CITY OF KENNEWICK HEARING EXAMINER
James M. Driscoll, Hearing Examiner

AGENDA

MONDAY, DECEMBER 12, 2016 @ 6:00 PM

KENNEWICK CITY HALL, COUNCIL CHAMBER

210 W. 6TH AVE, KENNEWICK, WA 99336

Procedure for Participation

- Please sign in if you wish to receive a copy of the decision when it is issued and if you plan to give testimony.
- When recognized by the Examiner, state your name, address and whether you are representing only yourself or others.
- All remarks, comments, and questions should be addressed to the Hearing Examiner and not to the audience or parties. You may offer written comments or other items (such as photographs) to the Hearing Examiner as an exhibit for the permanent record. Please provide at least three (3) copies of each item submitted: one copy for the Hearing Examiner, one for the Official Record, and one for Staff). During an Appeal Hearing, if the appellant and the applicant are different parties, then a fourth copy of all documentation is requested.

I. CALL TO ORDER

II. PROCEDURAL INFORMATION

III. PUBLIC HEARING

A. Preliminary Plat (PP) No. 16-04/PLN-2016-02914 “The Parks” proposing to develop approximately 22.26 acres of land in 2 phases with 74 lots and 8 tracts of land. The site is located west of S. Sherman Street and south of Bob Olsen Parkway at 3316 S. Sherman Street. The site is currently zoned Residential, Low density (RL), the Comprehensive Plan designation is Low Density Residential. The applicant & property owner is Matt Smith, Tri-Cities Development/JF Moore, 15 SW Colorado, Suite 1, Bend OR, 97702.

IV. ADJOURN

ECONOMIC DEVELOPMENT AND COMMUNITY PLANNING DEPARTMENT

STAFF REPORT AND RECOMMENDATION TO THE HEARING EXAMINER

FILE NO: PP 16-04/PLN-2016-02914

Staff Report Date: December 5, 2016

Public Hearing Date and Location: December 12, 2016, Kennewick City Hall

Report Prepared By: Wes Romine
Development Services Manager

Report Reviewed By: Gregory McCormick, AICP
Planning Director

Summary Recommendation: The City of Kennewick RECOMMENDS that Preliminary Plat 16-04 be APPROVED with conditions.

Summary of Proposal: The Parks Phases 1 & 2, Preliminary Plat for a subdivision on a portion of 2 parcels that total approximately 136.4 acres in size, proposed to be divided into 74 lots for single family homes.

Proposal Location: West of S. Sherman Street and south of Bob Olson Parkway at 3316 & 3514 S. Sherman Street. Parcel Nos. 1-1789-200-0001-001, and 1-1789-200-0001-002.

Legal Description:

1-1789-200-0001-001

A PARCEL OF LAND LOCATED WITHIN THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION 17 IN TOWNSHIP 8 NORTH, RANGE 29 EAST, W.M. CITY OF KENNEWICK, BENTON COUNTY, WASHINGTON, DESCRIBED MORE PARTICULARLY AS FOLLOWS; COMMENCING AT THE SOUTHEAST CORNER OF SAID NORTHWEST QUARTER OF SECTION 17; THENCE SOUTH 88° 47' 16" WEST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 30.00 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SOUTH SHERMAN STREET; THENCE NORTH 00° 37' 45" WEST ALONG THE WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET A DISTANCE OF 719.23 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89° 22' 15" WEST A DISTANCE OF 550.06; THENCE NORTH 00° 37' 45" WEST A DISTANCE OF 245.02; THENCE SOUTH 89° 22' 15" WEST A DISTANCE OF 534.55 FEET; THENCE NORTH 00° 37' 45" WEST A DISTANCE OF 750.04 FEET; THENCE NORTH 59° 43' 10" EAST A DISTANCE OF 336.71 FEET TO A POINT ON THE PROPOSED SOUTHWESTERLY RIGHT OF WAY LINE OF WEST HILDEBRAND BOULEVARD; THENCE ALONG SAID PROPOSED RIGHT OF WAY LINE AS FOLLOWS; THENCE WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 770.30 FEET WITH A RADIUS OF 811.93 WITH A CHORD BEARING OF SOUTH 59° 45' 56" EAST WITH A CHORD LENGTH OF 741.74 FEET; THENCE WITH A REVERSE CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 212.18 FEET WITH A RADIUS OF 150.02 FEET WITH A CHORD BEARING OF SOUTH 46° 24' 45" EAST WITH A CHORD LENGTH OF 194.93 FEET; THENCE SOUTH 05° 52' 23" EAST A DISTANCE OF 170.47 FEET TO A POINT ON THE WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET; THENCE SOUTH 00° 37' 45" EAST ALONG SAID WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET A DISTANCE OF 475.44 TO THE TRUE POINT OF BEGINNING. (BOUNDARY LINE ADJUSTMENT PER AF#2015-008798, 4/01/2015).

1-1789-200-0001-002

A PARCEL OF LAND LOCATED WITHIN THE NORTHWEST QUARTER OF SECTION 17 IN TOWNSHIP 8 NORTH, RANGE 29 EAST, W.M. CITY OF KENNEWICK, BENTON COUNTY, WASHINGTON, DESCRIBED MORE PARTICULARLY AS

FOLLOWS; COMMENCING AT THE SOUTHEAST CORNER OF SAID NORTHWEST QUARTER OF SECTION 17; THENCE SOUTH 88° 47' 16" WEST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 30.00 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SOUTH SHERMAN STREET AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 88° 47' 16" WEST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 2623.95 TO THE SOUTHWEST CORNER THEREOF; THENCE NORTH 00° 41' 22" WEST ALONG THE WEST LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 2615.91 TO A POINT 30.01 SOUTH OF THE NORTHWEST CORNER OF SECTION 17, BEING A POINT ON THE SOUTH LINE OF WEST HILDEBRAND ROAD; THENCE NORTH 88° 03' 42" EAST ALONG THE SOUTH LINE OF WEST HILDEBRAND ROAD BEING A LINE 30.00 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17, A DISTANCE OF 2627.26 FEET TO A POINT ON THE WEST LINE OF SOUTH SHERMAN STREET; THENCE SOUTH 00° 37' 45" EAST ALONG THE WEST RIGHT OF WAY LINE OF WEST SHERMAN STREET A DISTANCE OF 1454.57 TO A POINT ON THE PROPOSED SOUTHWESTERLY HILDEBRAND BOULEVARD RIGHT OF WAY LINE; THENCE ALONG SAID PROPOSED RIGHT OF WAY LINE AS FOLLOWS; THENCE NORTH 05° 52' 23" WEST A DISTANCE OF 170.47 FEET; THENCE WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 212.18 FEET WITH A RADIUS OF 150.02 FEET WITH A CHORD BEARING OF NORTH 46° 24' 45" WEST WITH A CHORD LENGTH OF 194.93 FEET; THENCE WITH A REVERSE CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 770.30 FEET WITH A RADIUS OF 811.93 FEET WITH A CHORD BEARING OF NORTH 59° 45' 56" WEST WITH A CHORD LENGTH OF 741.74 FEET; THENCE DEPARTING SAID PROPOSED RIGHT OF WAY LINE WITH A BEARING OF SOUTH 59° 43' 10" WEST A DISTANCE OF 336.71 FEET; THENCE SOUTH 00° 37' 45" EAST A DISTANCE OF 750.04 FEET; THENCE NORTH 89° 22' 15" EAST A DISTANCE OF 534.55 FEET; THENCE SOUTH 00° 37' 45" EAST A DISTANCE OF 245.02 FEET; THENCE NORTH 89° 22' 15" EAST A DISTANCE OF 550.06 FEET TO A POINT ON THE WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET; THENCE SOUTH 00° 37' 45" EAST ALONG THE WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET A DISTANCE OF 719.23 FEET TO A POINT ON THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 17; WHICH IS THE TRUE POINT OF BEGINNING. (BOUNDARY LINE ADJUSTMENT PER AF#2015-008797, 04/01/2015).

Property Owner: Tri-Cities Development / J.F. Moore
15 S.W. Colorado Avenue, Suite 1
Bend, OR 97702

Applicant: Matt Smith
Tri-Cities Development / J.F. Moore
15 S.W. Colorado Avenue, Suite 1
Bend, OR 97702

Engineer: Jason Mattox
HDJ – A Division of PBS
6115 Burden Blvd., Suite E
Pasco, Washington 99301

Surveyor: HDJ – A Division of PBS
6115 Burden Blvd., Suite E
Pasco, Washington 99301

Approval Criteria:

1. Comprehensive Plan – Land Use
2. KMC Title 18 – Zoning
3. KMC Title 17 – Subdivisions
4. KMC Section 5.56 – Public Works Construction Standards
5. Washington State Environmental Policy Act

Preliminary Plat Key Application Processing Dates:

Pre-Application/Feasibility Meeting	NA
Application Submittal	September 26, 2016
Determination of Completeness Issued	September 26, 2016
Notice of Application Mailed	October 5, 2016
City Department Review Meeting	October 19, 2016
SEPA Threshold Determination Issued	March 14, 2016
Property Posting Sign	November 21, 2016

Date of Published Notice of Public Hearing	November 27, 2016
Date of Mailed Notice of Public Hearing	November 22, 2016
SEPA Appeal Period Ends	March 28, 2016
Public Hearing Date	December 12, 2016

Exhibits:

1 Staff Report
2 Application
3 Notice of Application/Mailing List
4 Vicinity Map
5 Preliminary Plat Plans
6 Conceptual Grading Plan
7 Soils Sampling Report
8 Geotechnical Investigation/Geohazards Assessment Report
9 SEPA Determination
10 City Department Comments
11 Outside Agency Comments

Staff Analysis of Proposal & Discussion:

The Parks Phases 1 & 2, Preliminary Plat (PP 16-04) is a request for a 74 lot single-family home subdivision on portions of 2 parcels of land that total approximately 136.4 acres in size. 73 lots will occupy approximately 22.26 acres to be developed in 2 phases, and lot 74 is approximately 114.2 acres for future development. The lots range in size from 8,064 square feet to 11,956 square feet and an average lot size of 9,045 square feet. The project will include 8 tracts of land to be used for open space, storm ponds, and one tract sanitary sewer from S. Sherman Street to S. Taft Street. The project is located west of S. Sherman Street and south of Bob Olson Parkway at 3316 & 3514 S. Sherman Street. Access to the lots will be from S. Sherman Street and Bob Olson Parkway. The site is zoned Residential Low Density (RL) which allows a minimum lot size of 7,500 square feet. The City of Kennewick's Single-Family Residential Design Standards apply to this project.

A Preliminary Plat (KMC 17.10) is the first step in a subdivision process for subdivisions with more than nine (9) lots and is an approval for overall lot layout and compliance with land use regulations. A Final Plat is required to create lots for preliminary plats and is the last phase in the subdivision process, and must be recorded prior to the creation of individual lots. Final plat approval is based on the Preliminary Plat conditions of approval. A civil permit with a detailed review of street, utility and stormwater construction standards, and street and utility construction or bonding for incomplete work is required prior the final plat approval.

Property History:

1. The subject parcel was annexed into the City in April of 2006 with a Residential Low Density (RL) zoning designation (Ord. 5142).

2. The zoning for the Southridge Sub-area was clarified by City Council in December of 2011 and the zoning for the subject property remained as Residential Low Density (RL) (Ord 5385).

3. The applicant applied for a Planned Residential Development PRD 15-01 and a Preliminary Plat PP 15-06 that was complete for processing on November 19, 2015. The project included a subdivision proposal for the entire 136.4 acre plat area. A Mitigated Determination of Non-significance was issued on March 14, 2016. On September 21, 2016 the PRD 15-01 & PP 15-06 applications were withdrawn.

Density/Lot Size:

> Per the Table of Residential Development Standards (KMC 18.12.010 A.2) the Residential Low Density (RL) zoning district does not have a minimum or maximum density requirement, however the minimum lot size allowed is 7,500 square feet. The smallest lot is proposed is 8,064 square feet.

STAFF COMMENT: The preliminary plat as proposed meets the Residential Development Standards contained in KMC 18.12.010(A.2), as well as the Single-Family Residential Design Standards.

Traffic:

The City's traffic engineer has determined that this project meets concurrency for transportation.

Half-street improvements are required on S. Sherman Street. Bob Olson Parkway is to be completed by the City with the development contribution for improvements coming from the Traffic Impact Fee. Full residential street improvements are required on interior plat roadways.

Traffic mitigation fees of approximately $900 per dwelling unit will be required per the City of Kennewick's traffic mitigation ordinance (Ord. 5596). The $900 per dwelling unit Traffic Impact Fee may have a cost of living increase adjustment in 2017. Traffic mitigation fees can be paid at the time of building permit issuance or deferred until occupancy with a recorded covenant of payment obligation form.

Storm Water:

The City stormwater standard for residential subdivisions is to be designed to retain and dispose of the calculated difference between a 25-year, 24 hour event for the developed state and the 24-hour event for the natural pre-developed state. Detention ponds (control outlet) may be used only where it can be clearly demonstrated that infiltration, or retention, are not feasible per City of Kennewick Standard Specifications. Prior to Final Plat approval the applicant will be required to submit detailed civil engineering drawings for review and approval to the City's Public Works department. This submittal will include a stormwater plan that meets City standards.

Streets & Utilities:

A separate permit will be required from the Department of Public Works prior to construction for driveways, sidewalks, wheelchair ramps and utility extensions (water, sewer, street, storm drainage, street lights, fire hydrants, etc.). Full street improvements for residential streets within the subdivision will be required per KMC 5.56.270 and are required to be constructed per Kennewick Standard Detail 2-1, sheet 2 of 4. The Residential Design Standards allow curb tight sidewalks as an option to separated sidewalks; however the sidewalk at driveway curb cuts needs to meet ADA standards.

There is an existing 18-inch water main available at the east side of S. Sherman Street, and an existing 12-inch water main along the north side of the property at Bob Olson Parkway (formerly W. Hildebrand). The developer will be required to loop the water mains to avoid buildup of stagnant water and minimize bacteria regrowth.
There is an existing 8-inch sanitary sewer service stubbed to the north side of the property at Bob Olson Parkway (formerly W. Hildebrand).

The proposed phasing of the project shows phase 1 with a dead end street over 600-feet long. Per KMC 17.20.010(2)(c)(i) residential streets over 600-feet long must have a second city standard street. Per KMC 17.20.010(2)(d)(ii) for projects in the Southridge Sub-area a Second Emergency Vehicle Access (SEVA) can be provided in lieu of the second city standard street. The applicant is proposing a SEVA that connects to Bob Olson Parkway for use for the second access until phase 2 is developed.

Parks:

Based on the City's Comprehensive Park Plan the applicant's required amount of land to be dedicated for park land is 4.9 acres for the entire 136.4 acre are per the previously issued Mitigated Determination of Non-significance that is use for this project. Because the area does not fit the City's needs for a City Park, park fees in the amount of $46,635.58 are required in lieu of dedication of park land. Based on a percentage of lots to be developed in the subject application park fees in the amount $6,156.23 will be required for The Parks Phases 1&2. Per the Mitigated Determination of Non-significance (ED 15-62), park fees are required to be paid to mitigate impacts to park zone 6W – Southridge. Fees will be required to be paid prior to signing the final plat mylar based on a percentage of lots being developed in each phase.

Critical Areas:

There are Erosion Hazard and Steep Slope critical areas on the site. There is also a pond area that has the potential to be a Wetland critical area. Both of these areas were addressed in the previous application for PRD 15-01 and PP 15-06 with a critical area report and wetland report. The current application has a small area with Erosion Hazard Critical Area at the southwest of the proposed subdivision area. Staff recommends the project to be conditioned to comply with the recommendations of the Critical Area report. In regards to the pond area with a potential to be a wetland; since the project was scaled back and resubmitted, the proposed area of subdivision work is approximately 460-feet from the pond area and well outside any buffer areas that might be required. Also, the wetland report does not classify the pond area as a wetland. It is staff's opinion that if there are any questions regarding the pond area wetland requirements they can be addressed with a subsequent application for development of that area.

Schools:

Per a memo from Doug Carl of the Kennewick School District dated December 2, 2016, the schools that will serve the subdivision are the Sage Crest Elementary School, Chinook Middle School, and Southridge High School. Students living in the proposed subdivision are in a walking zone for Sagecrest Elementary School and Southridge High School. Chinook Middle School is in a bussing zone. All new streets within the subdivision will be required to have 5-foot wide sidewalks which will connect to Ridgeline Drive with sidewalks that connect to Southridge High School. New sidewalks on streets within the subdivision will also

connect to S. Sherman Street. With the exception of approximately 700 feet of property to be developed at a future date, S. Sherman Street will connect to W. 38th Avenue that has sidewalks and a safe walking route to Sage Crest Elementary School. The undeveloped section of S. Sherman has a wide gravel shoulder that can serve as a safe walking route until later phases of The Parks subdivision are completed and additional sidewalk is added to the west side of S. Sherman Street.

The memo states that the Kennewick School District has the capacity to add students at all levels and at the three schools.

Surrounding Property:

The surrounding property to the east and south is zoned Residential Medium Density (RM) and proposed to be developed with single-family housing. Property to the north is vacant and zoned Residential Low Density (RL) and will also be developed with single-family housing. To the west is vacant land zoned with a mixture of Commercial Community (CC) and Residential High Density (RH).

Staff Comment: It is staff's opinion that the proposed Preliminary Plat will be harmonious with the surrounding properties.

Provisions for Public Health, Safety, and Welfare:

Staff Comment: It is Staff's opinion that appropriate provisions have been made for, but not limited to, the public health, safety, and general welfare, for open spaces, drainage ways, streets or roads, alleys, public sidewalks, utility easements and other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation areas, playgrounds, schools and school grounds, and the proposed subdivision has considered all other relevant facts and other planning features that assure safe walking conditions for students who walk to and from school.

Comprehensive Plan:

Staff is of the opinion that this request is consistent with and generally conforms to the City's Comprehensive Plan, and it will implement, goals and policies of the Comprehensive Plan. Particularly the following:

URBAN AREA POLICY 3: *"Promote new growth consistent with the Comprehensive Land Use Map, the Capital Facilities Plan and the Capital Improvement Plan."*

Staff Comment: Single-Family housing is a permitted use within Residential Low Density (RML zoning. The subject property can be served by City utilities.

RESIDENTIAL GOAL 1: *"Guide the design of new residential developments to be compatible with adjacent residential areas."*

Staff Comment: The proposed Preliminary Plat is consistent with the Comprehensive Plan Land Use, is zoned similar to much of the surrounding property and complies with development standards for Residential Low Density (RL) zoning.

RESIDENTIAL GOAL 3: *"Promote a variety of residential densities with a minimum density target of 3 units per acre as averaged throughout the urban area."*

Staff Comment: The proposed Preliminary Plat has a density of 3.25 units per acre for the area proposed to be subdivided.

RESIDENTIAL GOAL 4: *"Encourage residential development only in urban areas where services can be provided."*

Staff Comment: City water and sewer is available at Bob Olson Parkway and city water is also available on S. Sherman Street.

RESIDENTIAL POLICY 5: *"Provide provisions for parks, schools, drainage, transit, water, sanitation, infrastructure, pedestrian, and aesthetic considerations in new residential developments."*

Staff Comment: The proposed Preliminary Plat provides the above provisions. Park mitigation fees will be paid at the time of final plat.

HOUSING GOAL 1: *"Support and develop a variety of housing types and densities to meet the diverse needs of the population."*

Staff Comment: The project will provide middle income housing.

CRITICAL AREAS AND SHORELINE GOAL 3: *"Regulate or mitigate activities in or adjacent to critical areas or the shoreline to avoid adverse environmental impacts"*.

Staff Comment: Critical area report(s) have been prepared it is recommended that the project be conditioned to comply with the recommendations of the critical area report.

The City of Kennewick hereby RECOMMENDS that Preliminary Plat 16-04 be APPROVED with the following conditions:

1. Comply with City of Kennewick regulatory controls, policies and codes, including the Single-family Residential Design Standards.

2. All fees required by the City shall be paid prior to the approval of the final plat.

3. Construct residential streets per City of Kennewick Standard Detail 2-1, sheet 2 of 4. The Single-Family Residential Design Standards allow an option for curb tight sidewalks which may be used.

4. Development shall be in conformance with the plat drawing (Exhibit 5).

5. Comply with Traffic Engineer memorandum dated March 9, 2014 (Exhibit 10).
6. Comply with Public Works memorandum dated March 8, 2016 (Exhibit 10).
7. Comply with Kennewick Irrigation District letter dated March 22, 2016 (Exhibit 11).
8. Grading activity is to be inspected by a qualified geotechnical engineer. At completion of grading it must be certified that the cut and fill of the site is per the recommendations of the Geotechnical Investigation/Geohazards Assessment Report prepared by HDJ Design Group (Exhibit 8).
9. Geo-Tec reports are required for each lot at the time of building permit submittal. With prior approval a blanket geological report may be accepted as long as all applicable codes are met regarding soil bearing capacity.
10. Provide dust control method(s) such as hydroseeding for all areas of the site that are disturbed. Re-hydroseeding may be required.

11. In lieu of dedication of park land park fees are required in the amount of **$6,156.23** for impacts to Park Planning Zone 6W-Southridge. Park fees will be collected prior to signing the final plat mylar.

12. A landscape plan must be submitted for approval of all common areas, open spaces and rights-of-way not left in a natural state, listing the number, location, and species of trees, sizes of plant material, and ground cover prior to final plat approval. The landscape plan shall be prepared by a licensed landscape architect or licensed landscape installer drawn to a legible scale.

13. Common area landscaping and residential street trees are required to be installed or bonded for prior to final plat.

14. Execute a written agreement to the satisfaction of the City Attorney which will allow the City to make arrangements for maintenance of any common areas, open spaces, private roads, and common landscape areas should the Homeowner's Association fail or refuse to maintain these areas.

15. The Preliminary Plat (PP 16-04) expires 5 years from the approval date. The City may grant an extension, but any extension application must be applied for before the approved preliminary plat expires.

Report Prepared By and Contact Person:
Wes Romine
Development Services Manager
wes.romine@ci.kennewick.wa.us 509-585-4558

Department only $ 2000 –

PP 16-04 / PLN- PLN-2016-02914 Fee $ ~~2,250.00~~

PAID

SEP 26 2016

CITY OF KENNEWICK

BY

City Of Kennewick
Preliminary Plat Application

Date:	September 1st, 2016
Name Or Number Of Plat:	The Parks
General Location:	W. Hildebrand and Sherman Street
Parent Parcel Numbers:	117892000001001,117892000001002
Applicant Name:	Matt Smith-Tri-Cities Development / J.F. Moore
Address:	15 SW Colorado; Suite 1
City, State, Zip:	Bend, Oregon 97702
Phone Number:	541-382-6691 office; 541-410-8470 cell
E-mail:	matt@wspi.net
Owner's Name:	Tri-Cities Development Co. LLC / J.F. Moore
Address:	15 SW Colorado; Suite 1
City, State, Zip:	Bend, Oregon 97702
Surveyor's Name:	HDJ - A Division of PBS
Address:	6115 Burden Blvd; Suite E
City, State, Zip:	Pasco, WA 99301
Engineer's Name:	HDJ - A Division of PBS - Jason Mattox
Address:	6115 Burden Blvd; Suite E
City, State, Zip:	Pasco, WA 99301

Area Of Plat: 136.4 Acres Zoning: RL #/Lots: 74

Min. Lot Size: 8,064 sf Average Lot Size: 9,342 sf (Excluding Lot 74)

Proposed Land Use: Residential Subdivision

Plat Will Be Served By: (Check Those Which Apply)

Telephone Co:	Verizon ☑	Other		
Water System:	Well ☐	Private ☐	City ☑	
Sewer System:	Septic ☐	City ☑		
Natural Gas:	Yes ☑	No ☐		
Cable Tv:	Yes ☑	No ☐		

Irrigation District: Kennewick Irrigation District Power: PUD Benton

I certify that the information given above is true and complete to the best of my knowledge.

SIGNATURE OF APPLICANT: Matt Smith V.P. Tri Cities Development Co, LLC

This preliminary plat is being submitted with my consent.

SIGNATURE OF OWNER: Matt Smith V.P. Tri Cities Development Co, LLC

Received by: _____ Date: _____ Fee paid: _____

____SEPA Checklist

____ESA Supplement

____Affidavit of Posting

____Ownership Report

____Receipt No.

____File No.

EXHIBIT 2

I certify that the information given above is true and complete to the best of my knowledge.

SIGNATURE OF APPLICANT: J. Moore

This preliminary plat is being submitted with my consent.

SIGNATURE OF OWNER: J. Moore

Received by: _____ Date: _____ Fee paid: _____

____SEPA Checklist

____ESA Supplement

____Affidavit of Posting

____Ownership Report

____Receipt No.

____File No.

Date Received Stamp

KENNEWICK
WASHINGTON

NOTIFICATION OF MAILING

I, Melinda Didier, on 11/22, 2016

Mailed 116 copies of NOPH & Map

for PP 16-04

to applicant & prop. owners w/in 300'

as shown on the attached list.

Melinda Didier
Signature

PP 16-04
PLN-2016-02914
W HILDEBRAND & SHERMAN ST
74 LOTS
MATT SMITH
TRI CITIES DEVELOPMENT

NOTICE OF APPLICATION

Proposal: An application for a preliminary plat has been submitted by Matt Smith of Tri-Cities Development/J.F. Moore, (15 SW Colorado, Suite 1, Bend, OR 97702). The site is located west of S. Sherman Street and south of Bob Olsen Parkway at 3316 S. Sherman Street. The project consists of 2 phases with 73 lots and 4 tracts of land on approximately 22.26 acres. The smallest lot size is 8,064 square feet, the largest lot size is 13,437 square feet, and the average lot size is 9,342 square feet. The site is currently zoned Residential Low Density (RL). The project is subject to the single-family design standards. The Comprehensive Plan designation is Low Density Residential. The file number is PP 16-04/PLN-2016-02914.

Open Record Hearing: The City of Kennewick Hearing Examiner will conduct an open record hearing at 6:00 p.m. on **December 12, 2016** in the Council Chambers in Kennewick City Hall at 210 W. 6th Avenue, Kennewick, WA 99336. Testimony will be taken at this meeting. The Hearing Examiner is expected to make a decision for the Preliminary Plat following this meeting.

Public Comment Period: You may submit comments at any time until **November 30, 2016**, before 4:30 p.m. Comments submitted on or before November 30, 2016 will be included in the Hearing Examiner's meeting packet. Comments after November 30, 2016 can be submitted at the Public Hearing. If you have questions on the proposal, contact Wes Romine, Development Services Manager at (509) 585-4558 or via e-mail at wes.romine@ci.kennewick.wa.us.

Environmental Documents and/or Studies Applicable to this Study: A Mitigated Determination of Non-significance No.15-62 was issued on March 14, 2016 for a similar project on a larger area of land which satisfies SEPA for this project. The time for appealing SEPA issues is fourteen (14) calendar days from the issue date.

Determination of Completeness: The application was declared complete on September 26, 2016 for the purpose of processing.

Project Permits Associated with this Proposal: None

Preliminary Determination of Regulations Used for Project Mitigation: Title 18 (Zoning), Title 17 (Subdivision), Title 4 of the Kennewick Municipal Code and the land use policies contained in the Kennewick Comprehensive Plan.
Estimated Date of Decision: Within 10 business days of the Hearing date of December 12, 2016.

To Receive Notification of the Decision and/or the Environmental Determination: Contact the Development Services Division at 210 W. 6th Avenue, Kennewick, WA 99336 or via telephone at (509) 585-4280.

Appeal: Any person aggrieved by the decision of the Kennewick Hearing Examiner on this proposal may appeal to the Superior Court of Benton County within twenty-one (21) days of the date of decision.

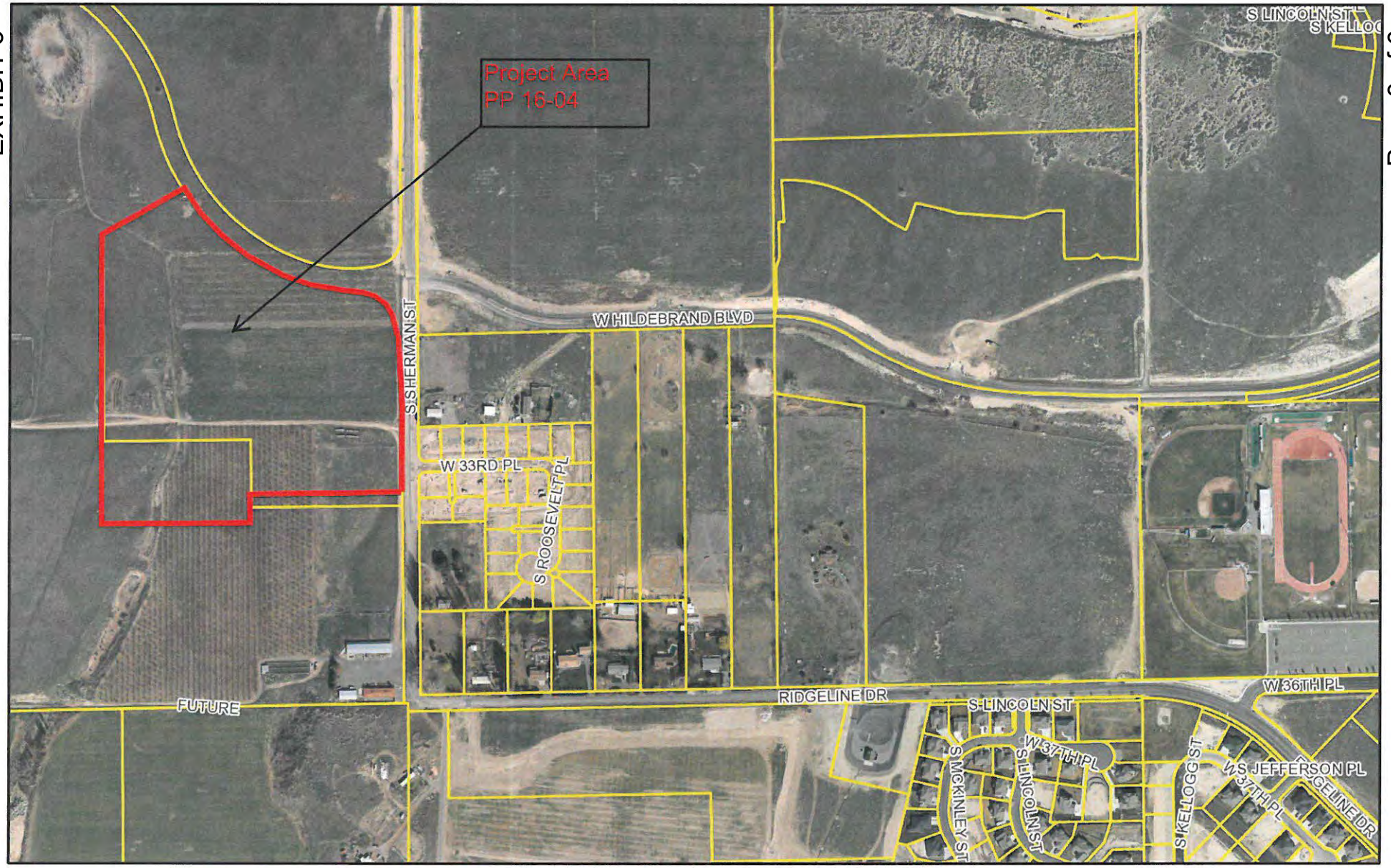
Wes Romine, Development Services Manager

The City of Kennewick welcomes full participation in public meetings by all citizens and does not discriminate on the basis of disability, pursuant to the requirements of the American with Disabilities Act of 1990, pub. L 101-336. No qualified individual with a disability shall be excluded or denied the benefit of participating in such meetings. If you wish to use auxiliary aids or require assistance to comment at this public meeting, please contact the City of Kennewick, Wes Romine, Development Services Department at (509) 585-4558 or TDD (509) 585-4425 or through the Washington Relay Service Center TTY at #711 at least ten days prior to the date of the meeting to make arrangements for special needs.

210 W. Sixth Avenue / PO Box 6108, Kennewick WA 99336

EXHIBIT 3

Permitting Map



October 4, 2016

This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

StreetName

SurveyCityLimits

SV_CI_KENNEWICK_10

SV_CI_RICHLAND_10

SV_CI_COUNTY_10

SurveyUrbanGrowthBoundary

SurveyParcel

StructureBridge

1 inch = 500 feet 1:6,000

0 250 500 1,000 ft

0 75 150 300 m

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp.,

ArcGIS WebApp Builder
City of Kennewick

PP 16-04
PLN-2016-02914
W HILDEBRAND & SHERMAN ST
74 LOTS
MATT SMITH
TRI CITIES DEVELOPMENT

37
NEW TRADITION HOMES INC
11815 NE 113TH ST #110
VANCOUVER, WA 98662

37
]BILLY & CHERYL NEWSOME
6629 W 33RD PL
KENNEWICK, WA 99338

37
MARIE JOY & ROLANDO TAPAWAN
6675 W 33RD PL
KENNEWICK, WA 99338

37
MATT SMITH
TRI CITIES DEVELOPMENT
15 SW COLORADO AVE #1
BEND, OR 97702

37
KID
BEN WOODARD
2015 S ELY ST
KENNEWICK, WA 99337

37
KING OF KINGS EVANGELICAL LUTHERAN CHURCH
5209 W 5TH AVE
KENNEWICK, WA 99336

37
KENNETH & MARY MAY BANKS
6652 W 33RD PL
KENNEWICK, WA 99338

37
MARJORIE & KYLE SPLATTSTOESSER
6635 W 33RD PL
KENNEWICK, WA 99338

37
KDS DEVELOPMENT LLC
32814 SE 110TH ST
ISSAQUAH, WA 98027

37
SOUTHRIDGE TRI CITIES DEV LLC
8205 N DIVISION
SPOKANE, WA 99208

37
HDJ – A DIVISION OF PBS
JASON MATTOX
6115 BURDEN BLVD STE. E
PASCO WA 99301

37
MARK & ELIZABETH THOMPSON
2317 FERNDALE AVE
RICHLAND, WA 99354-1926

37
SHAUN & KATHLEEN MIERZWA
6628 W 33RD PL
KENNEWICK, WA 99338

37
KORY & SHEENA BILLINGTON
6681 W 33RD PL
KENNEWICK, WA 99338

37
JF & GLADYS MOORE
3514 S SHERMAN ST
KENNEWICK, WA 99338

37
KID
JASON MCSHANE
2015 S ELY ST
KENNEWICK, WA 99337

Tri-City Herald
tricityherald.com
VOICE OF THE MID-COLUMBIA

LEGAL PROOF OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Lines
450496	0002800059	NOTICE OF APPLICATION Proposal: An applic		$252.12	1	102

Attention: Melinda Didier

KENNEWICK CITY OF/LEGALS
PO BOX 6108
KENNEWICK, WA 99336

AFFIDAVIT OF PUBLICATION

COUNTY OF BENTON)
.SS
STATE OF WASHINGTON)

Monica Allred, being duly sworn, deposes and says, I am the Legals Clerk of The Tri-City Herald, a daily newspaper. That said newspaper is a local newspaper and has been approved as a legal newspaper by order of the superior court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published continually as a daily newspaper in Benton County, Washington. That the attached is a true copy as it was printed in the regular and entire issue of the Tri-City Herald and not in a supplement thereof, ran 1 time(s) commencing on **11/27/2016**, and ending on **11/27/2016**, and that said newspaper was regularly distributed to its subscribers during all of this period.

Monica Allred
(Signature of Legals Clerk)

SUBSCRIBED AND SWORN BEFORE ME THIS **28th** DAY OF **November, 2016**

LouAnn Hug
Notary Public in and for the State of Washington residing in Benton County

COMMISSION EXPIRES: **3/1/2019**

LOUANN HUG
NOTARY PUBLIC
STATE OF WASHINGTON

NOTICE OF APPLICATION

Proposal : An application for a preliminary plat has been submitted by Matt Smith of Tri-Cities Development/J.F. Moore, (15 SW Colorado, Suite 1, Bend, OR 97702). The site is located west of S. Sherman Street and south of Bob Olsen Parkway at 3316 S. Sherman Street. The project consists of 2 phases with 73 lots and 4 tracts of land on approximately 22.26 acres. The smallest lot size is 8,064 square feet, the largest lot size is 13,437 square feet, and the average lot size is 9,342 square feet. The site is currently zoned Residential Low Density (RL). The project is subject to the single-family design standards. The Comprehensive Plan designation is Low Density Residential. The file number is PP 16-04/PLN-2016-02914.

Open Record Hearing : The City of Kennewick Hearing Examiner will conduct an open record hearing at 6:00 p.m. on **December 12, 2016** in the Council Chambers in Kennewick City Hall at 210 W. 6th Avenue, Kennewick, WA 99336. Testimony will be taken at this meeting. The Hearing Examiner is expected to make a decision for the Preliminary Plat following this meeting.

Public Comment Period: You may submit comments at any time until **November 30, 2016** , before 4:30 p.m. Comments submitted on or before November 30, 2016 will be included in the Hearing Examiner's meeting packet. Comments after November 30, 2016 can be submitted at the Public Hearing. If you have questions on the proposal, contact Wes Romine, Development Services Manager at (509) 585-4558 or via e-mail at wes.romine@ci.kennewick.wa.us.

Environmental Documents and/or Studies Applicable to this Study: A Mitigated Determination of Non-significance No.15-62 was issued on March 14, 2016 for a similar project on a larger area of land which satisfies SEPA for this project. The time for appealing SEPA issues is fourteen (14) calendar days from the issue date.

Determination of Completeness: The application was declared complete on September 26, 2016 for the purpose of processing.

Project Permits Associated with this Proposal: None

Preliminary Determination of Regulations Used for Project Mitigation: Title 18 (Zoning), Title 17 (Subdivision), Title 4 of the Kennewick Municipal Code and the land use policies contained in the Kennewick Comprehensive Plan.

Estimated Date of Decision: Within 10 business days of the Hearing date of December 12, 2016.

To Receive Notification of the Decision and/or the Environmental Determination : Contact the Development Services Division at 210 W. 6th Avenue, Kennewick, WA 99336 or via telephone at (509) 585-4280.

Appeal : Any person aggrieved by the decision of the Kennewick Hearing Examiner on this proposal may appeal to the Superior Court of Benton County within twenty-one (21) days of the date of decision.

Wes Romine, Development Services Manager

The City of Kennewick welcomes full participation in public meetings by all citizens and does not discriminate on the basis of disability, pursuant to the requirements of the American with Disabilities Act of 1990, pub. L 101-336. No qualified individual with a disability shall be excluded or denied the benefit of participating in such meetings. If you wish to use auxiliary aids or require assistance to comment at this public meeting, please contact the City of Kennewick, Wes Romine, Development Services Department at (509) 585-4558 or TDD (509) 585-4425 or through the Washington Relay Service Center TTY at #711 at least ten days prior to the date of the meeting to make arrangements for special needs. 210 W. Sixth Avenue / PO Box 6108, Kennewick WA 99336

#2800059 11/27/2016

CITY OF KENNEWICK WASHINGTON

AFFIDAVIT OF PROPERTY POSTING

The **Public Hearing Property Posting** _____

sign was posted on **November 21, 2016** (date) at this location:

Southwest corner of Bob Olson Parkway & Sherman,adjacent to **S. Sherman**(street) as depicted in the attached picture(s).

Type of application: **Preliminary Plat PP 16-04.**

Proposal **74 lot subdivision** _____

Applicant **name** **Matt Smith – Tri-Cities Development/J.F.Moore** _____

Signature _____ Phone # **509-585-4558**

Date **November 21, 2016**

State of Washington
County of Benton

I certify that I know or have satisfactory evidence that Wes Romine

_____

signed this instrument and acknowledge it to be their free and voluntary act for the uses and purposes mentioned in the instrument.

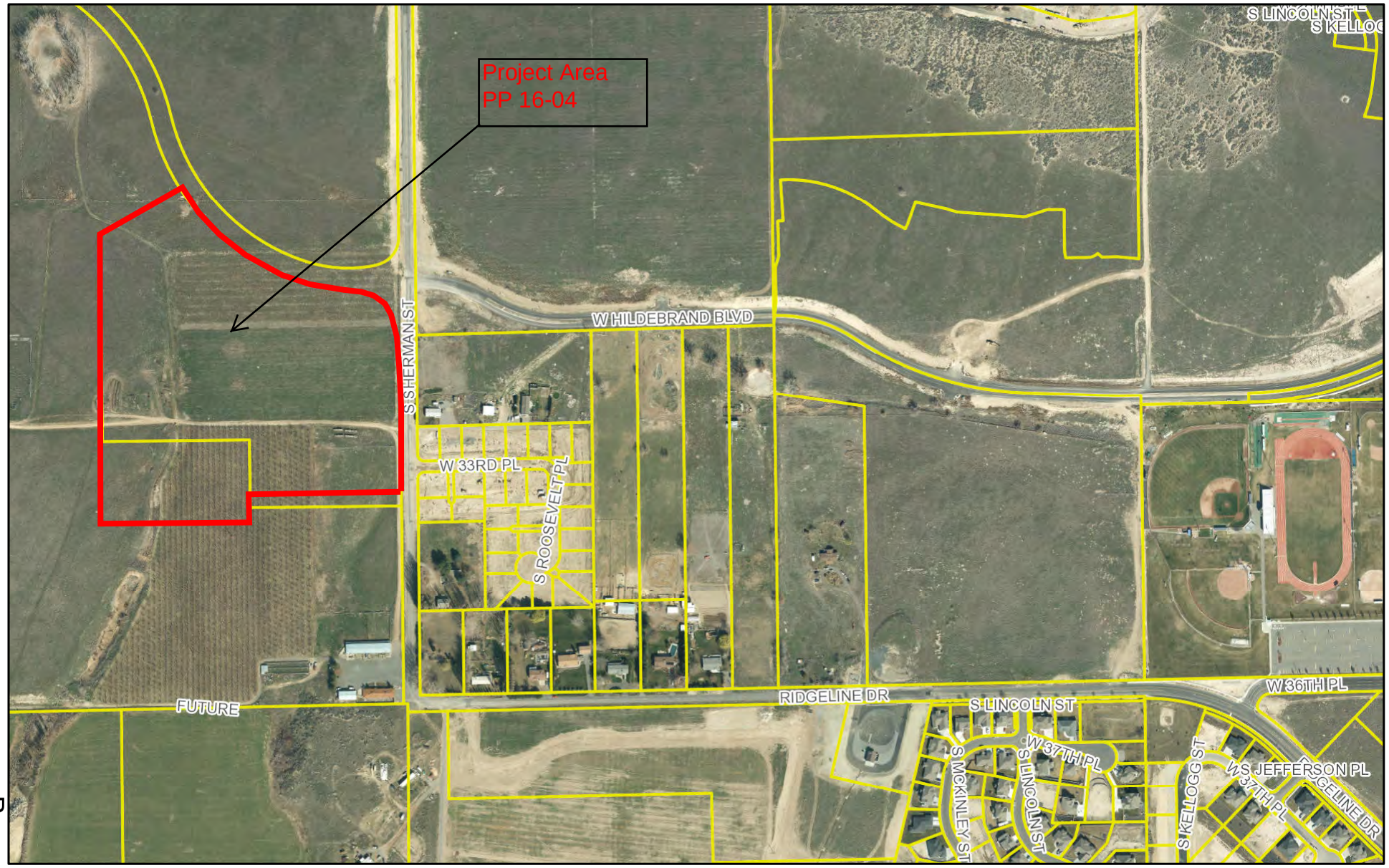
Melinda L. Didier
Notary Public in and for the State of Washington

Residing at Eltopia

My appointment expires 4-29-18

MELINDA L. DIDIER NOTARY PUBLIC COMMISSION EXPIRES 4-29-18 STATE OF WASHINGTON

Permitting Map



Page 1 of 1

EXHIBIT 4

October 4, 2016

This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

StreetName

SurveyCityLimits

SV_CI_KENNEWICK_10

SV_CI_RICHLAND_10

SV_CI_COUNTY_10

SurveyUrbanGrowthBoundary

SurveyParcel

StructureBridge

1 inch = 500 feet 1:6,000

0 250 500 1,000 ft

0 75 150 300 m

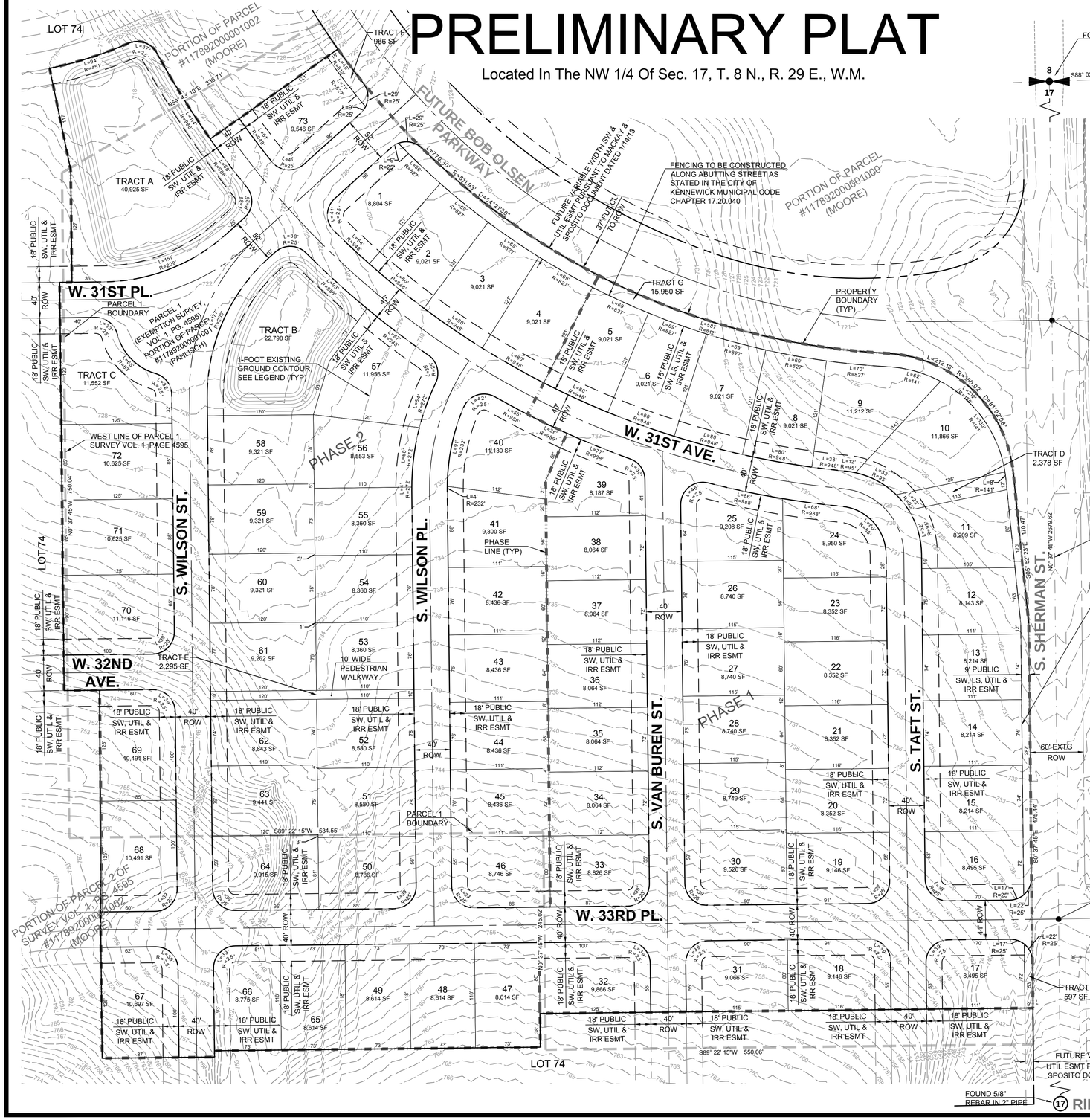
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp.,

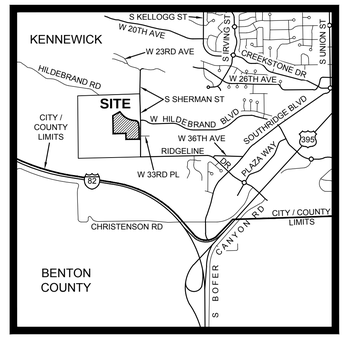
ArcGIS WebApp Builder
City of Kennewick

THE PARKS - PHASES 1 & 2

PRELIMINARY PLAT

Located In The NW 1/4 Of Sec. 17, T. 8 N., R. 29 E., W.M.





VICINITY MAP
NOT TO SCALE

BASIS OF BEARINGS:
NORTH 88°03'17" EAST ALONG THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 17, T. 8 N, R. 29 E, W.M., PER SURVEY IN BOOK 1 OF SURVEYS AT PAGE 4595. DISTANCES SHOWN ARE TRUE GROUND LENGTH

BASIS OF ELEVATION:
FOUND 2-1/2" BRASS CAP ON NORTHEAST CORNER SECTION 17, T. 8 N, R. 29 E, W.M., HELD CITY OF KENNEWICK DATUM, NGVD 1929 ELEVATION OF 879.59' PER SURVEY IN BOOK 1 OF SURVEYS AT PAGE 1540.

LEGEND

⊙	5/8" x 30" IRON REBAR WITH YELLOW PLASTIC CAP STAMPED: "HDJ - LS 25893" PURSUANT TO SURVEY VOL. 1, PG. 4595
EL	ELEVATION
INTX	INTERSECTION
PG.	PAGE
ROW	RIGHT-OF-WAY
SF	SQUARE FEET
TYP	TYPICAL
SW, IRR & UTIL ESMT	SIDEWALK, IRRIGATION & UTILITY EASEMENT (OR A COMBINATION THEREOF)
VOL.	VOLUME
	SECTION LINE OR SUB-SECTION LINE
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	EXISTING GROUND CONTOUR AS DERIVED FROM AERIAL PHOTOGRAPHY PROVIDED BY GEOTERRA ON FEBRUARY 20, 2015
	PARCEL 1 BOUNDARY
	PROPOSED RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY CENTERLINE
	PROPOSED LOT BOUNDARY
	PROPOSED PHASE LINE
	FUTURE RIGHT-OF-WAY
	FUTURE RIGHT-OF-WAY CENTERLINE

LAND USE TABLE	
SITE AREA:	22.26 ACRES
TOTAL LOT COUNT:	73 LOTS + 8 TRACTS
SINGLE FAMILY RESIDENTIAL LOTS:	73 LOTS
MINIMUM LOT AREA:	8,064 SF
MAXIMUM LOT AREA:	11,956 SF
OVERALL AVG. LOT AREA:	9,045 SF
RIGHT OF WAY DEDICATION:	212,001 SF (4.87 ACRES)
STORM POND TRACTS A & B:	63,723 SF (1.46 ACRES)
OPEN SPACE TRACTS C, E, F, G, H:	31,361 SF (0.72 ACRES)
STORM & SANITARY SEWER TRACT D:	2,378 SF (0.05 ACRES)

CITY OF KENNEWICK FILE #:
PP 16-04 / PLN-2016-02914

APPLICANT/DEVELOPER:
TRI-CITIES DEVELOPMENT CO. LLC
ATTN: MATT SMITH
15 SW COLORADO AVENUE
SUITE 1
BEND, OR 97702
(541) 382-6691

ENGINEER:
HDJ DESIGN GROUP P.L.L.C.
ATTN: JASON MATTOX, PE
6115 BURDEN BLVD., SUITE E
PASCO, WA 99301
PHONE: (509) 547-5119

SURVEYOR:
HDJ DESIGN GROUP P.L.L.C.
ATTN: PAUL TOMKINS, PLS
6115 BURDEN BLVD., SUITE E
PASCO, WA 99301
PHONE: (509) 547-5119

NOTES:
1.) TRACTS A & B TO BE STORM POND TRACTS, TRACT C TO BE AN OPEN SPACE TRACT, AND TRACT D TO BE BE A STORM & SANITARY SEWER TRACT, ALL OWNED AND MAINTAINED BY THE HOA.

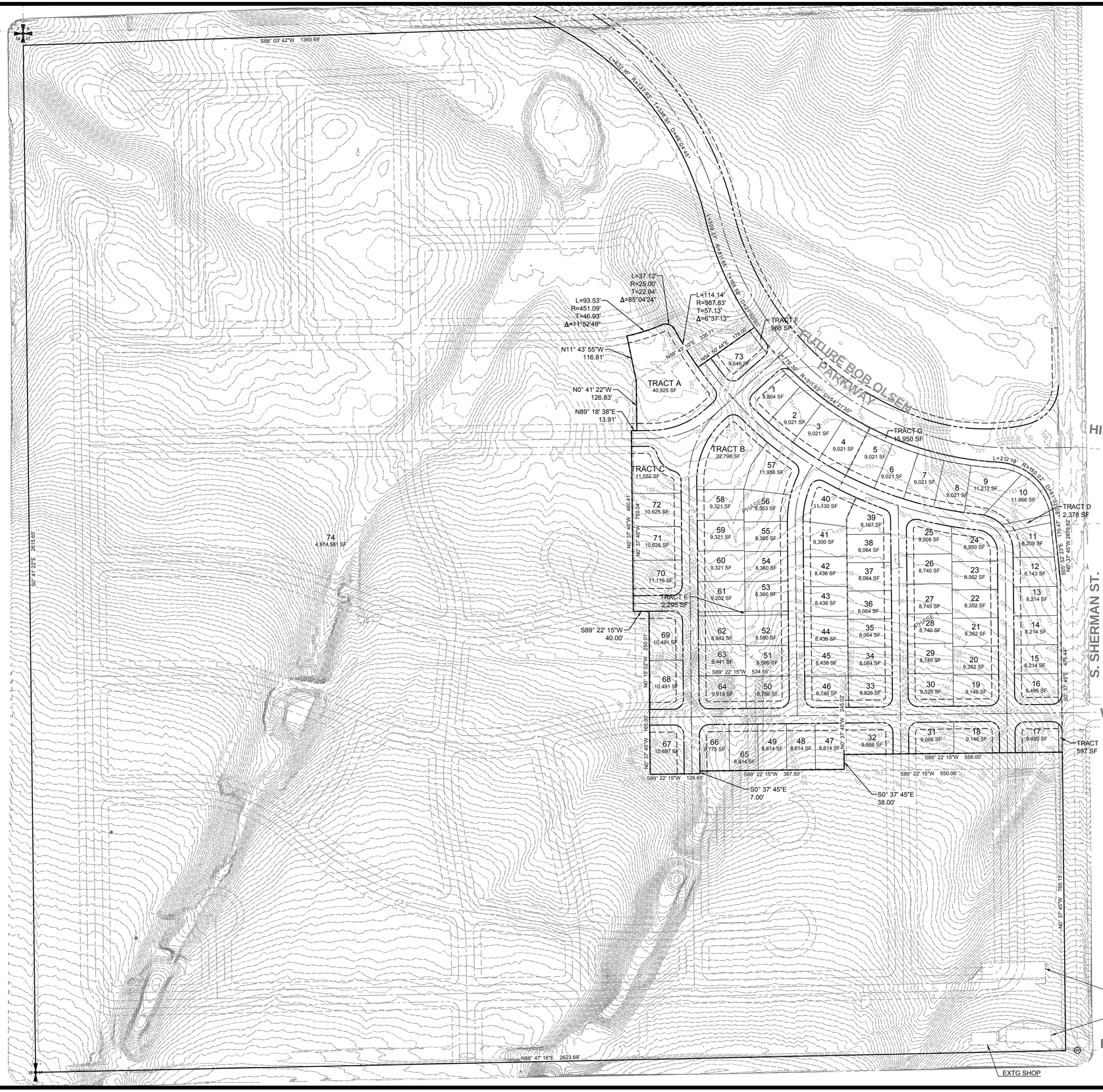
PRELIMINARY
SUBJECT TO AGENCY REVIEW
NOT FOR CONSTRUCTION

JASON L. MATTOX — STATE OF WASHINGTON — 24707 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDJ DESIGN GROUP
engineers | landscape architects | planners | surveyors
6115 Burden Blvd, Suite E
Pasco, WA 99301-8930
509/547-5119
306/695-3488
509/547-5129 fax
Internet: www.hdjdesigngroup.com

PRELIMINARY PLAT FOR:
THE PARKS - PHASES 1 & 2
A SUBDIVISION LOCATED IN THE CITY OF KENNEWICK, WASHINGTON

DESIGNED:	SG
DRAWN:	SG / JAM
CHECKED:	JLM
SCALE:	H: 1" = 60' V: N/A
NOVEMBER 2016	3949-00
SHEET	1 / 2



Scale 1" = 120'

0 60 120 240

LEGAL DESCRIPTION:

A PARCEL OF LAND LOCATED WITHIN THE NORTHWEST QUARTER OF SECTION 17 IN TOWNSHIP 8 NORTH IN RANGE 29 EAST, W.M., CITY OF KENNEWICK, BENTON COUNTY, WASHINGTON, DESCRIBED MORE PARTICULARLY AS FOLLOWS:
COMMENCING AT THE SOUTHEAST CORNER OF SAID NORTHWEST QUARTER OF SECTION 17; THENCE SOUTH 88°47'16" WEST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 30.00 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SOUTH SHERMAN STREET AND **THE TRUE POINT OF BEGINNING**;
THENCE SOUTH 88°47'16" WEST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER OF SECTION 17 A DISTANCE OF 2,623.95 FEET TO THE SOUTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 17;
THENCE NORTH 00°41'22" WEST ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 17 A DISTANCE OF 2,615.91 FEET;
THENCE NORTH 88°03'42" EAST ALONG A LINE THAT IS 30.00 FEET SOUTHERLY AND PARALLEL TO THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 17 A DISTANCE OF 1,360.83 FEET TO A POINT ON THE PROPOSED SOUTHWESTERLY RIGHT OF WAY LINE OF WEST HILDEBRAND BOULEVARD; THENCE ALONG SAID PROPOSED RIGHT OF WAY LINE AS FOLLOWS:
SAID POINT ON THE PROPOSED RIGHT OF WAY ALSO BEING A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 738.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 27°35'58" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 632.16 FEET, WITH A DELTA ANGLE OF 49°04'45", A CHORD BEARING OF SOUTH 37°51'39" EAST, AND A CHORD LENGTH OF 613.01 FEET;
TO A POINT OF REVERSE CURVATURE TURNING TO THE LEFT, HAVING A RADIUS OF 811.93 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 1043.30 FEET, WITH A DELTA ANGLE OF 73°37'24", A CHORD BEARING OF SOUTH 50°07'59" EAST, AND A CHORD LENGTH OF 972.99 FEET;
TO A POINT OF NON-TANGENT REVERSE CURVATURE TURNING TO THE RIGHT, HAVING A RADIUS OF 150.02 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 03°04'11" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 212.18 FEET, WITH A DELTA ANGLE OF 81°02'08", A CHORD BEARING OF SOUTH 46°24'45" EAST, AND A CHORD LENGTH OF 194.93 FEET TO A NON-TANGENT LINE;
THENCE SOUTH 05°52'23" EAST A DISTANCE OF 170.47 FEET TO A POINT ON THE WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET;
THENCE SOUTH 00°37'45" EAST ALONG SAID WEST RIGHT OF WAY LINE OF SOUTH SHERMAN STREET A DISTANCE OF 1,194.67 FEET TO THE **SAID TRUE POINT OF BEGINNING**.

HAVING AN AREA OF 5,945,494 SQUARE FEET, 136.49 ACRES.

PRELIMINARY
SUBJECT TO AGENCY REVIEW
NOT FOR CONSTRUCTION

CITY OF KENNEWICK FILE #:
PP 16-04 / PLN-2016-02914

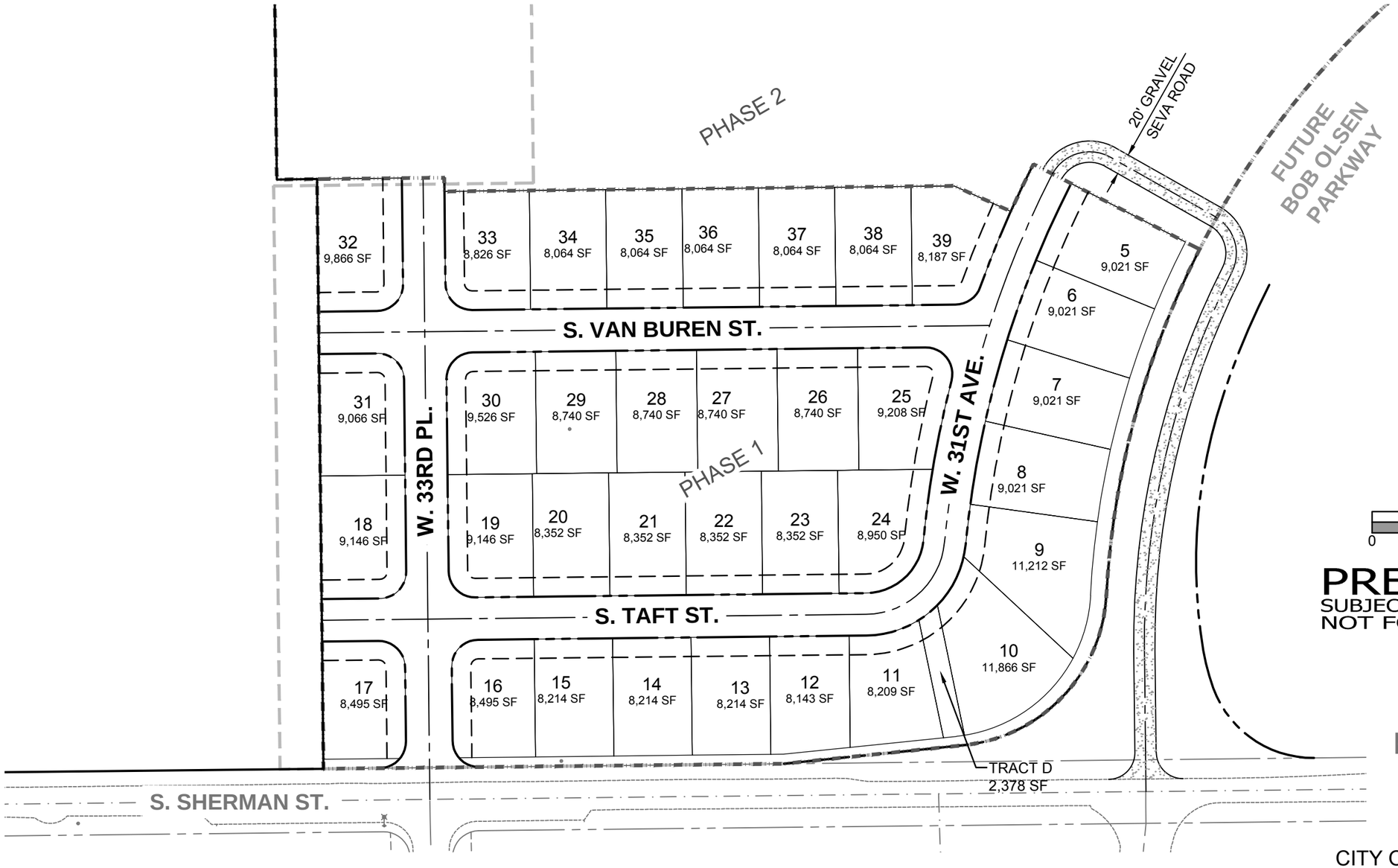
6115 Burden Blvd, Suite E
Pasco, WA 99301-8930
509/547-5119
308/695-3488
509/547-5129 fax
Internet: www.hdjdesigngroup.com
HDJ DESIGN GROUP
engineers | landscape architects | planners | surveyors

PRELIMINARY PLAT FOR:

THE PARKS - PHASES 1 & 2

A SUBDIVISION LOCATED IN THE CITY OF KENNEWICK, WASHINGTON

DESIGNED:	SG
DRAWN:	SG / JAM
CHECKED:	JLM
SCALE:	H: 1" = 120' V: N/A
NOVEMBER 2016	3949-00
SHEET	2 / 2



Scale 1" = 100'

0 50 100 200

PRELIMINARY
SUBJECT TO AGENCY REVIEW
NOT FOR CONSTRUCTION

JASON L. MATTOX
STATE OF WASHINGTON
44707
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

CITY OF KENNEWICK FILE #:
PP 16-04 / PLN-2016-02914

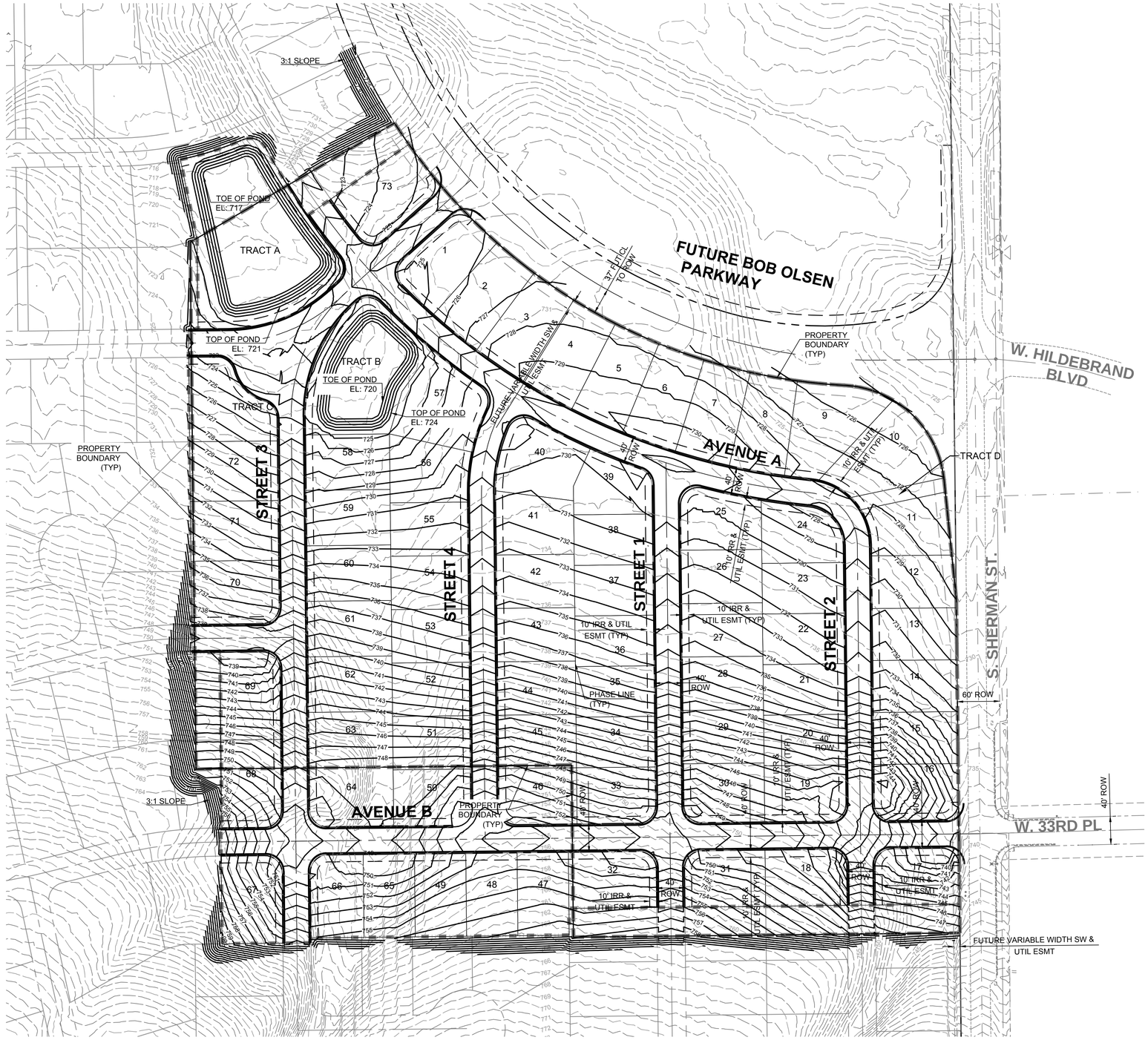
SECONDARY EMERGENCY VEHICLE ACCESS EXHIBIT FOR:

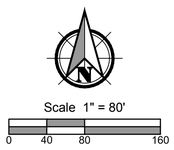
THE PARKS - PHASE 1

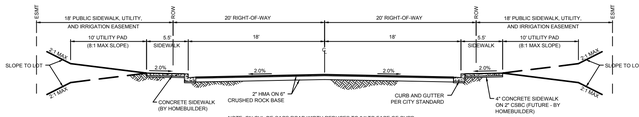
A SUBDIVISION LOCATED IN THE CITY OF KENNEWICK, WASHINGTON

HDJ A DIVISION OF PBS
6115 Burden Blvd, Suite E
Pasco, WA 99301-8930
509/547-5119
306/695-3488
509/547-5129 fax
Internet: www.hdjdesigngroup.com

DESIGNED: SG	**SCALE** H: 1" = 100' V: N/A	**SHEET** 1 / 1
DRAWN: JAM	**DATE:** NOV. 2016	
CHECKED: JLM	**JOB NO.:** 3949-00	







TYPICAL RESIDENTIAL ROAD SECTION
PER CITY OF KENNEWICK STANDARD 2-1 NTS

HDJ DESIGN GROUP
engineers | landscape architects | planners | surveyors
6115 Burden Blvd, Suite E
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509/547-5119
509/547-5368
509/547-5129 fax
Internet: www.hdjdesigngroup.com

PRELIMINARY GRADING PLAN FOR:

THE PARKS - PHASES 1 & 2

A SUBDIVISION LOCATED IN THE CITY OF KENNEWICK, WASHINGTON

DESIGNED:	SG
DRAWN BY:	BMW
CHECKED:	JLM
SCALE:	H: 1"=80' V: N/A
SEPT 2016	3949-00
SHEET	1 / 1

JASON L. MATTON
STATE OF WASHINGTON
13705
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

Soil Sampling Report For:
The Parks, Planned Residential Development
Kennewick, Benton County, Washington

April 2016

Prepared for

HDJ Design Group

Walla Walla, WA

Prepared by

EAS: Environmental Assessment Services, LLC

Richland, Washington

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Table of Contents

List of Figures

List of Appendices

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1.0 Introduction

Environmental Assessment Services, LLC (EAS) was contracted by the Jason Mattox, PE, with HDJ Design Group to provide soil sampling and analytical services for The Parks, a Planned Residential Development (PRD), located in the south part of Kennewick, Benton County, Washington (refer to Figure 1: Site Map).

1.1 Project Background

The need for the soil sampling and analyses is driven by correspondence to Mr. Wes Romine with Kennewick Development Services, from Ms. Gwen Clear with Washington State Department of Ecology (Ecology), dated December 1, 2015 and included in Appendix A to this report. Based upon the historical agricultural use of the subject property, Ecology recommended "that soils be sampled and analyzed for lead and arsenic, and for organochlorine pesticides." Ecology also stated that if these contaminants were found at concentrations above the Model Toxics Control (MTCA) cleanup levels that the potential buyers be notified of such.

1.2 Terms and Conditions

EAS personnel conducted the soil sampling per procedures specified in Statement of Work for: The Parks Environmental Property Work, Kennewick, WA, included as Appendix B to this report. Soils were analyzed by OnSite Environmental Inc. in Redmond, WA, an Ecology accredited laboratory for the prescribed analyses.

This work was performed for the sole use of Mr. Jason Mattox, PE, HDJ Design Group, and their representatives. No other party should rely on the information contained herein without the prior written consent of EAS.

1.3 Limitations and Exceptions of Assessment

The assessment involved no exceptions or limitations to the project scope of work or EAS's standard operating procedures.

1.4 Methodology Used

EAS's soil sampling methodology included:

- Development of sampling strategy and laboratory analyses;
- Decontamination of field sampling equipment;
- Sample collection, documentation, storage and shipping;
- Review of analytical results; and
- Report Preparation.

2.0 Development of Sampling Strategy and Laboratory Analyses

2.1 Sampling Strategy

Gwen Clear with Ecology was contacted by phone on January 19, 2016 to discuss a sampling strategy for the project. She indicated that grab samples from depths of six (6) inches and twelve (12) inches below ground surface (bgs) were preferred, over a grid-like pattern over the subject property. EAS developed the project SOW based upon this guidance, establishing 13 pre-determined (approximate) sampling points stratified as shown in Figure 2 of the SOW and including a field duplicate sample for each sampling depth (6" and 12" bgs).

2.2 Laboratory Analyses

The constituents of potential concern (COPCs) – lead, arsenic and organochlorine pesticides – were confirmed with Ms. Clear (Ecology). OnSite Environmental Inc., an Ecology accredited environmental lab, was contracted to conduct the analytical testing for the COPCs using EPA Method 8081B for organochlorine pesticides and EPA Method 6010C for lead and arsenic. OnSite Environmental Inc. provided pre-cleaned certified 8 oz. sample containers, chain-of-custody forms and sample labels for the samples. Copies of the Certificate of Compliance for the sample containers are included with the laboratory analytical results in Appendix C to this report.

3.0 Decontamination of Field Sampling Equipment

3.1 Pre-Sampling Decontamination

All field sampling equipment including spade, soil auger and stainless steel trowels were pre-cleaned at EAS facilities and allowed to air dry at least 24 hours prior to use. The equipment was cleaned in an Alconox ™ solution and rinsed three (3) times in deionized water with a purity of 18.2 megohms. The equipment was wrapped in aluminum foil for transport to the field.

3.2 Decontamination of Sampling Equipment During Field Sampling

The spade and soil trowels were decontaminated in the field after collection of each sample. Field decontamination entailed a “rough” wash in tap water, followed by washing the equipment with a brush in an Alconox ™ solution and the rinsing three (3) times in deionized water with a purity of 18.1 megohms. The items were allowed to air dry then wrapped in foil prior to each use.

4.0 Sample Collection, Documentation, Storage and Shipping

4.1 Sample Collection

Soil samples were collected from thirteen (13) pre-determined locations (refer to Figure 2). The global position system (gps) coordinates for each location are provided in Table 1 below. Each soil pit was dug to a depth of six (6) inches bgs and a grab sample was collected and placed in a certified clean 8 oz. glass sample container with a Teflon lid. The soil pit was then excavated to a total depth of twelve (12) inches bgs where another grab sample was collected and placed in a certified clean 8 oz. sample container. A field duplicate sample was collected for each sampling depth (6 " bgs and 12" bgs). Each grab sample was collected by using a decontaminated stainless steel soil-sampling trowel.

Table 1: Soil Sample Collection Location

Sampling Point	Latitude	Longitude	Sample Nos.	Sample Depth (bgs)
1	46°11'02.0" N	119°13'16.5" W	Parks-SS-01-06	6 inches
			Parks-SS-01-12	12 inches
2	46°11'02.0" N	119°13'03.7" W	Parks-SS-02-06	6 inches
			Parks-SS-02-12	12 inches
3	46°11'02.0" N	119°12'47.5" W	Parks-SS-03-06	6 inches
			Parks-SS-03-12	12 inches
4	46°10'57.0" N	119°13'10.0" W	Parks-SS-04-06	6 inches
			Parks-SS-04-12	12 inches
5	46°10'57.0" N	119°12'56.0" W	Parks-SS-05-06	6 inches
			Parks-SS-05-12	12 inches
6	46°10'52.6" N	119°13'16.5" W	Parks-SS-06-06	6 inches
			Parks-SS-06-12	12 inches
7	46°10'52.6" N	119°13'05.0" W	Parks-SS-07-06	6 inches
			Parks-SS-07-06A	6 inches
			Parks-SS-07-12	12 inches
8	46°10'48.0" N	119°12'47.5" W	Parks-SS-08-06	6 inches
			Parks-SS-08-12	12 inches
9	46°10'48.0" N	119°13'09.0" W	Parks-SS-09-06	6 inches
			Parks-SS-09-12	12 inches
			Parks-SS-09-12A	12 inches
10	46°10'48.8" N	119°12'54.0" W	Parks-SS-10-06	6 inches
			Parks-SS-10-12	12 inches

11	46°10'43.0" N	119°13'17.5" W	Parks-SS-11-06 Parks-SS-11-12	6 inches 12 inches
12	46°10'42.0" N	119°13'05.0" W	Parks-SS-12-06 Parks-SS-12-12	6 inches 12 inches
13	46°10'43.0" N	119°12'46.4" W	Parks-SS-13-06 Parks-SS-13-12	6 inches 12 inches

4.2 Sample Documentation

Sample labels were prepared for each soil sample and applied to the sample container upon sample collection. Per the project SOW, each sample was labeled with the client name (EAS), project number (7033-12 Parks), sample identification number (e.g., Parks-SS-01-06), date and time, analyses (EPA 8081B, As, Pb) and preservative ($\leq$ 6°C). Sample labels were secured to the sample container by applying clear tape over the label. The sample information for each sample (sample number, date/time, analyses, and name of EAS staff collecting the sample) was recorded in the EAS project field notebook. The gps coordinates for each sample location were also recorded in the field notebook.

4.3 Sample Storage

Soil samples were placed into a sample cooler for temporary storage once the sample label was completed and attached and the sample documentation was completed in the field notebook. Sufficient ice was placed in the cooler to maintain the sample temperatures at $\leq$ 6°C. Upon return to EAS facilities, the samples were stored in a locked refrigerator in the EAS laboratory overnight until prepared for shipment the next day.

4.4 Sample Shipment

Each sample was recorded on a Chain of Custody (CoC) form. Information recorded included our company name (EAS), project number (7033-12 Parks), project manager (D. Phipps), sampled by (D. Phipps), sample number (e.g., Parks-SS-01-06), date and time sampled, matrix (soil), number of containers, analyses (EPA 8081B for organochlorine pesticides & EPA 6010C for As & Pb) and box checked to indicate turnaround time. The CoC was signed and dated to relinquish the samples to the lab. The original CoC was placed in a plastic ziplock bag and packed in the cooler with the samples for that specific cooler and CoC. A copy of the CoC is included in Appendix C of this report.

Each sample container was packed in bubble wrap to ensure sample integrity to the lab. The samples were placed into two shipping coolers; each with sufficient ice to ensure that the samples arrived at the laboratory at a temperature of $\leq$ 6°C and the CoC for that specific cooler. Packaging tape was wrapped completely around each cooler at two locations to ensure that the hinges were covered.

CoC security tape was placed on each cooler so that the integrity of the cooler and its contents could be verified upon receipt at the analytical laboratory.

The sample coolers were shipped overnight by a commercial air-freight company on March 3, 2016 and were delivered to the analytical laboratory, OnSite Environmental in Redmond, WA on March 4, 2016.

5.0 Review of Analytical Results

The COPCs for this sampling effort included the following:

- Organochlorine pesticides
- Arsenic (As)
- Lead (Pb)

EPA Method 8081B was used for detection of organochlorine pesticides and EPA Method 6010C was used for detection of As & Ph.

5.1 Analytical Results

The analytical results for each of the 28 soil samples collected and submitted to OnSite Environmental Inc. for the project are presented in Appendix C of this report. Arsenic (As) was not detected in any of the samples. Lead (Pb) was detected in all of the samples with concentrations ranging from 6.7 mg/kg (parts per million – ppm) to 13 mg/kg (ppm). Heptachlor epoxide (an organochlorine pesticide) was detected in sample number Parks-SS-08-12 at 7.8 µg/kg (parts per billion – ppb).

Model Toxics Control Act (MTCA) Regulation and Statute (WDOE Publication No. 94-06, Revised 2013) was reviewed to determine the cleanup levels for lead and heptachlor epoxide. Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Use list a **cleanup level of 250 mg/kg (ppm) for lead**. **Heptachlor epoxide** is not listed in this table; it is listed in Table 749-2 Priority Contaminants of Ecological Concern for Sites that Qualify for the Simplified Terrestrial Ecological Evaluation Procedure with a cleanup level of 0.6 mg/kg (ppm) and in Table 749-3 Ecological Indicator Soil Concentrations for Protection of Terrestrial Plants & Animals (for wildlife) with a **cleanup level of 0.4 mg/kg (ppm), which equates to 400 ppb**.

Lead concentrations for the soil samples collected and analyzed for The Parks property ranged from 6.7 to 13 ppm, well below the MTCA Level A Cleanup level of 250 ppm for lead.

Heptachlor epoxide was detected in one sample, Parks-SS-08-12, at a concentration of 7.8 ppb, well below the most conservative MTCA Cleanup level of 400 ppb for the pesticide.

6.0 Conclusions

Per Ecology recommendations, soils were sampled at 13 pre-determined (approximate) sampling points stratified over the site and analyzed for lead, arsenic and organochlorine pesticides. As noted in the previous section, lead (Pb) and heptachlor epoxide (an organochlorine pesticide) were detected in soil samples collected from the site.

Lead was detected in all of the soil samples collected from the site. Concentrations ranged from 6.7 to 13 ppm, well below the MTCA Level A Cleanup level of 250 ppm for lead.

Heptachlor epoxide was detected in one sample, Parks-SS-08-12, at a concentration of 7.8 ppb, well below the most conservative MTCA Cleanup level of 400 ppb for the pesticide.

All detections of lead and heptachlor epoxide were well below their associated MTCA Cleanup levels and warrant no further action.

There is no indication that soils on the site contain residual concentrations of pesticides, arsenic or lead that are above MTCA cleanup levels.

7.0 References

Google® Earth Aerial Photographs 2015

Washington State Department of Ecology, Model Toxics Control Act Regulation and Statute, Washington Department of Ecology, Revised 2013, Publication No. 94-06

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Figures

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Figure 1: Site Map (Google Earth, 2015) The sampled property area is located in the south part of Kennewick, Washington, to the north of Interstate 82 and west of Hwy 395.

Figure 2 – Sampling Location Map (Google Earth, 2015) The approximate locations of the 13 sampling locations are represented with the orange triangles in the photo.

Appendices

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Appendix A - Washington Department of Ecology Project Correspondence

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

December 1, 2015

Wes Romine
Kennewick Development Services
P.O. Box 6108
Kennewick, WA 99336

Re: PLN-2015-01863 and PLN-2015-01862

Dear Mr. Romine:

Thank you for the opportunity to comment on the notice of application for The Parks, a Planned Residential Development to develop approximately 137.4 ac into 553 residential units in 10 phases, proposed by Chad Bettesworth of Pahlisch Homes. We have reviewed the application and have the following comment.

TOXICS CLEAN-UP

Based upon the historical agricultural use of this land, there is a possibility the soil contains residual concentrations of pesticides. Ecology recommends that the soils be sampled and analyzed for lead and arsenic, and for organochlorine pesticides. If these contaminants are found at concentrations above the Model Toxics Control Act cleanup levels Ecology recommends that potential buyers be notified of their occurrence.

If you have any questions or would like to respond to these Toxics Clean-up comments, please contact **Valerie Bound** at (509) 454-7886 or email at valerie.bound@ecy.wa.gov.

WATER QUALITY

Project with Potential to Discharge Off-Site
The NPDES Construction Stormwater General Permit from the Washington State Department of Ecology is required if there is a potential for stormwater discharge from a construction site with disturbed ground. This permit requires that the SEPA checklist fully disclose anticipated activities including building, road construction and utility placements. Obtaining a permit is a minimum of a 38 day process and may take up to 60 days if the original SEPA does not disclose all proposed activities.

The permit requires that Stormwater Pollution Prevention Plan (Erosion Sediment Control Plan) is prepared and implemented for all permitted construction sites. These control measures must be able to prevent soil from being carried into surface water (this includes storm drains) by stormwater runoff. Permit coverage and erosion control measures must be in place prior to any clearing, grading or construction.

More information on the stormwater program may be found on Ecology's stormwater website at: http://www.ecy.wa.gov/programs/wq/stormwater/construction/. Please submit an application or contact **Ray Latham** at the Department of Ecology, (509) 575-2807, with questions about this permit.

Sincerely,

Gwen Clear

Gwen Clear
Environmental Review Coordinator
Central Regional Office
(509) 575-2012
crosepacoordinator@ecy.wa.gov

4936

Appendix B – Statement of Work for: The Parks Environmental Property Work, Kennewick, WA

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Statement of Work for: The Parks Environmental Property Work, Kennewick, WA

Summary of Tasks

The following tasks are included in the statement of work (SOW) for The Parks Environmental Property Work (EPW):

1. Visual assessment of potential wetland areas to determine which areas will need to have a wetland delineation, assessment and rating
2. Delineation, assessment and rating of any wetlands on the subject property area
3. Soil sampling and analysis for Arsenic (As), Lead (Pb), and organochlorine pesticides

The Parks EPW area entails approximately 158 acres of undeveloped land in southeast Kennewick (refer to Figure 1).

Wetlands

Washington Department of Ecology (Ecology) in correspondence to Kennewick Development Services dated December 7, 2015 indicated that there are ravines on the subject property that may contain wetlands. Ecology also noted there is a pond on the property that will need to have the existing wetland functions evaluated to determine buffer zones and origin and history of the pond investigated to determine if it is a jurisdictional wetland under local, state or federal law.

Visual Assessment of Potential Wetlands

Staff will walk over the site and note all locations (e.g., ravines, ditches, ponds, seeps, etc.) that potentially contain wetlands and warrant further evaluation. A field-check for hydric soils and/or saturation will be conducted using a push probe to a depth of ~20 inches or refusal due to rock bottom. Areas that are potential wetlands will be flagged for future delineation. Areas that are checked but determined not to be wetlands will be noted in an EPW field notebook along with characteristics observed and used to make the determination.

Delineation, Assessment and Rating of Wetlands

All wetlands on the subject property will be delineated following procedures outlined in Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), U.S. Army Corps of Engineers (September 2008). The approximate border of any wetlands on the site will be flagged to aid surveyors in mapping the areas in the near future. All wetlands on the subject property will be rated following

procedures outlined in Washington State Wetland Rating System For Eastern Washington, 2014 Update.

Soil Sampling

Soil sampling will be conducted at 13 pre-determined (approximate) sampling points stratified as shown on Figure 2. Two grab samples, approximately an 8 oz jar full each, will be collected from each of the 13 sampling points. Samples will be collected from approximately 6 inches below ground surface (bgs) and from approximately 12 inches bgs. Field duplicate samples will be collected from two of the predetermined sampling points for quality assurance purposes; one from a depth of 6 inches and the other from a depth of 12 inches. Soil samples will be obtained by using a hand-held soil auger. Soils will be placed into a decontaminated stainless steel bowl that is lined with clean aluminum foil for each sample. Soil samples will be shipped to a Washington State Department of Ecology accredited environmental laboratory for analyses.

Decontamination

The soil auger, stainless steel sampling bowls, and any scoops, trowels, etc. that may be used for the soil sampling will be pre-cleaned at EAS facilities and allowed to air dry at least 24 hours prior to use but no longer than two weeks before use. All sampling equipment that may contact the sample material will be cleaned in an Alconox™ solution and rinsed three (3) times in deionized water with a purity of 10 megohms or greater. This same procedure will be used to clean all soil sampling equipment after completion of the sampling.

The soil auger will be decontaminated in the field after each sample collection. Field decontamination will entail a “rough” wash in tap water, followed by washing the auger with a brush in Alconox and water, followed by rinsing three (3) times in deionized water.

Sample Documentation

All soil samples will be placed in certified clean 8 oz. jars and labeled with the following information:

- Client name (EAS)
- Project number (7033-12Parks)
- Sample ID (e.g., Parks-SS-01-06); where SS = soil sample, 01 = sampling point, and 06 = sampling depth in inches bgs.
- Date and time
- Analysis (EPA 8081B, As, Pb)
- Preservative ($\leq$ 6 °C)

Sample labels will be secured with clear tape. Sample information will also be recorded in the EPW field notebook along with location coordinates acquired from a hand-held global positioning system (GPS) for each sample location.

Sample Storage

Samples will be placed into a sample cooler with sufficient ice to ensure that the sample is maintained at a temperature of ≤ 6 °C. Samples may be temporarily stored in a designated refrigerator in the EAS laboratory until shipment if not shipped the same day collected.

Sample Shipment

All samples to be shipped for analyses will be documented on a Chain of Custody (CoC) form. The following information will be listed on the CoC:

- Company (EAS)
- Project number (7033-12Parks)
- Project manager (D. Phipps)
- Sampled by (D. Phipps)
- Sample Identification (e.g., Parks-SS-01-06)
- Date & time sampled
- Matrix (soil)
- Number of containers
- Analyses (EPA 8081B & EPA 6010C/200.7 for As & Pb)
- Box checked to indicate turnaround time in working days

The CoC will be signed and dated to relinquish samples to the lab. The original CoC will accompany the samples and the carbon copy retained by EAS for the project file.

Samples will be packed in bubble wrap and/or other protective material to ensure sample integrity to the lab. Samples will be placed in a cooler with the CoC and sufficient ice to ensure that the samples arrive to the laboratory at a temperature of ≤ 6 °C. Tape will be wrapped around the cooler, including any hinges, at least two times to ensure that the cooler does not come open during transit. A CoC security tape will be placed on the cooler by the sampler and integrity will be verified by the receiving laboratory technician to ensure that it was not compromised during shipping.

Reporting

A project report will be prepared to document the wetland findings (including Washington state wetland ratings for all wetlands on the site) and to document the soil sampling locations and analytical results. The analytical results will be compared to Model Toxics Control Act (MTCA) clean-up levels for each analyte to determine if further investigation and potentially clean-up actions are needed.

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Appendix C – Analytical Results and Sample Container Certificates of Compliance

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 15, 2016

Deborah Phipps
Environmental Assessment Services
350 Hills Street, #12
Richland, WA 99354

Re: Analytical Data for Project 7033-12 PARKS
Laboratory Reference No. 1603-054

Dear Deborah:

Enclosed are the analytical results and associated quality control data for samples submitted on March 4, 2016.

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

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

Case Narrative

Samples were collected on March 2, 2016 and received by the laboratory on March 4, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-01-06**					
Laboratory ID:	03-054-01					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*69*	*53-107*				
DCB	*87*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-01-12**					
Laboratory ID:	03-054-02					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*53-107*				
DCB	*87*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-02-06**					
Laboratory ID:	03-054-03					
alpha-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	59	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*64*	*53-107*				
DCB	*76*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-02-12**					
Laboratory ID:	03-054-04					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*66*	*53-107*				
DCB	*85*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-03-06**					
Laboratory ID:	03-054-05					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*53-107*				
DCB	*93*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-03-12**					
Laboratory ID:	03-054-06					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*53-107*				
DCB	*95*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-04-06**					
Laboratory ID:	03-054-07					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*53-107*				
DCB	*94*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-04-12**					
Laboratory ID:	03-054-08					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*68*	*53-107*				
DCB	*90*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-05-06**					
Laboratory ID:	03-054-09					
alpha-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	57	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*64*	*53-107*				
DCB	*78*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-05-12**					
Laboratory ID:	03-054-10					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*53-107*				
DCB	*93*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-06-06**					
Laboratory ID:	03-054-11					
alpha-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.9	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	59	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*53-107*				
DCB	*92*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-06-12**					
Laboratory ID:	03-054-12					
alpha-BHC	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.8	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	12	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	58	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*74*	*53-107*				
DCB	*93*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-07-06**					
Laboratory ID:	03-054-13					
alpha-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	57	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*77*	*53-107*				
DCB	*97*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-07-06A**					
Laboratory ID:	03-054-14					
alpha-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	57	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*53-107*				
DCB	*93*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-07-12**					
Laboratory ID:	03-054-15					
alpha-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	11	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	56	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*76*	*53-107*				
DCB	*97*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0309S1					
alpha-BHC	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
gamma-BHC	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
beta-BHC	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
delta-BHC	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
Heptachlor	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
Aldrin	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
gamma-Chlordane	**ND**	10	EPA 8081B	3-9-16	3-9-16	
alpha-Chlordane	**ND**	10	EPA 8081B	3-9-16	3-9-16	
4,4'-DDE	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endosulfan I	**ND**	5.0	EPA 8081B	3-9-16	3-9-16	
Dieldrin	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endrin	**ND**	10	EPA 8081B	3-9-16	3-9-16	
4,4'-DDD	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endosulfan II	**ND**	10	EPA 8081B	3-9-16	3-9-16	
4,4'-DDT	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endrin Aldehyde	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Methoxychlor	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endosulfan Sulfate	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Endrin Ketone	**ND**	10	EPA 8081B	3-9-16	3-9-16	
Toxaphene	**ND**	50	EPA 8081B	3-9-16	3-9-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*78*	*53-107*				
DCB	*96*	*59-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-054-15										
	MS	MSD	MS	MSD		MS	MSD				
gamma-BHC	**45.8**	**45.3**	50.0	50.0	ND	**92**	**91**	41-116	1	12	
Heptachlor	**40.9**	**39.7**	50.0	50.0	ND	**82**	**79**	41-115	3	13	
Aldrin	**43.6**	**41.6**	50.0	50.0	ND	**87**	**83**	44-118	5	15	
Dieldrin	**101**	**98.2**	125	125	ND	**80**	**79**	38-121	3	13	
Endrin	**101**	**98.9**	125	125	ND	**81**	**79**	46-118	2	15	
4,4'-DDT	**101**	**92.5**	125	125	ND	**81**	**74**	34-117	9	21	
Surrogate:											
TCMX						*75*	*73*	*53-107*			
DCB						*96*	*95*	*59-121*			

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-054-01					
Client ID:	**PARKS-SS-01-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**12**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-02					
Client ID:	**PARKS-SS-01-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.5**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-03					
Client ID:	**PARKS-SS-02-06**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**8.2**	5.9	6010C	3-11-16	3-14-16	
Lab ID:	03-054-04					
Client ID:	**PARKS-SS-02-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**7.5**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-05					
Client ID:	**PARKS-SS-03-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**13**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-06					
Client ID:	**PARKS-SS-03-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.0**	5.6	6010C	3-11-16	3-14-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-054-07					
Client ID:	**PARKS-SS-04-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**7.9**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-08					
Client ID:	**PARKS-SS-04-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**8.7**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-09					
Client ID:	**PARKS-SS-05-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**8.9**	5.7	6010C	3-11-16	3-14-16	
Lab ID:	03-054-10					
Client ID:	**PARKS-SS-05-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**7.9**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-054-11					
Client ID:	**PARKS-SS-06-06**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**9.3**	5.9	6010C	3-11-16	3-14-16	
Lab ID:	03-054-12					
Client ID:	**PARKS-SS-06-12**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**8.7**	5.8	6010C	3-11-16	3-14-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-054-13					
Client ID:	**PARKS-SS-07-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.1**	5.7	6010C	3-11-16	3-14-16	
Lab ID:	03-054-14					
Client ID:	**PARKS-SS-07-06A**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**8.8**	5.7	6010C	3-11-16	3-14-16	
Lab ID:	03-054-15					
Client ID:	**PARKS-SS-07-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**8.9**	5.6	6010C	3-11-16	3-14-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11&14-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0311SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Lead	6010C	**ND**	5.0

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11&14-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-096-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	5.0	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11&14-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-096-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**91.0**	91	**93.4**	93	3	
Lead	250	**226**	90	**225**	90	0	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-054
Project: 7033-12 PARKS

% MOISTURE

Date Analyzed: 3-9-16

Client ID	Lab ID	% Moisture
PARKS-SS-01-06	03-054-01	11
PARKS-SS-01-12	03-054-02	11
PARKS-SS-02-06	03-054-03	15
PARKS-SS-02-12	03-054-04	11
PARKS-SS-03-06	03-054-05	10
PARKS-SS-03-12	03-054-06	10
PARKS-SS-04-06	03-054-07	10
PARKS-SS-04-12	03-054-08	11
PARKS-SS-05-06	03-054-09	12
PARKS-SS-05-12	03-054-10	11
PARKS-SS-06-06	03-054-11	15
PARKS-SS-06-12	03-054-12	14
PARKS-SS-07-06	03-054-13	12
PARKS-SS-07-06A	03-054-14	12
PARKS-SS-07-12	03-054-15	10

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.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: EAS
Project Number: 7033-12 PARKS
Project Name: PARKS SOIL SAMPLING
Project Manager: Deborah Phipps
Sampled by: Deborah Phipps

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: 03-054

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	6010 (As, Pb)					% Moisture
1	PARKS-SS-01-06	3/2/16	0955	Soil											X							X					X
2	PARKS-SS-01-12		1005												X							X					X
3	PARKS-SS-02-06														X							X					X
4	PARKS-SS-02-12														X							X					X
5	PARKS-SS-03-06														X							X					X
6	PARKS-SS-03-12														X							X					X
7	PARKS-SS-04-06														X							X					X
8	PARKS-SS-04-12														X							X					X
9	PARKS-SS-05-06														X							X					X
10	PARKS-SS-05-12	3/2/16		Soil											X							X					X

	Signature	Company	Date	Time
Relinquished	Deborah Phipps	EAS	3/3/16	1300
Received	[illegible]	[illegible]	3/4/16	940
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Please email results to:
deborah.phipps@easbio.com
(Invoice to same email please)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

EXHIBIT 7

Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 03-054

Company: EAS
Project Number: 7033-12 PARKS
Project Name: PARKS SOIL SAMPLING
Project Manager: Deborah Phipps
Sampled by: Deborah Phipps

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 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	6010 (As, Pb)	% Moisture
11	PARKS-SS-06-06	3/2/16	1430	Soil											X							X	X
12	PARKS-SS-06-12	"	1440	"											X							X	X
13	PARKS-SS-07-06	"	1325	"											X							X	X
14	PARKS-SS-07-06A	"	1325	"											X							X	X
15	PARKS-SS-07-12	3/2/16	1335	Soil											X							X	X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Deborah Phipps	EAS	3/3/16	1300	
Received		Courier Fed Ex	3/4/16	940	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 15, 2016

Deborah Phipps
Environmental Assessment Services
350 Hills Street, #12
Richland, WA 99354

Re: Analytical Data for Project 7033-12 PARKS
Laboratory Reference No. 1603-053

Dear Deborah:

Enclosed are the analytical results and associated quality control data for samples submitted on March 4, 2016.

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

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

Case Narrative

Samples were collected on March 2, 2016 and received by the laboratory on March 4, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-08-06**					
Laboratory ID:	03-053-01					
alpha-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	56	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*60*	*53-107*				
DCB	*74*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-08-12**					
Laboratory ID:	03-053-02					
alpha-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**7.8**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	56	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*62*	*53-107*				
DCB	*74*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-09-06**					
Laboratory ID:	03-053-03					
alpha-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	61	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*64*	*53-107*				
DCB	*78*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-09-12**					
Laboratory ID:	03-053-04					
alpha-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	61	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*53-107*				
DCB	*91*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-09-12A**					
Laboratory ID:	03-053-05					
alpha-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	6.1	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	61	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*74*	*53-107*				
DCB	*95*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-10-06**					
Laboratory ID:	03-053-06					
alpha-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	57	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*53-107*				
DCB	*92*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-10-12**					
Laboratory ID:	03-053-07					
alpha-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.6	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	56	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*53-107*				
DCB	*90*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-11-06**					
Laboratory ID:	03-053-08					
alpha-BHC	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.3	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	53	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*69*	*53-107*				
DCB	*84*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-11-12**					
Laboratory ID:	03-053-09					
alpha-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	57	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*69*	*53-107*				
DCB	*88*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-12-06**					
Laboratory ID:	03-053-10					
alpha-BHC	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.8	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	12	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	12	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	58	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*68*	*53-107*				
DCB	*85*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-12-12**					
Laboratory ID:	03-053-11					
alpha-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	57	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*53-107*				
DCB	*88*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-13-06**					
Laboratory ID:	03-053-12					
alpha-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	57	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*66*	*53-107*				
DCB	*83*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PARKS-SS-13-12**					
Laboratory ID:	03-053-13					
alpha-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.7	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	11	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	11	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	57	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*68*	*53-107*				
DCB	*85*	*59-121*				

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0308S1					
alpha-BHC	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
gamma-BHC	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
beta-BHC	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
delta-BHC	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
Heptachlor	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
Aldrin	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
gamma-Chlordane	**ND**	10	EPA 8081B	3-8-16	3-8-16	
alpha-Chlordane	**ND**	10	EPA 8081B	3-8-16	3-8-16	
4,4'-DDE	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endosulfan I	**ND**	5.0	EPA 8081B	3-8-16	3-8-16	
Dieldrin	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endrin	**ND**	10	EPA 8081B	3-8-16	3-8-16	
4,4'-DDD	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endosulfan II	**ND**	10	EPA 8081B	3-8-16	3-8-16	
4,4'-DDT	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endrin Aldehyde	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Methoxychlor	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endosulfan Sulfate	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Endrin Ketone	**ND**	10	EPA 8081B	3-8-16	3-8-16	
Toxaphene	**ND**	50	EPA 8081B	3-8-16	3-8-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*87*	*53-107*				
DCB	*105*	*59-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-053-01										
	MS	MSD	MS	MSD		MS	MSD				
gamma-BHC	**38.2**	**36.8**	50.0	50.0	ND	**76**	**74**	41-116	4	12	
Heptachlor	**34.9**	**33.8**	50.0	50.0	ND	**70**	**68**	41-115	3	13	
Aldrin	**37.5**	**36.2**	50.0	50.0	ND	**75**	**72**	44-118	4	15	
Dieldrin	**86.4**	**83.7**	125	125	ND	**69**	**67**	38-121	3	13	
Endrin	**89.0**	**86.9**	125	125	ND	**71**	**69**	46-118	2	15	
4,4'-DDT	**92.6**	**90.3**	125	125	ND	**74**	**72**	34-117	3	21	
Surrogate:											
TCMX						*66*	*64*	*53-107*			
DCB						*79*	*76*	*59-121*			

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-053-01					
Client ID:	**PARKS-SS-08-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**11**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-053-02					
Client ID:	**PARKS-SS-08-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**11**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-053-03					
Client ID:	**PARKS-SS-09-06**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**9.8**	6.1	6010C	3-11-16	3-14-16	
Lab ID:	03-053-04					
Client ID:	**PARKS-SS-09-12**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**9.4**	6.1	6010C	3-11-16	3-14-16	
Lab ID:	03-053-05					
Client ID:	**PARKS-SS-09-12A**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**9.4**	6.1	6010C	3-11-16	3-14-16	
Lab ID:	03-053-06					
Client ID:	**PARKS-SS-10-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**11**	5.7	6010C	3-11-16	3-14-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-053-07					
Client ID:	**PARKS-SS-10-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.6**	5.6	6010C	3-11-16	3-14-16	
Lab ID:	03-053-08					
Client ID:	**PARKS-SS-11-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**10**	5.3	6010C	3-11-16	3-14-16	
Lab ID:	03-053-09					
Client ID:	**PARKS-SS-11-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**11**	5.7	6010C	3-11-16	3-14-16	
Lab ID:	03-053-10					
Client ID:	**PARKS-SS-12-06**					
Arsenic	**ND**	12	6010C	3-11-16	3-14-16	
Lead	**9.3**	5.8	6010C	3-11-16	3-14-16	
Lab ID:	03-053-11					
Client ID:	**PARKS-SS-12-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.9**	5.7	6010C	3-11-16	3-14-16	
Lab ID:	03-053-12					
Client ID:	**PARKS-SS-13-06**					
Arsenic	**ND**	11	6010C	3-11-16	3-14-16	
Lead	**9.9**	5.7	6010C	3-11-16	3-14-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-053-13					
Client ID:	**PARKS-SS-13-12**					
Arsenic	**ND**	11	6010C	3-11-16	3-11-16	
Lead	**6.7**	5.7	6010C	3-11-16	3-11-16	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0311SM2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Lead	6010C	**ND**	5.0

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-053-13

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Lead	**5.90**	**8.00**	30	5.0	C

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 3-11-16
Date Analyzed: 3-11-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-053-13

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**100**	100	**98.2**	98	2	
Lead	250	**238**	93	**237**	92	1	

Date of Report: March 15, 2016
Samples Submitted: March 4, 2016
Laboratory Reference: 1603-053
Project: 7033-12 PARKS

% MOISTURE

Date Analyzed: 3-8-16

Client ID	Lab ID	% Moisture
PARKS-SS-08-06	03-053-01	11
PARKS-SS-08-12	03-053-02	10
PARKS-SS-09-06	03-053-03	18
PARKS-SS-09-12	03-053-04	18
PARKS-SS-09-12A	03-053-05	18
PARKS-SS-10-06	03-053-06	12
PARKS-SS-10-12	03-053-07	11
PARKS-SS-11-06	03-053-08	6
PARKS-SS-11-12	03-053-09	12
PARKS-SS-12-06	03-053-10	13
PARKS-SS-12-12	03-053-11	13
PARKS-SS-13-06	03-053-12	13
PARKS-SS-13-12	03-053-13	12

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.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

EXHIBIT 7

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: EAS
Project Number: 7033-12 PARKS
Project Name: PARKS SOIL SAMPLING
Project Manager: Deborah Phipps
Sampled by: Deborah Phipps

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: 03-053

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	6010 (As, Pb)					% Moisture
1	PARKS-SS-08-06	3/2/16	1150	Soil											X							X					X
2	PARKS-SS-08-12		1200												X							X					X
3	PARKS-SS-09-06		1405												X							X					X
4	PARKS-SS-09-12		1415												X							X					X
5	PARKS-SS-09-12A		1415												X							X					X
6	PARKS-SS-10-06		1305												X							X					X
7	PARKS-SS-10-12		1315												X							X					X
8	PARKS-SS-11-06		1555												X							X					X
9	PARKS-SS-11-12		1605												X							X					X
10	PARKS-SS-12-06	3/2/16	1620	Soil											X							X					X

	Signature	Company	Date	Time
Relinquished	Deborah Phipps	EAS	3/3/16	1300
Received		OnSite Env	3/4/16	940
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

EXHIBIT 7

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Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: EAS
Project Number: 7033-12 PARKS
Project Name: PARKS SOIL SAMPLING
Project Manager: Deborah Phipps
Sampled by: Deborah Phipps

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: 03-053

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	GOLD (As, Pb)	% Moisture
11	PARKS-SS-12-12	3/2/16	1630	Soil											X							X	X
12	PARKS-SS-13-06	3/2/16	1655	Soil											X							X	X
13	PARKS-SS-13-12	3/2/16	1705	Soil											X							X	X

Deborah Phipps 3/3/16

	Signature	Company	Date	Time
Relinquished	Deborah Phipps	EAS	3/3/16	1300
Received	Jennifer Ev		3/4/16	940
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Please email results to:
deborah.phipps@easbio.com
(Invoice to same email please)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

7033-12 The Rocks (8oz. jars)

EXHIBIT 7

PRECLEANED CERTIFIED

Certificate of Compliance

The enclosed containers have been chemically cleaned by using the specified USEPA cleaning procedures for low level chemical analysis. Representative containers have been tested by independent certified laboratories for their appropriate use. ESS containers meet and exceed the required detection limits established by the USEPA in SPECIFICATIONS AND GUIDANCE FOR CONTAMINANT-FREE SAMPLE CONTAINERS (OSWER Directive #9240.0-05A).

EXTRACTABLE ORGANIC COMPOUNDS (PROCEDURE 1)

Analyte	Quantitation Limit (ug/L)
PESTICIDES/PCB'S	
Alpha-BHC	<0.005
Beta-BHC	<0.005
Delta-BHC	<0.005
Gamma-BHC (Lindane)	<0.005
Heptachlor	<0.005
Aldrin	<0.005
Heptachlor Epoxide	<0.005
Endosulfan I	<0.005
Dieldrin	<0.005
4,4'-DDE	<0.005
Endrin	<0.005
Endosulfan II	<0.005
4,4'-DDD	<0.005
Endosulfan Sulfate	<0.005
4,4'-DDT	<0.005
Methoxychlor	<0.005
Endrin Ketone	<0.005
Endrin Aldehyde	<0.005
Alpha-Chlordane	<0.005
Gamma-Chlordane	<0.005
Toxaphene	<0.005
Aroclor-1016	<0.2
Aroclor-1221	<0.2
Aroclor-1232	<0.2
Aroclor-1242	<0.2
Aroclor-1248	<0.2
Aroclor-1254	<0.2
Aroclor-1260	<0.2
Aroclor-1262	<0.2
Aroclor-1268	<0.2
SEMIVOLATILES	
Phenol	<1
bis-(2-Chloroethyl) ether	<1
bis-(2-Chloroisopropyl) ether	<1
2-Chlorophenol	<1
2-Methylphenol	<1
2,2'-Oxybis-(1-Chloropropane)	<1
4-Methylphenol	<1
N-Nitroso-di-n-propylamine	<1
Hexachloroethane	<1
Nitrobenzene	<1
Isophorone	<1
2-Nitrophenol	<1
2,4-Dimethylphenol	<1
bis-(2-Chloroethoxy) methane	<1
2,4-Dichlorophenol	<1
1,2,4-Trichlorobenzene	<1
Naphthalene	<0.2
4-Chloroaniline	<1
Hexachlorobutadiene	<1
4-Chloro-3-Methylphenol	<1
2-Methylnaphthalene	<0.2
Hexachlorocyclopentadiene	<1
2,4,6-Tricholrophenol	<1
2,4,5-Tricholrophenol	<1
1,2-Diphenylhydrazene	<1
Carbazole	<1
2-Chloronaphthalene	<0.15
2-Nitroaniline	<1
Dimethylphthalate	<1
Acenaphthylene	<0.2
2,6-Dinitrotoluene	<1
3-Nitroaniline	<1
Acenaphthene	<0.2
2,4-Dinitrophenol	<5
4-Nitrophenol	<5
Dibenzofuran	<1
2,4-Dinitrotoluene	<1
Diethylphthalate	<1
4-Chlorophenyl-Phenylether	<1
Flourene	<0.15
4-Nitroaniline	<1.5
4,6-Dinitro-2-Methyphenol	<1
N-Nitrosodiphenylamine	<1
N-Nitrosodimethylamine	<1
4-Bromophenyl-Phenylether	<1
Hexachlorobenzene	<1
Pentachlorophenol	<1
Phenanthrene	<0.2
Anthracene	<0.1
Di-n-Butylphthalate	<0.2
Fluoroanthene	<0.1
Pyrene	<0.15
Butylbenzylphthalate	<1
1,2'-Dichlorobenzene	<1
1,3'-Dichlorobenzene	<1
1,4'-Dichlorobenzene	<1
3,3'-Dichlorobenzidine	<1
Benzo[a]anthracene	<0.15
Chyrsene	<0.1
bis-(2-Ethylhexyl) Phthalate	<1
Di-n-Octylphthalate	<1
Benzo[b]flouranthene	<0.2
Benzo[k]flouranthene	<0.15
Benzo[a]pyrene	<0.15
Indeno(1,2,3-cd)pyrene	<0.2
Dibenzo[a,h]anthracene	<0.15
Benzo[g,h,i]perylene	<0.15
Benzoic Acid	<5
Benzyl Alcohol	<1
TPH Diesel	**<50.00**

PURGEABLE VOLATILE ORGANIC COMPOUNDS (PROCEDURE 2)

Analyte	Quantitation Limit (ug/L)
Acetone	<2.0
Benzene	<0.1
Bromoform	<0.1
Bromobenzene	<0.1
Bromochloromethane	<0.1
Bromodichloromethane	<0.1
Bromomethane	<0.1
z-Butylbenzene	<0.1
n-Butylbenzene	<0.1
sec-Butylbenzene	<0.1
tert-Butylbenzene	<0.1
Carbon Tetrachloride	<0.1
Carbon Disulfide	<0.1
Chlorobenzene	<0.1
Chloroethane	<0.1
Chloromethane	<0.1
2-Chlorotoluene	<0.1
4-Chlorotoluene	<0.1
2,4-Chlorotoluene	<0.2
Chloroform	<0.1
Dibromomethane	<0.1
1,2-Dibro 3-Chloropropane	<0.1
Dibromochloromethane	<0.1
1,2-Dibromoethane (EDB)	<0.1
1,2-Dichlorobenzene	<0.1
1,3-Dichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.1
Dichlorodifluoromethane	<0.1
1,1-Dichloroethane	<0.1
1,2-Dichloroethane	<0.1
1,1-Dichloroethene	<0.1
cis-1,2-Dichloroethene	<0.1
trans-1,2-Dichloroethene	<0.1
1,2-Dichloropropane	<0.1
1,3-Dichloropropane	<0.1
2,2-Dichloropropane	<0.1
1,1-Dichloropropene	<0.1
cis-1,3-Dichloropropene	<0.1
trans-1,3-Dichloropropene	<0.1
Ethylbenzene	<0.1
2-Hexanone	<0.5
Hexachlorobutadiene	<0.1
Isopropylbenzene	<0.1
4-Isopropyltoluene	<0.1
Methylene Chloride	<0.5
Napthalene	<0.5
Propylbenzene	<0.1
Styrene	<0.1
1,1,1,2-Tetrachloroethane	<0.1
1,1,2,2-Tetrachloroethane	<0.1
Tetrachloroethene	<0.1
Toluene	<0.1
1,2,3-Trichlorobenzene	<0.1
1,2,4-Trichlorobenzene	<0.1
1,1,1-Trichloroethane	<0.1
1,1,2-Trichloroethane	<0.1
Trichloroethene	<0.1
Trichlorofluoromethane	<0.1
Trichlorotrifluorcethane	<0.1
1,2,3-Trichloropropane	<0.1
1,2,3-Trimethylbenzene	<0.1
1,2,4-Trimethylbenzene	<0.1
1,3,5-Trimethylbenzene	<0.1
Vinyl Acetate	<0.5
Vinyl Chloride	<0.1
Methyl-Tert-Butyl-Ether	<0.1
4-Methyl-2-pentanone	<0.5
ethyl-tert-butylether	<0.1
tert-amylmethylether	<0.1
diisopropylether	<0.1
tert-butanol	<0.1
o-xylene	<0.1
m-xylene(1)	<0.2
p-xylene(1)	<0.2
TPH as Gasoline	**<50.00**

METALS, CYANIDE & SULFIDE COMPOUNDS (PROCEDURE 3)

Analyte	Detection Limit (ug/L)
Aluminum	<0.5
Antimony	<0.03
Arsenic	<0.01
Barium	<0.03
Beryllium	<0.01
Cadmium	<0.03
Chromium	<0.06
Copper	<0.08
Iron	<3
Lead	<0.05
Magnesium	<4
Manganese	<0.1
Mercury	<0.2
Molybdenum	<0.5
Nickel	<0.05
Potassium	<50
Selenium	<0.5
Silver	<0.02
Sodium	<6
Thallium	<0.09
Zinc	<0.3
Flouride	<100
Nitrate + Nitrite	<50

This certificate only applies to the enclosed containers and not to any added preservative (except HCL vials). ESS uses only Analytical Grade chemicals. All ESS PrePreserved® containers include a case label with the reagent manufacturer and their lot number. Chemical C of A's can be found online using their lot number. For additional assistance or questions, call 800 233-8424 or email at: essorders@essvial.com.

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011416

7033-12 The Parks (8 oz Jars)

EXHIBIT 7

PRECLEANED CERTIFIED

Certificate of Compliance

The enclosed containers have been chemically cleaned by using the specified USEPA cleaning procedures for low level chemical analysis. Representative containers have been tested by independent certified laboratories for their appropriate use. ESS containers meet and exceed the required detection limits established by the USEPA in SPECIFICATIONS AND GUIDANCE FOR CONTAMINANT-FREE SAMPLE CONTAINERS (OSWER Directive #9240.0-05A).

EXTRACTABLE ORGANIC COMPOUNDS (PROCEDURE 1)

Analyte	Quantitation Limit (ug/L)
PESTICIDES/PCB'S	
Alpha-BHC	<0.005
Beta-BHC	<0.005
Delta-BHC	<0.005
Gamma-BHC (Lindane)	<0.005
Heptachlor	<0.005
Aldrin	<0.005
Heptachlor Epoxide	<0.005
Endosulfan I	<0.005
Dieldrin	<0.005
4,4'-DDE	<0.005
Endrin	<0.005
Endosulfan II	<0.005
4,4'-DDD	<0.005
Endosulfan Sulfate	<0.005
4,4'-DDT	<0.005
Methoxychlor	<0.005
Endrin Ketone	<0.005
Endrin Aldehyde	<0.005
Alpha-Chlordane	<0.005
Gamma-Chlordane	<0.005
Toxaphene	<0.005
Aroclor-1016	<0.2
Aroclor-1221	<0.2
Aroclor-1232	<0.2
Aroclor-1242	<0.2
Aroclor-1248	<0.2
Aroclor-1254	<0.2
Aroclor-1260	<0.2
Aroclor-1262	<0.2
Aroclor-1268	<0.2
SEMIVOLATILES	
Phenol	<1
bis-(2-Chloroethyl) ether	<1
bis-(2-Chloroisopropyl) ether	<1
2-Chlorophenol	<1
2-Methylphenol	<1
2,2'-Oxybis-(1-Chloropropane)	<1
4-Methylphenol	<1
N-Nitroso-di-n-propylamine	<1
Hexachloroethane	<1
Nitrobenzene	<1
Isophorone	<1
2-Nitrophenol	<1
2,4-Dimethylphenol	<1
bis-(2-Chloroethoxy) methane	<1
2,4-Dichlorophenol	<1
1,2,4-Trichlorobenzene	<1
Naphthalene	<0.2
4-Chloroaniline	<1
Hexachlorobutadiene	<1
4-Chloro-3-Methylphenol	<1
2-Methylnaphthalene	<0.2
Hexachlorocyclopentadiene	<1
2,4,6-Tricholrophenol	<1
2,4,5-Tricholrophenol	<1
1,2-Diphenylhydrazene	<1
Carbazole	<1
2-Chloronaphthalene	<0.15
2-Nitroaniline	<1
Dimethylphthalate	<1
Acenaphthylene	<0.2
2,6-Dinitrotoluene	<1
3-Nitroaniline	<1
Acenaphthene	<0.2
2,4-Dinitrophenol	<5
4-Nitrophenol	<5
Dibenzofuran	<1
2,4-Dinitrotoluene	<1
Diethylphthalate	<1
4-Chlorophenyl-Phenylether	<1
Flourene	<0.15
4-Nitroaniline	<1.5
4,6-Dinitro-2-Methyphenol	<1
N-Nitrosodiphenylamine	<1
N-Nitrosodimethylamine	<1
4-Bromophenyl-Phenylether	<1
Hexachlorobenzene	<1
Pentachlorophenol	<1
Phenanthrene	<0.2
Anthracene	<0.1
Di-n-Butylphthalate	<0.2
Fluoroanthene	<0.1
Pyrene	<0.15
Butylbenzylphthalate	<1
1,2'-Dichlorobenzene	<1
1,3'-Dichlorobenzene	<1
1,4'-Dichlorobenzene	<1
3,3'-Dichlorobenzidine	<1
Benzo[a]anthracene	<0.15
Chyrsene	<0.1
bis-(2-Ethylhexyl) Phthalate	<1
Di-n-Octylphthalate	<1
Benzo[b]flouranthene	<0.2
Benzo[k]flouranthene	<0.15
Benzo[a]pyrene	<0.15
Indeno(1,2,3-cd)pyrene	<0.2
Dibenzo[a,h]anthracene	<0.15
Benzo[g,h,i]perylene	<0.15
Benzoic Acid	<5
Benzyl Alcohol	<1
TPH Diesel	**<50.00**

PURGEABLE VOLATILE ORGANIC COMPOUNDS (PROCEDURE 2)

Analyte	Quantitation Limit (ug/L)
Acetone	<2.0
Benzene	<0.1
Bromoform	<0.1
Bromobenzene	<0.1
Bromochloromethane	<0.1
Bromodichloromethane	<0.1
Bromomethane	<0.1
z-Butylbenzene	<0.1
n-Butylbenzene	<0.1
sec-Butylbenzene	<0.1
tert-Butylbenzene	<0.1
Carbon Tetrachloride	<0.1
Carbon Disulfide	<0.1
Chlorobenzene	<0.1
Chloroethane	<0.1
Chloromethane	<0.1
2-Chlorotoluene	<0.1
4-Chlorotoluene	<0.1
2,4-Chlorotoluene	<0.2
Chloroform	<0.1
Dibromomethane	<0.1
1,2-Dibro 3-Chloropropane	<0.1
Dibromochloromethane	<0.1
1,2-Dibromoethane (EDB)	<0.1
1,2-Dichlorobenzene	<0.1
1,3-Dichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.1
Dichlorodifluoromethane	<0.1
1,1-Dichloroethane	<0.1
1,2-Dichloroethane	<0.1
1,1-Dichloroethene	<0.1
cis-1,2-Dichloroethene	<0.1
trans-1,2-Dichloroethene	<0.1
1,2-Dichloropropane	<0.1
1,3-Dichloropropane	<0.1
2,2-Dichloropropane	<0.1
1,1-Dichloropropene	<0.1
cis-1,3-Dichloropropene	<0.1
trans-1,3-Dichloropropene	<0.1
Ethylbenzene	<0.1
2-Hexanone	<0.5
Hexachlorobutadiene	<0.1
Isopropylbenzene	<0.1
4-Isopropyltoluene	<0.1
Methylene Chloride	<0.5
Napthalene	<0.5
Propylbenzene	<0.1
Styrene	<0.1
1,1,1,2-Tetrachloroethane	<0.1
1,1,2,2-Tetrachloroethane	<0.1
Tetrachloroethene	<0.1
Toluene	<0.1
1,2,3-Trichlorobenzene	<0.1
1,2,4-Trichlorobenzene	<0.1
1,1,1-Trichloroethane	<0.1
1,1,2-Trichloroethane	<0.1
Trichloroethene	<0.1
Trichlorofluoromethane	<0.1
Trichlorotrifluoroethane	<0.1
1,2,3-Trichloropropane	<0.1
1,2,3-Trimethylbenzene	<0.1
1,2,4-Trimethylbenzene	<0.1
1,3,5-Trimethylbenzene	<0.1
Vinyl Acetate	<0.5
Vinyl Chloride	<0.1
Methyl-Tert-Butyl-Ether	<0.1
4-Methyl-2-pentanone	<0.5
ethyl-tert-butylether	<0.1
tert-amylmethylether	<0.1
diisopropylether	<0.1
tert-butanol	<0.1
o-xylene	<0.1
m-xylene(1)	<0.2
p-xylene(1)	<0.2
TPH as Gasoline	**<50.00**

METALS, CYANIDE & SULFIDE COMPOUNDS (PROCEDURE 3)

Analyte	Detection Limit (ug/L)
Aluminum	<0.5
Antimony	<0.03
Arsenic	<0.01
Barium	<0.03
Beryllium	<0.01
Cadmium	<0.03
Chromium	<0.06
Copper	<0.08
Iron	<3
Lead	<0.05
Magnesium	<4
Manganese	<0.1
Mercury	<0.2
Molybdenum	<0.5
Nickel	<0.05
Potassium	<50
Selenium	<0.5
Silver	<0.02
Sodium	<6
Thallium	<0.09
Zinc	<0.3
Flouride	<100
Nitrate + Nitrite	<50

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Geotechnical Investigation/ Geohazards Assessment Report

Pahlisch Homes – The Parks at Thompson Hill
Kennewick, Washington

June 8, 2015

Prepared by:

HDJ Design Group, PLLC
6115 Burden Boulevard, Suite E
Pasco, Washington 99301
(509) 547-5119

HDJ Design Group Project No. 3949-00

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APPENDIX A

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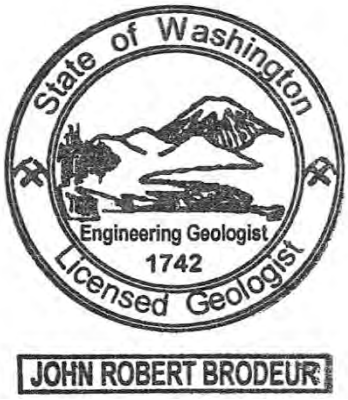
CERTIFICATE OF ENGINEER

Geotechnical Investigation Report
Pahlisch Homes – The Parks at Thompson Hill
Kennewick, Washington

The technical information and data contained in this report were prepared under the direction and supervision of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by:



John R. Brodeur, PE, LEG
Geotechnical Engineer, Geophysicist

And

Adam Swenson, PE
Geotechnical Engineer

1.0 INTRODUCTION

1.1 Project Background

HDJ Design Group, PLLC (HDJ) is pleased to present the results of our geotechnical investigation and geohazards assessment for "The Parks at Thompson Hill" Planned Residential Development (PRD) located on the west side of S. Sherman Street, across from the intersection of W. Hildebrand Boulevard, in Kennewick, Washington (site). The site is shown in the attached Appendix A, Figure 1: Site Location Map.

The Parks at Thompson Hill is a proposed residential development by Pahlisch Homes consisting of approximately 150 acres that will be divided into several development phases. This geotechnical report covers the first phase of the development, encompassing 20 acres located in the southeast portion of the larger 150 parcel.

HDJ's investigation of this 20-acre portion of the site was accomplished by excavating eleven exploration test pits to allow HDJ field personnel to observe, sample, and test the soil to assess subsurface conditions.

This report presents the results of our geotechnical investigation and geohazards assessment for this site. The report provides a description of site soils and soil profiles, a review of the regional and local geology, and a description of the local drainage systems and groundwater regime. This information was used to conduct a geohazards assessment of the site which is focused on the erosion hazards associated with the natural drainages at the site. Geotechnical recommendations and specifications are provided for construction of the development and for constructing homes in the development in a manner that is consistent with standard International Building Code (IBC) criteria.

1.2 Scope of Services

HDJ's geotechnical investigation scope of services for the project was limited to the following:

- **Geologic and Geotechnical Literature Review:** Relevant, readily available, geologic information on the site and surrounding area was reviewed for information regarding geologic conditions and hazards at or near the site.
- **Surface mapping:** Surface slopes, drainage, and soil conditions on the property were measured and assessed for potential impacts on the proposed development; in particular, the impact on the site grading plans. Surface features generally reflect the underlying bedrock topography in this area.
- **Subsurface Exploration and Soil Sampling:** Eleven exploration test pits were excavated at the site to observe, sample, and test the soil to determine subsurface conditions. The test pits were excavated using a trackhoe. The test pits were logged, representative soil samples were collected, in-situ soil testing was conducted, and soil moisture conditions were determined by our geotechnical staff.
- **Laboratory Testing:** Soil samples collected during the investigation were returned to the geotechnical laboratory for characterization, classification, and testing using the Unified Soil Classification System, along with soil descriptions derived from the Burmister soil classification method. Laboratory tests included natural moisture contents and grain-size analysis on selected soil samples.
- **Geotechnical Engineering Studies:** The data collected during the subsurface exploration, literature research, and laboratory testing work was analyzed, and specific

geotechnical design parameters and construction recommendations were developed for the proposed project.

- **Report Preparation:** This report contains the results of HDJ's site exploration work, including a summary of the site soil profile and underlying geology. This report includes a geohazards assessment as well as geotechnical specifications for site grading and development, and general geotechnical specifications for the design and construction of homes in the development.

2.0 SITE INVESTIGATION

2.1 Field Investigation

HDJ's field investigation of the site included the excavation of eleven exploration test pits at locations shown on Figure 2 – Site Exploration and Development Map. The test pits allowed us to examine and sample the soils, perform in-situ soil testing, and assess the subsurface conditions while developing and understanding of the near-surface soil profile.

Eleven exploration test pit logs, designated as TP-1 through TP-11, are provided in Appendix B.

Test pits were excavated to a maximum depth of 17 feet below the ground surface (bgs), although most test pits reached refusal on bedrock well above the 17-foot depth. The eleven test pits were spread around the site to obtain appropriate spatial coverage across the site.

2.2 Literature Review

The literature review for this project included a review of references on the geology of the area and the collection and review of nearby groundwater well logs obtained from the State of Washington database.

Information about the basic geology of the Pasco Basin is provided in Lindsey (1996) and a discussion of the underlying Miocene-age basalt bedrock structure is provided in Reidel (et al., 1994).

Groundwater well logs from the area all show shallow bedrock with groundwater being drawn from one of the interbedded sand layers between basalt flows. One domestic well log from a well located just west of the site shows a typical subsurface soil profile with basalt bedrock at about 10 feet bgs.

3.0 LABORATORY TESTING AND ANALYSIS

Soil samples collected during the field investigation were returned to our geotechnical laboratory for characterization, classification, and testing. Soil testing for this project included dry sieve analyses to determine the grain-size distribution of select soil samples. Soil characterization and classification results are shown on the test pit logs. The test pit logs and Sieve Analysis Plot Results are provided in Appendix B.

4.0 SITE CONDITIONS

4.1 Regional and Local Geology

The site is located near the center portion of a valley located between tectonic uplifts in the basalt bedrock. To the north of the site, Thompson Hill is located on the axis of a southeast-to northwest-trending anticlinal fold belt in the basalt bedrock that underlies the area. This fold belt extends from Wallula Gap at the southeast end to Rattlesnake Mountain.

South of the site, the underlying bedrock rises as a monocline that eventually levels out at or south of the Interstate 82 (I-82). The valley that exists on the site is a synclinal depression in the basalt bedrock with the approximate center or axis of the synclinal depression located just north of the site.

The synclinal depression in the bedrock is the substructure that formed the local valley. This valley and the anticlinal uplift of Thompson Hill are part of a series of parallel fold belts that were created by northeast to southwest compression of the continental plate. Basalt bedrock within the fold belt is composed of the Elephant Mountain and Pomona members of the Miocene-age (8 - 17 Ma [age]) Columbia River Basalt Group (CRBG).

Most of the folding and tectonic activity that created the fold belt occurred during the Miocene time (greater than 5 M ybp [millions of years since beginning of interval]) when the basalt lava flows were deposited. This area is now considered to be tectonically quiet and stable.

Ringold Formation (Ringold) sediments typically overlay the basalt bedrock; however, the Ringold sediments were deposited in valleys. In contrast, this site is located above the deposition elevation of most Ringold sediments.

The Ringold sediments that we do find at this site are the carbonate cemented silt and massive carbonate (limestone) that formed at the top of the Ringold just before the Pleistocene glaciation. These carbonate sediments were formed under drying lakebed conditions where annual runoff accumulates in the valleys and evaporates leaving the evaporite salts and carbonate.

The carbonate unit at the top of the Ringold is called the Plio-Pleistocene unit, or the Cold Creek member. The Plio-Pleistocene carbonate unit can be seen sitting on top of bedrock at the KID canal crossing over I-82 just west of this site. This unit can be followed all along the base of the KID canal as the canal extends around the north side of Thompson Hill.

This same carbonate unit was found in most of the test pits at the site as a thin layer covering the bedrock or colluvial gravel layer on top of bedrock. This carbonate layer can seal the bedrock and cause groundwater to be perched on top of the bedrock.

4.2 Site Description and Surface Conditions

The site was previously farmed and portions of the site contained a cherry orchard. The development area was not irrigated this year and currently consists of short brush and grass.

The surface soil at the site is a combination of late-Pleistocene (Holocene) glacio-fluvial (water deposited) and eolian (wind deposited) fine sand with some silt.

The surface topography has rolling hills with developed wash channels that drain from the south to the north toward a main drainage in the center of the valley that trends toward a westerly direction.

Figure 3 is extracted from the City of Kennewick Critical Areas Map and shows areas of the site that are designated as Geologically Hazardous Areas due to the erosion hazards or to the presence of slopes that are greater than 15%. Please note that two of the south-to-north drainage channels drain onto the property as shown by the green stippling pattern. These drainages probably developed in the late Pleistocene when flood waters backed up and flowed over the slope from the south.

Those drainages remain today but have not produced any runoff in the recent past. All three drainages are now blocked by the Interstate and by the KID canal adjacent to and down-slope of the Interstate. The drainages level out toward the north end of the site near the center of the valley.

4.3 Site Soil Profile

The basic soil profile at this site consists of near-surface fine sand and silt that sits on top of carbonate-cemented basalt bedrock, or colluvial basalt cobble and gravel. This profile is relatively consistent across the site; however, the depth to bedrock varies in an irregular manner from 2 to 17 feet bgs.

The primary, near-surface soil that we encountered at the site is composed of light olive-brown, fine sand and silt. This soil is classified between **SM** for silty sand and **ML** for sandy silt. Two samples of this soil type were subjected to sieve analysis and showed silt content of 21 percent and 57 percent. The soil samples were in a dry condition with no evidence of any subsurface water sources.

The near-surface silty sand soil is cemented with carbonate cementation and the degree of cementation varies significantly as indicated by a large variation observed in the dynamic penetrometer (DP) measures of soil strength.

Dynamic penetrometer (DP) measures of soil strength in the test pits typically exceeded 10 standard blows, indicating the soil is in a medium dense condition. At this site, six DP test horizons showed DP measures that exceeded 20 standard blows, indicating these soil layers are in a dense condition. The primary reason for the high DP measures of the sandy silt soil is that the high-strength layers are highly cemented with carbonate cementation. This variability in the soil density and soil strength (DP) is the result of the soil deposition mechanism and the development of the pedogenic carbonate cementation.

The near-surface silty sand soil is a combination of late Pleistocene lacustrine soil and post-Pleistocene eolian (wind deposited) soil.

The late Pleistocene lacustrine soil is primarily silt that was deposited under deep-water flood conditions on a temporary lake bottom after a significant flood episode.

In some areas of Kennewick, this late Pleistocene lacustrine silt soil formed as a loose soil matrix that is held together by carbonate cementation. Under those conditions, if the soil becomes wet and the carbonate cementation breaks down, the low-density soil can collapse into a higher density. This soil is, therefore, referred to as collapsible silt. Collapsible silt was not encountered in our test pit explorations.

The post-Pleistocene eolian soil is wind-deposited fine sand and silt that was deposited on and mixed with, any late-Pleistocene lacustrine soil at the site.

The depth to bedrock is of primary concern for development of the site as it impacts the design of the site grading, the design and construction of the sewage collection system, as well as the design of the stormwater infiltration system. Bedrock depth is indicated next to the test pit designations on the test pit map, Figure 2.

The shallowest bedrock was at 1.8 feet deep in test pit TP-4 that was excavated at the bottom of a shallow, north-trending drainage that is an erosion hazard area.

Bedrock varied from about 5.5 to 7.5 feet deep near S. Sherman Street in test pits TP-1, TP-2, and TP-3. Depth to bedrock appears to increase to the north and to the west; however, little can be concluded about any trends in bedrock depth from the sparse data available from the test pits.

HDJ's test pits were excavated by Troy McDaniel with EMAC Construction who has also been working on the same bedrock up on Thompson Hill in the Southcliffe development. Mr. McDaniel excavated the new sewer line along S. Sherman Street where he encountered bedrock along most of the route. According to Mr. McDaniel, the rock could be removed with some difficulty using a large trackhoe and it did not require blasting.

4.4 Infiltration Test Results

Infiltration tests were conducted in test pits TP-1, TP-3 and TP-8. All infiltration tests were conducted within the silty sand overburden above bedrock. However, the bedrock was only to depths of 5.5 feet bgs and 6 feet bgs in test pits TP-1 and TP-3, respectively. TP-8 encountered bedrock at approximately 17 feet bgs and the infiltration test was completed in an adjacent test pit within the overburden soil.

Infiltration test results are plotted as drawdown curves versus time on the Infiltration Test Results page in Appendix B.

A steady-state infiltration rate was achieved in all three infiltration tests.

The lowest infiltration rate observed was in test pit TP-8, located in the northwest portion of the project site, where the bedrock was 17 feet deep. The infiltration plot shows a steady-state infiltration rate of 4.6 inches per hour (in/hr).

Recommendations for infiltration rate for stormwater design are provided in the following Section 4.6

Infiltration of stormwater along the south portion of the property may be difficult at this site due to the shallow bedrock. Additionally, the surface of the bedrock is probably sealed with carbonate cementation. If water is put into the soil along the south portion of the property, it could flow downhill along the top of the sealed bedrock and daylight out to the surface in a depression or home crawl space below.

4.5 Groundwater

The only groundwater well log that was found to be near the proposed development indicates that the groundwater below the site is found within permeable zones in the basalt bedrock at a depth of approximately 120 feet bgs. This is well below any depth of concern for the residential development of the area. Copies of the nearby well logs are provided in Appendix B.

It is possible that a perched groundwater condition could develop on the site in the future where irrigation or infiltrated water from above the site becomes perched on a confining layer of carbonate above the bedrock. However, no perched water zones were found in any of the 11 test pits excavated at this site. If any perched water zones do develop in the future as the site becomes developed and stormwater and irrigation water infiltration increases, they are likely to be small local areas that can be drained by the stormwater collection system.

5.0 GEOHAZARDS ASSESSMENT

At this site the geohazards map (Figure 3) shows natural drainage channels as green stippled areas, indicating these areas are erosion hazard zones due to the potential for storm water to flow down the channels as runoff. These drainages flatten out toward the north portion of the project at the center of the valley where more erosion hazard areas are designated.

Only eastern drainage channel near Sherman Street would have outfall onto the development property. This erosion hazard can only occur if runoff can build within the drainage. However, the original drainage channel extended across the KID canal and across Interstate 84. Both of these structures currently block the flow of any surface water from above and they limit the extent and size of the potential runoff area.

Site grading plans call for all existing drainages to be filled in with soil during site grading operations. In addition, the newly designed stormwater system will be collecting any street runoff from the new development, removing any additional stormwater contribution during a storm.

The bottom line is that no runoff is expected from the north trending drainages in this area. If it does occur, runoff will not pass the Interstate or the KID canal and is not expected to flow onto the property. Stormwater simply cannot flow down these drainage channels any longer even for a very high intensity storm.

The only other geohazards on this site are associated with the steep slopes (greater than 15%) within or adjacent to the drainage channels and some minor steep areas in the middle of the site. These steep slopes will be cut or filled during site grading operations and are not expected to exist after grading operations. Thus they will no longer be geo-hazards.

6.0 GEOTECHNICAL DESIGN RECOMMENDATIONS

6.1 Earthwork

6.1.1 Site Preparations

Clear and grub the site of any surface vegetation and use the grub material as landscape fill or remove it from the site. Remove all roots and organic material, loose or soft soil, and old topsoil from all areas to receive pavement, foundations, driveways, etc.

Positive drainage away from structures and pavement subgrade areas should be constructed and maintained throughout the project.

6.1.2 Excavations

The near-surface silty sand soil at this site is easily excavated with a conventional backhoe. The underlying basalt bedrock and/or basalt cobble and gravel colluvium can be excavated with a large trackhoe, but it is difficult and time consuming.

A maximum slope of 1 vertical to 1.5 horizontal (1V:1.5H) is recommended for all excavation sidewalls at the site when shoring or bracing are not used to support the excavations That maximum excavation slope angle may need to be decreased depending upon the performance of the soil. Any trenching or excavations over 4 feet deep, such as basement

excavations, will require the previously-mentioned side slopes and/or shoring and bracing of the excavation.

The aforementioned information on slope protection is based on Occupational Health and Safety Administration (OSHA) regulations and is provided entirely as a service to HDJ's Client. Under no circumstances should the Client, their contractors or subcontractors, interpret this information to mean, or otherwise imply, that HDJ Design Group assumes responsibility for construction site safety and/or temporary slope stability, or the Contractor's activities. Such responsibility is not implied and should not be inferred.

6.1.3 Structural Fill Placement and Compaction

All graded areas across this site are considered to be structural fill areas that require compaction to specified values.

For structural fill, use existing on-site soil or approved imported soil. The on-site soil can be used as structural fill, provided it is free of organics and boulders that are greater than 6 inches in diameter, and it is installed in lifts and compacted in place. Imported structural fill soil should be sand or gravel that is well graded from fine to coarse and contains less than 15 percent by weight passing the No. 200 Sieve (silt). Crushed gravel is the best structural fill for foundation subgrade areas.

All structural fill soil shall be installed in 8-inch, maximum loose lifts, moisture conditioned to optimum moisture content, and compacted to a dry density of at least 95 percent of its maximum dry density, as determined by the modified proctor test, ASTM International (ASTM) D1557.

Large, heavy, vibratory-roller compactors or wheel-roller compaction equipment generally produces the best soil compaction results for large areas. If light weight compaction equipment is used to compact the soil, the maximum lift thickness may need to be decreased.

Mass grading and soil placement and compaction shall be monitored with nuclear density gauge measurements. Due to the high variability of the silt content of the soil at the site, more than one proctor may be required to obtain the correct maximum soil density.

Moisture requirements for soil compaction will vary as the silt content of the cut soil varies. It may be necessary to increase or decrease the water content during soil compaction to match the requirements of the soil.

6.2 Site Grading Design

Grading design for the development should consider the depth to bedrock across the site to try to avoid deep cuts along the south portion of the project where the bedrock appears to be the shallowest. Grading design should fill the existing shallow drainages on the south side where the soil is eroded down almost to bedrock. Borrow soil for filling should come from the north side of the project where the overburden is deep and soil cuts can avoid contact with bedrock.

Grading design should drain water down the natural slope to the north and into infiltration structures built into the soil where the depth to bedrock is the greatest.

Grading design for the single-family residential lots and town homes should be configured with level or gently sloping home pad areas on each lot, with transition slopes between lots set at a maximum grade of 1V:2H, to retain valuable level lot space. Lots can also be graded with a 10-foot-nominal slope in the middle of the lots to accommodate the construction of daylight basement homes.

All engineered cut or fill slopes should be set at a maximum slope angle of 1V:2H, or 50 percent. For areas where slopes greater than 50 percent are required, near-vertical, gravity mass rockery retaining walls, or some other retaining structure, can be installed. Gravity mass rockery walls are typically the lowest in cost and they can be configured in any geometry required without extensive soil reinforcement.

Grading design should provide a balance of the cut and fill and allow up to 20 percent shrinkage of the fill soil during placement.

Grading design should consider the IBC slope setback requirements from ascending or descending slopes for each lot to confirm the size and adequacy of the buildable areas on each lot.

6.3 Site Stormwater Infiltration and Management

The stormwater management for the residential development shall comply with the Eastern Washington Stormwater Management Manual (Ecology, 2004). Stormwater disposal/ infiltration devices are required to be registered with the Washington State Department of Ecology as Underground Injection and Control (UIC) facilities.

Stormwater disposal systems shall be designed for on-site retention and disposal of a 25-year, 24-hour storm, as per City of Kennewick requirements.

At this site, stormwater will be infiltrated into the silty sand overburden on top of the bedrock through infiltration trenches, drywells, or surface swales. As a result, depth to bedrock should be confirmed at each infiltration structure by test pit excavation or seismic refraction survey.

In general, shallow and wide infiltration trenches have performed better than drywells in the Southridge area. Drywells that require deep installation and a soil treatment zone below may not be suited for the shallow bedrock conditions at each infiltration site. Infiltration into near-surface infiltration trenches or surface ponds, may be a better option in order to maintain the required soil treatment zone thickness.

For stormwater design purposes, we recommend using the lowest field infiltration test rate that we obtained from three field tests. We recommend using the field test rate of 3 in/hr, divided by a correction factor of 2, for a net design infiltration rate of 1.5 in/hr. Please note that this infiltration rate is only for use when infiltrating into the overburden soil on top of bedrock.

We recommend geotechnical engineering review of the stormwater disposal plan. Some additional site-specific exploration may be needed at each specific infiltration structure to verify depth of bedrock and to determine the general slope of the underlying bedrock topography. Understanding the bedrock topography can help to determine the potential for down-gradient impacts for disposal of groundwater at each location.

6.4 Home Foundations

6.4.1 Design

Single-family homes or townhomes can be supported on conventional spread footings in a manner consistent with IBC requirements. All footings should be supported on properly prepared subgrade in native soils, or on structural fill as previously discussed in this report.

Footings shall have minimum widths consistent with IBC Table 1805.3.1, and the bottom of the exterior footings shall be at least 24 inches below the lowest adjacent exterior grade for frost protection.

Foundations will bear on eolian fine sand and silt. HDJ recommends the footings be sized to be consistent with the requirements of IBC Section 1804 and as summarized in Table 1804.2. For a silty sand soil type, foundations should exert a maximum soil bearing pressure of 1,500 pounds per square foot (lb/ft^2). Please note that this allowable soil bearing pressure assumes a minimum confinement depth, or depth of burial, of 2 feet.

Continuous wall and isolated spread footings shall be a minimum of 12 inches wide for a one-story home and 15-inches wide for a two-story home, consistent with IBC Table 1805.4.2.

An assessment of loading on the foundation system should be completed by the structural engineer or home designer to verify that the footing sizes comply with the aforementioned IBC requirements, and the footings are correctly proportioned for the specified bearing capacity.

For consideration of short period seismic and wind pressures, the allowable footing bearing pressure may be increased by one-third. Use a dynamic bearing capacity of 1,950 lb/ft^2 when sizing footings for transient forces.

For lateral forces, use a friction coefficient of 0.25 between the base of the footings and the underlying subgrade soil.

6.4.2 Settlement

For a continuous wall footing bearing on the upper silty sand soil buried 2 feet deep and with a load of 80 percent of the allowable maximum bearing pressure (1,500 lb/ft^2), we estimate the maximum total settlement will be less than 0.25 inch with a maximum differential settlement of approximately 50 percent of the maximum settlement over 50 feet. This settlement estimate assumes that all foundation subgrade soil has been compacted in place, or is composed of compacted structural fill as previously described in this report.

The settlement estimates described in the previous paragraph, assume that no disturbance of the foundation soil would be permitted during excavation and construction, and that footings are prepared as previously described.

6.4.3 Foundation Backfill

The clear space around the exterior of all foundations and between the stem walls and the footing trenches shall be backfilled in lifts not exceeding 1 foot thick and compacted to 90 percent of maximum dry density as per ASTM D1557. Care must be taken with the backfilling operation to provide foundation subgrade soil confinement pressure and to densify the soil to help limit the infiltration and water-induced settlement around the

foundation. Compaction of the soil around the stem walls and basement walls is particularly important on structures that do not have gutters.

6.4.4 Foundation Walls and Lateral Earth Pressure

For foundation wall design purposes, use the following data:

Assumed Soil Density (pounds per cubic foot)		=	110 lb/ft^3
Soil Internal Friction		=	30 degrees
Coefficient of At-Rest Pressure	Ko	=	0.5
At-Rest Earth Pressure Equivalent Fluid Density		=	55 lb\ft^3
Coefficient of Active Earth Pressure	Ka	=	0.33
Active Earth Pressure Equivalent Fluid Density		=	36 lb\ft^3
Coefficient of Passive Earth Pressure	Kp	=	3.0
Passive Earth Pressure Equivalent Fluid Density		=	330 lb\ft^3
Coefficient of Lateral Sliding		=	0.25

Basement foundation walls must be designed to conform to the at-rest lateral earth pressure as indicated in the previous data. Free-standing concrete walls that do not support structures can be designed to the active earth pressure.

Foundation wall backfill shall be placed in layers and compacted to at least 90 percent of the maximum dry density, as per ASTM D 1557, to fully mobilize the passive resistance of the wall. Backfill placed within 3 feet of the wall should be placed in lifts not exceeding 6 inches thick and compacted using hand-operated compaction equipment such as a jumping jack or a heavy plate wacker.

6.5 Seismic Design Criteria

The silty sand overburden on top of the bedrock at this site conforms to a seismic design Site Class E for a “soft soil” profile. However, the seismic design process allows averaging the soil conditions in the upper 100 feet of the soil profile. When considering the shallow bedrock at this site, we recommend the use of a seismic design Site Class C for a very dense soil and soft rock profile.

For this site, use the seismic design parameters as shown in the following Table 1.

Table 1: 2012 IBC Seismic Design Parameters

	Short Period	1 sec
Maximum Credible Earthquake Acceleration	S_s = 0.420	S_1 = 0.162
Site Class	C	
Site Coefficient	F_a = 1.200	F_v = 1.638
Adjusted Spectral Acceleration	S_{MS} = 0.504	S_{M1} = 0.265
Design Response Acceleration	S_{DS} = 0.336	S_{D1} = 0.177
Design Peak Ground Acceleration	0.14 g	

7.0 SUMMARY CONCLUSIONS

HDJ has completed a geotechnical investigation of the Phase 1 area of The Parks at Thompson Hill. This investigation was completed by excavating 11 exploration test pits at different locations around the site, and by conducting three test pit infiltration tests.

Basic soil profile at this site consists of silty sand to sandy silt overburden sitting on top of dense basalt bedrock or basalt gravel and cobble colluvium.

The sandy silt layer on top of bedrock is a combination of late Pleistocene lacustrine soil and post-Pleistocene eolian soil and the measured silt content varied from 21 percent to 57 percent silt content.

The thickness of the overburden or the depth of the bedrock varied from 2 feet to 17 feet deep. There was significant spatial variability to the bedrock depth, although a general trend was apparent indicating deeper bedrock to the north and west sides of the site.

The surface of the bedrock was consistently covered and presumably sealed with carbonate cementation that we correlate with the pre-Pleistocene carbonate unit at the top of the Ringold Formation called the Plio-Pleistocene unit.

A local unconfined aquifer has not developed in this area due to the shallow bedrock. Domestic water has been provided to homes in the area by drilling deep into the water-bearing interbeds between the basalt flows.

The shallow bedrock at this site is a critical factor that must be considered in the site grading design, in the design and layout of the sewage collection system, and in the design of the stormwater infiltration scheme.

The mass grading design should avoid any grading cuts into areas that contain shallow bedrock.

The sewer system design should also avoid deep cuts in areas with shallow bedrock. However, there may be no way to avoid some bedrock excavation for the sewer lines in the south portion of the project. A sewer trench can probably be excavated into the bedrock with a large trackhoe if required.

The bedrock depth issue also affects the stormwater infiltration system design. Shallow infiltration trenches should be considered for use in areas with shallow bedrock. Drywells may be used at the north portion of the project site, but depth to bedrock should be confirmed at every infiltration point by either a test pit or by seismic refraction survey.

Because the surface of the bedrock may be sealed with carbonate cementation, it is possible that local perched groundwater conditions could develop somewhere on a low spot in the bedrock topography. As a result, we recommend conducting a seismic refraction survey at each infiltration point to determine the topography of the bedrock and general slope trend at each infiltration structure location

A geohazards assessment of the site focused on the potential for soil erosion within the existing natural drainages. Our assessment concludes that the potential for any stormwater flow within the existing drainages is very low and the drainages will be filled in anyway during site grading operations. We conclude that there are no erosion hazards at this site.

General geotechnical recommendations are provided for site grading design, stormwater infiltration design and site grading operations. Geotechnical recommendations based on IBC standards for the previously discussed soil conditions, are also included in this report for the design and construction of the home structure foundations.

8.0 CONSTRUCTION OBSERVATION AND TESTING

Geotechnical engineering construction observation is required during mass grading construction of the development to observe soil conditions and monitor the soil placement and compaction operations.

Geotechnical engineering construction observation is not required for the construction of the homes within the development, provided soil conditions at each home construction site are consistent with the conditions described in this report. HDJ did not have an opportunity to determine the soil conditions at each lot and every home foundation location. Some variation in soil conditions are expected across the site.

If soil conditions are encountered at any of the home sites that are not consistent with the findings in this report, we recommend that the site where the unusual conditions occur be inspected and assessed by a geotechnical engineer to determine if any changes in our recommendations are warranted.

9.0 LIMITATIONS AND RESTRICTIONS

The opinions, discussion, and conclusions presented in this report are based on information obtained or collected in the conduct of this geotechnical investigation. Soil conditions that are encountered beyond our exploratory test pits may vary, and unanticipated soil conditions and seasonal soil moisture variations are commonly encountered and cannot be fully determined by a few test pits or soil borings. Such variations may result in changes to our recommendations and may require that additional expenditures be made to attain a properly constructed project.

If there is a substantial lapse of time between submission of this report and the start of excavation work at the site; if site conditions have changed due to natural causes, or if the basic project scheme is significantly modified from that assumed in the preparation of this report, HDJ recommends that the report be reviewed to determine the applicability of the conclusions and recommendations.

This report was prepared exclusively for the Client and their architects and engineers for aiding in the design and construction of the proposed project and is not to be used for other projects of similar type or at a site in close proximity to this site. This report is not to be photographed, photocopied, or reproduced in total or in part, without the written consent of the Client and HDJ Design Group.

10.0 REFERENCES

Lindsey, K.A. (1996). *The Miocene to Pliocene Ringold Formation and Associated Deposits of the Ancestral Columbia River System, South-Central Washington and North-Central Oregon.* Washington Department of Natural Resources, Division of Geology and Earth Resources, Open-File Report 96-8, 45 p., 4 Appendices.

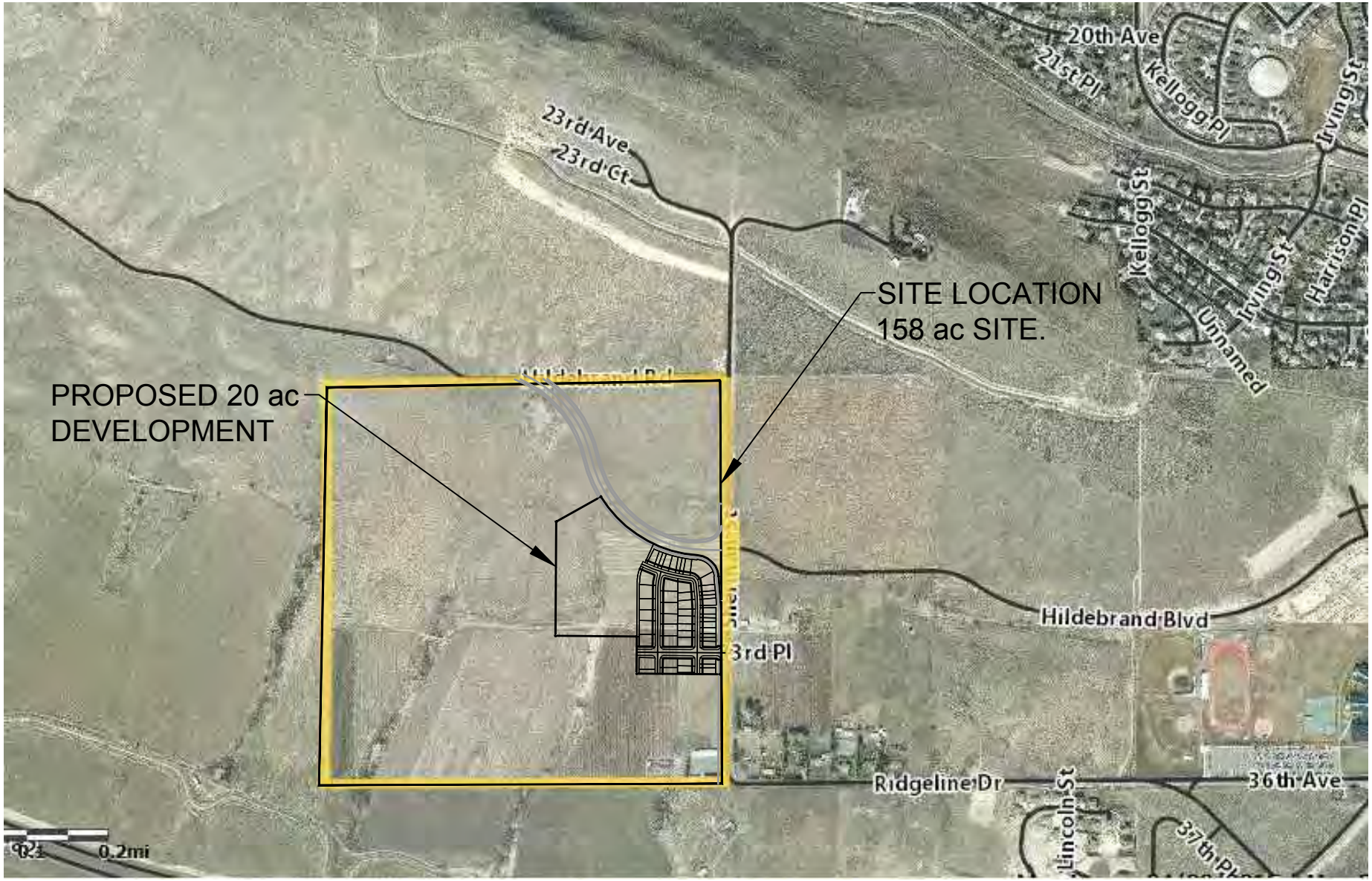
Reidel, S.P., N.P., Campbell, K.R. Fecht, and K.A. Lindsey (1994). *Late Cenozoic Structure and Stratigraphy of South-Central Washington.* Bulletin 80, WA Div. Geol. Earth Resources, WA Dept. Nat. Resources

Schuster, J.E., C.W. Gulick, S.P. Reidel, K.R. Fecht and S. Zurenko, (1997). *Geologic Map of Washington – Southeast Quadrant.* Geology Map GM-45, WA Div. Geol. Earth Resources, WA Dept. Nat. Resources

APPENDIX A

Figure 1: Site Location Map
Figure 2: Site Exploration and Development Map
Figure 3: Critical Areas Map

EXHIBIT 8



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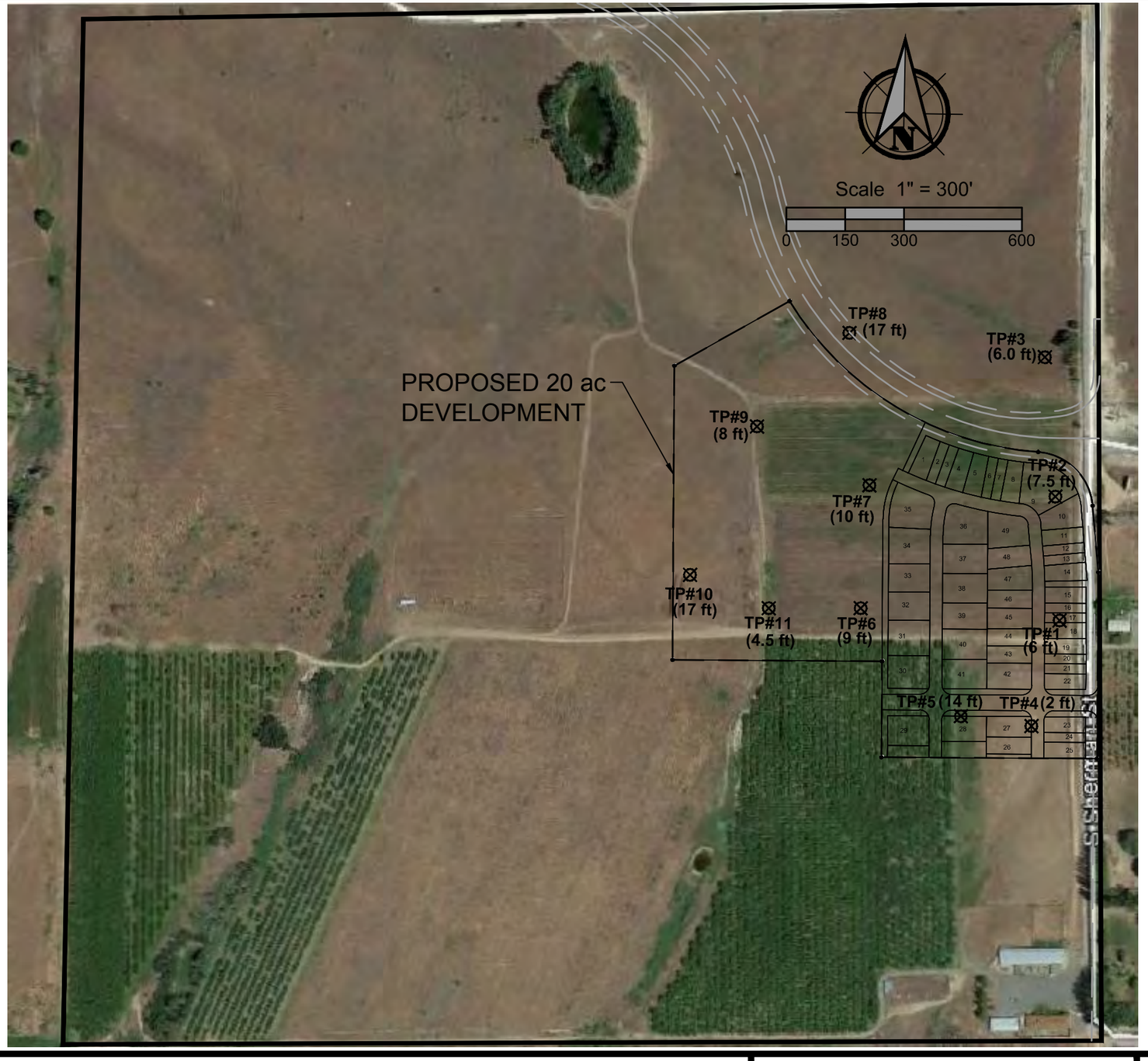
SITE LOCATION MAP

PAHLISCH HOMES SOUTHRIDGE PRD

DESIGNED:	SCALE:	FIGURE
JRB	H: N/A	
DRAWN BY: AJJ	V: N/A	1
CHECKED: JRB	MAY 2015	



SITE EXPLORATION AND DEVELOPMENT MAP

PAHLISCH HOMES SOUTHRIDGE PRD

LOCATED IN THE CITY OF KENNEWICK, WA

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DESIGNED: JRB	**SCALE** H: 1"=300 V: 1"=300	**FIGURE**
DRAWN: AJJ	**DATE:** JUNE 2015	**2**
CHECKED: JRB	**JOB NO.:** 3949-00	

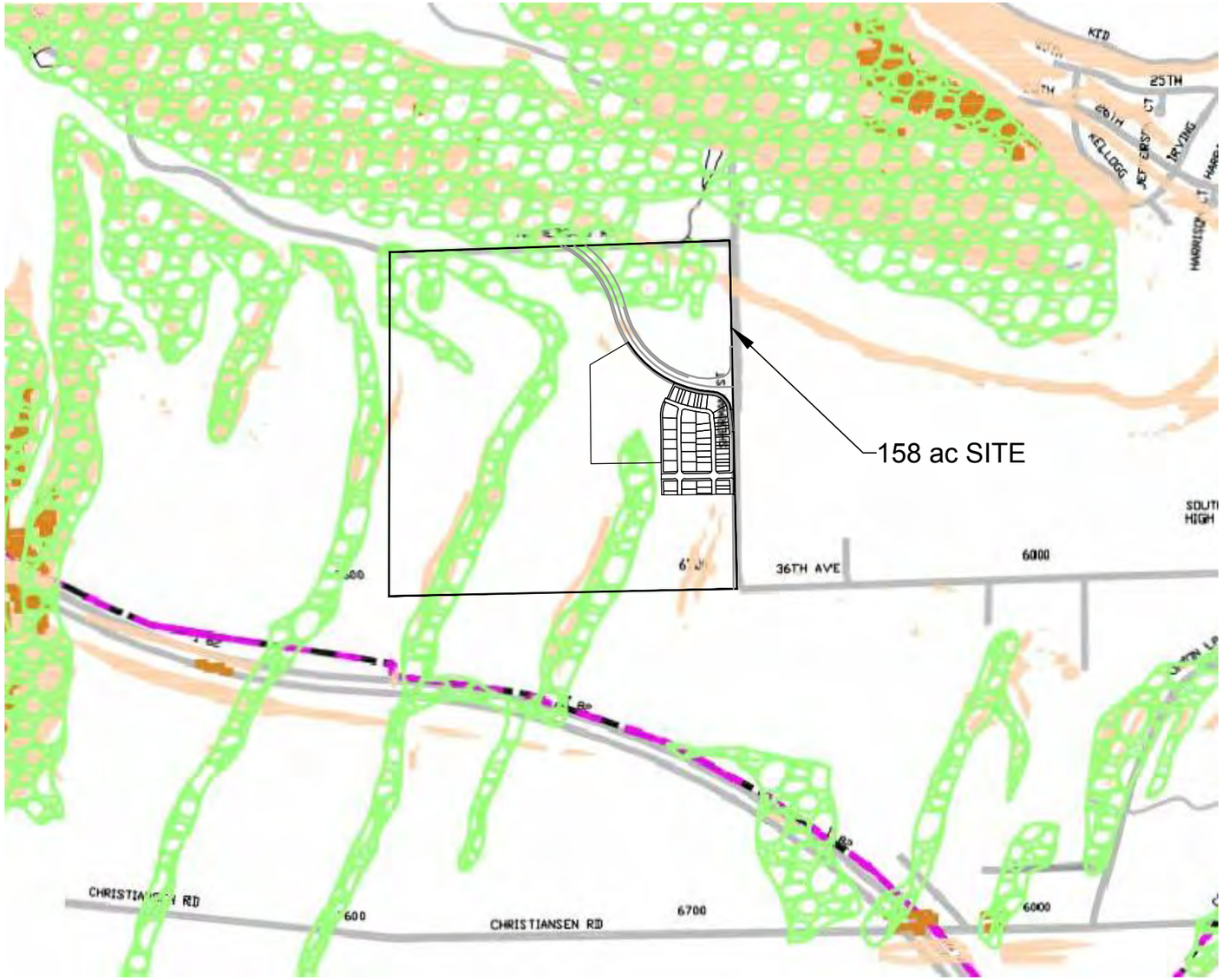

EXHIBIT 4

City of Kennewick
Critical Areas Map
Geologically Hazardous Areas

2007

HDR

- Steep Slopes* (>15%)
- Extreme Slope Hazard* (>40% Slope)
- Erosion Hazard**
- Landslide Hazard (Known)**
- City Limits
- UGA Boundary

* Derived from the United States Geological Survey 7.5-minute Digital Elevation Model

** Data taken from Soil Survey Benton County Area, Washington, July 1971. Provided by United States Department of Agriculture.

Disclaimer: This map is intended to be used as a reference and does not provide a final critical areas designation. All data presented should be considered advisory in nature and approximate in location, due to integration of multiple data types and variation in spatial accuracy of source data. Field inspection is advised to certify the presence of critical areas on a site-specific basis.

CRITICAL AREAS MAP

PAHLISCH HOMES SOUTHRIDGE PRD

LOCATED IN THE CITY OF KENNEWICK, WA

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DESIGNED: JRB	SCALE H: 1"=1000' V: 1"=1000'	FIGURE
DRAWN: AJJ	DATE: JUNE 2015	3
CHECKED: JRB	JOB NO.: 3949-00	

APPENDIX B

Test Pit Logs TP-1 through TP-11
Infiltration Test Results
Sieve Analysis Plot Results
Nearby Groundwater Well Logs

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THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-1
Page 1 of 1

APPROX. TEST PIT TP-1 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER (DCP) / STATIC PENETROMETER (SP) / MOISTURE CONTENT (%) / INDEX PROPERTIES (IP) / NUCLEAR DENSITY (ND) / DRY DENSITY (DD) / SIEVE (SIEV)	COMMENTS
0.0		Dry, medium dense, light olive-brown (2.5Y,6/4), silt and fine sand	0.0				
2.0				DCP		15 18	
4.0							
		Dry, light olive-brown, coarse to fine sand, little silt, subangular basalt cobble and gravel	4.5				
		Dry, very dense, colluvial, subangular basalt rock, carbonate cemented	5.5 5.8				
6.0		Dry, very dense, carbonate-covered bedrock	6.0				
		Total Depth: 6.0 feet bgs					
8.0							
10.0							
12.0							
14.0							
16.0							
18.0							
20.0							

0 25 50

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-1

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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THE PARKS AT THOMPSON HILL

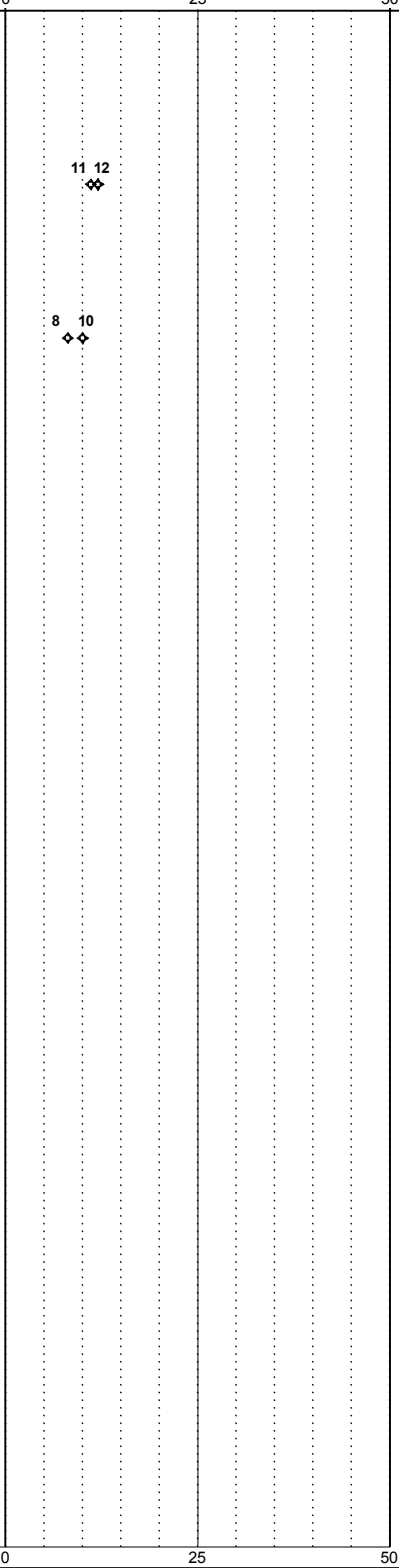
HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-2
Page 1 of 1

APPROX. TEST PIT TP-2 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	COMMENTS
0.0		Moist, medium dense, light olive-brown (10YR,4/4), fine sand, some silt, little coarse to medium sand, trace gravel USCS Classification: **SM**, silty sand	0.0	SIEV DCP		
4.0		Moist, light olive-brown, fine sand and silt	4.0	DCP		
6.0		Dry, angular, basalt cobble and gravel, some fine sand and silt	6.0			
7.3		Dry, very dense, colluvial basalt rock, carbonate cemented	7.5			
8.0		Total Depth: 7.5 feet bgs				

DYNAMIC CONE PENETROMETER (DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)



LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-2

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-3
Page 1 of 1

APPROX. TEST PIT TP-3 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	COMMENTS
0.0		Damp, medium dense, olive-brown, fine sand and silt	0.0			
2.0		Damp, medium dense, olive brown, fine sand and silt	2.0			
4.0						
		Damp, loose, light brown and gray, volcanic ash	5.0			
6.0		Damp, medium dense, olive-brown, fine sand with silt, colluvial gravel subrounded, cemented	5.8 6.0			
		Total Depth: 6.0 feet bgs				
8.0						
10.0						
12.0						
14.0						
16.0						
18.0						
20.0						

DYNAMIC CONE PENETROMETER (DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

0 25 50

0 25 50

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-3

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

HDJ DESIGN GROUP
6115 Burden Blvd., Suite E
Pasco, Washington 99301-8930
Phone: 509/547-5119
Fax: 509/547-5129

THE PARKS AT THOMPSON HILL

FIGURE TP-4
Page 1 of 1

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

APPROX. TEST PIT TP-4 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER (DCP) / STATIC PENETROMETER (SP) / MOISTURE CONTENT (%) / INDEX PROPERTIES (IP) / NUCLEAR DENSITY (ND) / DRY DENSITY (DD) / SIEVE (SIEV)	COMMENTS
0.0		Dry, medium dense, light olive-brown, fine sand and silt	0.0			0 25 50	
			1.8				
2.0		Carbonate-stained colluvial basalt	2.0				
		Total Depth: 2.0 feet bgs					
4.0							
6.0							
8.0							
10.0							
12.0							
14.0							
16.0							
18.0							
20.0						0 25 50	

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-4

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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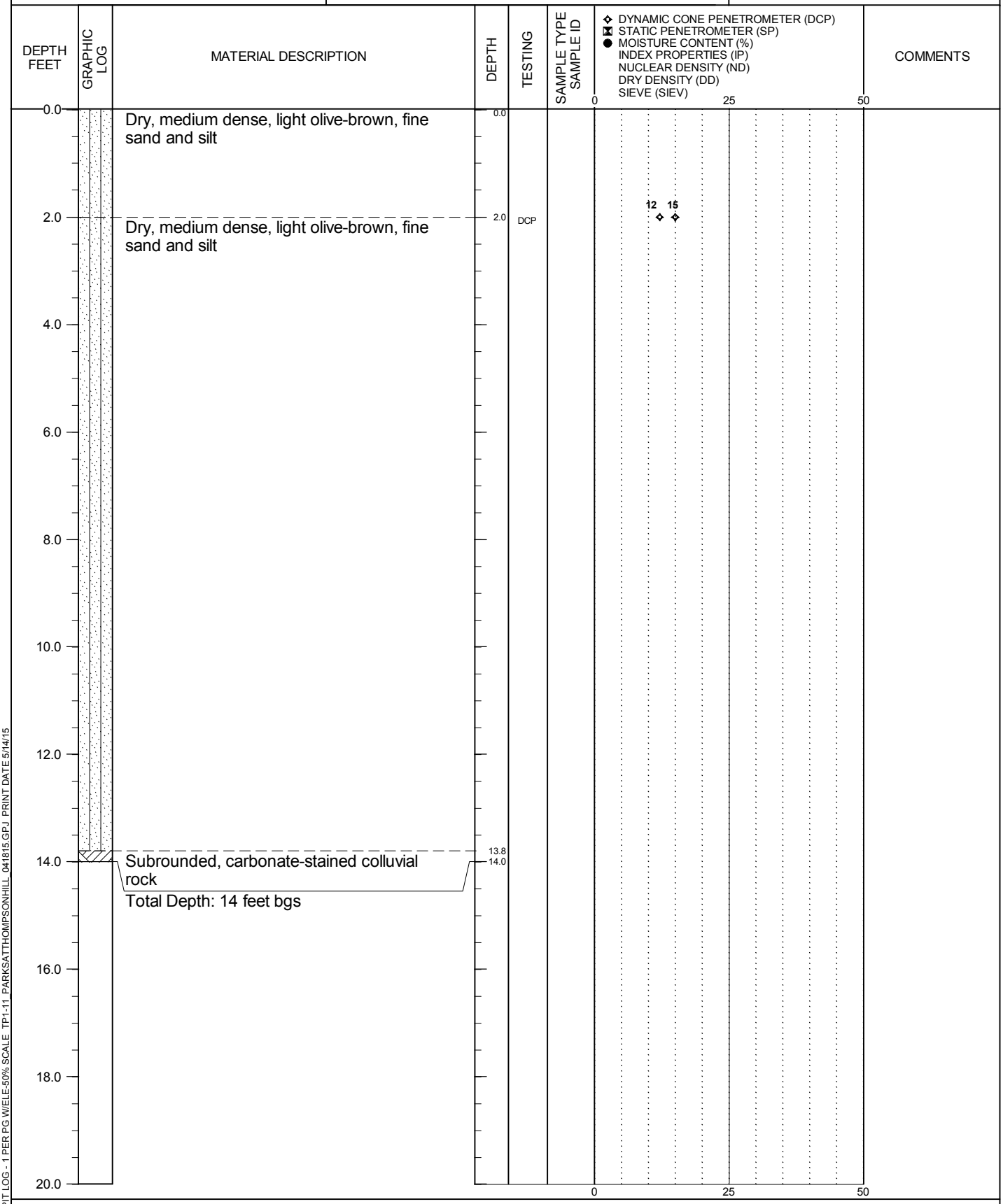
THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-5
Page 1 of 1

APPROX. TEST PIT TP-5 LOCATION:
(See Site Plan)



LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-5

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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THE PARKS AT THOMPSON HILL

FIGURE TP-6
Page 1 of 1

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

APPROX. TEST PIT TP-6 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER (DCP) / STATIC PENETROMETER (SP) / MOISTURE CONTENT (%) / INDEX PROPERTIES (IP) / NUCLEAR DENSITY (ND) / DRY DENSITY (DD) / SIEVE (SIEV)	COMMENTS
0.0		Damp, medium dense, light olive-brown, fine sand and silt	0.0				
2.0		Damp, medium dense, light olive-brown (2.5Y,5/4), silt, some fine sand, trace coarse to medium sand, trace gravel	2.0	SIEV DCP	☒	14 17	
		USCS Classification: **ML**, sandy silt	3.0				
4.0		Dry, medium dense, light olive-brown, silt and fine sand					
6.0							
8.0							
		Dry, medium dense, light olive-brown, fine sand and silt	8.8 9.0				
		Total Depth: 9 feet bgs					
10.0							
12.0							
14.0							
16.0							
18.0							
20.0							

0 25 50

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-6

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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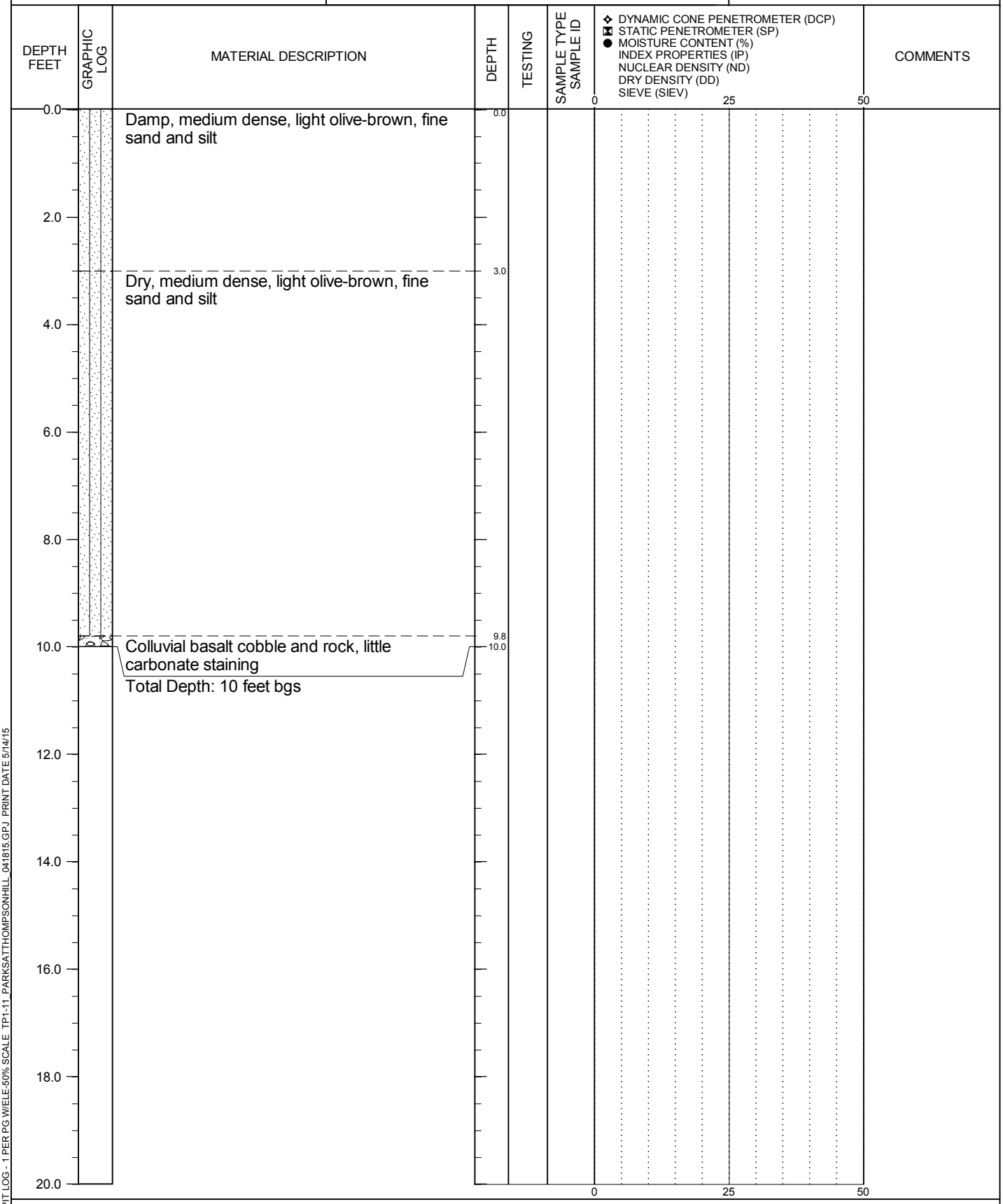
Fax: 509/547-5129

THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-7
Page 1 of 1

APPROX. TEST PIT TP-7 LOCATION:
(See Site Plan)



LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-7

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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Fax: 509/547-5129

THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-8
Page 1 of 1

APPROX. TEST PIT TP-8 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	COMMENTS
0.0		Damp, medium dense, olive-brown, fine sand and silt	0.0			
3.0		Damp, medium dense, olive-brown, fine sand and silt	3.0			
16.8		Subrounded, cemented basalt, some carbonate cementation and clasts	16.8			
17.0		Total Depth: 17 feet bgs	17.0			

DYNAMIC CONE PENETROMETER (DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

0 25 50

2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0

0 25 50

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-8

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

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THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-9
Page 1 of 1

APPROX. TEST PIT TP-9 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	COMMENTS
0.0		Damp, medium dense, olive-brown, fine sand and silt				
2.0						
4.0						
			5.5			
6.0		Dry, medium dense, light olive-brown, fine sand and silt				
			7.8			
8.0		Dry, medium dense, light olive-brown, fine sand and silt	8.0			
		Total Depth: 8 feet bgs				
10.0						
12.0						
14.0						
16.0						
18.0						
20.0						

DYNAMIC CONE PENETROMETER (DCP)
STATIC PENETROMETER (SP)
MOISTURE CONTENT (%)
INDEX PROPERTIES (IP)
NUCLEAR DENSITY (ND)
DRY DENSITY (DD)
SIEVE (SIEV)

0 25 50

0 25 50

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-9

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

HDJ DESIGN GROUP
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Pasco, Washington 99301-8930
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Fax: 509/547-5129

THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-10
Page 1 of 1

APPROX. TEST PIT TP-10 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER (DCP) / STATIC PENETROMETER (SP) / MOISTURE CONTENT (%) / INDEX PROPERTIES (IP) / NUCLEAR DENSITY (ND) / DRY DENSITY (DD) / SIEVE (SIEV)	COMMENTS
0.0		Damp, medium dense, olive-brown fine sand and silt	0.0			0 25 50	
2.0							
		Dry, medium dense, light olive-brown fine sand and silt	2.5				
4.0							
6.0							
8.0							
10.0							
12.0							
14.0							
16.0			16.8				
		Angular, cemented basalt, some carbonate cementation and clasts	17.0				
18.0		Total Depth: 17 feet bgs					
20.0						0 25 50	

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

TEST PIT TP-10

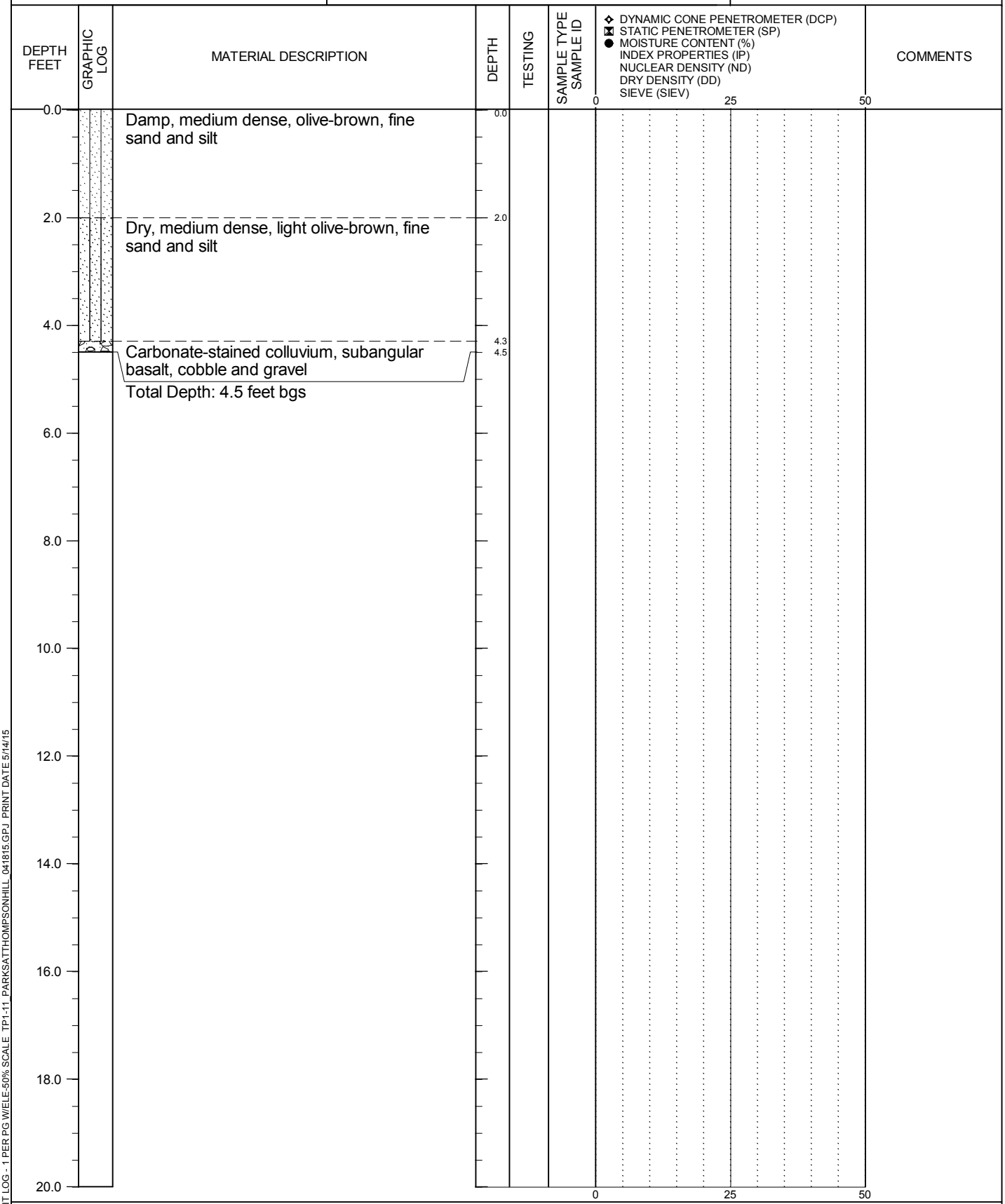
HDJ DESIGN GROUP
6115 Burden Blvd., Suite E
Pasco, Washington 99301-8930
Phone: 509/547-5119
Fax: 509/547-5129

THE PARKS AT THOMPSON HILL

HDJ DESIGN GROUP PROJECT NUMBER:
3949-00

FIGURE TP-11
Page 1 of 1

APPROX. TEST PIT TP-11 LOCATION:
(See Site Plan)



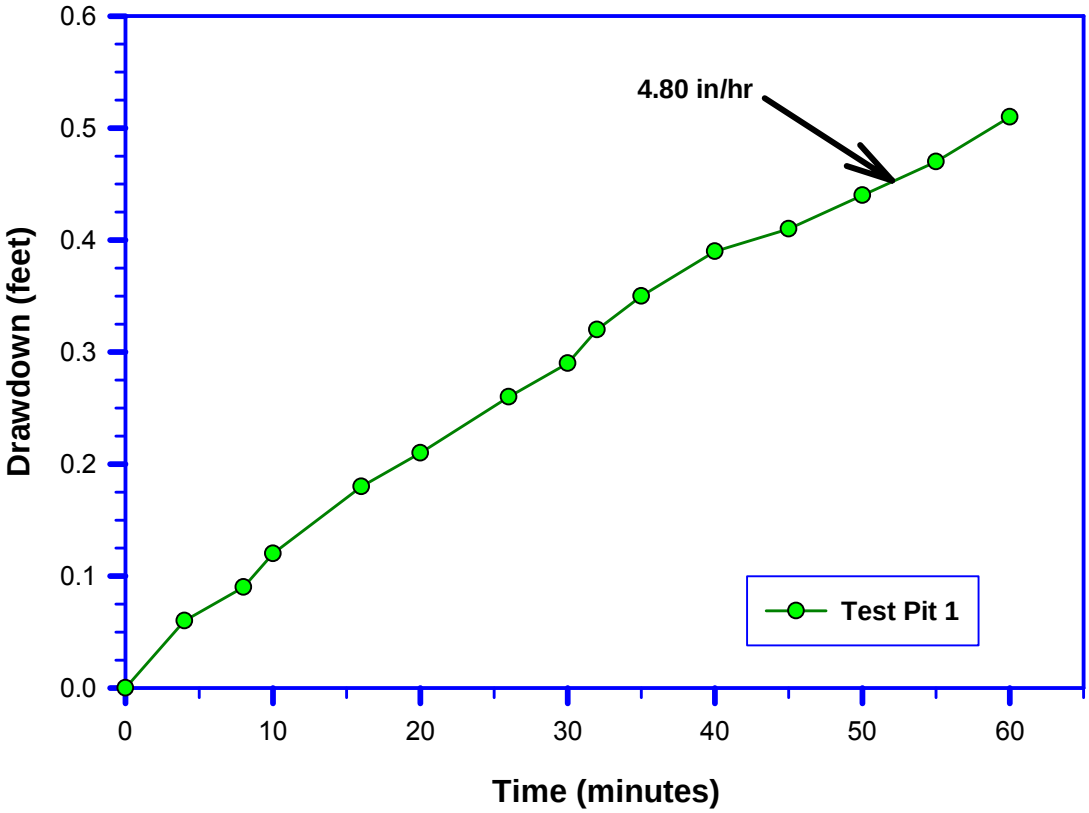
LOGGED BY: A. Jaimes
COMPLETED: 4/01/15

EXCAVATED BY: EMAC
EXCAVATION METHOD: Excavator

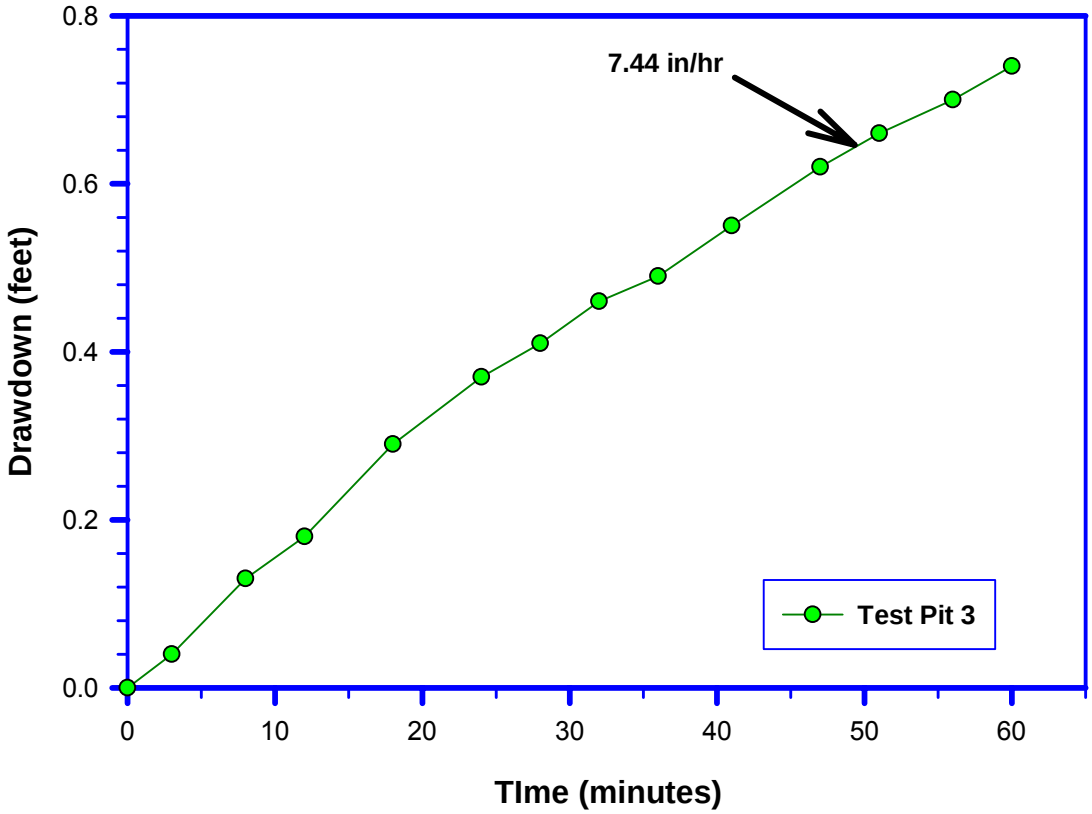
TEST PIT TP-11

TEST PIT LOG - 1 PER PG W/ELE-50% SCALE TP1-11_PARKSATTHOMPSONHILL_041815.GPJ PRINT DATE 5/14/15

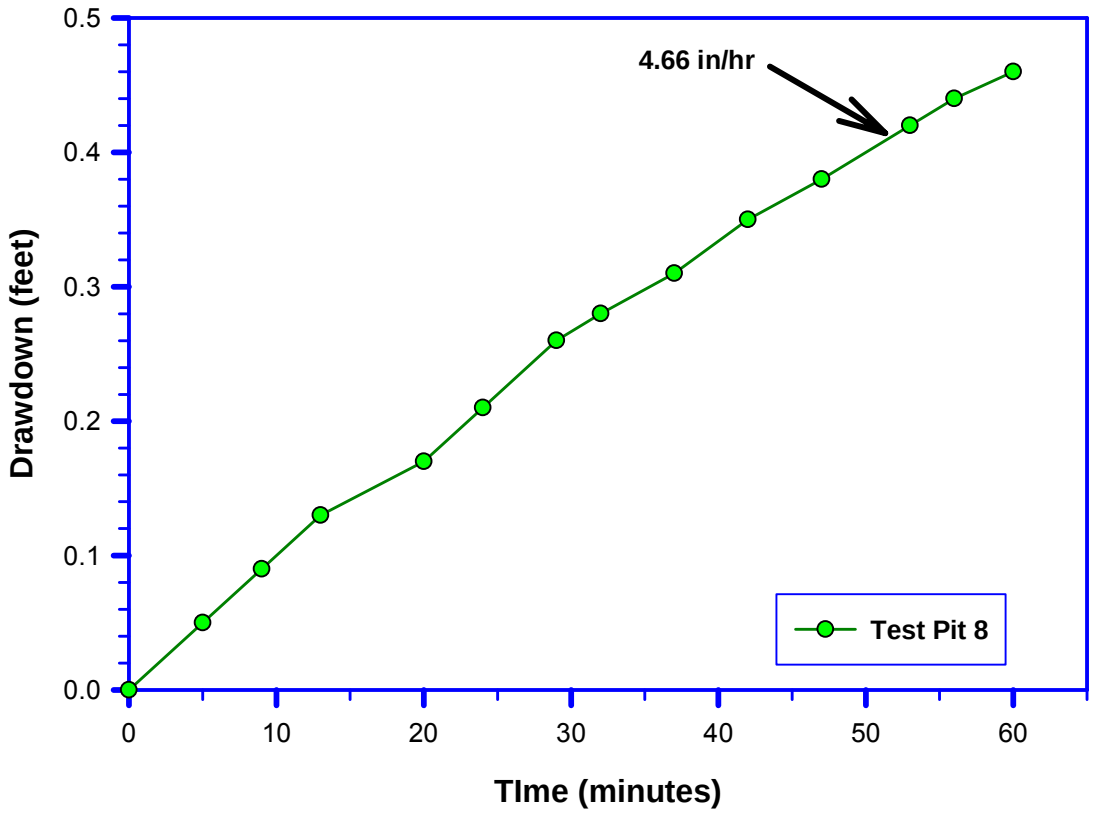
Infiltration Test 1: Test Pit 1



Infiltration Test 2: Test Pit 3



Infiltration Test 3: Test Pit 8



HDJ DESIGN GROUP PLLC
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Particle-Size Distribution of Soils Using Sieve Analysis ASTM D 6913

Project
The Parks at Thompson Hill
Kennewick, WA

Project No.
3949-00

Test Date
4/7/15

Tested By
A Jaimes

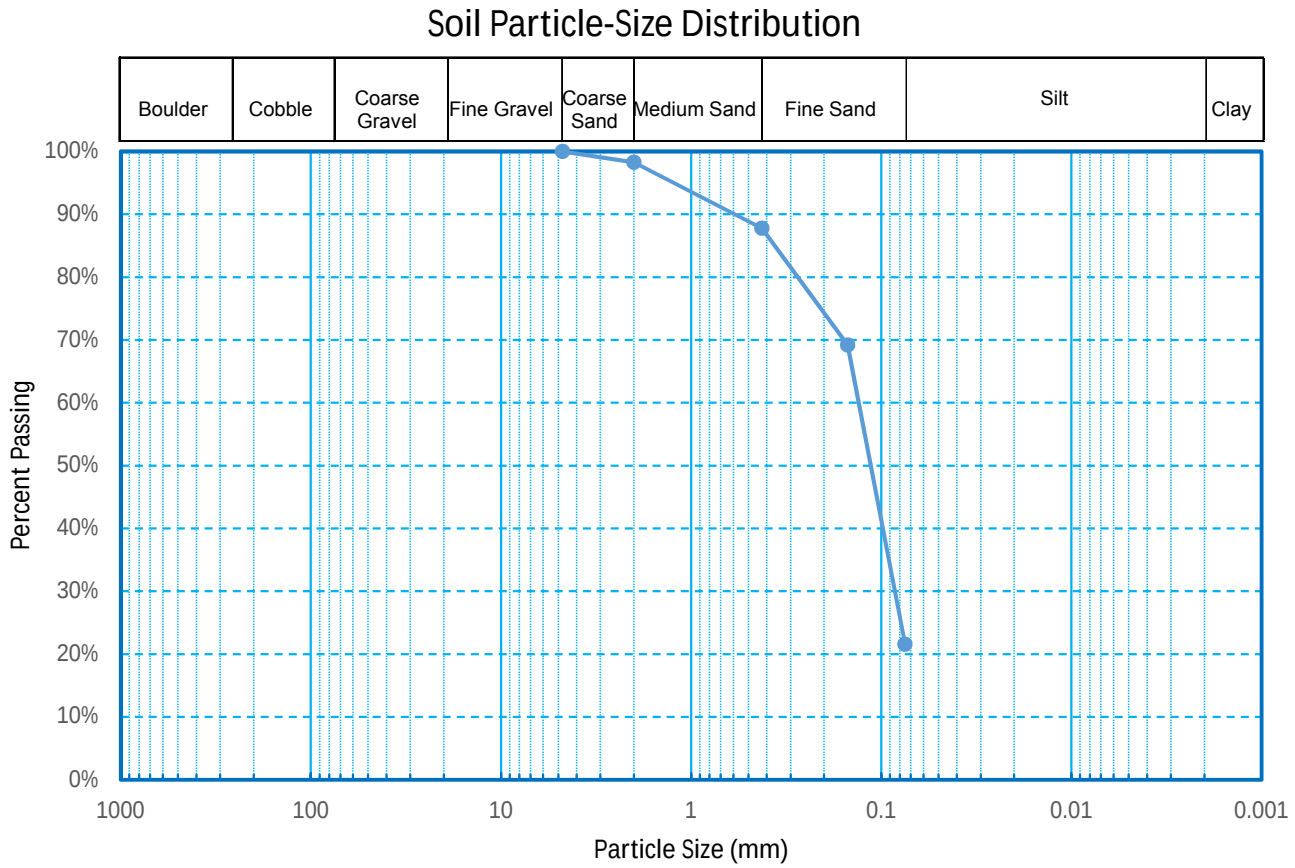
Sample Location
TP-2 @ 2 ft

Sample Description
Damp, light olive brown (2.5Y 5/4), fine sand, some silt, little coarse to medium sand, trace gravel

USCS Classification
SM silty sand

Summary Results

	Coarse Gravel
	Fine Gravel
1.7%	Coarse Sand
10.5%	Medium Sand
66.2%	Fine Sand
21.6%	Silt/Clay



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Particle-Size Distribution of Soils Using Sieve Analysis ASTM D 6913

Project
The Parks at Thompson Hill
Kennewick, WA

Project No.
3949-00

Test Date
4/7/15

Tested By
A Jaimes

Sample Location
TP-6 @ 2

Sample Description
Damp, light olive brown (2.5Y 5/4), silt and fine sand,

USCS Classification
ML sandy silt

Summary Results

	Coarse Gravel
	Fine Gravel
	Coarse Sand
2.0%	Medium Sand
40.5%	Fine Sand
57.6%	Silt/Clay

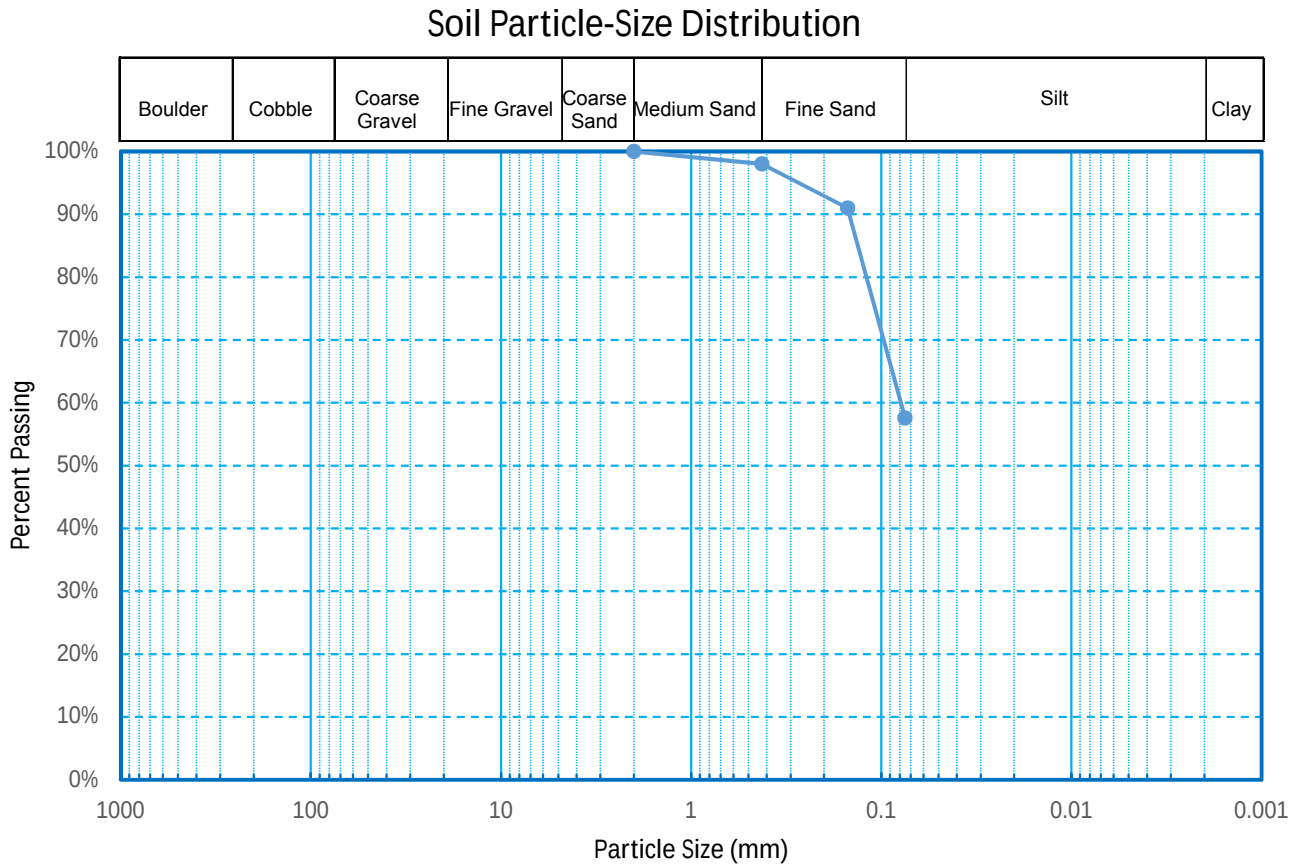


EXHIBIT 8

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy 106857

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent AW 103918 9
UNIQUE WELL I.D # AEQ-793
Water Right Permit No.

(1) OWNER: Name Harold Brinkley Address 320 N. Johnson Kenn Wa 99336

(2) LOCATION OF WELL: County Benton SW 1/4 NW 1/4 Sec 17 T 8 N.R. 29E WM
(2a) STREET ADDRESS OF WELL: (or nearest address) W 36th AVE.
TAX PARCEL NO.

E

(3) PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
☐ New Well Method: ☐ Dug ☐ Bored
☑ Deepened ☐ Cable ☐ Driven
☐ Reconditioned ☑ Rotary ☐ Jetted
☐ Decommission

(5) DIMENSIONS: Diameter of well 6" inches
Drilled 623 feet. Depth of completed well 625 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☑ Welded 5" Diam. from 0 ft to 350 ft
☐ Liner installed " Diam. from ft. to ft.
☐ Threaded " Diam from ft to ft.

Perforations: ☑ Yes ☐ No
Type of perforator used Torch
SIZE of perforations 12" X 1/4" in by in.
30 perforations from 330 ft to 350 ft

Screens: ☐ Yes ☑ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam Slot Size from ft. to ft.
Diam. Slot Size from ft to ft

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand
Material placed from ft to ft.

Surface seal: ☐ Yes ☐ No To what depth? ft
Material used in seal
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 250 ft below top of well Date 9-11-01
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min. with ft. drawdown after hrs.
Yield: gal./min. with ft drawdown after hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs
Airtest 30 gal./min with ft drawdown after 4 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Black Basalt	350	453
Green clay - HARD	453	470
Porus Basalt & Green clay	470	484
Red Porus Basalt	484	496
Black Basalt	496	605
Fractured porous water	605	621
Bering Basalt (30GPM)	"	"
Hard Black Basalt	621	625

RECEIVED
DEC 20 2001
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT
DEC 24 2001

Work Started 8-27, 01 Completed 9-12, 01

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name TODD HANEY License No 2343
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company Statewide Well Drilling
(Signed) License No. 2343
(Licensed Driller/Engineer)
Address 101 KAU Trail RD PASCO 99301
Contractor's Registration No STATEWDO15L2 Date 12-3 01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action Employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006

ECY 050-1-20 (11/98)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

EXHIBIT 8

(1) OWNER: Name Harold Brindley Address PO Box [illegible] Kennewick, Wa. 99336

(2) LOCATION OF WELL: County Benton — ¼ ¼ Sec. 17 T. 8 N., R. 29E W.M.

and distance from section or subdivision corner north of Kennewick Irrigation Dist. Canal rt. of way

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 352 ft. Depth of completed well 352 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 20 ft.
Threaded ☐ 5 " Diam. from 12 ft. to 352 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used torch
SIZE of perforations ¼ in. by 10 in.
30 perforations from 112 ft. to 132 ft.
30 perforations from 332 ft. to 352 ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 116 ft. below top of well Date 4-26-74
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Type of test 8
test gal./min. with 209 ft. drawdown after 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
top soil	0	1
broken basalt M	1	10
basalt black H	10	27
broken, deteriorated rock, red w/clay seams	27	30
brown rock	30	31
void	31	33
basalt, black H	33	50
fractured rock, grey LGDM	50	54
basalt black M	54	103
broken & deteriorated rock	103	121
fractured rock	121	132
basalt grey M	132	154
basalt, black H	154	322
basalt, broken, water bearing	322	325
basalt, fractured, grey M	325	354

Work started 4-22 19 74 Completed 4-26 19 74

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hansen Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 6711 NE 59th Ave. Vancouver
0251: Jess Kuhnhausen
[Signed] Jess Kuhnhausen (Well Driller) RM Hansen
#C051
License No. 223 02 1155 Date May 2 19 74

S. F. No. 7356—OS—(Rev. 4-71). 6/5/74 (USE ADDITIONAL SHEETS IF NECESSARY)

Critical Area Report Supplement to the Geotechnical Report

The Parks Development in the City of Kennewick

by Pahlisch Homes
HDJ Project # 3949-00

The Parks is a 36 acre site that will be developed in three Phases. Phase 1 is the residential portion shown in the attached Figure 3, and Phases 2 and 3 will be the portion to the west of Phase 1.

Two areas within Phases 2 and 3 of the development are designated as critical areas due to a high erosion potential. The attached Figure 3 shows the critical areas within the development. These areas are designated as a critical areas because they are near the base of ancient drainage ways. Please note that these drainages are sub-parallel northeast trending drainages or ravines that extend from the south and cross the Interstate and the KID canal located just south of the site.

These drainages were formed during the late Pleistocene Epoch when temporary Lake Lewis formed within the Pasco Basin during cataclysmic flood events. As the lake receded, it scoured the drainage channels in the lacustrine silt deposits on the site and eroded the silt down to the bedrock forming the deep drainage channels.

When the Interstate and the KID canal were installed, culverts were not installed in either of the ravines. We assume that drainage calculations conducted by WSDOT showed that any potential surface water flowing down the drainages from the south and onto the ROW would infiltrate on the south side of the ROW.

After the Pleistocene it is unlikely that any of the drainages near the site had any kind of surface runoff flow, even during major snowmelt events. Some water has recently drained down the third ravine to the west (see Figure 3), however, that water is overflow from an irrigation pond and not from meteoric sources.

The portions of the critical areas that are within the Phase 2 & 3 areas of the development were farmed for many years and there is no sign of surface or subsurface moisture within these critical areas.

Site development plans call for the low areas that are critical areas to be filled to level the site and control all stormwater flow. Civil design plans are not finalized for the Phase 2&3 areas but the design plans will include a grading plan map with roadways, stormwater drainage and infiltration facilities, and utilities.

In our geotechnical investigation we excavated test pits within the Phase 1 and Phase 3 areas but not in the Phase 2 area. Soil within the designated critical areas is composed of lacustrine or fluvial silt with little to some fine sand. This soil sits on top of relatively shallow bedrock as explained in the geotechnical investigation report. Soil within the entire 36 acre development area is in a dry condition and a near-surface unconfined aquifer is not found at the site. The only

groundwater seeps or exfiltration is found surrounding an irrigation pond located approximately 600 feet northwest of the Phase 3 area.

Geohazard Mitigation

The geohazard at this site is a potential erosion and/or flooding hazard that is to be avoided. It is not a critical area that is designated as such in an effort to protect a critical resource.

Therefore, it is proposed that the erosion geohazard at this site shall be mitigated by the engineering design of the development. Site grading and drainage design will control all surface drainage, including any potential on-site stormwater flow. Mitigation of this geohazard by site grading design will essentially remove and eliminate the geohazard to a level that is less than the current pre-development condition.

A site plan and a site grading plan have not yet been prepared for the Phase 2 and 3 area where the geohazard is present. Development plans are only being prepared for the Phase 1 area at this time.

Please note that there are no overly steep slopes associated with this geohazard zone and a slope stability analysis is not required to demonstrate slope stability because the existing slopes within the geohazard zone are inherently stable. The proposed development of this site will not decrease the factor of safety of any of the shallow slopes within the geohazard area.

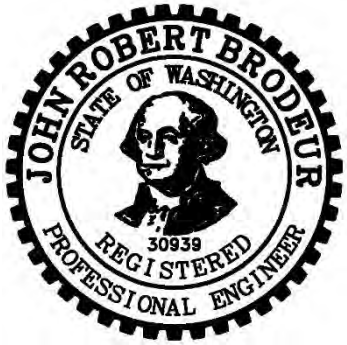
There are no seeps or springs within or near to the geohazard areas and there is no surface runoff within the geohazard zones.

A standard erosion and sediment control plan will be prepared as a part of the site development plans.

The mitigation plan for the erosion hazard at this site will be the standard engineering plans for the site which will include site grading and stormwater management plans. Beyond the site grading plan, no additional site-specific mitigation is required.

This Critical Area Report was prepared by:

John R. Brodeur, PE, LEG



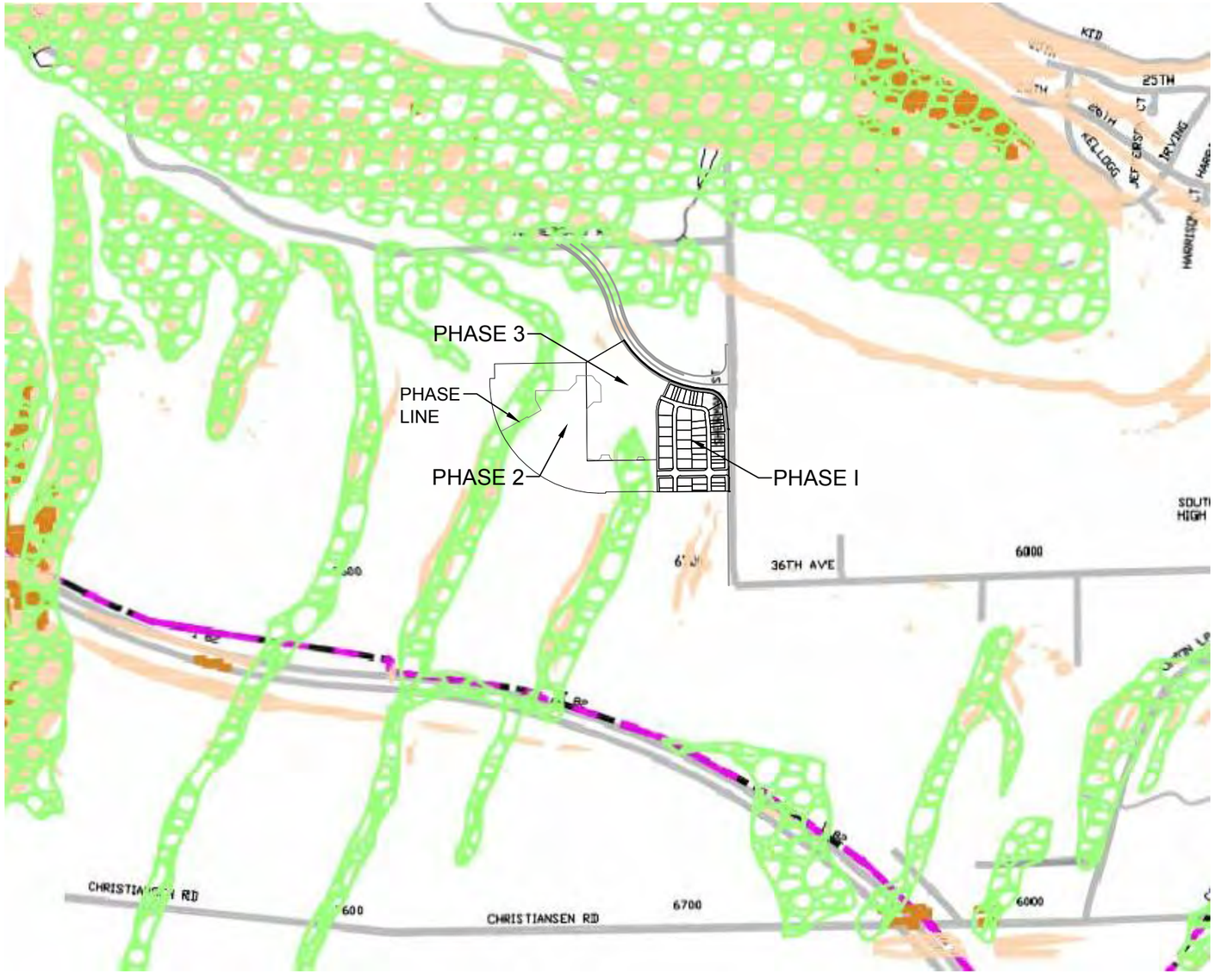


EXHIBIT 4

City of Kennewick
Critical Areas Map
Geologically Hazardous Areas

2007

HDR

- Steep Slopes* (>15%)
- Extreme Slope Hazard* (>40% Slope)
- Erosion Hazard**
- Landslide Hazard (Known)**
- City Limits
- UGA Boundary

* Derived from the United States Geological Survey 7.5-minute Digital Elevation Model

** Data taken from Soil Survey Benton County Area, Washington, July 1971. Provided by United States Department of Agriculture.

Disclaimer: This map is intended to be used as a reference and does not provide a final critical areas designation. All data presented should be considered advisory in nature and approximate in location, due to integration of multiple data types and variation in spatial accuracy of source data. Field inspection is advised to certify the presence of critical areas on a site-specific basis.

CRITICAL AREAS MAP

PAHLISCH HOMES SOUTHRIDGE PRD

LOCATED IN THE CITY OF KENNEWICK, WA

HDJ DESIGN GROUP PLLC
engineers | landscape architects | planners | surveyors
6115 Burden Blvd, Suite E
Pasco, WA 99301-8930
509/547-5119
306/695-3488
509/547-5129 fax
Internet: www.hdjdesigngroup.com

DESIGNED: JRB	SCALE H: 1"=1000' V: 1"=1000'	FIGURE
DRAWN: AJJ	DATE: NOV 2015	3
CHECKED: JRB	JOB NO.: 3949-00	

EXHIBIT 9

ED #15-62

CITY OF KENNEWICK
MITIGATED DETERMINATION OF NON-SIGNIFICANCE

FILE/PROJECT NUMBER: **ED 15-62 FOR PRD 15-01/PP 15-06**

DESCRIPTION OF PROPOSAL: **PLANNED RESIDENTIAL DEVELOPMENT FOR 553 LOT SUBDIVISION**

PROPONENT: **CHAD BETTESWORTH, PAHLISCH HOMES**

LOCATION OF PROPOSAL, INCLUDING STREET ADDRESS, IF ANY: **SOUTH OF W. HILDEBRAND BLVD (BOB OLSON PARKWAY) AND WEST OF S. SHERMAN STREET AT 3514 S. SHERMAN STREET.**
LEAD AGENCY: CITY OF KENNEWICK

DETERMINATION: The City of Kennewick has determined that this proposal does not have a probable significant adverse impact o the environment. An Environmental Impact Statement (EIS) will not be required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the City. This information is available to the public on request. Application for other required permits may require further review under SEPA procedures.

___ There is no comment period for this DNS.

___ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

__X__ This DNS is issued under 197-11-340(2); the City will not act on this proposal for fifteen days from the date below. Comments must be submitted by **March 29, 2016** . After the review period has elapsed, all comments received will be evaluated and the DNS will be retained, modified, or withdrawn as required by SEPA regulations.

RESPONSIBLE OFFICIAL: Gregory McCormick, AICP
POSITION/TITLE: Community Planning Director
ADDRESS: 210 W 6th Ave., P.O. Box 6108, Kennewick, WA 99336
PHONE: (509) 585-4463

__X__ Changes, modifications and /or additions to the checklist have been made on the attached Environmental Checklist Review.

This DNS is subject to the attached conditions:
___ No conditions.
__X__ See attached condition(s).

Date: **March 14, 2016** Signature: Gregory J. McCormick

****

Appeal: An appeal of this determination must be submitted to the Community Planning Department within fourteen (14) calendar days after the date issued. This appeal must be written and make specific factual objections to the City's threshold determination. Appeals shall be conducted in conformance with Section 4.12.090(9) of the Kennewick Municipal Code and the required fees pursuant to the City's adopted Fee Schedule shall be paid at time of appeal submittal.

Copies of this DNS were mailed to: Dept. of Ecology, WA Dept of Fish & Wildlife, WSDOT, Yakima Nation, CTUIR, PRD 15-01 &PP 15-06 File

CITY OF KENNEWICK
ENVIRONMENTAL CHECKLIST REVIEW

E. D. File #15-62 **Reviewed by: Wes Romine**
Action: PRD 15-01 & PP 15-06 **March 14, 2016**

The City of Kennewick has reviewed the checklist and made additions & corrections to it.

Please note the following condition(s):

1.) Park Fees

For this proposal, PRD 15-01/PLN-2015-01862 & PP 15-06/PLN-2015-01863, conditions include the mitigation fees for impacts for the addition of 553 dwelling units in Park Planning Zone 6W – Southridge. In lieu of land dedication, fees are required to be paid to Park Planning Zone 6W in the amount of **$46,635.58** as calculated per the City's Park Fee Determination Process form. This fee must be paid at the time of final plat as a percentage of lots in each final plat phase.

.

ED 15-62
for
PRD 15-01 & PP 15-06

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*: [help]**

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:
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]

Evaluation for Agency Use Only

1. Name of proposed project, if applicable: [help]
The Parks

2. Name of applicant: [help]
Pahlisch Homes
63088 NE 18th Street, Suite 100
Bend, OR 97701

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

Chad Bettesworth
chadb@pahlischhomes.com
(541) 280-6242

4. Date checklist prepared: [help]

October 23rd, 2015

5. Agency requesting checklist: [help]

City of Kennewick

6. Proposed timing or schedule (including phasing, if applicable): [help]

Phase 1: Spring 2016
Phase 2: Fall 2016
Phases 3-10: as market demands

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]

The Parks at Thompson Hill PRD is planned to be staged in 10 phases. The Phase 1-3 Preliminary Plat will be submitted concurrent with PRD Application. Each Phase of development will be developed under a separate prelim plat per COK municipal code. When the PRD is fully developed there are no additional plans for expansion or activities.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]

- A geotechnical study has been completed at the site with detailed observation of the on-site soil characteristics and will seek to address development of any defined critical areas.
- A traffic analysis and Trip Generation Letter have been developed for the PRD
- An engineered stormwater plan and grading plan will be fully developed with each phase of construction drawings.

May 2014

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]

A preliminary plat for Phases 1-3 to be approved by the City of Kennewick and will be considered concurrent with the Planned Residential Development application

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

Engineering plans would be permitted through City of Kennewick for infrastructure improvements necessary to construct public streets and utilities with service to individual lots. Building permits will be issued for each residential unit within the development.

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 proposed PRD will develop approximately 137.4 acres into a mix of single family homes, townhomes, common areas and open spaces and will consist of 553 residential units. Phase 1 will develop a portion of 20 acres into the the single family homes, townhomes, and open spaces and will consist of 46 residential units.

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 PRD is bounded by S. Sherman Street to the east, W. Hilebrand Blvd. to the north and Ridgeline Drive to the south. Phase 1 is in the northeast corner of the site at the intersection of Hildebrand Blvd and S. Sherman Street.

The PRD is identified as Parcel # 117892000001000

Phase 1 will be located south and east of the intersection of Hildebrand and Sherman Street, and will be located within parent parcel # 117892000001000.

Evaluation for Agency Use Only

Per the Preliminary Plat drawing, the Preliminary Plat application covers phases 1-3 on 35.76 acres to be divided into 130 lots and 14 tracts.

May 2014

B. ENVIRONMENTAL ELEMENTS [help]

Evaluation for Agency Use Only

1. Earth

a. General description of the site [help]
(check one): ☐ Flat, ☐ rolling, ☑ hilly, ☑ steep slopes, mountainous, ☐ other _____
While most of the site is hilly between 5-10% there are portions of the site less than 5% and other portions identified on the City's GIS as Steep Slopes >15%

b. What is the steepest slope on the site (approximate percent slope)? [help]
The steepest slope for the PRD is approximately 50%. Within the boundaries of Phase 1, the steepest slope is approximately 10%.

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]

The soils in the PRD boundary are a mixture of Warden silty loams and sandy loams.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]

The City of Kennewick GIS indicates areas of erosion hazard and steep slopes within the PRD boundary. There does not appear to be unstable soils within Phase 1.

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]

PRD development would seek to regrade each phase as necessary for street, utility and residential development. The fill and excavation would be limited to the PRD site and would be conducted in accordance with the recommendation of a geotechnical engineer.

Any grading prior to approval of a Civil Permit will require a separate grading permit.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]

Potential erosion, both wind blown and runoff, are possible as a result of construction and will be managed with a temporary erosion control plan approved by the City of Kennewick.

May 2014

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

The PRD will be approximately 35% impervious area. While Phase 1 will be approximately 35% impervious area.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]

During construction erosion control measures will be implemented such as person operated watering devices and silt fencing. After construction the majority of the pervious surface on the site will be grass and landscaping consistent with single family yards. The site will also have common landscape open spaces consisting of live ground cover and trees. These aspect of development will be present throughout the overall PRD as well as Phase 1

2. Air

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]

During construction there will be exhaust emissions from construction equipment as well as dust. After project completion there would be normal air emissions resulting from a residential neighborhood setting.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]

There are no known off-site sources of emissions will affect this proposal.

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

During construction, emissions will be limited to working hours and dust will be controlled by person operated watering devices.

3. Water

a. Surface Water: [help]

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 is an existing un-named seasonal pond within the PRD boundary located near the northern boundary of the development. There are no bodies of water located within the Phase 1 boundary.

Evaluation for Agency Use Only

Per the City GIS Map and the Wetland Assessment Report prepared in February of 2016, the seasonal pond is fed by irrigation water and not classified as a state or federally regulated wetland.

May 2014

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]

There will be potential mass grading and for individual home grading within 200 feet of the pond. There would be no development within the designated Open Space planned to be surrounding the pond as shown on the PRD landscape plan..

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 fill or dredge material would be placed in or removed from the existing pond.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]

The overall development does not propose or require any surface water withdrawls or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]

The project does not lie within a 100-year floodplain.

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]

The proposal does not involve any discharges of waste materials to surface waters.

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 for development of the project. No water will be directly discharged to the groundwater with the project.

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]

No waste material will be discharged into the ground with the development of the project..

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 runoff will be collected within the roadway prism and disposed of via surface and subsurface methods consistent with City of Kennewick standards for stormwater disposal. There will be no off-site discharges of stormwater proposed with the project. All stormwater plans will be developed consistent with the Eastern Washington Stormwater Manual.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]

It is not anticipated that this will occur since waste materials are not allowed to be discharged to City of Kennewick owned and maintained storm systems.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The proposal will alter the existing drainage patterns on-site. There are two drainages on-site that will be filled with the development in order to complete the overall plan of development.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]

The stormwater disposal methods will be in compliance with the City of Kennewick standards as well as the Washington State Department of Ecology Eastern Washington Stormwater Manual.

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 ☐

☐ bullrush

Orchards, vineyards or other permanent crops. ☑

wet soil plants: ☐ cattail ☐ buttercup
skunk cabbage ☐

other water plants: ☐ water lily ☐ eelgrass ☐ milfoil

other types of vegetation ☐

b. What kind and amount of vegetation will be removed or altered? [help]

Existing pasture, orchards, and native vegetation will be removed during the course of the PRD. During Phase 1, a portion of the orchard and native grasses will be removed.

c. List threatened and endangered species known to be on or near the site. [help]

There are no threatened or endangered species known to be on or near the site to the applicant's knowledge.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]

The single family residential lots will be landscaped with grass and trees. The open areas and common areas will be landscaped with ground cover and trees. An overall Landscape Development Plan has been submitted with the PRD outlining the locations and types of landscaping to be used within the PRD.

e. List all noxious weeds and invasive species known to be on or near the site.

There are not any noxious weeds or invasive species known to be on or near the site.

5. Animals

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. Examples include: [help]

birds: ☑ hawk ☐ heron ☐ eagle ☑ songbirds ☐ other:

mammals: ☑ deer ☐ bear ☐ elk ☐ beaver ☐ other: ☐

fish: ☐ bass ☐ salmon ☐ trout ☐ herring ☐ shellfish ☐ other

b. List any threatened and endangered species known to be on or near the site. [help]

There are no threatened or endangered species known to be on or near the site to the applicant's knowledge.

c. Is the site part of a migration route? If so, explain. [help]

Yes, Canada Geese and ducks are known to migrate through the Columbia Basin.

d. Proposed measures to preserve or enhance wildlife, if any: [help]

There are no direct measures being proposed to solely enhance wildlife. There will be open spaces within the development which wildlife will continue to use.

e. List any invasive animal species known to be on or near the site.

No known invasive animal species are known to be on or near the site to the applicant's knowledge.

6. Energy and natural resources

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 project will require energy in order to serve the proposed homes with electricity and gas.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]

This project is not anticipated to have any impacts to adjacent properties potential solar use.

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]

The proposed homes will be constructed in accordance with all applicable building and energy codes as recognized by the City of Kennewick.

7. Environmental health

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]

There are no recognized toxic health hazards usually associated with the development of Residential homes within a defined urban area.

1) Describe any known or possible contamination at the site from present or past uses. [help]

There are no known or possible contamination at the site from present or past uses to the applicant's knowledge.

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.

There are no existing hazardous chemicals/conditions or pas pipelines that might affect the project development and design to the applicant's knowledge.

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.

No storage, use or production of toxic or hazardous chemicals is being proposed with the development.

4) Describe special emergency services that might be required.

Both the PRD and subsequent phases will require police, fire and ambulance services.

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

None at this time.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]

There are no known sources of noise in the area that will affect this proposal. Phase 1 is adjacent to Hildebrand Blvd and S. Sherman Street, which will have noise from traffic. Other phases of the PRD will also border Hildebrand, Sherman and Ridgeline Drive, which will have traffic noise. There are existing farming operations to the south and west of the property

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]

During each phase of construction, there will be construction noise due to equipment and home construction. At full build out, noise would be typical of urban homes with traffic entering and exiting the site.

3) Proposed measures to reduce or control noise impacts, if any: [help]

Construction hours will be limited to working hours defined by the City of Kennewick

Noise shall comply with the City of Kennewick Noise Ordinance, KMC 9.52

8. Land and shoreline use

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]

The current use of the PRD is an operating orchard, pasture land and vacant land zoned RL. The current use of the surrounding land is used in a similar manner and also zoned RL. The proposal is not anticipated to affect land uses nearby

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 non-forest use? [help]

The orchard in the southern portion of the PRD will be converted from ag to single family homes. At full development, approximately 42 acres of farmland from ag use to residential will be converted. During Phase 1-3, approximately 13 acres will be converted from farmland to residential.

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:

The proposal will not affect surrounding working farms or forest lands. The proposal could be affected by the application of pesticides depending on the application technique used and weather conditions.

c. Describe any structures on the site. [help]

There is an existing residence and outlying buildings on the site located in the south east corner at the intersection of Ridgeline and Sherman Street. There are no structures on the Phase 1-3 portions of the site.

d. Will any structures be demolished? If so, what? [help]

The existing residence and outlying buildings will be removed during the final phase of the PRD. No structures will be removed in Phase 1-3 of the project.

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

The site is currently zoned RL, per City of Kennewick zoning maps

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

Low density residential per City of Kennewick maps

g. If applicable, what is the current shoreline master program designation of the site? [help]

None

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]

Portions of the PRD have been classified and identified on City of Kennewck's GIS as areas of erosion hazard and areas of slopes greater than 15% (steep slopes)

i. Approximately how many people would reside or work in the completed project? [help]

Within the fully built PRD of 553 units there would be approximately 1800 residents. During Phase 1-3 there would be 125 housing units with approximately 408 residents.

j. Approximately how many people would the completed project displace? [help]

The overall PRD would seek to develop the acreage where the existing home is located and the existing single family homes residents would need to be relocated. In Phase 1-3, no people reside within the area of work.

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]

No measures are being proposed with Phase 1-3. The overall PRD seeks to develop a multiphase residential development that would offset the impacts of the removal of the existing home. The existing owner of the home is being compensated for the home and underlying property.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]

The PRD is to be built in accordance with City of Kennewick RL zoning requirements

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

This project will not seek to alter the nearby agricultural and forest lands of long term commercial significance.

May 2014

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]

At full build out, the PRD would provide 553 residential units. During Phase 1-3, 125 residential units will be provided.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]

At full build out of the overall PRD, one single family house will be replaced by a mix of single family homes and townhomes.

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

Housing impacts and density within the PRD will be controlled by the City of Kennewick zoning code for an RL designation and the City's Planned Residential Development Code.

10. Aesthetics

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

Maximum height of any proposed structure would be 30 feet per the zoning code.

b. What views in the immediate vicinity would be altered or obstructed? [help]

Views in the immediate vicinity would be altered by rooftops.

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

The aesthetic impacts will be controlled by the City of Kennewick zoning code for an RL designation. The overall PRD will dictate the plan of development guidelines for future phases as well as where the open space and ares of common use will be for the development.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]

The proposal would produce light from the residential street lights adjacent to the roadways. Light would also be produced from fixtures on the outside of homes. Light would be present in the evening hours.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]

Not to the applicant's knowledge.

May 2014

c. What existing off-site sources of light or glare may affect your proposal? [help]

None to the applicant's knowledge.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]

Any lighting would be directed downward.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]

Existing recreational opportunities exist at the Southridge Sports Complex and at Southridge High School. The Canyon Lakes Golf Course is within 5 miles of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]

No existing recreational uses will be displaced with this project.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]

The PRD plans to include open and common spaces with walking trails. A community center and pool will be built for residents and their guest.

park fees in lieu of dedication of park land will be paid to park zone 6W Southridge.

13. Historic and cultural preservation

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 located on or near the site? If so, specifically describe. [help]

No buildings of historical significance are located on the 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]

Not to the applicant's knowledge.

May 2014

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]

No areas of cultural significance are identified on the City of Kennewick's GIS mapping.

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.

No impacts to resources are anticipated.

If historic artifacts are found work will be stopped immediately and the City of Kennewick and appropriate agencies will be notified.

14. Transportation

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 located south of Hildebrand Blvd, east of S. Sherman Street and north of Ridgeline Drive. Phase 1-3 is located at the corner of Hildebrand and Sherman Street, and will be accessed from Sherman Street.

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 public transit. The closet transit stop is located at the Southridge Sports Complex.

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 project would have the ability to provide on-street parking as well as a driveway at each individual home. There would be a parking lot provided at the community center. The development would not eliminate any existing parking spaces.

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 PRD will require the development of new public streets within the overall plan of development. It is anticipated that existing Sherman Street will require improvement.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]

The site is not in the immediate vicinity of water, rail, or air transportation.

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 non-passenger vehicles). What data or transportation models were used to make these estimates? [help]

During full build out, the PRD would generate approximately 4,841 average weekday trips, with a pm peak of 499. A trip generation letter was prepared with the PRD submittal package.

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]

The proposal will not interfere with or affect the movement of agricultural and forest products in the area.

h. Proposed measures to reduce or control transportation impacts, if any: [help]

The project would be subject to transportation impact fees imposed by the City of Kennewick.

15. Public services

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]

This project would increase the need for public services as population in the area increases due to the number of residential units increasing. The PRD is phased, so the demand for public services will increase incrementally.

May 2014

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:

May 2014

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]

The residents of the development will be subject to local taxes and levies used to support public services.

16. Utilities

a. Check utilities currently available at the site: [help]

☑electricity, ☑natural gas, water☑ refuse service☑ ☐telephone, ☑sanitary sewer, ☐septic system, other irrigation (KID)

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]

The PRD development will require public water and sewer. Power from Benton PUD, gas from Cascade Natural Gas, communication from Charter and Frontier, and irrigation from Kennewick Irrigation District.

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 Jason Mattox

Position and Agency/Organization Principal/ HDJ Design Group, PLLC

Date Submitted: 10/23/15

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.

ESA LISTED SALMONIDS CHECKLIST

The Listed Salmonids Checklist is provided in order that the City can identify a project's potential impacts (if any) on salmonids that have been listed as "threat ened" or "endangered" under the Federal Endangered Species Act (ESA). A salmonid is any fish species that spends part of its life cycle in the ocean and returns to fresh water. Potential project impacts that may result in a "taking" of listed salmonids must be avoided, or mitigated to insignificant levels. Generally, under ESA, a "taking" is broadly defined as any action that causes the death of, or harm to, the listed species. Such actions include those that affect the environmental in ways that interfere with or reduce the level of reproduction of the species.

If ESA listed species are present or ever were present in the watershed where your project will be located, your project has the potential for affecting them, and you need to comply with the ESA. The questions in this section will help determine if the ESA listing will impact your project. The Fish Program Manager at the appropriate Department of Fish and Wildlife (DFW) regional office can provide additional information. Please contact the Dept. of Fish and Wildlife at 1701 S. 24th, Yakima WA 98902-5720, Phone No. 509-575-2740.

1. Are ESA listed salmonids currently present in the watershed in which your project will be?
   Yes **_X_** No___

Please Describe.

2. Has there ever been an ESA listed salmonid stock present in this watershed?
   Yes **_X_** No___

Please Describe.

NOTE: Kennewick is located in the upper Mid-Columbia watershed. Salmonids are present in the watershed - questions no. 1 and no. 2 already answered "yes". Questions A-1 and A-2 are also answered.

PROJECT SPECIFIC: The questions in this section are specific to the project and vicinity.

A1. Name of watershed: Upper Mid-Columbia

A2. Name of nearest waterbody: Columbia River

A3. What is the distance from this project to the nearest body of water?
The project is located approximately 3.6 miles to the Columbia River, 4.4 miles to the Yakima River by way of the Amon Basin, 1000 feet to an irrigation canal to the south and 1500 feet to an irrigation canal to the north.
Often a buffer between the project and a stream can reduce the chance of a negative impact to fish.

A4. What is the current land use between the project and the potentially affected water body (parking lots, farmland, etc.)

The land use to the south of the PRD is cultivated orchards, land to the north is vacant land. Land between the PRD and the major Rivers is a densely developed urban city and undeveloped land.

A5. What percentage of the project will be impervious surface (including pavement & roof area)?

During Phase 1, the impervious area will be approximately 35% of the project area.
At full build out, the PRD will be approximately 35% impervious area.

FISH MIGRATION: The following questions will help determine if this project could interfere with migration of adult and juvenile fish. Both increases and decreases in water flows can affect fish migration.

B1. Does the project require the withdrawal of

a. Surface water? Yes____ No__✔__
Amount
Name of surface water body

b. Ground water? Yes____ No__✔__
Amount
From Where
Depth of well

B2. Will any water be rerouted? Yes_____ No__✔__
If yes, will this require a channel change?

B3. Will there be retention ponds? Yes__✔__ No_____
If yes, will this be an infiltration pond or a surface discharge to either a municipal storm water system or a surface water body?

The project may implement the use of surface infiltration ponds on-site. There will not be a direct discharge to a surface water body.

If to a surface water discharge, please give the name of the waterbody.

N/A

B4. Will this project require the building of new roads? (Increased road mileage may affect the timing of water reaching a stream and may, thus, impact fish habitat.)

Yes, the proposal requires building new roads.

B5. Are culverts proposed as part of this project? Yes ____ No __✔__

B6. Are stormwater drywells proposed as part of this project? Yes __✔__ No_____

B7. Will topography changes affect the duration/direction of runoff flows? Yes ✔ No___

If yes describe the changes.
The site will be graded to direct roadway runoff to on-site infiltration facilities while home runoff will be directed to surface infiltration.

B8. Will the project involve any reduction of a floodway or floodplain by filling or other partial blockage of flows? Yes_____ No ✔

If yes, how will the loss of flood storage be mitigated by your project?

WATER QUALITY: The following questions will help determine if this project could adversely impact water quality. Degraded water quality can affect listed species. Water quality can be made worse by runoff from impervious surfaces, altering water temperature, discharging contaminants, etc.

C1. Will your project either reduce or increase shade along or over a waterbody?
Yes ____ No ✔ (Removal of shading vegetation or the building of structures such as docks or floats often result in a change in shade.)

C2. Will the project increase nutrient loading or have the potential to increase nutrient loading or contaminants (fertilizers, other waste discharges, or runoff) to the waterbody?
Yes ____ No ✔

C3. Will turbidity (dissolved or partially dissolved sediment load) be increased because of construction of the project or during operation of the project? (In-water or near water work will often increase turbidity.)
Yes ____ No ✔

C4. Will your project require long term maintenance, i.e., bridge cleaning, highway salting, chemical sprays for vegetation management, clearing of parking lots?
Yes ____ No ✔
Please Describe.

Vegetation: The following questions are designed to determine if the project will affect riparian vegetation, which can impact listed species.

D1. Will the project involve the removal of any vegetation from the stream banks?
YES ____ NO ✔

If yes, please describe the existing conditions and the amount and type of vegetation to be removed.

D2. If any vegetation is removed, do you plan to re-plant? YES ____ NO ✔

If yes, what types of plants will you use?

E. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand the City is relying on them to make its decision.

Signature _____ Date 10/23/15

MEMORANDUM

PUBLIC WORKS DEPARTMENT

To: Wes Romine, Development Services Manager

From: Kristin Stowe, Public Works Technician

Date: October 19, 2016

Re: Public Works Consolidated Comments

Project: PP No.16-04 / PLN-2016-02914

1. Developer will be required to provide construction of public roads, sidewalks, streetlights, storm drainage, and designate sidewalk and utility easements all in conformance with the latest City of Kennewick (COK) Standard Specifications and details.

2. As part of all residential development construction plans, there shall be a separate schematic drawing which, at a minimum, shows the power source(s), wiring diagram, street light pole spacing, and street permanent signing per COK Standard Specifications 7-10. Combine signing, striping, and illumination plans onto the same drawing with other elements left off.

3. Due to project phasing, any temporary dead end street 150-feet or greater from the street intersection will require construction of a temporary cul-de-sac, constructed with 6-inches of base rock and 2-inches of Hot Mix Asphalt (HMA).

4. There is an existing 18-inch water main along the east side of the property in S Sherman St. installed by COK, Record Drawing F-3005_05.

5. There is an existing 12-inch water main along the north side of the property in W Hildebrand Blvd. installed by COK, Record Drawing F-3006_29.

6. Developer will be required to loop all water mains to avoid the buildup of stagnant water which will assist in minimizing bacteria re-growth, and also minimize taste and odor concerns associated with stagnant water.

7. Provide water main sizes on comprehensive water plan for City review and approval.

8. Potable water is not available for irrigation purposes. Provide irrigation water to irrigate proposed plat.

9. There is an existing 8-inch sanitary sewer service stubbed to the north side of the property in W Hildebrand Blvd. installed by COK, Record Drawing F-3006_29.

10. Provide sanitary sewer main sizes on the sanitary sewer comprehensive plan for review.

11. Residential sub-divisions shall be designed to retain and dispose of the calculated difference between a 25-year, 24-hour, event for the developed state and the 24-hour event for the natural pre-developed state. Detention ponds (control outlet) may be used only where it can be clearly demonstrated that infiltration, or retention, are not feasible per City of Kennewick Standard Specifications section 5-9.02.

12. Provide storm main sizes on storm comprehensive plan for City review.

13. Construction civil drawings shall include only the infrastructure proposed with the first phase of the project. Design Engineer has the option of showing phase 2 in a lighter line style to assure clarity for review, permitting, and construction.

14. Sidewalks shall be widened an additional 18-inches when adjoining a wall, or fence, per COK detail 2-10, sheet 1 of 8, note 4.

15. For civil plan reviews submit the following:
    a. Application for Civil Review and Permitting
    b. One full size set (24" x 36") Xerox copy of the construction plans with Storm Calculations
    c. One full size PDF copy of each shall be submitted to the Public Works Department for review.

16. Plan review and utility fees will be quoted from the construction cost from the Contractor selected by the Developer to construct the project. Cost shall be paid in the amount of five percent (5%), and the construction cost shall be determined by the actual bid document reviewed, and approved, by the City Engineer.

17. Property owners as well as their contractors, subcontractors, builders, suppliers, and other representatives shall follow all KMC's regarding storm water management, erosion sediment control, and illicit discharges. Failure to meet City Code can result in approval delays, fines, and a hold on permits per the following KMC's:
    a. KMC 14.29: Illicit Discharge
    b. KMC 18.72: Clearing and Grading
    c. KMC 17.20: Design and Construction
    d. KMC 18.75 and KMC 18.78: Residential & Commercial Design Standards.

MEMORANDUM

Traffic Engineering Division

To: Wes Romine, Development Services Manager

From: John Deskins, Traffic Engineer

Date: October 18, 2016

Re: Traffic Engineer's Comments for The Parks Phases 1 & 2

Project: PP 16-04/PLN-2016-02914

Conditions

Based upon review of the proposed development site plan, existing traffic conditions, the average weekday traffic volumes generated by similar types of developments (per current ITE Trip Generation Manual), traffic flow and safety, proximately to the intersection adjoining property access and in conformance with Kennewick Administrative Code (KAC) Chapter 13-46 "Highway Access Management", the conditions are as follows:

1. Half-Street Improvements required.
    a. Bob Olson Parkway – Improvements are to be completed by the City. Development's contribution to this improvement is standard TIF since the project is TIF eligible. Ensure that dedications are provided of right-of-way and easement. These should be 37' of right-of-way and 15 foot easements unless the McKay & Sposito document dated 1/14/13 shows otherwise for the easements.
    b. Sherman Street – Half-street improvements will be required on Sherman Street from the point where the City improvements of Bob Olson Parkway leave off at the curb return. These improvements shall be per City of Kennewick Standard Drawing 2-3.
2. The current residential standard street cross section is 40 feet of right-of-way with 18 foot easements on each side and a roadway width of 36' curb to curb. Since the sight is no longer proposed as a PRD, this shall be the standard used per KMC 18.45.050(7). These improvements shall be per City of Kennewick Standard Drawing 2-1 Sheet 1 (curb tight sidewalk) or Sheet 2 (planter strip) of 4.
3. The original traffic study dated October 20th, 2015 shows that the intersection on Bob Olson Parkway has 111 eastbound right-turns estimated in the PM peak hour. This exceeds the warrant in KAC 13-46-060(2)(A)(i) of 50 in the peak hour. Therefore a right-turn lane should be provided in one of the future phases. The

turn bay shall be 12' wide, 150 feet in length and have an additional 100 foot taper. Additional right-of-way (12') and corresponding easement should be dedicated along the frontage of Lot 3 and lots in future phases. The turn lane should reduce the incidences of rear-end crashes entering the site and also has some benefits with regard to making left-turn exits from the site.

4. Provide 40' curb to curb in first block at 33rd Place for improved entry width. Adjust right-of-way by an additional 2 feet on each side.
5. The Trip Generation and Distribution Letter states that Traffic Circles will be utilized at some locations. The developers will need to utilize accepted design standards in conjunction with the City of Kennewick Standard Drawings 7-11, Sheets 1 and 2.
    a. The developer has also been provided with information on the design of Mini-Roundabouts per the FHWA-SA-10-007 document as appropriate design standards for the proposed roundabout/ traffic circle at the intersection of Avenue D(?) and Street 3. The design of the mini-roundabout can be submitted and approved at plan review stage with final adjustments of Tract A, B, and C boundaries to fit the design shown at Final Plat.
    b. The report also showed a traffic circle at Street 3 and Avenue B.
    c. Avenue B shows a long straight stretch that would benefit from another traffic circle at Street 1 and Avenue B or a speed hump located somewhere between Street 3 and Sherman Street.
6. Approximate total TIF for both phases is $65,700 based on $900 per lot. Note TIF's paid after January 1st, 2017 may be slightly higher based on an annual adjustment factor.

MEMORANDUM

Fire Department

To: Wes Romine, Development Services Manager

From: Joe Terpenning, Deputy Fire Marshal

Date: October 24, 2016

Re: 3316 S Sherman

Project: PLN 2016-02914

1. In accordance with City of Kennewick Development Standards, a residential development that is served by a single city standard street over six hundred feet (600”) in length shall have a second city standard street. In accordance with the Southridge Comprehensive Development plan a SEVA (secondary emergency access road) can be installed as alternative to a second city standard street.

FIRE DEPARTMENT
210 W 6TH AVE * PO Box 6108* Kennewick, WA 99336
509-585-4563 * 509-585-4442 Fax

KENNEWICK IRRIGATION DISTRICT
EST. 1917

2015 South Ely Street
Kennewick, WA 99337
Phone 509-586-9111
FAX 509-586-7663
www.kid.org

October 19, 2016

Wes Romine
Development Services Manager
City of Kennewick
210 W. 6th Avenue
Kennewick, WA 99336

Subject: Preliminary Plat 16-04 - The Parks Review Comments

Dear Mr. Romine:

This letter provides Kennewick Irrigation District (KID) review comments on Pre Plat No. 16-04 The Parks submitted by Matt Smith of Tri-Cities Development/JF Moore 15 S.W. Colorado, Suite 1, Bend, Oregon 97702. The Parks is generally located west of S. Sherman Street and north of Ridgeline Drive at 3514 S. Sherman Street and includes the following parcels:

- 1-1789-200-0001-001 (19.07 irrigable acres)
- 1-1789-200-0001-002 (120.83 irrigable acres)

The properties identified on the proposed preliminary plat are located within the KID boundaries. The properties within this preliminary plat are classified as irrigable land and consist of **139.90 irrigable acres**. KID provides the following comments as a condition of approval by the legislative authority for R.C.W. 58.17.310:

1) The following are KID easement requirements:
    a. Dedicate to KID an irrigation easement 10 feet in width via a recorded deed to match any irrigation system components, centered on an irrigation pipe line.
    b. Dedicate to KID an irrigation easement 10 feet in width, five (5) feet in width if adjacent to a utility easement, along the road frontage of all lots.
        i. Within the City of Kennewick KID allows a "Sidewalk, Utility and Irrigation easement" and an "Access and Irrigation easement." Please change the easements to reflect this.

2) This Development is within the Southridge Master Plan Benefit Area. Compliance with Southridge Master Irrigation Facilities Plan and KID Resolution No. 2016-04 is required.

3) The property owner or developer is required to install an irrigation system that conforms to the most recent edition of the KID Standard Specifications pursuant to Resolution 86-15-A. This includes providing distribution pipelines adequate to provide individual pressurized irrigation services to each lot within the preliminary plat. This system will be dedicated to the KID upon completion, at the time of final plat.

a. Please note, as an alternative to immediate construction the owner may choose to delay installation of the irrigation system by entering into a facilities installation agreement with the KID. The owner must provide the KID with an irrigation system design that conforms to the most recent addition of the KID standard specifications. This irrigation system may be bonded and delayed up to five years. The facility installation agreement charge is $350.00. The owner must establish an approved bonding mechanism with the KID in an amount approved by KID.

4) The property owner or developer is required to submit an irrigation plan designed by a professional engineer for review and approval by the KID. The plan may be hand drawn or computer drafted. The plan shall be accurate and to a scale not to exceed one (1) inch = 50 feet. This is a vital step of the approval process. After approval of the plan, completion of all the facilities is required prior to KID signature on the Final Plat. Please contact me at 586-9111 for more information regarding this irrigation plan.
   a. In addition, this plan shall ensure all reasonable measures are taken to protect any easements, ROW's, and facilities. In the event any KID facilities are damaged during construction, the damage must be fully repaired to KID's then-existing standards.
   b. For each phase of the Project, KID review and approval of construction and grading plans is required to allow KID to assure all reasonable measures to protect any easements and ROW's. Such review and approval will be coordinated as part of the City's review and Final Plat approval process.
   c. No permanent structures are allowed within the KID's ROW.

5) The KID must inspect any new irrigation system installations or modifications. The property owner or developer shall contact the KID to arrange an inspection at least 48 hours in advance of the desired inspection date.

6) Prior to approval of each phase, the current year's assessment must be paid. If the final plat is submitted for review after May 31st of a given year or submitted for review prior to May 31st but not submitted for final approval prior to June 15th, the next year's estimated assessment (125% of the current year's assessment) must be paid prior to plat approval.

7) Prior to approval of the first phase, the United States Bureau of Reclamation (USBR) construction loan for **all parcels** owned by the property owner within the boundaries of the KID must be paid and all other USBR requirements associated with this payout must be completed.

8) The Review and Inspection fees in place at the time of each review request must be paid. At the time of application the review fees are as follows:
   a. A Preliminary Plat review fee of $825.00 which must be paid prior to scheduling for final plat approval at a KID Board meeting for the first phase.
   b. For each Phase an inspection fee $350 for the first 20 lots/tracts plus $25 per lot/tract after 20 lots/tracts.
   c. Final Plat review fee for each phase of $225.00.

9) Per KID Policy 4.17, "Irrigable Land Recalibration Principles," as land within the boundaries of the KID is subdivided or developed; KID will remove the irrigation water allocation from the impermeable surfaces, such as streets, from the plats.

10) In order to receive KID irrigation water delivery, a Watermaster (or point of contact) for the subdivision must be appointed. This water master can be appointed by the Home Owners Association (or similar organization) officers, or must be elected from among the property owners within the boundary of this proposed subdivision. If no HOA (or similar organization) is organized, than an election method similar to the attached document is required.

11) Prior to approval of each phase, an electronic file (AutoCAD 2004 format) and hard copy (6-mil mylar, sealed by a professional engineer) of construction as-builts must be provided to KID.

12) All subdivisions of land are required to be approved by the KID Board of Directors during a KID Board Meeting. KID Board Meetings are regularly scheduled on the first and third Tuesdays of each month. All conditions must be completed prior to submittal to KID for final approval. The submittal for final approval must be received by KID a minimum of two weeks prior to a regularly scheduled Board Meeting in order to be considered at that meeting.

13) Conditions Related to Design, Grading, and Construction
    a. Provisions should be made to allow canal, flood waters and irrigation return flows from up gradient water users to drain through existing drainage paths.
    b. Pursuant to RCW 58.17.310 (1), the KID would like to inform the City of Kennewick that portion of the development lies below an unlined earthen canal section (A). Unlined earthen canal sections are more likely to have a canal embankment breach occur than lined sections. Should a canal embankment breach occur near this development, there is potential for the public safety to be at risk. In order to mitigate this risk, the KID will require:
        i. Rights-of-Way that shall include all reasonably necessary features to allow the KID to operate, maintain and replace the irrigation system. Features shall include drainage systems and/or features that will carry irrigation return flows from up gradient water users, excess water and/or flood waters away from the irrigation water distribution system should a canal failure and/or breach occur.
        ii. As an alternative to i (above), pursuant to KID Policy 4.3, "Developer Risk Mitigation", plat developers may enter into a written agreement with the KID to provide other acceptable means of protecting persons and property. This may include the lining or piping of canals where appropriate. In instances where the KID agrees that canals may be lined or piped as an alternate to providing drainage, the KID Board of Directors may negotiate a cost share or contribution to the expense of lining.
    c. For each phase of the Project, KID review and approval of construction plans is required to allow KID to assure all reasonable measures to protect any easements and

ROWs. Such review and approval will be coordinated as part of the City's review and Final Plat approval process.

14) Conditions Related to Residential Use, The Applicant Shall:
   a. Include the potential failure of KID system components in its public offering statement for the plat pursuant to RCW 58.19.055(1)(r), which requires a public offering statement to include "[a] list of any physical hazards known to the developer which particularly affect the development or the immediate vicinity in which the developer is located and which are not readily ascertainable by the purchaser"; and

15) Future review, KID reserves the following rights regarding future review of the plat:
   a. KID reserves the right to provide review comments under RCW 58.17.330(1) and RCW 58.17.330(2) in response to future design submittals by the Applicant prior to final plat approval. The scope of these reviews will be limited to Phases that are adjacent to the District's Rights of Way. KID review of construction plans will be consistent with the City of Kennewick's plan review timelines.
   b. KID reserves the right to review and comment on the Applicant's plat line revisions for potential additional revisions to protect KID system components for Phases that are adjacent to KID's easements or ROWs.
   c. KID reserves the right to review and comment on the Applicant's CC&Rs to evaluate whether they should include any terms regarding protection of KID system components after construction and fencing requirements.
   d. KID reserves the right to submit additional comments during the City's review process under the State Environmental Policy Act (SEPA).
   e. All subdivisions of land are required to be approved by the KID Board of Directors.

Please provide notice to KID of any Public meeting or hearing where this project will be an agenda item. If you have any questions regarding these comments, please contact me at the address/phone number listed below.

Sincerely,

Jason McShane, P.E.
Engineering/Operations Manager

Enc: Sample Water Master Information
C: LB\correspondence\File: [03-8-29]
R:\Development\The Parks\The Parks Phases 1-3\Pre Plat Letter, The Parks.docx

Sample Watermaster Election Process

That the Water Users are deemed to agree as a condition of water delivery as follows::

i. The LID participants will elect a Watermaster from among themselves, as follows:

   a. Election of First Watermaster. The first Watermaster shall be elected prior to April 1, 2011, and shall be elected as described in paragraph d. below.

   b. Resignation of Watermaster. If the Watermaster resigns, the parties shall meet at a place and time designated by the resigning Watermaster in a written notice and elect a new Watermaster, or if the Watermaster does not designate a time and a place for such a meeting, the parties shall meet at a time and a place first designated in writing by two of the parties hereto to elect a new Watermaster.

   c. Death or Incapacity of Watermaster. If the Watermaster dies or becomes incapacitated, the parties shall meet at a time and a place first designated in writing by two of the parties hereto to elect a new Watermaster.

   d. Elections and Replacement of Watermaster. The Watermaster shall be assigned by the elected members of the Royal Ann Estates Homeowner Association Board of Directors. If the Homeowner's Association defaults or stops functioning, the Watermaster shall be elected by and may be replaced by a sixty percent (60%) majority of the Water Users participating in the LID at an election called for by a majority of the properties that are subject hereto. Each property shall have one (1) vote. If more than one person owns a property, the owners of the property shall designate in writing the person who shall have the right to vote for that property. If the owners of the property cannot agree on the person who shall vote for the property, that property shall have no vote in the election. The owners' properties which are calling for an election or replacement of a new Watermaster shall give or cause the other parties to be given a written notice stating the place and time of the election. Any notice required under this paragraph, which notice shall be mailed by U.S. Mail as certified mail to the common address identified above for the property not more than thirty days and not less than ten days

prior to the election. Any election held hereunder shall be held in Benton County, Washington, between 6:00 p.m. and 9:00 p.m.

ii. Powers and Duties of Watermaster. The Watermaster shall have the power and it shall be his or her duty to take all actions reasonably necessary to fulfill the purposes of this agreement, including but not limited to:

a. Provide a primary point of contact for KID to communicate system problems, outages, schedules, drought mitigation measures, etc.

b. Assist KID in providing the LID participants information regarding system problems, outages, water schedules, drought mitigation measures, etc.

iii. Qualified Immunity of Watermaster from Liability. The Watermaster shall not be liable for any damages caused to the parcels or persons subject hereto so long as the Watermaster acts in good faith.

iv. No water delivery unless a Watermaster is performing duties. If at any time a Watermaster no longer is performing his/her duties, as outlined above, for more than 30 days, KID will stop water delivery to the participants of the LID until a new Watermaster has been elected.

v. Alternate Watermaster. An alternate Watermaster may be elected in the same manner as described above for the Watermaster. This alternate Watermaster can function as Watermaster for a limited time, not to exceed 60 days, in case of the elected Watermaster being unavailable.

Washington State Department of Transportation

South Central Region
2809 Rudkin Road
Union Gap, WA 98903-1648
509-577-1600 / FAX: 509-577-1603
TTY: 1-800-833-6388
www.wsdot.wa.gov

October 19, 2016

City of Kennewick Development Services
210 W. 6th Avenue
Kennewick, WA 99336

Attention: Wes Romine, Development Services Manager

Subject: PP 16-04/PLN-2016-02914 – The Parks Phases 1 & 2
US 395 milepost 13.78 vicinity

We have reviewed the proposed project and have the following comments.

The subject property is not adjacent to U.S. Highway 395 (US 395); however, this highway is the sole north-south arterial serving the area. As such, WSDOT expects the majority of traffic generated by this proposal will utilize US 395 and access the highway at Ridgeline Drive and Hildebrand Boulevard.

This year, WSDOT constructed a southbound right-turn pocket at US 395/Hildebrand Boulevard; however, the intersection is still incomplete. The City's eastbound right-turn lane along Hildebrand does not connect to US 395. We recommend the City apply the traffic impact fees from this development towards the relocation of the signal pole and completion of the right-turn lane.

Thank you for the opportunity to review and comment on this proposal. If you have any questions regarding these comments, please contact Jacob Prilucik at (509) 577-1635.

Sincerely,

Paul Gonseth, P.E.
Planning Engineer

PG:jjp

cc: SR 395, File #8 (2015)
Kara Shute, Area 3 Maintenance Superintendent

Wes Romine

From: David Smith <smithd@bentonpud.org>
Sent: Thursday, October 20, 2016 8:51 AM
To: Wes Romine
Subject: RE: Preliminary Plat Application PP 16-04/PLN-2016-02914

Please provide a 10.00 foot wide utility easement along the westerly line of Lot 9.

Thank You
David Smith
509-582-1231

From: Wes Romine [mailto:Wes.Romine@ci.kennewick.wa.us]
Sent: Wednesday, October 05, 2016 4:11 PM
To: Alex Sligar Benton Clean Air; Ben Franklin Transit - Kevin Sliger; Ben Franklin Transit Tony Kalmbach; Benton Clean Air Authority - Rob Rodger; Benton Clean Air Authority - Tyler Thompson; Benton County - Mike Shuttleworth; Benton Franklin Health Dept - Rick Dawson; Bob Roe; David Smith; Jeff Vosahlo; Ken Klander; Rick Sunford; Chad Brooks; Mike Irving; Benton-Franklin Health Dept. - Justin Gerber; BPA - Deborah Rodgers; BPA - Joe Cottrell; Cascade Natural Gas - Arnie Garza; Charter Communication - Dean Kelley; Charter Communications - Robert Early; City of Richland - Rick Simon; Columbia Irrigation District; Consolidated Tribes of Umatilla Indian Reservation - Audie Huber; Consolidated Tribes of Umatilla Indian Reservation - Carey L. Miller; Department of Ecology SEPA UNIT; Dept of Fish & Wildlife; Dept of Fish & Wildlife - Michael Ritter; Dept of Natural Resources SEPA Center; Desert Winds Wireless; Dustin Fisk - Kennewick School District (dustin.fisk@ksd.org); Frontier - Gary Taylor; Frontier - Gregory Goodwin; Frontier - Randy Lee; Kenewick Irrigation District - Jason McShane; Kennewick Irrigation District - Ben Woodard; Kennewick School District - Doug Carl; Mike Blatman; US Army Corps of Engineers; Williams Pipeline - Audie Neuson; WSDOT - Paul Gonseth; WSDOT - Rick Holmstrom; Yakama Nation - Thalia Sachtleban
Subject: Preliminary Plat Application PP 16-04/PLN-2016-02914

Project description:
A Preliminary Plat application has been submitted by Matt Smith of Tri-Cities Development/JF Moore (15 S.W. Colorado, Suite 1, Bend, Oregon 97702). The proposed Preliminary Plat is located west of S. Sherman Street and south of future Bob Olson Parkway (Hildebrand) at 3316 S. Sherman Street. The project consists 2 phases with 73 lots and 4 tracts of land on approximately 22.26 acres. The smallest lot size is 8,064 square feet, the largest lot size is 13,437 square feet, and the average lot size is 9,342 square feet. The site is currently zoned Residential Low Density (RL), and the Comprehensive Plan designation is Low Density Residential. This project is a portion of a larger Planned Residential Development and Preliminary Plat that has been withdrawn. Environmental Determination ED 15-62 was processed for the larger area and will be adopted for the subject preliminary plat.

Please review and submit your comments to the Development Services Division, 210 W. 6th Avenue, Kennewick, WA 99336 (or via e-mail), on or before October 20, 2016. It is anticipated that the public hearing for this project will be at the December 12, 2016 Hearing Examiner meeting. The City plan review meeting for this project is scheduled for Wednesday October 19, 2016.

Thank you,

Wes Romine A.I.A.
Development Services Manager

City of Kennewick
210 W. 6th Avenue

DOUG CARL • *Capital Projects Director*
622 N. KELLOGG. • KENNEWICK, WA 99336
P: (509) 222-7667 • F: (509) 222-5057
DOUG.CARL@KSD.ORG • WWW.KSD.ORG

December 2, 2016

Wes Romine
Development Services Manager
City of Kennewick
210 W. 6th Ave.
Kennewick, WA 99336

Wes,

This memo is written in regards to your request for the Kennewick School District #17 to address capacity questions in regards to The Parks Phases 1 & 2 Preliminary Plat application. The school district was asked to identify the boundary schools for this development and state if each of the schools were within walking zones or received bussing. The boundary schools for this development are Sagecrest Elementary (Walking Zone), Chinook Middle School (Bussing Zone) and Southridge High School (Walking Zone).

The Kennewick School District has a Ten-Year Plan in place that forecasts future growth. It is impossible to know exactly where pockets of growth may occur, but the district works closely with the City of Kennewick and Benton County to make sure that we own property near projected areas of growth. Having property near potential growth areas allows us to add schools where the students are living, and to avoid additional bussing or redistricting of our boundaries. That being said, we do occasionally have to redistrict to keep our schools within our preferred enrollment numbers.

The Kennewick School District has the capacity to add students at all levels and at the three schools mentioned in this letter. Forecasted growth in additional boundary areas of the Kennewick School District makes it difficult to know if any redistricting could result because of this proposed development.

Sincerely,

Doug Carl