the contractor. The 3H:1V exterior embankment slopes should be protected immediately after construction. We recommend that the exterior slopes be vegetated by the first winter after construction. The erosion control plan should follow best management practices (BMPs). A combination of hydroseeding, jute mats, etc. and plastic covering may be required until vegetation has been well established.

4.3.4 Construction Observations

A qualified geotechnical representative should be onsite during embankment construction to observe proof rolling, confirm the fill material meet specification, and confirm the fill is placed and compacted appropriately.

5.0 USE OF REPORT

This report has been prepared exclusively for the use of Careage Development Company, L.L.C. and their consultants for the project site. We encourage review of this report by bidders and/or contractors as it relates to factual data only (infiltration test results, conclusions, etc.). The conclusions and recommendations presented in this report are based on the testing and observations completed for this study, conversations regarding the existing site conditions, and our understanding of the planned development. The conclusions are not intended, nor should they be construed to represent, a warranty regarding the development. They are, however, included to assist in the planning and design process.

Judgment has been applied in interpreting and presenting the results. Variations in subsurface conditions outside the exploration locations are common in glacial environments such as those encountered at the site. Actual conditions encountered during construction might be different from those observed in the explorations. When the site project plans are finalized, we recommend that Golder be given the opportunity to review the plans and specifications to verify that they are in accordance with the conditions described in this report.

The field testing was conducted in general accordance with locally accepted geotechnical engineering practice, subject to the time limits and financial and physical constraints applicable to the services for this project, to provide information for the areas explored.

The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site. The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous site activities and/or resulting from the introduction of materials from off-site sources are outside the scope of services for this report and have not been investigated or addressed.

6.0 CLOSING

We trust that this report meets your current needs. If you have questions or comments, please contact us at (425) 883-0777. We appreciate the opportunity to provide our services for this project.

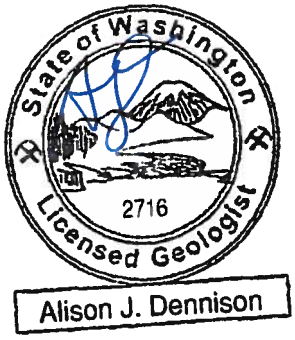
GOLDER ASSOCIATES INC.

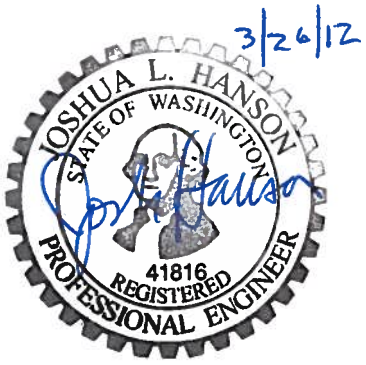
Alison J. Dennison, LG
Project Geologist

Joshua L. Hanson, PE
Senior Project Engineer

James G. Johnson, LG, LEG
Principal

AJD/JLH/JGJ/jbk





7.0 REFERENCES

ESM Consulting Engineers LLC. (ESM). 2010. Skilled Nursing Facility. Federal Way, Washington. October 5.

Golder Associates Inc. (Golder). 2012. *Geotechnical Investigation Report – Patriot's Landing Skilled Nursing Facility – 1600 Marshall Circle - DuPont, Washington.* February 13.

King County Department of Natural Resources and Parks. (King County). 2009. *Surface Water Design Manual*. King County, Washington. January 9. Section 5.4. Reference 6-A Single-Ring Percolation Test.

Miller, Dominic. 2012. Personal communication (e-mail) between Dominic Miller (Engineer, Gray and Osborne, Inc.), George Stephan (Project Manager, Careage Development Company, L.L.C.), Peter Zahn (Public Works Director, City of DuPont), Frederick Brown, PE (Director of Engineering, ESM Consulting Engineers, LLC), and Joe Cosare (Civil Designer, Gray and Osborne, Inc.) regarding: infiltration testing, March 9.

Washington State Department of Ecology Water Quality Program. (Ecology). 2005. *Stormwater Management in Western Washington*. Publication No. 05-10-31 (A revision of Publication No. 99-13). February. Volume III – Hydrologic Analysis and Flow Control BMPs.

FIGURES



0 2000

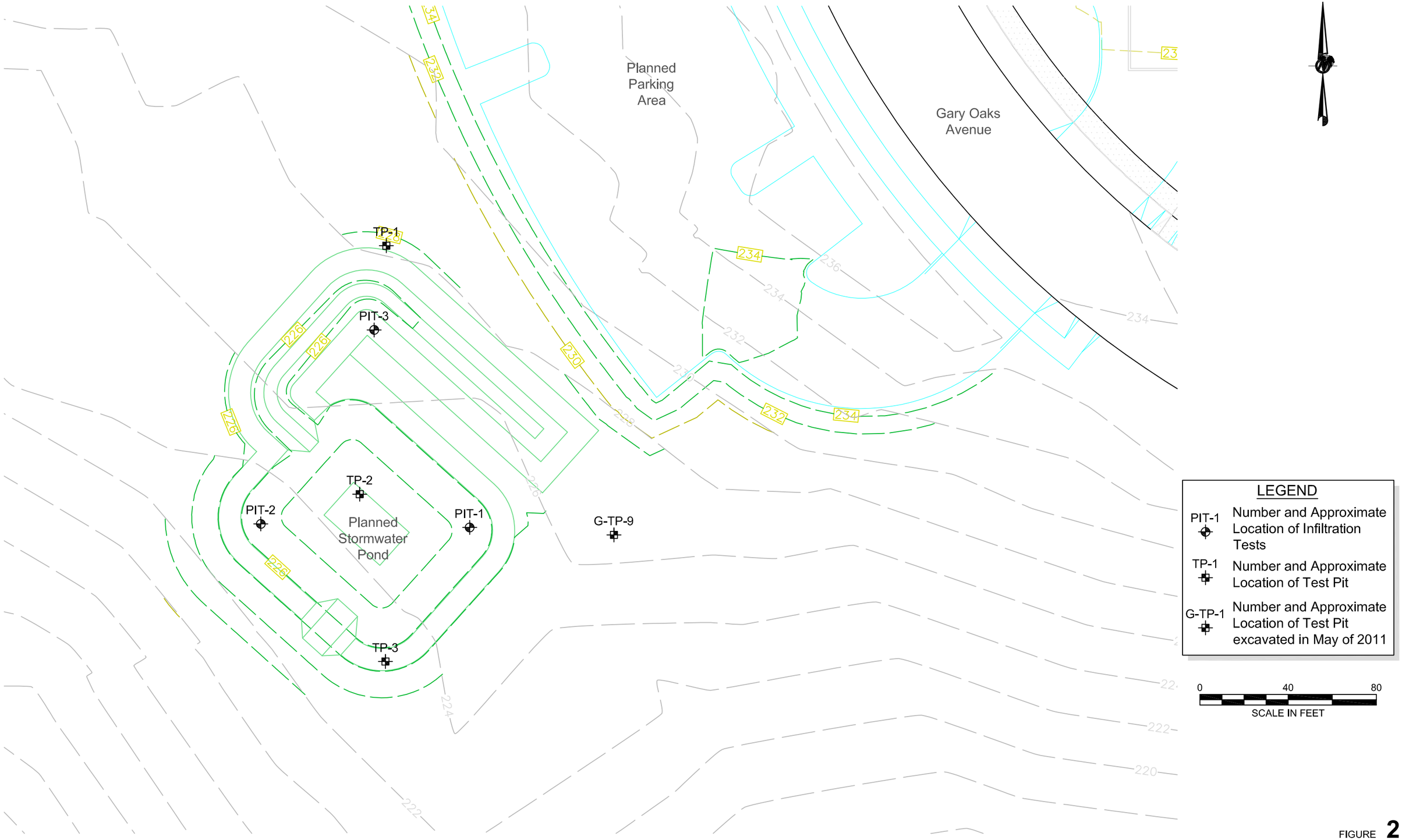
SCALE IN FEET

FIGURE **1**

VICINITY MAP

CAREAGE/PATRIOTS LANDING GEOTECH/WA

Source: USGS 7.5 Minute Topographic Quadrangle Map, Nisqually, WA, 1994



Source: Base map provided by ESM Consulting Engineers, LLC on January 23, 2012.

FIGURE **2**

STORMWATER POND SITE EXPLORATION PLAN

Careage/Dupont Geotech/WA

Golder Associates

APPENDIX A
SOIL CLASSIFICATION LEGEND AND TEST PIT LOGS

Unified Soil Classification System (USCS)

Criteria for Assigning Group Symbols and Names			Soil Classification Generalized Group Descriptions	
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 Sieve	CLEAN GRAVELS Less than 5% fines	GW	Well-graded Gravels
			GP	Poorly-graded gravels
		GRAVELS WITH FINES More than 12% fines	GM	Gravel and Silt Mixtures
			GC	Gravel and Clay Mixtures
	SANDS 50% or more of coarse fraction passes No. 4 Sieve	CLEAN SANDS Less than 5% fines	SW	Well-graded Sands
			SP	Non-plastic and Low-Poorly-graded Sands
		SANDS WITH FINES More than 12% fines	SM	Sand and Silt Mixtures
			SC	Sand and Clay Mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50	INORGANIC	CL	Low-plasticity Clays
			ML	Non-plastic and Low-Plasticity Silts
		ORGANIC	OL	Non-plastic and Low-Plasticity Organic Clays Non-plastic and Low-Plasticity Organic Silts
	SILTS AND CLAYS Liquid limit greater than 50	INORGANIC	CH	High-plasticity Clays
			MH	High-plasticity Silts
		ORGANIC	OH	High-plasticity Organic Clays High-plasticity Organic Silts
HIGHLY ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor		PT	Peat

Based on: ASTM D2487-00

Component Definitions by Gradation

Component	Size Range
Boulders	Above 12 in.
Cobbles	3 in. to 12 in.
Gravel	3 in. to No. 4 (4.76mm)
Coarse gravel	3 in. to 3/4 in.
Fine gravel	3/4 in. to No. 4 (4.76mm)
Sand	No. 4 (4.76mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.76mm) to No. 10 (2.0mm)
Medium sand	No. 10 (2.0mm) to No. 40 (0.42mm)
Fine sand	No. 40 (0.42mm) to No. 200 (0.074mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

Sample Types

Symbol	Description
SS	SPT Sampler (2.0" OD)
HD	Heavy Duty Split Spoon
SH	Shelby Tube
CA	California Sampler
B	Bulk
C	Cored
G	Grab
P	Pitcher Sampler

Cohesionless Soils [a]		
Density	N, blows/ft.[c]	Relative Density (%)
Very loose	0 to 4	0 - 15
Loose	4 to 10	15 - 35
Compact	10 to 30	35 - 65
Dense	30 to 50	65 - 85
Very Dense	over 50	>85

Cohesive Soils[b]		
Consistency	N, blows/ft.[c]	Undrained Shear Strength (psf) [d]
Very soft	0 to 2	<250
Soft	2 to 4	250-500
Firm	4 to 8	500-1000
Stiff	8 to 15	1000-2000
Very Stiff	15 to 30	2000-4000
Hard	over 30	>4000

(a) Soils consisting of gravel, sand, and silt, either separately or in combination, possessing no characteristics of plasticity, and exhibiting drained behavior.
(b) Soils possessing the characteristics of plasticity, and exhibiting undrained behavior.
(c) Refer to text of ASTM D 1586-84 for a definition of N; in normally consolidated cohesionless soils. Relative Density terms are based on N values corrected for overburden pressures.
(d) Undrained shear strength = 1/2 unconfined compression strength.

Laboratory Tests

Test	Designation
Moisture	(1)
Density	D
Grain Size	G
Hydrometer	H
Atterberg Limits	(1)
Consolidation	C
Unconfined	U
UU Triax	UU
CU Triax	CU
CD Triax	CD
Permeability	P

(1) Moisture and Atterberg Limits plotted on log.

Silt and Clay Descriptions

Description	Typical Unified Designation
Silt	ML (non-plastic)
Clayey Silt	CL-ML (low plasticity)
Silty Clay	CL
Clay	CH
Plastic Silt	MH
Organic Soils	OL, OH, Pt

Qualitative Descriptive Terminology for Moisture Content

Dry	No discernible moisture present
Damp	Enough moisture present to darken the appearance but no moisture on materials adheres to the hand
Moist	Will moisten the hand
Wet	Visible water present on materials

Descriptive Terminology Denoting Component Proportions

Descriptive Terms	Range of Proportion
Trace	0-5%
Little	5-12%
Some or Adjective (a)	12-30%
And	30-50%

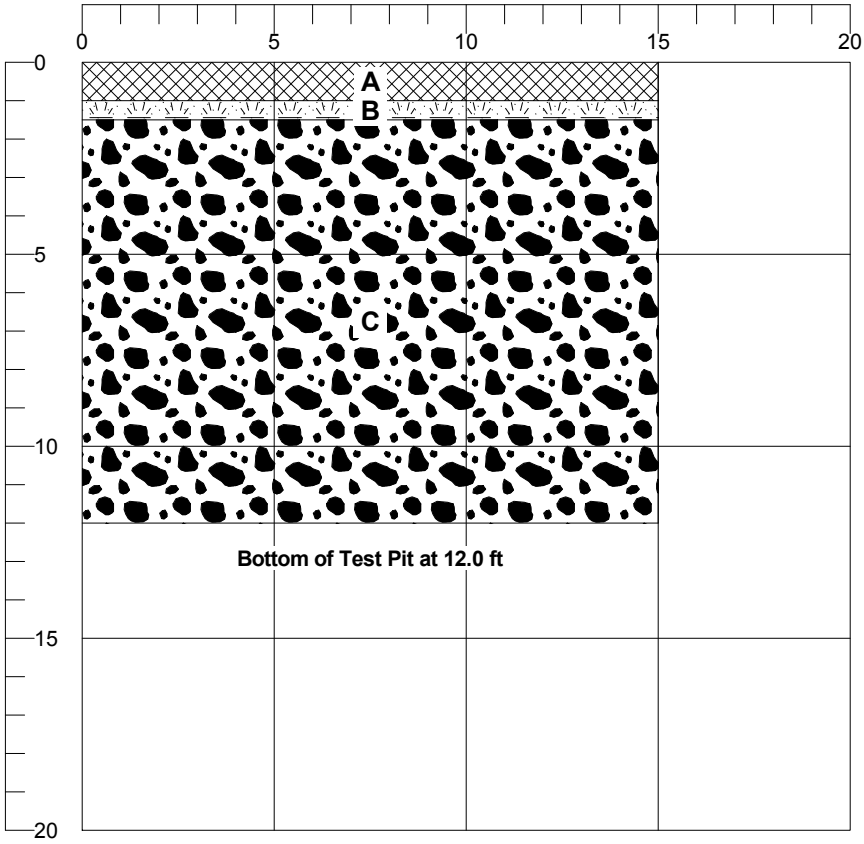
(a) Use Gravelly, Sandy or Silty as appropriate.

SOIL CLASSIFICATION LEGEND

Golder Associates

LOG OF TEST PIT TP-1

Temp 35 °F Weather Rain | Engineer J. Coleman | Operator Gary
Equipment Hitachi160 Trackhoe | Contractor Active Construction Inc. | Date 1/24/12
Elevation 230.0 ft | Datum Local | Job 103-93529-10
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	6.0	
4	8.0	
5	10.0	
6	12.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, light brown, non-stratified, sand fine to coarse subrounded GRAVEL, trace silt, trace organics, moist. (GW) (FILL)

B 1.0 - 1.5 ft: Compact, dark brown, non-stratified, sandy SILT, little organics, little fine to coarse subrounded gravel, moist. (ML) (BURIED TOPSOIL)

C 1.5 - 12.0 ft: Compact, light brown, non-stratified, fine to coarse subrounded GRAVEL and fine to coarse SAND, trace silt, trace subrounded cobbles, damp. (GW) (RECESSIONAL OUTWASH)

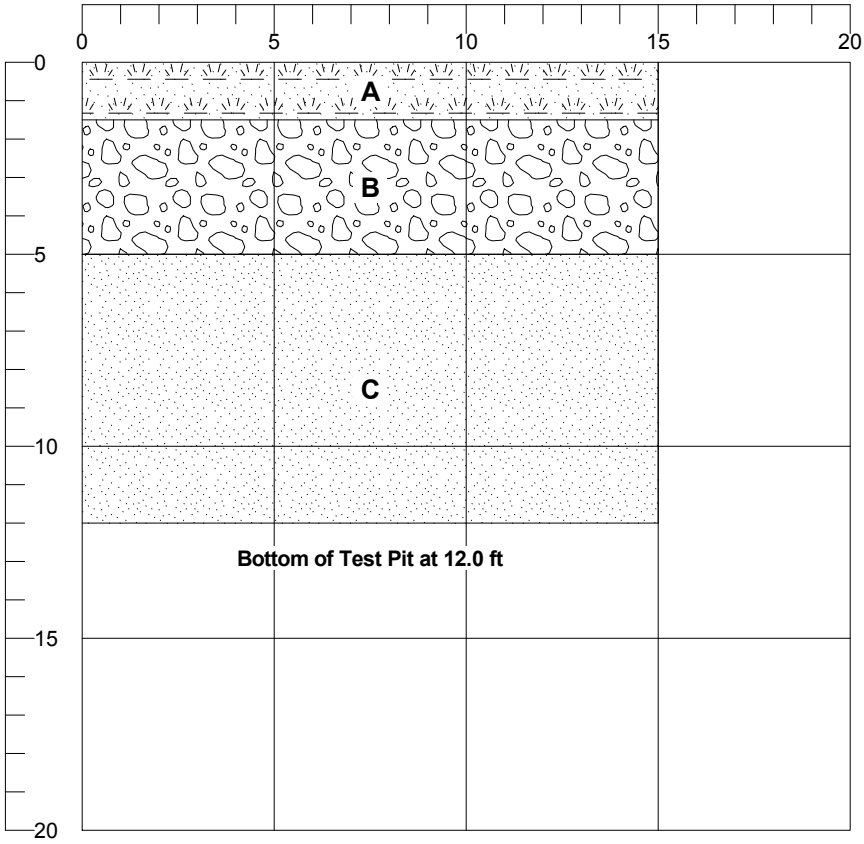
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

Major test pit caving was observed. No groundwater seepage was observed.

LOG OF TEST PIT TP-2

Temp 35 °F Weather Rain | Engineer J. Coleman | Operator Gary
Equipment Hitachi160 Trackhoe | Contractor Active Construction Inc. | Date 1/24/12
Elevation 225.0 ft | Datum Local | Job 103-93529-10
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	6.0	
4	8.0	
5	12.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.5 ft: Compact, dark brown, non-stratified, sandy SILT, little organics, little fine to coarse subrounded gravel, moist. (ML) (TOPSOIL)

B 1.5 - 5.0 ft: Compact, light brown, non-stratified, fine to coarse subrounded GRAVEL and fine to coarse SAND, damp. (GP) (RECESSIONAL OUTWASH)

C 5.0 - 12.0 ft: Compact, light brown, non-stratified, fine to coarse SAND and to some fine to coarse subrounded GRAVEL, damp. (SP) (RECESSIONAL OUTWASH)

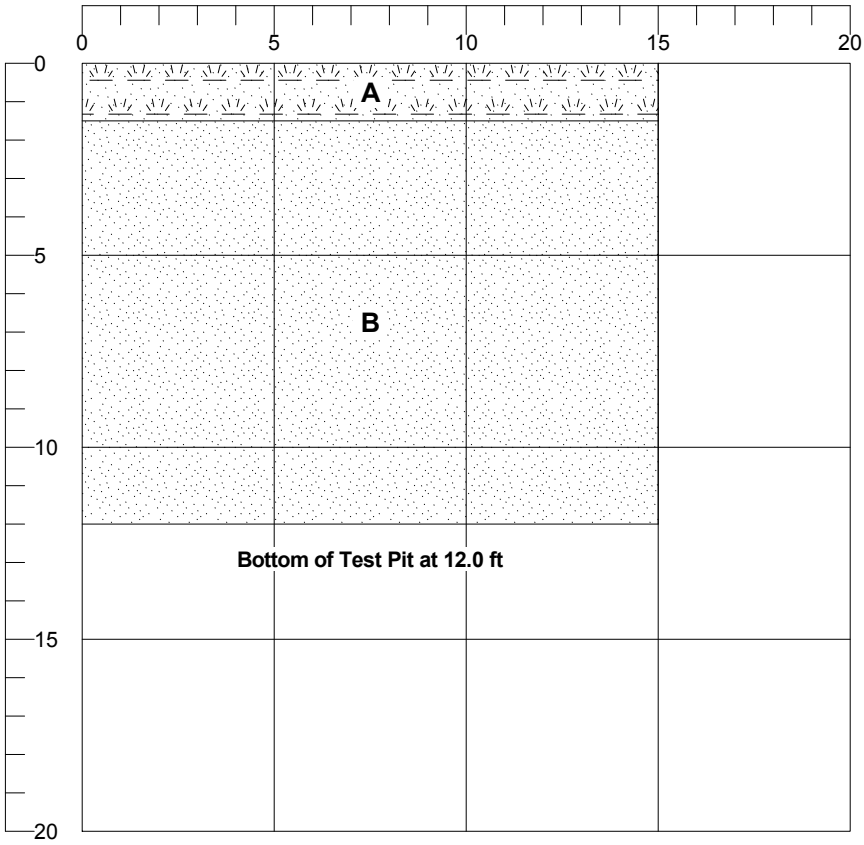
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

Major test pit caving was observed. No groundwater seepage was observed.

LOG OF TEST PIT TP-3

Temp 35 °F Weather Rain | Engineer J. Coleman | Operator Gary
Equipment Hitachi160 Trackhoe | Contractor Active Construction Inc. | Date 1/24/12
Elevation 223.0 ft | Datum Local | Job 103-93529-10
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	6.0	
4	8.0	
5	12.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.5 ft: Compact, dark brown, non-stratified, sandy SILT, little organics, little fine to coarse subrounded gravel, moist. (ML) (TOPSOIL)

B 1.5 - 12.0 ft: Compact, light brown, non-stratified, medium to coarse SAND and fine to coarse GRAVEL, damp. (SP) (RECESSIONAL OUTWASH)

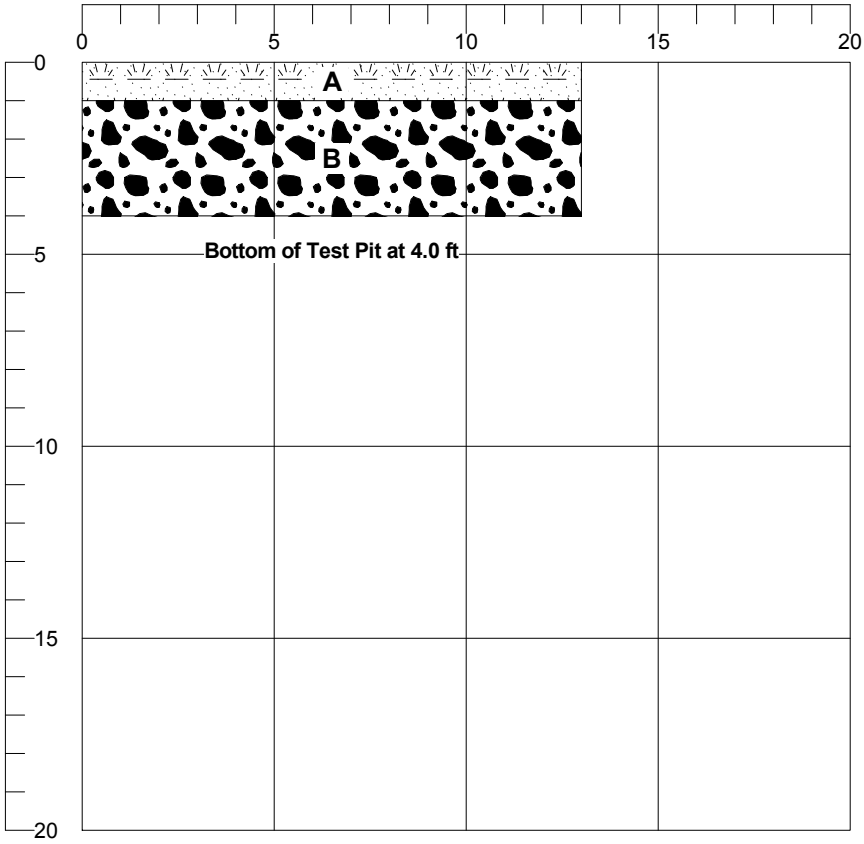
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

Major test pit caving was observed. No groundwater seepage was observed.

LOG OF TEST PIT G-TP-9

Temp 60-70 °F Weather Partly Cloudy | Engineer J. deLaChapelle | Operator Dave Rankin
Equipment Hitachi160 Trackhoe | Contractor Active Construction Inc. | Date 5/24/11
Elevation 226.0 ft | Datum Local | Job 103-93529.100
Location



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	2.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, heterogeneous, fine to coarse GRAVEL, some fine to coarse sand, trace to little silt, moist. (GW/GW-GM) (TOPSOIL)

B 1.0 - 4.0 ft: Loose, light brown, non-stratified, fine to coarse GRAVEL, some medium to coarse sand, trace cobbles, damp. (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)

SPECIAL NOTES:

Moderate test pit caving was observed 0 to 4 ft bgs.
No groundwater seepage was observed.

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA
Tel: (425) 883-0777
Fax: (425) 882-5498

Golder Associates

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

8. OTHER PERMITS

The National Pollutant Discharge Elimination System (NPDES) permit will be prepared with the final construction plans.

If a Forest Practice Permit for this project is required, the permit will be obtained prior to the site being cleared. The site has minimal trees located on it and was previously cleared as part of the Center Street Overpass project.

This project also requires the following permits:
Building Permits
Clearing & Grading Permits

9. OPERATION AND MAINTENANCE MANUAL

The Operation and Maintenance Manual will be provided with the final Stormwater Site Plan.

10. BOND QUANTITIES WORKSHEET

The Bond Quantities Worksheet will be provided with the final Stormwater Site Plan. The Declaration of Covenant is not applicable.

APPENDIX

Stormwater Calculations

BIOSWALE CALCULATION FOR MEMORY CARE FACILITY

Design for Swale Biofiltration Capacity

Manning's n	0.24		
Swale Shape	Trapezoidal		
Slope, s	0.01	ft/ft	(partially at 5% with check dams)
Side Slope, Z	3.00	ft	(minimum side slope = 3 ft, OK)
Bottom Width	3.00	ft	
Depth, y	0.33	ft	
Water Quality Flow	0.1621	cfs	
Bottom Width, b	0.83	ft	(< 6 ft, OK)
Bioswale Cross-Sectional Area	1.33	ft^2	(based on b = 6 ft and y = 0.33 ft)
Minimum Cross-sectional Area	0.61	ft^2	(< 1.33 ft^2, OK)
Wetted Perimeter	5.11	ft	
Hydraulic Radius, R	0.12	ft	
Velocity, V	0.12	ft/s	(maximum velocity = 1 ft/s, OK)
Residence Time Actual Swale	14.26	min	(> 9 min, OK)

Channel Stability Check

Vegetation Cover	Fair		
Degree of Retardance	D		
Manning's n	0.0455	ft	
VR	2.60	ft^2/s	
R using V_{max}	0.87	ft	
VR using V_{max}	2.57	ft^2/s	(within 5% of VR, OK)
V	2.97	ft/s	(< 3 ft/s, V_{max}, OK)
Cross-Sectional Area, A	0.53	ft^2	(< 1.33 ft^2, use Bioswale Cross-Sectional Area)
100 year 24 hour Peak Flow	0.98	cfs	
100 year Flow (15 min)	1.57	cfs	
Depth of Flow	0.15	ft	(< 0.33 ft, OK)
Stability Area	6.00	ft^2	
Stability Hydraulic Radius	0.64	ft	
Stability Flow, Q	2.77	cfs	(> 1.57 cfs, OK)

Completion Steps - From Capacity Check

Length	**104**	ft	(minimum length = 100 ft, OK)
Freeboard	**0.67**	ft	
Bottom Width	**3.00**	ft	
Top Width	**9.00**	ft	
Total Depth	**1.00**	ft	

WWHM2012

PROJECT REPORT

General Model Information

Project Name:	memorycare
Site Name:	Memory Care
Site Address:	
City:	
Report Date:	8/31/2017
Gage:	
Data Start:	10/01/1901
Data End:	09/30/2059
Timestep:	15 Minute
Precip Scale:	1.00
Version Date:	2015/11/13
Version:	4.2.11

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year
Low Flow Threshold for POC2:	50 Percent of the 2 Year
High Flow Threshold for POC2:	50 Year
Low Flow Threshold for POC3:	50 Percent of the 2 Year
High Flow Threshold for POC3:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Forest, Mod	2.97
Pervious Total	2.97

Impervious Land Use	acre
Impervious Total	0
Basin Total	2.97

Element Flows To:

Surface	Interflow	Groundwater

Basin 2

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Mod	1.03
Pervious Total	1.03
Impervious Land Use	acre
Impervious Total	0
Basin Total	1.03

Element Flows To:

Surface	Interflow	Groundwater

Basin 3

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Forest, Mod	0.12
Pervious Total	0.12

Impervious Land Use	acre
Impervious Total	0
Basin Total	0.12

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1 - Site

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Lawn, Flat	1.88
Pervious Total	1.88

Impervious Land Use	acre
ROADS FLAT	1.09
Impervious Total	1.09
Basin Total	2.97

Element Flows To:

Surface	Interflow	Groundwater
Trapezoidal Pond 1	Trapezoidal Pond 1	

Basin 2 - Roof

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
ROOF TOPS FLAT	1.03
Impervious Total	1.03
Basin Total	1.03

Element Flows To:

Surface	Interflow	Groundwater
Trapezoidal Pond 2	Trapezoidal Pond 2	

Basin 3

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Lawn, Flat	0.07
Pervious Total	0.07

Impervious Land Use	acre
ROADS FLAT	0.07
Impervious Total	0.07
Basin Total	0.14

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Routing

Trapezoidal Pond 1

Bottom Length:	15.00 ft.
Bottom Width:	10.00 ft.
Depth:	3 ft.
Volume at riser head:	0.0442 acre-feet.
Infiltration On	
Infiltration rate:	40
Infiltration safety factor:	0.5
Wetted surface area On	
Total Volume Infiltrated (ac-ft.):	439.296
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	439.296
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Side slope 1:	4 To 1
Side slope 2:	4 To 1
Side slope 3:	4 To 1
Side slope 4:	4 To 1
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2

Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.003	0.000	0.000	0.000
0.0333	0.003	0.000	0.000	0.072
0.0667	0.003	0.000	0.000	0.075
0.1000	0.003	0.000	0.000	0.079
0.1333	0.004	0.000	0.000	0.082
0.1667	0.004	0.000	0.000	0.085
0.2000	0.004	0.000	0.000	0.089
0.2333	0.004	0.000	0.000	0.092
0.2667	0.004	0.001	0.000	0.096
0.3000	0.005	0.001	0.000	0.099
0.3333	0.005	0.001	0.000	0.103
0.3667	0.005	0.001	0.000	0.107
0.4000	0.005	0.001	0.000	0.111
0.4333	0.005	0.002	0.000	0.115
0.4667	0.005	0.002	0.000	0.119
0.5000	0.006	0.002	0.000	0.123
0.5333	0.006	0.002	0.000	0.127
0.5667	0.006	0.002	0.000	0.131
0.6000	0.006	0.003	0.000	0.135
0.6333	0.006	0.003	0.000	0.140
0.6667	0.007	0.003	0.000	0.144
0.7000	0.007	0.003	0.000	0.148
0.7333	0.007	0.004	0.000	0.153
0.7667	0.007	0.004	0.000	0.157
0.8000	0.008	0.004	0.000	0.162
0.8333	0.008	0.004	0.000	0.167

0.8667	0.008	0.005	0.000	0.171
0.9000	0.008	0.005	0.000	0.176
0.9333	0.009	0.005	0.000	0.181
0.9667	0.009	0.005	0.000	0.186
1.0000	0.009	0.006	0.000	0.191
1.0333	0.009	0.006	0.000	0.196
1.0667	0.010	0.006	0.000	0.201
1.1000	0.010	0.007	0.000	0.207
1.1333	0.010	0.007	0.000	0.212
1.1667	0.010	0.007	0.000	0.217
1.2000	0.011	0.008	0.000	0.223
1.2333	0.011	0.008	0.000	0.228
1.2667	0.011	0.009	0.000	0.234
1.3000	0.011	0.009	0.000	0.239
1.3333	0.012	0.009	0.000	0.245
1.3667	0.012	0.010	0.000	0.251
1.4000	0.012	0.010	0.000	0.257
1.4333	0.013	0.011	0.000	0.263
1.4667	0.013	0.011	0.000	0.269
1.5000	0.013	0.012	0.000	0.275
1.5333	0.013	0.012	0.000	0.281
1.5667	0.014	0.012	0.000	0.287
1.6000	0.014	0.013	0.000	0.293
1.6333	0.014	0.013	0.000	0.299
1.6667	0.015	0.014	0.000	0.306
1.7000	0.015	0.014	0.000	0.312
1.7333	0.015	0.015	0.000	0.319
1.7667	0.016	0.015	0.000	0.325
1.8000	0.016	0.016	0.000	0.332
1.8333	0.016	0.017	0.000	0.338
1.8667	0.017	0.017	0.000	0.345
1.9000	0.017	0.018	0.000	0.352
1.9333	0.017	0.018	0.000	0.359
1.9667	0.018	0.019	0.000	0.366
2.0000	0.018	0.020	0.000	0.373
2.0333	0.018	0.020	0.000	0.380
2.0667	0.019	0.021	0.000	0.387
2.1000	0.019	0.021	0.000	0.394
2.1333	0.019	0.022	0.000	0.401
2.1667	0.020	0.023	0.000	0.409
2.2000	0.020	0.023	0.000	0.416
2.2333	0.021	0.024	0.000	0.424
2.2667	0.021	0.025	0.000	0.431
2.3000	0.021	0.026	0.000	0.439
2.3333	0.022	0.026	0.000	0.446
2.3667	0.022	0.027	0.000	0.454
2.4000	0.022	0.028	0.000	0.462
2.4333	0.023	0.029	0.000	0.470
2.4667	0.023	0.029	0.000	0.478
2.5000	0.024	0.030	0.000	0.486
2.5333	0.024	0.031	0.000	0.494
2.5667	0.024	0.032	0.000	0.502
2.6000	0.025	0.033	0.000	0.510
2.6333	0.025	0.033	0.000	0.518
2.6667	0.026	0.034	0.000	0.527
2.7000	0.026	0.035	0.000	0.535
2.7333	0.027	0.036	0.000	0.543
2.7667	0.027	0.037	0.000	0.552

2.8000	0.027	0.038	0.000	0.561
2.8333	0.028	0.039	0.000	0.569
2.8667	0.028	0.040	0.000	0.578
2.9000	0.029	0.041	0.000	0.587
2.9333	0.029	0.042	0.000	0.596
2.9667	0.030	0.043	0.000	0.604
3.0000	0.030	0.044	0.000	0.613
3.0333	0.030	0.045	0.064	0.622

Trapezoidal Pond 2

Bottom Length:	49.00 ft.	
Bottom Width:	10.00 ft.	
Depth:	5 ft.	
Volume at riser head:	0.0569 acre-feet.	
Infiltration On		
Infiltration rate:	40	
Infiltration safety factor:	0.5	
Total Volume Infiltrated (ac-ft.):		414.008
Total Volume Through Riser (ac-ft.):		0
Total Volume Through Facility (ac-ft.):		414.008
Percent Infiltrated:		100
Total Precip Applied to Facility:		0
Total Evap From Facility:		0
Side slope 1:	0 To 1	
Side slope 2:	0 To 1	
Side slope 3:	0 To 1	
Side slope 4:	0 To 1	
Discharge Structure		
Riser Height:	5 ft.	
Riser Diameter:	12 in.	
Element Flows To:		
Outlet 1	Outlet 2	

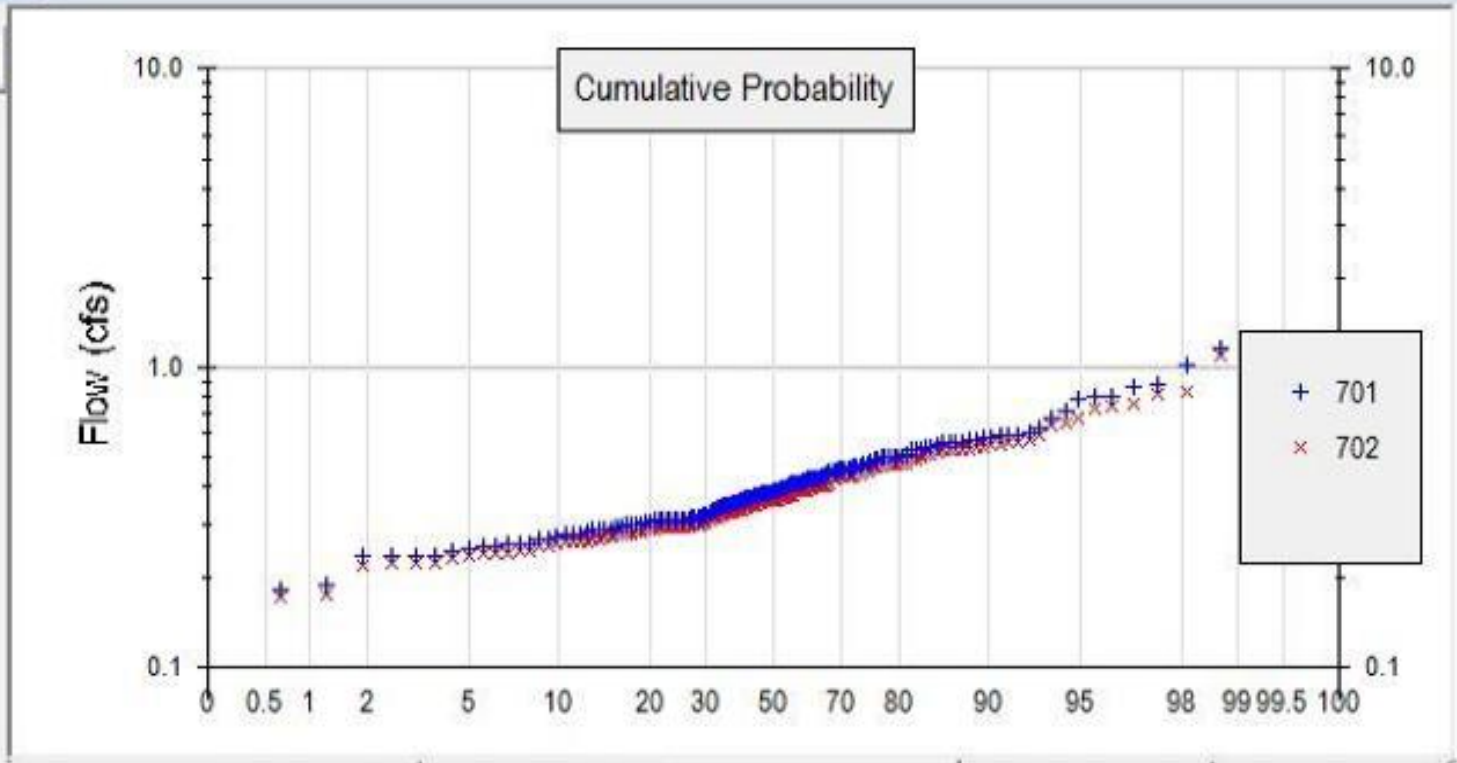
Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.011	0.000	0.000	0.000
0.0556	0.011	0.000	0.000	0.226
0.1111	0.011	0.001	0.000	0.226
0.1667	0.011	0.001	0.000	0.226
0.2222	0.011	0.002	0.000	0.226
0.2778	0.011	0.003	0.000	0.226
0.3333	0.011	0.003	0.000	0.226
0.3889	0.011	0.004	0.000	0.226
0.4444	0.011	0.005	0.000	0.226
0.5000	0.011	0.005	0.000	0.226
0.5556	0.011	0.006	0.000	0.226
0.6111	0.011	0.006	0.000	0.226
0.6667	0.011	0.007	0.000	0.226
0.7222	0.011	0.008	0.000	0.226
0.7778	0.011	0.008	0.000	0.226
0.8333	0.011	0.009	0.000	0.226
0.8889	0.011	0.010	0.000	0.226
0.9444	0.011	0.010	0.000	0.226
1.0000	0.011	0.011	0.000	0.226
1.0556	0.011	0.011	0.000	0.226
1.1111	0.011	0.012	0.000	0.226
1.1667	0.011	0.013	0.000	0.226
1.2222	0.011	0.013	0.000	0.226
1.2778	0.011	0.014	0.000	0.226
1.3333	0.011	0.015	0.000	0.226
1.3889	0.011	0.015	0.000	0.226
1.4444	0.011	0.016	0.000	0.226
1.5000	0.011	0.016	0.000	0.226
1.5556	0.011	0.017	0.000	0.226

1.6111	0.011	0.018	0.000	0.226
1.6667	0.011	0.018	0.000	0.226
1.7222	0.011	0.019	0.000	0.226
1.7778	0.011	0.020	0.000	0.226
1.8333	0.011	0.020	0.000	0.226
1.8889	0.011	0.021	0.000	0.226
1.9444	0.011	0.021	0.000	0.226
2.0000	0.011	0.022	0.000	0.226
2.0556	0.011	0.023	0.000	0.226
2.1111	0.011	0.023	0.000	0.226
2.1667	0.011	0.024	0.000	0.226
2.2222	0.011	0.025	0.000	0.226
2.2778	0.011	0.025	0.000	0.226
2.3333	0.011	0.026	0.000	0.226
2.3889	0.011	0.026	0.000	0.226
2.4444	0.011	0.027	0.000	0.226
2.5000	0.011	0.028	0.000	0.226
2.5556	0.011	0.028	0.000	0.226
2.6111	0.011	0.029	0.000	0.226
2.6667	0.011	0.030	0.000	0.226
2.7222	0.011	0.030	0.000	0.226
2.7778	0.011	0.031	0.000	0.226
2.8333	0.011	0.031	0.000	0.226
2.8889	0.011	0.032	0.000	0.226
2.9444	0.011	0.033	0.000	0.226
3.0000	0.011	0.033	0.000	0.226
3.0556	0.011	0.034	0.000	0.226
3.1111	0.011	0.035	0.000	0.226
3.1667	0.011	0.035	0.000	0.226
3.2222	0.011	0.036	0.000	0.226
3.2778	0.011	0.036	0.000	0.226
3.3333	0.011	0.037	0.000	0.226
3.3889	0.011	0.038	0.000	0.226
3.4444	0.011	0.038	0.000	0.226
3.5000	0.011	0.039	0.000	0.226
3.5556	0.011	0.040	0.000	0.226
3.6111	0.011	0.040	0.000	0.226
3.6667	0.011	0.041	0.000	0.226
3.7222	0.011	0.041	0.000	0.226
3.7778	0.011	0.042	0.000	0.226
3.8333	0.011	0.043	0.000	0.226
3.8889	0.011	0.043	0.000	0.226
3.9444	0.011	0.044	0.000	0.226
4.0000	0.011	0.045	0.000	0.226
4.0556	0.011	0.045	0.000	0.226
4.1111	0.011	0.046	0.000	0.226
4.1667	0.011	0.046	0.000	0.226
4.2222	0.011	0.047	0.000	0.226
4.2778	0.011	0.048	0.000	0.226
4.3333	0.011	0.048	0.000	0.226
4.3889	0.011	0.049	0.000	0.226
4.4444	0.011	0.050	0.000	0.226
4.5000	0.011	0.050	0.000	0.226
4.5556	0.011	0.051	0.000	0.226
4.6111	0.011	0.051	0.000	0.226
4.6667	0.011	0.052	0.000	0.226
4.7222	0.011	0.053	0.000	0.226
4.7778	0.011	0.053	0.000	0.226

4.8333	0.011	0.054	0.000	0.226
4.8889	0.011	0.055	0.000	0.226
4.9444	0.011	0.055	0.000	0.226
5.0000	0.011	0.056	0.000	0.226
5.0556	0.011	0.056	0.138	0.226

Analysis



Stream Protection Duration | LID Duration | Flow Frequency | Water Quality | Hydrograph

Wetland Input Volumes | LID Report | Recharge Duration | Recharge Predeveloped | Recharge Mitigated

nalyze datasets Compact WDM

158 YR EVAP TIMESERIES, 38 IN CENTRAL, 24 HR
2 158 YR PRECIP TIMESERIES, 38 IN CENTRAL, 15 MIN
601 POC 1 Predeveloped flow
602 POC 2 Predeveloped flow
603 POC 3 Predeveloped flow
701 Inflow to POC 1 Mitigated
702 Inflow to POC 2 Mitigated
801 POC 1 Mitigated flow

All Datasets | Flow | Stage | Precip

Evap | POC 1 | POC 2 | POC 3

Flood Frequency Method

- (•) Log Pearson Type III 17B
- ( ) Weibull
- ( ) Cunnane
- ( ) Gringorten

Flow Frequency

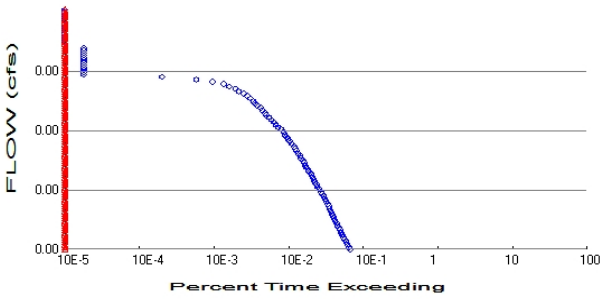
Flow(cfs)	0701	0702
2 Year =	0.3850	0.3610
5 Year =	0.5195	0.4845
10 Year =	0.6177	0.5743
25 Year =	0.7525	0.6973
50 Year =	0.8609	0.7959
100 Year =	0.9766	0.9008

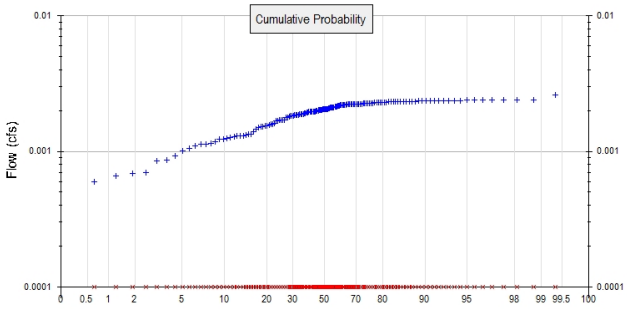
Annual Peaks

1902	0.4517	0.4268
1903	0.5007	0.4731
1904	0.5669	0.5355
1905	0.2549	0.2401
1906	0.2856	0.2685
1907	0.3801	0.3591
1908	0.3125	0.2953
1909	0.3864	0.3644
1910	0.3685	0.3482
1911	0.4135	0.3907
1912	1.0191	0.6475
1913	0.2990	0.2821
1914	1.2537	1.1844
1915	0.2571	0.2429
1916	0.4809	0.4544
1917	0.1818	0.1716
1918	0.3863	0.3639
1919	0.2356	0.2226
1920	0.3135	0.2962
1921	0.2691	0.2540
1922	0.4268	0.3986
1923	0.2974	0.2777
1924	0.5562	0.5255
1925	0.2335	0.2194
1926	0.4531	0.4281
1927	0.3691	0.3488
1928	0.2738	0.2587
1929	0.5464	0.5163

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 2.97
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 1.88
Total Impervious Area: 1.09

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.001934
5 year	0.002388
10 year	0.002598
25 year	0.002795
50 year	0.002905
100 year	0.002992

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0
5 year	0
10 year	0
25 year	0
50 year	0
100 year	0

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	**Predeveloped**	**Mitigated**
1902	0.002	0.000
1903	0.001	0.000
1904	0.002	0.000
1905	0.002	0.000
1906	0.001	0.000
1907	0.002	0.000
1908	0.002	0.000
1909	0.002	0.000
1910	0.002	0.000
1911	0.002	0.000

1912	0.002	0.000
1913	0.002	0.000
1914	0.002	0.000
1915	0.002	0.000
1916	0.002	0.000
1917	0.001	0.000
1918	0.002	0.000
1919	0.001	0.000
1920	0.002	0.000
1921	0.002	0.000
1922	0.002	0.000
1923	0.002	0.000
1924	0.001	0.000
1925	0.001	0.000
1926	0.002	0.000
1927	0.001	0.000
1928	0.002	0.000
1929	0.002	0.000
1930	0.002	0.000
1931	0.002	0.000
1932	0.002	0.000
1933	0.002	0.000
1934	0.002	0.000
1935	0.001	0.000
1936	0.002	0.000
1937	0.002	0.000
1938	0.002	0.000
1939	0.001	0.000
1940	0.002	0.000
1941	0.002	0.000
1942	0.002	0.000
1943	0.002	0.000
1944	0.002	0.000
1945	0.002	0.000
1946	0.002	0.000
1947	0.001	0.000
1948	0.002	0.000
1949	0.002	0.000
1950	0.001	0.000
1951	0.002	0.000
1952	0.002	0.000
1953	0.002	0.000
1954	0.002	0.000
1955	0.001	0.000
1956	0.001	0.000
1957	0.002	0.000
1958	0.002	0.000
1959	0.002	0.000
1960	0.002	0.000
1961	0.002	0.000
1962	0.002	0.000
1963	0.001	0.000
1964	0.001	0.000
1965	0.002	0.000
1966	0.002	0.000
1967	0.002	0.000
1968	0.002	0.000
1969	0.002	0.000

1970	0.002	0.000
1971	0.002	0.000
1972	0.002	0.000
1973	0.002	0.000
1974	0.002	0.000
1975	0.002	0.000
1976	0.002	0.000
1977	0.002	0.000
1978	0.002	0.000
1979	0.002	0.000
1980	0.002	0.000
1981	0.002	0.000
1982	0.001	0.000
1983	0.002	0.000
1984	0.002	0.000
1985	0.002	0.000
1986	0.002	0.000
1987	0.002	0.000
1988	0.002	0.000
1989	0.002	0.000
1990	0.002	0.000
1991	0.002	0.000
1992	0.002	0.000
1993	0.002	0.000
1994	0.002	0.000
1995	0.002	0.000
1996	0.002	0.000
1997	0.002	0.000
1998	0.002	0.000
1999	0.002	0.000
2000	0.002	0.000
2001	0.001	0.000
2002	0.002	0.000
2003	0.002	0.000
2004	0.002	0.000
2005	0.002	0.000
2006	0.002	0.000
2007	0.002	0.000
2008	0.002	0.000
2009	0.001	0.000
2010	0.002	0.000
2011	0.001	0.000
2012	0.002	0.000
2013	0.002	0.000
2014	0.002	0.000
2015	0.002	0.000
2016	0.001	0.000
2017	0.002	0.000
2018	0.002	0.000
2019	0.002	0.000
2020	0.002	0.000
2021	0.002	0.000
2022	0.001	0.000
2023	0.002	0.000
2024	0.002	0.000
2025	0.001	0.000
2026	0.002	0.000
2027	0.002	0.000

2028	0.001	0.000
2029	0.002	0.000
2030	0.002	0.000
2031	0.001	0.000
2032	0.001	0.000
2033	0.001	0.000
2034	0.002	0.000
2035	0.002	0.000
2036	0.001	0.000
2037	0.002	0.000
2038	0.002	0.000
2039	0.002	0.000
2040	0.002	0.000
2041	0.002	0.000
2042	0.002	0.000
2043	0.002	0.000
2044	0.002	0.000
2045	0.002	0.000
2046	0.002	0.000
2047	0.002	0.000
2048	0.002	0.000
2049	0.001	0.000
2050	0.002	0.000
2051	0.002	0.000
2052	0.002	0.000
2053	0.002	0.000
2054	0.002	0.000
2055	0.002	0.000
2056	0.001	0.000
2057	0.002	0.000
2058	0.002	0.000
2059	0.003	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.0026	0.0000
2	0.0024	0.0000
3	0.0024	0.0000
4	0.0024	0.0000
5	0.0024	0.0000
6	0.0024	0.0000
7	0.0024	0.0000
8	0.0024	0.0000
9	0.0024	0.0000
10	0.0024	0.0000
11	0.0024	0.0000
12	0.0024	0.0000
13	0.0024	0.0000
14	0.0024	0.0000
15	0.0024	0.0000
16	0.0024	0.0000
17	0.0023	0.0000
18	0.0023	0.0000
19	0.0023	0.0000
20	0.0023	0.0000
21	0.0023	0.0000
22	0.0023	0.0000

23	0.0023	0.0000
24	0.0023	0.0000
25	0.0023	0.0000
26	0.0023	0.0000
27	0.0023	0.0000
28	0.0023	0.0000
29	0.0023	0.0000
30	0.0023	0.0000
31	0.0023	0.0000
32	0.0023	0.0000
33	0.0023	0.0000
34	0.0023	0.0000
35	0.0023	0.0000
36	0.0023	0.0000
37	0.0023	0.0000
38	0.0023	0.0000
39	0.0023	0.0000
40	0.0023	0.0000
41	0.0023	0.0000
42	0.0023	0.0000
43	0.0023	0.0000
44	0.0022	0.0000
45	0.0022	0.0000
46	0.0022	0.0000
47	0.0022	0.0000
48	0.0022	0.0000
49	0.0022	0.0000
50	0.0022	0.0000
51	0.0022	0.0000
52	0.0022	0.0000
53	0.0022	0.0000
54	0.0022	0.0000
55	0.0022	0.0000
56	0.0022	0.0000
57	0.0022	0.0000
58	0.0022	0.0000
59	0.0022	0.0000
60	0.0022	0.0000
61	0.0022	0.0000
62	0.0022	0.0000
63	0.0022	0.0000
64	0.0022	0.0000
65	0.0021	0.0000
66	0.0021	0.0000
67	0.0021	0.0000
68	0.0021	0.0000
69	0.0021	0.0000
70	0.0021	0.0000
71	0.0021	0.0000
72	0.0021	0.0000
73	0.0021	0.0000
74	0.0021	0.0000
75	0.0021	0.0000
76	0.0021	0.0000
77	0.0021	0.0000
78	0.0020	0.0000
79	0.0020	0.0000
80	0.0020	0.0000

81	0.0020	0.0000
82	0.0020	0.0000
83	0.0020	0.0000
84	0.0020	0.0000
85	0.0020	0.0000
86	0.0020	0.0000
87	0.0020	0.0000
88	0.0020	0.0000
89	0.0020	0.0000
90	0.0020	0.0000
91	0.0020	0.0000
92	0.0020	0.0000
93	0.0020	0.0000
94	0.0020	0.0000
95	0.0020	0.0000
96	0.0020	0.0000
97	0.0019	0.0000
98	0.0019	0.0000
99	0.0019	0.0000
100	0.0019	0.0000
101	0.0019	0.0000
102	0.0019	0.0000
103	0.0019	0.0000
104	0.0019	0.0000
105	0.0019	0.0000
106	0.0019	0.0000
107	0.0019	0.0000
108	0.0018	0.0000
109	0.0018	0.0000
110	0.0018	0.0000
111	0.0018	0.0000
112	0.0018	0.0000
113	0.0018	0.0000
114	0.0018	0.0000
115	0.0018	0.0000
116	0.0017	0.0000
117	0.0017	0.0000
118	0.0017	0.0000
119	0.0017	0.0000
120	0.0017	0.0000
121	0.0017	0.0000
122	0.0016	0.0000
123	0.0016	0.0000
124	0.0016	0.0000
125	0.0016	0.0000
126	0.0015	0.0000
127	0.0015	0.0000
128	0.0015	0.0000
129	0.0015	0.0000
130	0.0015	0.0000
131	0.0015	0.0000
132	0.0014	0.0000
133	0.0013	0.0000
134	0.0013	0.0000
135	0.0013	0.0000
136	0.0013	0.0000
137	0.0013	0.0000
138	0.0013	0.0000

139	0.0013	0.0000
140	0.0013	0.0000
141	0.0012	0.0000
142	0.0012	0.0000
143	0.0012	0.0000
144	0.0012	0.0000
145	0.0011	0.0000
146	0.0011	0.0000
147	0.0011	0.0000
148	0.0011	0.0000
149	0.0010	0.0000
150	0.0010	0.0000
151	0.0009	0.0000
152	0.0009	0.0000
153	0.0008	0.0000
154	0.0007	0.0000
155	0.0007	0.0000
156	0.0007	0.0000
157	0.0006	0.0000
158	0.0005	0.0000

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0010	3719	0	0	Pass
0.0010	3553	0	0	Pass
0.0010	3387	0	0	Pass
0.0010	3246	0	0	Pass
0.0010	3128	0	0	Pass
0.0011	3015	0	0	Pass
0.0011	2889	0	0	Pass
0.0011	2784	0	0	Pass
0.0011	2688	0	0	Pass
0.0011	2593	0	0	Pass
0.0012	2487	0	0	Pass
0.0012	2409	0	0	Pass
0.0012	2318	0	0	Pass
0.0012	2227	0	0	Pass
0.0012	2150	0	0	Pass
0.0013	2079	0	0	Pass
0.0013	2020	0	0	Pass
0.0013	1952	0	0	Pass
0.0013	1889	0	0	Pass
0.0013	1829	0	0	Pass
0.0014	1759	0	0	Pass
0.0014	1694	0	0	Pass
0.0014	1634	0	0	Pass
0.0014	1570	0	0	Pass
0.0014	1492	0	0	Pass
0.0015	1432	0	0	Pass
0.0015	1343	0	0	Pass
0.0015	1299	0	0	Pass
0.0015	1244	0	0	Pass
0.0015	1204	0	0	Pass
0.0016	1159	0	0	Pass
0.0016	1120	0	0	Pass
0.0016	1055	0	0	Pass
0.0016	1009	0	0	Pass
0.0016	963	0	0	Pass
0.0017	921	0	0	Pass
0.0017	900	0	0	Pass
0.0017	855	0	0	Pass
0.0017	814	0	0	Pass
0.0017	789	0	0	Pass
0.0018	741	0	0	Pass
0.0018	694	0	0	Pass
0.0018	679	0	0	Pass
0.0018	648	0	0	Pass
0.0018	613	0	0	Pass
0.0018	568	0	0	Pass
0.0019	544	0	0	Pass
0.0019	517	0	0	Pass
0.0019	490	0	0	Pass
0.0019	473	0	0	Pass
0.0019	439	0	0	Pass
0.0020	398	0	0	Pass
0.0020	371	0	0	Pass

0.0020	350	0	0	Pass
0.0020	328	0	0	Pass
0.0020	301	0	0	Pass
0.0021	279	0	0	Pass
0.0021	267	0	0	Pass
0.0021	245	0	0	Pass
0.0021	232	0	0	Pass
0.0021	209	0	0	Pass
0.0022	197	0	0	Pass
0.0022	185	0	0	Pass
0.0022	169	0	0	Pass
0.0022	153	0	0	Pass
0.0022	138	0	0	Pass
0.0023	118	0	0	Pass
0.0023	107	0	0	Pass
0.0023	88	0	0	Pass
0.0023	74	0	0	Pass
0.0023	53	0	0	Pass
0.0024	32	0	0	Pass
0.0024	11	0	0	Pass
0.0024	1	0	0	Pass
0.0024	1	0	0	Pass
0.0024	1	0	0	Pass
0.0025	1	0	0	Pass
0.0025	1	0	0	Pass
0.0025	1	0	0	Pass
0.0025	1	0	0	Pass
0.0025	1	0	0	Pass
0.0026	1	0	0	Pass
0.0026	1	0	0	Pass
0.0026	1	0	0	Pass
0.0026	1	0	0	Pass
0.0026	0	0	0	Pass
0.0027	0	0	0	Pass
0.0027	0	0	0	Pass
0.0027	0	0	0	Pass
0.0027	0	0	0	Pass
0.0027	0	0	0	Pass
0.0027	0	0	0	Pass
0.0028	0	0	0	Pass
0.0028	0	0	0	Pass
0.0028	0	0	0	Pass
0.0028	0	0	0	Pass
0.0028	0	0	0	Pass
0.0029	0	0	0	Pass
0.0029	0	0	0	Pass
0.0029	0	0	0	Pass

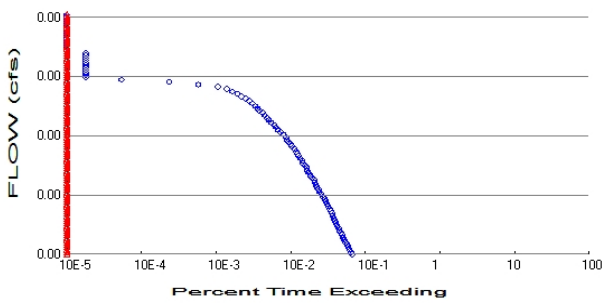
Water Quality

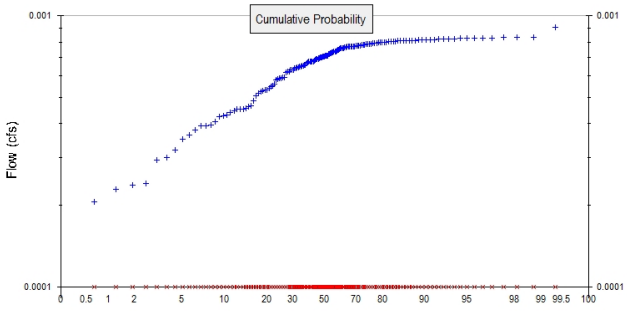
Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0.1175 acre-feet
On-line facility target flow:	0.1621 cfs.
Adjusted for 15 min:	0.1621 cfs.
Off-line facility target flow:	0.0934 cfs.
Adjusted for 15 min:	0.0934 cfs.



POC 2





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #2
Total Pervious Area: 1.03
Total Impervious Area: 0

Mitigated Landuse Totals for POC #2
Total Pervious Area: 0
Total Impervious Area: 1.03

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #2

Return Period	**Flow(cfs)**
2 year	0.000671
5 year	0.000828
10 year	0.000901
25 year	0.000969
50 year	0.001007
100 year	0.001038

Flow Frequency Return Periods for Mitigated. POC #2

Return Period	**Flow(cfs)**
2 year	0
5 year	0
10 year	0
25 year	0
50 year	0
100 year	0

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #2

Year	**Predeveloped**	**Mitigated**
1902	0.001	0.000
1903	0.000	0.000
1904	0.001	0.000
1905	0.001	0.000
1906	0.000	0.000
1907	0.001	0.000
1908	0.001	0.000
1909	0.001	0.000
1910	0.001	0.000
1911	0.001	0.000
1912	0.001	0.000

1913	0.001	0.000
1914	0.001	0.000
1915	0.001	0.000
1916	0.001	0.000
1917	0.000	0.000
1918	0.001	0.000
1919	0.000	0.000
1920	0.001	0.000
1921	0.001	0.000
1922	0.001	0.000
1923	0.001	0.000
1924	0.000	0.000
1925	0.000	0.000
1926	0.001	0.000
1927	0.000	0.000
1928	0.001	0.000
1929	0.001	0.000
1930	0.001	0.000
1931	0.001	0.000
1932	0.001	0.000
1933	0.001	0.000
1934	0.001	0.000
1935	0.000	0.000
1936	0.001	0.000
1937	0.001	0.000
1938	0.001	0.000
1939	0.000	0.000
1940	0.001	0.000
1941	0.001	0.000
1942	0.001	0.000
1943	0.001	0.000
1944	0.001	0.000
1945	0.001	0.000
1946	0.001	0.000
1947	0.000	0.000
1948	0.001	0.000
1949	0.001	0.000
1950	0.000	0.000
1951	0.001	0.000
1952	0.001	0.000
1953	0.001	0.000
1954	0.001	0.000
1955	0.000	0.000
1956	0.000	0.000
1957	0.001	0.000
1958	0.001	0.000
1959	0.001	0.000
1960	0.001	0.000
1961	0.001	0.000
1962	0.001	0.000
1963	0.000	0.000
1964	0.000	0.000
1965	0.001	0.000
1966	0.001	0.000
1967	0.001	0.000
1968	0.001	0.000
1969	0.001	0.000
1970	0.001	0.000

1971	0.001	0.000
1972	0.001	0.000
1973	0.001	0.000
1974	0.001	0.000
1975	0.001	0.000
1976	0.001	0.000
1977	0.001	0.000
1978	0.001	0.000
1979	0.001	0.000
1980	0.001	0.000
1981	0.001	0.000
1982	0.000	0.000
1983	0.001	0.000
1984	0.001	0.000
1985	0.001	0.000
1986	0.001	0.000
1987	0.001	0.000
1988	0.001	0.000
1989	0.001	0.000
1990	0.001	0.000
1991	0.001	0.000
1992	0.001	0.000
1993	0.001	0.000
1994	0.001	0.000
1995	0.001	0.000
1996	0.001	0.000
1997	0.001	0.000
1998	0.001	0.000
1999	0.001	0.000
2000	0.001	0.000
2001	0.000	0.000
2002	0.001	0.000
2003	0.001	0.000
2004	0.001	0.000
2005	0.001	0.000
2006	0.001	0.000
2007	0.001	0.000
2008	0.001	0.000
2009	0.001	0.000
2010	0.001	0.000
2011	0.000	0.000
2012	0.001	0.000
2013	0.001	0.000
2014	0.001	0.000
2015	0.001	0.000
2016	0.000	0.000
2017	0.001	0.000
2018	0.001	0.000
2019	0.001	0.000
2020	0.001	0.000
2021	0.001	0.000
2022	0.000	0.000
2023	0.001	0.000
2024	0.001	0.000
2025	0.000	0.000
2026	0.001	0.000
2027	0.001	0.000
2028	0.000	0.000

2029	0.001	0.000
2030	0.001	0.000
2031	0.000	0.000
2032	0.000	0.000
2033	0.000	0.000
2034	0.001	0.000
2035	0.001	0.000
2036	0.000	0.000
2037	0.001	0.000
2038	0.001	0.000
2039	0.001	0.000
2040	0.001	0.000
2041	0.001	0.000
2042	0.001	0.000
2043	0.001	0.000
2044	0.001	0.000
2045	0.001	0.000
2046	0.001	0.000
2047	0.001	0.000
2048	0.001	0.000
2049	0.001	0.000
2050	0.001	0.000
2051	0.001	0.000
2052	0.001	0.000
2053	0.001	0.000
2054	0.001	0.000
2055	0.001	0.000
2056	0.000	0.000
2057	0.001	0.000
2058	0.001	0.000
2059	0.001	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #2

Rank	Predeveloped	Mitigated
1	0.0009	0.0000
2	0.0008	0.0000
3	0.0008	0.0000
4	0.0008	0.0000
5	0.0008	0.0000
6	0.0008	0.0000
7	0.0008	0.0000
8	0.0008	0.0000
9	0.0008	0.0000
10	0.0008	0.0000
11	0.0008	0.0000
12	0.0008	0.0000
13	0.0008	0.0000
14	0.0008	0.0000
15	0.0008	0.0000
16	0.0008	0.0000
17	0.0008	0.0000
18	0.0008	0.0000
19	0.0008	0.0000
20	0.0008	0.0000
21	0.0008	0.0000
22	0.0008	0.0000
23	0.0008	0.0000

24	0.0008	0.0000
25	0.0008	0.0000
26	0.0008	0.0000
27	0.0008	0.0000
28	0.0008	0.0000
29	0.0008	0.0000
30	0.0008	0.0000
31	0.0008	0.0000
32	0.0008	0.0000
33	0.0008	0.0000
34	0.0008	0.0000
35	0.0008	0.0000
36	0.0008	0.0000
37	0.0008	0.0000
38	0.0008	0.0000
39	0.0008	0.0000
40	0.0008	0.0000
41	0.0008	0.0000
42	0.0008	0.0000
43	0.0008	0.0000
44	0.0008	0.0000
45	0.0008	0.0000
46	0.0008	0.0000
47	0.0008	0.0000
48	0.0008	0.0000
49	0.0008	0.0000
50	0.0008	0.0000
51	0.0008	0.0000
52	0.0008	0.0000
53	0.0008	0.0000
54	0.0008	0.0000
55	0.0008	0.0000
56	0.0008	0.0000
57	0.0008	0.0000
58	0.0008	0.0000
59	0.0008	0.0000
60	0.0008	0.0000
61	0.0008	0.0000
62	0.0008	0.0000
63	0.0008	0.0000
64	0.0007	0.0000
65	0.0007	0.0000
66	0.0007	0.0000
67	0.0007	0.0000
68	0.0007	0.0000
69	0.0007	0.0000
70	0.0007	0.0000
71	0.0007	0.0000
72	0.0007	0.0000
73	0.0007	0.0000
74	0.0007	0.0000
75	0.0007	0.0000
76	0.0007	0.0000
77	0.0007	0.0000
78	0.0007	0.0000
79	0.0007	0.0000
80	0.0007	0.0000
81	0.0007	0.0000

82	0.0007	0.0000
83	0.0007	0.0000
84	0.0007	0.0000
85	0.0007	0.0000
86	0.0007	0.0000
87	0.0007	0.0000
88	0.0007	0.0000
89	0.0007	0.0000
90	0.0007	0.0000
91	0.0007	0.0000
92	0.0007	0.0000
93	0.0007	0.0000
94	0.0007	0.0000
95	0.0007	0.0000
96	0.0007	0.0000
97	0.0007	0.0000
98	0.0007	0.0000
99	0.0007	0.0000
100	0.0007	0.0000
101	0.0007	0.0000
102	0.0007	0.0000
103	0.0007	0.0000
104	0.0007	0.0000
105	0.0007	0.0000
106	0.0006	0.0000
107	0.0006	0.0000
108	0.0006	0.0000
109	0.0006	0.0000
110	0.0006	0.0000
111	0.0006	0.0000
112	0.0006	0.0000
113	0.0006	0.0000
114	0.0006	0.0000
115	0.0006	0.0000
116	0.0006	0.0000
117	0.0006	0.0000
118	0.0006	0.0000
119	0.0006	0.0000
120	0.0006	0.0000
121	0.0006	0.0000
122	0.0006	0.0000
123	0.0006	0.0000
124	0.0005	0.0000
125	0.0005	0.0000
126	0.0005	0.0000
127	0.0005	0.0000
128	0.0005	0.0000
129	0.0005	0.0000
130	0.0005	0.0000
131	0.0005	0.0000
132	0.0005	0.0000
133	0.0005	0.0000
134	0.0005	0.0000
135	0.0005	0.0000
136	0.0005	0.0000
137	0.0005	0.0000
138	0.0005	0.0000
139	0.0004	0.0000

140	0.0004	0.0000
141	0.0004	0.0000
142	0.0004	0.0000
143	0.0004	0.0000
144	0.0004	0.0000
145	0.0004	0.0000
146	0.0004	0.0000
147	0.0004	0.0000
148	0.0004	0.0000
149	0.0004	0.0000
150	0.0003	0.0000
151	0.0003	0.0000
152	0.0003	0.0000
153	0.0003	0.0000
154	0.0002	0.0000
155	0.0002	0.0000
156	0.0002	0.0000
157	0.0002	0.0000
158	0.0002	0.0000

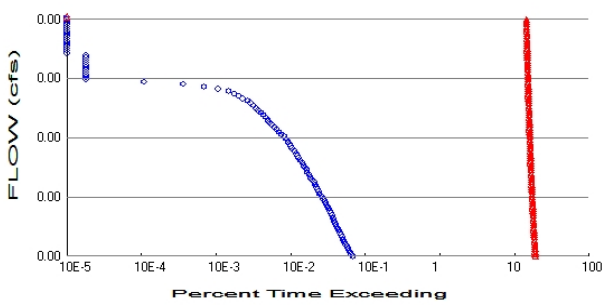
Duration Flows

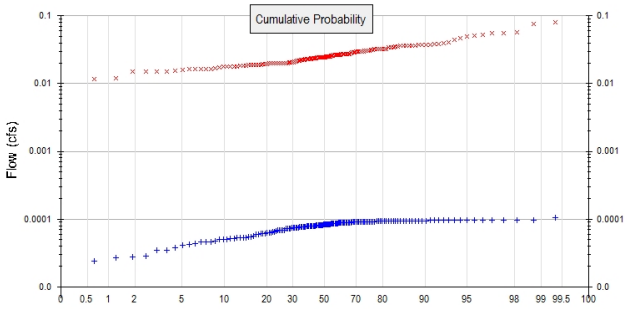
The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0003	3722	0	0	Pass
0.0003	3551	0	0	Pass
0.0003	3383	0	0	Pass
0.0004	3263	0	0	Pass
0.0004	3137	0	0	Pass
0.0004	3015	0	0	Pass
0.0004	2887	0	0	Pass
0.0004	2792	0	0	Pass
0.0004	2690	0	0	Pass
0.0004	2597	0	0	Pass
0.0004	2487	0	0	Pass
0.0004	2406	0	0	Pass
0.0004	2321	0	0	Pass
0.0004	2232	0	0	Pass
0.0004	2153	0	0	Pass
0.0004	2079	0	0	Pass
0.0004	2018	0	0	Pass
0.0005	1956	0	0	Pass
0.0005	1892	0	0	Pass
0.0005	1829	0	0	Pass
0.0005	1759	0	0	Pass
0.0005	1698	0	0	Pass
0.0005	1637	0	0	Pass
0.0005	1574	0	0	Pass
0.0005	1492	0	0	Pass
0.0005	1431	0	0	Pass
0.0005	1355	0	0	Pass
0.0005	1303	0	0	Pass
0.0005	1246	0	0	Pass
0.0005	1204	0	0	Pass
0.0005	1164	0	0	Pass
0.0005	1128	0	0	Pass
0.0006	1057	0	0	Pass
0.0006	1010	0	0	Pass
0.0006	963	0	0	Pass
0.0006	924	0	0	Pass
0.0006	905	0	0	Pass
0.0006	858	0	0	Pass
0.0006	814	0	0	Pass
0.0006	788	0	0	Pass
0.0006	752	0	0	Pass
0.0006	696	0	0	Pass
0.0006	679	0	0	Pass
0.0006	648	0	0	Pass
0.0006	619	0	0	Pass
0.0006	568	0	0	Pass
0.0006	546	0	0	Pass
0.0007	518	0	0	Pass
0.0007	490	0	0	Pass
0.0007	475	0	0	Pass
0.0007	441	0	0	Pass
0.0007	400	0	0	Pass
0.0007	371	0	0	Pass

0.0007	350	0	0	Pass
0.0007	332	0	0	Pass
0.0007	302	0	0	Pass
0.0007	280	0	0	Pass
0.0007	267	0	0	Pass
0.0007	249	0	0	Pass
0.0007	233	0	0	Pass
0.0007	211	0	0	Pass
0.0007	199	0	0	Pass
0.0008	185	0	0	Pass
0.0008	171	0	0	Pass
0.0008	154	0	0	Pass
0.0008	139	0	0	Pass
0.0008	121	0	0	Pass
0.0008	107	0	0	Pass
0.0008	92	0	0	Pass
0.0008	77	0	0	Pass
0.0008	58	0	0	Pass
0.0008	32	0	0	Pass
0.0008	13	0	0	Pass
0.0008	3	0	0	Pass
0.0008	1	0	0	Pass
0.0008	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	1	0	0	Pass
0.0009	0	0	0	Pass
0.0009	0	0	0	Pass
0.0009	0	0	0	Pass
0.0009	0	0	0	Pass
0.0009	0	0	0	Pass
0.0009	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass
0.0010	0	0	0	Pass

POC 3





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #3
Total Pervious Area: 0.12
Total Impervious Area: 0

Mitigated Landuse Totals for POC #3
Total Pervious Area: 0.07
Total Impervious Area: 0.07

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #3

Return Period	**Flow(cfs)**
2 year	0.000078
5 year	0.000096
10 year	0.000105
25 year	0.000113
50 year	0.000117
100 year	0.000121

Flow Frequency Return Periods for Mitigated. POC #3

Return Period	**Flow(cfs)**
2 year	0.024642
5 year	0.033168
10 year	0.039379
25 year	0.047893
50 year	0.054736
100 year	0.062023

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #3

Year	**Predeveloped**	**Mitigated**
1902	0.000	0.029
1903	0.000	0.032
1904	0.000	0.036
1905	0.000	0.016
1906	0.000	0.018
1907	0.000	0.024
1908	0.000	0.020
1909	0.000	0.025
1910	0.000	0.024
1911	0.000	0.027
1912	0.000	0.056

1913	0.000	0.019
1914	0.000	0.081
1915	0.000	0.017
1916	0.000	0.031
1917	0.000	0.012
1918	0.000	0.025
1919	0.000	0.015
1920	0.000	0.020
1921	0.000	0.017
1922	0.000	0.027
1923	0.000	0.019
1924	0.000	0.036
1925	0.000	0.015
1926	0.000	0.029
1927	0.000	0.024
1928	0.000	0.018
1929	0.000	0.035
1930	0.000	0.037
1931	0.000	0.018
1932	0.000	0.019
1933	0.000	0.019
1934	0.000	0.031
1935	0.000	0.016
1936	0.000	0.023
1937	0.000	0.034
1938	0.000	0.017
1939	0.000	0.021
1940	0.000	0.037
1941	0.000	0.036
1942	0.000	0.027
1943	0.000	0.027
1944	0.000	0.039
1945	0.000	0.030
1946	0.000	0.023
1947	0.000	0.018
1948	0.000	0.025
1949	0.000	0.038
1950	0.000	0.021
1951	0.000	0.033
1952	0.000	0.037
1953	0.000	0.034
1954	0.000	0.020
1955	0.000	0.019
1956	0.000	0.018
1957	0.000	0.020
1958	0.000	0.026
1959	0.000	0.027
1960	0.000	0.020
1961	0.000	0.056
1962	0.000	0.024
1963	0.000	0.018
1964	0.000	0.052
1965	0.000	0.024
1966	0.000	0.019
1967	0.000	0.027
1968	0.000	0.023
1969	0.000	0.021
1970	0.000	0.023

1971	0.000	0.023
1972	0.000	0.075
1973	0.000	0.044
1974	0.000	0.032
1975	0.000	0.033
1976	0.000	0.035
1977	0.000	0.015
1978	0.000	0.027
1979	0.000	0.026
1980	0.000	0.026
1981	0.000	0.025
1982	0.000	0.020
1983	0.000	0.027
1984	0.000	0.027
1985	0.000	0.031
1986	0.000	0.016
1987	0.000	0.027
1988	0.000	0.016
1989	0.000	0.015
1990	0.000	0.020
1991	0.000	0.029
1992	0.000	0.028
1993	0.000	0.032
1994	0.000	0.022
1995	0.000	0.017
1996	0.000	0.023
1997	0.000	0.020
1998	0.000	0.024
1999	0.000	0.026
2000	0.000	0.023
2001	0.000	0.019
2002	0.000	0.034
2003	0.000	0.020
2004	0.000	0.030
2005	0.000	0.057
2006	0.000	0.027
2007	0.000	0.030
2008	0.000	0.024
2009	0.000	0.019
2010	0.000	0.024
2011	0.000	0.025
2012	0.000	0.023
2013	0.000	0.022
2014	0.000	0.021
2015	0.000	0.036
2016	0.000	0.022
2017	0.000	0.036
2018	0.000	0.024
2019	0.000	0.032
2020	0.000	0.026
2021	0.000	0.022
2022	0.000	0.037
2023	0.000	0.046
2024	0.000	0.050
2025	0.000	0.024
2026	0.000	0.026
2027	0.000	0.030
2028	0.000	0.012

2029	0.000	0.019
2030	0.000	0.038
2031	0.000	0.012
2032	0.000	0.020
2033	0.000	0.025
2034	0.000	0.020
2035	0.000	0.025
2036	0.000	0.020
2037	0.000	0.027
2038	0.000	0.025
2039	0.000	0.051
2040	0.000	0.020
2041	0.000	0.025
2042	0.000	0.029
2043	0.000	0.032
2044	0.000	0.022
2045	0.000	0.018
2046	0.000	0.020
2047	0.000	0.025
2048	0.000	0.020
2049	0.000	0.030
2050	0.000	0.022
2051	0.000	0.032
2052	0.000	0.024
2053	0.000	0.020
2054	0.000	0.041
2055	0.000	0.025
2056	0.000	0.032
2057	0.000	0.016
2058	0.000	0.030
2059	0.000	0.038

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #3

Rank	Predeveloped	Mitigated
1	0.0001	0.0805
2	0.0001	0.0752
3	0.0001	0.0566
4	0.0001	0.0562
5	0.0001	0.0557
6	0.0001	0.0517
7	0.0001	0.0510
8	0.0001	0.0502
9	0.0001	0.0463
10	0.0001	0.0436
11	0.0001	0.0407
12	0.0001	0.0390
13	0.0001	0.0380
14	0.0001	0.0380
15	0.0001	0.0377
16	0.0001	0.0375
17	0.0001	0.0374
18	0.0001	0.0368
19	0.0001	0.0367
20	0.0001	0.0364
21	0.0001	0.0364
22	0.0001	0.0360
23	0.0001	0.0359

24	0.0001	0.0357
25	0.0001	0.0351
26	0.0001	0.0348
27	0.0001	0.0340
28	0.0001	0.0340
29	0.0001	0.0339
30	0.0001	0.0328
31	0.0001	0.0325
32	0.0001	0.0323
33	0.0001	0.0322
34	0.0001	0.0321
35	0.0001	0.0320
36	0.0001	0.0320
37	0.0001	0.0316
38	0.0001	0.0316
39	0.0001	0.0309
40	0.0001	0.0308
41	0.0001	0.0307
42	0.0001	0.0302
43	0.0001	0.0301
44	0.0001	0.0297
45	0.0001	0.0296
46	0.0001	0.0295
47	0.0001	0.0295
48	0.0001	0.0295
49	0.0001	0.0292
50	0.0001	0.0291
51	0.0001	0.0290
52	0.0001	0.0280
53	0.0001	0.0274
54	0.0001	0.0274
55	0.0001	0.0273
56	0.0001	0.0273
57	0.0001	0.0271
58	0.0001	0.0271
59	0.0001	0.0271
60	0.0001	0.0270
61	0.0001	0.0267
62	0.0001	0.0266
63	0.0001	0.0265
64	0.0001	0.0265
65	0.0001	0.0265
66	0.0001	0.0265
67	0.0001	0.0265
68	0.0001	0.0262
69	0.0001	0.0261
70	0.0001	0.0257
71	0.0001	0.0254
72	0.0001	0.0254
73	0.0001	0.0253
74	0.0001	0.0253
75	0.0001	0.0249
76	0.0001	0.0248
77	0.0001	0.0248
78	0.0001	0.0246
79	0.0001	0.0246
80	0.0001	0.0246
81	0.0001	0.0245

82	0.0001	0.0245
83	0.0001	0.0244
84	0.0001	0.0243
85	0.0001	0.0241
86	0.0001	0.0241
87	0.0001	0.0241
88	0.0001	0.0240
89	0.0001	0.0240
90	0.0001	0.0239
91	0.0001	0.0237
92	0.0001	0.0237
93	0.0001	0.0235
94	0.0001	0.0234
95	0.0001	0.0232
96	0.0001	0.0230
97	0.0001	0.0229
98	0.0001	0.0229
99	0.0001	0.0228
100	0.0001	0.0228
101	0.0001	0.0224
102	0.0001	0.0224
103	0.0001	0.0222
104	0.0001	0.0221
105	0.0001	0.0220
106	0.0001	0.0219
107	0.0001	0.0215
108	0.0001	0.0214
109	0.0001	0.0209
110	0.0001	0.0206
111	0.0001	0.0205
112	0.0001	0.0205
113	0.0001	0.0203
114	0.0001	0.0202
115	0.0001	0.0201
116	0.0001	0.0201
117	0.0001	0.0200
118	0.0001	0.0200
119	0.0001	0.0199
120	0.0001	0.0199
121	0.0001	0.0199
122	0.0001	0.0199
123	0.0001	0.0198
124	0.0001	0.0197
125	0.0001	0.0197
126	0.0001	0.0195
127	0.0001	0.0194
128	0.0001	0.0192
129	0.0001	0.0191
130	0.0001	0.0191
131	0.0001	0.0190
132	0.0001	0.0189
133	0.0001	0.0187
134	0.0001	0.0186
135	0.0001	0.0186
136	0.0001	0.0183
137	0.0001	0.0183
138	0.0001	0.0180
139	0.0001	0.0179

140	0.0001	0.0178
141	0.0001	0.0177
142	0.0000	0.0176
143	0.0000	0.0173
144	0.0000	0.0170
145	0.0000	0.0166
146	0.0000	0.0165
147	0.0000	0.0164
148	0.0000	0.0163
149	0.0000	0.0163
150	0.0000	0.0158
151	0.0000	0.0156
152	0.0000	0.0151
153	0.0000	0.0150
154	0.0000	0.0149
155	0.0000	0.0149
156	0.0000	0.0120
157	0.0000	0.0117
158	0.0000	0.0116

Appendix
Predeveloped Schematic



Mitigated Schematic



Disclaimer

Legal Notice

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages. Software Copyright © by : Clear Creek Solutions, Inc. 2005-2017; All Rights Reserved.

Clear Creek Solutions, Inc.
6200 Capitol Blvd. Ste F
Olympia, WA. 98501
Toll Free 1(866)943-0304
Local (360)943-0304

www.clearcreeksolutions.com

CONDITIONAL USE PERMIT

for

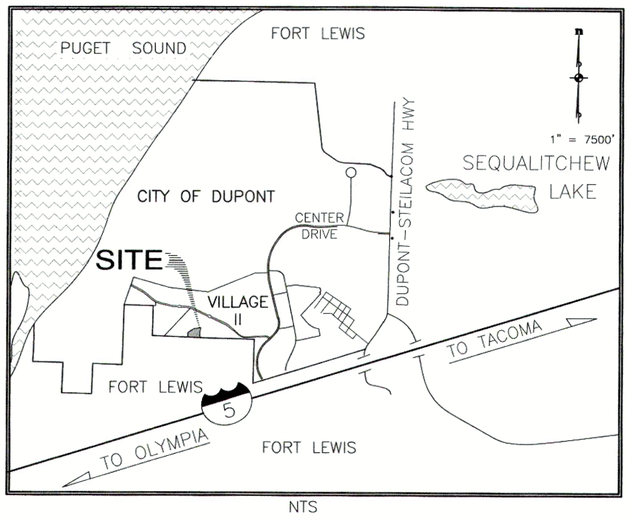
MEMORY CARE FACILITY

prepared for

CAREAGE DEVELOPMENT COMPANY LLC.

P.O. BOX 1969
GIG HARBOR, WA 98335

Vicinity Map



NTS

prepared by

ESM

33400 8th Ave S, Suite 205
FEDERAL WAY, WASHINGTON 98003
Phone: (253) 838-6113

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 24097 — REGISTERED PROFESSIONAL ENGINEER
9/1/17

09/01/2017
ESM JOB NO. 845-021-017
SHEET 1 OF 12

Sheet Index

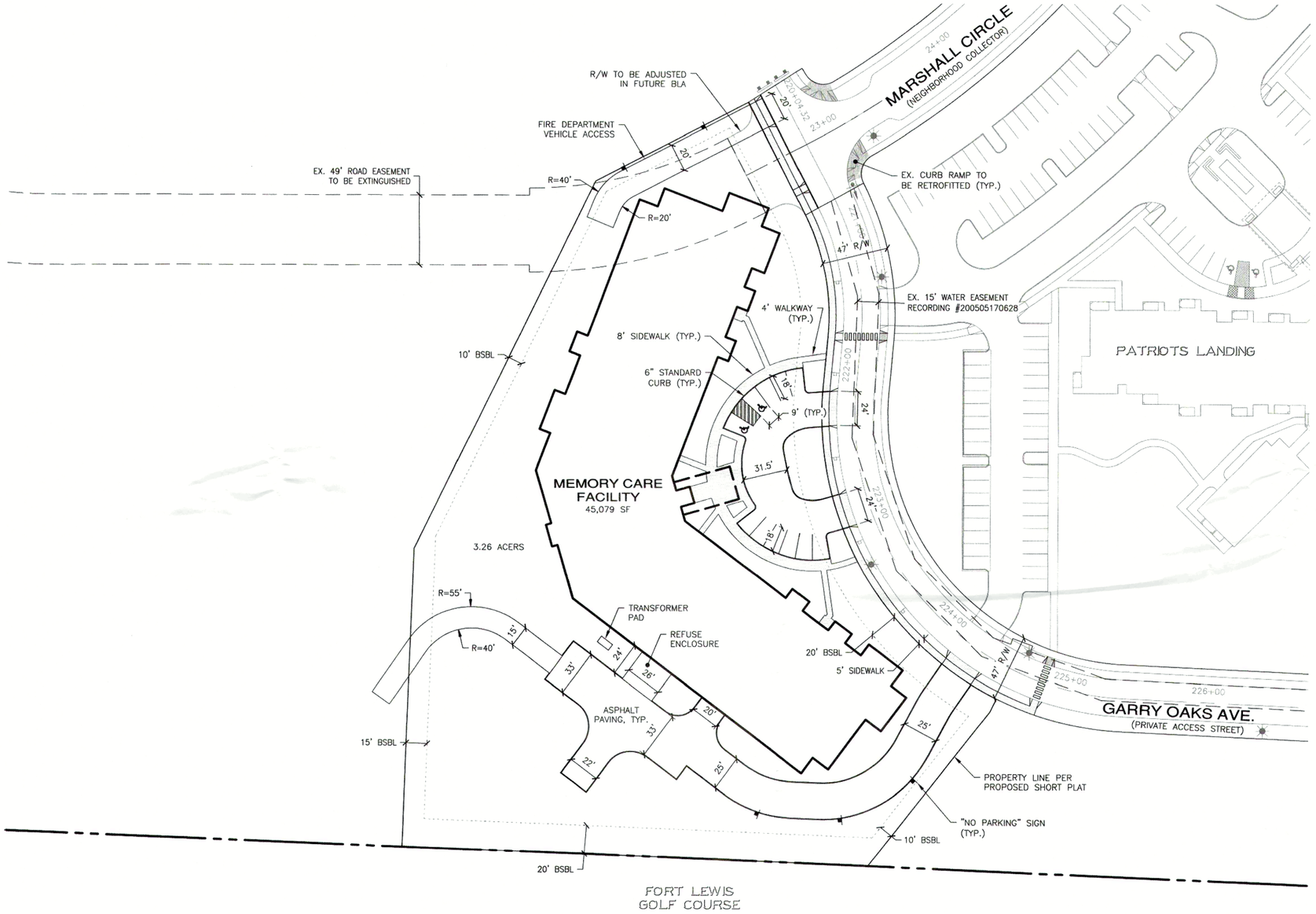
SHEET NO.	DRAWING NO.	DESCRIPTION
1	COVER	COVER SHEET
2	ST-01	PRELIMINARY SITE PLAN
3 – 5	UT-01 – UT-03	PRELIMINARY STORM DRAINAGE AND UTILITY PLAN
6 – 7	GR-01 – GR-02	PRELIMINARY GRADING PLAN
8	DT-01	FIRE TRUCK TURNING/SIGHT DISTANCE
9 – 10	LA-01 – LA-02	PRELIMINARY LANDSCAPE PLAN
11 – 12	TR-01 – TR-02	TREE RETENTION PLAN

RECEIVED
SEP 01 2017
CITY OF DUPONT

File: \\Esm8\eng\ESM-JOBS\845\021\017\Conditional Use\Plots\Cv-01.dwg
Plotted: 8/31/2017 9:34 AM
Plotted By: Carl Roberts

Attachment 1o

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



n

SCALE: 1" = 40'

40 20 0 40 80

SITE INFORMATION

PARCEL NO.: 0119345001

ACREAGE: 3.26

REVISIONS		
NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 48111 — REGISTERED PROFESSIONAL ENGINEER — 9/11/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-2900
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

PRELIMINARY SITE PLAN

CITY OF DUPONT WASHINGTON

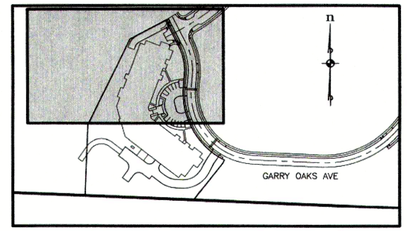
JOB NO.:	845-021-017
DWG. NAME:	ST-01
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

ST-01

2 OF 12 SHEETS

Plot: \\Esm3\Jmgr\ESM~JOBS\845\021\017\Conditional Use\Plots\ST-01.dwg
Plotted: 9/27/2017 9:39 AM Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

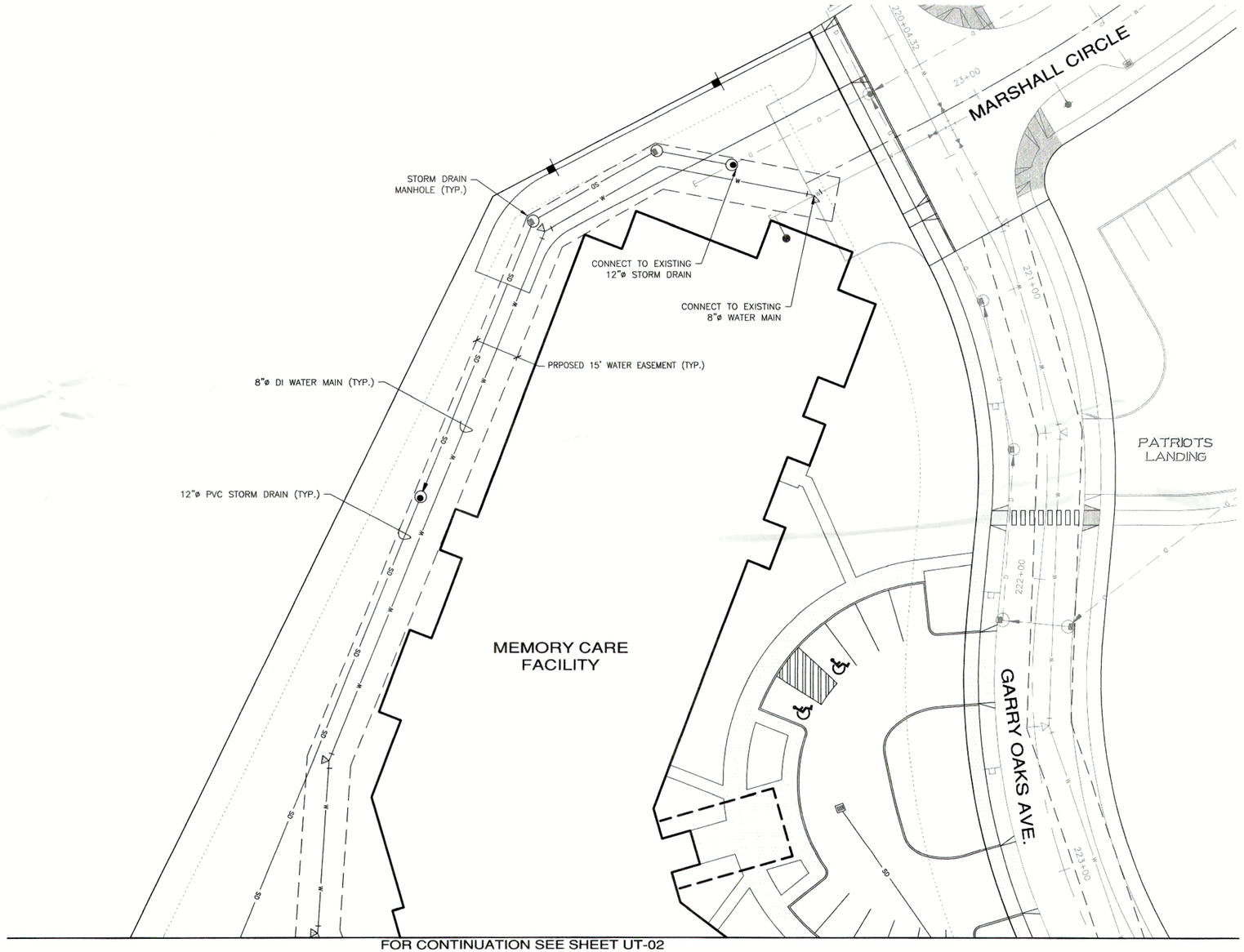


KEY MAP

SCALE: 1" = 20'

20 10 0 20 40

n



FOR CONTINUATION SEE SHEET UT-02

REVISIONS		
NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 21611 — REGISTERED PROFESSIONAL ENGINEER

9/1/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT — STORM DRAINAGE AND UTILITY PLAN — WASHINGTON

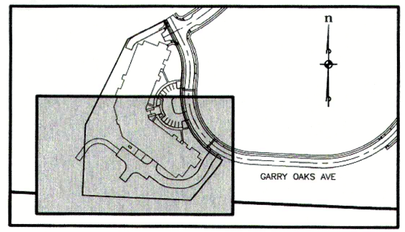
JOB NO.:	845-021-017
DWG. NAME:	UT-01
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

UT-01

3 OF 12 SHEETS

File: \\Esm9\engr\ESM-JOBS\845\021\017\Conditional Use\Plots\UT-01.dwg
Plotted: 8/31/2017 9:49 AM Plotted By: Cori Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



KEY MAP

SCALE: 1" = 20'

20 10 0 20 40

n

FOR CONTINUATION SEE SHEET UT-01

MEMORY CARE FACILITY

PROPOSED 15' WATER EASEMENT (TYP.)

STORM DRAIN CATCH BASIN (TYP.)

8"ø DI WATER MAIN (TYP.)

ROOFTOP INFILTRATION TRENCH (TYP.)

12"ø PVC STORM DRAIN (TYP.)

FIRE HYDRANT (TYP.)

3" PVC SEWER FORCE MAIN (TYP.)

GARRY OAKS AVE.

PATRIOTS LANDING

DOUBLE DETECTOR CHECK VALVE ASSEMBLY VAULT

FIRE DEPARTMENT CONNECTION

CONNECT TO EXISTING WATER MAIN

SANITARY SEWER MANHOLE

SANITARY SEWER EASEMENT (TYP.)

8"ø PVC SEWER MAIN (TYP.)

FOR CONTINUATION SEE SHEET UT-03

FORT LEWIS
GOLF COURSE

REVISIONS

NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
9/1/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9800
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning | Landscape Architecture | Project Management | Public Works

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT WASHINGTON

STORM DRAINAGE AND UTILITY PLAN

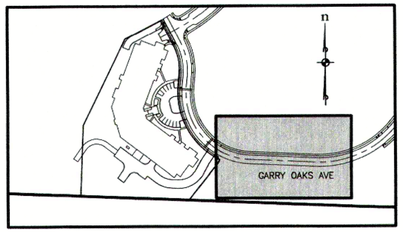
JOB NO.:	845-021-017
DWG. NAME:	UT-02
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

UT-02

4 OF 12 SHEETS

File: \\Esm8\engr\ESM-JOBS\845\021\017\Conditional Use\Plots\UT-02.dwg
Plotted: 8/31/2017 9:56 AM
Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

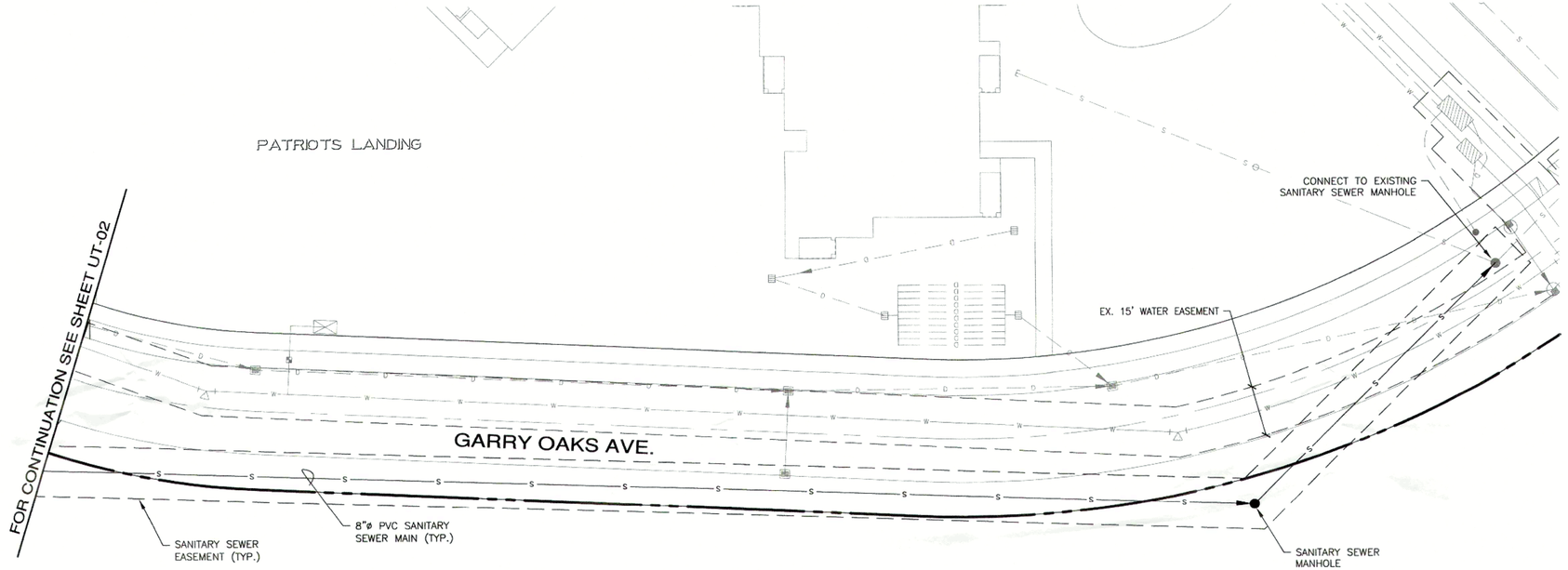


KEY MAP

SCALE: 1" = 20'

20 10 0 20 40

n



FORT LEWIS
GOLF COURSE

REVISIONS

NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 40111 — REGISTERED PROFESSIONAL ENGINEER — 9/1/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-8900
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT — WASHINGTON

STORM DRAINAGE AND UTILITY PLAN

JOB NO.:	845-021-017
DWG. NAME:	UT-03
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

UT-03

5 OF 12 SHEETS

File: \\Esm8\engr\ESM-JOBS\845\021\017\Conditional Use\Plat\UT-03.dwg
Plotted: 8/31/2017 10:01 AM
Plotted By: Carl Roberts

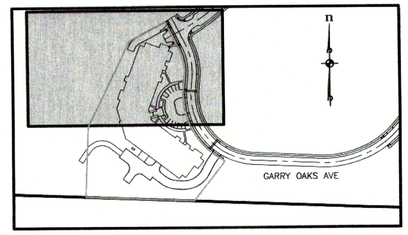
A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

LEGEND

- 218 EXISTING CONTOUR
- 218 PROPOSED CONTOUR
- CLEARING LIMITS
- DAYLIGHT LINE

APPROXIMATE EARTHWORK QUANTITIES

CUT	=	16,500 cu yds.
FILL	=	5,700 cu yds.
TOTAL	=	10,800 cu yds. (CUT)
STRIPPING (6")	=	3,400 cu yds.

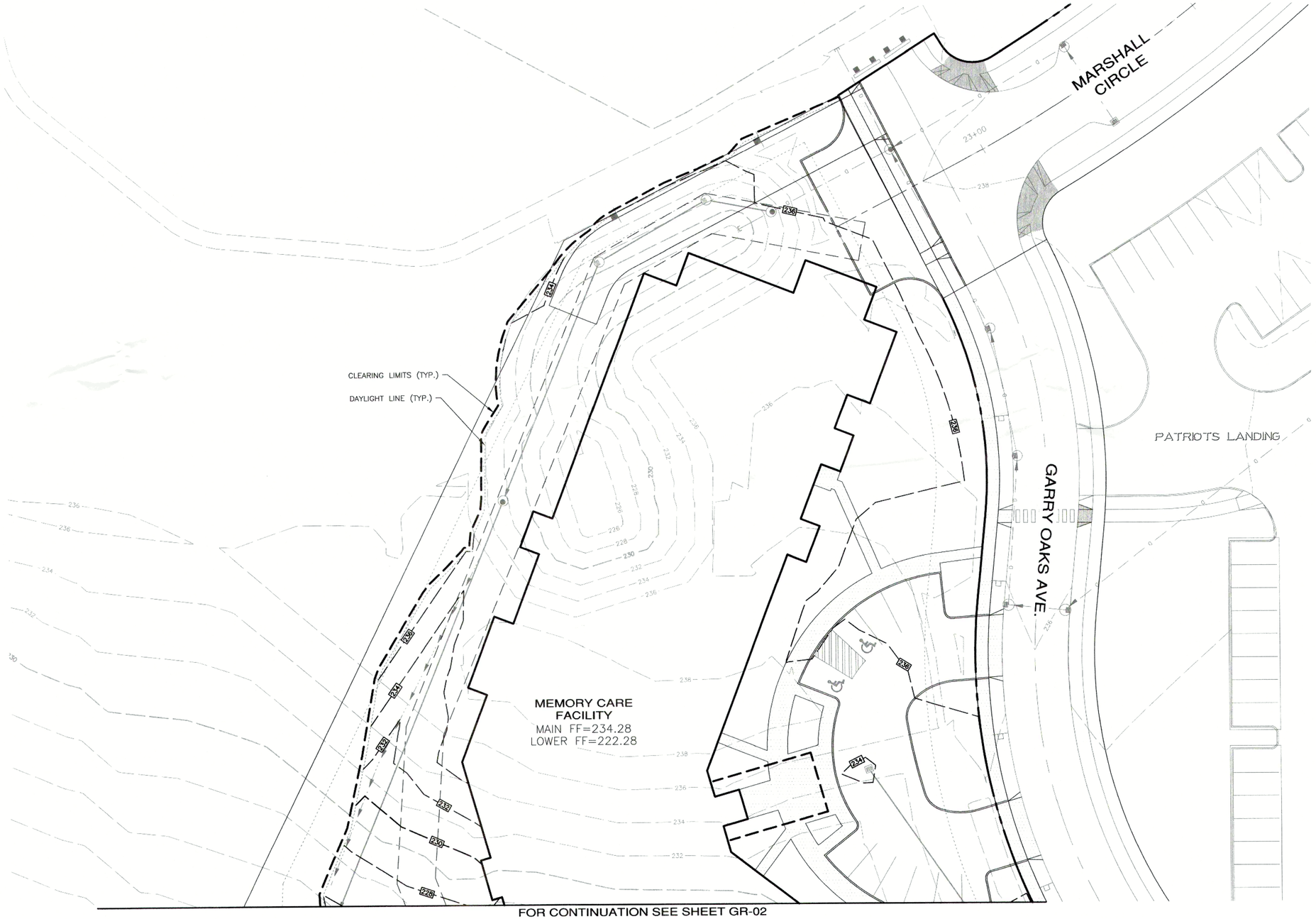


KEY MAP

SCALE: 1" = 20'

20 10 0 20 40

n



FOR CONTINUATION SEE SHEET GR-02

REVISIONS

NO.	DESCRIPTION/DATE	BY

LARRY G. BARTENHAGEN — STATE OF WASHINGTON — 40111 — REGISTERED PROFESSIONAL ENGINEER

9/1/17

CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

PRELIMINARY GRADING PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	845-021-017
DWG. NAME:	GR-01
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

GR-01

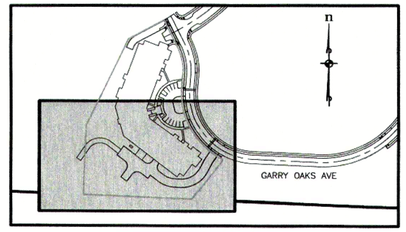
6 OF 12 SHEETS

File: \\Esm8\engr\ESM--JOBS\845\021\017\Conditional Use\Plots\GR-01.dwg
Plotted: 8/31/2017 10:13 AM
Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

LEGEND

- 218 EXISTING CONTOUR
- 218 PROPOSED CONTOUR
- CLEARING LIMITS
- DAYLIGHT LINE



KEY MAP

SCALE: 1" = 20'

20 10 0 20 40

n

FOR CONTINUATION SEE SHEET GR-01

TEMPORARY BIOFILTERATION SWALE

TEMPORARY INFILTRATION POND

MEMORY CARE FACILITY
MAIN FF=234.28
LOWER FF=222.28

GARRY OAKS AVE.

PATRIOTS LANDING

CLEARING LIMITS (TYP.)

DAYLIGHT LINE (TYP.)

FORT LEWIS
GOLF COURSE

REVISIONS

NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 22411 — REGISTERED PROFESSIONAL ENGINEER

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-3900
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning | Landscape Architecture | Project Management | Public Works

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

PRELIMINARY GRADING PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	845-021-017
DWG. NAME:	GR-02
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

GR-02

7 OF 12 SHEETS

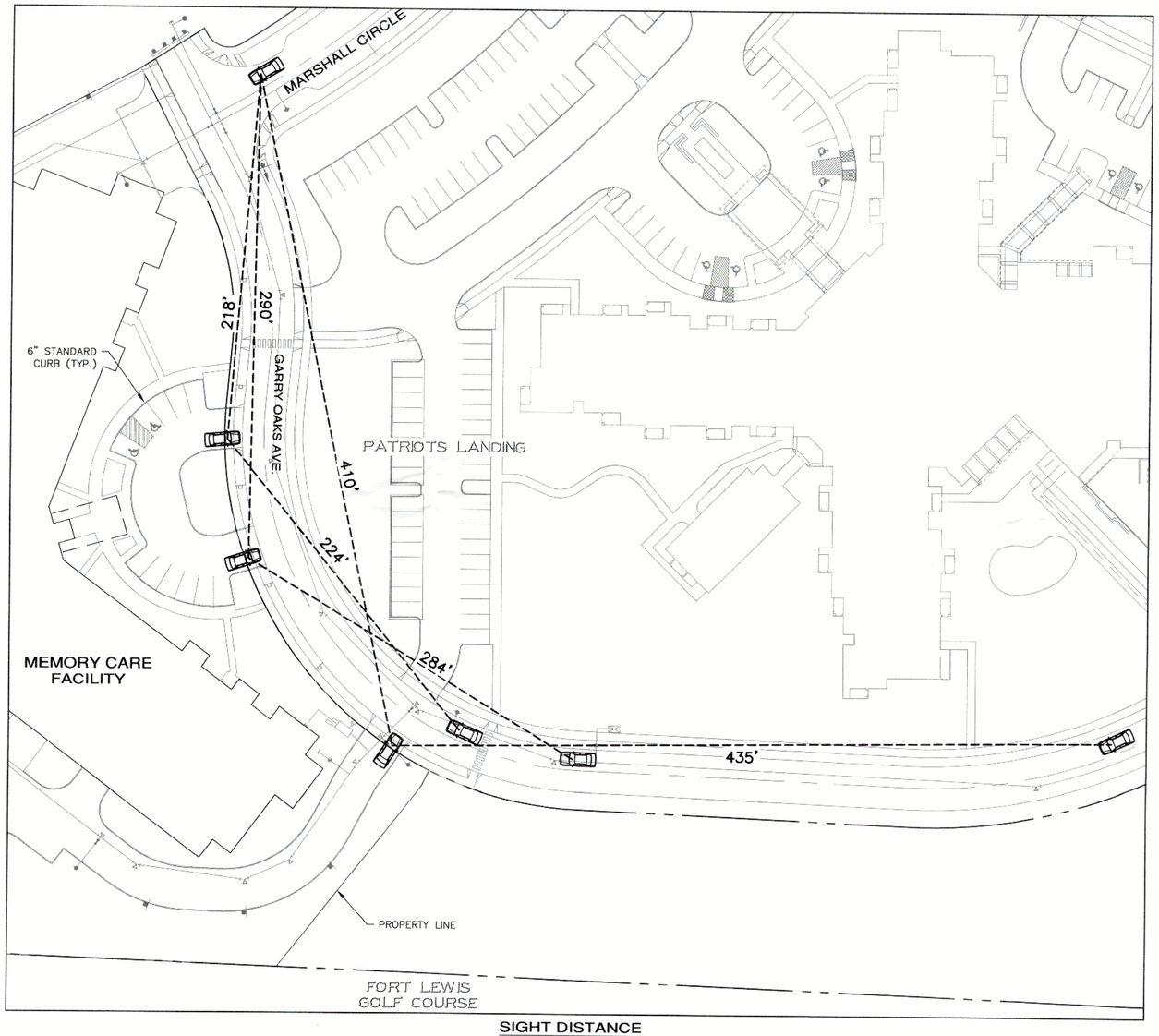
File: \\Esm8\engr\ESM-JOBS\845\021\017\Conditional Use\Plots\GR-02.dwg
Plotted: 8/31/2017 10:19 AM
Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

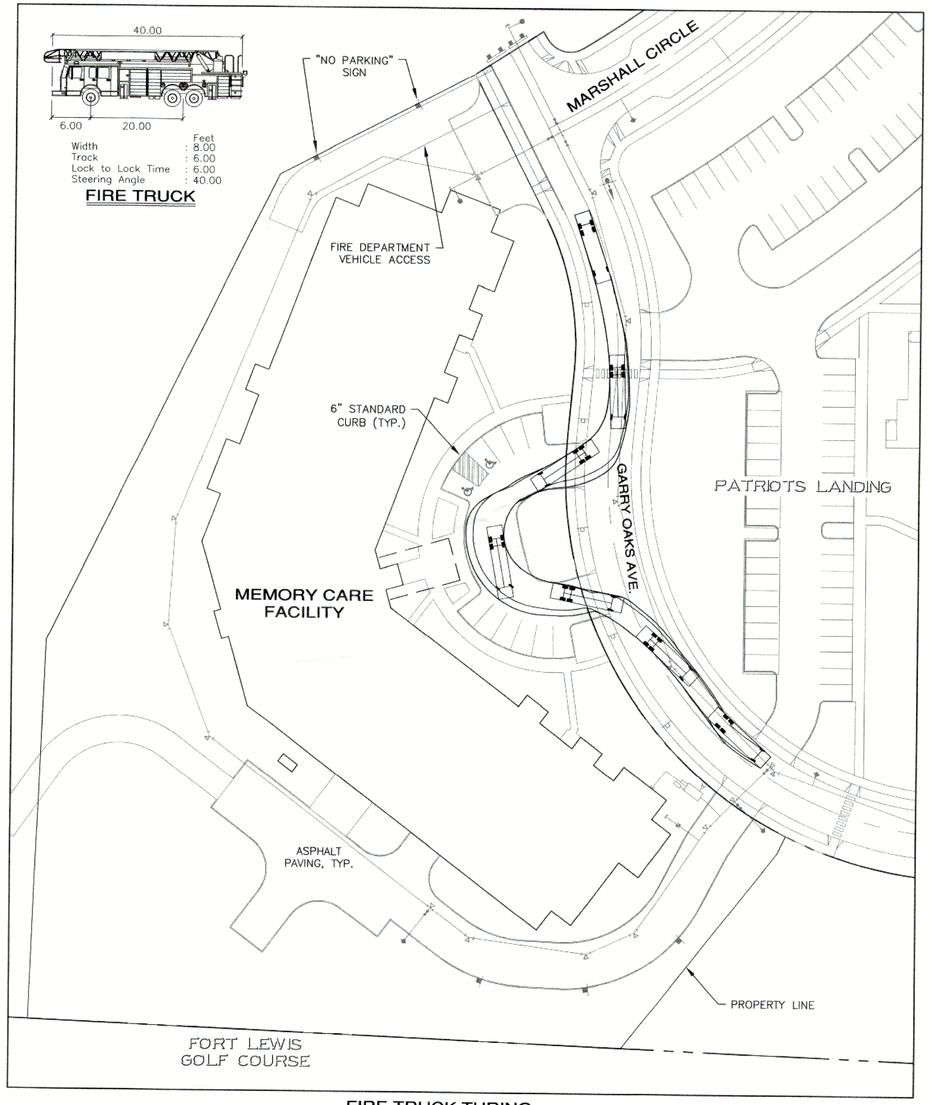
SCALE: 1" = 40'

40 20 0 40 80

n



SIGHT DISTANCE



FIRE TRUCK TURING

REVISIONS

NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 45411 — REGISTERED PROFESSIONAL ENGINEER

9/1/17

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
(253) 838-6113
(425) 397-9903
FEDERAL WAY
EVERETT
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT — WASHINGTON

FIRE TRUCK TURNING/SIGHT DISTANCE

JOB NO.:	845-021-017
DWG. NAME:	DT-01
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

DT-01

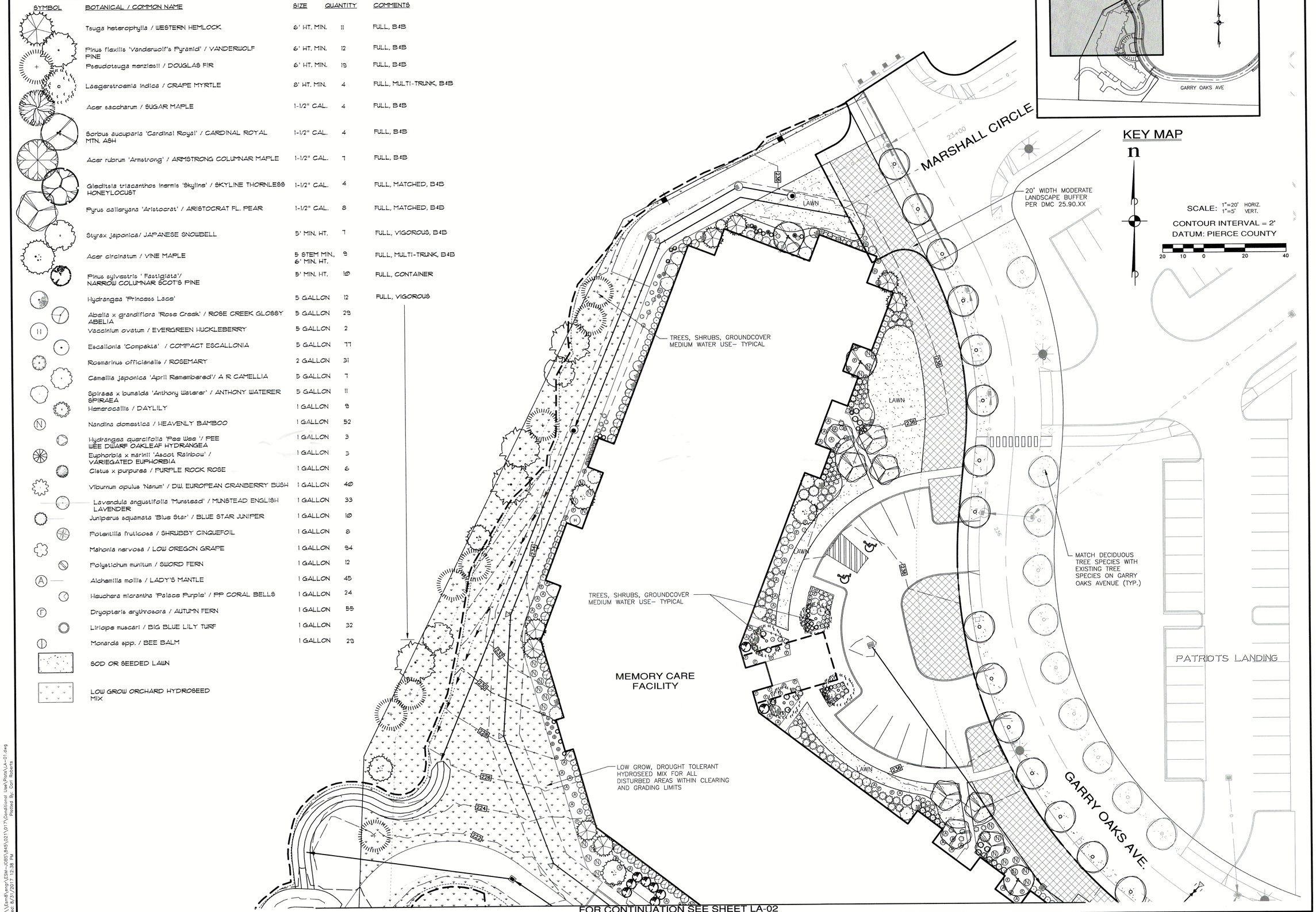
8 OF 12 SHEETS

File: \\Esm8\engr\ESM-~1\DBS\845\021\017\Conditional Use\Plots\DT-01.dwg
Plotted: 8/31/2017 10:23 AM
Plotted By: Carl Roberts

PRELIMINARY PLANT LEGEND

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QUANTITY	COMMENTS
	Tsuga heterophylla / WESTERN HEMLOCK	6' HT. MIN.	11	FULL, B&B
	Pinus flexilis 'Vanderwolf's Pyramid' / VANDERWOLF PINE	6' HT. MIN.	12	FULL, B&B
	Pseudotsuga menziesii / DOUGLAS FIR	6' HT. MIN.	19	FULL, B&B
	Lagerstroemia indica / CRAPE MYRTLE	8' HT. MIN.	4	FULL, MULTI-TRUNK, B&B
	Acer saccharum / SUGAR MAPLE	1-1/2" CAL.	4	FULL, B&B
	Sorbus aucuparia 'Cardinal Royal' / CARDINAL ROYAL MTN. ASH	1-1/2" CAL.	4	FULL, B&B
	Acer rubrum 'Armstrong' / ARMSTRONG COLUMNAR MAPLE	1-1/2" CAL.	7	FULL, B&B
	Gleditsia triacanthos inermis 'Skyline' / SKYLINE THORNLESS HONEYLOCUST	1-1/2" CAL.	4	FULL, MATCHED, B&B
	Pyrus calleryana 'Aristocrat' / ARISTOCRAT FL. PEAR	1-1/2" CAL.	8	FULL, MATCHED, B&B
	Styrax japonica/ JAPANESE SNOWBELL	5' MIN. HT.	7	FULL, VIGOROUS, B&B
	Acer circinatum / VINE MAPLE	5 STEM MIN., 6' MIN. HT.	9	FULL, MULTI-TRUNK, B&B
	Pinus sylvestris ' Fastigiata'/ NARROW COLUMNAR SCOT'S PINE	5' MIN. HT.	10	FULL, CONTAINER
	Hydrangea 'Princess Lace'	5 GALLON	12	FULL, VIGOROUS
	Abelia x grandiflora 'Rose Creek' / ROSE CREEK GLOSSY ABELIA	5 GALLON	29	
	Vaccinium ovatum / EVERGREEN HUCKLEBERRY	5 GALLON	2	
	Escallonia 'Compakta' / COMPACT ESCALLONIA	5 GALLON	77	
	Rosemarinus officianalis / ROSEMARY	2 GALLON	31	
	Camellia japonica 'April Remembered'/ A R CAMELLIA	5 GALLON	7	
	Spiraea x bumalda 'Anthony Waterer' / ANTHONY WATERER SPIRAEA	5 GALLON	11	
	Hemerocallis / DAYLILY	1 GALLON	9	
	Nandina domestica / HEAVENLY BAMBOO	1 GALLON	52	
	Hydrangea quercifolia 'Pee Wee '/ PEE WEE DWARF OAKLEAF HYDRANGEA	1 GALLON	3	
	Euphorbia x martinii 'Ascot Rainbow' / VARIEGATED EUPHORBIA	1 GALLON	3	
	Cistus x purpurea / PURPLE ROCK ROSE	1 GALLON	6	
	Viburnum opulus 'Nanum' / DW. EUROPEAN CRANBERRY BUSH	1 GALLON	40	
	Lavendula angustifolia 'Munstead' / MUNSTEAD ENGLISH LAVENDER	1 GALLON	33	
	Juniperus squamata 'Blue Star' / BLUE STAR JUNIPER	1 GALLON	10	
	Potentilla fruticosa / SHRUBBY CINQUEFOIL	1 GALLON	8	
	Mahonia nervosa / LOW OREGON GRAPE	1 GALLON	94	
	Polystichum munitum / SWORD FERN	1 GALLON	12	
	Alchemilla mollis / LADY'S MANTLE	1 GALLON	45	
	Heuchera micrantha 'Palace Purple' / PP CORAL BELLS	1 GALLON	24	
	Dryopteris erythrosora / AUTUMN FERN	1 GALLON	55	
	Liriope muscari / BIG BLUE LILY TURF	1 GALLON	32	
	Monarda spp. / BEE BALM	1 GALLON	29	
	SOD OR SEEDED LAWN			
	LOW GROW ORCHARD HYDROSEED MIX			

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



FOR CONTINUATION SEE SHEET LA-02

REVISIONS		
NO.	DESCRIPTION/DATE	BY

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
LEANNE D. KUHLMAN
CERTIFICATE No. 743

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

PRELIMINARY LANDSCAPE PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	845-021-017
DWG. NAME:	LA-01
DESIGNED BY:	LDK
DRAWN BY:	LDK
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

LA-01

9 OF 12 SHEETS

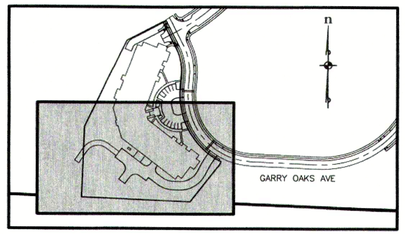
File: \\Esm9\wogp\ESM-JOBS\845\021\01\Conditional Use\Plots\LA-01.dwg
Plotted: 8/31/2017 12:38 PM
Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

SCALE: 1"=20' HORIZ.
1"=5' VERT.

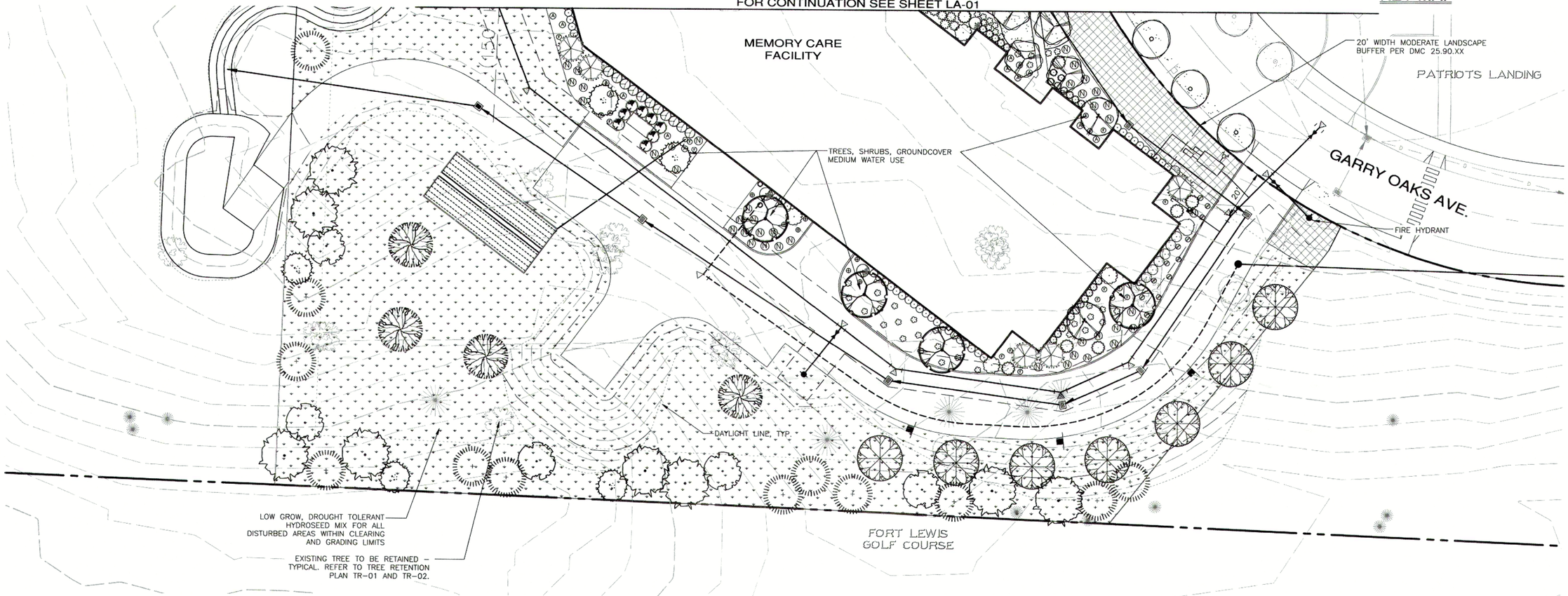
CONTOUR INTERVAL = 2'
DATUM: PIERCE COUNTY

20 10 0 20 40



FOR CONTINUATION SEE SHEET LA-01

KEY MAP



SITE LANDSCAPE DATA

PER DMC 25.90.020, A MINIMUM OF 30% OF THE SITE SHALL BE LANDSCAPED.

TOTAL SITE SQUARE FOOTAGE = 3.46 ACRES
TOTAL LANDSCAPED AREA OF SITE = APPROX. 65,700 SF (43%)

PER DMC 25.90.030(2), A MINIMUM OF ONE TREE PER SIX PARKING STALLS IS REQUIRED.

NUMBER OF PARKING STALLS = 11
NUMBER OF TREES REQUIRED WITHIN PARKING AREAS = 2
NUMBER OF TREES SHOWN WITHIN PARKING AREAS = 2

WATER CONSERVATION STATEMENT

IRRIGATION WATER USAGE SHALL COMPLY WITH THE REQUIREMENTS OF DMC25.90.040

WATER CONSERVATION CALCULATIONS

PER DMC 25.90.040, LANDSCAPING SHALL MEET CERTAIN WATER CONSERVATION STANDARDS.
LANDSCAPE HYDROZONE MULTIPLIERS:
HIGH USAGE– 0.9
MEDIUM USAGE– 0.5
LOW USAGE– 0.3

SQUARE FOOTAGE OF LANDSCAPING:	BUDGET AT 7.2 GALLONS PER SF	MULTIPLIER	APPROXIMATE WATER USAGE IN GALLONS PER SF
MODERATE BUFFER WITH 3' HEIGHT BERM– LOW WATER USE 7,620 SF	54,864	0.3	2,286
LOW GROW DROUGHT TOLERANT HYDROSEED AT DISTURBED AREAS 45,105 SF	324,756	0.3	13,532
LAWN AREAS– HIGH WATER USE	33,156	0.9	4,145
LANDSCAPING AROUND BUILDINGS AND PARKING AREAS– MED. WATER USE 12,932 SF	93,110	0.5	6,466

REVISIONS

NO.	DESCRIPTION/DATE	BY

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
LEANNE D. KUHLMAN
CERTIFICATE No. 743
9/1/17

CONSULTING ENGINEERS LLC
33400 8th Ave S. Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9800
www.esmcivil.com
Civil Engineering | Land Planning
Public Works | Landscape Architecture
Land Surveying
Project Management

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT WASHINGTON

PRELIMINARY LANDSCAPE PLAN

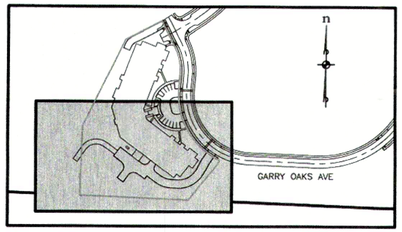
JOB NO.:	845-021-017
DWG. NAME:	LA-02
DESIGNED BY:	LDK
DRAWN BY:	LDK
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

LA-02

10 OF 12 SHEETS

File: \\Esm8\engr\ESM-CIVIL\845\021\017\Conditional Use\Plots\LA-02.dwg
Plotted: 8/25/2017 11:02 AM
Plotted By: Carl Rogers

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



KEY MAP

SCALE: 1"=20' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'

DATUM: PIERCE COUNTY

20 10 0 20 40

MARSHALL CIRCLE

MEMORY CARE FACILITY

GARRY OAKS AVE.

PATRIOTS LANDING

FORT LEWIS GOLF COURSE

S 14"

S 36"

S 28"

S 17"

S 19" CLUSTER

S 14"

S 22"

S 16"

LM 73" CLUSTER

FOR CONTINUATION SEE SHEET TR-02

LEGEND

- 218 EXISTING CONTOUR
- 218 PROPOSED CONTOUR
- CLEARING LIMITS
- DAYLIGHT LINE

TREE DEFINITIONS

	LANDMARK		SPECIMEN	
SPECIES	SINGLE–TRUNK	MULTI–TRUNK	SINGLE–TRUNK	MULTI–TRUNK
Oregon white oak, Pacific yew, or Madrona	24 Inches	30 Inches (sum of dia.)	12 Inches	12 Inches (sum of dia.)
Douglas fir, Western red cedar, Western hemlock, or Big leaf maple	30 Inches	45 Inches (sum of dia.)	15 Inches	15 Inches (sum of dia.)

EXISTING TREE LEGEND

	LANDMARK		SPECIMEN		TOTAL
FIR	LM CAL.	1	S CAL.	6	7
OAK	LM CAL.	2	S CAL.	5	7
MAPLE	LM CAL.	1	S CAL.	1	2

TREES TO BE REMOVED

SYMBOL		LANDMARK	SPECIMEN	TOTAL
	FIR	0	3	3
	OAK	2	3	5
	MAPLE	1	1	2

TREES TO BE RETAINED

SYMBOL		LANDMARK	SPECIMEN	TOTAL
S CAL.	FIR	1	3	4
	OAK	0	2	2
	MAPLE	0	0	0

REVISIONS

NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 48111 — REGISTERED PROFESSIONAL ENGINEER — 9/1/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
(253) 838-6113
(425) 397-9820
FEDERAL WAY
EVERETT
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

TREE RETENTION PLAN

CITY OF DUPONT WASHINGTON

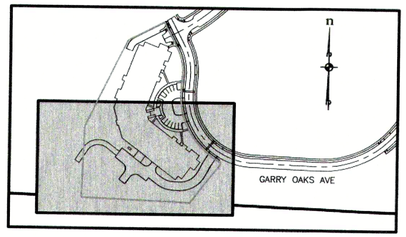
JOB NO.:	845-021-017
DWG. NAME:	TR-01
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

TR-01

11 OF 12 SHEETS

File: \\Esm8\engr\ESM-JOBS\#845\021\017\Conditional Use\Plots\TR-01.dwg
Plotted: 8/31/2017 10:58 AM
Plotted By: Carl Roberts

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



KEY MAP

SCALE: 1"=20' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'

DATUM: PIERCE COUNTY

20 10 0 20 40

N

FOR CONTINUATION SEE SHEET TR-01

MEMORY CARE FACILITY

PATRIOTS LANDING

FORT LEWIS GOLF COURSE

GARRY OAKS AVE.

DAYLIGHT LINE, (TYP.)

CLEARING LIMITS (TYP.)

S 22" CLUSTER

LM 46" CLUSTER

LM 32"

LM 48"

S 17"

S 17"

S 15"

S 16"

S 37" CLUSTER

S 28"

S 19"

S 19"

220 218 216 214 212

222 224 226 228 230 232 234

TREE RETENTION DATA

PER DMC 25.120.030(2); ALL LANDMARK OREGON WHITE OAK TREES SHALL BE RETAINED ALONG WITH ANY NATIVE UNDERSTORY WITHIN A PROTECTION ZONE, ONE AND ONE HALF TIMES THE RADIUS OF THE OAK'S CANOPY. AT LEAST HALF OF ALL OTHER LANDMARK TREES SHALL BE RETAINED.

NUMBER OF OREGON WHITE OAK TREES = 7
NUMBER TO BE REMOVED = 5

PER DMC 25.120.030(3)(C); THE RETENTION REQUIREMENT FOR NON-OAK SPECIES IS FOUR (4) TREES PER ACRE

SITE AREA = 3.26 ACRES X 4 = 14 NON-OAK TREES REQUIRED TO BE RETAINED

NUMBER OF NON-OAK SPECIMEN OR LANDMARK TREES TO BE RETAINED = 4

THE MINIMUM TREE RETENTION REQUIREMENTS ARE EXCEEDED WITHIN THE OVERALL CAMPUS INCLUDING PATRIOTS LANDING PHASE I.

File: \\Esm8\engr\ESM-JOBS\845\021\017\Conditional Use\Plots\TR-02.dwg
Plotted: 9/5/2017 11:03 AM
Plotted By: Carl Roberts

REVISIONS

NO.	DESCRIPTION/DATE	BY

LARRY G. BARTENHAGEN — STATE OF WASHINGTON — 19911 — REGISTERED PROFESSIONAL ENGINEER
9/1/17

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 327-8500
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

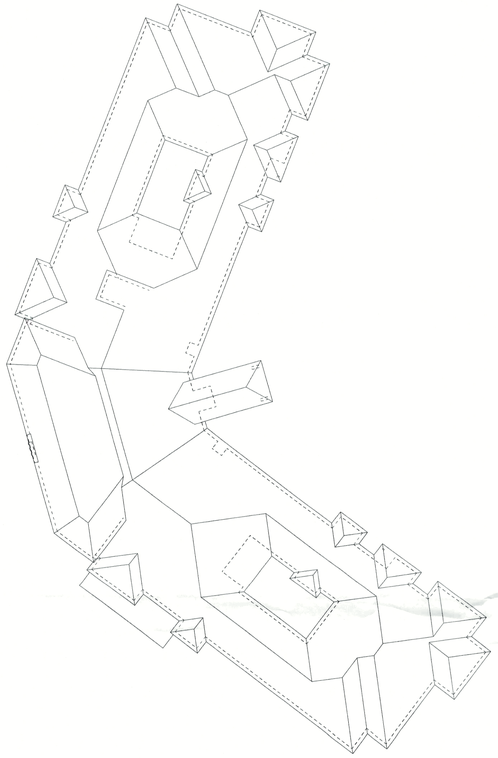
TREE RETENTION PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	845-021-017
DWG. NAME:	TR-02
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

TR-02

12 OF 12 SHEETS



N

ROOF PLAN
SCALE: 1" = 40'-0"



N

GROUND FLOOR PLAN
SCALE: 1" = 40'-0"



N

LOWER LEVEL PLAN
SCALE: 1" = 40'-0"

RECEIVED
SEP 01 2017
CITY OF DUPONT

HDI
ARCHITECTS P.S.

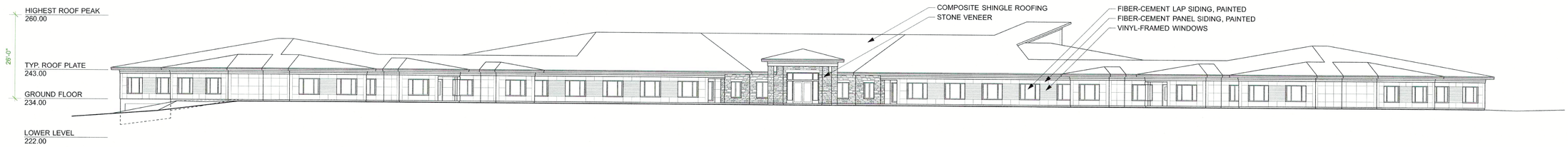
12835 Bel-Red Road #216
Bellevue, WA 98005
425 455-4997

PATRIOT'S LANDING MEMORY CARE
SCHEMATIC FLOOR AND ROOF PLANS

A-1

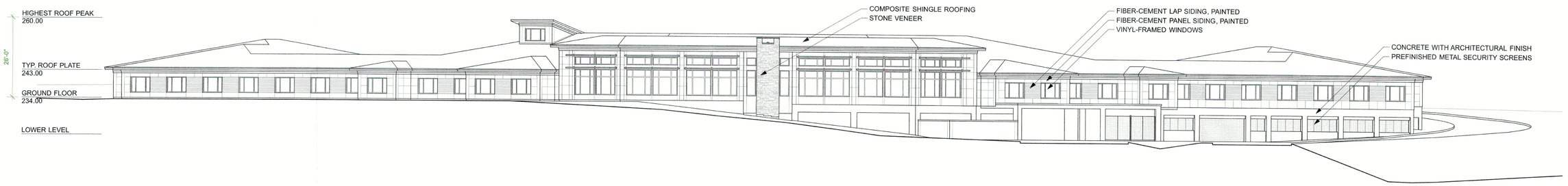
1 SEP 2017

Attachment 1p



ALTERNATIVE EAST (FRONT) ELEVATION

SCALE: 1/16" = 1'-0"



ALTERNATIVE WEST (REAR) ELEVATION

SCALE: 1/16" = 1'-0"

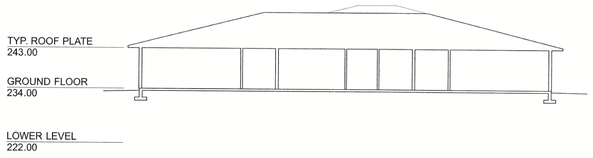
HDI
ARCHITECTS P.S.

12835 Bel-Red Road #216
Bellevue, WA 98005
425 455-4997

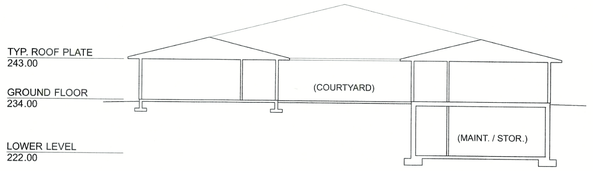
PATRIOT'S LANDING MEMORY CARE
SCHEMATIC BUILDING ELEVATIONS

A-2

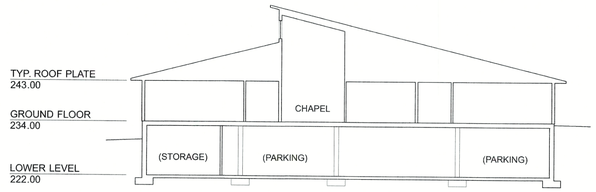
1 SEP 2017



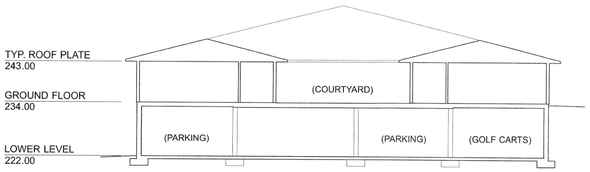
A SECTION AT NORTH WING END MASSAGE / BATHING LOOKING NORTH
SCALE: 1/16" = 1'-0"



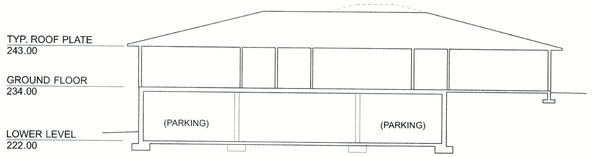
B SECTION AT NORTH WING COURTYARD LOOKING NORTH
SCALE: 1/16" = 1'-0"



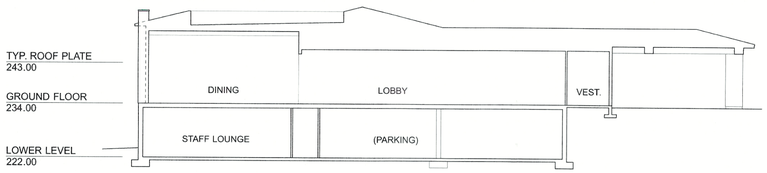
C SECTION AT NORTH WING CHAPEL LOOKING NORTH
SCALE: 1/16" = 1'-0"



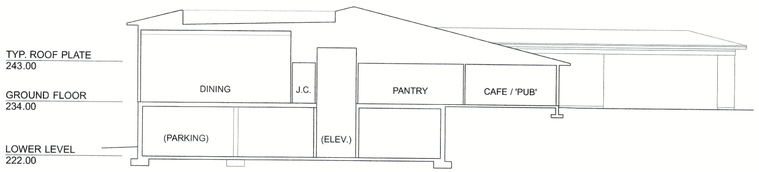
D SECTION AT SOUTH WING COURTYARD LOOKING NORTH
SCALE: 1/16" = 1'-0"



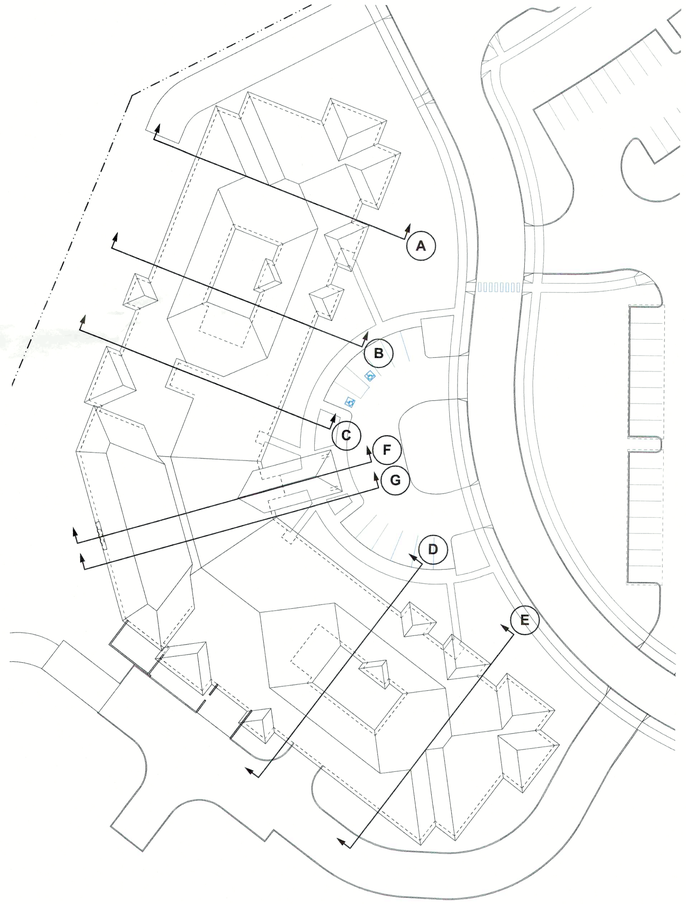
E SECTION AT SOUTH WING END STORAGE LOOKING NORTH
SCALE: 1/16" = 1'-0"



F SECTION AT CORE ALONG MAIN ENTRY AXIS
SCALE: 1/16" = 1'-0"



G SECTION AT CORE THROUGH ELEVATOR
SCALE: 1/16" = 1'-0"



N

KEY PLAN

HDI
ARCHITECTS P.S.
12835 Bel-Red Road #216
Bellevue, WA 98005
425 455-4997

PATRIOT'S LANDING MEMORY CARE
SCHEMATIC BUILDING SECTIONS

A-3

1 SEP 2017

August 1, 2017

Matt Reider
ESM Consulting Engineers, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003

Subject: Site Specific Sewer Information for Memory Care Facility (proposed 60 units)
Application Number: SWDR #865394
Application Expiration Date: 06/27/2018
Building Permit: City of Dupont
Site Address: XXX McNeil St
Parcel Number: 0119345001

Dear Mr. Reider:

Our office has researched the site specific sewer information regarding the subject request and has the following comments.

Pierce County Planning and Public Works will not provide a commitment, or guarantee, of sewer availability for the subject proposal until payment of connection charges has been received by the Sewer Division. This letter shall be used for informational purposes only in support of a Land Use Application and shall not be misconstrued by the proponent or reviewing agency as a commitment on behalf of the Sewer Division.

This letter does not convey any vested rights or any exclusive privileges. It does not authorize any construction. It does not eliminate the need to comply with any County, State, Federal or local standards or regulations or the need to obtain all necessary permits. This letter is not a waiver of any departmental requirements. The information presented in this letter is general in nature and is based on estimates; therefore, it should not be relied upon as completely accurate.

Submittals for new applications and resubmittals for existing applications must be made online at http://piercecountywa.org/pals.

The payment of permit fees and connection charges can also be made at the same website. For payment of permit fees by mail or in person, use the following address: Pierce County Development Center (Annex), 2401 South 35th Street, Room 150, Tacoma, WA 98409.

Sewer Division Standard Plans and Forms, including handouts, bulletins, and applications, and checklists, can be downloaded in PDF format from the following webpage: www.piercecountywa.org/sewer.

REQUIREMENT TO CONNECT

1. The subject property is located within the Pierce County Sewer Service area and is within the Comprehensive Urban Growth Area (CUGA).

2. The subject property is within 300 feet of an existing accessible sanitary sewer which has sufficient capacity to accommodate the proposed development on the subject property.

3. The proposed building on the subject property is required to connect to sanitary sewer.

CONNECTION POINT

1. The point of permanent connection to the public sanitary sewer system is SSMH#13033 located at the intersection of Marshall Circle and Bradley Street.

2. Record drawings are enclosed.

APPLICATIONS/PERMITS

Prior to connection to the existing public sanitary sewer system, the applicant must design and construct the required sanitary sewer facilities, at their expense, and comply with the following requirements.

1. A **Sewer Line Extension Permit** is required.

    a. Complete and submit form A1, ***Sewer Line Extension Permit Application***.
    b. Submit sanitary sewer plans stamped and signed by a WA State licensed professional engineer and a properly completed ***Sewer Line Extension Design Checklist*** per County standards for review and approval, including required easements, if applicable. [Proposed public sewer facilities and proposed private sewer facilities must be shown on separate engineered plans even though they may be covered under one sewer line extension permit.]
    c. Submit a complete, itemized, stamped and signed engineer's construction cost estimate for all the sanitary sewage facilities to be constructed within the existing public right-of-way and public sanitary sewer easements.
    d. Pay the Sewer Line Extension Permit Fees. The Sewer Line Extension Permit Fees consists of two parts; the Plan Review Fees and the Inspection Fees. The Sewer Line Extension Permit Plan Review Fees must be paid at the time of application, and the Sewer Line Extension Permit Inspection Fees must be paid prior to the issuance of the Sewer Line Extension Permit.

        Sewer Line Extension Permit Plan Review (Base Fee) $2,805.00
        with Gravity Sewer Main ..... add $1.15 per Linear Foot (LF) of gravity main
        with Private Pump Station ..... add $206.00 plus $0.39 per LF of force main
        with Low-Pressure System ..... add $433.00 plus $0.56 per LF of low-pressure main

Sewer Line Extension Permit Inspection (Base Fee)..... $2,359.00
with Gravity Sewer Main ..... add $1.26 per Linear Foot (LF) of gravity main
with Private Pump Station..... add $200.00 plus $0.29 per LF of force main
with Low-Pressure System.....add $289.00 plus $0.38 per LF of low-pressure main

e. In lieu of paying the Sewer Line Extension Permit Fees outlined above, the applicant may choose to have the plan review and inspection fees for the Sewer Line Extension Permit paid through a Time and Materials account.

   i. Applicant **requests** to use time and materials-based fees shall be made at time of application, shall be irrevocable, and shall include a completed form F2, ***Time and Materials Account Information Form***, the submittal of a non-refundable administrative fee of $250.00 and a non-refundable deposit of $50.00.

2. A separate **Pretreatment Review** is required for each building and commercial tenant space. The user must comply with all Pierce County pretreatment requirements.

   a. See form H1, ***What Type of Industrial User Are You?*** to determine what type of pretreatment review application must be submitted. Submit the appropriate Pretreatment Review Application, submit the required supplemental information and documents, and pay the appropriate Sewer Development Application Review Fee.

   Minor Industrial User..... $484.00
   with new or revised Accidental Spill Prevention Plan……..add $302.00

   Significant Industrial User $857.00
   with new or revised Accidental Spill Prevention Plan……..add $302.00

   b. Submit the required supplemental information referenced in the following bulletins:

      1. Bulletin B4, *Floor/Plumbing Plan*
      2. Bulletin B5, *Documented Water Use Data*
      3. Bulletin B6, *Traps*
      4. Bulletin B8, *Hair Salons, Barbers, and Pet Groomers*
      5. Bulletin B9, *Dentists and Orthodontists*
      6. Bulletin B11, *Food Establishments with Cooking*
      7. Bulletin B12, *Food Establishments with No Cooking*
      8. Bulletin B14, *Nail Salons*
      9. Bulletin B15, *Commercial/Community Laundry Facilities*

c. If your facility will have floor drains, catch basins, sumps or any other outlet to the sewer system located in the same area/room where chemicals, paints, dyes, solvents, cleaners, or fuels are stored or used without spill containment measures an Accidental Spill Prevention Plan will be required. Complete and submit form A12, ***Accidental Spill Prevention Plan Application*** along with the additional plan review fee.

3. A separate **Sewer Service Permit** is required to connect each of the proposed **commercial** buildings to the existing sanitary sewer system.

   a. Complete and submit form A3, **Commercial *Sewer Service Permit Application***, for each building to be connected along with a sewer site plan.
   b. A **commercial pump** may be required.

      i. County topographical information indicates that gravity sewer service may not be available for the property, depending upon location of the proposed building.
      ii. If sewer service cannot be provided by gravity, then submit sewer plans with a **commercial pump**, stamped and signed by a WA State licensed professional engineer, and a properly completed **Commercial Pump Checklist** per County standards for review and approval, including required easements, if applicable.
      iii. Pay additional permit fees for a **commercial pump**.

   c. A **grease interceptor** may be required.

      i. Submit grease interceptor plans stamped by a registered civil engineer and a properly completed ***Grease Interceptor Checklist*** per County standards for review and approval, including required easements, if applicable.
      ii. Submit a copy of a maintenance agreement between the owner and a commercial disposal or septic tank cleaning service to provide periodic grease removal from the interceptor.
      iii. Pay additional permit fees for a grease interceptor.

   d. Pay the Sewer Service Permit Application Fees. The Sewer Service Permit Fees consists of two parts; the Plan Review Fees and the Inspection Fees. The Sewer Service Permit Plan Review Fees must be paid at the time of application, and the Sewer Service Permit Inspection Fees must be paid prior to the issuance of the Sewer Service Permit.

Commercial Building Sewer Service Plan Review (Base Fee)	$50.00
with new or revised private pump station and force main	add $1,367.00
with new grease interceptor	add $1,340.00
with new misc. pretreatment device	add $1,400.00
Commercial Building Sewer Service Inspection (Base Fee)	$135.00
with new or revised private pump station and force main	add $782.00
with new grease interceptor	add $277.00
with new miscellaneous pretreatment device	add $282.00

e. In lieu of paying the Sewer Service Permit Fees outlined above, the applicant may choose to have the **plan review and inspection fees for the Sewer Service Permit paid through a Time and Materials account**.

i. Applicant **requests** to use time and materials-based fees shall be made at time of application, shall be irrevocable, and shall include the submittal of an administrative fee of $250.00 and a non-refundable deposit of $50.00.

SEWER CONTRACTOR

1. The applicant's sewer contractor must be listed on the Sewer Division's current Registered Side Sewer Contractors List.

2. If the applicant's sewer contractor is not currently registered with Pierce County, please have them follow the registration requirements prior to attempting to obtain the issued sewer line extension permit and sewer service permits. Please see form T12, ***Sewer Division Street Obstruction Bond,*** for registration requirements.

3. Prior to the issuance of any sewer permits, the side sewer contractor must obtain the right-of-way permits from the City of DuPont. It is the responsibility of the applicant to provide copies of the approved sewer plans to the right-of-way office, which is retained by the right-of-way permit office, at the time of the permit application or a right-of-way permit will not be issued.

CONNECTION CHARGES

1. Based on the information provided, outlined below is the total estimated sanitary sewer connection charge.

   Basin: DuPont
   Basin Area Charge: $1,653.00/RE
   Treatment Plant Capacity Charge: $3,491.00/RE

   Estimated Connection Charge for 60 units at 0.83 residential equivalent (RE) per unit with a total of 49.8 RE:

Basin Area Charge: 49.8 RE X $1,653/RE	=$ 82,319.40
Treatment Plant Capacity Charge: 49.8 RE X $3,491/RE	=$ 173,851.80
Total Estimated Connection Charge for 60 Units	**=$ 256,171.20**

2. **The connection charges for commercial uses in incorporated areas or King County must be paid in full prior to issuance of sewer service permits and prior to approval of associated building permits.**

3. Please note that any future Capital Improvement Projects or Reimbursement Agreements or Latecomers Agreements between the County and other property owners to construct

improvements downstream of the subject property can result in a significantly higher Connection Charge.

4. Please note that the Capacity Charges, Basin Area Charges and future monthly Sewer Service fees for all commercial buildings are calculated based on actual water flows when available. Therefore, we strongly recommend that the owner have a separate meter installed and a separate account initiated with the local water purveyor for irrigation water and any other water supply that will not be entering the sanitary sewer system. If a separate water meter and account is not feasible, the owner may enter into a Sub-metering Agreement with the County. Connection Charge requirements will not be recalculated based on sub-metered usage until the sub-meter has been installed according to approved plans, the Sub-metering Agreement approved by the County, and at least 12 months of sub-metered water readings submitted to our office for review. For further details regarding the ***Water Sub-metering Plan Review Application*** (A17) see Bulletin B21, ***Water Sub-metering Program***.

5. The total estimated connection charge will be recalculated at the time the owner purchases it based on the rates in effect at that time.

6. Once paid, connection charges are credited against the parcel and are only refundable to the person(s) or entity that is the owner of record at the time of refund.

Note that the fees and connection charges shown in this letter are subject to change without prior notification.

If you have any questions regarding the above, please contact me at (253) 798-2287 or alma.arroyo@co.pierce.wa.us. Please note that as of March 13, 2017, Sewer Permit Review Staff relocated to the following address: Pierce County Annex Planning Lobby Room 175, 2401 South 35th Street, Tacoma WA 98409.

Sincerely,

Alma Arroyo

Alma Arroyo
Civil Engineer 2

AA:ca

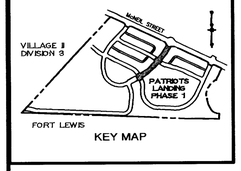
ec: Matt Reider, ESM Consulting Engineers, LLC: matt.reider@esmcivil.com

PATRIOTS LANDING PHASE 1
A PORTION OF THE NE 1/4 OF SEC. 34, & THE NW 1/4 OF SEC. 35, TWP. 19 N., RGE. 1 E., W.M.
PUBLIC SANITARY SEWER SYSTEM

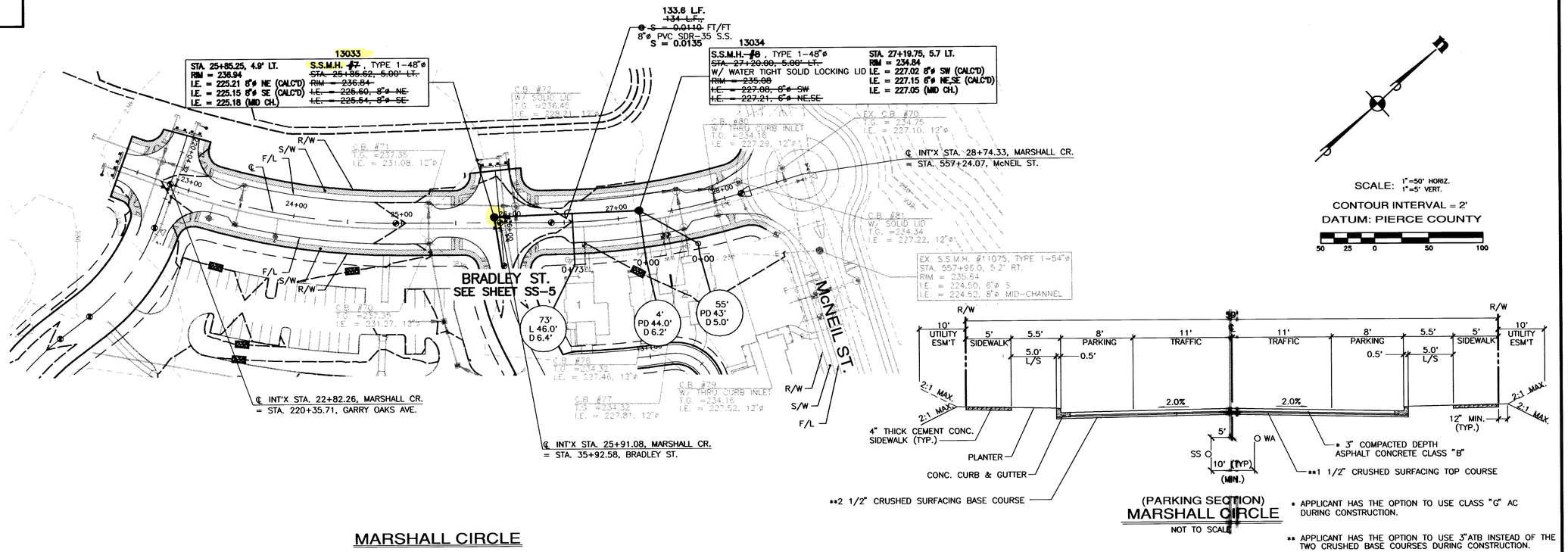
APPROVED

WASTEWATER UTILITY MANAGER DATE

PLAN APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE OF APPROVAL



KEY MAP



SCALE: 1"=50' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'

DATUM: PIERCE COUNTY

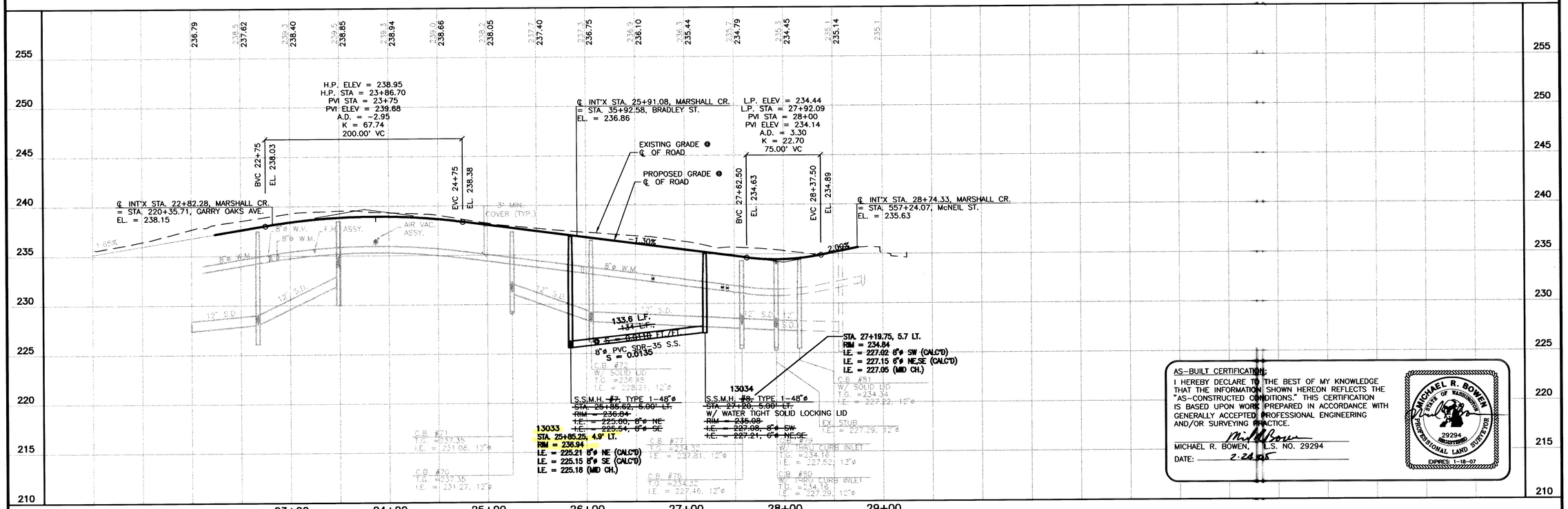
50 25 0 50 100

(PARKING SECTION)
MARSHALL CIRCLE
NOT TO SCALE

* APPLICANT HAS THE OPTION TO USE CLASS "G" AC DURING CONSTRUCTION.

** APPLICANT HAS THE OPTION TO USE 3"ATB INSTEAD OF THE TWO CRUSHED BASE COURSES DURING CONSTRUCTION.

MARSHALL CIRCLE



AS-BUILT CERTIFICATION:

I HEREBY DECLARE TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION SHOWN HEREON REFLECTS THE "AS-CONSTRUCTED CONDITIONS." THIS CERTIFICATION IS BASED UPON WORK PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING AND/OR SURVEYING PRACTICE.

MICHAEL R. BOWEN, L.S. NO. 29294

DATE: 2-24-05

MICHAEL R. BOWEN STATE OF WASHINGTON 29294 REGISTERED PROFESSIONAL LAND SURVEYOR EXPIRES 1-18-07

REVISIONS		
NO.	DESCRIPTION/DATE	BY

FREDERICK B. BROWN STATE OF WASHINGTON 33710 REGISTERED PROFESSIONAL ENGINEER 2-24-05 EXPIRES 3/9/06

ESM CONSULTING ENGINEERS, LLC
720 S. 348th Street, Federal Way, WA 98003
FEDERAL WAY (253) 838-6113 BOTHELL (425) 415-0144
www.esmcivil.com
Civil Engineering, Public Works | Land Planning, Landscape Architecture | Land Surveying, Project Management

OWNER: CAREAGE DEVELOPMENT COMPANY LLC CONTACT: GRANVILLE BRINKMAN
P.O. BOX 1966, GIG HARBOR, WASHINGTON 98335 PHONE: (253)853-4457

PATRIOTS LANDING PHASE 1
SANITARY SEWER PLAN & PROFILE
CITY OF DUPONT WASHINGTON

JOB NO.:	845-001-990
DWG. NAME:	SS-04
DESIGNED BY:	FBB
DRAWN BY:	EAP/RJB
CHECKED BY:	
DATE:	03-24-04
DATE OF PRINT:	

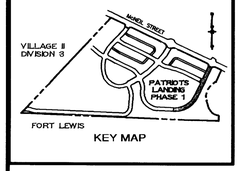
SS-4

4 OF 6 SHEETS

I:\dem-pdx\845\001\990\001\plotdwgs\dwgs 2-24-05 SS-04.dwg, 2/23/2005 4:09:11 PM, bobb

378436-004

PATRIOTS LANDING PHASE 1
A PORTION OF THE NE 1/4 OF SEC. 34, & THE NW 1/4 OF SEC. 35, TWP. 19 N., RGE. 1 E., W.M.
PUBLIC SANITARY SEWER SYSTEM



KEY MAP

APPROVED

WASTEWATER UTILITY MANAGER DATE

PLAN APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE OF APPROVAL

59.0 LF. (PLAN) ~~59 LF.~~ 6"ø PVC SDR-35 S.S. S = 0.0710 @ ~~S = 0.0846~~ FT/FT

13029
STA. 230+50.61, 4.9' LT.
RIM=234.86
I.E. = 218.01, 8"ø SW (CALC'D)
I.E. = 217.95, 8"ø NE (CALC'D)
I.E. = 218.08, 6"ø SE (CALC'D)
I.E. = 217.98 (MID CH.)
S.S.M.H. ~~#3~~ TYPE 1-48"ø
~~STA. 230+50.00, 5.00' LT.~~
~~RIM = 234.72~~
~~I.E. = 218.08, 6"ø SW~~
~~I.E. = 218.02, 8"ø NE~~
~~I.E. = 218.15, 6"ø SE~~

13027
STA. 232+87.00, 4.4' LT.
RIM = 233.25
I.E. = 215.23, 8"ø NW,SW (CALC'D)
I.E. = 215.17, 8"ø NE (CALC'D)
I.E. = 215.20, (MID CH.)
S.S.M.H. ~~#2~~ TYPE 1-48"ø
~~STA. 232+88.75, 5.00' LT.~~
~~RIM = 233.08~~
~~I.E. = 215.35, 6"ø NW,SW~~
~~I.E. = 215.29, 8"ø NE~~

13026
STA. 234+87.05, 4.6' LT.
RIM = 230.72
I.E. = 212.69, 8"ø SW (CALC'D)
I.E. = 212.66, (MID CH.)
S.S.M.H. ~~#1~~ TYPE 1-48"ø W/ WATER TIGHT LOCKING LID
~~STA. 234+86.25, 5.00' LT.~~
~~RIM = 230.46~~
~~I.E. = 213.09, 6"ø SW~~
EX. I.E. = 213.03, 8"ø NE

61.7' PD 141.6' D 10.6'

69.7' L 111.6' D 4.9'

C.O. #2
~~RIM = 233.61~~
RIM = 235.64
~~I.E./ELBOW = 223.85, 6"ø~~
I.E./ELBOW = 224.11 6"ø

78.0 LF. (PLAN) ~~78 LF.~~ 8"ø PVC SDR-35 S.S. S = 0.0279 @ ~~S = 0.0247~~ FT/FT

C.O. #1
~~RIM = 233.51~~
RIM = 236.51
~~I.E. = 221.46, 6"ø~~
I.E./ELBOW = 221.06 8"ø

77.1 LF. ~~77 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0247~~ FT/FT S = 0.0244

59.0 LF. ~~53 LF.~~ 6"ø PVC SDR-35 S.S. @ ~~S = 0.0846~~ FT/FT S = 0.0927

34.0 LF. ~~34 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0341~~ FT/FT S = 0.0379

198 LF. 200.1 LF. ~~198 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0111~~ FT/FT S = 0.0124

NOTE:
47' PUBLIC SANITARY SEWER EASEMENT EXISTS ON GARRY OAKS AVE. FROM MARSHALL CIRCLE TO BRADLEY STREET PER AFN #200405040

SEE SHEET SS-5 BRADLEY ST.

LF=217.43
I.E. 217.43

0+69

66' L 45.0' D 8.9'

18' PD 36.0' D 9.9'

131' L 40.0' D 9.8'

145' L 42.0' D 6.7'

91' L 40.0' D 5.6'

23' L 40.0' D 6.8'

S.S.M.H. ~~#4~~ TYPE 1-48"ø
~~STA. 229+25.00, 5.00' LT.~~
~~RIM = 233.47~~
~~I.E. = 219.49, 8"ø W~~
~~I.E. = 219.43, 8"ø NE~~

13030
STA. 229+25.71, 4.7' LT.
RIM = 233.61
I.E. = 219.18, 8"ø W (CALC'D)
I.E. = 219.12, 8"ø NE (CALC'D)
I.E. = 219.15 (MID CH.)

122.0 LF. ~~122 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0110~~ FT/FT S = 0.0091

157.5 LF. ~~159 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0110~~ FT/FT S = 0.0115

S.S.M.H. ~~#2A~~ TYPE 1-48"ø
~~STA. 232+10.25, 5.00' LT.~~
~~RIM = 234.15~~
~~I.E. = 216.27, 8"ø NW,SW~~
~~I.E. = 216.21, 8"ø NE~~

13028
STA. 232+08.95, 5.2' LT.
RIM = 234.21
I.E. = 216.14, 8"ø NW,SW (CALC'D)
I.E. = 216.06, 8"ø NE (CALC'D)
I.E. = 216.11, (MID CH.)

78.1 LF. ~~78 LF.~~ 8"ø PVC SDR-35 S.S. @ ~~S = 0.0110~~ FT/FT S = 0.0109

℄ INT'X STA. 232+93.77, GARRY OAKS AVE. = STA. 42+11.21, BRADLEY ST.

TRENCH DAM PER PIERCE COUNTY STD. DETAIL S1-016-01.

EX. C.B. #85 T.G. = 230.37 I.E. = 224.40, 12"ø

EX. 59 L.F. @ S = 0.0149% 8"ø PVC SDR-35 S.S. SEE CONTRACTOR NOTE

EX. S.S.M.H. #11073, TYPE 1-54"ø W/ INSIDE DROP STRUCTURE STA. RIM = 231.38 I.E. = 218.84, 8"ø W I.E. = 212.12, 8"ø E I.E. = 211.99, 8"ø N I.E. = 212.15, 8"ø S

℄ INT'X STA. 235+51.75, GARRY OAKS AVE. = STA. 562+99.07, McNEIL ST.

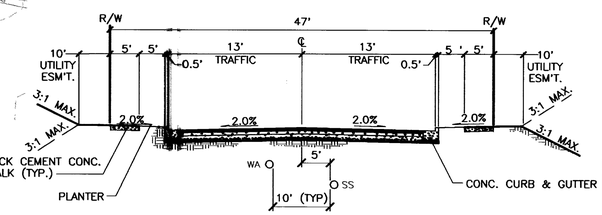
McNEIL ST.

EX. C.B. #84 T.G. = 230.37 I.E. = 222.63, 12"ø I.E. = 222.38, 15"ø

EX. C.B. #81 T.G. = 230.38 I.E. = 222.54, 12"ø I.E. = 222.29, 15"ø

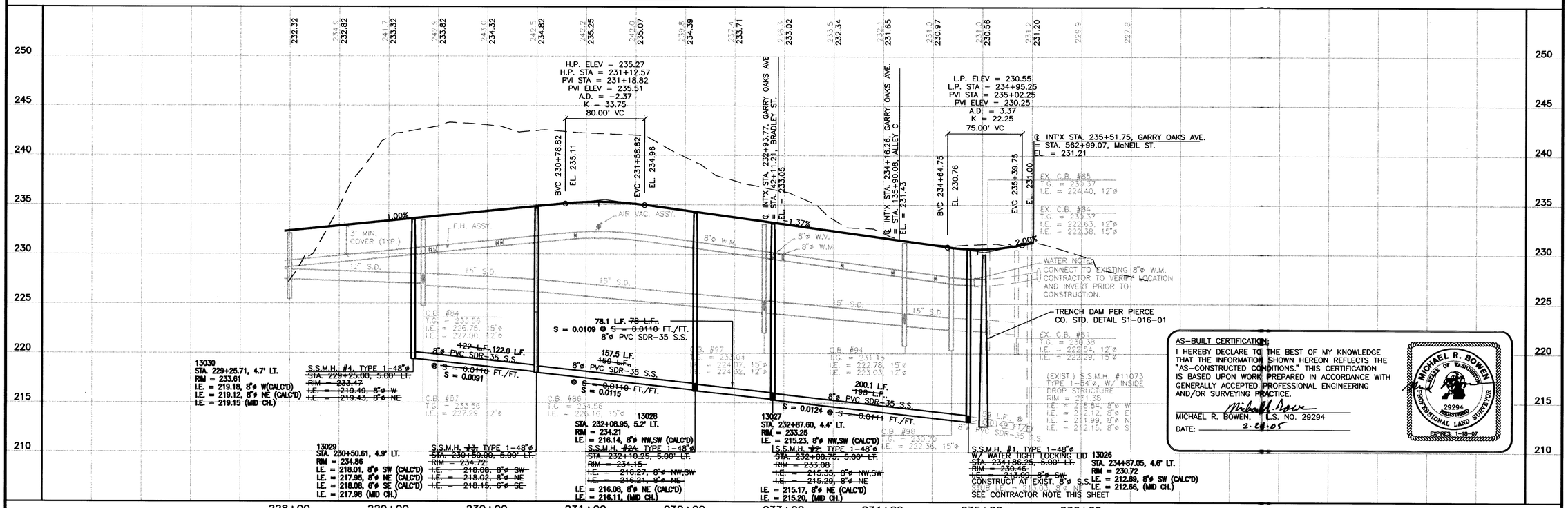
SCALE: 1"=50' HORIZ. 1"=5' VERT.
CONTOUR INTERVAL = 2'
DATUM: PIERCE COUNTY
50 25 0 50 100

CONTRACTOR NOTE:
THE CONTRACTOR SHALL VERIFY THE DIAMETER, PIPE TYPE, SLOPE, CONDITION, LENGTH, AND HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING STUB PRIOR TO CONNECTION. IF DIFFERENT THAN SHOWN ON THESE PLANS, CONTACT THE ENGINEER AND PIERCE COUNTY SEWER UTILITIES INSPECTOR.



GARRY OAKS AVENUE
NOT TO SCALE

GARRY OAKS AVENUE



AS-BUILT CERTIFICATION:
I HEREBY DECLARE TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION SHOWN HEREON REFLECTS THE "AS-CONSTRUCTED CONDITIONS." THIS CERTIFICATION IS BASED UPON WORK PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING AND/OR SURVEYING PRACTICE.

MICHAEL R. BOWEN, L.S. NO. 29294
DATE: 2-28-05

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — EXPIRES: 1-16-07

REVISIONS		
NO.	DESCRIPTION/DATE	BY

FREDERICK & BROWN — 33710 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 3/9/06

ESM CONSULTING ENGINEERS, LLC
720 S. 348th Street, Federal Way, WA 98003
FEDERAL WAY (253) 838-6113 BOTHELL (425) 415-0144
www.esmcivil.com
Land Planning, Landscape Architecture, Land Surveying, Project Management, Civil Engineering, Public Works

OWNER: CAREAGE DEVELOPMENT COMPANY LLC CONTACT: GRANVILLE BRINKMAN
P.O. BOX 1988, GIG HARBOR, WASHINGTON 98335 PHONE: (253)853-4457

PATRIOTS LANDING PHASE 1
CITY OF DUPONT — WASHINGTON
SANITARY SEWER PLAN & PROFILE

JOB NO.:	845-001-990
DWG. NAME:	SS-06
DESIGNED BY:	FBB
DRAWN BY:	EAP/RJB
CHECKED BY:	
DATE:	03-24-04
DATE OF PRINT:	

SS-6
6 OF 6 SHEETS

I:\esm-projects\01.990\001\prelim\phase 1\MB-SS-06.dwg, 2/23/2005 4:13:04 PM, bobb

378436-006

CITY OF DuPONT
1700 Civic Drive, DuPont, WA 98327
Phone: (253) 912-5381, Fax: (253) 964-1455
www.dupontwa.gov

Water Availability Form

RECEIVED
NOV 29 2017
CITY OF DUPONT

Part A
To Be Completed By Applicant

Project Address: XXX McNeil Street Application Number: _____

Subdivision/Project Name: Patriots Landing Memory Care Parcel: 0119345001

Proposed Water Usage: 6,000 GPD (Commercial) Residential # of Units: _____
(100 GPD PER BED)

Customer Type (circle one) Rural Residential Residential Multi-family (Commercial) Industrial

I, the undersigned, or my appointed representative have requested the following purveyor to certify willingness and ability to provide the indicated service. I have read and understand the information provided by the water purveyor on this Certificate, and acknowledge that the proposed project may require improvements to the water system which would incur my financial obligation. Prior to final approval for water service, operational responsibility, and financial obligation may be required.

Print Name: Mike Campeau Signature: Mike Campeau

Address: 4411 Point Fosdick Drive, Ste 203 City: Gig Harbor State: WA Zip: 98335

Part B
To be completed by Water Purveyor

Water system to provide service: **CITY OF DUPONT** State ID#: **20500P**

The proposed development is / is not within our approved service area (circle one).

This water utility will / will not be providing service (circle one).

Approved number of connections: **Unspecified**

Number of current/existing users: **3,129** (1) Existing Storage: **4,000,000 gallons**

Water service will be provided by:

_____ Direct connection to approved, existing water main

X Extension of existing water main(s)

_____ New water system in accordance with WAC 246-290

Fred Freeman
Water Purveyor Signature

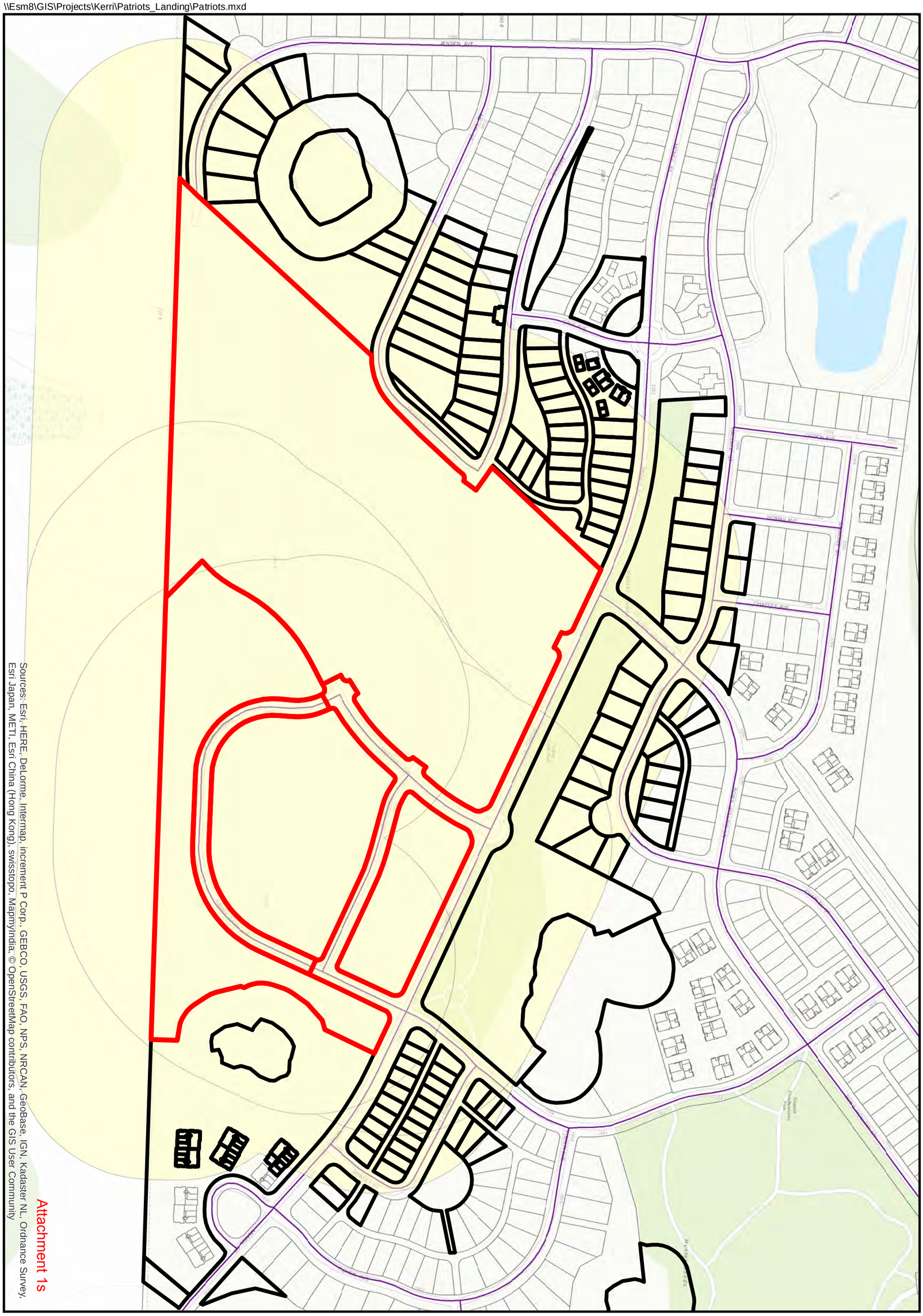
8/8/2017
Date

(1) Per City of DuPont, as of October 1, 2014.

Revised: 10/1/2014

Attachment 1r

\\Esm8\GIS\Projects\Kerri\Patriots_Landing\Patriots.mxd



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Attachment 1s

ESM CONSULTING ENGINEERS, LLC
ESMCIVIL.COM

0 125 250
1 " = 250 '
N

Patriots Landing
300' Mailing Radius

Data Source:

Date: 11/17/2016
User: Kerri O'Connor

City of DuPont
1700 Civic Drive · DuPont, WA 98327
Phone: (253) 964-8121 / Fax: (253) 964-1455

AUTHORIZATION TO ACT AS AGENT AFFIDAVIT

I, Mike Campeau, as ~~property owner~~ owner's representative of the following described property

1600 Marshall Circle, DuPont, WA 98327
(Property Address)

0119341004, 0119345001, 0119345004, 0119345002, and 0119345003
(Parcel Number)

hereby authorize

Matt Reider c/o ESM Consulting Engineers, LLC
(Name)

33400 8th AVE S, STE 205 Federal Way, WA 98003
(Address)

253-838-6113 / matt.reider@esmcivil.com
(Phone/Email)

to act as agent on my behalf before the City of DuPont regarding the application to

allow a Memory Care Facility in the R-5 district. Specifically requiring the following permits: Memory Care Facility Conditional Use Permit, Road Standards Variance, Tree Modification Request, and Transportation Concurrency.

Mike Campeau
~~Property Owner Signature~~
Owner's Representative

10-17-17
Date

Mike Campeau, President of Construction & Development
Print Name

STATE OF WASHINGTON }
COUNTY OF PIERCE }

On this 17th day of October, 2017, personally appeared before me Mike Campeau known to be the individual(s) described in and who executed the within and foregoing instrument and acknowledged that he/she signed the same as given, as his/her free and voluntary act and deed, for the uses and purposes therein mentioned, and under oath stated that he/she was authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereto set my hand and affixed my official seal the day and year first above written.

AMY PATTEN NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 10-05-19

Notary Public
Amy Patten
Print Name
NOTARY PUBLIC in and for the State of Washington
Residing at Tacoma, WA
My Commission expires: 10.5.19

Attachment 1t

ESM CONSULTING ENGINEERS, LLC

October 23, 2017

Job No. 845-021-017

Mr. Jeffrey S. Wilson, A.I.C.P.
Planning Director
City of DuPont
Community Development Department
1700 Civic Drive
DuPont, WA 98327

RE: PLMC Request for Alternative Parking Requirements

Dear Mr. Wilson:

The City of DuPont's off-street parking requirements table found in DMC 25.95.030 does not provide adequate off-street parking quantities for the normal operation of the proposed Memory Care Facility (MCF). Pursuant to DMC 25.95.030(2), Careage, Inc. is requesting application of alternative parking requirements for the proposed MCF.

The MCF should not be classified as a hospital as there will not be an emergency department on site nor will the facility be licensed as a hospital by the State of Washington. The facility will be licensed as an Assisted Living Facility (ALF) by the State of Washington. Washington Administration Code 388-78A-2020 defines "Assisted Living Facility" as "any home or other institution, however named, which is advertised, announced, or maintained for the express or implied purpose of providing housing, basic services, and assuming general responsibility for the safety and well-being of the residents, and may also provide domiciliary care, consistent with this chapter to seven or more residents after July 1, 2000." The MCF is an ALF with the key focus on patients who suffer from memory related illness. Senior housing and independent living facilities offer very few, if any, services for their residents thus requiring less onsite staff personnel. In contrast, the MCF requires a higher staff ratio to help with activities of daily living for the residents.

The MCF will be providing 60 beds. While most, if not all, patients will be precluded from driving vehicles, the operation of the MCF generates a need for more parking than what is provided under DMC 25.95.030. For instance, residents will have friends and family who visit the facility. Off-street parking needs are based on ancillary impacts of the MCF. Additionally, the MCF will employ 30 staff members. It is reasonable to assume that each staff member will drive their own vehicle to work. The following municipal code examples are provided to illustrate other suitable applications of off-street parking for MCF or ALF uses:

ESM Federal Way
33400 8th Ave S, Ste 205
Federal Way, WA 98003
253.838.6113 tel
800.345.5694 toll free
253.838.7104 fax

ESM Everett
1010 SE Everett Mall Way, Ste 210
Everett, WA 98208
425.297.9900 tel
800.345.5694 toll free
425.297.9901 fax

Civil Engineering
Land Surveying
3D Laser Scanning
Land Planning
Landscape Architecture
GIS
www.esmcivil.com

Attachment 1u

1. The City of Kenmore (KMC 18.40.030) computes required off-street parking spaces for senior citizen assisted living" as 1 space per 2 sleeping units.

2. The City of Lakewood (LMC 18A.50.560B.6) requires "assisted living facilities" provide one space per three beds plus one per employee.

3. The City of Portland (PMC 33.266.115(2)) provides for structured parking maximums which says that, "where 75 percent or more of the parking accessory to a use in structured parking, both the structured and surface parking are regulated as follows.... There is no maximum number of parking spaces, except ...parking accessory to medical centers[1] and colleges."

In conclusion, Careage, Inc. requests that the City acts on DMC 25.95.030(2) by applying an alternative parking requirement on the proposed MCF. The proposed MCF is not a hospital, nor a residential health care facility, but rather an institution that provides services to residents who suffer from a memory related illness. The above referenced parking examples are based on bed count. The last example is based on the ratio of structured parking. The proposed MCF will provide 51 parking stalls (including ADA). Of those 51 stalls, 40 will be provided under the 1st floor of the MCF. That means 78% of the parking will not be visible from the street. We hope that this letter provides adequate justification for the application of alternative parking requirements to the proposed MCF.

If you have any questions, please feel free to contact me at: 253-838-6113.

Sincerely,

ESM CONSULTING ENGINEERS, LLC

MATT REIDER
Assistant Planner

g:\esm-jobs\845\021\017\document\letter-009.docx

From:	Mike Campeau
To:	Matt Reider; Laura Bartenhagen
Cc:	Marlin Seanet
Subject:	FW: Patriot"s Landing Compactor Package
Date:	Thursday, October 05, 2017 2:47:40 PM

Matt,

See the below refuse enclosure approval from Le-May. Let me know if you need additional info.

Thank you

Mike Campeau
President of Construction & Development

CAREAGE

4411 Point Fosdick Drive, Ste 203
Gig Harbor, WA 98335
Phone: (253) 853-4457
Mobile: (253) 377-6622
Fax: (253) 853-5280

From: Ric Thompson [mailto:RicT@WasteConnections.com]
Sent: Thursday, October 05, 2017 1:55 PM
To: Chad Hartje <chadh@swsequipment.com>
Cc: Mike Campeau <mcampeau@careage.com>; Chase Juza <cjuza@careage.com>
Subject: Re: Patriot's Landing Compactor Package

Good Afternoon Mike & Chase,

It looks like the roof/canopy is good to go. I don't see any other concerns with this enclosure for this refuse compactor and our trucks being able to safely service the container. Thank you for assisting me and taking care of the concerns that I had.

Thank you for your patience as well. All is good to go.

Thank you Chad for your assistance as well.

Respectfully,

Ric Thompson
Cell# 253-606-8869

Attachment 1v

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Chad Hartje
Sent: Thursday, October 5, 2017 11:46 AM
To: Ric Thompson
Cc: Mike Campeau; Chase Juza
Subject: FW: Patriot's Landing Compactor Package

Hi Ric,

Can we get a formal blessing on this compactor design, and containment area? I guess it still hasn't been approved on the hauler's end, and so Mike just called me about it. He was hoping to get approval so he can move forward with the permitting and processes.

Can you formally rubber stamp this, and finish up any approval paperwork for Mike and Chase? Many thanks in advance!

Ch

Chad Hartje

Territory Manager
13502 Pacific Ave South | Tacoma, WA 98444
United States of America
Cell: (360)561-2905

website | vCard | map

Confidentiality Note: This email and any attachments are confidential and may be protected by legal privilege. If you are not intended recipient, be aware that any disclosure, copying, distribution or use of this email or any attachment is prohibited. If you have received this email in error, please notify us immediately by returning it to the sender and delete this copy from your system.

From: Chad Hartje
Sent: Monday, September 11, 2017 7:22 AM
To: 'Mike Campeau' <mcampeau@careage.com>
Cc: 'Ric Thompson' <RicT@Wasteconnections.com>
Subject: FW: Patriot's Landing Compactor Package

Mike,

I forgot to mention, that I modified the left gate a little bit. You don't need the full double swinging doors of 12' there. Unless you want them anyway. The containers will roll out fine for recycling, and

they fit in there pretty nicely. My drawing has a legend too, and each box is 12". So fitment is down to the inch and looks great.

Last, I was not sure on the opening on the side, if that is for people to walk into the enclosure. It appears that was the case, so I made sure the opening was 42", a standard door opening. The arch rendering made it look a little more narrow.

Please be advised Sir -

Thanks,
Chad

Chad Hartje
Territory Manager

13502 Pacific Ave South | Tacoma, WA 98444
Phone: (206)282-2100 | Cell: (360)561-2905

Confidentiality Note: This email and any attachments are confidential and may be protected by legal privilege. If you are not intended recipient, be aware that any disclosure, copying, distribution or use of this email or any attachment is prohibited. If you have received this email in error, please notify us immediately by returning it to the sender and delete this copy from your system.

From: Chad Hartje
Sent: Monday, September 11, 2017 7:12 AM
To: 'Mike Campeau' <mcampeau@careage.com>
Cc: 'Ric Thompson' <RicT@Wasteconnections.com>
Subject: Patriot's Landing Compactor Package

Hi Mike, Good morning and Happy Monday!

Here is a compactor design package for Patriot's Landing. Thanks for your patience last week as I assembled everything.

Attached:

1. Compactor installation drawing. This shows the compactor installed into the containment area, with the dimensions the architect has designed around it. The machine fits nicely.

2. Picture of an existing roof enclosure in Federal Way, WA. This is at an apartment complex that was just installed last year. The distance from the ground to the bottom of the roof is exactly 15'6" – usable clear opening. I stopped by and visited Friday and got a picture with measurements. This is definitely comfortable and they made sure the truck has lots of clearance. Will this work for you? They have the existing roof sloped backwards so that rain runs off that way, and also because the height in the rear doesn't have to be as tall because of the way the truck pulls out the compactor. If you can achieve that height of 15'6" up front,

then most likely you will be able to get this approved by Ric Thompson and the hauling division.

3. Manufacturer brochure for compactor

4. Manufacturer brochure for Sonozaire Ozone Generator. What that does is blow O3 (Ozone) into the compactor body to decrease odors and retard bacteria growth. Definitely recommended if there is a roof or anytime the compactor is enclosed in a room.

5. Electrical Cut Sheet. This shows how many amps to run for 5HP 3 phase power unit, along with fuse sizes for the disconnect. Please note that the Sonozaire runs on 120 volt power, and it will need and outlet too. I showed on the drawing where to stub power for both. :]

6. Color Chart for equipment. You have 12 standard options.

7. Color with enclosed doghouse hopper on it – example of product I have in mind for this location. Brochure shows an open hopper, but we would definitely make sure the compactor has an enclosed hopper for pests and odor reduction.

Let me know if you have any questions!

If this game plan looks good to you, I'll add you to the list of quotes to assemble and get you some numbers. We have options for outright purchase and lease options also (like a loan).

Very Respectfully,
Chad Hartje

Chad Hartje
Territory Manager

13502 Pacific Ave South | Tacoma, WA 98444
Phone: (206)282-2100 | Cell: (360)561-2905

website | vCard | map

Confidentiality Note: This email and any attachments are confidential and may be protected by legal privilege. If you are not intended recipient, be aware that any disclosure, copying, distribution or use of this email or any attachment is prohibited. If you have received this email in error, please notify us immediately by returning it to the sender and delete this copy from your system.

The information contained in this transmission may contain privileged and confidential information, including patient information protected by federal and state privacy laws. It is intended only for the use of the person(s) named above. If you are not the intended recipient, you are hereby notified that any review, dissemination, distribution, or duplication of this communication is strictly prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.
E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed,arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission.
For additional information about our corporation and corporate policy, please visit www.careage.com

ESM CONSULTING ENGINEERS, LLC

January 22, 2018 Job No. 845-021-017

Mr. Jeffrey S. Wilson, AICP
Director of Community Development
City of DuPont
1700 Civic Drive
DuPont, WA 98327

RE: **Patriot's Landing Memory Care, PLNG2017-039**
Response to Planning Department Comments
Regarding DMC 25.120 Tree Retention

Dear Jeff:

On behalf of Careage, Inc, ESM Consulting Engineers, LLC is providing this letter as our response to the Planning Department Comments Regarding DMC 25.120 - Tree Retention, dated January 8th, 2018. For ease of review, we have followed the same format and numbering in your letter and have included our responses in **Bold.**

The following tables summarize the existing tree types on the property and those that are proposed to be removed and retained. These numbers are based on counting the tree symbols provided on Sheets TR-01 and TR-02 dated October 17, 2017, and are not consistent with the tables and data provided on Sheet TR-01 and TR-02.

Total Trees			
Tree Type	Landmark	Specimen	Total
Fir	1	7	8
Oak	2	5	7
Maple	1	1	2
Total	4	13	17
Total Trees Retained			
Tree Type	Landmark	Specimen	Total
Fir	1	4	5
Oak	0	2	2
Maple	0	0	0
Total	1	6	7
Total Trees Removed			
Tree Type	Landmark	Specimen	Total
Fir	0	3	3
Oak	2	3	5
Maple	1	1	2
Total	3	7	10

ESM Federal Way
33400 8th Ave S, Ste 205
Federal Way, WA 98003
253.838.6113 tel
800.345.5694 toll free
253.838.7104 fax

ESM Everett
1010 SE Everett Mall Way, Ste 210
Everett, WA 98208
425.297.9900 tel
800.345.5694 toll free
425.297.9901 fax

Civil Engineering
Land Surveying
3D Laser Scanning
Land Planning
Landscape Architecture
GIS
www.esmcivil.com

Attachment 1w

Note – there is one off-site oak tree proposed to remain that is not included in the above calculations. The tree is currently threatened by clearing/grading impacts from the stormwater pond. The pond will need to be revised to meet the tree protection requirements. This will be a SEPA mitigation measure.

ESM has revised the tree data tables to reflect what is shown on the site plan. The CUP plan set has been revised to show a new pond design which eliminates impact to the offsite oak tree on the adjacent parcel. Furthermore, the off-site oak tree is not considered in the calculations because it will not be impacted and is considered outside of the project area.

DMC 25.120.030(2) requires all landmark Oregon white oak trees be retained

Staff Analysis: The plan proposes to remove all of the landmark oak trees (2), which is the reason for the Type III Tree modification. The cumulative diameter of the landmark oaks to be removed is 119 inches. Your application does not proposed a mitigation plan for the removal of the 2 landmark Oregon white oak trees. There are trees proposed to the south and southwest of the new building that could be replaced with new oak trees of a total equivalent diameter of the removed oak trees to mitigate for their loss. The landscape plan and tree retention plan are to be revised as follows:

a) Correct the tables on Sheet TR-01 to be consistent with the numbers provided above. If you disagree with these numbers, please contact Lisa Klein, contract planner with AHBL, at 253-383-2422 to discuss.

   The tables on Sheet TR-01 have been revised to be consistent with the numbers above.

b) Correct the Tree Retention Data on Sheet TR-02 to be consistent with the above tables.

   The Tree Retention Data on Sheet TR-01 has been corrected to be consistent with the above tables.

c) Provide Oregon white oak replacement trees at a minimum of 2.5" caliper to meet the cumulative equivalent of 119 inches. They may be provided in lieu of the other ornamental trees provided around the south and southwest perimeter. Please note on the plans "Install 2" – 3" depth 6' diameter arborist wood chip mulch around base of tree".

   Oregon white oak replacement trees have been provided on the Landscape Sheets and Tree Retention Sheets.

d) Include Tree Protection measures on the plans that comply with DMC 25.120.030(5).

   Retained trees are located outside of grading limits. Temporary Erosion and Sediment Control measures will be identified in the construction plans.

ESM

DMC 25.120.030(2) requires at least half of all other (non-oak) landmark trees be retained

Staff Analysis: There are 2 non-oak landmark trees, so the requirement is that at least one shall be retained. One tree is planned to be retained, and is therefore code-compliant.

Correct. The two non-oak landmark trees consist of 1 fir and 1 maple. One landmark fir tree is being retained.

DMC 25.120.030(3) requires a minimum of 4 trees per acres be retained, but nothing shall require the retention of more than half of the existing non-oak trees. 4 trees per 3.26 acres requires 13 trees be retained, however, there are 10 existing non-oak trees, half of which is 5. Therefore a minimum of 5 non-oak trees is required to be retained.

Staff Analysis: A total of 5 fir trees are being retained and is therefore is code-compliant.

Comment acknowledged.

Included with this letter are the following revised CUP plan sheets:

1. Tree Retention TR-01 and TR-02 (7 copies); and
2. Landscape Plan LA-01and LA-02 (7 copies)

If you have any questions, please feel free to contact me at 253-838-6113.

Sincerely,

ESM CONSULTING ENGINEERS, LLC

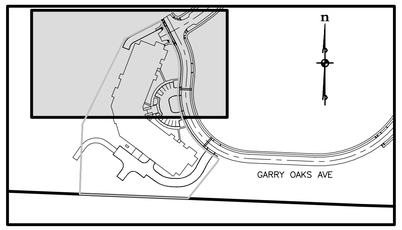
MATT REIDER
Assistant Planner

Enc.

cc: Mike Campeau

\\esm8\engr\esm-jobs\845\021\017\document\letter-014.docx

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



KEY MAP

SCALE: 1"=20' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'

DATUM: PIERCE COUNTY

20 10 0 20 40

(40) 3" CALIPER OREGON WHITE OAK REPLACEMENT TREES– TYPICAL SYMBOL.

INSTALL 2"–3" DEPTH 6' DIAMETER ARBORIST WOOD CHIP MULCH AROUND BASE OF EACH REPLACEMENT TREE.

REFER TO SHEET TR–02 FOR REPLACEMENT CALCULATION.

S MULTITRUNK (TYP.)– 19", 10", 9"

S 14"

S 22"

S 16"

LM MULTITRUNK – 73" 10", 10", 8", 6", 7", 5", 4", 4", 9", 10"

MARSHALL CIRCLE

MEMORY CARE FACILITY

GARRY OAKS AVE.

PATRIOTS LANDING

FORT LEWIS GOLF COURSE

FOR CONTINUATION SEE SHEET TR-02

LEGEND

- 218 EXISTING CONTOUR
- 218 PROPOSED CONTOUR
- CLEARING LIMITS
- DAYLIGHT LINE

TREE DEFINITIONS

	LANDMARK		SPECIMEN	
SPECIES	SINGLE–TRUNK	MULTI–TRUNK	SINGLE–TRUNK	MULTI–TRUNK
Oregon white oak, Pacific yew, or Madrona	24 Inches	30 Inches (sum of dia.)	12 Inches	12 Inches (sum of dia.)
Douglas fir, Western red cedar, Western hemlock, or Big leaf maple	30 Inches	45 Inches (sum of dia.)	15 Inches	15 Inches (sum of dia.)

EXISTING TREE LEGEND

	LANDMARK		SPECIMEN		TOTAL
FIR	LM CAL.	1	S CAL.	7	8
OAK	LM CAL.	2	S CAL.	5	7
MAPLE	LM CAL.	1	S CAL.	1	2

TREES TO BE REMOVED

SYMBOL		LANDMARK	SPECIMEN	TOTAL
	FIR	0	3	3
	OAK	2	3	5
	MAPLE	1	1	2

TREES TO BE RETAINED

SYMBOL		LANDMARK	SPECIMEN	TOTAL
S CAL.	FIR	1	4	5
	OAK	0	2	2
	MAPLE	0	0	0

Attachment 1x

REVISIONS		
NO.	DESCRIPTION/DATE	BY
1	TABLES AND NOTES UPDATED 10/16/17	ESM
2	PER CITY COMMENTS 01/22/2018	ESM

LAURA G. BARTENHAGEN — STATE OF WASHINGTON — 40111 — REGISTERED PROFESSIONAL ENGINEER

ESM CONSULTING ENGINEERS, LLC
33400 9th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838–6113
EVERETT (425) 297–9900
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

TREE RETENTION & REPLACEMENT PLAN

CITY OF DUPONT WASHINGTON

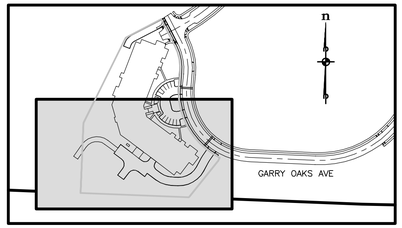
JOB NO.: 845–021–017
DWG. NAME: TR–01
DESIGNED BY: LBG
DRAWN BY: CJR
CHECKED BY:
DATE: 01/22/2018
DATE OF PRINT:

TR-01

19 OF 20 SHEETS

File: \\Esm9_server\ESM–JOBS\845\021\017\Construction\plots\TR–01.dwg
Plotted: 1/21/2018 11:12 PM
Plotted By: Lorinne Kuhlman

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



KEY MAP

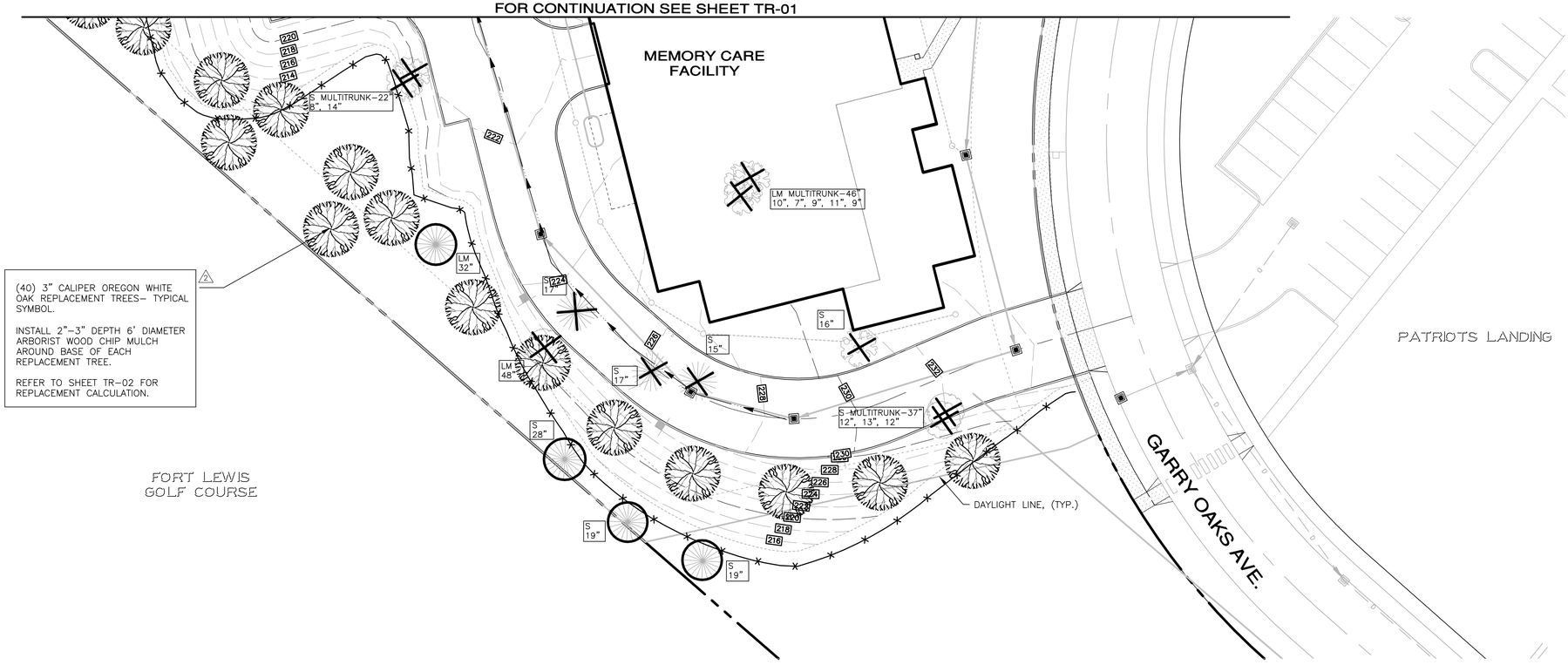
SCALE: 1"=20' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'
DATUM: PIERCE COUNTY

20 10 0 20 40

n

FOR CONTINUATION SEE SHEET TR-01



(40) 3" CALIPER OREGON WHITE OAK REPLACEMENT TREES– TYPICAL SYMBOL.

INSTALL 2"–3" DEPTH 6' DIAMETER ARBORIST WOOD CHIP MULCH AROUND BASE OF EACH REPLACEMENT TREE.

REFER TO SHEET TR–02 FOR REPLACEMENT CALCULATION.

TREE RETENTION DATA

PER DMC 25.120.030(2); ALL LANDMARK OREGON WHITE OAK TREES SHALL BE RETAINED ALONG WITH ANY NATIVE UNDERSTORY WITHIN A PROTECTION ZONE, ONE AND ONE HALF TIMES THE RADIUS OF THE OAK'S CANOPY. AT LEAST HALF OF ALL OTHER LANDMARK TREES SHALL BE RETAINED.

NUMBER OF OREGON WHITE OAK TREES = 7

NUMBER TO BE REMOVED = 5 (REFER TO TYPE III TREE MODIFICATION APPLICATION)

PER DMC 25.120.030(3)(C); THE RETENTION REQUIREMENT FOR NON–OAK SPECIES IS FOUR (4) TREES PER ACRE

SITE AREA = 3.26 ACRES X 4 = 14 NON–OAK TREES REQUIRED TO BE RETAINED

NUMBER OF NON–OAK SPECIMEN OR LANDMARK TREES TO BE RETAINED = 4

THE MINIMUM TREE RETENTION REQUIREMENTS ARE EXCEEDED WITHIN THE OVERALL CAMPUS INCLUDING PATRIOTS LANDING PHASE I.

TREE REPLACEMENT DATA

NUMBER OF LANDMARK OREGON WHITE OAK TREES TO BE REMOVED = 2

CUMULATIVE DIAMETER OF TWO REMOVED LANDMARK OREGON WHITE OAK TREES = 119"

NUMBER OF 3" CALIPER OREGON WHITE OAK REPLACEMENT TREES REQUIRED TO PROVIDE AN EQUIVALENT DIAMETER OF THE REMOVED TREES = 40

NUMBER OF 3" CALIPER OREGON WHITE OAK REPLACEMENT TREES PROVIDED = 40 (REFER TO PLANT LEGEND ON SHEET LA–01.

TREE PROTECTION MEASURES

PER DMC 25.120.030(5):

NO CLEARING, GRADING, TRENCHING, CUTTING, IMPERVIOUS SURFACING, OR OTHER CONSTRUCTION SHALL BE ALLOWED WITHIN THE DRIP LINE OF ANY TREE TO BE RETAINED, OR WITHIN ONE AND ONE–HALF TIMES THE RADIUS OF THE CANOPY IN THE CASE OF OAK TREES TO BE RETAINED, NOR SHALL GRADES BE LOWERED OR RAISED SO NEAR AS TO JEOPARDIZE SAID TREES; UNLESS THERE IS NO OTHER ALTERNATIVE AND THE INTRUSION IS THE MINIMUM POSSIBLE AS DETERMINED BY THE ADMINISTRATOR. TEMPORARY BARRIERS SHALL BE INSTALLED AROUND TREES REQUIRING PROTECTION DURING CONSTRUCTION.

REVISIONS			
NO.	DESCRIPTION/DATE	BY
1	TABLES AND NOTES UPDATED 10/16/17	ESM
2	PER CITY COMMENTS 01/22/2018	ESM

LAURA G. BARTENHAGEN
STATE OF WASHINGTON
40111
REGISTERED PROFESSIONAL ENGINEER

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

CITY OF DUPONT WASHINGTON

TREE RETENTION & REPLACEMENT PLAN

JOB NO.:	845-021-017
DWG. NAME:	TR-02
DESIGNED BY:	LBG
DRAWN BY:	CJR
CHECKED BY:	
DATE:	01/22/2018
DATE OF PRINT:	

TR-02

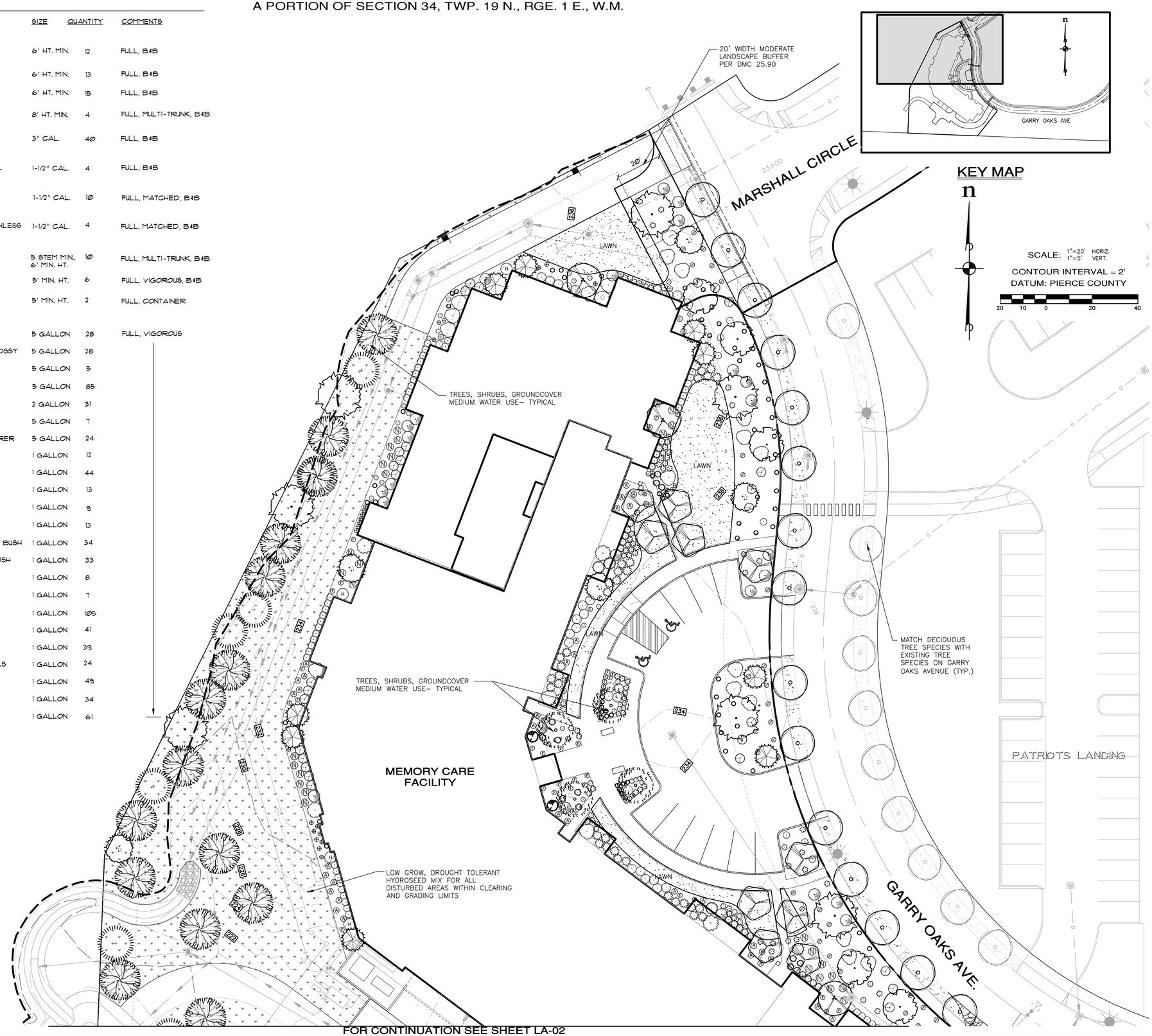
20 OF 20 SHEETS

File: \\Esm6\verp\ESM_JOBS\845\021\017\Construction\plan\TR-02.dwg
Plotted: 1/21/2018 11:09 PM
Plotted By: Leanne Kuhlman

PLANT LEGEND

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QUANTITY	COMMENTS
	TREES:			
	Tsuga heterophylla / WESTERN HEMLOCK	6' HT. MIN.	12	FULL, B&B
	Pinus flexilis 'Vanderwolf's Pyramid' / VANDERWOLF PINE	6' HT. MIN.	13	FULL, B&B
	Pseudotsuga menziesii / DOUGLAS FIR	6' HT. MIN.	15	FULL, B&B
	Lagerstroemia indica / CRAPE MYRTLE	8' HT. MIN.	4	FULL, MULTI-TRUNK, B&B
	Quercus garryana / OREGON WHITE OAK (REPLACEMENT TREE- REFER TO TR-01 AND TR-02)	3" CAL.	40	FULL, B&B
	Sorbus aucuparia 'Cardinal Royal' / CARDINAL ROYAL MTN. ASH	1-1/2" CAL.	4	FULL, B&B
	Pyrus calleryana 'Aristocrat' / ARISTOCRAT FL. PEAR	1-1/2" CAL.	10	FULL, MATCHED, B&B
	Gleditsia triacanthos inermis 'Skyline' / SKYLINE THORNLESS HONEYLOCUST	1-1/2" CAL.	4	FULL, MATCHED, B&B
	Acer circinatum / VINE MAPLE	5 STEM MIN., 6' MIN. HT.	10	FULL, MULTI-TRUNK, B&B
	Styrax japonica/ JAPANESE SNOWBELL	5' MIN. HT.	6	FULL, VIGOROUS, B&B
	Pinus sylvestris ' Fastigiata'/ NARROW COLUMNAR SCOT'S PINE	5' MIN. HT.	2	FULL, CONTAINER
	SHRUBS:			
	Hydrangea 'Princess Lace'	5 GALLON	28	FULL, VIGOROUS
	Abelia x grandiflora 'Rose Creek' / ROSE CREEK GLOSSY ABELIA	5 GALLON	28	
H	Vaccinium ovatum / EVERGREEN HUCKLEBERRY	5 GALLON	5	
	Escallonia 'Compakta' / COMPACT ESCALLONIA	5 GALLON	85	
	Rosmarinus officianalis / ROSEMARY	2 GALLON	31	
	Camellia japonica 'April Remembered'/ A R CAMELLIA	5 GALLON	7	
	Spiraea x bumalda 'Anthony Waterer' / ANTHONY WATERER SPIRAEA	5 GALLON	24	
	Hemerocallis / DAYLILY	1 GALLON	12	
N	Nandina domestica / HEAVENLY BAMBOO	1 GALLON	44	
	Hydrangea quercifolia 'Pee Wee '/ PEE WEE DWARF OAKLEAF HYDRANGEA	1 GALLON	13	
	Euphorbia x martinii 'Ascot Rainbow' / VARIEGATED EUPHORBIA	1 GALLON	9	
	Cistus x purpurea / PURPLE ROCK ROSE	1 GALLON	13	
	Viburnum opulus 'Nanum' / DW. EUROPEAN CRANBERRY BUSH	1 GALLON	34	
	Lavendula angustifolia 'Munstead' / MUNSTEAD ENGLISH LAVENDER	1 GALLON	33	
	Juniperus squamata 'Blue Star' / BLUE STAR JUNIPER	1 GALLON	8	
	Potentilla fruticosa / SHRUBBY CINQUEFOIL	1 GALLON	7	
	Mahonia nervosa / LOW OREGON GRAPE	1 GALLON	105	
	Polystichum munitum / SWORD FERN	1 GALLON	41	
A	Alchemilla mollis / LADY'S MANTLE	1 GALLON	39	
	Heuchera micrantha 'Palace Purple' / PP CORAL BELLS	1 GALLON	24	
F	Dryopteris erythrosora / AUTUMN FERN	1 GALLON	49	
	Liriope muscari / BIG BLUE LILY TURF	1 GALLON	34	
	Monarda spp. / BEE BALM	1 GALLON	61	
	SOD OR SEEDED LAWN			
	LOW GROW ORCHARD HYDROSEED MIX			

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



FOR CONTINUATION SEE SHEET LA-02

REVISIONS			
NO.	DESCRIPTION/DATE	BY
1	PER CITY COMMENTS 01/22/2018	ESM

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
LEANNE D. KUHLMAN
CERTIFICATE No. 743

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

LANDSCAPE PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	845-021-017
DWG. NAME:	LA-01
DESIGNED BY:	LDK
DRAWN BY:	LDK
CHECKED BY:	
DATE:	01/22/2018
DATE OF PRINT:	

LA-01

17 OF 20 SHEETS

File: \\Esm8\vmp\ESM-e080\845\021\017\Construction\plots\LA-01.dwg
Plotted: 1/21/2018 11:18 PM
Plotted By: Leanne Kuhlman

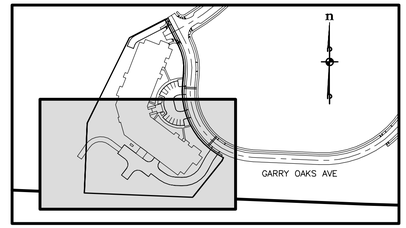
A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.

SCALE: 1"=20' HORIZ.
1"=5' VERT.

CONTOUR INTERVAL = 2'
DATUM: PIERCE COUNTY

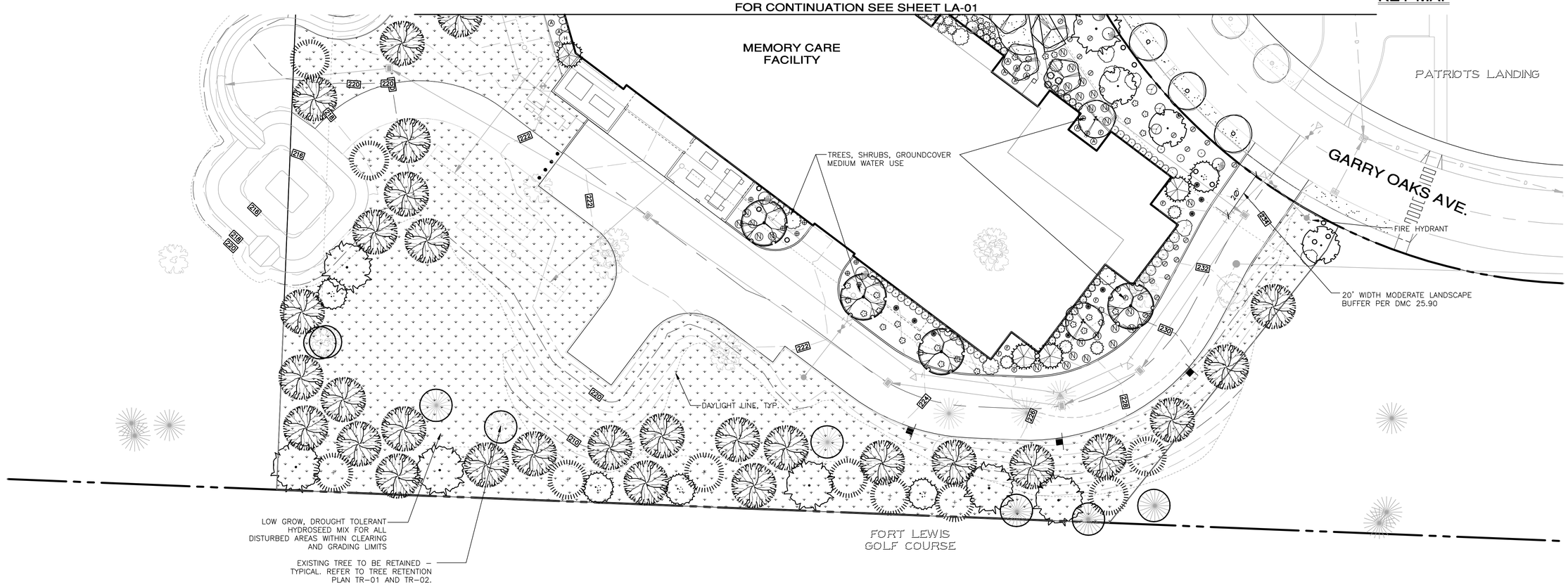
20 10 0 20 40

n



KEY MAP

FOR CONTINUATION SEE SHEET LA-01



SITE LANDSCAPE DATA

PER DMC 25.90.020, A MINIMUM OF 30% OF THE SITE SHALL BE LANDSCAPED.

TOTAL SITE SQUARE FOOTAGE = 3.26 ACRES
TOTAL LANDSCAPED AREA OF SITE = APPROX. 65,700 SF (43%)

PER DMC 25.90.030(2), A MINIMUM OF ONE TREE PER SIX PARKING STALLS IS REQUIRED.

NUMBER OF PARKING STALLS = 11
NUMBER OF TREES REQUIRED WITHIN PARKING AREAS = 2
NUMBER OF TREES SHOWN WITHIN PARKING AREAS = 2

WATER CONSERVATION STATEMENT

IRRIGATION WATER USAGE SHALL COMPLY WITH THE REQUIREMENTS OF DMC25.90.040

WATER CONSERVATION CALCULATIONS

PER DMC 25.90.040, LANDSCAPING SHALL MEET CERTAIN WATER CONSERVATION STANDARDS.
LANDSCAPE HYDROZONE MULTIPLIERS:
HIGH USAGE– 0.9
MEDIUM USAGE– 0.5
LOW USAGE– 0.3

SQUARE FOOTAGE OF LANDSCAPING:	BUDGET AT 7.2 GALLONS PER SF	MULTIPLIER	APPROXIMATE WATER USAGE IN GALLONS PER SF
MODERATE BUFFER WITH 3' HEIGHT BERM– LOW WATER USE 7,620 SF	54,864	0.3	2,286
LOW GROW DROUGHT TOLERANT HYDROSEED AT DISTURBED AREAS 45,105 SF	324,756	0.3	13,532
LAWN AREAS– HIGH WATER USE	33,156	0.9	4,145
LANDSCAPING AROUND BUILDINGS AND PARKING AREAS– MED. WATER USE 12,932 SF	93,110	0.5	6,466

REVISIONS

NO.	DESCRIPTION/DATE	BY
1	PER CITY COMMENTS 01/22/2018	ESM

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
LEANNE D. KUHLMAN
CERTIFICATE No. 743

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

LANDSCAPE PLAN

WASHINGTON

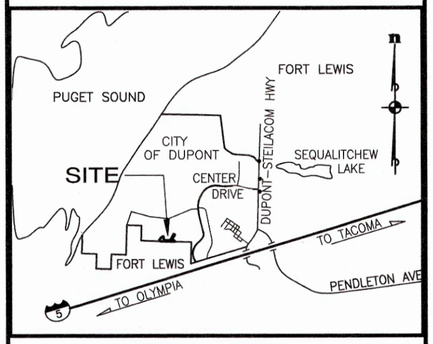
CITY OF DUPONT

JOB NO.:	845-021-017
DWG. NAME:	LA-02
DESIGNED BY:	LDK
DRAWN BY:	LDK
CHECKED BY:	
DATE:	01/22/2018
DATE OF PRINT:	

LA-02

18 OF 20 SHEETS

File: \\Esm8\engr\ESM-JOBS\845\021\017\Construction\plots\LA-02.dwg
Plotted: 1/21/2018 11:23 PM
Plotted By: Leanne Kuhlman



VICINITY MAP
NOT TO SCALE

DECLARATION

WE, THE UNDERSIGNED OWNERS, OF THE HEREIN DESCRIBED PROPERTY DO HEREBY DECLARE THIS SHORT PLAT TO BE THE GRAPHIC REPRESENTATION OF THE SUBDIVISION MADE HEREBY AND DO HEREBY DEDICATE TO THE PUBLIC ALL EASEMENTS ON THIS SHORT PLAT FOR PUBLIC PURPOSES AS INDICATED HEREON INCLUDING BUT NOT LIMITED TO UTILITIES AND DRAINAGE UNLESS SUCH EASEMENTS ARE SPECIFICALLY IDENTIFIED ON THIS SHORT PLAT AS BEING DEDICATED TO A PERSON OR ENTITY OTHER THAN THE PUBLIC. THIS SHORT PLAT HAS BEEN MADE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNERS.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS,
PATRIOTS LANDING INVESTMENT, LLC, A WASHINGTON LIMITED LIABILITY COMPANY

_____
NAME TITLE

STATE OF WASHINGTON }
} SS
COUNTY OF _____ }

ON THIS _____ DAY OF _____, 2017, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, PERSONALLY APPEARED _____ TO ME KNOWN TO BE THE _____ OF PATRIOTS LANDING INVESTMENT, LLC, A WASHINGTON LIMITED LIABILITY COMPANY, THAT EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID COMPANY FOR THE USES AND PURPOSES THEREIN MENTIONED AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE SAID INSTRUMENT.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON RESIDING AT _____
MY COMMISSION EXPIRES : _____

CITY OF DUPONT
SHORT PLAT NO. SP 17–XX

A PORTION OF SECTIONS 34 AND 35, T 19 N, R 1 E, W.M.

ASSESSOR'S
PARCEL NO(S) 0119345001

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS SHORT PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE SURVEY RECORDING ACT AT THE PATRIOTS LANDING INVESTMENT, LLC AND THAT ALL COURSES AND DISTANCES ARE SHOW CORRECTLY THEREON.

_____
ZACHARY T. LENNON, L.S. NO. 44925
ESM CONSULTING ENGINEERS, LLC
33400 8TH AVE S, SUITE 205
FEDERAL WAY, WA 98003
PHONE (253) 838–8113

ZACHARY T. LENNON
STATE OF WASHINGTON
44925
REGISTERED
PROFESSIONAL LAND SURVEYOR

DIRECTOR OF COMMUNITY DEVELOPMENT

I HEREBY CERTIFY THAT THIS SHORT PLAT IS DULY APPROVED BY THE OFFICE OF THE MAYOR AND THAT THE APPROPRIATE FEES HAVE BEEN PAID.

_____ _____
DIRECTOR OF COMMUNITY DEVELOPMENT DATE

CITY OF DUPONT ENGINEER

I HEREBY CERTIFY THAT THIS SHORT PLAT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF DUPONT AND IS HEREBY APPROVED.

_____ _____
CITY ENGINEER DATE

MAYOR

I HEREBY CERTIFY THAT ALL CITY TAXES HERETOFORE LEVIED AGAINST THE PROPERTY DESCRIBED HEREIN, ACCORDING TO THE BOOKS AND RECORDS OF MY OFFICE, HAVE BEEN PAID AND DISCHARGED.

_____ _____
MAYOR DATE

COUNTY ASSESSOR–TREASURER

I HEREBY CERTIFY THAT ALL STATE AND COUNTY TAXES HERETOFORE LEVIED AGAINST THE SHORT PLATTED PROPERTY DESCRIBED HEREON, ACCORDING TO THE BOOKS AND RECORDS OF MY OFFICE, HAVE BEEN FULLY PAID AND DISCHARGED.

_____ _____
ASSESSOR–TREASURER DATE

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____
2010, AT THE REQUEST OF ESM CONSULTING ENGINEERS, L.L.C.

AUDITOR'S FEE NO. _____

_____ _____
DEPUTY COUNTY AUDITOR

LEGAL DESCRIPTION

LOT D OF CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 17–__, RECORDED _____, 2017 UNDER RECORDING NO. _____, RECORDS OF PIERCE COUNTY AUDITOR.

SITUATE IN THE CITY OF DUPONT, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXCEPTIONS TO THE TITLE REPORT

LEGAL DESCRIPTION, EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS ARE FROM CHICAGO TITLE INSURANCE COMPANY AMENDED PLAT CERTIFICATE ORDER NO. 0107118–TC DATED OCTOBER 5, 2017. IN PREPARING THIS BOUNDARY LINE ADJUSTMENT, ESM HAS NOT CONDUCTED AN INDEPENDENT SEARCH NOR IS ESM AWARE OF ANY TITLE ISSUES AFFECTING THE PROPERTY OTHER THAN THOSE SHOWN ON THIS BOUNDARY LINE ADJUSTMENT. ESM HAS WHOLLY RELIED ON THE ABOVE REFERENCED TITLE REPORT TO PREPARE THIS BOUNDARY LINE ADJUSTMENT AND THEREFORE QUALIFIES THE BOUNDARY LINE ADJUSTMENT'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

1) SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM WEYERHAEUSER COMPANY RECORDED UNDER RECORDING NO. 9112090237. SAID DEED RESERVES THE RIGHTS TO ALL ORES AND MINERALS OF ANY NATURE WHATSOEVER IN OR UPON SAID LANDS. INSTRUMENT WAS AMENDED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9405130746.

2) SUBJECT TO COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9208240297, INCLUDING BUT NOT LIMITED TO RIGHTS OR BENEFITS WHICH MAY BE DISCLOSED AFFECTING LAND OUTSIDE THE BOUNDARY DESCRIBED THEREIN. SAID INSTRUMENT WAS AMENDED BY INSTRUMENTS RECORDED UNDER RECORDING NOS. 9501100462, 9503150368, 9601090368, 9601260346, 9603120707, 9609110555, 9612240420, 9710170646, 9803170310, 9807070025, 9912200109, 200012060263, 200209180938, 200304041434, 200512050081, 200712210490, AND 200808150280.

3) NOT APPLICABLE TO SITE.

4) NOT APPLICABLE TO SITE.

5) NOT APPLICABLE TO SITE

6) NOT APPLICABLE TO SITE.

7) SUBJECT TO THAT AGREEMENT FOR RIGHT–OF–WAY AND LANDSCAPING MAINTENANCE AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NO. 200103160634 AND 200103160636.

8) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY LARGE LOT SURVEY AS RECORDED UNDER RECORDING NO. 200403055001.

9) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY SHORT PLAT AS RECORDED UNDER RECORDING NO. 200403055002.

10) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO COMCAST OF PUGET SOUND, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200412211460. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

11) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO PUGET SOUND ENERGY, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200502111047. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

12) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN THAT BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 200505245001.

13) SUBJECT TO MEMORANDUM OF RESTRICTIVE COVENANTS AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200510200257.

14) SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07–04 AS RECORDED UNDER RECORDING NO. 200711215001 AND THAT AFFIDAVIT OF MINOR CORRECTION RECORDED UNDER RECORDING NO. 200803310989.

15) NOT REPORTED HEREIN.

16–17) SUBJECT TO GENERAL TAXES FOR TAX ACCOUNT NO. 0119345001.

18) ITEM HAS BEEN INTENTIONALLY DELETED.

19–24) NOT REPORTED HEREIN.

NOTES

1) SITE CONTAINS 7.26 ACRES, MORE OR LESS.

2) CORNERS HAVE BEEN SET IN CONJUNCTION WITH THIS SHORT PLAT AS DEPICTED HEREIN.

3) NO BUILDINGS EXIST ON SUBJECT LOTS EXCEPT AS DEPICTED HEREIN.

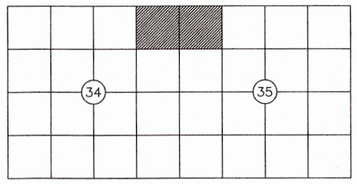
4) IN COMPLIANCE WITH DMC 254.06.080(D), THE APPROVAL OF THIS SHORT PLAT SHALL NOT BE A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED FOR ANY STRUCTURES OR DEVELOPMENT WITHIN SAID AREA.

5) THE APPLICANT AND/OR ADJOINING LAND OWNERS AND THEIR SUCCESSORS SHALL CONSTRUCT AND MAINTAIN ALL PRIVATE ACCESSES AND EASEMENTS ASSOCIATED WITH THIS SHORT PLAT.

NOTICE

THE LAND CONTAINED IN THIS SHORT PLAT MAY NOT BE FURTHER DIVIDED BY ANYONE WITHIN FIVE (5) YEARS OF THE RECORDING OF THIS SHORT PLAT WITHOUT A FORMAL SUBDIVISION HAVING BEEN FILED WITH THE PIERCE COUNTY AUDITOR PER RCW 58.17.060(1).

THE APPROVAL OF A SHORT PLAT SHALL NOT BE A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED FOR ANY STRUCTURES OR DEVELOPMENT WITHIN SAID AREA.



NE 1/4 NE 1/4 OF SECTION 34 AND
NW 1/4 NW 1/4 OF SECTION 35,
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NAME & ADDRESS–ORIGINAL LOT OWNER:

PATRIOTS LANDING INVESTMENT, LLC
P.O. BOX 1969
GIG HARBOR, WA 98334
PHONE: 253–853–4457
EXISTING ZONING: R–5
SOURCE OF WATER: CITY OF DUPONT
SEWER SYSTEM: PIERCE COUNTY
WIDTH & TYPE OF ACCESS: 47' AND 61' WIDE
PUBLIC ROW AND 47' PRIVATE ROW
NO. OF LOTS: 2
SCALE: SEE SHEET 2

SUBMITTED ON : _____ RECEIPT # _____
AUTOMATIC APPROVAL DATE : _____
RETURN FOR CAUSE ON : _____

JOB NO. 845–021–017–0006
\\ESM8\ENGR\ESM–JOBS\845\021\017\SURVEY PLOTS\SP–01.DWG
DRAWN BY : R.W./D.R./C.F.
DATE : 2017–10–31
SHEET 1 OF 2

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S,
Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838–8113
EVERETT (425) 297–9900
www.esmcivil.com
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

Attachment 1y

CITY OF DUPONT
SHORT PLAT NO. SP 17–XX

A PORTION OF SECTIONS 34 AND 35, T 19 N, R 1 E, W.M.

SURVEY INSTRUMENTATION

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

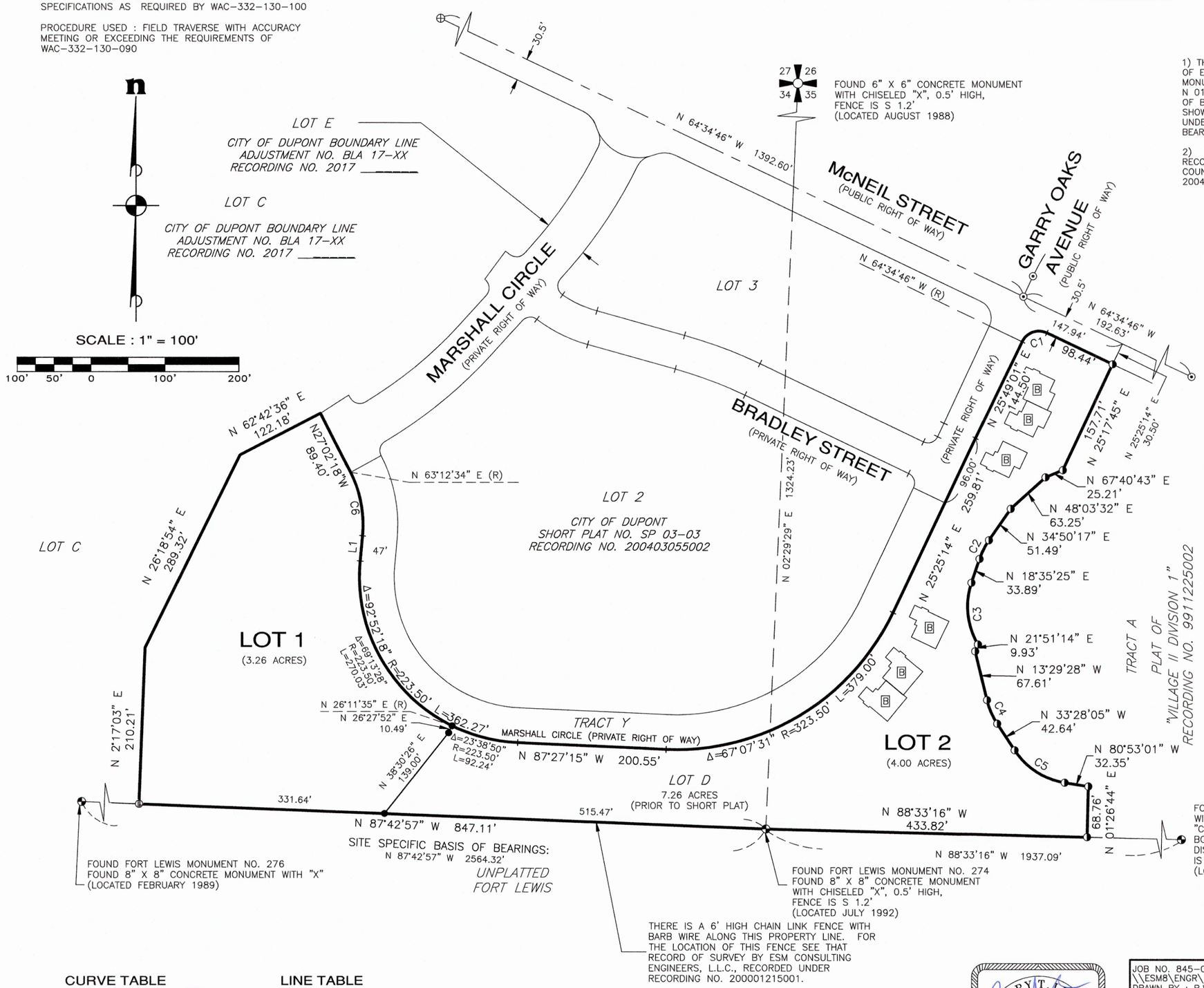
10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC–332–130–100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC–332–130–090

PROJECT BASIS OF BEARINGS : CORPS OF ENGINEERS

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY. BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THOSE RECORD OF SURVEYS BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NOS. 9303050249, 200001215001, 200403055001, 200403055002, AND 200711215001.



LEGEND

- ◓ EXISTING MONUMENT AS NOTED
- ⊕ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 3" AS RECORDED UNDER RECORDING NO. 200012115005
- ⊙ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002
- ◑ REBAR AND CAP STAMPED "ESM L.S. 15661/29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002.
- ◍ REBAR AND CAP STAMPED "ESM L.S. 15661/29281" SET IN CONJUNCTION WITH CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07–04 AS RECORDED UNDER RECORDING NO. 200711215001
- (R) RADIAL BEARING
- Δ DELTA
- R RADIUS
- L ARC
- ● SET 5/8" REBAR AND CAP STAMPED: "ESM LLC 35142 / 44925"
- [B] EXISTING SINGLE FAMILY RESIDENCE

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C1	90°00'00"	25.00	39.27
C2	16°14'52"	100.00	28.36
C3	49°11'30"	100.00	85.86
C4	19°58'37"	100.00	34.87
C5	47°24'56"	100.00	82.76
C6	32°12'29"	156.50	87.97
C7	90°29'58"	14.50	22.90
C8	01°40'42"	329.50	9.65

LINE TABLE

LINE	BEARING	LENGTH
L1	N 05°25'03" E	34.01
L2	N 62°42'36" E	10.04
L3	N 27°17'24" W	29.50
L4	N 62°42'36" E	24.86
L5	N 27°17'24" W	40.00
L6	N 37°55'39" E	90.81
L7	N 52°04'21" W	25.00
L8	N 30°07'40" E	70.00

ZACHARY T. LENNON
STATE OF WASHINGTON
44925
REGISTERED
PROFESSIONAL LAND SURVEYOR

JOB NO. 845–021–017–0006
\\ESM8\ENGR\ESM–JOBS\845\021\017\SURVEY PLOTS\SP–02.DWG
DRAWN BY : R.W./D.R./C.F./R.G
DATE : 2017–10–31
SHEET 2 OF 2

ESM CONSULTING ENGINEERS LLC
33400 8TH AVE S
Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838–6113
EVERETT (425) 297–9900
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

CLOSURES FOR PATRIOTS LANDING MEMORY CARE SHORT PLAT

October 30, 2017

BOUNDARY

North: 649843.1583 East : 463136.4703
Line Course: S 27-02-18 E Length: 89.40
North: 649763.5295 East : 463177.1103
Curve Length: 87.97 Radius: 156.50
Delta: 32-12-29 Tangent: 45.18
Chord: 86.82 Course: S 10-41-12 E
Course In: S 63-12-34 W Course Out: S 84-34-57 E
RP North: 649692.9902 East : 463037.4090
End North: 649678.2146 East : 463193.2100
Line Course: S 05-25-03 W Length: 34.01
North: 649644.3565 East : 463189.9990
Curve Length: 362.27 Radius: 223.50
Delta: 92-52-18 Tangent: 234.99
Chord: 323.90 Course: S 41-01-06 E
Course In: S 84-34-57 E Course Out: S 02-32-45 W
RP North: 649623.2554 East : 463412.5007
End North: 649399.9760 East : 463402.5731
Line Course: S 87-27-15 E Length: 200.55
North: 649391.0678 East : 463602.9252
Curve Length: 379.00 Radius: 323.50
Delta: 67-07-31 Tangent: 214.63
Chord: 357.69 Course: N 58-59-00 E
Course In: N 02-32-45 E Course Out: S 64-34-46 E
RP North: 649714.2485 East : 463617.2946
End North: 649575.3832 East : 463909.4737
Line Course: N 25-25-14 E Length: 259.81
North: 649810.0387 East : 464020.9996
Line Course: N 25-49-01 E Length: 144.50
North: 649940.1162 East : 464083.9289
Curve Length: 39.27 Radius: 25.00
Delta: 90-00-00 Tangent: 25.00
Chord: 35.36 Course: N 70-25-14 E
Course In: S 64-34-46 E Course Out: N 25-25-14 E
RP North: 649929.3847 East : 464106.5085

Attachment 1z

End North: 649951.9642 East : 464117.2400
Line Course: S 64-34-46 E Length: 98.44
North: 649909.7080 East : 464206.1491
Line Course: S 25-17-45 W Length: 157.71
North: 649767.1202 East : 464138.7609
Line Course: S 67-40-43 W Length: 25.21
North: 649757.5454 East : 464115.4399
Line Course: S 48-03-32 W Length: 63.25
North: 649715.2712 East : 464068.3925
Line Course: S 34-50-17 W Length: 51.49
North: 649673.0098 East : 464038.9784
Curve Length: 28.36 Radius: 100.00
Delta: 16-14-52 Tangent: 14.27
Chord: 28.26 Course: S 26-42-51 W
Course In: S 55-09-43 E Course Out: N 71-24-35 W
RP North: 649615.8839 East : 464121.0554
End North: 649647.7638 East : 464026.2732
Line Course: S 18-35-25 W Length: 33.89
North: 649615.6420 East : 464015.4691
Curve Length: 85.86 Radius: 100.00
Delta: 49-11-30 Tangent: 45.77
Chord: 83.24 Course: S 06-00-20 E
Course In: S 71-24-35 E Course Out: S 59-23-55 W
RP North: 649583.7622 East : 464110.2513
End North: 649532.8560 East : 464024.1784
Line Course: S 21-51-14 W Length: 9.93
North: 649523.6396 East : 464020.4820
Line Course: S 13-29-28 E Length: 67.61
North: 649457.8952 East : 464036.2551
Curve Length: 34.87 Radius: 100.00
Delta: 19-58-37 Tangent: 17.61
Chord: 34.69 Course: S 23-28-47 E
Course In: N 76-30-32 E Course Out: S 56-31-55 W
RP North: 649481.2247 East : 464133.4957
End North: 649426.0775 East : 464050.0763
Line Course: S 33-28-05 E Length: 42.64
North: 649390.5074 East : 464073.5911
Curve Length: 82.76 Radius: 100.00
Delta: 47-24-56 Tangent: 43.91
Chord: 80.41 Course: S 57-10-33 E
Course In: N 56-31-55 E Course Out: S 09-06-59 W
RP North: 649445.6546 East : 464157.0104

End North: 649346.9178 East : 464141.1664
Line Course: S 80-53-01 E Length: 32.35
North: 649341.7922 East : 464173.1078
Line Course: S 01-26-44 W Length: 68.76
North: 649273.0541 East : 464171.3731
Line Course: N 88-33-16 W Length: 433.82
North: 649283.9981 East : 463737.6912
Line Course: N 87-42-57 W Length: 847.11
North: 649317.7602 East : 462891.2543
Line Course: N 02-17-03 E Length: 210.21
North: 649527.8032 East : 462899.6323
Line Course: N 26-18-54 E Length: 289.32
North: 649787.1411 East : 463027.8896
Line Course: N 62-42-36 E Length: 122.18
North: 649843.1600 East : 463136.4706
Line Course: S 11-09-31 W Length: 0.00
North: 649843.1600 East : 463136.4706

Perimeter: 4382.55 Area: 316,222 sq.ft. 7.26 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)
Error Closure: 0.0017 Course: N 11-09-31 E
Error North: 0.00168 East : 0.00033
Precision 1: 2,577,970.59

Lot 1

North: 649763.5332 East : 463177.1174
Curve Length: 87.97 Radius: 156.50
Delta: 32-12-29 Tangent: 45.18
Chord: 86.82 Course: S 10-41-11 E
Course In: S 63-12-34 W Course Out: S 84-34-57 E
RP North: 649692.9939 East : 463037.4161
End North: 649678.2184 East : 463193.2171
Line Course: S 05-25-03 W Length: 34.01
North: 649644.3603 East : 463190.0061
Curve Length: 270.03 Radius: 223.50
Delta: 69-13-28 Tangent: 154.25
Chord: 253.90 Course: S 29-11-41 E
Course In: S 84-34-57 E Course Out: S 26-11-35 W
RP North: 649623.2591 East : 463412.5078

End North: 649422.7099 East : 463313.8555
Line Course: S 26-27-52 W Length: 10.49
North: 649413.3191 East : 463309.1807
Line Course: S 38-30-26 W Length: 139.00
North: 649304.5475 East : 463222.6375
Line Course: N 87-42-57 W Length: 331.64
North: 649317.7652 East : 462891.2610
Line Course: N 02-17-03 E Length: 210.21
North: 649527.8082 East : 462899.6391
Line Course: N 26-18-54 E Length: 289.32
North: 649787.1461 East : 463027.8963
Line Course: N 62-42-36 E Length: 122.18
North: 649843.1650 East : 463136.4773
Line Course: S 27-02-18 E Length: 89.40
North: 649763.5361 East : 463177.1174
Line Course: S 01-17-08 E Length: 0.00
North: 649763.5361 East : 463177.1174

Perimeter: 1584.26 Area: 141,993 sq.ft. 3.26 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)
Error Closure: 0.0029 Course: N 01-17-08 W
Error North: 0.00295 East : -0.00007
Precision 1: 546,293.10

Lot 2

North: 649399.9684 East : 463402.5743
Line Course: S 87-27-15 E Length: 200.55
North: 649391.0602 East : 463602.9264
Curve Length: 379.00 Radius: 323.50
Delta: 67-07-31 Tangent: 214.63
Chord: 357.69 Course: N 58-58-59 E
Course In: N 02-32-45 E Course Out: S 64-34-46 E
RP North: 649714.2409 East : 463617.2958
End North: 649575.3756 East : 463909.4750
Line Course: N 25-25-14 E Length: 259.81
North: 649810.0311 East : 464021.0008
Line Course: N 25-49-01 E Length: 144.50
North: 649940.1086 East : 464083.9302
Curve Length: 39.27 Radius: 25.00

Delta: 90-00-00 Tangent: 25.00
Chord: 35.36 Course: N 70-25-14 E
Course In: S 64-34-46 E Course Out: N 25-25-14 E
RP North: 649929.3771 East : 464106.5097
End North: 649951.9566 East : 464117.2412
Line Course: S 64-34-46 E Length: 98.44
North: 649909.7004 East : 464206.1503
Line Course: S 25-17-45 W Length: 157.71
North: 649767.1126 East : 464138.7621
Line Course: S 67-40-43 W Length: 25.21
North: 649757.5378 East : 464115.4411
Line Course: S 48-03-32 W Length: 63.25
North: 649715.2636 East : 464068.3938
Line Course: S 34-50-17 W Length: 51.49
North: 649673.0022 East : 464038.9796
Curve Length: 28.36 Radius: 100.00
Delta: 16-14-52 Tangent: 14.27
Chord: 28.26 Course: S 26-42-51 W
Course In: S 55-09-43 E Course Out: N 71-24-35 W
RP North: 649615.8763 East : 464121.0566
End North: 649647.7561 East : 464026.2744
Line Course: S 18-35-25 W Length: 33.89
North: 649615.6344 East : 464015.4703
Curve Length: 85.86 Radius: 100.00
Delta: 49-11-30 Tangent: 45.77
Chord: 83.24 Course: S 06-00-20 E
Course In: S 71-24-35 E Course Out: S 59-23-55 W
RP North: 649583.7546 East : 464110.2526
End North: 649532.8484 East : 464024.1796
Line Course: S 21-51-14 W Length: 9.93
North: 649523.6320 East : 464020.4832
Line Course: S 13-29-28 E Length: 67.61
North: 649457.8876 East : 464036.2563
Curve Length: 34.87 Radius: 100.00
Delta: 19-58-37 Tangent: 17.61
Chord: 34.69 Course: S 23-28-47 E
Course In: N 76-30-32 E Course Out: S 56-31-55 W
RP North: 649481.2170 East : 464133.4969
End North: 649426.0698 East : 464050.0775
Line Course: S 33-28-05 E Length: 42.64
North: 649390.4998 East : 464073.5923
Curve Length: 82.76 Radius: 100.00

Delta: 47-24-56 Tangent: 43.91
Chord: 80.41 Course: S 57-10-33 E
Course In: N 56-31-55 E Course Out: S 09-06-59 W
RP North: 649445.6470 East : 464157.0117
End North: 649346.9102 East : 464141.1676
Line Course: S 80-53-01 E Length: 32.35
North: 649341.7846 East : 464173.1090
Line Course: S 01-26-44 W Length: 68.76
North: 649273.0465 East : 464171.3744
Line Course: N 88-33-16 W Length: 433.82
North: 649283.9905 East : 463737.6924
Line Course: N 87-42-57 W Length: 515.47
North: 649304.5349 East : 463222.6320
Line Course: N 38-30-26 E Length: 139.00
North: 649413.3065 East : 463309.1752
Line Course: N 26-27-52 E Length: 10.49
North: 649422.6973 East : 463313.8500
Curve Length: 92.24 Radius: 223.50
Delta: 23-38-50 Tangent: 46.79
Chord: 91.59 Course: S 75-37-50 E
Course In: N 26-11-35 E Course Out: S 02-32-45 W
RP North: 649623.2465 East : 463412.5023
End North: 649399.9671 East : 463402.5747
Line Course: N 17-30-30 W Length: 0.00
North: 649399.9671 East : 463402.5747

Perimeter: 3097.27 Area: 174,228 sq.ft. 4.00 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)
Error Closure: 0.0013 Course: S 17-30-30 E
Error North: -0.00126 East : 0.00040
Precision 1: 2,382,523.08

ESM CONSULTING ENGINEERS LLC
33400 8th Avenue South, Suite 205
Federal Way, WA 98003

MEMORANDUM

TO: JEFF WILSON, PLANNING DIRECTOR

FROM: MATT REIDER, ESM CONSULTING ENGINEERS, LLC

RE: PATRIOTS LANDING MEMORY CARE EMPLOYEE SHIFT COUNT

JOB #: 845-021-017

DATE: JANUARY 11, 2018

Patriots Landing Memory Care Facility will operate 24 hours a day, seven days a week. All-day operations require 3 rotating shifts. The table below represents the three rotating shifts, type of employee required at each shift, and number of employees per type per shift.

Dept	Dayshift	Change of Shift	Evening Shift	Nocturnal Shift
Nursing	16	30	14	6
Plant	1			
Hskg/laundry	2	4	2	
Dietary	3	6	3	
Mktg	2			
Life Enrich	3	4	1	
Admin	3	4	1	
Visitors*	Unknown	Unknown	Unknown	Unknown
Total	30	48	21	6

*Residents will be allowed to have guest visitors at any time of day. It is unknown how many and for long guests will stay.

The proposed parking is designed to accommodate the parking needs at max staff levels (change shift). Additional parking spaces are provided to accommodate a small amount of visitor parking.

Attachment 1aa

CITY OF DUPONT, PIERCE COUNTY

CITY FILE NO. PLNG2017-044 (BOUNDARY LINE ADJUSTMENT)

DECLARATION

KNOW ALL MEN BY THESE PRESENTS THAT WE THE UNDERSIGNED OWNER(S) OF THE LAND HEREIN DESCRIBED DO HEREBY MAKE A BOUNDARY LINE ADJUSTMENT THEREOF PURSUANT TO RCW 58.17.040 AND DECLARE THIS ADJUSTMENT TO BE THE GRAPHIC REPRESENTATION OF THE SAME, AND THAT SAID ADJUSTMENT IS MADE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNER(S). IN WITNESS WHEREOF WE HAVE SET OUR HANDS AND SEALS.

PATRIOTS LANDING INVESTMENT, LLC,
A WASHINGTON LIMITED LIABILITY COMPANY

BY: _____
SIGNATURE PRINTED NAME TITLE

PATRIOTS LANDING INVESTMENT II, LLC,
A WASHINGTON LIMITED LIABILITY COMPANY

BY: _____
SIGNATURE PRINTED NAME TITLE

STATE OF WASHINGTON
COUNTY OF_____

ON THIS DAY PERSONALLY APPEARED BEFORE ME_____ TO ME KNOWN TO BE THE_____ OF PATRIOTS LANDING INVESTMENT, LLC, THE COMPANY DESCRIBED IN THE FOREGOING INSTRUMENT AND ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID COMPANY, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE/SHE WAS AUTHORIZED TO EXECUTE SAID INSTRUMENT ON BEHALF OF SAID COMPANY.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS____DAY OF_____,2018.

SIGNATURE OF
NOTARY PUBLIC_____

DATED _____

MY APPOINTMENT EXPIRES_____

STATE OF WASHINGTON
COUNTY OF_____

ON THIS DAY PERSONALLY APPEARED BEFORE ME_____ TO ME KNOWN TO BE THE_____ OF PATRIOTS LANDING INVESTMENT, LLC II, THE COMPANY DESCRIBED IN THE FOREGOING INSTRUMENT AND ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID COMPANY, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE/SHE WAS AUTHORIZED TO EXECUTE SAID INSTRUMENT ON BEHALF OF SAID COMPANY.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS____DAY OF_____,2018.

SIGNATURE OF
NOTARY PUBLIC_____

DATED _____

MY APPOINTMENT EXPIRES_____

CITY OF DUPONT APPROVAL

DIRECTOR OF COMMUNITY DEVELOPMENT

I HEREBY CERTIFY THAT THIS BOUNDARY LINE ADJUSTMENT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF DUPONT.

_____ _____
DIRECTOR OF COMMUNITY DEVELOPMENT DATE

CITY ENGINEER

I HEREBY CERTIFY THAT THIS BOUNDARY LINE ADJUSTMENT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF DUPONT.

_____ _____
CITY ENGINEER DATE

MAYOR

I HEREBY CERTIFY THAT ALL CITY FEES AND TAXES HERETOFORE LEVIED AGAINST THE PROPERTY DESCRIBED HEREIN, ACCORDING TO THE BOOKS AND RECORDS OF THE CITY, HAVE BEEN PAID AND DISCHARGED. THIS BOUNDARY LINE ADJUSTMENT IS HEREBY APPROVED.

_____ _____
MAYOR DATE

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS____DAY OF _____, 2018 AT

AT____MINUTES PAST _____ M., RECORDS OF PIERCE COUNTY AUDITOR,

TACOMA, WASHINGTON.

RECORDING NO. _____

JULIE ANDERSON
PIERCE COUNTY AUDITOR

BY: _____ FEE: _____

DEPUTY

RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT

EXCEPTIONS FROM TITLE REPORT

LEGAL DESCRIPTION, EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS ARE FROM CHICAGO TITLE INSURANCE COMPANY AMENDED PLAT CERTIFICATE ORDER NO. 0107118-TC DATED OCTOBER 5, 2017. IN PREPARING THIS BOUNDARY LINE ADJUSTMENT, ESM HAS NOT CONDUCTED AN INDEPENDENT SEARCH NOR IS ESM AWARE OF ANY TITLE ISSUES AFFECTING THE PROPERTY OTHER THAN THOSE SHOWN ON THIS BOUNDARY LINE ADJUSTMENT. ESM HAS WHOLLY RELIED ON THE ABOVE REFERENCED TITLE REPORT TO PREPARE THIS BOUNDARY LINE ADJUSTMENT AND THEREFORE QUALIFIES THE BOUNDARY LINE ADJUSTMENT'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

1) SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM WEYERHAEUSER COMPANY RECORDED UNDER RECORDING NO. 9112090237. SAID DEED RESERVES THE RIGHTS TO ALL ORES AND MINERALS OF ANY NATURE WHATSOEVER IN OR UPON SAID LANDS. INSTRUMENT WAS AMENDED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9405130746.

2) SUBJECT TO COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9208240297, INCLUDING BUT NOT LIMITED TO RIGHTS OR BENEFITS WHICH MAY BE DISCLOSED AFFECTING LAND OUTSIDE THE BOUNDARY DESCRIBED THEREIN. SAID INSTRUMENT WAS AMENDED BY INSTRUMENTS RECORDED UNDER RECORDING NOS. 9501100462, 9503150368, 9601090368, 9601260346, 9603120707, 9609110555, 9612240420, 9710170646, 9803170310, 9807070025, 9912200109, 200012060263, 200209180938, 200304041434, 200512050081, 200712210490, AND 200808150280.

3) SUBJECT TO AN EASEMENT AND THE TERMS AND CONDITIONS THEREOF TO PUGET SOUND POWER AND LIGHT COMPANY FOR ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINES AS RECORDED UNDER RECORDING NO. 9004190543. IN CONNECTION THEREWITH NOTE CONSENT FOR USE OF PUGET SOUND ENERGY, INC. TRANSMISSION LINE RIGHT OF WAY PER INSTRUMENT RECORDED UNDER RECORDING NO. 9909090471. THE LOCATION OF SAID EASEMENT IS DEPICTED HEREON.

4) SUBJECT TO THAT EASEMENT FOR SANITARY SEWER PURPOSES AND THE TERMS AND CONDITIONS THEREOF TO PIERCE COUNTY AS CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 9909090470. THE LOCATION OF SAID EASEMENT IS DEPICTED HEREIN.

5) SUBJECT TO THAT EASEMENT FOR WATERLINE PURPOSES AND THE TERMS AND CONDITIONS THEREOF TO CITY OF DUPONT AS CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 9911090330. THE LOCATION OF SAID EASEMENT IS DEPICTED HEREIN.

6) SUBJECT TO THAT EASEMENT FOR STORM WATER FACILITIES AND THE TERMS AND CONDITIONS THEREOF TO CITY OF DUPONT AS RECORDED UNDER RECORDING NO. 200012070866. THE LOCATION OF SAID EASEMENT IS DEPICTED HEREON.

7) SUBJECT TO THAT AGREEMENT FOR RIGHT-OF-WAY AND LANDSCAPING MAINTENANCE AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NO. 200103160634 AND 200103160636.

8) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY LARGE LOT SURVEY AS RECORDED UNDER RECORDING NO. 200403055001.

9) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY SHORT PLAT AS RECORDED UNDER RECORDING NO. 200403055002.

10) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO COMCAST OF PUGET SOUND, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200412211460. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

11) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO PUGET SOUND ENERGY, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200502111047. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

12) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN THAT BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 200505245001.

13) SUBJECT TO MEMORANDUM OF RESTRICTIVE COVENANTS AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200510200257.

14) SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001 AND THAT AFFIDAVIT OF MINOR CORRECTION RECORDED UNDER RECORDING NO. 200803310989.

15) NOT REPORTED HEREIN.

16-17) SUBJECT TO GENERAL TAXES FOR TAX ACCOUNT NOS. 0119345001 AND 0119341004.

18) ITEM HAS BEEN INTENTIONALLY DELETED.

19-24) NOT REPORTED HEREIN.

LEGAL DESCRIPTIONS PRIOR TO ADJUSTMENT

LOT X AND LOT Y, BOUNDARY LINE ADJUSTMENT 200711215001, ACCORDING TO THE SURVEY THEREOF RECORDED NOVEMBER 21, 2007, AND BY AFFIDAVIT OF MINOR CORRECTION OF SURVEY RECORDED UNDER RECORDING NO. 200803310989, RECORDS OF PIERCE COUNTY AUDITOR.

AND

TRACT X, PIERCE COUNTY SHORT PLAT NO. 200403055002, ACCORDING TO THE PLAT THEREOF RECORDED MARCH 5, 2004, RECORDS OF PIERCE COUNTY AUDITOR.

SITUATE IN THE CITY OF DUPONT, COUNTY OF PIERCE, STATE OF WASHINGTON.

LEGAL DESCRIPTIONS AFTER ADJUSTMENT

LOT C

LOTS X AND Y OF CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001;

EXCEPT ANY PORTION THEREOF LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE MOST SOUTHERLY CORNER COMMON TO SAID LOT Y AND LOT X OF SAID BOUNDARY LINE ADJUSTMENT;

THENCE ALONG THE SOUTH BOUNDARY LINE OF SAID LOT Y OF SAID, N 87°42'57" W, 5.86 FEET; TO THE TRUE POINT OF BEGINNING;

THENCE N 02°17'03" E, 210.21 FEET;

THENCE N 26°18'54" E, 289.32 FEET;

THENCE N 62°42'36" E, 122.18 FEET TO THE NORTHWESTERLY LINE OF TRACT X OF CITY OF DUPONT SHORT PLAT NO. SP 03-03 AS RECORDED UNDER THE RECORDING NO. 200403055002 AND THE TERMINUS OF THIS LINE.

CONTAINING 24.60 ACRES, MORE OR LESS.

LOT D

LOTS X AND Y OF CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001;

EXCEPT ANY PORTION THEREOF LYING WESTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE MOST SOUTHERLY CORNER COMMON TO SAID LOT Y AND LOT X OF SAID BOUNDARY LINE ADJUSTMENT;

THENCE ALONG THE SOUTH BOUNDARY LINE OF SAID LOT Y OF SAID, N 87°42'57" W, 5.86 FEET; TO THE TRUE POINT OF BEGINNING;

THENCE N 02°17'03" E, 210.21 FEET;

THENCE N 26°18'54" E, 289.32 FEET;

THENCE N 62°42'36" E, 122.18 FEET TO THE NORTHWESTERLY LINE OF TRACT X OF CITY OF DUPONT SHORT PLAT NO. SP 03-03 AS RECORDED UNDER THE RECORDING NO. 200403055002 AND THE TERMINUS OF THIS LINE;

TOGETHER WITH THAT PORTION OF TRACT X OF SAID SHORT PLAT LYING SOUTHERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE MOST SOUTHERLY CORNER OF LOTS X AND Y OF CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001;

THENCE ALONG THE SOUTHERLY LINE OF SAID LOT Y, N 87°42'57" W, 5.86 FEET;

THENCE N 02°17'03" E, 210.21 FEET;

THENCE N 26°18'54" E, 289.32 FEET;

THENCE N 62°42'36" E, 122.18 FEET TO THE NORTHWESTERLY LINE OF SAID TRACT X AND THE TRUE POINT OF BEGINNING;

THENCE S 27°02'18" E 89.40 FEET TO THE WESTERLY LINE OF TRACT Y OF SAID SHORT PLAT AND THE TERMINUS OF THIS LINE.

CONTAINING 7.26 ACRES, MORE OR LESS.

LOT E

TRACT X OF CITY OF DUPONT SHORT PLAT NO. SP 03-03 AS RECORDED UNDER THE RECORDING NO. 200403055002;

EXCEPT ANY PORTION THEREOF LYING SOUTHERLY OF THE FOLLOWING DESCRIBED LINE:

THENCE ALONG THE SOUTHERLY LINE OF SAID LOT Y, N 87°42'57" W, 5.86 FEET;

THENCE N 02°17'03" E, 210.21 FEET;

THENCE N 26°18'54" E, 289.32 FEET;

THENCE N 62°42'36" E, 122.18 FEET TO THE NORTHWESTERLY LINE OF SAID TRACT X AND THE TRUE POINT OF BEGINNING;

THENCE S 27°02'18" E 89.40 FEET TO THE WESTERLY LINE OF TRACT Y OF SAID SHORT PLAT AND THE TERMINUS OF THIS LINE.

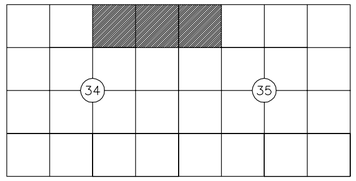
CONTAINING 1.69 ACRES, MORE OR LESS.

PIERCE COUNTY ASSESSOR-TREASURER

I HEREBY CERTIFY THAT ALL STATE AND COUNTY TAXES HERETOFORE LEVIED AGAINST THE PROPERTY DESCRIBED HEREON, ACCORDING TO THE BOOKS AND RECORDS OF MY OFFICE, HAVE BEEN FULLY PAID AND DISCHARGED.

_____ _____
ASSESSOR/TREASURER DATE

NE 1/4 OF THE NE 1/4 OF SECTION 34
NW 1/4 OF THE NE 1/4 OF SECTION 34
NW 1/4 OF THE NW 1/4 OF SECTION 35
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.



DRAWING NAME : 845\021\017\SurveyPlots\BLA2-01.DWG

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-8113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

LAND SURVEYOR'S CERTIFICATE

THIS BOUNDARY LINE ADJUSTMENT CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF PATRIOTS LANDING INVESTMENT, LLC, AND PATRIOTS LANDING INVESTMENT II, LLC, IN JANUARY, 2018.

_____
ZACHARY T. LENNON
CERTIFICATE NO. 44925

ZACHARY T. LENNON
STATE OF WASHINGTON
44925
REGISTERED
PROFESSIONAL LAND SURVEYOR

APPROVAL NOTES

This boundary line adjustment is not a plat, replat or subdivision. It does not guarantee that the lots will be suitable for development now or in the future. The legal transfer of the property must be done by separate instrument.

_____
_____
_____

PORTION OF

NE NE 34
NW NE 34
NW 1/4 of NW 1/4, S. 35 T. 19 N. R. 1E., W.M.

DWN. BY	DATE	JOB NO.
R.J.W./C.A.F.	2018-01-11	845-021-017-0005
CHKD. BY	SCALE	SHEET
C.A.F.		1 OF 3

Attachment 2a

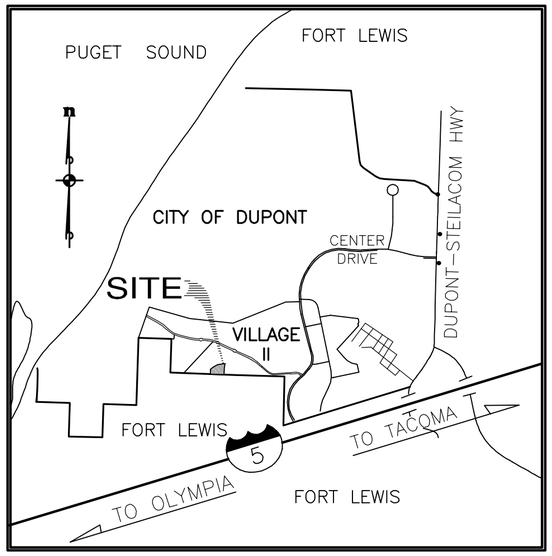
CITY OF DUPONT, PIERCE COUNTY

CITY FILE NO. PLNG2017-044 (BOUNDARY LINE ADJUSTMENT)

RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT

Vicinity Map

1" = 10,000'



SURVEY INSTRUMENTATION

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090

BOB'S HOLLOW LANE

SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281", SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 7" AS RECORDED UNDER RECORDING NO. 200405075004.

SITE SPECIFIC BASIS OF BEARINGS: N 64°34'46" W 1585.23'

McNEIL STREET (PUBLIC RIGHT OF WAY)

N 64°34'46" W 184.48' C3 30.5' C1 C2 49.00' N 62°45'35" W (R) N 64°34'46" W 459.35' 30.5'

24.5' WATER EASEMENT - RECORDING NO. 9911090330 (SEE EXCEPTION 5 ON SHEET 1 OF 3)

30' SANITARY SEWER EASEMENT - RECORDING NO. 9909090470 (SEE EXCEPTION 4 ON SHEET 1 OF 3)

ARNOLD STREET (PUBLIC RIGHT OF WAY)

MEYER STREET (PUBLIC RIGHT OF WAY)

PLAT OF VILLAGE II DIVISION 3" RECORDING NO. 200012115005

N 42°58'59" E 427.55' N 42°32'06" E(R) N 31°37'19" E(R) N 35°19'45" E(R) 83 82 81 80 79 42 C10 C9 C8 C4 L4 C5 N 35°50'17" E(R) 45.00' C6 C7 C11 L1 N 27°57'21" E(R) N 42°58'59" E 245.58' 145.58' N 42°58'59" E 21.5' 100.12' N 45°50'44" E C12 C13

C30 C29 C28 Δ=78°53'24" R=60.50' L=83.30'

L=161.47' R=570.50' Δ=16°13'01" L10 C27 C26 L11(R) C25 L9 TRACT X

L=164.49' R=570.50' Δ=16°31'11" C23 C24 L8(R) C22 LOT E MARSHALL CIRCLE (PRIVATE ROAD)

CITY OF DUPONT SHORT PLAT NO. SP 03-03 RECORDING NO. 200403055002

N 62°42'36" E 10.48' N 27°17'24" W 59.00' N 62°42'36" E 122.18' L6 N 62°42'36" E 6.38' N 62°42'36" E 78.21' N 27°02'18" W 89.40'

N 26°18'54" E 289.32' R=470.50' L=292.99' Δ=35°40'46"

SEE LEGEND ON SHEET 3 OF 3

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C1	88°37'53"	25.00	38.67
C2	00°27'04"	374.50	2.95
C3	91°49'11"	25.00	40.06
C4	03°05'13"	623.50	33.59
C5	00°30'32"	622.50	5.53
C6	89°57'55"	14.50	22.77
C7	07°06'37"	207.50	25.75
C8	07°52'56"	600.00	82.54
C9	03°39'58"	600.00	38.39
C10	27°39'48"	600.00	289.69
C11	11°21'40"	180.00	35.69
C12	41°31'47"	180.00	130.47
C13	29°58'11"	180.00	94.15
C14	60°06'49"	350.00	367.21
C22	95°03'26"	14.50	24.06
C23	01°24'32"	202.50	4.98
C24	90°07'19"	14.50	22.81
C25	95°41'54"	14.50	24.22
C26	00°44'18"	573.50	7.39
C27	85°02'24"	14.50	21.52
C28	51°17'47"	24.50	21.93
C29	07°12'37"	60.50	7.61
C30	46°41'47"	35.00	28.53

LINE TABLE

LINE	BEARING	LENGTH
L1	N 31°37'19" E	22.07
L2	N 45°09'55" E	54.32
L3	N 87°01'56" E	61.85
L4	N 55°06'14" W	40.31
L6	N 62°42'36" E	10.04
L8	N 57°39'10" E	45.00
L9	N 42°25'12" E	54.31
L10	N 42°25'12" E	12.79
L11	N 36°43'18" E	47.00

FOUND FORT LEWIS MONUMENT NO. 277 FOUND 6" X 6" CONCRETE MONUMENT WITH LARGE "X" (LOCATED FEBRUARY 1989) FENCE CORNER IS S 1.3' W 1.3'

27 34 N 87°34'19" E 2588.68' 27 26 34 35

FOUND 6" X 6" CONCRETE MONUMENT WITH CHISELED "X" 0.5' HIGH (LOCATED AUGUST 1988)

N 01°26'30" E 1330.88'

MacARTHUR STREET

TRACT E

N 42°58'59" E 695.57'

90' POWER EASEMENT RECORDING NO. 9004190543 (SEE EXCEPTION 3 ON SHEET 1 OF 3)

Δ=48°17'04" R=202.50' L=170.65'

LOT C

PRIOR TO ADJUSTMENT: 24.59 ACRES
AFTER ADJUSTMENT: 24.60 ACRES

LOT Y

CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 RECORDING NO. 200711215001

LOT LINE ESTABLISHED UPON THE RECORDING OF THIS BOUNDARY LINE ADJUSTMENT

DETAIL A

5.86'

EXISTING LOT LINE ESTABLISHED BY BLA 07-04 IS EXTINGUISHED UPON THE RECORDING OF THIS BOUNDARY LINE ADJUSTMENT

STORM WATER FACILITIES EASEMENT - RECORDING NO. 200012070866 (SEE EXCEPTION 6 ON SHEET 1 OF 3)

SOUTHERLY CORNER COMMON TO LOTS X AND Y

LOT LINE ESTABLISHED UPON THE RECORDING OF THIS BOUNDARY LINE ADJUSTMENT

LOT D

LOT X

CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 RECORDING NO. 200711215001

SEE SHEET 3 OF 3

<N 39°46'34" W(R)> Δ=23°11'36" R=329.50' L=133.38' N 2°17'03" E 210.21' N 45°00'00" W 147.22' DETAIL A 847.11' 841.25'

23 22 34.01' C14 L3 16.35' L2 1196.97' 1202.83'

N 87°42'57" W 2044.08'

N 87°42'57" W 2564.32'

SOUTHERLY CORNER COMMON TO LOTS X AND Y

FOUND FORT LEWIS MONUMENT NO. 274 FOUND 8" X 8" CONCRETE MONUMENT WITH CHISELED "X", 0.5' HIGH (LOCATED JULY 1992) FENCE IS S 1.2'

FOUND FORT LEWIS MONUMENT NO. 276 FOUND 8" X 8" CONCRETE MONUMENT WITH "X" (LOCATED FEBRUARY 1989) FENCE CORNER IS S 1.0' W 1.1'

FORT LEWIS UNPLATTED

THERE IS A 6' HIGH CHAIN LINK FENCE WITH BARB WIRE ALONG THIS PROPERTY LINE. FOR THE LOCATION OF THIS FENCE SEE THAT RECORD OF SURVEY BY ESM CONSULTING ENGINEERS, L.L.C., RECORDED UNDER RECORDING NO. 200001215001.

SCALE : 1" = 100'

100' 50' 0 100' 200'

COUNTY ASSESSOR'S PARCEL NUMBERS

LOT D (LOT X) 0119345001
LOT C (LOT Y) 0119341004

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

ZACHARY T. LENNON STATE OF WASHINGTON 44925 REGISTERED PROFESSIONAL LAND SURVEYOR

DRAWING NAME : 845\021\017\SURVEY PLOTS\BLA2-02.DWG

PORTION OF

NW NE 34
NE NE 34
NW 1/4 of NW 1/4, S. 35 T. 19 N. R. 1E., W.M.

DWN. BY	DATE	JOB NO.
R.J.W./C.A.F./R.F.G	2018-01-11	845-021-017-0005
CHKD. BY	SCALE	SHEET
C.A.F.	1"=100'	2 OF 3

CITY OF DUPONT, PIERCE COUNTY

CITY FILE NO. PLNG2017–044 (BOUNDARY LINE ADJUSTMENT)

RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT

THIS BOUNDARY LINE ADJUSTMENT IS NOT A PLAT, REPLAT OR SUBDIVISION.

APPROVAL OF A BOUNDARY LINE ADJUSTMENT IS NOT A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED FOR ANY STRUCTURE OR DEVELOPMENT WITHIN A LOT AFFECTED BY A BOUNDARY LINE ADJUSTMENT.

THIS SURVEY COMPLIES WITH ALL STANDARDS AND GUIDELINES FOR THE "SURVEY RECORDING ACT" CHAPTER 58.09 RCW AND 332–130 WAC.

COUNTY ASSESSOR'S PARCEL NUMBERS

LOT D (LOT X) 0119345001
LOT C (LOT Y) 0119341004

LOT E

PRIOR TO ADJUSTMENT: 1.73 ACRES
AFTER ADJUSTMENT: 1.69 ACRES

TRACT X

CITY OF DUPONT SHORT PLAT NO. SP 03–03 RECORDING NO. 200403055002

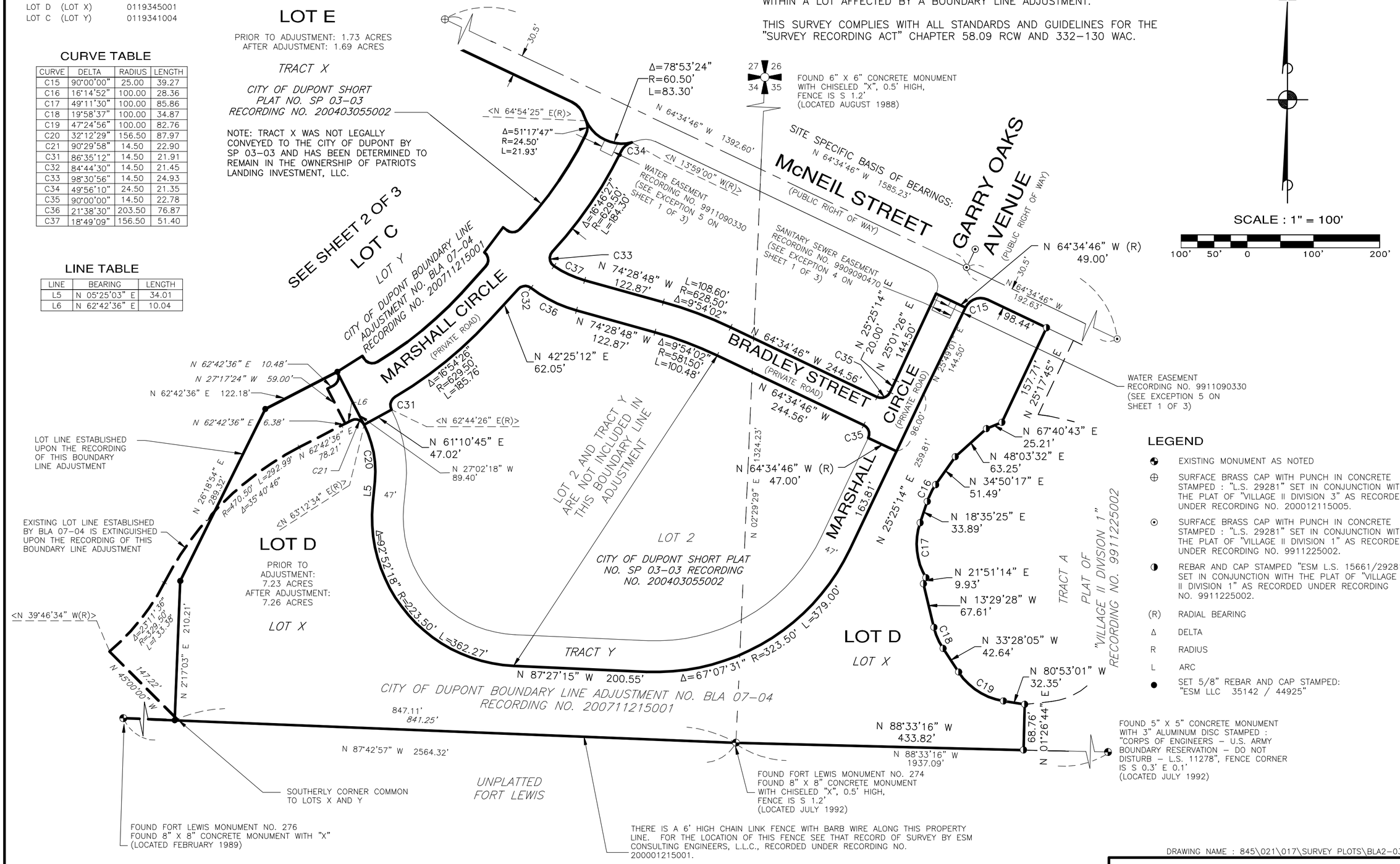
NOTE: TRACT X WAS NOT LEGALLY CONVEYED TO THE CITY OF DUPONT BY SP 03–03 AND HAS BEEN DETERMINED TO REMAIN IN THE OWNERSHIP OF PATRIOTS LANDING INVESTMENT, LLC.

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C15	90°00'00"	25.00	39.27
C16	16°14'52"	100.00	28.36
C17	49°11'30"	100.00	85.86
C18	19°58'37"	100.00	34.87
C19	47°24'56"	100.00	82.76
C20	32°12'29"	156.50	87.97
C21	90°29'58"	14.50	22.90
C31	86°35'12"	14.50	21.91
C32	84°44'30"	14.50	21.45
C33	98°30'56"	14.50	24.93
C34	49°56'10"	24.50	21.35
C35	90°00'00"	14.50	22.78
C36	21°38'30"	203.50	76.87
C37	18°49'09"	156.50	51.40

LINE TABLE

LINE	BEARING	LENGTH
L5	N 05°25'03" E	34.01
L6	N 62°42'36" E	10.04



LEGEND

- ● EXISTING MONUMENT AS NOTED
- ⊕ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 3" AS RECORDED UNDER RECORDING NO. 200012115005.
- ⊙ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002.
- ◑ REBAR AND CAP STAMPED "ESM L.S. 15661/29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002.
- (R) RADIAL BEARING
- Δ DELTA
- R RADIUS
- L ARC
- ● SET 5/8" REBAR AND CAP STAMPED: "ESM LLC 35142 / 44925"

PROJECT BASIS OF BEARINGS : CORPS OF ENGINEERS

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY. BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THOSE RECORD OF SURVEYS BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NOS. 9303050249, 200001215001, 200403055001 AND 200403055002.

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838–6113
EVERETT (425) 297–9900
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

ZACHARY T. LENNON
STATE OF WASHINGTON
44925
REGISTERED
PROFESSIONAL LAND SURVEYOR

DRAWING NAME : 845\021\017\SURVEY PLOTS\BLA2–03.DWG

PORTION OF

NW NE 34
NE NE 34
NW 1/4 of NW 1/4, S. 35 T. 19 N. R. 1E., W.M.

DWN. BY	DATE	JOB NO.
R.J.W./C.A.F./R.F.G.	2018–01–11	845–021–017–0005
CHKD. BY	SCALE	SHEET
C.A.F.	1" = 100'	3 OF 3

Unique History … Vibrant Future

CITY OF DUPONT
Department of Community Development
1700 Civic Drive, DuPont, WA 98327
Telephone: (253) 964-8121
www.dupontwa.gov

November 8, 2017

Laura Bartenhagen, PE
ESM Consulting Engineers, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003

Subject: Patriots Landing Memory Care Facility
Conditional Use Permit, Design Review, Road Standards Variance Application, Tree Modification, and Site Plan Review (PLNG 2017-030, -031, -032, -039 and -040).

Dear Ms. Bartenhagen,

On October 23, 2017 the City received the following additional information for your application for a 60-bed memory care facility in a 2-story, 42,143 square foot building with 49 parking spaces. The following additional plans and documents were submitted:

1. Response letter dated October 23, 2017.
2. 300-foot radius map.
3. Completed Agent Affidavit.
4. Roadway Cross Sections (on Sheet 2 of 12).
5. Parking – letter requesting alternative parking quantities for the memory care facility.
6. The Closing Report prepared by the project archaeologist or the Nisqually Tribe for prior clearing and grading activity. Alternatively, we will issue a SEPA Determination without this background information.
7. Tree Modification Type III application, including Request Letter
8. Application Form for Road Standards Variance – A separate Land Use Application form is required for a variance from the road design standards.
9. Approval from LeMay, Inc for refuse enclosure location dated October 5, 2017.
10. Land Use Application for Site Plan Review.

Please note that the mailing labels and map provided do not include the JBLM property to the south. We will need a revision to the map and the additional label provided prior to issuing a Notice of Hearing on the project.

Attachment 2b

We met recently with Matt Reider and discussed the future application of a short plat and boundary line adjustment that is required to conform to the boundaries represented in the CUP application. We discussed your interest in consolidation of permit review as well as conflicting information regarding the ownership of Marshall Circle (Tract X). On November 7, 2017 you submitted a memorandum from Cynthia Flood, PLS, documenting the ownership of Tract X. The applications are currently on hold pending review of the memorandum and ownership history by the City Attorney.

If Tract X is determined to be owned by the City you will need to submit for a right of way vacation, as outlined in DMC 14.06. We can continue to work on the submitted applications concurrently; however, we will not schedule the public hearing or finalize a staff report until the Right of Way Vacation (if needed) and/or Boundary Line Adjustment have been finalized.

If you have any questions, please call me at 253.912.5393, or email me at jwilson@dupontwa.gov.

Sincerely,

Jeffrey S. Wilson, AICP
Director of Community Development

Cc: File No. PLNG 2017-030, -031, -032, -039 and -040
Lisa Klein, AHBL

Unique History … Vibrant Future

CITY OF DUPONT
Department of Community Development
1700 Civic Drive, DuPont, WA 98327
Telephone: (253) 964-8121
www.dupontwa.gov

Notice of Application with Optional DNS
Patriot's Landing Memory Care Facility
City File Nos. PLNG 2017-030, 031, 032, 039, 040, & 045

The City of DuPont has received a permit application for the following project that may be of interest to you. You are invited to comment on this proposed project.

Date of Complete Application: November 8, 2017 and December 8, 2017
Date of Notice of Application: December 21, 2017
Comment Due Date: January 4, 2018

Project Description: Development of a one-story, 60-bed memory care facility located on top of structured underground parking. City approval is required for a Conditional Use Permit (PLNG 2017-030), Design Review (PLNG 2017-031), Road Standards Variance Application (PLNG 2017-032), Tree Modification (PLNG 2017-039), Site Plan Review (PLNG 2017-040) and Short Plat (PLNG 2017-045).

Project Location: South of McNeil Street, along the west side of Garry Oaks Ave., Pierce Co. tax parcel no. 0119345001, Section 34, Township 19N, Range 1E, W.M.

Project Applicant: Mr. Mike Campeau, Careage Development Company.

Environmental Review: The City of DuPont has reviewed the proposed project for probable adverse environmental impacts and expects to issue a Mitigated Determination of Non-significance (MDNS) for this project. The optional DNS process in WAC 197-11-355 is being used. **This may be your only opportunity to comment on the environmental impacts of the proposed project.**

Agencies, tribes, and the public are encouraged to review and comment on the proposed project and its probable environmental impacts. Comments must be submitted by the date noted above to:

Jeff Wilson, AICP
Planning Director and City SEPA Official
City of DuPont
1700 Civic Drive
DuPont, WA 98327
(253) 912-5393 / jwilson@dupontwa.gov

The following conditions have been identified that may be used to mitigate the adverse environmental impacts of the proposal: Noise, light and glare, vehicular and truck traffic, tree removal, soil remediation and cultural resources mitigation measures are anticipated. (Note: These conditions are in addition to mitigation required by the development regulations listed below.)

City Permits and Approvals: SEPA Environmental Determination, Site Plan Approval, Tree Modification, Road Standards Variance, Design Review, Short Plat, Boundary Line Adjustment, Building Permits, Fire Suppression/Fire Alarm Permits, Plumbing/Electrical/Mechanical Permits, Grading Permit, Site Development

Permit, Right-of-Way Use Permit, Water Service/Connection Permits and Determination of Transportation Concurrency.

Other Permits and Approvals: Trash Enclosure Location Approval by LeMay, Inc., Sanitary Sewer Permits by Pierce County, NPDES Permit by Department of Ecology.

Required Studies: Environmental Checklist, Stormwater Site Plan, Trip Generation Report, Geotechnical Report, Archaeological/Cultural Closing Report, Landscaping Plan, Tree Retention Plan, and grading, utilities and architectural plans.

The project will be evaluated for consistency with the City development regulations, including Title 12, Buildings & Construction; Title 14, Streets, Sidewalks, Curbs, Driveways and Parking Strips; Title 21, Water & Sewer Utilities; Title 22, Stormwater Utility; Title 23, Environment; Title 24 Subdivision Regulations; and Title 25 Land Use Code.

Public Comment: The public may comment on this notice of Type III application and Optional SEPA DNS by submitting written comments to the City of DuPont by 5 p.m. January 4, 2018. The City intends to issue the SEPA MDNS with a 14-day appeal period and will accept comments on the Type III application up to the Public Hearing. Copies of all application plans and documents may be viewed at City Hall.

Public Hearing: The date for the public hearing has tentatively been scheduled for February 8th, 2018 at 10:00 am. An official notice of public hearing will be issued in accordance with DMC 25.175.030.

CITY OF DUPONT

Department of Community Development

Unique History … Vibrant Future

MITIGATED DETERMINATION OF NONSIGNIFICANCE
PATRIOT'S LANDING MEMORY CARE FACILITY
City File Nos. PLNG 2017-030, -031, -032, -039, -040, & -045

Description of proposal: Develop a one-story, approximately 42,200 square foot, 60-bed Memory Care Facility with underground and surface parking and associated landscaping and utilities.

Proponent: Mike Campeau
Careage Development Company
4411 Point Fosdick Drive NW
Gig Harbor, WA 98335

Location of proposal: Section 34, Township 19N, Range 1E, W.M., Pierce County. Located south of McNeil Street and south and east of Marshal Circle in the City of DuPont, Washington.

Tax Parcel Number: 0119341004 and 0119345001

Lead agency: City of DuPont

The lead agency has determined that the requirements for environmental analysis and protection have been adequately addressed in the development regulations and comprehensive plan adopted under chapter 36.70A RCW, and in other applicable local, state, or federal laws or rules, as provided by RCW 43.21C.240 and WAC 197-11-158 and/or mitigating measures have been applied that ensure no significant adverse impacts will be created.

An environmental impact statement is not required under RCW 43.21C.030(2)(c). The optional DNS process in WAC 197-11-355 is being used. This decision was made after review of a completed environmental checklist, other information on file with the lead agency and comments received during the Notice of Application/Optional DNS comment period. This information is available to the public on request.

Responsible Official: Jeffrey Wilson, AICP
Community Development Director
City of DuPont

Contact Information: City of DuPont | 1700 Civic Drive, DuPont, WA 98327 | 253-912-5393

FINDINGS

1. Earth - The site slopes generally to the south with approximately 50% slopes located on the south side of Marshall Circle. The soil type is Spanaway gravelly sandy loam. Grading for construction is estimated to require 16,500 cubic yards of cut and 5,700 cubic yards of ill for a net export of 10,800 cubic yards. Approximately 50 percent of the site will be covered with impervious surfaces. An erosion/sediment control plan will be required to be approved by the City detailing the best management practices for erosion control prior to the start of construction.

2. Air – There are no known emissions as a result of the proposal other than those associated with vehicular use during and after construction.

3. Water – There are no surface water bodies located on or in the immediate vicinity of the project. No surface water withdrawals or diversions are planned. Stormwater runoff from roadways and parking as will be collected and conveyed to temporary offsite water quality and infiltration facility designed in accordance with the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), as adopted by the City of DuPont. The facility will eventually be relocated at a later date in conjunction with other future development. Stormwater runoff from the

Attachment 2d

building will not generate pollutants and will be infiltrated onsite through the use of two infiltration trenches.

4. Plants – Portions of the site was previously cleared. It is currently vegetated with grass, shrubs and assorted deciduous and evergreen trees. Construction will require removal of the majority of the vegetation.

Patriot's Landing Memory Care Facility Tree Retention Table			
Total Trees			
	Landmark	**Specimen**	**Total**
Fir	1	7	8
Oregon White Oak	2	5	7
Maple	1	1	2
Total	4	13	17
Total Trees Retained			
	Landmark	**Specimen**	**Total**
Fir	1	4	5
Oregon White Oak	0	2	2
Maple	0	0	0
Total	1	6	7
Total Trees Removed			
	Landmark	**Specimen**	**Total**
Fir	0	3	3
Oregon White Oak	2	3	5
Maple	1	1	2
Total	3	7	10

A Tree Retention Plan was prepared for the project, which depicts tree removal and replacement. A Type III Tree Modification Approval is required for the removal of two Landmark Oregon white oak trees. The City will mitigate for the loss of the oak trees through the required Type III Tree Modification process.

New parking lot and ornamental landscaping will be provided in accordance with City requirements and the Tree Retention Plan.

5. Animals – Hawk, Eagle, songbirds and deer have been observed at the site. No endangered animal species have been identified in the area. The site is located within the Pacific Flyway for Migratory Birds.

6. Environmental Health – Environmental health hazards are not anticipated. The presence of arsenic and lead on the subject site are a potential due to possible contamination from the Asarco Tacoma Smelter Plume and the past activities of the DuPont Works operations.

7. Noise - Noise from construction equipment would be created from 7 am to 6 pm, Monday through Friday, as regulated by DuPont Municipal Code (DMC) Chapter 9.09. Following construction noise will be generated by the use of vehicles.

8. Land Use – Adjacent uses include single family residential to the north, east and west; vacant land to the west and Eagles Pride Golf Course (Federal JBLM property) to the south. There are six dwelling units onsite that will be segregated from the project following the recording of a short plat. The site is designated by the City's Comprehensive Plan as Residential 5 and the zoning district is Residential 5 (R5). The site contains slopes that are classified as sensitive areas. Approximately 60 residents

(patients) and 70 employees are anticipated. The use is allowed with a Conditional Use Permit and is generally consistent with the goals and policies for Yehle Park Village in the Comprehensive Plan.

9. Aesthetics – The building will be 22 feet in height and constructed with fiber cement and lap siding, cultured stone, and wood and synthetic wood. The project will be required to comply with the City architectural design standards.

10. Recreation – No new recreational facilities are planned and no impacts to the City's recreational facilities are anticipated.

11. Historic and Cultural Preservation – There are no known historic or cultural sites listed in national, state, or local preservation registers on or near the site that are over 45 years old. The project entails new excavation of soil; therefore, the proponent shall follow the measures identified in the Memorandums of Agreement (MOAs) between (1) Weyerhaeuser Real Estate Company (WRECO), the City of DuPont, and the Washington State Historic Preservation Office regarding the discovery of cultural resources within the City of DuPont, and (2) WRECO and the Nisqually Tribe regarding the discovery of Native American burials. The proponent shall follow the provisions of the MOAs during all construction phases of the proposed project.

12. Transportation – The site is accessed from McNeil Street and Marshall Circle. Transit service is available at DuPont Station, approximately 1 mile from the site. The project will provide a total of 49 parking spaces, 38 of which will be located in underground structured parking garage. Trip generation has been estimated based on the ITE Trip Generation Manual, 6th Edition (and verified by the 9th Edition). The facility is anticipated to generate 126 average daily trips and a maximum of 12 peak-hour trips, which is below the City's threshold for additional study. The trip generation estimates have been reviewed by the City's Traffic Engineering Consultant and deemed acceptable. A variance from City Public Works Standards Section 3.1.2 for driveway separation will be needed for the project to accommodate reduced spacing on Garry Oaks Avenue for three driveways. A concurrency certificate will be required prior to building permit approval per DMC 25.115.

13. Public Services – All necessary utilities will be extended from available connections to the site.

MITIGATION MEASURES

The following mitigation measures shall be in place prior to issuance of site development permits:

1. The design of the stormwater pond shall be modified so that no clearing, grading, trenching, cutting, impervious surfacing or other construction shall be allowed within the drip line of any tree, including the adjacent Oregon white oak tree. All trees planned for retention are to be protected during construction in accordance with DMC 25.115.030(5).

2. The site grading, paving and buildings shall be designed in accordance with the requirements of the Geotechnical Addendum Report prepared by Golder Associates dated March 2012, or as updated.

3. A haul route plan for clearing and grading shall be submitted to the City for review and approval prior to issuance of any site development permits.

4. The source of fill material will be approved by the City in advance of filling the site.

5. A final Stormwater Plan shall be prepared and include a Stormwater Pollution Prevention Plan (SWPPP) and a Temporary Erosion and Sedimentation Control (TESC) plan per City of DuPont standards and implemented for the project to reduce and control erosion impacts. It shall also include an Operations and Maintenance Plan.

6. The plans shall identify the vertical separation between the infiltration facilities and the seasonal high groundwater levels which demonstrate compliance with the 2014 Department of Ecology Stormwater Management Manual for Western Washington.

7. The project will be required to obtain a Construction Stormwater General Permit from the Washington State Department of Ecology.

8. The site soil shall be sampled and analyze for arsenic and lead following the 2012 Tacoma Smelter Plume Guidance. Contact Eva Barber with the Southwest Regional Office (SWRO), Toxic Cleanup Program at 360-407-7094 or via email at Eva.Barber@ecy.wa.gov for additional guidance about soil sampling within the buffer tract areas. The soil sampling results shall be sent to the City of DuPont and Ecology for review.

9. If lead or arsenic are found at concentrations above the Model Toxics Control Act (MTCA) cleanup levels (Chapter 173-340 WAC); the owners, potential buyers, construction workers, and others shall be notified of their occurrence. The applicant shall also contact the Environmental Report Tracking System Coordinator at the Ecology Southwest Regional Office at (360) 407-6300. The MTCA cleanup level for arsenic is 20 ppm and lead is 250 ppm.

10. If lead, arsenic and/or other contaminants are found at concentrations above MTCA cleanup levels, the applicant shall:

    a) Enter into the Voluntary Cleanup Program with Ecology. For more information on the Voluntary Cleanup Program, visit Ecology website at: http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

    b) Obtain an opinion letter from Ecology stating that the proposed soil remediation will likely result in no further action under MTCA and provide to the City of DuPont. The City-issued clearing and grading plans shall be consistent with the plans reviewed and deemed consistent with MTCA by Ecology.

    c) If soils are found to be contaminated with arsenic, lead, or other contaminants, extra precautions shall be taken to avoid escaping dust, soil erosion, and water pollution during grading and site construction. Site design shall include protective measures to isolate or remove contaminated soils from public spaces, yards, and children's play areas. Contaminated soils generated during site construction shall be managed and disposed of in accordance with state and local regulations, including the Solid Waste Handling Standards regulation (Chapter 173-350 WAC). For information about soil disposal contact the local health department in the jurisdiction where soils will be placed.

The following mitigation measures shall be in place <u>during construction</u>:

11. Best Management Practices to minimize dust during construction shall be used, including temporary paving of certain roads, street sweeping, and watering the site as needed.

12. Construction equipment shall be maintained to meet emission standards. Construction vehicles shall be turned off when not in use to limit emissions caused by idling.

13. On-site infiltration tests will be completed to validate the design infiltration rate.

14. The Applicant shall fully implement the Memorandum of Agreement dated August 7, 1989, between Weyerhaeuser Real Estate Company (WRECO), the City of DuPont and the Washington State Historic Preservation Officer regarding the discovery of cultural resources within the City of DuPont, customary professional standards for archaeology, and applicable state and federal laws.

    a. The Applicant shall provide a professional archaeologist to monitor onsite soil disturbance activities.

    b. The Project Archaeologist shall notify and allow a Nisqually Indian Tribe representative to be present during soil disturbance activities.

    c. The Project Archaeologist shall notify the Nisqually Indian Tribal representative if Native American cultural resources are discovered during any soil disturbance activities. Construction activities that might

disturb or affect such resources are to stop until the Tribal representative has had the opportunity to examine the find.

d. If the Tribal representative cannot be reached through reasonable efforts or does not come to the construction site within a reasonable period of time after being notified, construction does not need to stop. However, archaeological work shall to follow the 1989 Memo of Agreement, customary professional standards for archaeology, and applicable state and federal laws.

e. The City of DuPont requests Native American artifacts recovered during construction activities be donated to the Nisqually Indian Tribe. Hudson's Bay Company-era artifacts should be donated to the Fort Nisqually Living History Museum, located in the City of Tacoma's Point Defiance Park. DuPont-era artifacts should be donated to the DuPont Historical Museum.

f. The Project Archaeologist shall forward a closing report to the City of DuPont. The report shall discuss contact with the Nisqually Indian Tribe, implemented procedures and observed conditions and be submitted prior to issuance of any permanent Certificate of Occupancy for the project.

The following mitigation measures shall be in place prior to issuance of a building permit:

15. The project shall meet the architectural character/design requirements as detailed in DMC 25.45. Building colors and materials shall blend in with the natural environment.

16. The Applicant shall pay DuPont the water meter permit fee, meter connection fee, water service installation fee and system development charge at time of connection to the DuPont water system per DMC 21.05.022.

17. Light fixtures shall be full cut-off type and shielded to minimize light spill and glare. Building glass will be required to be non-glare.

18. The Applicant shall pay DuPont the storm water system development charge prior to issuance of a DuPont building or construction permit per DMC 22.04.060.

19. The Applicant will be required to submit a Temporary Erosion and Sedimentation Control Plan with the plat civil construction permit and building permits, per the requirements of the DuPont standards.

20. In accordance with DMC 26.05.050 fire impact fees are to be paid at time of building permit issuance at the rate in effect at that time.

The following mitigation measures shall be in place prior to the issuance of a Certificate of Occupancy:

21. A City of DuPont Agreement for Inspection and Maintenance of Privately Maintained Storm Drainage Facilities will be required for any onsite stormwater system.

22. The Project Archaeologist shall forward a closing report to the City of DuPont. The report shall discuss contact with the Nisqually Indian Tribe, implemented procedures, and observed conditions.

CONCLUSIONS OF THE RESPONSIBLE OFFICIAL: The Responsible Official has determined, with the mitigation measures listed above, that the proposal will not have a probable significant adverse impact on the environment, and an Environmental Impact Statement is not required under RCW 43.21c.030(2). The mitigation measures described are recommended as conditions of project approval. This decision is made after review of a completed environmental checklist, other information on file with the City, and existing regulations.

APPEAL PERIOD: This MDNS is issued using the optional DNS process in WAC 197-11-355. There is no further comment period on the MDNS. You may appeal this determination to Jeffrey Wilson, Community Development Director/SEPA Responsible Official, at 1700 Civic Center, DuPont, WA 98327, by filing a written appeal citing the specific reasons for the appeal with the required appeal fee, adjacent property owners list

and notarized affidavit form no later than January 23, 2018. You should be prepared to make specific factual objections. Contact Jeffrey S. Wilson to read or ask about the procedures for SEPA appeals.

SEPA Responsible Official Signature: _____ 1/8/18

Jeffrey S. Wilson, AICP January 8, 2018
Community Development Director, City of DuPont

Issue Date: January 9, 2018
End of Appeal Period: January 23, 2018

SEPA Distribution List

XX Indicates notice mailed to the following:

Dist.	Agency/Contact	Dist.	Agency/Contact
XX	WA State Dept. of Archaeology & Historic Preservation Gretchen Kaehler Gretchen.Kaehler@DAHP.wa.gov	XX	WA State Dept. of Labor and Industries PO Box 44000 Olympia, WA 98504
	WA State Dept. of Commerce Anne Fritzel, AICP Anne.fritzel@commerce.wa.gov	XX	WA State Dept. of Natural Resources SEPA Center SEPACENTER@dnr.wa.gov
XX	WA State Dept. of Ecology SEPA Unit separegister@ecy.wa.gov	XX	WA State Dept. of Natural Resources South Puget Sound Region Southpuget.region@dnr.wa.gov
XX	WA State Dept. of Ecology Environmental Review Section SEPAunit@ecy.wa.gov	XX	WA State Dept. of Social and Health Services Lands & Bldg Div Elizabeth McNagny PO Box 45848 Olympia, WA 98504-5848
XX	WA State Dept. of Ecology SW Regional Office Sonia Mendoza SEPA Coordinator Sonia.mendoza@ecy.wa.gov		WA State Dept. of Social and Health Services Robert J. Hubenthal hubenbj@dshs.wa.gov
	WA State Dept. of Ecology SW Regional Office Toxic Clean-up Program Marian Abbett Marian.abbett@ecy.wa.gov	XX	WA State Dept. of Transportation OR-SEPA-REVIEW@wsdot.wa.gov
	WA. State Dept. of Ecology SW Regional Office Toxic Clean-up Program Eva Barber Eva.barber@ECY.WA.GOV		WA State Parks and Recreation Commission PO Box 42650 Olympia, WA 98504
	WA State Dept. of Ecology SW Regional Office Shorelands & Environmental Assistance Zachary Meyer ZMEY461@ECY.WA.GOV		WA State Recreation and Conservation Office Lorinda Anderson Outdoor Planner Lorinda.anderson@rco.wa.gov
XX	WA State Dept. of Ecology SW Regional Office Shorelands & Environmental Assistance Donna Joblonski dmca461@ECY.WA.GOV	XX	Puget Sound Partnership Heather Saunders Benson Environmental Planner Heather.benson@psp.wa.gov
XX	WA State Dept. of Fish & Wildlife(WDFW) SEPA Coordinator SEPAdesk@dfw.wa.gov	XX	Puget Sound Clean Air Agency Betsy Sheelock Betsyw@pscleanair.org 1904 3rd Ave #105 Seattle, WA 98101
	WA State Dept. of Fish & Wildlife (WDFW) Michele Culver Regional Director Teammontesano@dfw.wa.gov		BNSF Railway General Manager 2454 Occidental Ave. South, Ste 1A Seattle, WA 98134-1451
	WA State Dept. of Health Division of Drinking Water PO Box 47822 Olympia, WA 98504-7822		FEMA John Graves John.graves1@dhs.gov

XX	JBLM Public Works Charles Markham Deputy for Programs and Operations Charles.s.markham2.civ@mail.mil	XX	DuPont City Clerk Karri Muir Kmuir@dupontwa.gov
XX	JBLM Steven Perrenot Director Public Works Steven.t.perrenot.civ@mail.mil	XX	Lakewood Community & Economic Development Frank Fiori Planning Manager ffiori@cityoflakewood.us
XX	US Army Corps of Engineers (Regulatory Branch) Suzanne Anderson Suzanne.l.anderson@usace.army.mil	XX	Steilacoom Community Development Doug Fortner Town Planner Doug.fortner@ci.steilacoom.wa.us
XX	USDA-Natural Resources Conservation Service 941 Powell Ave SW. Ste 102 Renton, WA 98057	XX	Puget Sound Regional Council Michael Hubner Mhubner@psrc.org
XX	DuPont Post Office Attn: Post Master 1313 Thompson Circle DuPont, WA 98327	XX	Nisqually Indian Tribe Joe Cushman Cushman.joe@nisqually-nsn.gov
	National Marine Fisheries Service Northwest Regional Office 7600 Sand Point Way NE Seattle, WA 98115-0070	XX	Yakama Nation Elizabeth Sanchey esanchey@yakama.com
	Nisqually Nat'l Wildlife Refuge Glynnis Nakai Glynnis Nakai@fws.gov		Clover Park School District 10903 Gravelly Lake Dr. SW Lakewood, WA 98499
XX	Environmental Official-Pierce County Kathleen Larrabee Klarrab@co.pierce.wa.us	XX	Steilacoom Historical School District Celeste Johnston cjohnston@steilacoom.k12.wa.us
XX	Land Use Review Capital Development-Pierce Transit PO Box 99070 Lakewood, WA 98499-0070	XX	LeMay Cust2180@wcnx.org
XX	Pierce Co. Assessor/Treasurer-Commercial Dept. Darci Brandvold dbrand@co.pierce.wa.us	XX	PSE Jeff Payne Jeff.payne@pse.com
XX	Pierce Co. Environmental Services Bldg Public Works Kip Julin 9850 64th St. West University Place, WA 98467	XX	AHBL Lisa Klein Lklein@AHBL.com
XX	Pierce Co. PALS Adonais Clark aclark@co.pierce.wa.us	XX	Gray & Osborne Dominic Miller, PE dmiller@g-o.com
XX	Pierce Co. Public Works Debbie Germer dgermer@co.pierce.wa.us	XX	Geri Reinart, P.E. greinart@msn.com
XX	Tacoma Pierce Co. Health Dept. Sara Bird SEPA@tpchd.org	XX	CalPortland Pete Stoltz Pstoltz@calportland.com

XX	NWL Associates Larry Ackerman nwldirector@reachone.com		XX	NWL Association Emily Griffith nwlassistdirector@reachone.com

Permit Applicant Information

XX	Matt Reider ESM Consulting Engineers Inc. 33400 8th Ave South, Suite 205 Federal Way, WA 98003 Matt.reider@esmcivil.com			Name Title Address Address Email
XX	Mike Campeau Careage Development Company 4411 Point Fosdick Drive NW Gig Harbor, WA 98335 mcampeau@careage.com			Name Title Address Address Email

RECEIVED
SEP 01 2017
CITY OF DUPONT

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:
Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [help]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND [HELP]

1. Name of proposed project, if applicable: [help]
Patriots Landing Memory Care Facility

2. Name of applicant: [help]
Careage, Inc

3. Address and phone number of applicant and contact person: [help]

Applicant:
Mr. Mike Campeau
President of Construction & Development
Careage Development Company
4411 Point Fosdick Drive NW
Gig Harbor, WA 98335
Phone: (253) 853-4457
Main Fax: (253) 853-5280

Contact Person:
Matt Reider
ESM Consulting Engineers, LLC
33400 8th AVE S. , suite 205
Federal Way, WA 98003
Phone: (253) 838-6113
Main Fax: (253) 838-7104

4. Date checklist prepared: [help]
September 1, 2017

5. Agency requesting checklist: [help]
The City of DuPont Planning Department

6. Proposed timing or schedule (including phasing, if applicable): [help]
The conditional use permit application process is estimated to be completed January 2018. The construction of the Memory Care Facility would commence January 2018 and is expected to be developed in one phase. The anticipated date of completion is Summer/Fall 2018.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
Phase I Environemntal Site Assessment Careage NWL Phase II, Dated 12/13/99
Results of Preliminary Geotechnical investigation Northwest Landing Phase II Dupont, WA dated 12/17/99
Geotechnical Addendum Reports 03/23/2012 and 04/12/2012
Geotechnical Investigation Report Patriot's Landing Skilled Nursing Facility 02/17/2012
Soil Sampling Report Patriot's Landing Skilled Nursing Facility South Parcel 07/15/2011
Geotechnical Investigation Report Patriot's Landing Skilled Nursing (South Parcel) 06/13/2011

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
Yes, a Comprehensive Plan Amendment and Zoning Code Text Amendment is currently in the workshop stage with the City of DuPont Planning Commission with an anticipated adoption date of October 2017. These amendments would allow for the creation of an overlay district applicable to this property which would allow for additional uses and

development regulations permitted through a Master Planned Development/Community permit.

10. List any government approvals or permits that will be needed for your proposal, if known. [help]

Conditional Use Permit	**City of DuPont**
Building Permit	**City of DuPont**
Grading Permit	**City of DuPont**
Sewer Line Extension Permit	**Pierce County**
Sewer Service Permit	**Pierce County**
Boarding Home License	**State of Washington**
DSHS	**State of Washington**
DOH	**State of Washington**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]
The Conditional Use Permit application is for the development of a one-story, 60-bed Memory Care Facility located on top of structured underground parking that daylights on the rear of the building. The project site is 3.26 acres.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]
The proposed development is located in Section 34, Township 19 North, Range 1 East, W.M., more specifically within the City of DuPont, Yehle Park Village, south of McNeil Street, along the west side of Garry Oaks Avenue.

B. ENVIRONMENTAL ELEMENTS [HELP]

1. Earth [help]

a. General description of the site: [help]
The topography of the proposed site generally slopes to the south.

(circle one): Flat, (rolling), hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)? [help]
The steepest slope on the site is approximately 50% and located on the south side of Garry Oaks Avenue.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

Based on the Soil Survey of the Pierce County Area, as provided by the United States Department of Agriculture (USDA) Natural Resources Conservation Service, the type of soils located on the project site is Spanaway gravelly sandy loam. Spanaway soils are typically nearly level, moderately rapid in permeability, slow in surface runoff, minimally susceptible to erosion, and somewhat excessively drained soils that were formed in glacial outwash.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
None known.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]
Grading will occur for the construction of building, parking area and utilities. Cut and fill quantities based on the preliminary grading plan are estimated at approximately 16,500 cubic yards of cut and 5,700 cubic yards of fill resulting in an approximate net export of 10,800 cubic yards within this project which will be obtained from a suitable offsite source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]
Yes. As always, clearing and construction associated with development could contribute to the likelihood of erosion. Best Management Practices to control erosion and sedimentation during construction as required by the City of DuPont will be used to minimize impacts. In addition, the existing soils have a high infiltration rate that helps reduce runoff and the potential for erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]
Approximately 50 percent of the site will be covered with impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]
An erosion/sediment control plan will be prepared and approved by the City of DuPont prior to commencement of construction activities for the proposed development.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Some dust and equipment fumes during construction of the roadways, utilities and buildings can be expected. Automobile emissions can be expected when the developments are complete.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
None known.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

If necessary, a water truck will be used during construction activities to suppress dust.

3. **Water** [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
There are no surface water bodies located on or in the immediate vicinity of the project site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]
No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]
No filling in or dredging from any wetlands will be done as part of the proposed development activities.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
No surface water withdrawals or diversions are planned as part of the proposed activities.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]
No. Stormwater runoff from roadways and parking areas as well as irrigation water runoff will be collected and conveyed to a temporary offsite water quality and infiltration facility designed in accordance with the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), as adopted by the City of DuPont.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]
No groundwater will be withdrawn from a well. Municipal Water will be supplied by the City of DuPont.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system,

the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]
Pierce County Utilities will be responsible for collecting all domestic sewage in a piping network for routing to a regional treatment facility.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]
Stormwater and irrigation water from the proposed Memory Care Facility and associated parking area are the only anticipated sources of runoff. An onsite storm drainage system will be designed to collect and convey the runoff to a temporary offsite water quality and infiltration facility. Stormwater runoff from the proposed building will not generate pollutants, therefore this runoff is considered clean and will be infiltrated directly on the project site.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
Common pollutants from parked vehicles may collect on impervious surfaces and be washed into the storm drainage system. Common pesticides and nutrients from landscaping areas may also enter the storm drainage system. See item 3.a.6) above.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
The guidelines and Best Management Practices developed in the Department of Ecology Stormwater Management Manual for Western Washington (2012 version with 2014 amendments), will be adhered to, as adopted by the City of DuPont.

4. **Plants** [help]

a. *Check the types of vegetation found on the site: [help]*

_√_deciduous tree: alder, maple, aspen, other
_√_evergreen tree: fir, cedar, pine, other
_√_shrubs
_√_grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered? [help]
It is estimated that 100 percent of the area for site, parking, landscaping, and utilities will need to be cleared for construction of the Memory Care Facility. The

majority of the site area was previously cleared as a result of the I-5 ramp project, which utilized the material from this site as structural fill. There are five landmark Oregon white oak trees, 5 specimen white oak trees, three specimen fir trees, 2 specimen maple trees, and one landmark maple tree within the south central portion of the project site which will be removed. For more information, see the attached Tree Retention Plan and the attached Request for a Tree Retention Modification.

c. List threatened and endangered species known to be on or near the site. [help]
No threatened or endangered species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
All roadway cuts/fills and areas cleared for the proposed building, driveways, parking and utilities shall at a minimum be re-seeded upon completion of construction activities. New landscaping is anticipated to supplement any areas disturbed by construction activities. Current City of DuPont policy and Northwest Landing Development Guidelines encourage the use of native and drought tolerant plant materials within new landscape areas.

e. List all noxious weeds and invasive species known to be on or near the site. [help]
None known to be on the site.

5. **Animals** [help]
a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Hawk, Eagle, Songbirds, and deer have been observed at the site.

b. List any threatened and endangered species known to be on or near the site. [help]
No endangered animal species have been identified as having home territory within the site.

c. Is the site part of a migration route? If so, explain. [help]
The Nisqually River Delta is located approximately 1 mile southwesterly of the site and is a nesting and feeding area for migratory waterfowl. The site is located within the Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any: [help]
It is not anticipated that the proposed project will impact wildlife habitat or cause disturbance such that mitigation measures will be needed.

e. List any invasive animal species known to be on or near the site. [help]
None are known to be on or near the site.

6. **Energy and Natural Resources** [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
The use and incorporation of electrical or gas heating and cooking is anticipated with the proposed Memory Care Facility. Electricity for street, parking lots, and other lighting is also anticipated in connection with the roadways and parking areas.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
No. It is unlikely that use of solar energy by adjacent properties would be affected considering the proposed use of the site and City limitations on heights of the structures.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]
General design guidelines developed for the Northwest Landing master planned community encourage energy conservation and the use of energy efficient construction and apply to all developments.

7. **Environmental Health** [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe. [help]
The proposed development will require construction activities which have potential environmental health hazards associated with the use and operation of heavy construction equipment. No other environmental health hazards are anticipated to occur as a result of this project.

1) Describe any known or possible contamination at the site from present or past uses. [help]
None known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]
None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
None known.

4) Describe special emergency services that might be required. [help]
None anticipated other than those emergency services currently available from the City of DuPont.

5) Proposed measures to reduce or control environmental health hazards, if any: [help]

Best Management Practices shall be implemented during all construction activities.

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
Ambient noise levels from Interstate 5 are anticipated to have minimal impact on the site due to the separation distance. Other local streets surrounding and within the site are typical of those associated with the types of development proposed.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [help]
Localized noise of short duration commonly associated with construction of a project of this type and the operation of construction equipment is likely to occur as a result of this project. Noise from the construction equipment will occur during daylight hours.

3) Proposed measures to reduce or control noise impacts, if any: [help]
Contractors shall be required to comply with City of DuPont limitations for operating hours of construction equipment.

8. **Land and Shoreline Use** [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
North: Single-family residential, McNeil St;
East: Single-family residential, private road;
West: Single-family residential, vacant property;
South: Eagles Pride Golf Course.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
None known other than possible grazing by cattle over portions of the site in the past.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
No impact.

c. Describe any structures on the site. [help]
There are currently no existing structures on the site.

d. Will any structures be demolished? If so, what? [help]
No.

e. What is the current zoning classification of the site? [help]
The current zoning classification of the site is Residential 5.

f. What is the current comprehensive plan designation of the site? [help]
Residential 5.

g. If applicable, what is the current shoreline master program designation of the site? [help]
Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]
No.

i. Approximately how many people would reside or work in the completed project? [help]
It is anticipated that the development of the proposed Memory Care Facility will have up to 60 residents and 70 employees.

j. Approximately how many people would the completed project displace? [help]
None.

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]
Not Applicable

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]
The proposed development meets the definition of a "Assisted Living" per DMC 25.10.010, which is allowed in the underlying Residential 5 zone as a conditional use and is consistent with the goals and policies for Yehle Park Village within the City of DuPont Comprehensive Land Use Plan.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [help]
None proposed.

9. **Housing** [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]
The proposed Memory Care Facility project will provide 60 beds. The high, middle, or low-income housing designation is not applicable.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]
None.

c. Proposed measures to reduce or control housing impacts, if any: [help]
None are proposed.

10. **Aesthetics** [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]

The tallest height of the proposed building is 22 feet from closest adjacent grade. The proposed building materials consist of the following elements:

- **Modified asphalt/fiberglass shingle roof,**
- **Fiber cement panel and lap siding**
- **Cultured Stone**
- **Painted wood and synthetic wood trim,**
- **Vinyl Windows Insulated low-e glazing**
- **Exposed Concrete at underground parking structure and foundation**

b. What views in the immediate vicinity would be altered or obstructed? [help]
Views within the project site are anticipated to be altered to the extent that a new building and associated parking development will replace vacant land; however, it is not anticipated that the development of the site will obstruct views from surrounding sites due the distance of separation to adjacent developments.

b. Proposed measures to reduce or control aesthetic impacts, if any: [help]
The proposed development is subject to Design Review by the City of DuPont- a tytpe I process. Any elements that are determined to impact the surrounding natural and built environment will be mitigated for as necessary.

11. **Light and Glare** [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]
Light from the interior of the building as well as streetlights along public roadways and within the parking lot will occur during hours of darkness.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
No. The lighting would be designed to increase safety within the project site and minimize glare to surrounding development.

c. What existing off-site sources of light or glare may affect your proposal? [help]
Light and glare from the existing Garry Oaks Avenue is anticipated to have minimal impact on the site.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
Street and parking lot luminaries will be designed to control impacts.

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
Existing pedestrian trails and other natural and historical attractions are available within the Northwest Landing community including Sequalitchew Creek and Edmonds Marsh trails. In addition, the City of DuPont has several parks that provide active recreational opportunities, including DuPont PowderWorks Park and Clocktower Park which are located approximately one to one and a half miles easterly of the site. The Eagles Pride Golf Course (private) is located adjacent to the south of the site and the Home Course is located approximately one mile northwesterly of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
No adverse impacts on recreation are anticipated and no mitigation is necessary.

13. **Historic and cultural preservation** [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. [help]
No evidence of historic, archaeological, scientific, or cultural importance has been identified on or near the proposed project site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
Several known and possibly unknown historical/archeological sites exist within the Northwest Landing project area. Extensive field investigations have been made within and adjacent to the proposed project area by archeological consultants for the Northwest Landing project.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]
Review of the Washington Information System for Architectural and Archeological Records Data (WISAARD) resulted in no determination of low to moderate risk of Archaeological factors.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]
The site is subject to an existing cultural resources agreement signed by the City of DuPont, the State Office of Archeological and Historical Preservation (DAHP) and Weyerhaeuser Real Estate Company. The cultural resources management plan discusses ongoing actions to protect the identified important resources and to provide contingency plans to protect resources discovered during other activities at the site.

14. **Transportation** [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]
The site is currently served from Center Drive to McNeil Street and to the private local access street Garry Oaks Avenue.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]
The site is not currently served by transit. Sound Transit and Pierce Transit provide bus service to DuPont Station, located approximately 1 mile from the site at the intersection of Palisade Boulevard and Wilmington Drive. Shuttle buses may be provided to transport residents to City of DuPont recreational areas, the Patriot's Landing retirement community facility, regional doctors, shopping, or to special events. These buses will be owned and maintained by the developer.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]
The proposed project consists of 36 parking stall and 2 disabled parking stall in the parking garage. There will be 11 additional parking stalls locate near the building entrance (9 visitor parking, 2 disabled parking stalls).

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]
The proposed project includes a fire access lane along the northern property line.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]
Air, water and rail transportation are available in the DuPont-Steilacoom, Olympia, and Tacoma areas, but not in the immediate vicinity of the project site. It is not anticipated that the proposed development will directly use these facilities.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
Based on the Institute of Transportation Engineers Trip Generation Manual, the proposed Memory Care Facility generates 126 average daily trips and a maximum of 12 peak-hour trips.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
No.

h. Proposed measures to reduce or control transportation impacts, if any: [help]
None proposed other than construction of the internal parking lot circulation.

15. **Public Services** [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
Yes, the proposed project will result in an increased need for, fire, emergency medical and police protection as well as increased street and utility maintenance.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
All necessary utility main extensions will be extended from the existing available connections along Garry Oaks Avenue and Marshall Circle. Also, the City of DuPont currently has ordinances requiring all new structures to be sprinkled for fire protection to reduce the impacts to the fire department.

16. **Utilities** [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]
Electricity - Puget Sound Energy
Natural Gas - Puget Sound Energy
Water (domestic, fire, and irrigation) - City of DuPont
Refuse Service - LeMay Inc
Telephone/Fiber Optics – Century Link
Cable TV - Comcast
Sanitary Sewer - Pierce County
The general construction activities associated with utilities are extensions into the project site from the existing connections along Garry Oaks Avenue and Marshall Circle.

C. SIGNATURE [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee: **Mike Campeau, President of Construction & Development**

Position and Agency/Organization: **Careage Development Company**

Date Submitted: **September 1, 2017**

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS [HELP]

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

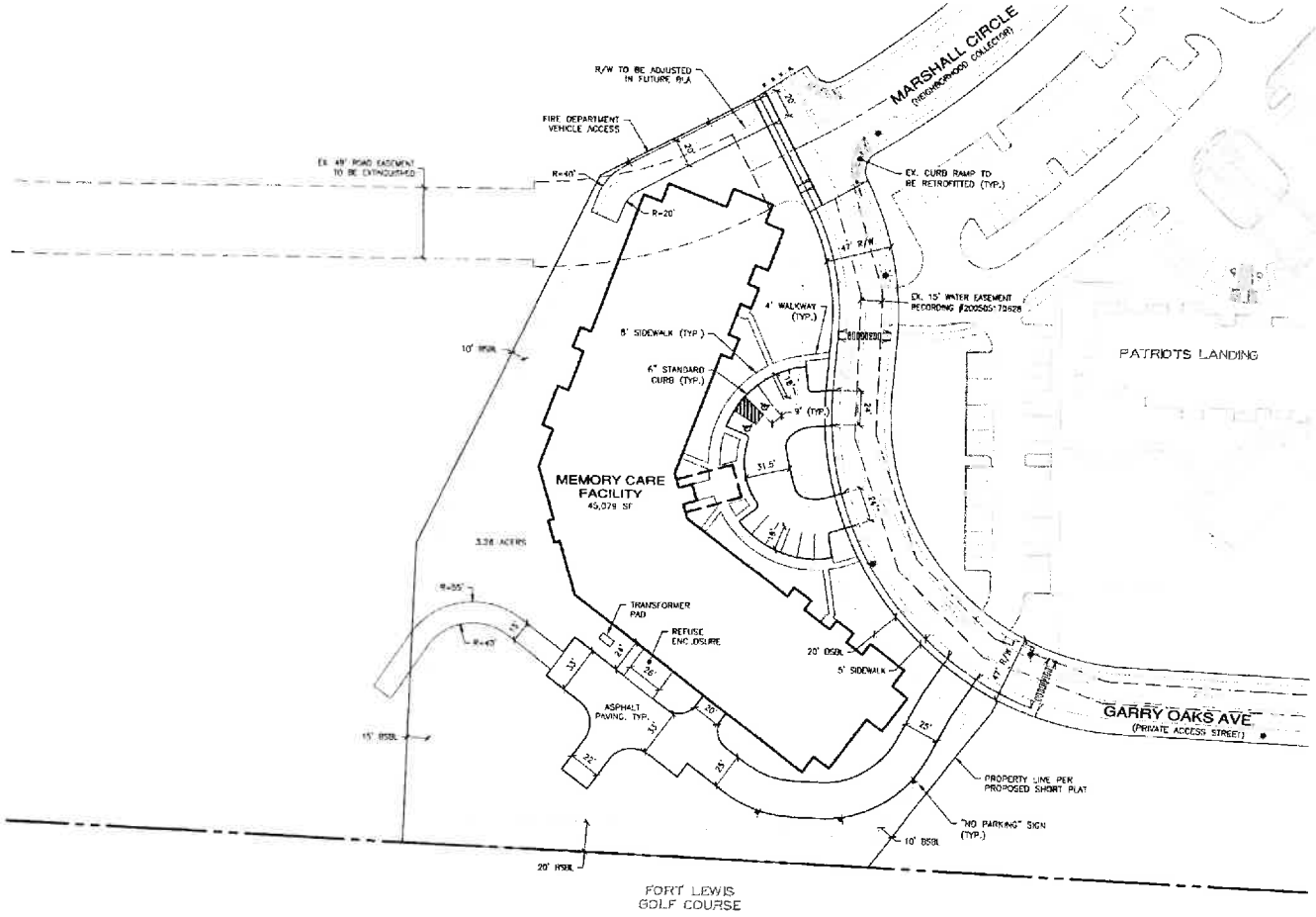
   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

A PORTION OF SECTION 34, TWP. 19 N., RGE. 1 E., W.M.



n

SCALE: 1" = 40'

40 20 0 40 80

SITE INFORMATION

PARCEL NO.: 0119345001

ACREAGE: 3.25

REVISIONS

NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
Seattle | Tacoma | Federal Way, WA 98003
www.esmcivil.com
Civil Engineering | Land Planning
Public Works | Project Development

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

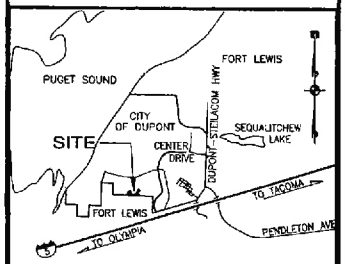
PRELIMINARY SITE PLAN

CITY OF DUPONT WASHINGTON

JOB NO.:	
DWG. NAME:	ST-01
DESIGNED BY:	LMC
DRAWN BY:	CJR
CHECKED BY:	
DATE:	09/01/2017
DATE OF PRINT:	

ST-01

2 OF 12 SHEETS



VICINITY MAP
NOT TO SCALE

DECLARATION

WE, THE UNDERSIGNED OWNERS, OF THE HEREIN DESCRIBED PROPERTY DO HEREBY DECLARE THIS SHORT PLAT TO BE THE GRAPHIC REPRESENTATION OF THE SUBDIVISION MADE HEREBY AND DO HEREBY DEDICATE TO THE PUBLIC ALL EASEMENTS ON THIS SHORT PLAT FOR PUBLIC PURPOSES AS INDICATED HEREON INCLUDING BUT NOT LIMITED TO UTILITIES AND DRAINAGE UNLESS SUCH EASEMENTS ARE SPECIFICALLY IDENTIFIED ON THIS SHORT PLAT AS BEING DEDICATED TO A PERSON OR ENTITY OTHER THAN THE PUBLIC. THIS SHORT PLAT HAS BEEN MADE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNERS.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS,
PATRIOTS LANDING INVESTMENT, LLC, A WASHINGTON LIMITED LIABILITY COMPANY

NAME _____ TITLE _____

STATE OF WASHINGTON }
} SS
COUNTY OF _____ }

ON THIS _____ DAY OF _____, 2017, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, PERSONALLY APPEARED _____ TO ME KNOWN TO BE THE _____ OF PATRIOTS LANDING INVESTMENT, LLC, A WASHINGTON LIMITED LIABILITY COMPANY, THAT EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID COMPANY FOR THE USES AND PURPOSES THEREIN MENTIONED AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE SAID INSTRUMENT.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON RESIDING AT _____
MY COMMISSION EXPIRES : _____

CITY OF DUPONT
SHORT PLAT NO. SP 17-XX

A PORTION OF SECTIONS 34 AND 35, T 19 N, R 1 E, W.M.

ASSESSOR'S
PARCEL NO(S) 0119345001

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS SHORT PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE SURVEY RECORDING ACT AT THE PATRIOTS LANDING INVESTMENT, LLC AND THAT ALL COURSES AND DISTANCES ARE SHOW CORRECTLY THEREON.

ZACHARY T. LENNON, L.S. NO. 44625
ESM CONSULTING ENGINEERS, LLC
33400 8TH AVE S, SUITE 205
FEDERAL WAY, WA 98003
PHONE (253) 838-8113

ZACHARY T. LENNON — STATE OF WASHINGTON — 44625 — REGISTERED — PROFESSIONAL LAND SURVEYOR

DIRECTOR OF COMMUNITY DEVELOPMENT

I HEREBY CERTIFY THAT THIS SHORT PLAT IS DULY APPROVED BY THE OFFICE OF THE MAYOR AND THAT THE APPROPRIATE FEES HAVE BEEN PAID.

DIRECTOR OF COMMUNITY DEVELOPMENT _____ DATE _____

CITY OF DUPONT ENGINEER

I HEREBY CERTIFY THAT THIS SHORT PLAT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF DUPONT AND IS HEREBY APPROVED.

CITY ENGINEER _____ DATE _____

MAYOR

I HEREBY CERTIFY THAT ALL CITY TAXES HERETOFORE LEVIED AGAINST THE PROPERTY DESCRIBED HEREIN, ACCORDING TO THE BOOKS AND RECORDS OF MY OFFICE, HAVE BEEN PAID AND DISCHARGED.

MAYOR _____ DATE _____

COUNTY ASSESSOR-TREASURER

I HEREBY CERTIFY THAT ALL STATE AND COUNTY TAXES HERETOFORE LEVIED AGAINST THE SHORT PLATTED PROPERTY DESCRIBED HEREON, ACCORDING TO THE BOOKS AND RECORDS OF MY OFFICE, HAVE BEEN FULLY PAID AND DISCHARGED.

ASSESSOR-TREASURER _____ DATE _____

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____ 2010, AT THE REQUEST OF ESM CONSULTING ENGINEERS, L.L.C.

AUDITOR'S FEE NO. _____

DEPUTY _____ COUNTY AUDITOR _____

LEGAL DESCRIPTION

LOT D OF CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 17-___, RECORDED _____, 2017 UNDER RECORDING NO. _____, RECORDS OF PIERCE COUNTY AUDITOR.

SITUATE IN THE CITY OF DUPONT, COUNTY OF PIERCE, STATE OF WASHINGTON.

EXCEPTIONS TO THE TITLE REPORT

LEGAL DESCRIPTION, EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS ARE FROM CHICAGO TITLE INSURANCE COMPANY AMENDED PLAT CERTIFICATE ORDER NO. 0107118-TC DATED OCTOBER 5, 2017. IN PREPARING THIS BOUNDARY LINE ADJUSTMENT, ESM HAS NOT CONDUCTED AN INDEPENDENT SEARCH NOR IS ESM AWARE OF ANY TITLE ISSUES AFFECTING THE PROPERTY OTHER THAN THOSE SHOWN ON THIS BOUNDARY LINE ADJUSTMENT. ESM HAS WHOLLY RELIED ON THE ABOVE REFERENCED TITLE REPORT TO PREPARE THIS BOUNDARY LINE ADJUSTMENT AND THEREFORE QUALIFIES THE BOUNDARY LINE ADJUSTMENT'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

1) SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM WEYERHAEUSER COMPANY RECORDED UNDER RECORDING NO. 9112090237. SAID DEED RESERVES THE RIGHTS TO ALL ORES AND MINERALS OF ANY NATURE WHATSOEVER IN OR UPON SAID LANDS. INSTRUMENT WAS AMENDED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9405130746.

2) SUBJECT TO COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9208240297, INCLUDING BUT NOT LIMITED TO RIGHTS OR BENEFITS WHICH MAY BE DISCLOSED AFFECTING LAND OUTSIDE THE BOUNDARY DESCRIBED THEREIN. SAID INSTRUMENT WAS AMENDED BY INSTRUMENTS RECORDED UNDER RECORDING NOS. 9501100452, 9503150388, 9601090368, 9601260346, 9603120707, 9609110555, 9612240420, 9710170646, 9803170310, 9807070025, 9912200109, 200012060263, 200209180935, 200304041434, 200512050081, 200712210490, AND 200808150280.

3) NOT APPLICABLE TO SITE.

4) NOT APPLICABLE TO SITE.

5) NOT APPLICABLE TO SITE

6) NOT APPLICABLE TO SITE.

7) SUBJECT TO THAT AGREEMENT FOR RIGHT-OF-WAY AND LANDSCAPING MAINTENANCE AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NO. 200103160634 AND 200103160636.

8) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY LARGE LOT SURVEY AS RECORDED UNDER RECORDING NO. 200403055001.

9) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY AS DISCLOSED BY SHORT PLAT AS RECORDED UNDER RECORDING NO. 200403055002.

10) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO COMCAST OF PUGET SOUND, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200412211460. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

11) SUBJECT TO AN EASEMENT FOR UTILITIES GRANTED TO PUGET SOUND ENERGY, INC. AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200502111047. THE EXACT LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE INSTRUMENT OF RECORD.

12) SUBJECT TO ALL COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN THAT BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 200505245001.

13) SUBJECT TO MEMORANDUM OF RESTRICTIVE COVENANTS AND THE TERMS AND CONDITIONS THEREOF CONTAINED IN INSTRUMENT RECORDED UNDER RECORDING NO. 200510200257.

14) SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS, DEDICATIONS, AGREEMENTS AND NOTES AS CONTAINED IN CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001 AND THAT AFFIDAVIT OF MINOR CORRECTION RECORDED UNDER RECORDING NO. 200803316989.

15) NOT REPORTED HEREIN.

16-17) SUBJECT TO GENERAL TAXES FOR TAX ACCOUNT NO. 0119345001.

18) ITEM HAS BEEN INTENTIONALLY DELETED.

19-24) NOT REPORTED HEREIN.

NOTES

1) SITE CONTAINS 7.26 ACRES, MORE OR LESS.

2) CORNERS HAVE BEEN SET IN CONJUNCTION WITH THIS SHORT PLAT AS DEPICTED HEREIN.

3) NO BUILDINGS EXIST ON SUBJECT LOTS EXCEPT AS DEPICTED HEREIN.

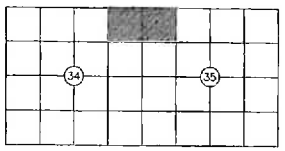
4) IN COMPLIANCE WITH DMC 254.08.080(D), THE APPROVAL OF THIS SHORT PLAT SHALL NOT BE A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED FOR ANY STRUCTURES OR DEVELOPMENT WITHIN SAID AREA.

5) THE APPLICANT AND/OR ADJOINING LAND OWNERS AND THEIR SUCCESSORS SHALL CONSTRUCT AND MAINTAIN ALL PRIVATE ACCESSES AND EASEMENTS ASSOCIATED WITH THIS SHORT PLAT.

NOTICE

THE LAND CONTAINED IN THIS SHORT PLAT MAY NOT BE FURTHER DIVIDED BY ANYONE WITHIN FIVE (5) YEARS OF THE RECORDING OF THIS SHORT PLAT WITHOUT A FORMAL SUBDIVISION HAVING BEEN FILED WITH THE PIERCE COUNTY AUDITOR PER RCW 58.17.060(1).

THE APPROVAL OF A SHORT PLAT SHALL NOT BE A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED FOR ANY STRUCTURES OR DEVELOPMENT WITHIN SAID AREA.



NE 1/4 NE 1/4 OF SECTION 34 AND
NW 1/4 NW 1/4 OF SECTION 35,
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NAME & ADDRESS-ORIGINAL LOT OWNER:

PATRIOTS LANDING INVESTMENT, LLC
P.O. BOX 1969
GIG HARBOR, WA. 98334
PHONE: 253-853-4457
EXISTING ZONING: R-5
SOURCE OF WATER: CITY OF DUPONT
SEWER SYSTEM: PIERCE COUNTY
WIDTH & TYPE OF ACCESS: 47' AND 61' WIDE PUBLIC ROW AND 47' PRIVATE ROW
NO. OF LOTS: 2
SCALE: SEE SHEET 2

SUBMITTED ON : _____ RECEIPT # _____
AUTOMATIC APPROVAL DATE : _____
RETURN FOR CAUSE ON : _____

JOB NO. 845-021-017-0006
\\ESM9\ENGR\ESM-JOBS\845\021\017\SURVEY PLOTS\SP-01.DWG
DRAWN BY : R.W./D.R./C.F.
DATE : 2017-10-31
SHEET 1 OF 2

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S.
Suite 205
Federal Way, WA 98003
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

CITY OF DUPONT
SHORT PLAT NO. SP 17-XX

A PORTION OF SECTIONS 34 AND 35, T 19 N, R 1 E, W.M.

SURVEY INSTRUMENTATION

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

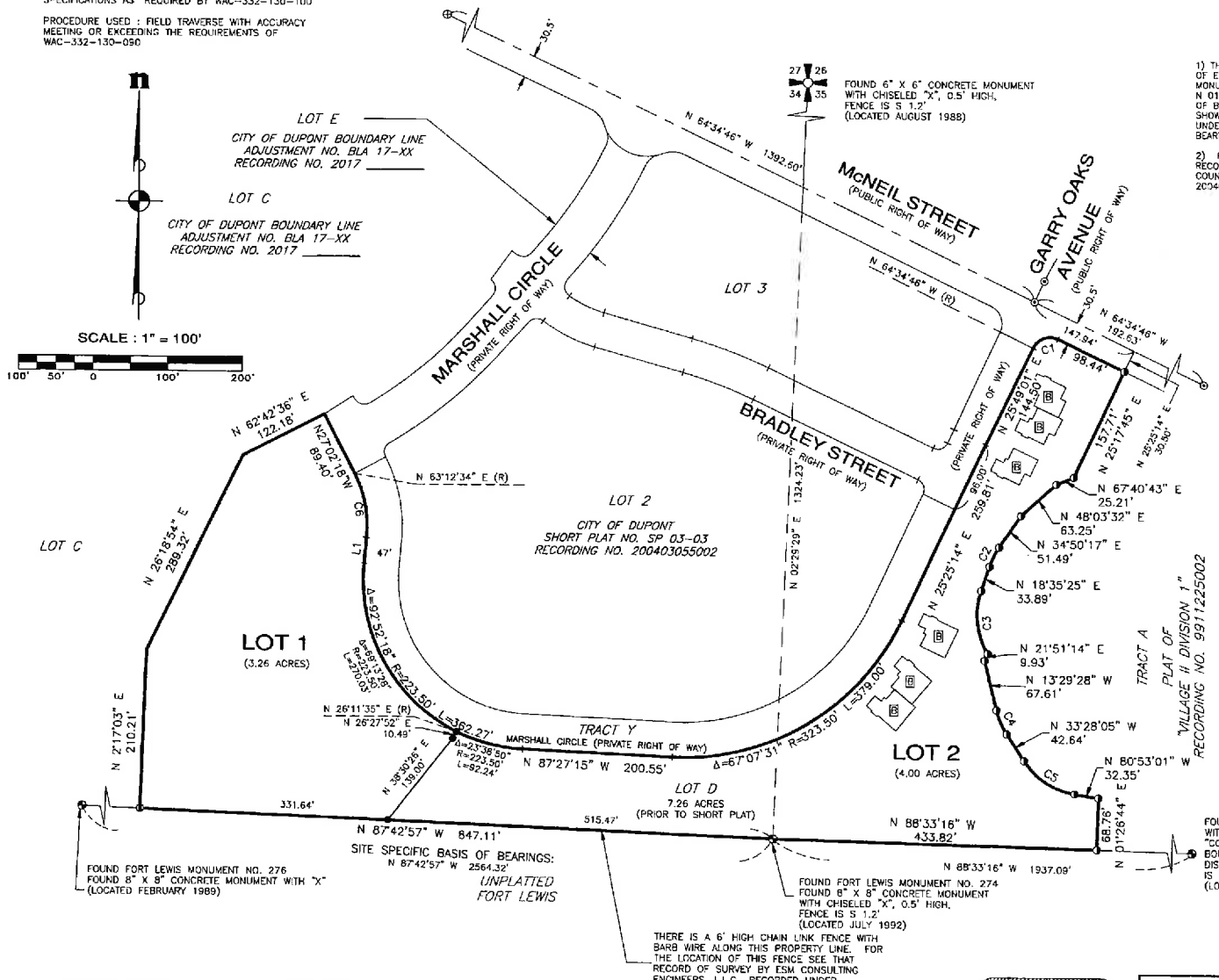
10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090

PROJECT BASIS OF BEARINGS : CORPS OF ENGINEERS

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY. BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THOSE RECORD OF SURVEYS BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NOS. 9303050249, 200001215001, 200403055001, 200403055002, AND 200711215001.



LEGEND

- ● EXISTING MONUMENT AS NOTED
- ⊕ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 3" AS RECORDED UNDER RECORDING NO. 200012115005
- ⊙ SURFACE BRASS CAP WITH PUNCH IN CONCRETE STAMPED : "L.S. 29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002
- ◑ REBAR AND CAP STAMPED "ESM L.S. 15661/29281" SET IN CONJUNCTION WITH THE PLAT OF "VILLAGE II DIVISION 1" AS RECORDED UNDER RECORDING NO. 9911225002.
- ◑ REBAR AND CAP STAMPED "ESM L.S. 15661/29281" SET IN CONJUNCTION WITH CITY OF DUPONT BOUNDARY LINE ADJUSTMENT NO. BLA 07-04 AS RECORDED UNDER RECORDING NO. 200711215001
- (R) RADIAL BEARING
- Δ DELTA
- R RADIUS
- L ARC
- ● SET 5/8" REBAR AND CAP STAMPED: "ESM LLC 35142 / 44925"
- [B] EXISTING SINGLE FAMILY RESIDENCE

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C1	90°00'00"	25.00	39.27
C2	16°14'52"	100.00	28.36
C3	49°11'30"	100.00	85.86
C4	19°58'37"	100.00	34.87
C5	47°24'56"	100.00	82.76
C6	32°12'29"	156.50	87.97
C7	90°29'58"	14.50	22.90
C8	01°40'42"	329.50	9.65

LINE TABLE

LINE	BEARING	LENGTH
L1	N 05°25'03" E	34.01
L2	N 62°42'36" E	10.04
L3	N 27°17'24" W	29.50
L4	N 62°42'36" E	24.86
L5	N 27°17'24" W	40.00
L6	N 37°55'39" E	50.81
L7	N 52°04'21" W	25.00
L8	N 30°07'40" E	70.00

JOB NO. 845-021-017-0008
\\ESMB\ENGR\ESM-JOBS\845\021\017\SURVEY PLOTS\SP-02.DWG
DRAWN BY : R.W./D.R./C.F./R.G
DATE : 2017-10-31
SHEET 2 OF 2

ESM CONSULTING ENGINEERS LLC
33400 8TH AVE S
Suite 205
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 257-9600
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

CITY OF DUPONT
1700 Civic Drive
DuPont, Washington 98327
Phone: 253-912-5393 FAX: 253-964-1455

Notice of Public Hearing
Patriot's Landing Memory Care Facility

Description of Proposal: Development of a one-story, 60-bed memory care facility located on top of structured underground parking. City approval is required for a Conditional Use Permit (PLNG 2017-030), Design Review (PLNG 2017-031), Road Standards Variance Application (PLNG 2017-032), Tree Modification (PLNG 2017-039), Site Plan Review (PLNG 2017-040) and Short Plat (PLNG 2017-045).
Applicant: Mr. Mike Campeau, Careage Development Company
City File No: PLNG 2017-030, -031, -032, -039, -040, & -045
Date of Application: December 8, 2017
Date of Notice of Application: December 21, 2017
Hearing Date and Time: February 8, 2017, 9:00 a.m.
Hearing Location: DuPont City Hall, Council Chambers, 1700 Civic Drive, DuPont, Washington.

A public hearing will be held with the City of DuPont Hearing Examiner on February 8, 2017, 9:00 a.m. All interested persons are invited to attend and provide testimony. The public may comment on the application by submitting written comments to the City of DuPont prior to the close of the public hearing. This hearing may also address any SEPA appeals filed by 5:00 pm on January 23, 2018.

A determination of consistency will be completed per DMC 25.175.040(1), as well as evaluation of the proposed tree modification per 25.120.050, Conditional Use Permit criteria per 25.135.030, design review requirements per Chapter 25.65, site plan review per 25.45.040, and short plat criteria 24.06.070. These will be summarized in a staff report available for review seven days prior to the public hearing. For questions on the application contact Jeff Wilson, AICP, Planning Director for the City of DuPont, at (253) 912-5393 or jwilson@dupontwa.gov. Copies of the application are available at City Hall.

Attachment 2e

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

January 23, 2018

Jeffrey Wilson, AICP, Director
Department of Community Development
City of DuPont
1700 Civic Drive
DuPont, WA 98327

Dear Mr. Wilson:

Thank you for the opportunity to comment on the optional mitigated determination of nonsignificance/notice of application for the Patriots Landing Memory Care Facility Project (PLNG 2017-030, PLNG 2017-031, PLNG 2017-032, PLNG 2017-039, PLNG 2017-040, PLNG 2017-045) located south of McNeil Street and south and east of Marshal Circle as proposed by Mike Campeau, Careage Development Company. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

TOXICS CLEANUP: Eva Barber (360) 407-7094

This proposed project is located in an area that may have been contaminated with heavy metals due to the air emissions originating from the old Asarco smelter in north Tacoma (visit Ecology's Tacoma Smelter Plume map search tool: https://fortress.wa.gov/ecy/smeltersearch/).

Soil contamination from the former Asarco smelter poses a risk to human health and the environment. Children are at especially high risk from direct exposure to contaminated soil. Construction workers, landscapers, gardeners, and others who work in the soils are also at risk.

Ecology recommends that the lead agency include the following as conditions of approval, prior to the issuance of any site development permits or the initiation of grading, filling, or clearing:

- Sample the soil and analyze for arsenic and lead following the 2012 Tacoma Smelter Plume Guidance. The soil sampling results shall be sent to Ecology for review. If the project includes open space areas, contact the Technical Assistance Coordinator, Eva Barber, for assistance in soil sampling methodology within the open space area.

- If lead or arsenic are found at concentrations above the Model Toxics Control Act (MTCA) cleanup levels (Chapter 173-340 WAC); the owners, potential buyers, construction workers, and others shall be notified of their occurrence. The MTCA cleanup level for arsenic is 20 parts per million (ppm) and lead is 250 ppm.

- If lead, arsenic and/or other contaminants are found at concentrations above MTCA cleanup levels, the applicant shall:

  1) Develop soil remediation plan and enter into the Voluntary Cleanup Program with Ecology. For more information on the Voluntary Cleanup Program, visit Ecology's website at: http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

  2) Obtain an opinion letter from Ecology stating that the proposed soil remediation plan will likely result in no further action under MTCA. The applicant shall provide to the local land use permitting agency the opinion letter from Ecology.

  3) Prior to finalizing site development permits, provide to the local land use permitting agency "No Further Action" determination from Ecology indicating that the remediation plans were successfully implemented under MTCA.

- If soils are found to be contaminated with arsenic, lead, or other contaminants, extra precautions shall be taken to avoid escaping dust, soil erosion, and water pollution during grading and site construction. Site design shall include protective measures to isolate or remove contaminated soils from public spaces, yards, and children's play areas. Contaminated soils generated during site construction shall be managed and disposed of in accordance with state and local regulations, including the Solid Waste Handling Standards regulation (Chapter 173-350 WAC). For information about soil disposal contact the local health department in the jurisdiction where soils will be placed.

The link below provides a fact sheet that explains more how the arsenic and lead clean-up levels were set and why Ecology sees that they are protective for human health: https://fortress.wa.gov/ecy/publications/SummaryPages/1109095.html.

For assistance and information about Tacoma Smelter Plume and soils contamination, the applicant shall contact, Eva Barber with the Toxics Cleanup Program at the phone number provided above or via email at Eva.Barber@ecy.wa.gov.

TOXICS CLEANUP: Marv Coleman (360) 407-6259

The proposed project is also within the project limits of the Weyerhaeuser/DuPont Works cleanup site & may be subject to Environmental Covenants &/or zoning overlays related to residual contamination from the former DuPont Works. Due Diligence appropriate for these site characteristics should be observed.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(MLD:201800104)

cc: Eva Barber, TCP
Marv Coleman, TCP
Mike Campeau, Careage Development Company (Proponent)
Matt Reider, ESM Consulting Engineers Inc. (Contact)

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

January 22, 2018

Mr. Jeffrey Wilson
Planning Director
City of Dupont
1700 Civic Drive
Dupont WA 98327

In future correspondence please refer to:
Project Tracking Code: 2018-01-00519
Property: Environmental Determination for Patriot's Landing Memory Care Facility, PLNG2017-030,031,032,040,045
Re: Archaeology - Survey Requested

Dear Mr. Wilson:

Thank you for contacting the Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) and providing documentation regarding the above referenced project. As a result of our review, our professional opinion is that the project area has the probability to contain precontact archaeological resources and/or human burials. The project area is within approximately 2,000 feet of multiple precotnact and historic period archaeological sites and human burials. Please be aware that archaeological sites are protected from knowing disturbance on both public and private lands in Washington States. Both RCW 27.44 and RCW 27.53.060 require that a person obtain a permit from our Department before excavating, removing, or altering Native American human remains or archaeological resources in Washington. Failure to obtain a permit is punishable by civil fines and other penalties under RCW 27.53.095, and by criminal prosecution under RCW 27.53.090.

Chapter 27.53.095 RCW allows the Department of Archaeology and Historic Preservation to issue civil penalties for the violation of this statute in an amount up to five thousand dollars, in addition to site restoration costs and investigative costs. Also, these remedies do not prevent concerned tribes from undertaking civil action in state or federal court, or law enforcement agencies from undertaking criminal investigation or prosecution. Chapter 27.44.050 RCW allows the affected Indian Tribe to undertake civil action apart from any criminal prosecution if burials are disturbed.

Identification of archaeological resources and/or human remains during construction is not a recommended detection method because inadvertent discoveries often result in costly construction delays and damage to the resource. We request a professional archaeological survey of the project area be conducted prior to ground disturbing activities. The completed survey should be submitted to DAHP and the interested Tribes for review prior to ground disturbance. We also recommend consultation with the concerned Tribes' cultural committees and staff regarding cultural resource issues.

Thank you for the opportunity to comment on this project and we look forward to receiving the survey report. Should you have any questions, please feel free to contact me.

Sincerely,

Gretchen Kaehler
Assistant State Archaeologist, Local Governments
(360) 586-3088
gretchen.kaehler@dahp.wa.gov

cc. Jackie Wall, THPO, Nisqually Tribe
Rhonda Foster, THPO, Squaxin Island Tribe
Stephanie Neal, Archaeologist, Squaxin Island Tribe
Brandon Reynon, Cultural Resources Compliance, Puyallup Tribe

AFFIDAVIT OF POSTING

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone (253) 964-8121
Fax (253) 964-1455

Application # PLNG 2017-030, 031, 032, 039, 040 & 045 and/or Case # _____

I, Matthew Reider applicant/applicant's agent for the above referenced project number, being duly sworn on oath, deposes and says: That on the 21 day of December, 20 17 I posted a notice, prominently displayed, at the site.

Site/Project Description: Public Notice Sign posting at the corner of McNeil St and Marshal Circle.

Signed By Matt Reider

Notarization/Certification

(Seal or Stamp)

ANN MARI MONNETT
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
9-27-21

State of Washington, County of King

Signed or attested before me this 21 day of December, 20 17.

X _____
Signature of notary public

Ann Mari Monnett
Printed or stamped name of notary public

Affidavit of Posting.docx

Attachment 2h

AFFIDAVIT OF POSTING

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone (253) 964-8121
Fax (253) 964-1455

Application # PLNG 2017-030, 031, 032, 039, 040, & 045 and/or Case # _____

I, Matthew Reider applicant/applicant's agent for the above referenced project number, being duly sworn on oath, deposes and says: That on the 21 day of December, 20 17 I posted a notice, prominently displayed, at the site.

Site/Project Description: Public Notice Sign posting at the corner of McNeil st and Garry Oaks Ave.

Signed By Matt Reider

Notarization/Certification

State of Washington, County of King

Signed or attested before me this 21 day of December, 20 17.

X _____
Signature of notary public

Ann Mari Monnett
Printed or stamped name of notary public

ANN MARI MONNETT
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
9-27-21

Affidavit of Posting.docx

LETTER OF TRANSMITTAL

DATE: *1/24/2018*	JOB NO. *845-021-017*
ATTN: ***Jeffrey S. Wilson, AICP***	
RE: *Patriots Landing Memory Care*	
CUP - Posted Notice of Hearing	

33400 8th Ave S. Ste 205
Federal Way, WA 98003
(253) 838-6113 Fax: (253) 838-7104

TO: Jeffrey S. Wilson, AICP
City of DuPont
1700 Civic DR
DuPont, WA 98327-9603

VIA
- X Mail
- ____ Mail Certified
- ____ Courier
- ____ To be picked up
- ____ Overnight mail

WE ARE SENDING YOU:

- ____ Prints
- ____ Plans
- ____ CAD Disk
- ____ Copy of Letter
- ____ Change Order
- ____ Original drawings
- X Other - Affidavit of Posting, Pictures of Posting

COPIES	DATE	SHT. NO.	DESCRIPTION
1	1/24/2018		Affidavit of posting
1	1/24/2018		Map of Posting Locations
1	1/23/2018		Photos of Posting

THESE ARE TRANSMITTED as checked below:

- ____ For approval
- ____ For review and comment
- ____ For your use
- ____ For your signature
- X As requested

REMARKS

COPY TO:

SIGNED:
Matt Reider

Attachment 2i

AFFIDAVIT OF POSTING

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone (253) 964-8121
Fax (253) 964-1455

Application # PLNG2017-030, 031, 032, 039, 040, 045 and/or Case # _____

I, Matthew Reider applicant/applicant's agent for the above referenced project number, being duly sworn on oath, deposes and says: That on the 23 day of January, 20 18 I posted a notice, prominently displayed, at the site.

Site/Project Description: Memory Care Conditional Use Permit.

_____

_____

Matthew Reider 1/24/18
Signed By Matt Reider

Notarization/Certification

ANN MARI MONNETT
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
9-27-21
(Seal or Stamp)

State of Washington, County of King

Signed or attested before me this 24 day of January, 20 18.

X _____
Signature of notary public

Ann Mari Monnett
Printed or stamped name of notary public

Affidavit of Posting.docx

Unique History … Vibrant Future

CITY OF DUPONT

Department of Community Development
1700 Civic Drive, DuPont, WA 98327
Telephone: (253) 964-8121
www.dupontwa.gov

Transmittal Memo

TO: Careage Development Company

FROM: Jeff Wilson, Planning Director

DATE: January 23, 2018

RE: Affidavit of Posting

Please return completed and signed Affidavits of Posting along with photos displaying the Public Notice signs. The photos may be emailed to me at Jwilson@dupontwa.gov.

If you have any questions, I can be also be reached at 253-912-5393.

Thank you

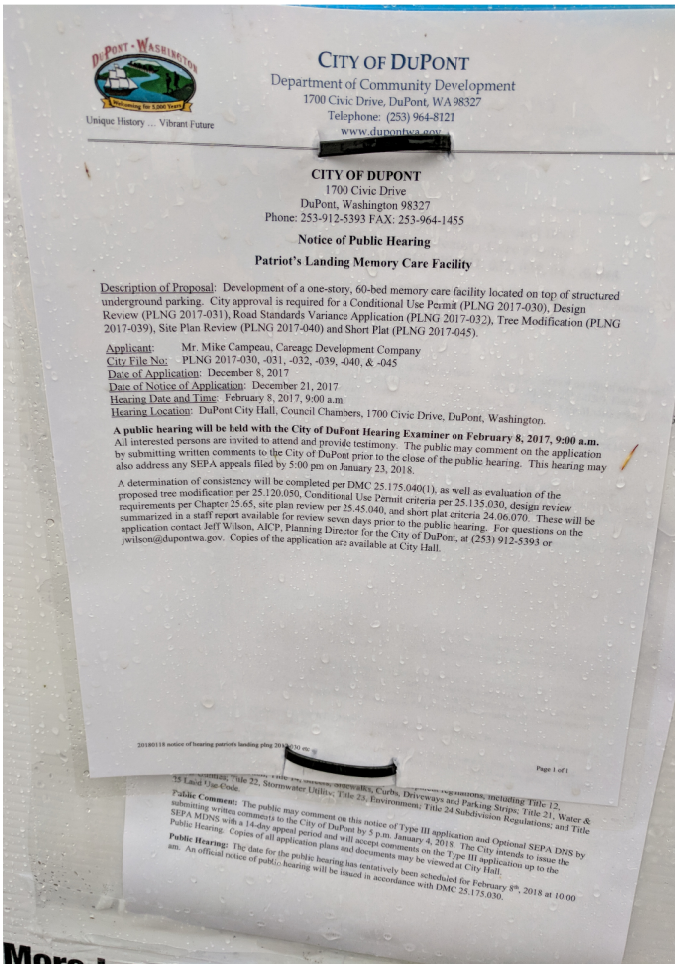
Pierce County
WASHINGTON



Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. **ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'.** The County makes no warranty of fitness for a particular purpose. 2017/12/22



Posting on McNeil and Garry Oaks



CITY OF DUPONT
Department of Community Development
1700 Civic Drive, DuPont, WA 98327
Telephone: (253) 964-8121
www.dupontwa.gov

Unique History ... Vibrant Future

CITY OF DUPONT
1700 Civic Drive
DuPont, Washington 98327
Phone: 253-912-5393 FAX: 253-964-1455

Notice of Public Hearing

Patriot's Landing Memory Care Facility

Description of Proposal: Development of a one-story, 60-bed memory care facility located on top of structured underground parking. City approval is required for a Conditional Use Permit (PLNG 2017-030), Design Review (PLNG 2017-031), Road Standards Variance Application (PLNG 2017-032), Tree Modification (PLNG 2017-039), Site Plan Review (PLNG 2017-040) and Short Plat (PLNG 2017-045).

Applicant: Mr. Mike Campeau, Careage Development Company
City File No: PLNG 2017-030, -031, -032, -039, -040, & -045
Date of Application: December 8, 2017
Date of Notice of Application: December 21, 2017
Hearing Date and Time: February 8, 2017, 9:00 a.m
Hearing Location: DuPont City Hall, Council Chambers, 1700 Civic Drive, DuPont, Washington.

A public hearing will be held with the City of DuPont Hearing Examiner on February 8, 2017, 9:00 a.m. All interested persons are invited to attend and provide testimony. The public may comment on the application by submitting written comments to the City of DuPont prior to the close of the public hearing. This hearing may also address any SEPA appeals filed by 5:00 pm on January 23, 2018.

A determination of consistency will be completed per DMC 25.175.040(1), as well as evaluation of the proposed tree modification per 25.120.050, Conditional Use Permit criteria per 25.135.030, design review requirements per Chapter 25.65, site plan review per 25.45.040, and short plat criteria 24.06.070. These will be summarized in a staff report available for review seven days prior to the public hearing. For questions on the application contact Jeff Wilson, AICP, Planning Director for the City of DuPont, at (253) 912-5393 or jwilson@dupontwa.gov. Copies of the application are available at City Hall.

20180118 notice of hearing patriots landing plng 2017-030 etc

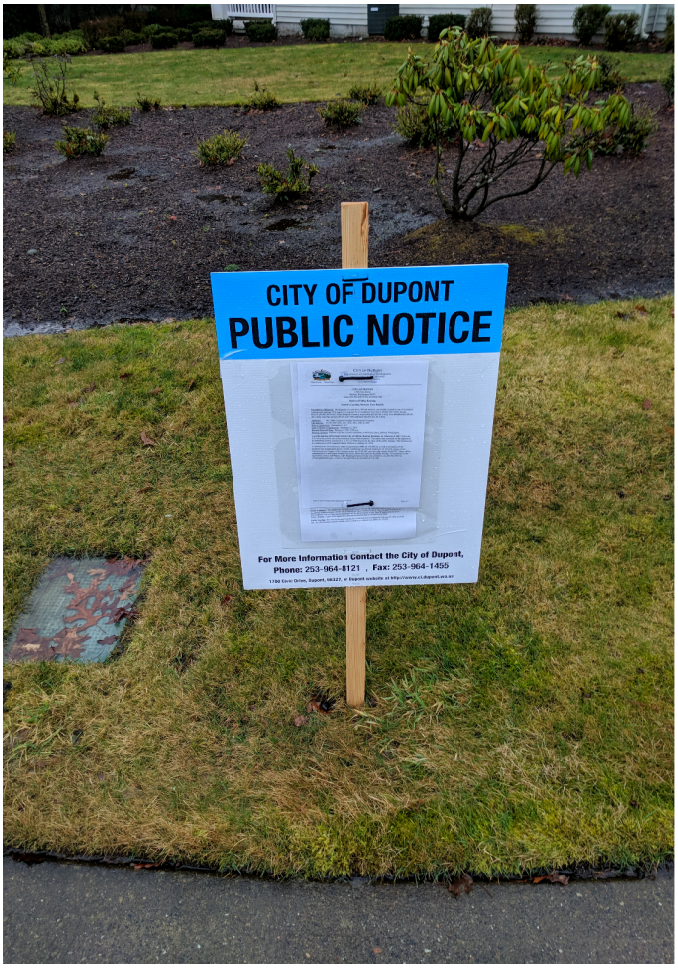
Page 1 of 1

25 Land Use Code.

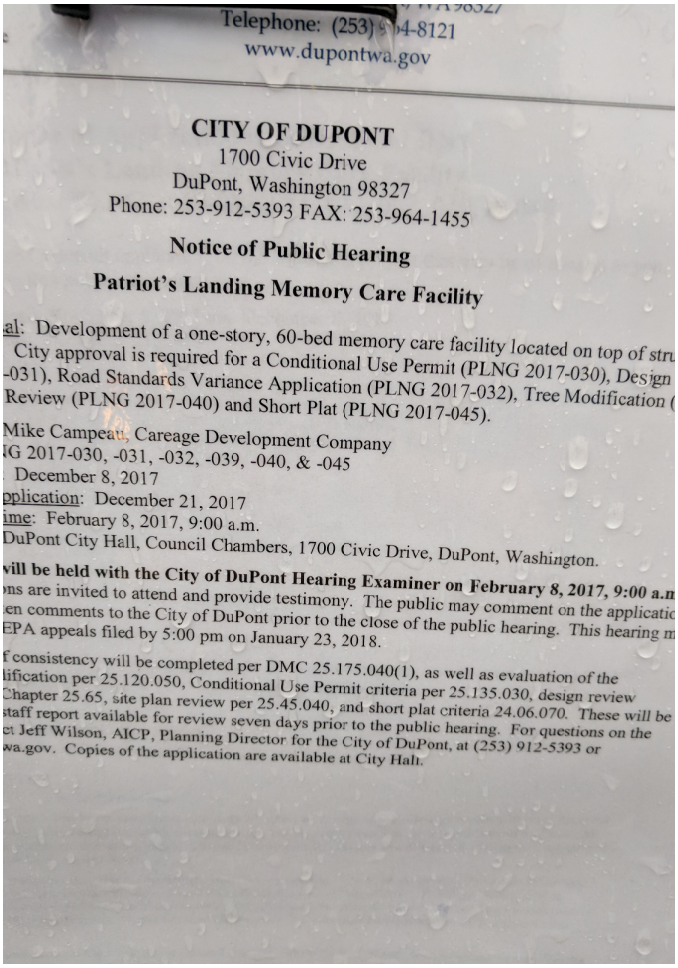
Public Comment: The public may comment on this notice of Type III application and Optional SEPA DNS by submitting written comments to the City of DuPont by 5 p.m. January 4, 2018. The City intends to issue the SEPA MDNS with a 14-day appeal period and will accept comments on the Type III application up to the Public Hearing. Copies of all application plans and documents may be viewed at City Hall.

Public Hearing: The date for the public hearing has tentatively been scheduled for February 8th, 2018 at 10:00 am. An official notice of public hearing will be issued in accordance with DMC 25.175.030.

Notice of Public Hearing



Posting on McNeil and Marshall Cir.



Telephone: (253) 964-8121
www.dupontwa.gov

CITY OF DUPONT
1700 Civic Drive
DuPont, Washington 98327
Phone: 253-912-5393 FAX: 253-964-1455

Notice of Public Hearing

Patriot's Landing Memory Care Facility

al: Development of a one-story, 60-bed memory care facility located on top of stru
City approval is required for a Conditional Use Permit (PLNG 2017-030), Design
-031), Road Standards Variance Application (PLNG 2017-032), Tree Modification (
Review (PLNG 2017-040) and Short Plat (PLNG 2017-045).

Mike Campeau, Careage Development Company
G 2017-030, -031, -032, -039, -040, & -045
December 8, 2017
pplication: December 21, 2017
ime: February 8, 2017, 9:00 a.m.
DuPont City Hall, Council Chambers, 1700 Civic Drive, DuPont, Washington.

vill be held with the City of DuPont Hearing Examiner on February 8, 2017, 9:00 a.m
ns are invited to attend and provide testimony. The public may comment on the applicatio
en comments to the City of DuPont prior to the close of the public hearing. This hearing m
EPA appeals filed by 5:00 pm on January 23, 2018.

f consistency will be completed per DMC 25.175.040(1), as well as evaluation of the
ification per 25.120.050, Conditional Use Permit criteria per 25.135.030, design review
Chapter 25.65, site plan review per 25.45.040, and short plat criteria 24.06.070. These will be
staff report available for review seven days prior to the public hearing. For questions on the
et Jeff Wilson, AICP, Planning Director for the City of DuPont, at (253) 912-5393 or
wa.gov. Copies of the application are available at City Hall.

Notice of Public Hearing

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING SERVICES DIVISION

1700 Civic Drive
DuPont, WA 98327
Ph 253.964.5387 Fax 253.964.1455

MEMORANDUM

TO: **Jeff Wilson**

FROM: **Bill Anderson**

RE: **Patriot's Landing Memory Care Facility - Conditional Use Application**
City File No's. PLNG2017-030

DATE: **September 19, 2017**

The Building Services Division has reviewed the revised preliminary drawings submitted to the City on September 1, 2017 for Conditional Use Application for the referenced proposed development. The following comments are provided for the applicant's use in progressing with planning and design of their project:

1. The proposed structure will be required to comply with the requirements of the building construction codes that are in effect at the time of building permit application submittal. The following codes are currently enforced by the City of DuPont: the 2015 International Building Code, the 2015 International Fire Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, the 2015 Uniform Plumbing Code (each as amended and adopted by the State of Washington); and the 2015 Washington State Energy Code.
2. The project (or each portion of project) will be required to receive all land use and civil construction approvals prior to issuance of building permit for the proposed structures.
3. All applicable Fire Impact fees assessed for the proposed development will be required to be paid prior to the issuance of building permit(s) associated with the proposed project.
4. Also prior to issuance of a building permit for the structure, the applicant shall provide a copy of Pierce County Sewer Service Permits for City record. This permit (and authorization to connect to sewer service) is/may be independent from any sewer system extension that may also apply to the project. All sewer connection and permitting requirements must be coordinated with the utility purveyor. (Please note that Pierce County Sewer Utility requires a pre-treatment review and approval be completed prior to their issuance of sewer extension or sewer service connection permit(s). Each subsequent tenant, for multi-tenant buildings, must also complete a separate pre-treatment review and provide copy of sewer service permitting, where applicable, prior to obtaining a building permit for associated improvements.)
5. The project will be required to comply with the requirements for provision of as-built drawings contained in DMC Chapter 24.10, GIS. As-built drawings and project close out submittals must

Attachment 2j

be submitted and approved prior to issuance of a Certificate of Occupancy for the building, or portions thereof.

6. The accessibility requirements of WAC 51-50-005 (or newly adopted edition if applicable) must be incorporated into the construction plans for the site and related structure, to include, but not be limited to the provision of a minimum of (1) one van accessible parking space, and provisions for accessible route(s) of travel within the site and providing connectivity with adjacent improvements.
7. Separate Building, Plumbing, and Mechanical Permits will be required for the structure associated with the development project. Plans showing the details for construction for each shall be submitted to the city for review and approval prior to permit issuance. (Note: Electrical permits may be obtained through WA. St. L&I.; sewer service and permitting through Pierce County Utilities.)
8. Underground Fire Supply, Fire Suppression and Fire Alarm permits associated with the structure must be obtained through DuPont Fire Department prior to initiating any such work. All alarms systems will be required to obtain an alarm registration permit with the city, prior to full activation of the alarm system for operation; forms may be obtained at city hall.
9. Fire flow requirements and requirements for on –site hydrants and site access provisions will be determined by the DuPont Fire Chief or designee. Such requirements may be subject to additional review and requirements as future submittals come forward.
10. Addressing for the building within the project area will be assigned as the project scope progresses, and may be obtained from the building department as needed.
11. Permit forms for future submittals associated with the project may be obtained either at city hall or may be downloaded through the city's website. Assistance in completing applications is available by contacting permit staff.
12. The project proposal appears to indicate an emergency generator. The type and quantity of fuel stored for the emergency generator is to be quantified. Permitting and installation shall conform to State of Washington WAC 296-46B and Department of Labor & Industries requirements. The proposed generator shall comply with DMC Chapter 9.09 for off-site noise generation. Separate permitting or other additional requirements pertaining to the installation of fuel or battery storage associated with the generator may be required through DuPont Fire Department.
13. Emergency Planning and Preparedness shall conform to the requirements of Chapter 4 of the International Fire Code.

As the project proceeds, more specific requirements may be discussed with our department. If there are any questions or clarifications needed, please contact me.

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING SERVICES DIVISION

1700 Civic Drive
DuPont, WA 98327
Ph 253.964.5387 Fax 253.964.1455

MEMORANDUM

TO: **Jeff Wilson**

FROM: **Bill Anderson**

RE: **Patriot's Landing Memory Care Facility - Land Use Application**
City File No's. PLNG2017-031

DATE: **September 21, 2017**

The Building Services Division has reviewed the revised preliminary drawings submitted to the City on September 1, 2017 for Land Use Application for the referenced proposed development. The following comments are provided for the applicant's use in progressing with planning and design of their project:

1. The proposed structure will be required to comply with the requirements of the building construction codes that are in effect at the time of building permit application submittal. The following codes are currently enforced by the City of DuPont: the 2015 International Building Code, the 2015 International Fire Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, the 2015 Uniform Plumbing Code (each as amended and adopted by the State of Washington); and the 2015 Washington State Energy Code.
2. The project (or each portion of project) will be required to receive all land use and civil construction approvals prior to issuance of building permit for the proposed structures.
3. All applicable Fire Impact fees assessed for the proposed development will be required to be paid prior to the issuance of building permit(s) associated with the proposed project.
4. Also prior to issuance of a building permit for the structure, the applicant shall provide a copy of Pierce County Sewer Service Permits for City record. This permit (and authorization to connect to sewer service) is/may be independent from any sewer system extension that may also apply to the project. All sewer connection and permitting requirements must be coordinated with the utility purveyor. (Please note that Pierce County Sewer Utility requires a pre-treatment review and approval be completed prior to their issuance of sewer extension or sewer service connection permit(s). Each subsequent tenant, for multi-tenant buildings, must also complete a separate pre-treatment review and provide copy of sewer service permitting, where applicable, prior to obtaining a building permit for associated improvements.)
5. The project will be required to comply with the requirements for provision of as-built drawings contained in DMC Chapter 24.10, GIS. As-built drawings and project close out submittals must be submitted and approved prior to issuance of a Certificate of Occupancy for the building, or portions thereof.

Attachment 2k

6. The accessibility requirements of WAC 51-50-005 (or newly adopted edition if applicable) must be incorporated into the construction plans for the site and related structure, to include, but not be limited to the provision of a minimum of (1) one van accessible parking space, and provisions for accessible route(s) of travel within the site and providing connectivity with adjacent improvements.
7. Separate Building, Plumbing, and Mechanical Permits will be required for the structure associated with the development project. Plans showing the details for construction for each shall be submitted to the city for review and approval prior to permit issuance. (Note: Electrical permits may be obtained through WA. St. L&I.; sewer service and permitting through Pierce County Utilities.)
8. Underground Fire Supply, Fire Suppression and Fire Alarm permits associated with the structure must be obtained through DuPont Fire Department prior to initiating any such work. All alarms systems will be required to obtain an alarm registration permit with the city, prior to full activation of the alarm system for operation; forms may be obtained at city hall.
9. Fire flow requirements and requirements for on –site hydrants and site access provisions will be determined by the DuPont Fire Chief or designee. Such requirements may be subject to additional review and requirements as future submittals come forward.
10. Addressing for the building within the project area will be assigned as the project scope progresses, and may be obtained from the building department as needed.
11. Permit forms for future submittals associated with the project may be obtained either at city hall or may be downloaded through the city's website. Assistance in completing applications is available by contacting permit staff.
12. The project proposal appears to indicate an emergency generator. The type and quantity of fuel stored for the emergency generator is to be quantified. Permitting and installation shall conform to State of Washington WAC 296-46B and Department of Labor & Industries requirements. The proposed generator shall comply with DMC Chapter 9.09 for off-site noise generation. Separate permitting or other additional requirements pertaining to the installation of fuel or battery storage associated with the generator may be required through DuPont Fire Department.
13. Emergency Planning and Preparedness shall conform to the requirements of Chapter 4 of the International Fire Code.

As the project proceeds, more specific requirements may be discussed with our department. If there are any questions or clarifications needed, please contact me.

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING SERVICES DIVISION

1700 Civic Drive
DuPont, WA 98327
Ph 253.964.5387 Fax 253.964.1455

MEMORANDUM

TO: **Jeff Wilson, AICP**

FROM: **Bill Anderson, CBO**

RE: **Patriot's Landing Memory Care facility Preliminary Short Plat application Application No. PLNG 2017-045**

DATE: **December 28, 2017**

The Building Services Division has reviewed the preliminary drawings submitted on November 29, 2017 for the referenced proposed Preliminary Short Plat. The following comments are provided for the applicant's use in progressing with planning and design of their project:

1. The proposed structure will be required to comply with the requirements of the building construction codes that are in effect at the time of building permit application submittal. The following codes are currently enforced by the City of DuPont: the 2015 International Building Code, the 2015 International Fire Code, the 2015 International Mechanical Code, the 2015 International Fuel Gas Code, the 2015 Uniform Plumbing Code and the 2015 Washington State Energy Code; (each as amended and adopted by the State of Washington).
2. The project (or each portion of project) will be required to receive all land use and civil construction approvals prior to issuance of building permit for the proposed structures.
3. All applicable Storm System Development and Fire Impact fees assessed for the proposed development will be required to be paid prior to the issuance of building permit(s) associated with the proposed project.
4. Also prior to issuance of a building permit for the structure, the applicant shall provide a copy of Pierce County Sewer Service Permits for City record. This permit (and authorization to connect to sewer service) is/may be independent from any sewer system extension that may also apply to the project. All sewer connection and permitting requirements must be coordinated with the utility purveyor. (Please note that Pierce County Sewer Utility requires a pre-treatment review and approval be completed prior to their issuance of sewer extension or sewer service connection permit(s). Each subsequent tenant, for multi-tenant buildings, must also complete a separate pre-treatment review and provide copy of sewer service permitting, where applicable, prior to obtaining a building permit for associated improvements.)
5. The project will be required to comply with the requirements for provision of as-built drawings contained in DMC Chapter 24.10, GIS. As-built drawings and project close out submittals must be submitted and approved prior to issuance of a Certificate of Occupancy for the building, or portions thereof.

Attachment 2I

6. The accessibility requirements of WAC 51-50-005 (or newly adopted edition if applicable) must be incorporated into the construction plans for the site and related structure, to include, but not be limited to the provision of a minimum of (1) one van accessible parking space, and provisions for accessible route(s) of travel within the site and providing connectivity with adjacent improvements.
7. Separate Building, Plumbing, and Mechanical Permits will be required for the structure associated with the development project. Plans showing the details for construction for each shall be submitted to the city for review and approval prior to permit issuance. (Note: Electrical permits may be obtained through WA. St. L&I.; sewer service and permitting through Pierce County Utilities.)
8. Underground Fire Supply, Fire Suppression and Fire Alarm permits associated with the structure must be obtained through DuPont Fire Department prior to initiating any such work. All alarms systems will be required to obtain an alarm registration permit with the city, prior to full activation of the alarm system for operation; forms may be obtained at city hall.
9. Fire flow requirements and requirements for on –site hydrants and site access provisions will be determined by the DuPont Fire Chief or designee. Such requirements may be subject to additional review and requirements as future submittals come forward.
10. Addressing for the building within the project area has been assigned 1000 Garry Oaks Avenue.
11. Permit forms for future submittals associated with the project may be obtained either at city hall or may be downloaded through the city's website. Assistance in completing applications is available by contacting permit staff.
12. Per WAC 51-50-009, Recyclable Materials and Solid Waste Storage, (code citation included in the Washington State Amendments to the IBC) " All local jurisdictions shall require that space be provided for storage of recycled materials and solid waste for all new buildings" that is "designed to meet the needs of the occupancy, efficiency of pick-up, and shall be available to occupants and haulers."
13. Retaining walls exceeding four feet in height, measured from the bottom of the footing, or retaining a surcharge shall obtain a separate Building Permit.
14. Pursuant to RCW 19.122.033, the applicant shall consult with all utility and pipeline companies.

As the project proceeds, more specific requirements may be discussed with our department. If there are any questions or clarifications needed, please contact me.

Gray & Osborne, Inc.
CONSULTING ENGINEERS

October 6, 2017

Mr. Jeff Wilson
City of DuPont
1700 Civic Drive
DuPont, Washington 98327

SUBJECT: PATRIOTS LANDING MEMORY CARE FACILITY,
CITY FILE NO. PLNG2017-030 AND PLNG2017-031
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON
G&O #17281.00, TASK 01

Dear Mr. Wilson:

On September 20, 2017, Gray & Osborne, Inc. received a submittal package for the above-subject project. The package included the following:

- City Conditional Use Permit Application PLNG2017-030 (dated August 28, 2017);
- City Land Use Application PLNG2017-031 (dated August 28, 2017);
- Cover letter by ESM Consulting Engineers, LLC (dated September 1, 2017);
- Design Memorandum by ESM Consulting Engineers, LLC (dated September 1, 2017);
- Refuse Memorandum by ESM Consulting Engineers, LLC (dated September 1, 2017);
- Pre-application Meeting Comment letter by ESM Consulting Engineers, LLC (dated September 1, 2017);
- Request for Variance by ESM Consulting Engineers, LLC (dated September 1, 2017);
- SEPA Checklist by ESM Consulting Engineers, LLC (dated September 1, 2017);
- Trip Generation Report;
- Geotechnical Investigation Report by Golder Associates (dated June 13, 2011);
- Preliminary Stormwater Site Plan Report by ESM Consulting Engineers, LLC (dated September 1, 2017);

2102 Carriage Drive SW, Building I Olympia, Washington 98502 (360) 292-7481 Fax (360) 292-7517

Printed on recycled paper

Attachment 2m

- Conditional Use Permit Plans by ESM Consulting Engineers, LLC (12 sheets dated September 1, 2017);
- Architectural Elevation Plans (3 sheets dated September 1, 2017);
- Pierce County Public Works and Utilities Sanitary Sewer Request for Sewer Service Information (dated August 1, 2017);
- Preliminary Construction Plans by ESM Consulting Engineers, LLC (12 sheets dated September 1, 2017);
- Preliminary Construction Plans by ESM Consulting Engineers, LLC (8 sheets dated September 1, 2017);
- Preliminary Landscape Plans by ESM Consulting Engineers, LLC (2 sheets dated September 1, 2017);
- Sanitary Sewer As-built Drawings by ESM Consulting Engineers, LLC (2 sheets dated February 24, 2005).

The following variance is requested for this project and will be addressed under separate cover:

- City of DuPont Street Standards 3.1.2 – Reduction of driveway spacing (dated September 1, 2017).

We have reviewed this information for compliance with the current City of DuPont standards, codes, and policies and have the following comments:

GENERAL

1. The Applicant previously requested a short plat of Parcel No. 0119345001 into two parcels and has indicated that a boundary line adjustment will be submitted. The Applicant shall complete submittal of application documents as required by DuPont Municipal Code. Appropriate lots must be legally created prior to issuance of any permits for this project.

2. It appears development is proposed within the Marshall Circle right-of-way and the adjacent parcel to the northwest (Parcel No. 0119341004), which are outside of the northerly portion of the subject parcel (Parcel No. 0119345001) proposed to be short platted. The proposal includes the northerly portion of the building, a 20-foot wide fire department vehicle access road, sidewalk, driveway approach, and elimination of the southwest leg of the Marshall Circle/Gary Oaks Avenue intersection. A right-of-way vacation at the Applicant's expense will be required for elimination of the Marshall Circle right-of-way. The Applicant shall clarify the intent.

Printed on recycled paper

3. Release of the existing 49-foot wide road easement should be completed prior to issuance of a building permit. The Applicant will be required to submit a request for release of the easement. Upon City approval, the document shall be recorded with Pierce County and a hard copy distributed to the City for record.

4. Based on the Stormwater Site Plan, the project proposes a stormwater biofiltration swale and infiltration pond which borders Parcel Nos. 0119341004 and 0119345001. Following construction and prior to final acceptance of this project, the Applicant will be required to execute an Agreement for Inspection and Maintenance of Privately Maintained Storm Drainage Facilities. The Agreement shall include the Owners of all legal lots which benefit from the onsite stormwater system and provided after construction of the storm drainage system to reflect "as-built" conditions. A copy of the form of the agreement is included in the City Public Works Standards.

CONDITIONAL USE PERMIT APPLICATION

5. A title report that is less than 30 days old is required.

6. All easements as identified in the report shall be shown and labeled on the Plans.

LAND USE APPLICATION

We have no comments on the Land Use Application at this time.

TRIP GENERATION REPORT

7. The projected trip generation from the currently submitted report for one building (9 A.M. trips, 12 P.M. trips) appears to be sufficient for Land Use approval. Since the projected average daily trips (126) is below the City's threshold requirement; a traffic study is not required.

8. Garry Oaks Avenue is a private street with marked mid-block crossings proposed at two locations. A signage plan shall be provided, which includes provisions for safe pedestrian mobility for the proposed crosswalks. The mid-block crossings shall be evaluated for sight line distance, provided with current City Standard curb ramps, and marked in

Printed on recycled paper

accordance with the recommendations of the current WSDOT Design Manual and Traffic Manual.

SEPA CHECKLIST

9. Item A.10. should be revised to include the City of DuPont Construction Permit.

REFUSE

10. The submitted information appears to be sufficient for Land Use approval. Documentation from LeMay, Inc., of their approval of the proposed trash enclosure location shall be furnished by the Applicant prior to issuance of any permits.

PRELIMINARY STORMWATER SITE PLAN

11. General: The Stormwater Pollution Prevention Plan and Operations and Maintenance Manual must be included with the final Stormwater Site Plan.

12. Page 2-1: Under Minimum Requirement #3, specific BMPs should be identified that will be implemented on site.

13. Page 2-1: State the party responsible for maintenance of the proposed facilities under Minimum Requirement #9.

14. Page 7-1: The excerpts from the previous Patriots Landing Stormwater Report should include the original basin map showing all basins and the landcover assumptions in each basin that were used in determining the size of the existing facilities.

15. Site Plans: Sheet UT-02 indicates that the collected runoff from the facility's lawn and driveway will be conveyed to the bioretention swale at a point near the middle of the swale. The runoff must enter the swale at the upstream end such that the calculated flowpath length is provided for all polluted runoff.

16. Site Plans: Details for all storm structures and facilities must be provided. Sections for the infiltration trench, bioretention swale, and infiltration pond must be included.

Printed on recycled paper

17. Site Plans: A stabilized overflow route (spillway or structure) must be provided for the infiltration pond in the event of an especially severe storm or in case infiltration is inhibited because of clogged soils. See Section 3.3.9 of Volume III of the Manual. A description of the overflow route and potential impact on downstream properties should be included in the downstream analysis section of the Stormwater Site Plan.

18. Site Plans: A planting plan and/or list of recommended planting materials for the infiltration pond and bioretention swale must be included on the Plans.

19. Site Plans: A note should be added to the Plans referencing BMP T5.13 Post-Construction Soil Quality and Depth in Volume V of the Manual so that disturbed soil/landscaped areas onsite meet the LID requirements.

20. Site Plans: The plans should include the following guidelines for grading of infiltration facilities: "Conduct initial basin excavation to within 1-foot of the final elevation of the basin floor. Excavate infiltration trenches and basins to final grade only after all disturbed areas in the upgradient project drainage area have been permanently stabilized. The final phase of excavation should remove all accumulation of silt in the infiltration facility before putting it in service. After construction completion, prevent sediment from entering the infiltration facility by first conveying the runoff water through an appropriate pretreatment system such as a pre-settling basin, wet pond, or sand filter." (Manual Volume III, Page 3-87)

21. Site Plans: The erosion control plans should include the following guidelines for protecting the infiltration facilities during construction: "*Generally, do not use infiltration facilities as temporary sediment traps during construction. If an infiltration facility will be used as a sediment trap, do not excavated to final grade until after the stabilizing the upgradient drainage area. Remove any accumulation of silt in the basin putting it in service.*" (Manual Volume III, Page 3-87)

22. The final Stormwater Plan shall include a Stormwater Pollution Prevention Plan and an Operations and Maintenance Plan.

23. The project proposes a stormwater biofiltration swale and infiltration pond which borders Parcel Nos. 0119341004 and 0119345001. Stormwater from the Marshall Circle right-of-way should be conveyed to a separate

Printed on recycled paper

stormwater facility with an easement dedicated to the City for maintenance. Stormwater from the private section of Garry Oaks Avenue (Parcel No. 0119345004) should be conveyed to a private stormwater facility. Stormwater from the proposed development (Parcel No. 0119345001) should be conveyed to an onsite stormwater system. It is our understanding that the Owners may desire to request right-of-way vacation of the portion of Marshall Circle between Bradley Street and Garry Oaks Avenue. All impervious road surfaces shall drain to appropriate facilities (e.g., public rights-of-way to storm facilities within an easement or tract, private roads to private onsite facilities).

24. Page 5-2 states that an infiltration rate of 20 in/hr was used for design of the infiltration facilities. The DOE Manual requires infiltration tests for each infiltration facility – refer to Section 3.3 in Volume III of the Manual. The location of the storm facility shown on Figure 2 (Exploration Plan) does not appear to be consistent with the construction plans. Confirm and show the test pit locations on the Plans. During construction, on-site infiltration tests will be required for validation of the design infiltration rate.

GEOTECHNICAL REPORT

We have no comments on the geotechnical report at this time.

WATER AVAILABILITY

25. The Water Availability Form, with a proposed water usage of 6,000 gallons per minute (100 GPD per bed), was approved on August 8, 2017.

SEWER AVAILABILITY

26. The submitted Pierce County Utilities information appears acceptable for Land Use approval.

27. The submitted Pierce County Utilities information states the point of permanent connection to the public sanitary sewer system is SSMH#13033, located at the intersection of Marshall Circle and Bradley Street. The utility plans show a point of connection to an existing manhole near the intersection of Bradley Street and Gary Oaks Avenue. Documentation of Pierce County Public Works and Utilities approval of

Printed on recycled paper

the Sanitary Sewer Plans for this project will be required prior to issuance of a construction permit.

BUILDING ELEVATIONS

We have no comments on the building elevations at this time.

PRELIMINARY SITE PLAN

28. The site plan should reflect all easements, site restrictions and encumbrances from any recorded documents. This will be reviewed upon submittal of the title report.

29. As part of the frontage improvements, this project shall fulfill the approved Patriots Landing Phase 1 street variance condition, "Where the sidewalk is eliminated along Garry Oaks Avenue, a 10-foot-wide planter strip shall be provided behind the curb." Compliance may be demonstrated as part of the landscape plan.

30. Identify the detectable warning pattern locations at curb ramps and interfaces between pedestrian and vehicle areas. The information may be provided as part of the architectural site plan for the project.

31. The dimensions of the parking lot stalls and access aisles must comply with City of DuPont Ordinance No. 03-752. The width of the road access at the front of the building shall be a minimum of 26-feet for emergency vehicle access. Include in the submittal, if the information is provided as part of the architectural site plan.

32. Driveway approaches shall comply with the requirements of the City's Driveway Approach Detail (Drawing No. 3.1-1). The width is 25-foot minimum for commercial and 20-foot maximum for residential. Based on the submitted documents, it appears a zoning amendment from the current Residential 5 zoning is anticipated. The Plans shall comply with the applicable zoning as approved by the City.

33. Per City Standard Section 3.1.2.13, no driveway shall be located within 20 feet of a crosswalk. Label distance to demonstrate compliance.

34. Zoning of the parcel and adjacent properties should be labeled on the Plans to demonstrate compliance with the applicable building setbacks.

Printed on recycled paper

PRELIMINARY CONSTRUCTION PLANS

35. Add the project contact representative information (i.e. Owner, Engineer/Surveyor, Geotechnical, and Architect), which includes the company name, address, contact name, phone number, and email address.

36. Separate water connections with backflow prevention devices will be required for domestic, fire, and irrigation. Such devices shall be located in underground vaults with easements granted to the City of DuPont for access. The locations of the meters and backflow devices for the water service connections (i.e. domestic, fire, and irrigation) should be shown and labeled for review of site feasibility. Meter sizing calculations will be required for domestic and fire water services. Label each service connection to demonstrate compliance.

37. Cross-connection control, in accordance with WAC 246-290-490, shall be provided by installation of an approved backflow preventer commensurate with the degree of hazard for protection of the public water system. The City's Cross-Control Specialist (CCCS) shall be granted access for plumbing and fixture inspection during construction and annual hazard evaluations thereafter. The CCCS is the approving authority for evaluation of the premises hazard protection for the building official. Generally, the proposed facility use would be classified as a high hazard which requires reduced pressure backflow assemblies. Investigate.

38. The operation of the existing water main shall be maintained while making connections. For extension of the water main, a gate valve shall be provided at the point of connection to the existing water main for isolation and to facilitate disinfection and testing requirements.

39. The gate valve for the fire hydrant at the easterly portion of the parcel shall be located onsite; outside of the sidewalk.

40. Water vaults and meter boxes shall include provisions for drainage.

41. Fire lanes and details shall be coordinated with the City of DuPont Fire Department during construction review.

42. The asphalt paved hammerhead area at the southern portion shall meet the requirements of the City's Fire Access Turnaround Detail (Drawing No. 2.9-3). Label distances to demonstrate compliance.

Printed on recycled paper

43. The project activities shall comply with the requirements of the Washington State Department of Ecology National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges associated with construction activity will be required for this project prior to issuance of a grading permit.

44. Private storm lines shall be located outside of the City's water easement.

45. The construction plans shall include profiles for storm drains and for water mains to include proposed utility crossings.

46. In accordance with DMC 25.105.040, existing slopes greater than 50 percent are classified as Undevelopable Sensitive Areas and slopes of 15 percent to 40 percent are classified as Developable Sensitive Areas. The existing slopes, in percent, along the southerly portion of the project should be labeled to demonstrate compliance. The Plans shall demonstrate compliance with the Development Standards of DMC 25.105.070(2) as applicable to the project.

47. The Plans shall incorporate perimeter footing drains into the design. If the Applicant desires to eliminate the footing drains during construction, a geotechnical representative shall be present to observe, confirm soil conditions, and provide a report to the City's resident inspector.

48. Current City of DuPont Public Works Standards Details shall be provided on the Plans.

49. At the Marshall Circle/Gary Oaks Avenue intersection, sufficient information (e.g., curb flow line elevations) shall be provided to demonstrate positive flow with no ponding within the rights-of-way.

50. On Sheet DT-01, the design elements used for determination of the sight distance shall be added to demonstrate compliance with City Standard Sections 2.12 and 2.13.

51. On Sheet DT-01, the Sight Distance exhibit shall include the fire department vehicle access driveway approach.

Printed on recycled paper

52. On Sheet DT-01, the Fire Truck Turning exhibit shall include the Fire Department vehicle access at the northerly portion of the site and access to the fire hydrant at the southern portion of the project.

LANDSCAPE PLANS

53. Clearances, in accordance with City Standards, will be reviewed for compliance during construction review. A minimum 3-foot clearance and level area is required around fire hydrants.

54. Trees shall be located outside of the City's water easement(s).

55. The locations of street trees shall comply with the requirements of the City's Street Tree Standards (Drawing No. 5.7-1).

56. Irrigation plans that demonstrate compliance with the City of DMC and current City of DuPont Public Works Standards shall be submitted for review and approval. The proposed irrigation water use calculations appear to comply with DMC 25.90 and are acceptable Land Use approval. For Land Use approval, the Water Conservation Statement shall include the techniques proposed to conserve water as required per DMC 25.90.040.

Thank you for the opportunity to provide these comments. Please contact the undersigned if you have any questions or comments regarding this review.

Sincerely,

GRAY & OSBORNE, INC.

Dominic J. Miller, P.E.

DJM/sp

cc: Mr. Gus Lim, P.E., Public Works Director, City of DuPont
Mr. Bill Anderson, Building Official, City of DuPont
Mr. Scott Hein, Public Works Supervisor, City of DuPont
Mr. Mike Turner, Fire Marshal, City of DuPont
Ms. Lisa Klein, AHBL, Inc.

Printed on recycled paper

From:	Dom Miller
To:	Lisa Klein
Cc:	"Jeff Wilson"; Gus Lim
Subject:	RE: Patriot"s Landing
Date:	Friday, January 26, 2018 2:13:40 PM

Lisa,

Please strike the last part in parentheses.

Thanks,

Dom

From: Lisa Klein [mailto:LKlein@AHBL.com]
Sent: Friday, January 26, 2018 10:10 AM
To: Dom Miller <dmiller@g-o.com>
Cc: 'Jeff Wilson' <jwilson@dupontwa.gov>; Gus Lim <glim@dupontwa.gov>
Subject: RE: Patriot's Landing

Dominic,
With Marshall Circle being private, does this change this comment from your October letter:

1. The project proposes a stormwater biofiltration swale and infiltration pond which borders Parcel Nos. 0119341004 and 0119345001. Stormwater from the Marshall Circle right-of-way should be conveyed to a separate stormwater facility with an easement dedicated to the City for maintenance. Stormwater from the private section of Garry Oaks Avenue (Parcel No. 0119345004) should be conveyed to a private stormwater facility. Stormwater from the proposed development (Parcel No. 0119345001) should be conveyed to an onsite stormwater system. All impervious road surfaces shall drain to appropriate facilities ~~(e.g., public rights-of-way to storm facilities within an easement or tract, private roads to private onsite facilities).~~

Lisa Klein, AICP | Associate Principal
AHBL, Inc. | **TACOMA** • SEATTLE • SPOKANE • TRI-CITIES
253.383.2422 **TEL** | 253.284.0256 **DIRECT** | lklein@ahbl.com **EMAIL** | Send us a file.

From: Dom Miller [mailto:dmiller@g-o.com]
Sent: Thursday, January 25, 2018 5:12 PM
To: Lisa Klein
Cc: 'Jeff Wilson'; Gus Lim
Subject: Patriot's Landing

Lisa,

In response to your message:

1) Comment 2 from my letter dated 10/6/2017 can be disregarded. The private road designation and BLA have rendered this comment obsolete.
2) My letter on the street standards variance is attached (pdf and word). Typically, the City's Public Works Director has issued this letter.
3) My short plat review letter is attached (pdf and word).

Thanks,

Dom

Dominic J. Miller, P.E. | Project Manager | (p) 360.292.7481, Ext. 1504 | (f) 360.292.7517
dmiller@g-o.com | www.g-o.com
Gray & Osborne, Inc | 2102 Carriage Drive SW, Building I, Olympia, WA 98502

Gray & Osborne, Inc.
CONSULTING ENGINEERS

January 25, 2018

Mr. Jeff Wilson
City of DuPont
303 Barksdale Avenue
DuPont, Washington 98327

SUBJECT: REVIEW COMMENTS, PATRIOTS LANDING SHORT PLAT
(CITY FILE NO. PLNG2017-045)
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON
G&O #17281.00

Dear Mr. Wilson:

On December 27, 2017, Gray & Osborne, Inc. received a submittal packet regarding this project. The packet included the following:

- Short Plat Application (dated November 1, 2017)
- Short Plat Drawings by ESM Consulting Engineers (two sheets dated October 31, 2017)
- Lot Closures (dated October 30, 2017)

The proposed short plat consists of subdividing one lot (Parcel No. 0119345001) into two lots.

We have reviewed this information for compliance with current City of DuPont standards, codes, and policies, and have the following comments (please note that "DMC" refers to the DuPont Municipal Code):

GENERAL

1. The Pierce County recording number for the Boundary Line Adjustment (BLA) associated with this project shall be reflected on the Short Plat (SP) drawings.

2. Upon City approval of the SP, the drawings shall be recorded with the Pierce County.

3. Upon recording of the SP, the applicant shall submit the following directly to Gray & Osborne, Inc.: two sets of blackline drawings, and GIS AutoCAD files in accordance with the City of DuPont GIS Ordinance 97-559.

4. Per DMC 24.06.06(a), adequacy of access, storm water drainage facilities, water supply feasibility for building sites and compliance with the public works standards shall be demonstrated. A supplemental drawing shall be provided which identifies the location of existing and proposed underground utilities and their associated easements (i.e., water, sewer, and storm adjacent to or within the proposed plat).

5. Per DMC 24.06.060(c), Pierce County shall review the SP for adequacy of the sewer system. Documentation of Pierce County Public Works and Utilities approval of the sanitary sewer plans will be required prior to issuance of a Construction Permit for said lots.

6. Per DMC 24.06.060(d), the Fire Department shall review the SP for adequacy of the fire protection water system and access for fire-fighting equipment.

SHORT PLAT APPLICATION

No comments at this time.

DRAWINGS

7. City of DuPont SP 03-03 (Recording No. 200403055002) Note 5 states "Tract X is owned and maintained by the City of DuPont upon the recording of this Short Plat." Tract X includes Bradley Street and Marshall Circle, which are identified as "Private Right Of Way" on Sheet 2. Resolution to this matter shall be clarified with this SP.

8. City of DuPont SP 03-03 (Recording No. 200403055002) Note 6 states "Tract Y is retained by the owner upon the recording of this Short Plat. The entirety of said tract is subject to an easement for ingress, egress and utilities in favor of Lots 1, 2, and 3 of this Short Plat." Resolution to this matter shall be clarified with this SP.

9. All easements identified in the title report shall be shown and labeled (e.g., width, purpose, recording no.).

Printed on recycled paper

10. Easements shall be demonstrated to be provided for all utilities. Show and label on the drawings.

11. Per DMC 24.06.030(b)(1), the SP shall be drawn in ink to a scale not smaller than 1 inch equals 50 feet or other approved scale or Mylar, a sheet size of 18-inch by 24-inch.

12. Per DMC 24.06.030(b)(3), a vicinity map drawn to a scale of 4 inches equals 1 mile or other approved scale of sufficient detail to orient the location of the original tract, is required.

13. Per DMC 24.06.030(b)(6), show and label the width and location of access to all short platted lots.

14. Per DMC 24.06.070(a)(1), the SP shall be reviewed for compliance with the public works standards including adequate ingress and egress to all proposed lots. Based on a proposed site layout submitted for Lot 1, approval of a street variance will be required for the proposed access driveways to Lot 1.

15. If the lot owners will be obligated to maintain the existing abutting right-of-way, a note to this effect shall be stated on the face of the SP.

16. Per DMC 24.06.070(a)(2) Private Streets. The City Engineer may approve private streets if all persons and their successors, who own the land adjoining the street within the short plat, have equal legal rights to use said private street area, and a note indicating such is placed on the short plat drawings. Said Developer and/or adjoining landowners and their successors shall bear the expenses of constructing and maintaining said street and a note to this effect shall be made on the face of the SP.

17. Per DMC 24.06.070(b) Drainage. The short plat shall be reviewed for compliance with the public works standards including but not limited to adequate drainage facilities. Requirements for any necessary facilities may be required to be on the face of the short plat. Lot 1 shall infiltrate roof drainage and incorporate an onsite drainage facility. The existing drainage systems on Lot 2 are conveyed offsite to the adjacent right-of-way, then to a City owned drainage facility. The stormwater from the westerly portion of the Marshall Circle right-of-way and the westerly portion of the parking lot on Lot 2 (SP 03-03) are conveyed to an existing

Printed on recycled paper

biofiltration swale and infiltration pond on Lot C of the current BLA. The ownership and maintenance shall be clarified and a note to this effect shall be made on the face of the SP.

18. Per DMC 24.06.070(e) Water Supply and Fire Protection. The short plat shall be reviewed for potential adequacy of water supply and fire protection. Water is available to the lots via an existing 8-inch looped water main within the Marshall Circle right-of-way. The existing 8-inch water main and water meters to the buildings on Lot 2 shall be provided with water easements dedicated to the City.

19. The Auditor's Certificate shall be updated and be consistent with RCW 58.09.080.

20. On Sheet 1, under the Exceptions to the Title Report heading, the title report date is inconsistent with the submitted title report and the text refers to the boundary line adjustment. Resolve these discrepancies.

21. On Sheet 1, it appears the DMC reference no. stated in Note No. 4 is in error. Resolve this discrepancy. The reference should be changed to DMC 24.06.080(D).

22. On Sheet 2, show the right-of-way centerline of Marshall Circle, Bradley Street, and Gary Oaks Avenue.

23. On Sheet 2, label the widths of the rights-of-way.

24. On Sheet 2, label the name for the section of right-of-way (i.e. east end of Bradley Street) between Bradley Street and McNeil Street.

25. On Sheet 2, the Marshall Circle font at Tract Y should be consistent with the other right-of-way labels.

26. On Sheet 2 at the McNeil Street and Gary Oaks Avenue intersection, show the northeast right-of-way line consistent with the BLA for this project.

27. On Sheet 2, revise the lot areas to include the square footage consistent with the closure calculations.

Printed on recycled paper

Thank you for the opportunity to provide these comments. Please contact me if you have any questions or concerns regarding this matter.

Sincerely,

GRAY & OSBORNE, INC.

Dominic J. Miller, P.E.

DJM/sp

cc: Ms. Lisa Klein, AHBL, Inc.
Mr. Gus Lim, P.E., Public Works Director, City of DuPont
Mr. Bill Anderson, Building Official, City of DuPont
Mr. Scott Hein, Public Works Supervisor, City of DuPont
Mr. Mike Turner, Fire Marshal, City of DuPont

Printed on recycled paper

Gray & Osborne, Inc.
CONSULTING ENGINEERS

January 25, 2018

Mr. Jeff Wilson
City of DuPont
1700 Civic Drive
DuPont, Washington 98327

SUBJECT: STREET STANDARDS VARIANCE REQUEST, PATRIOTS LANDING MEMORY CARE FACILITY,
CITY FILE NO. PLNG2017-030 AND PLNG2017-031
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON
G&O #17281.00, TASK 01

Dear Mr. Wilson:

On September 20, 2017, Gray & Osborne, Inc. received a submittal package regarding the subject project. This package included a Street Standards variance request letter from ESM Consulting Engineers, LLC (dated September 1, 2017), with an attached Driveway Spacing Exhibit (dated August 25, 2017) for Garry Oaks Avenue. This variance request was reviewed for compliance with the City's Street Standards, Section 1.6, for consistency with the City's Comprehensive Plan, public interest, safety, function, fire protection, appearance, and maintainability.

GENERAL

The proposed Patriots Landing Memory Care Facility project (Parcel No. 0119345001) resides on the westerly portion of Lot No. X of Boundary Line Adjustment No. BLA 07-04 as recorded under Recording No. 200711215001. Garry Oaks Avenue, from Bradley Street to Marshall Circle, is under private ownership, with operation and maintenance by Patriots Landing property owners. Patriots Landing Memory Care Facility is subject to a City-approved Conditional Use Permit, Boundary Line Adjustment, and Short Plat.

The variance request is for reduction of spacing for four (4) driveway approach locations.

CITY STREET STANDARDS

> Section 3.1.2.1 of the Street Standards requires that "Driveways that serve any use other than detached dwelling units may not be located closer than 150 feet to any street intersection or to any other driveway, whether on or off the subject property."

Section 3.1.2.3 of the Street Standards states "On frontages over 100 feet, two or more driveways per lot may be permitted; subject to approval by the City."

VARIANCE REQUEST

The Applicant has requested a reduction in the required 150-foot spacing at the following four (4) driveway locations within Patriot's Landing Phase 1. Three (3) driveways (i.e. northern, central, southern) will access parking areas for the proposed Patriots Landing Memory Care Facility project. The northern driveway will be provided for fire department access. The two (2) central driveways will be utilized for drop-off and pick-up circulation and additional vehicular access and parking. The southern driveway will be utilized for access to underground parking and service utilities.

1. Reduction of spacing to 72 feet from the northern driveway approach on the east side of Garry Oaks Avenue to the northern central driveway approach on the west side.

2. Reduction of spacing to 67 feet between the two central driveway approaches on the west side of Garry Oaks Avenue.

3. Reduction of spacing to 130 feet from the southern central driveway approach to the southern driveway approach on the west side of Gary Oaks Avenue.

4. Reduction of spacing from the fire department access driveway approach to the intersection of Marshall Circle and Garry Oaks Avenue.

The City Public Works Standards Section 3.1.2.1 states "driveways may not be located closer than 150 feet to any street intersection or to any other driveway." The Driveway Spacing Exhibit shows spacing from driveway centerline to centerline. Assuming 25-foot wide driveway approaches, in accordance with the City's Standard Driveway Approach (Drawing No. 3.1-1) detail, the spacing between driveways would be as follows:

1. Reduction of spacing to 47 feet (72-25) from the northern driveway approach on the east side of Garry Oaks Avenue to the northern central driveway approach on the west side.

2. Reduction of spacing to 42 feet (67-25) between the two central driveway approaches on the west side of Garry Oaks Avenue.

3. Reduction of spacing to 105 feet (130-25) from the southern central driveway approach to the southern driveway approach on the west side of Gary Oaks Avenue.

Printed on recycled paper

4. Reduction of spacing from the fire department access driveway approach to the intersection of Marshall Circle and Garry Oaks Avenue.

CONSISTENCY WITH THE COMPREHENSIVE PLAN

Patriots Landing Memory Care Facility is subject to a City-approved Conditional Use Permit. The reduction in driveway spacing on Garry Oaks Avenue is consistent with the Comprehensive Plan for the project.

PUBLIC INTEREST

The variance request pertains to a portion of Garry Oaks Avenue, which is a Private Road. The reduction in driveway spacing is not anticipated to produce measurable traffic impacts to Marshall Circle or Garry Oaks Avenue.

SAFETY REQUIREMENTS

The reductions in driveway spacing still provides for adequate sight distance for the safety of motorists and pedestrians. The supporting traffic information indicates that the anticipated traffic volumes will not result in unsafe turning movements into and out of the driveways during peak periods of travel.

FUNCTION

The supporting traffic information demonstrates that the reduction in driveway spacing will not adversely affect the function of Garry Oaks Avenue, Marshall Circle, or the adjacent intersections.

FIRE PROTECTION

The reductions in driveway spacing are not anticipated to impact fire protection.

APPEARANCE

The reduction in driveway spacing is not anticipated to negatively impact the appearance of the roads, sidewalks, and access points within the project.

MAINTAINABILITY

The reduction in driveway spacing is not anticipated to impact the maintenance of the right-of-way improvements by the City.

Printed on recycled paper

VARIANCE CONDITIONS

We recommend that the City grant the requested variance in full with the following conditions:

1. Entering and stopping sight distance requirements, per the City's Street Standards, shall be provided at the four (4) driveway ingress/egress locations where the spacing requirements have been reduced.

2. Crosswalks shall be located 20 feet clear from all driveway approaches per City Street Standards Section 3.1.2.13.

3. A signage plan shall be provided, which includes provisions for safe pedestrian mobility for the proposed crosswalks. The mid-block crossings shall be evaluated for sight line distance, provided with current City Standard curb ramps, and marked in accordance with the recommendations of the current WSDOT Design Manual and Traffic Manual.

4. Upon development of the parcel to the west, the fire department access driveway approach location will need to be reviewed to determine if adequate driveway spacing is provided to the west.

Thank you for the opportunity to provide these comments. Please contact me if you have any questions or comments regarding this review.

Sincerely,

GRAY & OSBORNE, INC.

Dominic J. Miller, P.E.

DJM/sp
Encl.

cc: Mr. Gus Lim, P.E., Public Works Director, City of DuPont
Ms. Lisa Klein, AHBL, Inc.
Mr. Bill Anderson, Building Official, City of DuPont
Mr. Scott Hein, Public Works Supervisor, City of DuPont
Mr. Mike Turner, Fire Marshal, City of DuPont

Printed on recycled paper

ESM CONSULTING ENGINEERS, LLC

September 1, 2017

Job No. 845-009-010

Mr. Gus Lim
Public Works Director
City of DuPont
Department of Community Development Planning Services
1700 Civic Drive, DuPont, WA 98327

RE: **Memory Care Facility**
Request for Variance to the City of DuPont Public Works Standards

Dear Gus:

On behalf of Careage Development Company, LLC, ESM Consulting Engineers, LLC is requesting a variance to the City of DuPont Public Works Standards for the proposed Memory Care Facility development. This variance is requested to the Public Works Standards Section 3.1.2 as it relates to driveway spacing.

The proposed Memory Care Facility project is located on the west side of the private local access street Garry Oaks Avenue with three driveways proposed along Garry Oaks Avenue and one driveway proposed at Marshall Circle for fire department vehicle access. Section 3.1.2.1 of the Street Standards require driveways that serve any use other than detached dwelling units to be spaced a minimum of 150 feet from any street intersection or another driveway.

The request for a variance consists of reducing the spacing between driveways as follows:

1. Spacing between the existing northern driveway on the east side and the north central project driveway is reduced to 72 feet.
2. Spacing between two central project driveways on the west side of Gary Oaks Avenue is reduced to 67 feet.
3. Spacing between the south central and south project driveways on the west side of Garry Oaks Avenue is reduced to 130 feet.
4. Providing a fire department access driveway at the proposed tee intersection with Marshall Circle.

As shown on the attached exhibit, the proposed southern driveway along Garry Oaks Avenue is lined up to match the existing driveway location of the Patriots Landing retirement community. The purpose of the two central driveways are to allow drop-off and pick-up circulation and provide additional vehicular access which is necessary for the memory care facility operations. Since the southern driveway was aligned to match the existing driveway, the central driveways were spaced such as to balance the separation from existing driveways and Marshall Circle.

The proposed Memory Care Facility is intended to be a complimentary use to the existing Patriots Landing retirement community, to better serve the community as a whole. Therefore, we believe that the proposed reduction of driveway spacing at each location does not impede safety, function, appearance, and maintainability for the project site or the adjacent Patriots Landing retirement community. Furthermore, it allows for additional accessibility for fire protection.

In summary, this variance to the City of DuPont Public Works Standards can be allowed, because the proposed Memory Care Facility is consistent with the goals and policies for Yehle Park Village within the DuPont comprehensive plan and therefore in the public's best interest and the proposed driveway locations are essential for the function of the facility.

A $750.00 check is included with this submittal for the Street Variance Fee. If you have questions please feel free to contact me at (253) 838-6113.

Sincerely,

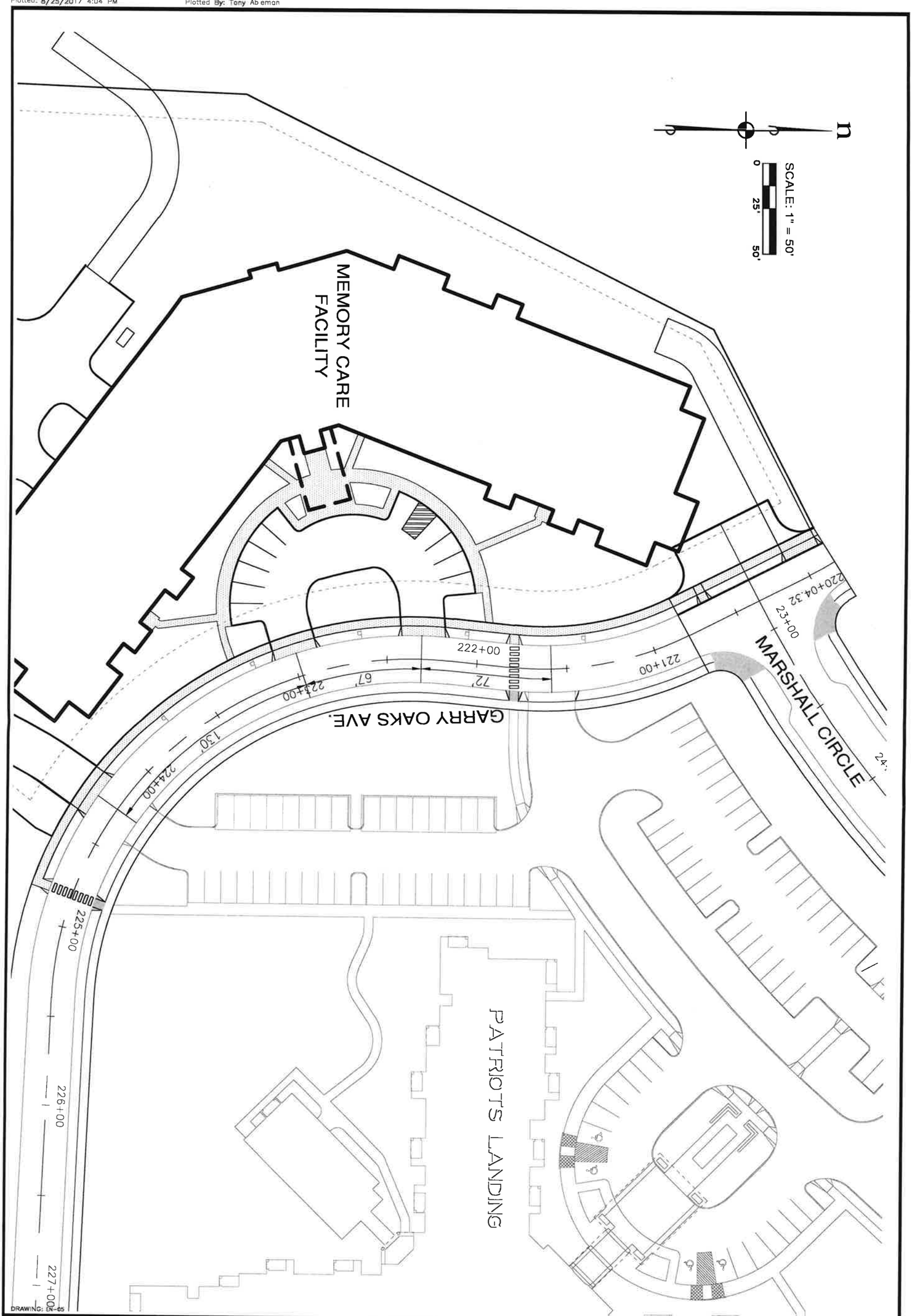
ESM CONSULTING ENGINEERS LLC

LAURA G. BARTENHAGEN, PE, LEED® AP
Principal

Enclosures

\\esm8\engr\esm-jobs\845\021\017\document\letter-006.docx

File: \\Esm8\engr\ESM-JOBS\845\021\017\exhibits\EN-05.dwg
Plotted: 8/25/2017 4:04 PM Plotted By: Tony Abeman



DRAWING: EN-05

ESM CONSULTING ENGINEERS LLC
181 S 333rd St, Bldg C, Suite 210
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
ELLENSBURG (509) 962-2608
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 845-021-017 | DATE: 2017-08-25
DRAWN: TMA | SHEET 1 OF 1

CAREAGE DEVELOPMENT CO., LLC

MEMORY CARE FACILITY

DRIVEWAY SPACING EXHIBIT

City of DuPont Fire Department

Proudly serving the community of DuPont

1780 Civic Drive, DuPont, WA, 98327

Phone 253.964.8414 ▪ Fax 253.912.5240 ▪ www.ci.dupont.wa.us

September 18, 2017

TO: Jeff Wilson

FROM: Mike Turner Fire Marshal

RE: Patriots Landing Memory Care Facility (PLNG2017-030)

The DuPont Fire Department Prevention Division reviewed the above project and has the following comments.

1. Fire hydrant located by the northeast entrance off Garry Oaks Ave shall be relocated to the other side of the access road by the FDC.

2. Standpipe system shall be installed in the underground parking garage. Three (3) set of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

3. An automatic fire sprinkler system shall be installed. The system shall comply with NFPA 13 Standard for Automatic Fire Sprinkler System. Three (3) sets of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

4. Prior to Fire Department approval for occupancy, an underground fire line shall be installed. The system shall comply with NFPA 24 Standard for Installation of Private Fire Service Mains. Three (3) sets of plans, material specifications sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval, and permits issued prior to commencing work. The FDC shall be a minimum of 50 feet or 1&1/2 times the height of the structure away from the building. The FDC shall be within 50 feet of a hydrant and be 5 inch with a locking cap. (Fire Department approval for location) **Separate Permit required.**

5. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall follow Section D105 of the 2015 International Fire Code where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet. (D105.2 Width. A minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.)

6. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall have approved “NO Parking” striping or signs.

City of DuPont Fire Department

Proudly serving the community of DuPont

1780 Civic Drive, DuPont, WA, 98327

Phone 253.964.8414 ▪ Fax 253.912.5240 ▪ www.ci.dupont.wa.us

7. An automatic fire alarm system shall be installed. The system shall comply with NFPA 72 Standard for Fire Alarm System. Three (3) sets of plans, material specifications sheet for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

8. A Knox key box system shall be required. Knox applications may be picked up at the DuPont Fire Department located at 1780 Civic Drive DuPont, WA 98327. A key shall be required to be placed in the Knox key box.

9. Fire extinguishers are required to be installed as directed by City of DuPont Fire Department. Prior to installation the client is directed to request a fire inspection to confirm the locations of the fire extinguishers.

10. All new building shall have approved emergency responder radio coverage per section 510 of the 2015 International Fire Code.

If you have any questions, you may call Fire Marshal Mike Turner at (253) 666-2760 or e-mail mturner@dupontwa.gov.

Sincerely,

Fire Marshal

Mike Turner

City of DuPont Fire Department

Proudly serving the community of DuPont

1780 Civic Drive, DuPont, WA, 98327

Phone 253.964.8414 ▪ Fax 253.912.5240 ▪ www.ci.dupont.wa.us

September 18, 2017

TO: Jeff Wilson

FROM: Mike Turner Fire Marshal

RE: Patriots Landing Memory Care Facility (PLNG2017-031)

The DuPont Fire Department Prevention Division reviewed the above project and has the following comments.

1. Fire hydrant located by the northeast entrance off Garry Oaks Ave shall be relocated to the other side of the access road by the FDC.

2. Standpipe system shall be installed in the underground parking garage. Three (3) set of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

3. An automatic fire sprinkler system shall be installed. The system shall comply with NFPA 13 Standard for Automatic Fire Sprinkler System. Three (3) sets of plans, hydraulic calculations and material specification sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

4. Prior to Fire Department approval for occupancy, an underground fire line shall be installed. The system shall comply with NFPA 24 Standard for Installation of Private Fire Service Mains. Three (3) sets of plans, material specifications sheets for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval, and permits issued prior to commencing work. The FDC shall be a minimum of 50 feet or 1&1/2 times the height of the structure away from the building. The FDC shall be within 50 feet of a hydrant and be 5 inch with a locking cap. (Fire Department approval for location) **Separate Permit required.**

5. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall follow Section D105 of the 2015 International Fire Code where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet. (D105.2 Width. A minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.)

6. Prior to Fire Department approval for occupancy, Fire apparatus access roads shall have approved “NO Parking” striping or signs.

City of DuPont Fire Department

Proudly serving the community of DuPont

1780 Civic Drive, DuPont, WA, 98327

Phone 253.964.8414 ▪ Fax 253.912.5240 ▪ www.ci.dupont.wa.us

7. An automatic fire alarm system shall be installed. The system shall comply with NFPA 72 Standard for Fire Alarm System. Three (3) sets of plans, material specifications sheet for all equipment used in the system shall be submitted by a State of Washington Licensed Contractor for review, approval and permits issued prior to commencing work. **Separate Permit Required.**

8. A Knox key box system shall be required. Knox applications may be picked up at the DuPont Fire Department located at 1780 Civic Drive DuPont, WA 98327. A key shall be required to be placed in the Knox key box.

9. Fire extinguishers are required to be installed as directed by City of DuPont Fire Department. Prior to installation the client is directed to request a fire inspection to confirm the locations of the fire extinguishers.

10. All new building shall have approved emergency responder radio coverage per section 510 of the 2015 International Fire Code.

If you have any questions, you may call Fire Marshal Mike Turner at (253) 666-2760 or e-mail mturner@dupontwa.gov.

Sincerely,

Fire Marshal

Mike Turner

From: Jeff Wilson
To: Lisa Klein
Subject: FW: Patriots Landing Memory Care Facility PLNG2017-021
Date: Tuesday, September 19, 2017 9:48:40 AM

FYI

JEFFREY S. WILSON, AICP
COMMUNITY DEVELOPMENT DIRECTOR

CITY OF DUPONT
1700 CIVIC DR
DUPONT, WA 98327-9603

Office: (253) 912-5393
Cell: (253 433-4238
Fax: (253) 964-1455
jwilson@dupontwa.gov
www.dupontwa.gov

From: Fred Foreman
Sent: Tuesday, September 19, 2017 9:41 AM
To: Dominic Miller <dmiller@g-o.com>
Cc: Jeff Wilson <JWilson@dupontwa.gov>; Scott Hein <SHein@dupontwa.gov>
Subject: Patriots Landing Memory Care Facility PLNG2017-021

I received the land use plans today and thought this item needs to be considered in the planning phase

- **Please assure adequate real estate is available for the water meters & <u>above ground</u> backflow preventers**.

  - *A memory care facility is a medical facility as categorized by the Washington Department of Health Office of Drinking Water which is a High Health Hazard and shall have a reduced pressure backflow preventer on all water services prior to entering the building, including the fire service.*
  - **See table 9** **http://apps.leg.wa.gov/wac/default.aspx?cite=246-290-490**

Here is a the current memory care DOH License
PATRIOTS LANDING OPERATIONS LLC
License#: 1762 https://fortress.wa.gov/dshs/adsaapps/lookup/BHAdvResults.aspx

The fire RPDA's may be more than 4' tall, consider site distance triangle in its selected location

This link take you to a picture of a 3" RPBA at State Farm
https://photos.app.goo.gl/EBvbo01SiCjLT5XS2

- They did something wrong to endanger the public water system

Fred Foreman
City of DuPont Water Quality

Attachment 2r

1700 Civic Drive
DuPont WA 98327
PW Reception 253-912-5381 **Cell 253-377-4971**
https://wa-dupont.civicplus.com/directory.aspx?EID=16

2016 Water Quality Report

Geralyn Reinart, P.E.
831 Sprague Street
Edmonds, WA. 98020
(206) 285-9035
Traffic & Transportation Engineering Services

MEMORANDUM

September 27, 2017

TO: Dominic Miller, PE
Gray & Osborne, Inc.

FROM: Geralyn Reinart, P.E.

SUBJECT: Review of Patriot's Landing Memory Care Facility

I have reviewed the information forwarded by your office for the proposed 60-bed Patriot's Landing Memory Care Facility located along Garry Oaks at Marshall Circle and have the following limited comments:

- The trip generation estimates used data from the 6th edition of the *Trip Generation* manual (current edition is 9th edition, with 10th edition just being released). Cross-checking with the 9th edition, the data is acceptable. As such, no further analysis is need due to the small number of trips that are anticipated.
- Having stated the above, 'memory care' facilities are more typically represented by ITE Land Use 254 – Assisted Living. Based on the 9th Edition of the *Trip Generation* manual, using the 'Assisted Living' land use would result in slightly more daily and peak hour trips, but these values would still fall below the City's threshold and no further analysis is required.
- Page 2 of 12 of the site plan notes that Garry Oaks Avenue is a private street and marked crosswalks have been shown at two locations. If Garry Oaks is actually a public street, the applicant will need to submit a request/ analysis to Public Works for these installation since the City typically does not install crosswalks along local access streets without a study. **IF** these crossings are allowed, a signing plan will also be needed for the installations and the applicant would be responsible for the installation of the signs. (The signing plan would apply whether or not the street is private or public.)

These are the comments that I have at the present time. Please give me a call if you have any questions.

Attachment 2s

From:	Dom Miller
To:	"Jeff Wilson"
Cc:	"Laura Bartenhagen"; "Matt Reider"; "Cindy Flood"; Lisa Klein
Subject:	RE: BLA as revised for Patriots Landing Memory Care Facility
Date:	Saturday, January 13, 2018 7:15:37 AM

Jeff,

I have reviewed the revised BLA drawings from ESM received via e-mail from Cindy Flood on 1/10/2018 and have determined that my previous comments in my letter dated 1/9/2018 have been addressed. Based on this review, I believe the City can request Mylars from ESM for City signatures.

Thanks,

Dom

Dominic J. Miller, P.E. | Project Manager | (p) 360.292.7481, Ext. 1504 | (f) 360.292.7517
dmiller@g-o.com | www.g-o.com
Gray & Osborne, Inc | 2102 Carriage Drive SW, Building I, Olympia, WA 98502

From: Jeff Wilson [mailto:JWilson@dupontwa.gov]
Sent: Friday, January 12, 2018 2:41 PM
To: Cindy Flood <cindy.flood@esmcivil.com>; Dominic Miller <dmiller@g-o.com>; 'Lisa Klein, AHBL' <lklein@ahbl.com>
Cc: Laura Bartenhagen <laura.bartenhagen@esmcivil.com>; Matt Reider <matt.reider@esmcivil.com>
Subject: RE: BLA as revised for Patriots Landing Memory Care Facility

Dominic,

Please provide me your comments regarding the revisions. Please look at the line weights carefully to ensure it meets our requirements.

Thank

JEFFREY S. WILSON, AICP
COMMUNITY DEVELOPMENT DIRECTOR
CITY OF DUPONT
1700 CIVIC DR
DUPONT, WA 98327-9603
Office: (253) 912-5393
Cell: (253 433-4238
Fax: (253) 964-1455
jwilson@dupontwa.gov
www.dupontwa.gov

From: Cindy Flood [mailto:cindy.flood@esmcivil.com]

Attachment 2(t)

Sent: Wednesday, January 10, 2018 11:39 AM
To: Dominic Miller <dmiller@g-o.com>; Jeff Wilson <JWilson@dupontwa.gov>; 'Lisa Klein, AHBL' <LKlein@AHBL.com>
Cc: Laura Bartenhagen <laura.bartenhagen@esmcivil.com>; Matt Reider <Matt.Reider@esmcivil.com>
Subject: BLA as revised for Patriots Landing Memory Care Facility

Hello again. Attached is the revised boundary line adjustment. I believe that I have captured all of the things that we discussed this morning. The note requested by the assessor's office has been added to the upper left corner of Sheet 3. Please let me know if there are any further changes required before we re-submit paper copies.

Warm Regards,
Cindy

From: Cindy Flood
Sent: Wednesday, January 10, 2018 10:14 AM
To: Dominic Miller; Jeff Wilson; 'Lisa Klein, AHBL'
Cc: Laura Bartenhagen; Matt Reider
Subject: Right of way for Patriots Landing Memory Care Facility

I called Tony DePaul at the Pierce County Assessor's Office to confirm that he is the correct individual to receive and review the information regarding the Tract X and its ownership. Tony and one other individual with the Assessor's Office will be involved. We briefly discussed the situation and they do not see a problem. They will do what is referred to as a "pickup segregation", assign a new parcel number and show Patriots Landing as the owner. Patriots Landing will be responsible for any back taxes. I will be sending Tony an email later today with a full explanation and copies of the information that was provided to the City. You will all be copied on that email.

They also would like a copy of the proposed BLA and requested that a narrative about the right of way issue appear on the BLA. I plan to add the narrative when I make the other changes to the BLA. Let me know if you have any questions.

Warm Regards,
Cindy

From: Matt Reider
Sent: Wednesday, January 10, 2018 10:02 AM
To: Dominic Miller; Jeff Wilson
Cc: Laura Bartenhagen; 'Lisa Klein, AHBL'; Cindy Flood
Subject: Flow and Pressure Information for proposed Patriots Landing Memory Care Facility

Dominic,

Thank you very much for discussing the BLA comments and revisions with me and Cindy. I also appreciate you helping to clarify my question regarding water pressure on the site. I am sending this as a follow-up so it is still on your radar.

Would you please send me and Laura the flow and pressure information for the water out on that site?

Thank you,

MATT REIDER
Assistant Planner
matt.reider@esmcivil.com

ESM CONSULTING ENGINEERS, LLC
www.esmcivil.com
Federal Way ê Everett

33400 8th Avenue South, Ste 205
Federal Way, WA 98003
Tel: 253.838.6113
Fax: 253.838.7104

Civil Engineering ê Surveying ê Land Planning ê Landscape Architecture ê GIS

Nisqually Indian Tribe
4820 She-Nah-Num Dr. S.E.
Olympia, WA 98513
(360) 456-5221

February 1, 2018

Jeff Wilson
City of Dupont
1700 Civic Dr.
Dupont, WA 98327-9603

Dear Mr. Wilson,

The Nisqually Indian Tribe thanks you for the opportunity to comment on:

Re: PLNG2017-30,31,32,40,45 Patriot's Landing Memory Care Facility

The Nisqually Indian Tribe has reviewed the report you provided for the above-named project. The project is in an area that is at very high risk for archaeological findings. The Nisqually Indian Tribe requests a Cultural Resource Survey be done by a qualified Archaeologist before there are any ground disturbing activities. The Nisqually Indian Tribe also requests that an Inadvertent Discovery Plan be put in place for this project. Please keep me informed if there are any Inadvertent Discoveries of Archaeological Resources/Human Burials.

Sincerely,

Jackie Wall
THPO
Nisqually Indian Tribe
(360)456-5221 Ext. 2180
wall.jackie@nisqually-nsn.gov

cc: Gretchen Kaehler, DAHP

Attachment 2u