



Board of County Commissioners
Board Work Session
Wednesday, April 24, 2024
2:00 PM to 4:30 PM
3000 Pacific Avenue SE, Room 110

For public virtual attendance, you may follow along on the [Thurston County YouTube Channel](#).

AGENDA

- I. Thurston County Sheriff's Office Proposed Acquisitions – Grappler and StarChase – *Follow up***
- II. South County Transfer Station Update – *Informational***
- III. Commissioners Items – *Discussion***

Disability Accommodations: Room 110 is equipped with an assistive listening system and is wheelchair accessible. To request disability accommodations, call the Reasonable Accommodation Coordinator at least 3 days prior to the meeting at 360-786-5440. Persons with speech or hearing disabilities may call via Washington Relay at 711 or 800-833-6388.



Board of County Commissioners Briefing Presentation Form

Title

Sheriff's Office Proposed Acquisition – StarChase and Grappler

Date

04/24/2024

Board Meeting

PM Board Work Session- 2:00pm

Office/Department

Thurston County Sheriff's Office

Staff Contact

Derek Sanders, Sheriff
Dave Pearsall, Undersheriff
Ruben Mancillas, Chief
Brian Bishop, Risk Analyst
Kari Knies, Executive Aide (for scheduling)

Attachments

- TCSO Pursuit Mitigation PP

Type

- ☐ Informational
☒ Follow up/Continued work session
☐ Discussion before decision

Board decisions will not be made during work sessions.

Primary Objective

Continue discussion on acquiring and implementing StarChase and Grappler systems. These systems would be used for pursuit mitigation.

Staff Recommendation

N/A

Background

The board briefing on March 27th was cut short, the April 9th Agenda setting it was recommended to set this additional board briefing.

Due to recent changes in pursuit law, that will go into effect June 2024, Thurston County is also looking for ways to mitigate pursuits by implementing the use of StarChase and the Grappler systems.

Budget Impacts/Requests

We are not seeking additional funding approval from the Board.

Others Affected

County residents, law enforcement agencies, ER & R, Risk

Timeline/Next Steps

Spring & Summer 2024- We will return before the Board with an AIS for each system to officially request approval.



Thurston County Sheriff's Office

PURSUIT MITIGATION TOOLS

Starchase

<https://www.starchase.com/products/vehicle-mounted-gps-launcher/>

- ▶ GPS tracker deployed from patrol vehicle to track fleeing vehicle
- ▶ Can be deployed in emergency situations without a search warrant (Upheld to not violate the 4th amendment)
- ▶ Deployed on any vehicle with search warrant
- ▶ Allows Deputies to disengage from pursuit and follow from distance
- ▶ Recently purchased by multiple Washington agencies under Washington State Commerce Grant

Discreet bumper mount

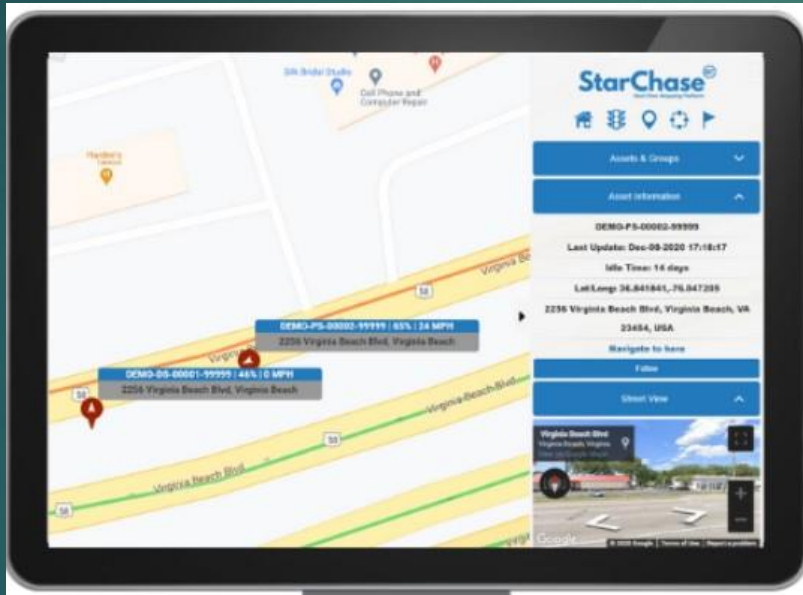




Small non-permanent tracker

Real time GPS monitoring

Computer or phone app by anyone logged in to secure web-based system.



Lynnwood PD Video

<https://youtu.be/iX3YUR5jP0U?si=29HBvaMunk-l59jf>

Cost:

- \$5,462.00 – per unit (discount for multiple units)
- \$1,500 – annual subscription per vehicle, includes web access and unlimited tracker darts
- \$702.00 – install fee for first 4 installs during certification of installers
- \$3500.00 – Operator and Instructor certification (one time cost)



System allows for:

- De-escalation of suspects fleeing in vehicles
- Ability to disengage from pursuits but still track and locate suspects
- Apprehension of fleeing subjects after vehicle stops
- Safer roadways for the community, deputies, and suspect while holding perpetrators accountable

Grappler

<https://policebumper.com/>

- ▶ Bumper system that provides ability to stop pursuits with minimal force.
- ▶ Mounted on patrol vehicle and looks like our normal bumpers.
- ▶ Ability to stop pursuits without having to conduct P.I.T.
- ▶ Deployed on numerous Police vehicles in agencies around the country.

Similar bumper appearance to current patrol car bumpers

Grappler



Push Bumper



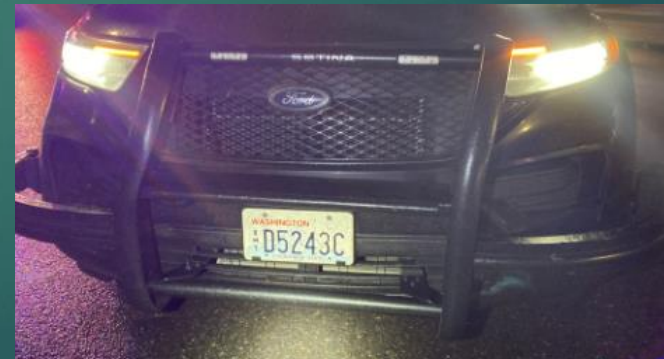
Grappler Videos

<https://youtu.be/doOqOotxcd8?si=s1nnYUX89hgYRtoM>

<https://youtu.be/850ZgmDO61U?si=WtGnA62vpw-aahfE>

<https://youtu.be/rw97v1HqRwc?si=av8OtRgfMxJnFybV>

Recent damage to patrol vehicles from multiple attempted P.I.T.s on F350





Cost:

- \$7,000 – per unit, includes installation, and training
- \$600.00 – for additional pit bar assembly
- \$325.00 – replacement nets (can only use one time)



System allows for:

- Safer means of stopping a fleeing vehicle other than P.I.T.
- Grappler causes less damage to patrol vehicle than other tactics
- Can use grapples in areas with other citizen traffic
- Allows ability to stop vehicles that cannot be stopped normally
- Provides another tool to de-escalate pursuits



Board of County Commissioners Briefing Presentation Form

Title

South County Transfer Station Update

Date

04/24/2024

Board Meeting

PM Board Work Session

Office/Department

Public Works

Staff Contact

Jeff Bickford, Solid Waste Manager (x2902)

Jennifer D. Walker, Public Works Director (x2271)

Karen Weiss, Public Works Assistant Director (x2327)

Attachments

- PowerPoint Presentation
- South County Transfer Station Site Evaluation – HDR (September 2023)

Type

- ☒ Informational
- ☐ Follow up/Continued work session
- ☐ Discussion before decision

Board decisions will not be made during work sessions.

Primary Objective

Public Works will brief the BoCC on the results of a siting study performed by HDR, Inc. identifying potential sites for a south county transfer station facility.

Options:

1. Move forward with site selection and preliminary design and permitting:

Pro: Begins process of identifying a site for a new south county transfer station along with the startup of preliminary design and permitting for the site. A new transfer station would provide increased services available for our customers as well as providing the customer capacity needed for a growing south county population and business community. Additionally, a new transfer station would take some of the load off of the Waste and Recovery Center (WARC), as waste delivered to the new transfer station would no longer be hauled to the WARC but would be taken directly to the intermodal location in Centralia for loading onto the train headed for the Roosevelt landfill.

Con: Site selection might be challenging; some residents and businesses may not be enthusiastic about certain identified sites due to their proposed location.

2. Upgrade existing drop-box sites:

Pro: Easier and quicker to accomplish, at a lesser overall cost compared to developing a new transfer station. Would allow for the weighing of loads with the installation of scales at both the drop-box sites. Customers are familiar with the current drop-box site locations and services.

Con: Existing drop-box sites are virtually at capacity. While upgrades will help, there isn't additional room to expand within the existing 5-acre sites to allow for future waste stream growth or increased services.

3. Continue current operations at existing drop-box sites with no improvements:

Pro: Minimal capital expenditures.

Con: Does not solve current operational inefficiencies, mitigate safety concerns, address future capacity needs, or provide increased services to our customers.

Staff Recommendation

Public Works will brief the BoCC on the results of a siting study performed by HDR, Inc. identifying potential sites for a south county transfer station facility, beginning the planning process for the development of a new south county transfer station.

Background

Thurston County currently owns and operates the Rainier and Rochester Drop-Box sites in the southern portion of the county. Public Works is evaluating the possibility of development of a new transfer station facility due to current drop-box sites that:

- Are operating above design capacity with customers experiencing extended wait times.
- Provide limited disposal and recycling options.
- Rely on manual measurement of disposed materials to calculate customer charges and tonnage data.
- Provide inefficient queuing and waste container operations.

In the summer of 2022, the County partnered with HDR, Inc. to engage the community in a conversation about current and future waste and recycling services and the possibility of a new transfer station in south Thurston County to potentially replace the two drop-box sites. The SWAC was involved in the process prior to, during, and after the engagement activities.

Stakeholder responses to the intercept survey and online survey were compiled with the combined survey responses tabulated and presented to the SWAC for their consideration and feedback at their October 5, 2022 meeting. The SWAC passed a recommendation to forward the results of the survey responses to the BoCC and recommend Public Works move forward with a siting study of potential locations for a new south county transfer station. At a Briefing held on January 4, 2023 the Board approved Public Works move forward with a siting study to identify sites for a possible south county transfer station facility.

In 2023, HDR, Inc. performed a siting study that looked at properties in the south county that were greater than ten acres in size and were not located in certain restricted zones. This resulted in a relatively small number of possible sites, which were rated based on a set of established criteria, and the top three scoring properties evaluated in greater detail. The result of this analysis is provided in the South County Transfer Station Site Evaluation report prepared by HDR, Inc. The results of this report were presented to the SWAC at their October 4, 2023 meeting.

Budget Impacts/Requests

Based on estimates from the initial siting study, the cost to develop a new south county transfer station would cost approximately \$12-13 million dollars. A portion of these funds are currently budgeted within the Capital Improvement Program (CIP) but would require an amendment to fully fund the project, and review of timing for completion of other solid waste capital projects. Funding is planned from solid waste tipping fees.

Others Affected

Thurston County residents and businesses.

Timeline/Next Steps

The next steps include the following:

- Preferred site selection - August 2024
- Perform a Basis of Design study – September 2024 to March 2025
- Develop a funding plan – July 2025



South County Transfer Station Site Evaluation

Public Works

April 24, 2024

Board Work Session

Background Information

- Solid Waste Facility Condition Assessment Report prepared in 2019.
- Rainier and Rochester Drop-box site improvements needed, such as adding scales and tipping wall improvements.
- Preliminary engineering design showed estimated cost to upgrade would be approximately \$7.1 million.
- The Thurston County Solid Waste Management Plan for 2021 recommends implementation of improvements to the Rainier and Rochester Drop-box sites as outlined in the County Capital Improvement Program to ensure high-quality service delivery in a fiscally responsible manner.



Initial Actions

- 2021 – County begins evaluation process for development of a new transfer station to replace the Rainier and Rochester Drop-box sites.
- 2022 – County conducts stakeholder engagement and outreach about the potential siting of a new transfer station.
- 2023 – County completes a more in-depth property search for viable parcels.

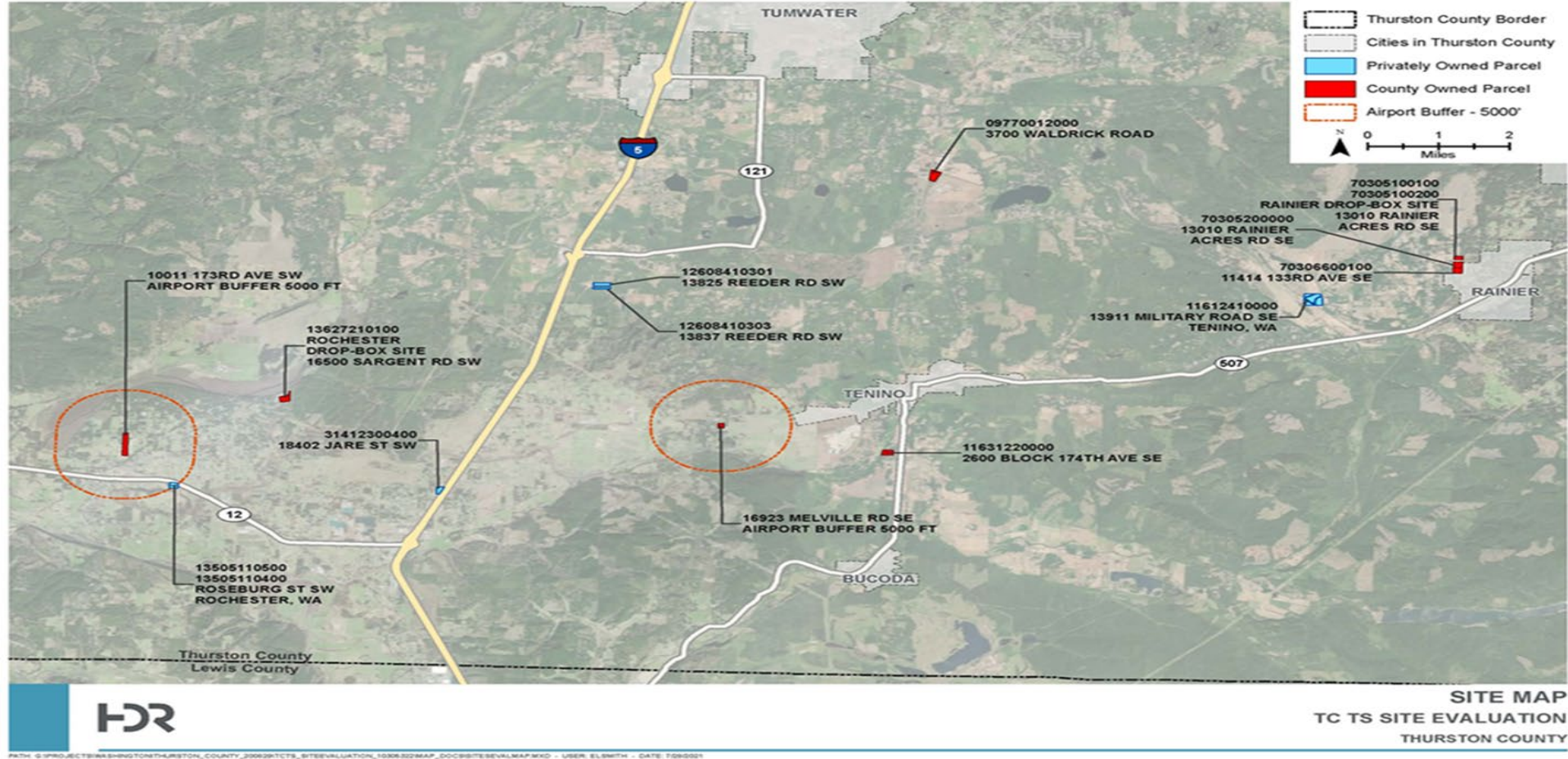


2021 Site Evaluation Criteria

- More than 8 acres in size and is vacant land or has limited buildings.
- Will serve the southern portion of Thurston County.
- Located outside of residential zoning, and current zoning allows for a transfer station through a conditional use process.
- Outside of prime agricultural lands.
- Outside of forest-designated lands.
- Not designated as a wetland or in the 100-year floodplain.
- Endangered and protected flora and fauna habitats are not located on the site.
- Not protected for historical, archeological, or cultural significance.



2021 Site Evaluation



2021 Prioritized Potential Sites

Table 3-3. Prioritized List of Potential Sites			
Site	Parcel Number	Description	Zoning
County Site A	70305100100 70305100200 70305200000 70306600100	County Owned – 13010 Rainier Acres Road SW – 29.13 acres	RRR 1/5 ¹
Private Site D	11612410000	Privately Owned – 13911 Military Road SE – 33.71 acres	RRR 1/5 ¹

¹Rural Residential/Resource one house to 5 acres zoning. Requires application for essential public facility.



2022 Stakeholder Engagement

- 84% of those surveyed were residential self-haul customers.
- 57% of those surveyed subscribed to curbside collection services.
- 58% of those surveyed travel to the WARC for recycling and disposal services.
- Drop-box site customers typically use the sites for recycling, household garbage and bulky item disposal.



2022 Stakeholder Engagement (cont.)

- Additional services requested, in order of ranking:
 - Organics
 - Household Hazardous Waste
 - Tires
 - Appliances
- Survey respondents would like to see 7-day-per-week availability of a site.
- Of the survey respondents, the super-majority response relating to willingness to travel to a disposal site was up to 10 miles; 40% of those surveyed would be willing to travel between 11 and 20 miles.

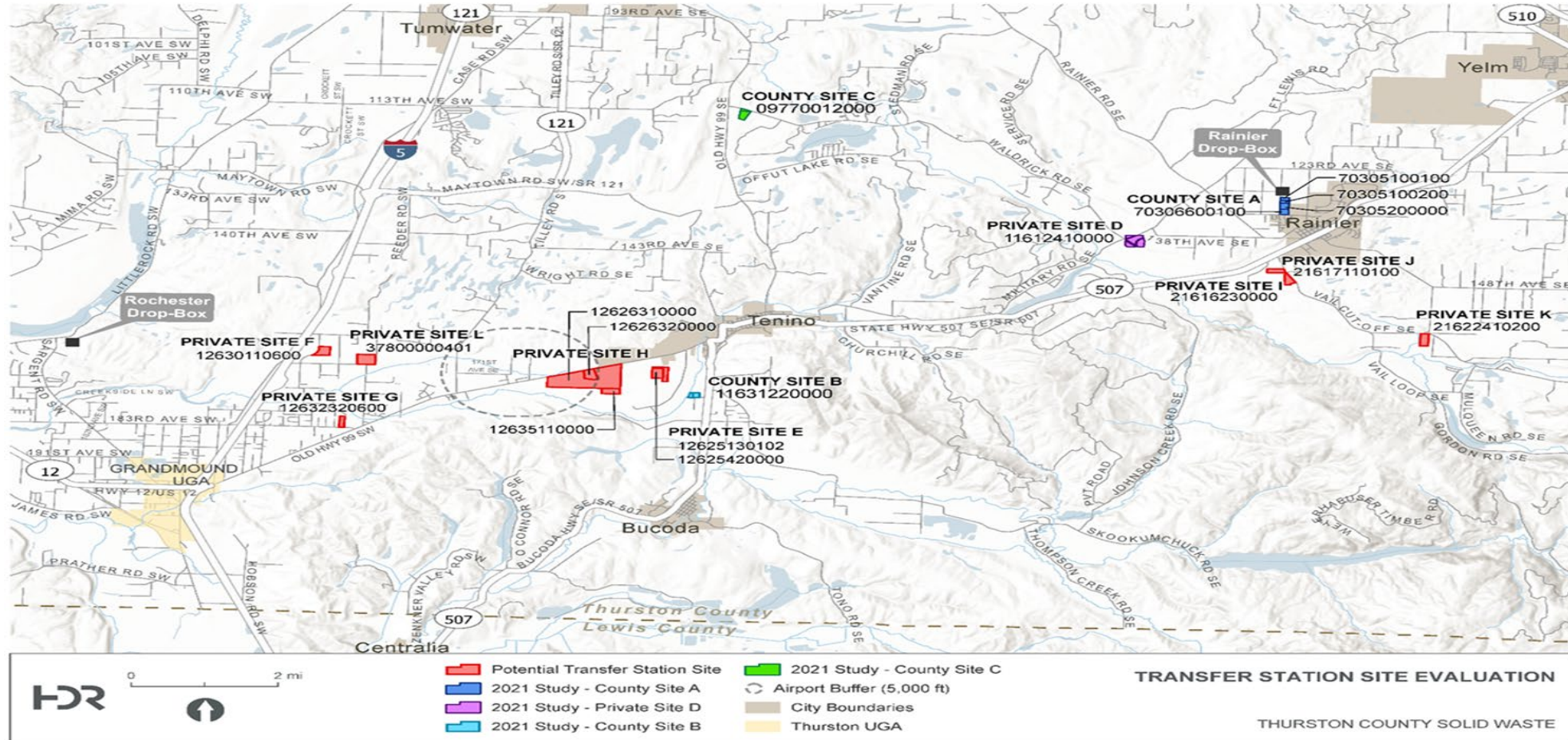


2023 Site Evaluation Criteria

- More than 10 acres in size and is vacant land or has limited buildings.
- Will serve the southern portion of Thurston County.
- Located outside of residential zoning, and current zoning allows for a transfer station through a conditional use process.
- Outside of prime agricultural lands.
- Outside of forest designated lands.
- Not in designated as a wetland or in the 100-year floodplain.
- Endangered and protected flora and fauna habitats are not located on the site.
- Not protected for historical, archeological, or cultural significance.



2023 Site Evaluation



2023 Prioritized Potential Sites

Table 5-3. 2023 Prioritized List of Potential Sites			
Site	Parcel Number	Description	Zoning
County Site A	70305100100 70305100200 70305200000 70306600100	County Owned – 13010 Rainier Acres Road SW – 29.13 acres	RRR 1/5 ¹
Private Site D	11612410000	Privately Owned – 13911 Military Road SE – 33.71 acres	RRR 1/5 ¹
Private Site L	37800000401	Privately Owned – 16821 Gibson Road SW – 34.81 acres	RRR 1/5 ¹

¹Rural Residential/Resource one house to 5 acres zoning. Requires application for essential public facility.



2023 Potential Sites



County Owned Site A



Privately Owned Site D



Privately Owned Site L

Preliminary Sizing, Site Layouts, and Probable Costs

Preliminary sizing and capital costs for each site plan include key components of a conceptual transfer station, including the following:

- An approximately 24,000-SF transfer station building – high bay, column-free interior, metal building with corrosion protection features and maneuvering area inside the building.
- Thirteen customer unloading bays.
- Two load-out hoppers to trailers in a drive-through tunnel below.
- Paved roadway network.
- Transfer trailer parking area.

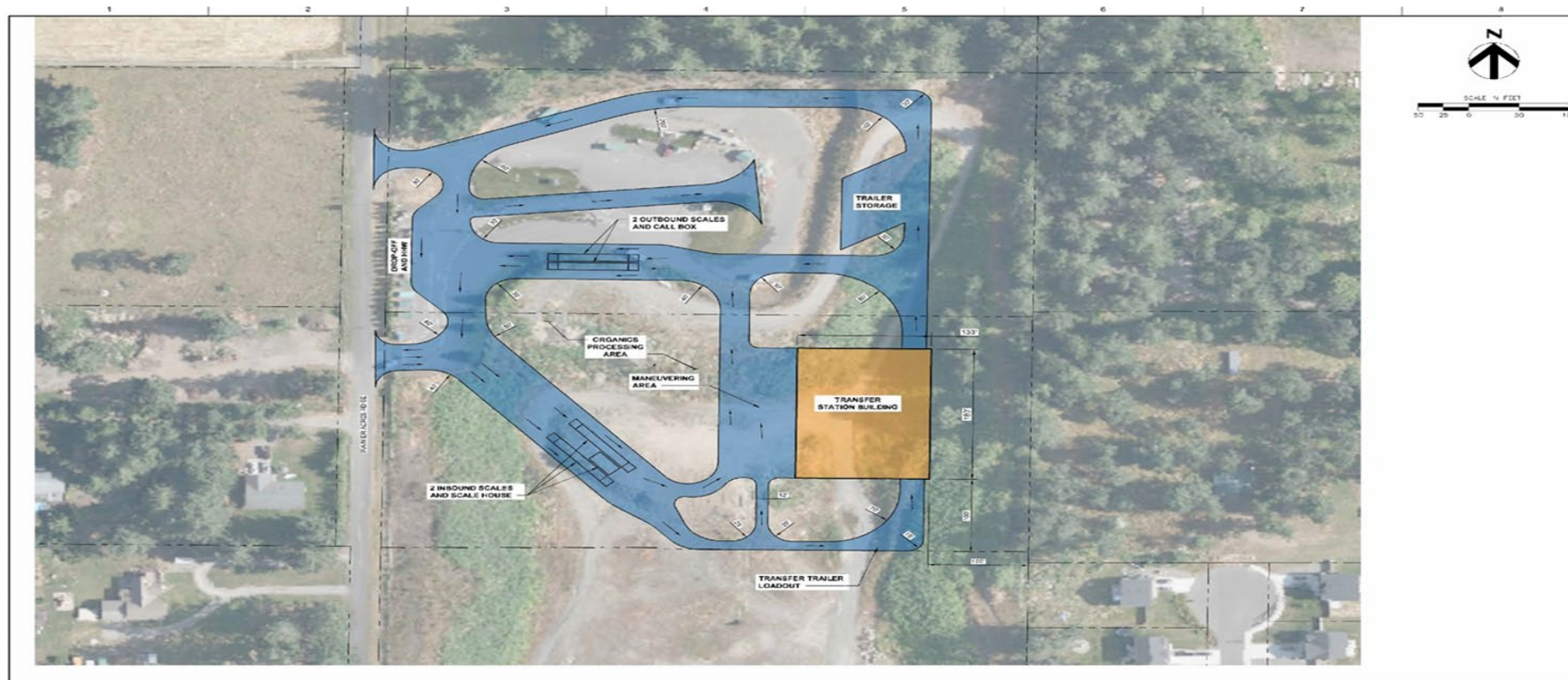


Preliminary Sizing, Site Layouts, and Probable Costs (cont.)

- Recycling and household hazardous waste collection area.
- Organics collection and processing area.
- Scales and scalehouses.
- Extension/expansion of utilities for electricity, water, and sewer.
- Site investigations and earthwork to provide full-elevation separation between tipping floor and load-out tunnel.



Preliminary Site Layout – County Site A



			PROJECT MANAGER XXX.X.XXXXXX	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	XXXXXXXXXXXXXXXXXX

THURSTON COUNTY
TRANSFER STATION SITING

COUNTY SITE A
13010 RAINIER ACRES RD SE

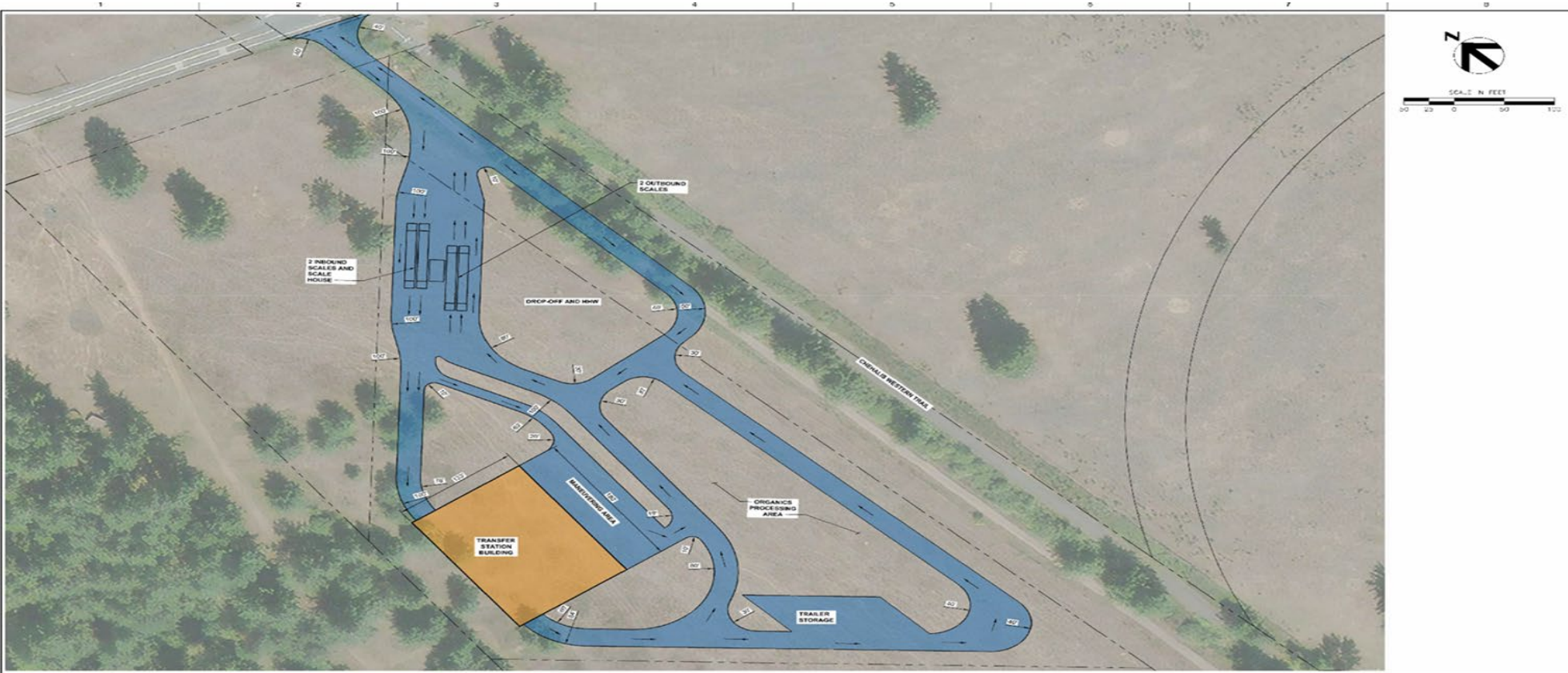


FILENAME Site 1 - Site Planning
SCALE AS SHOWN

SHEET
2



Preliminary Site Layout – Private Site D



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	XXX.X.XXXXXXX
PROJECT NUMBER	XXXXXXXXXXXXXXXXXX

THURSTON COUNTY
TRANSFER STATION SITING

PRIVATE SITE D
13911 MILITARY RD SE

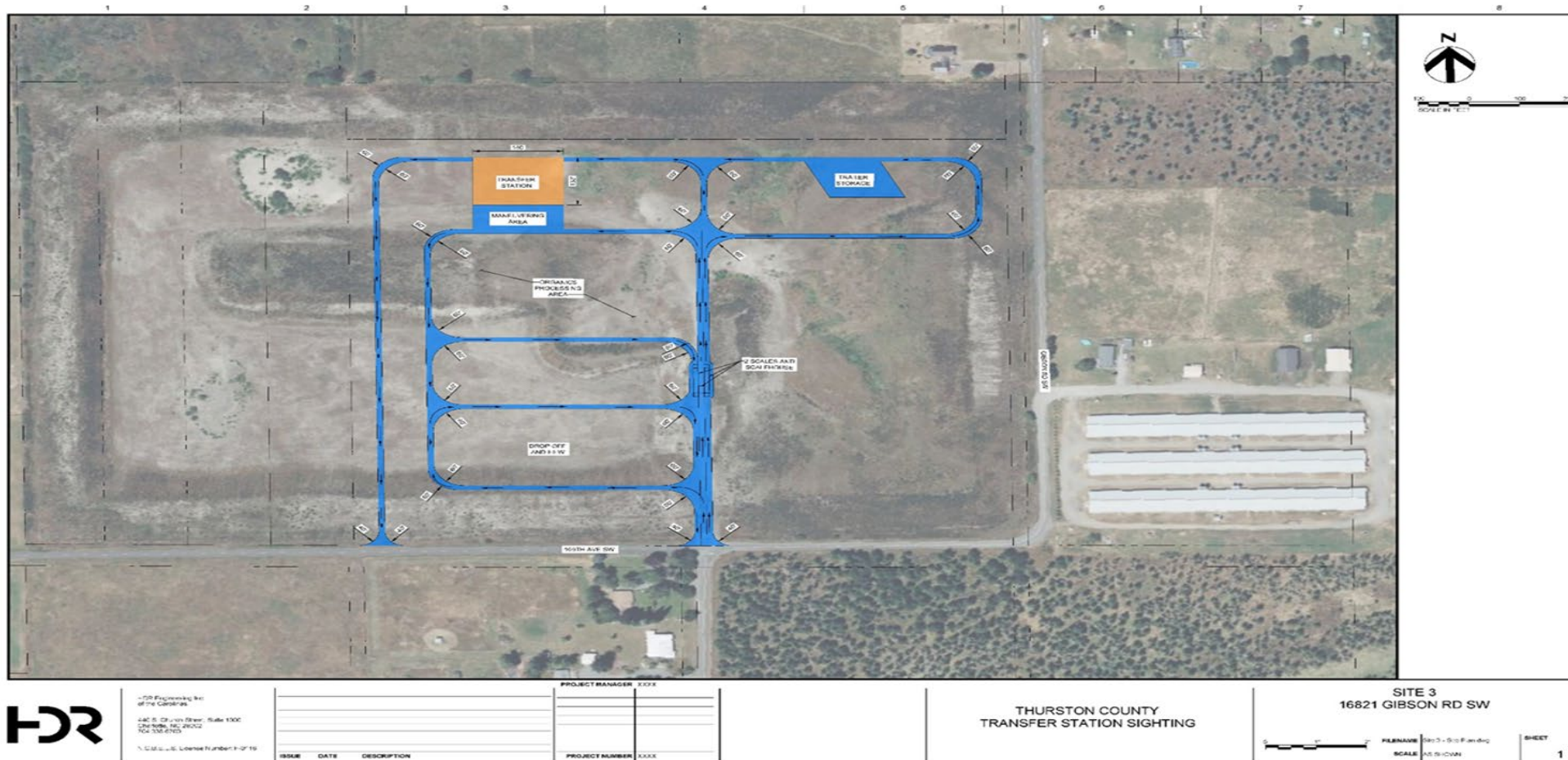


FILENAME: Site 2 - 0101Plan.dwg
SCALE: AS SHOWN

SHEET
3



Preliminary Site Layout – Private Site L



Preliminary Probable Costs

Transfer Station Opinion of Probable Cost Estimate (2023\$) Summary				
Task	Features	County Site A	Private Site D	Private Site L
Site Acquisition	Cost by site size/ownership	\$0	\$1,011,300	\$1,020,000
Site Work	Earthwork, roadways, utilities, storm water control, surveying, etc.	\$1,962,300	\$1,560,300	\$2,200,500
Facilities				
Transfer Station	24,000 SF	\$4,657,400	\$4,557,200	\$4,557,200
Scalehouse and Scales	Building, in-bound and out-bound scales	\$890,400	\$890,400	\$890,400
Subtotal Facilities		\$5,547,800	\$5,447,600	\$5,447,600
Subtotal Costs		\$7,510,100	\$8,019,200	\$8,668,100
Contingency (30%)		\$2,253,000	\$2,102,400	\$2,294,400
Post-Pandemic Pricing Impact (30%)		\$2,928,900	\$2,733,100	\$2,982,800
Total		\$12,692,000	\$12,854,700	\$13,945,300



Next Steps

- Narrow selection to preferred site and, if appropriate, negotiate property acquisition cost and purchase.
- Select the preferred site and proceed with performing a basis of design study.
- Develop a funding plan.



Questions?



South County Transfer Station Site Evaluation

Thurston County, Washington



September 6, 2023



This page intentionally left blank.

Contents

1	Introduction.....	1-1
2	Background Information	2-1
2.1	Thurston County Solid Waste Management Plan	2-1
2.2	Regulatory Requirements.....	2-1
2.2.1	Washington State Requirements	2-1
2.2.2	Thurston County Requirements	2-2
2.2.3	Federal Aviation Administration Requirements	2-4
2.2.4	Thurston County Comprehensive Plan	2-5
3	2021 South County Transfer Station Site Evaluation.....	3-1
3.1	2021 Criteria for Assessing Suitable Site Locations	3-1
3.2	2021 Prioritized List of Potential Sites.....	3-5
4	Stakeholder Engagement.....	4-1
4.1	Stakeholder Engagement Goals and Objectives	4-1
4.2	Community Engagement Methods.....	4-1
4.3	Stakeholder Engagement Conclusions	4-2
5	2023 South County Transfer Station Site Evaluation.....	5-1
5.1	2023 Criteria for Assessing Suitable Site Locations	5-1
5.2	2023 Prioritized List of Potential Sites.....	5-5
6	Preliminary Sizing, Site Layouts, and Probable Costs	6-1
6.1	Preliminary Transfer Station Sizing	6-1
6.1.1	Sizing Assumptions	6-1
6.1.2	Sizing Calculations	6-2
6.2	Preliminary Conceptual Site Layouts	6-3
6.2.1	Conceptual Site Layouts	6-3
6.3	Opinion of Probable Construction Costs	6-7
6.4	Report Limitations Affecting the Project	6-9
7	Next Steps	7-1

Tables

Table 3-1.	2021 Sites Identified for Further Assessment.....	3-1
Table 3-2.	2021 Site Scores Based on Weighted Criteria	3-4
Table 3-3.	Prioritized List of Potential Sites	3-5
Table 5-1.	2023 Sites Identified for Further Assessment.....	5-2
Table 5-2.	2023 Site Scores Based on Weighted Criteria	5-4
Table 5-3.	2023 Prioritized List of Potential Sites	5-5
Table 6-1.	Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – County Site A	6-7
Table 6-2.	Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – Private Site D	6-8
Table 6-3.	Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – Private Site L	6-8

Figures

Figure 2-1. Current LTA Zoning	2-6
Figure 2-2. LTA Baseline Scenario	2-8
Figure 2-3. LTA Scenario 1	2-9
Figure 2-4. LTA Scenario 2	2-10
Figure 2-5. Draft LTF Update Map	2-12
Figure 3-1. Thurston County Potential Transfer Station Sites 2021 Study	3-3
Figure 4-1. Stakeholder Engagement	4-1
Figure 5-1. Thurston County Potential Transfer Station Sites 2023 Study	5-3
Figure 5-2. County-Owned Site A	5-6
Figure 5-3. Privately Owned Site D	5-6
Figure 5-4. Privately Owned Site L	5-6
Figure 6-1. County-Owned Site A Layout	6-4
Figure 6-2. Privately Owned Site D Layout	6-5
Figure 6-3. Privately Owned Site L Layout	6-6

Appendices

Appendix A: 2023 Individual Site Rankings
Appendix B: Potential Haul Route Maps

Acronyms and Abbreviations

Comprehensive Plan	Thurston County Comprehensive Land Use Plan
County	Thurston County, Washington
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
Environmental Health	Thurston County Public Health and Social Services, Environmental Health Division
FAA	Federal Aviation Administration
GIS	Geographic Information System
GMA	Washington State Growth Management Act
HDR	HDR Engineering, Inc.
LTA	Long-Term Agriculture
LTF	Long-Term Forest
MSW	Municipal Solid Waste
PHSS	Thurston County Public Health and Social Services
Plan	Thurston County Solid Waste Management Plan for Years 2021–2026
RCW	Revised Code of Washington
RRR	Rural/Residential Resource
SEPA	State Environmental Policy Act
SF	Square Feet
SWAC	Thurston County Solid Waste Advisory Committee
WAC	Washington Administrative Code
WARC	Waste and Recovery Center

This page is intentionally left blank.

1 Introduction

Thurston County (County) currently owns and operates two drop-box sites, the Rainier and Rochester Drop-Box sites, in the southern portion of the County. The County hired a design consultant in 2020 to provide revised site layouts for each drop-box site to include upgrades for scales, scalehouses, and lower bay areas to accommodate 53-foot containers for waste transport to rail. Due to projected cost estimates at the 30 percent design stage, the County put a hold on the design effort to modify the existing site layouts.

In 2021, the County evaluated the possibility of developing a new transfer station on a greenfield site to replace the drop-box sites that are operating above design capacity.

As part of the 2021 South County Transfer Station Site Evaluation project, the County and HDR Engineering, Inc. (HDR), collected and evaluated site data to assess the feasibility of locating a transfer station to replace the existing drop-box sites. Several available parcels were screened through established criteria to provide the County with preliminary feasible sites to consider as potential locations for the new facility.

In 2022, the County partnered with HDR to engage the community in a conversation about potentially siting a new transfer station as a replacement for the two drop-box sites. Project goals were established and an extensive public engagement process was implemented to shape the planning process to meet countywide needs for solid waste and recycling handling into the future.

In 2023, the County requested that HDR complete a more in-depth property search through a geographic information system (GIS) spatial analysis related to potential sites using project-specific selection criteria. Utilizing online and publicly available sources, HDR compiled and catalogued the available GIS data layers required for the analysis and provided a map and spreadsheet with all viable parcel options.

This memo provides information in the following sections:

- Section 2 – Background Information
- Section 3 – 2021 South County Transfer Station Site Evaluation
- Section 4 – Stakeholder Engagement
- Section 5 – 2023 South County Transfer Station Site Evaluation
- Section 6 – Preliminary Sizing, Site Layouts, and Probable Costs
- Section 7 – Next Steps

This page is intentionally left blank.

2 Background Information

This section provides information on planning documents and rules and regulations as they relate to transfer station siting, design, and operations.

2.1 Thurston County Solid Waste Management Plan

In August 2021, Thurston County adopted the Solid Waste Management Plan for Years 2021–2026 (Plan). The Plan recommends that the County implement proposed improvements to the Rainier Drop-Box site and Rochester Drop-Box site included in the County Capital Facility Plan, as appropriate, to ensure high-quality service delivery in a fiscally responsible manner during the Plan’s 5-year planning period.

2.2 Regulatory Requirements

There are many factors to consider when constructing a transfer station facility site. The following sections provide an overview of transfer station rules and regulations including requirements for Washington State and Thurston County, inclusive of the local health department, Public Health and Social Services (PHSS).

2.2.1 Washington State Requirements

Washington Administrative Code (WAC) 173-350-310, administered by the State of Washington Department of Ecology (Ecology), has design requirements for transfer stations and drop box facilities, as follows:

- Have a tipping floor made of impervious material such as concrete or asphalt to prevent soil and groundwater contamination.
- Have a covered tipping floor to protect it from precipitation.
- Control public access and prevent unauthorized vehicles and illegal dumping.
- Provide effective means to control rodents, birds, insects, and other vectors.
- Provide effective means to control litter.
- Convey leachate from the tipping floor to an impoundment to prevent uncontrolled discharges.
- Provide for stormwater runoff collection.
- Provide an all-weather surface for vehicular traffic.

While WAC 173-350-310 does not have specific location standards for transfer station or drop box facilities, these facilities must meet the performance standards of WAC 173-350-040, which requires that any solid waste facility must:

- Design, construct, operate, close, and provide post-closure care as applicable in a manner that does not pose a threat to human health or the environment.

- Not be in conflict with the approved local comprehensive solid waste management plan.
- Comply with all other applicable local, state, and federal laws and regulations.

Ecology is also responsible for administering coverage under the Construction Stormwater General Permit as part of the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System program. The program requires permits for discharges from construction activities that disturb 1 acre or more, or if there is any possibility that during construction, stormwater could run off the site or enter a conveyance system that leads to surface waters.

2.2.2 Thurston County Requirements

Thurston County Building Development Center

The primary responsibility of the Thurston County Permitting and Land Use Division of the Community Planning and Economic Development Department is construction permitting and inspection, land use permitting, and advance planning. The Permitting and Land Use Division is responsible for the local implementation of state and federal mandates affecting lands in unincorporated Thurston County.

The commercial building and land use development process for capital projects at a potential site requires the following:

- Pre-Submission Development Conference to discuss land use development and zoning requirements for the project, which includes a Master Application, applicable fees, a site plan drawn to scale, and a completed site plan requirement checklist and State Environmental Policy Act (SEPA) checklist.
- Master Application, which is a general permit for all projects and includes property information, access, water and septic information, and completion of a checklist of the supplemental, project-specific applications.
- Supplemental Application Non-Residential Permit, which includes a description of the project, four sets of drawings, one full-size set of plans, two copies of structural calculations, a soils report, two copies of energy code lighting, envelope and mechanical forms, proof of water availability, and site and building plan requirements.
- Completion of the gopher review process for the Mazama pocket gopher species, which is federally protected under the Endangered Species Act. When applying for a building permit, projects on gopher soils require an on-site review that includes two site visits 30 days apart in order to rule out the presence of these gophers. If gophers are found, building plans can be modified to avoid mitigation requirements, or a mitigation plan can be created and submitted to the U.S. Fish and Wildlife Service as a habitat conservation plan.

Other County permit requirements that may be applicable, depending on the project scope, include:

- Non-Residential Fire Code – required for many types of non-residential operations.
- Encroachment Permit – required for building a driveway to a County road, relocating an existing approach, extending an existing culvert, or any other work performed within the right-of-way.
- Construction Permit – required for clearing/disturbing more than 7,000 square feet (SF) (e.g., clearing, conversion to lawn, conversion to pasture), excavating/filling more than 50 cubic yards, or performing these tasks in a critical area buffer.
- Drainage Scoping Review – generally required if the project exceeds 5,000 SF of new impervious surface, converts more than 0.75 acre of native vegetation to lawn or landscape, or converts more than 2.5 acres of native vegetation to pasture.
- Hearing Examiner – required if the project relates to plat subdivision, special use, shoreline permit, or variance and administrative land use change and allows for a public hearing process to solicit community member and public feedback.

Thurston County Public Works Solid Waste Division

The Washington State Solid Waste Management Act, Chapter 70A.205 Revised Code of Washington (RCW), assigns local government the primary responsibility for managing solid waste. Solid waste handling, as defined in Chapter 70A.205 RCW, includes the “management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from solid wastes or the conversion of the energy in solid wastes to more useful forms or combinations thereof.”

Chapter 36.58 RCW authorizes the County to develop, own, and operate solid-waste-handling facilities in unincorporated areas or to accomplish these activities by contracting with private firms.

The County exercises its solid waste responsibilities through the Public Works Department – Solid Waste Division, and enforcement is through PHSS. The specific administrative functions performed by the Solid Waste Division includes the following:

- Managing operations of the solid waste facilities including the existing transfer station located at the Waste and Recovery Center, closed landfill, moderate-risk waste facility, recycling drop-off, and two satellite drop-box facilities.
- Administering and staffing public education programs for waste reduction and recycling.
- Administering contracts.
- Maintaining the Plan as adopted relating to public health, safety, and sanitation, and providing regulations to govern the storage, collection, transfer, transportation, processing, use, and final disposal of solid waste by all persons in the County.

- Providing staff support for the Solid Waste Advisory Committee (SWAC).

The implementation of any proposed project to replace, modify, or develop new facilities would also be reviewed by the SWAC for compliance with the Plan prior to issuance of permit approvals.

Thurston County Public Health and Social Services Department Requirements

The Thurston County PHSS, Environmental Health Division (Environmental Health), works with the public, cities, the County, and state agencies to develop and implement plans for the safe storage, collection, transportation, and final disposal of solid waste. Environmental Health works to ensure compliance with Chapter 70A.205 RCW, WAC 173-304 – Minimum Functional Standards for Solid Waste Facilities, and WAC 173-351-500 – Closure and Post-Closure Care. Environmental Health is responsible for the following:

- Permitting solid waste facilities that operate in the County.
- Ensuring that permits are consistent with the Plan, local ordinances, and appropriate State of Washington and federal regulations.
- Conducting oversight of existing permitted facilities.
- Responding to complaints regarding improper storage and disposal of solid waste.
- Investigating illegal dumping and non-permitted dump sites.

Solid waste facility permits are required in accordance with WAC 173-303, 173-350, and 173-351. Facilities are required to obtain solid waste handling permits from the PHSS.

SEPA, Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. To determine if an EIS is necessary, an environmental checklist must be completed.

Applicants applying for new or modified solid waste permits must notify the PHSS. The applicant will submit a permit application and a SEPA checklist for review and approval.

2.2.3 Federal Aviation Administration Requirements

In 2007, the Federal Aviation Administration (FAA) issued Advisory Circular 150/5200-33B, which provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. Airports selling Jet-A fuel that serve turbine-powered aircraft have an FAA recommendation for a separation distance of 10,000 feet from any land-use practice that attracts hazardous wildlife. The FAA guidance¹ requires the following for transfer station facilities:

¹ https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_150_5200-33B.pdf

Enclosed waste handling facilities that receive garbage behind closed doors; process it via compaction, incineration or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are not located on airport property or within the Runway Protection Zone. These facilities should not handle or store putrescible waste outside or in a partially enclosed structure accessible to hazardous wildlife.

Trash transfer facilities that are open on one or more sides; that store uncovered quantities of municipal waste outside, even if only for a short time; that use semi-trailers that leak or have trash clinging to the outside; or that do not control odors by ventilation and filtration systems (odor masking is not acceptable) do not meet the FAA's definition of fully enclosed trash transfer stations. The FAA considers these facilities incompatible with safe airport operations if they are located closer than the 10,000-foot separation distance.

2.2.4 Thurston County Comprehensive Plan

Thurston County first adopted a Comprehensive Land Use Plan (Comprehensive Plan) in 1975 and completed its last update in 2019 (Resolution Number 15836). The adoption of the Comprehensive Plan was processed in compliance with the requirements of SEPA. Thurston County is required to plan under Chapter 36.70A RCW, the Growth Management Act (GMA), which contains 14 goals intended to guide the development and adoption of comprehensive plans. More specifically, the GMA requires counties to designate agricultural lands and forested land of long-term commercial significance.

Washington State law requires the County to protect lands that can be used for agriculture, which the County does through policies and zoning. Thurston County's 2019 Comprehensive Plan Update was appealed for using outdated soils information, so the County must look at new soils information to be used in policies for Long-Term Agriculture (LTA) designation.

HDR reviewed the Agricultural Zoning Update² to understand which lands are protected through LTA designation and zoning.

Current Long-Term Agriculture Designation and Zoning

Figure 2-1 shows the current LTA policies and Nisqually Agricultural (NA) zone, which include approximately 15,500 acres as LTA.

² <https://storymaps.arcgis.com/stories/0b76ffc94c304f648803ffd03d1b6594>

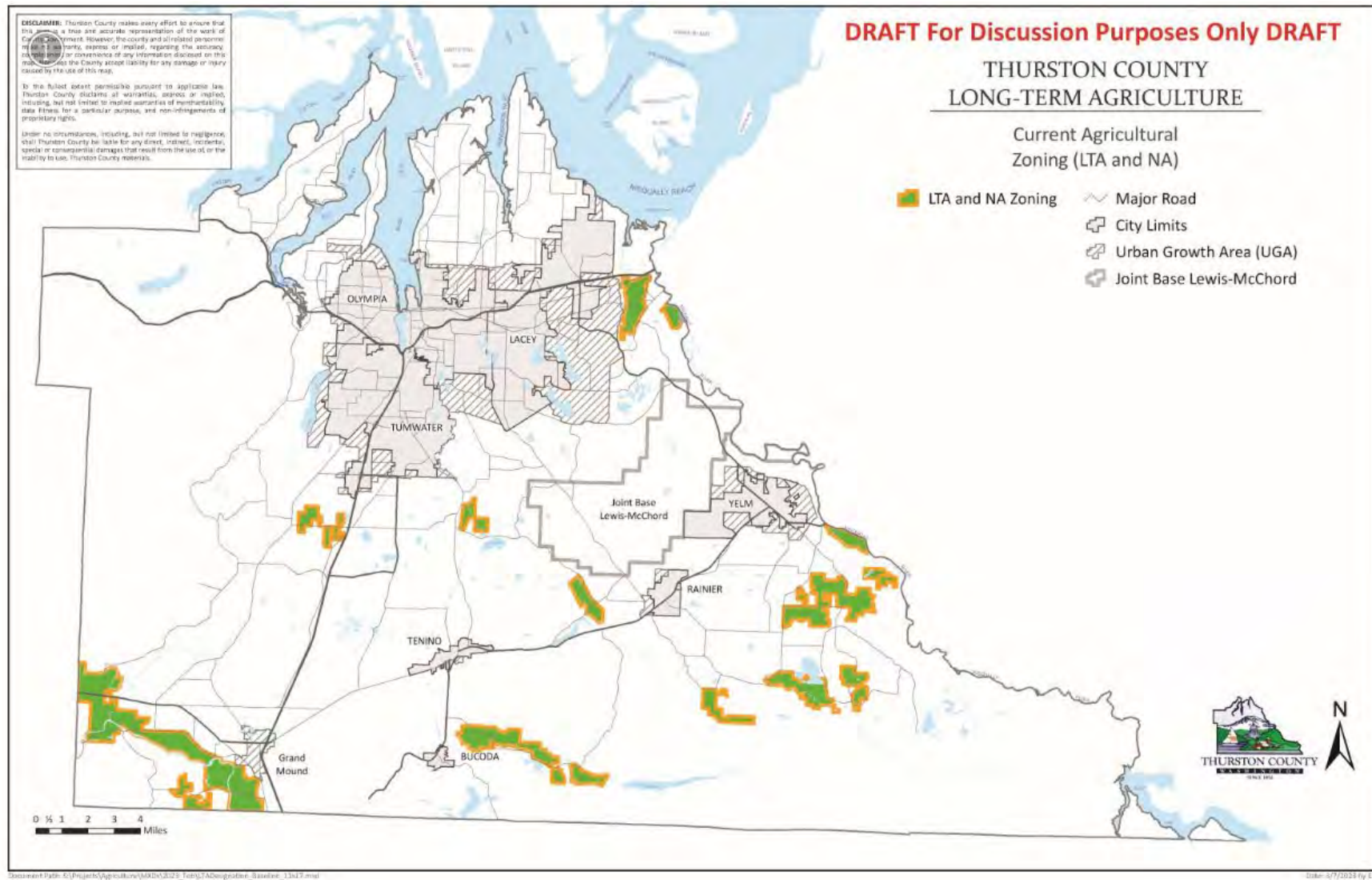


Figure 2-1. Current LTA Zoning

Long-Term Agriculture:

- Is both a *zone* and a *land use designation*.
- Protects lands that *can be used* for agriculture.
- Protects lands with long-term commercial significance.
- Has policies that determine which lands are protected.

Long-Term Agriculture does not:

- *Require* the property be used for agriculture.
- Protect *all* lands that are used for agriculture.

Additionally, a Rural/Residential Resource (RRR) 1/5 Zone allows a 40-acre parcel to be divided into eight 5-acre lots, whereas an LTA Zone allows a 40-acre parcel to be divided into two 20-acre lots.

The following highlights the three scenarios for changes based on the feedback from stakeholder groups.

LTA Baseline Scenario

Figure 2-2 shows the baseline scenario, which would add about 22,000 acres to zoned LTA and highlights the LTA policies with updated prime farmland soils from the 2022 United States Department of Agriculture Web Soil Survey.

Scenario 1 Based on Stakeholder Themes

Figure 2-3 shows Scenario 1, which would add about 12,000 acres to zoned LTA. This map shows the baseline changes and also includes parcels with at least 75 percent prime soils, reduces block size requirement to 100+ acres.

Scenario 2 Based on Stakeholder Themes

Figure 2-4 shows Scenario 2, which would add about 19,000 acres to zoned LTA. This map shows the baseline and Scenario 1 changes, and also reduces block size requirement to 40+ acres and reduces parcel size to 15+ acres.

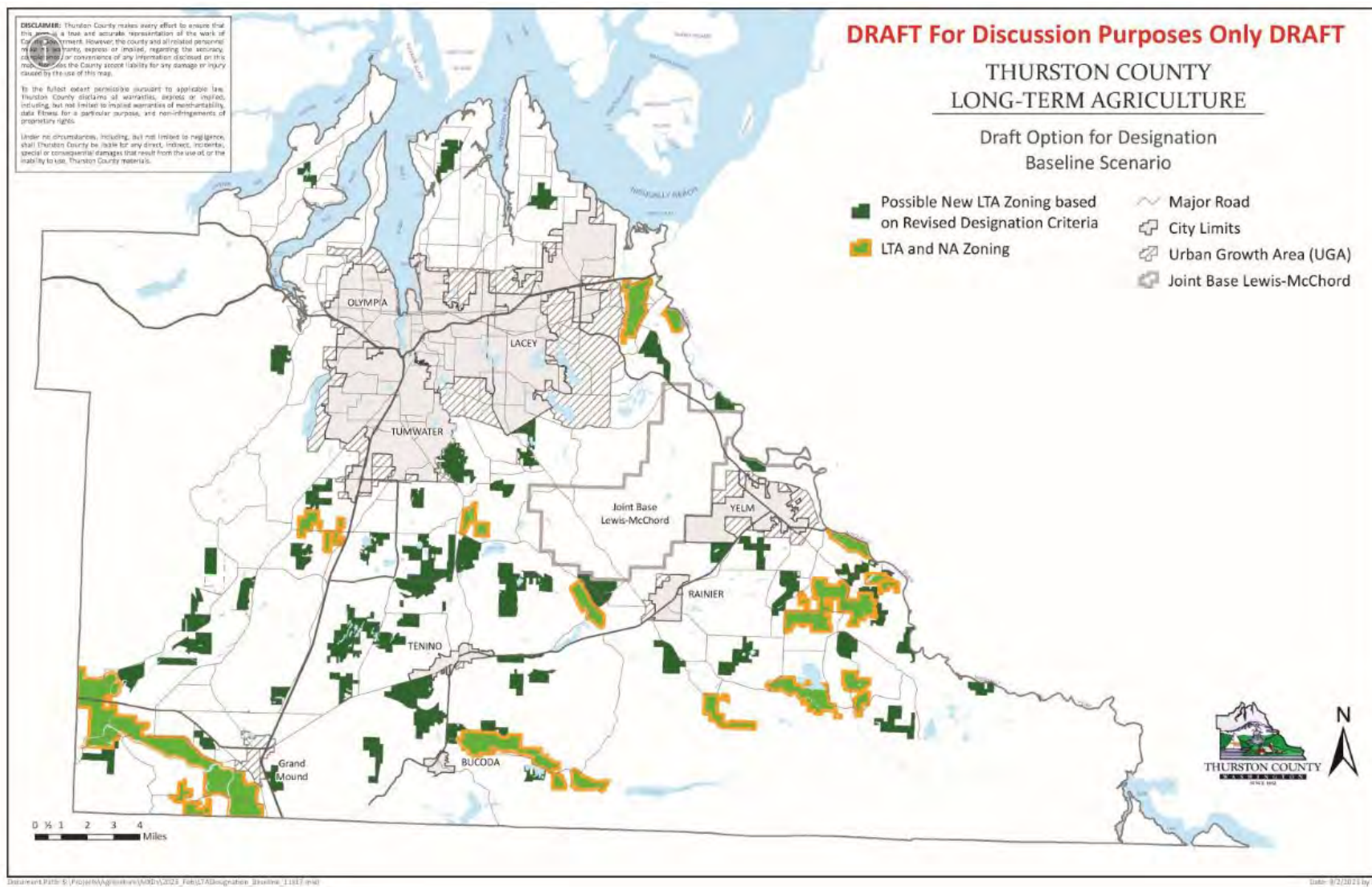


Figure 2-2. LTA Baseline Scenario

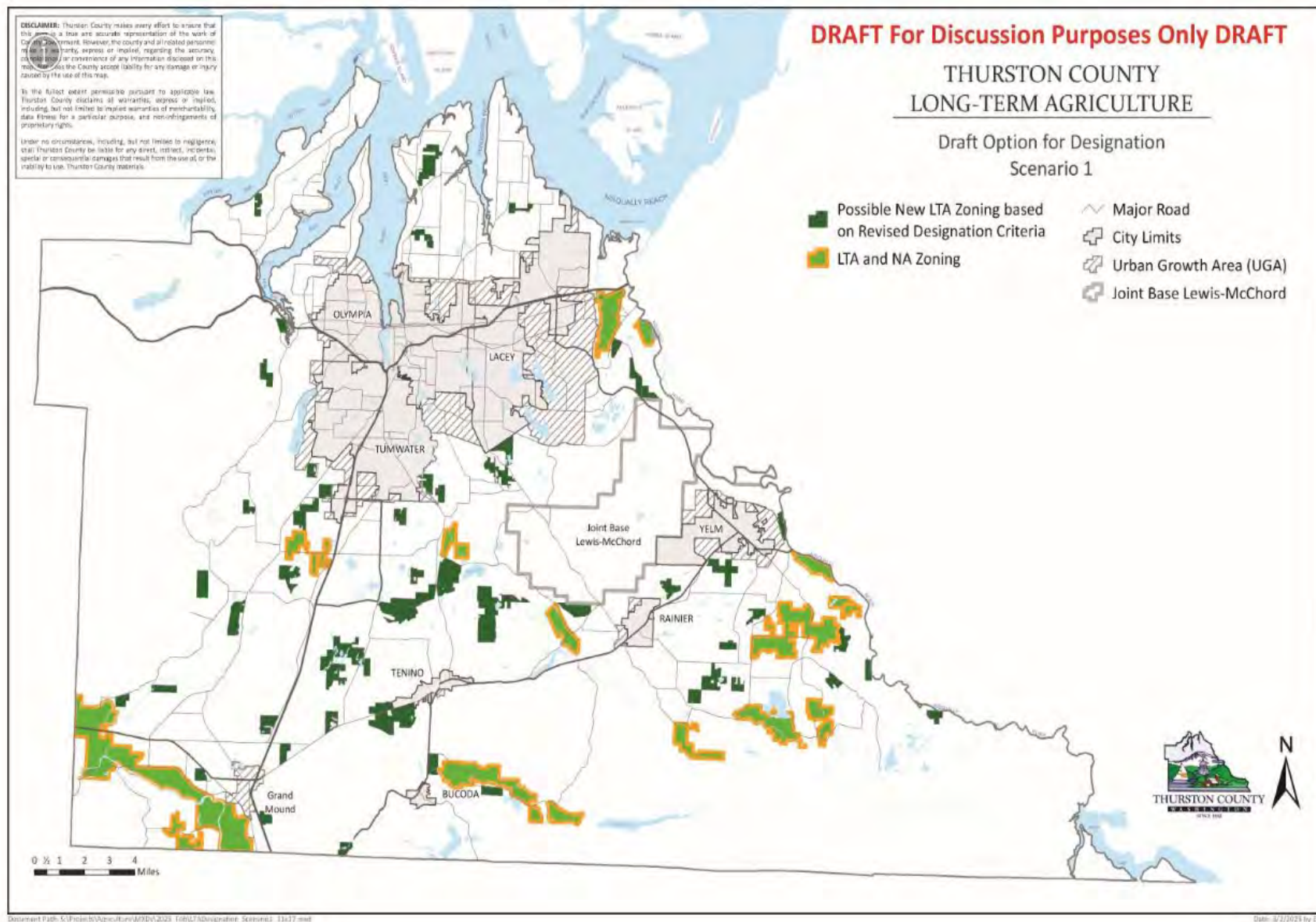


Figure 2-3. LTA Scenario 1

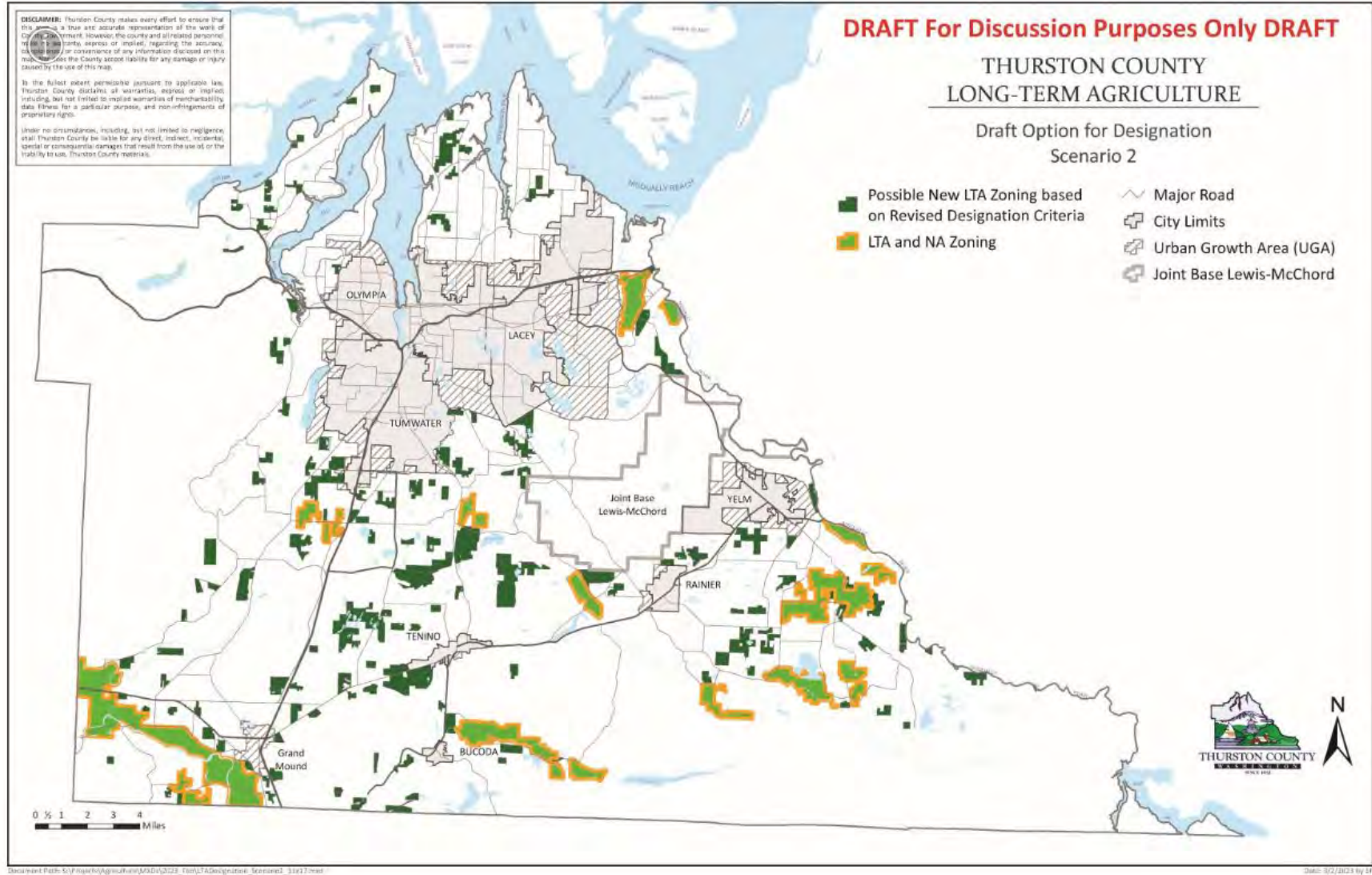


Figure 2-4. LTA Scenario 2

HDR reviewed the potential sites of interest identified in this study with these maps. If the LTA update is approved by the Board of County Commissioners in December 2023, some of the potential sites considered may fall in the new designated LTA zone.

Long-Term Forestry – Healthy Forests Project

The Healthy Forests Project is a County-initiated project that was officially started by the Board of County Commissioners in 2009. It was later clarified to include a countywide canopy assessment and focus on a review of rural tree protection standards. Forest Practices (logging) in unincorporated Thurston County are regulated by the State Forest Practices Act ([Chapter 76.09 RCW](#)), State Rules ([WAC 222](#)), and Thurston County Code Chapter 17.25. The Healthy Forests Project consists of four integrated planning efforts:

- **Managing Forest Conversions (Spring 2022 – Winter 2023)**
Update the County's forest conversion ordinance (Thurston County Development Code Section 17.25) to streamline permit processes and make provisions easier to understand and add a Tree Conservation Standards Chapter (17.27) to outline tree protections for single-family housing developments.
- **Studying our Forest Canopy (Winter 2023 – Summer 2024)**
Complete a detailed geospatial analysis to better understand the extent and composition of the county's forest resources. This assessment will help identify forested areas at highest risk of conversion and opportunities for conservation and restoration.
- **Planning for a Growing Forest Canopy (Fall 2023 – Fall 2024)**
Update County tree planting standards (Thurston County Development Code Titles 18 and 20) and review forest conservation programs with the aim of growing and restoring healthy forests in our rural areas.
- **Planning for our Urban Forests (Spring 2023 – Winter 2024)**
Update urban forest management provisions for the north County cities' urban growth areas as part of the Joint Code Update projects with Lacey, Olympia, and Tumwater.

HDR reviewed the County initiative, which will update the forest conversion ordinance and review tree protection standards in late 2024. Figure 2-5 shows the draft Long-Term Forest (LTF) update map.

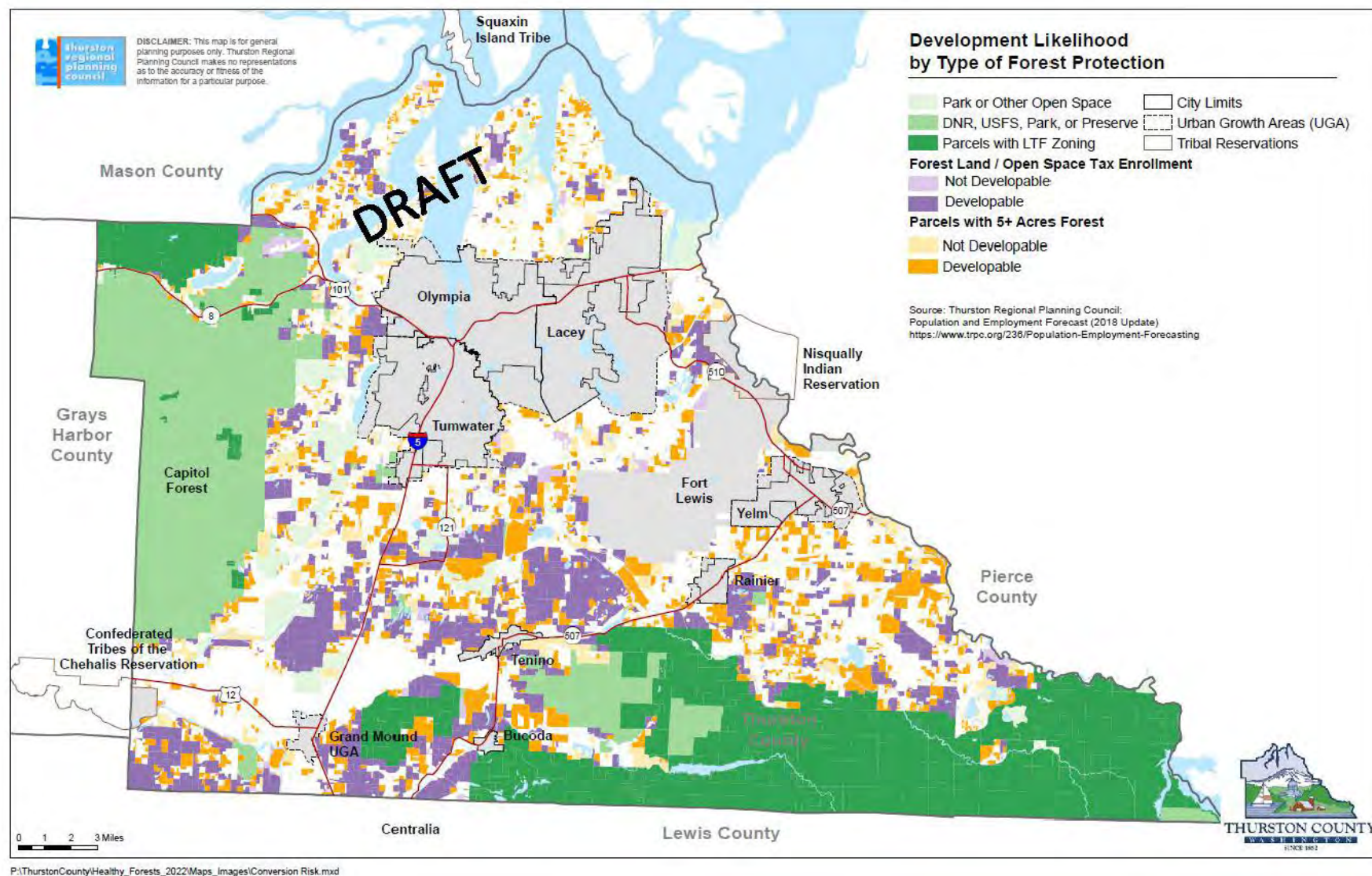


Figure 2-5. Draft LTF Update Map

3 2021 South County Transfer Station Site Evaluation

In 2021, the County and HDR collected and evaluated site data to assess the feasibility of locating a transfer station in the southern portion of the County, potentially to replace the Rainier and Rochester Drop-Box sites. This section provides information on the 2021 South County Transfer Station Site Evaluation.

3.1 2021 Criteria for Assessing Suitable Site Locations

The County and HDR established siting criteria to use in screening potential transfer station sites. Initially, more than 25 parcels were identified as available for transfer station siting. Those parcels were screened using the following initial siting criteria:

- Site is more than 8 acres in size and is vacant land or has limited buildings.
- Site will serve the southern portion of Thurston County.
- Site is located outside of residential zoning, and current zoning allows for a transfer station through a conditional use process.
- Site is outside prime agricultural lands.
- Site is outside forest designated lands.
- Site is not designated as a wetland or in the 100-year floodplain.
- Endangered and protected flora and fauna habitats are not located on the site.
- Site is not protected for historical, archeological, or cultural significance.

Upon completion of initial screening, seven potential sites were selected to move forward for further assessment as presented in Table 3-1.

Table 3-1. 2021 Sites Identified for Further Assessment

Site	Site Address	Parcel Number	Size
Private Parcels			
Private Site A	13825–13841 Reeder Road SW – Tenino	12608410301 12608410303	1–10 acres 3–5 acres
Private Site B	18402 Jare Street SW – Rochester	31412300400	7.46 acres ¹
Private Site C	Roseburg Street SW – Rochester	13505110500 13505110400	10 acres
Private Site D	13911 Military Road SE – Tenino	11612410000	33.71 acres

Table 3-1. 2021 Sites Identified for Further Assessment			
Site	Site Address	Parcel Number	Size
County-Owned Parcels			
County Site A	13010 Rainier Acres Road SW – Rainier 11414 133 rd Avenue SE – Rainier	70305100100 70305100200 70305200000 70306600100	29.13 acres
County Site B	2600 174 th Avenue SE – Tenino	11631220000	9.88 acres
County Site C	3700 Waldrick Road – Tenino	09770012000	12 acres

¹Site size does not meet initial siting criteria. Site assessed due to location, utilities, and zoning.

Sites with multiple parcels were assessed as a single potential site for consideration. Figure 3-1 provides a map showing locations of sites identified for further assessment. Also included on the map are the current locations of the County-owned drop-box sites and two privately owned airports with FAA buffer zones delineated.

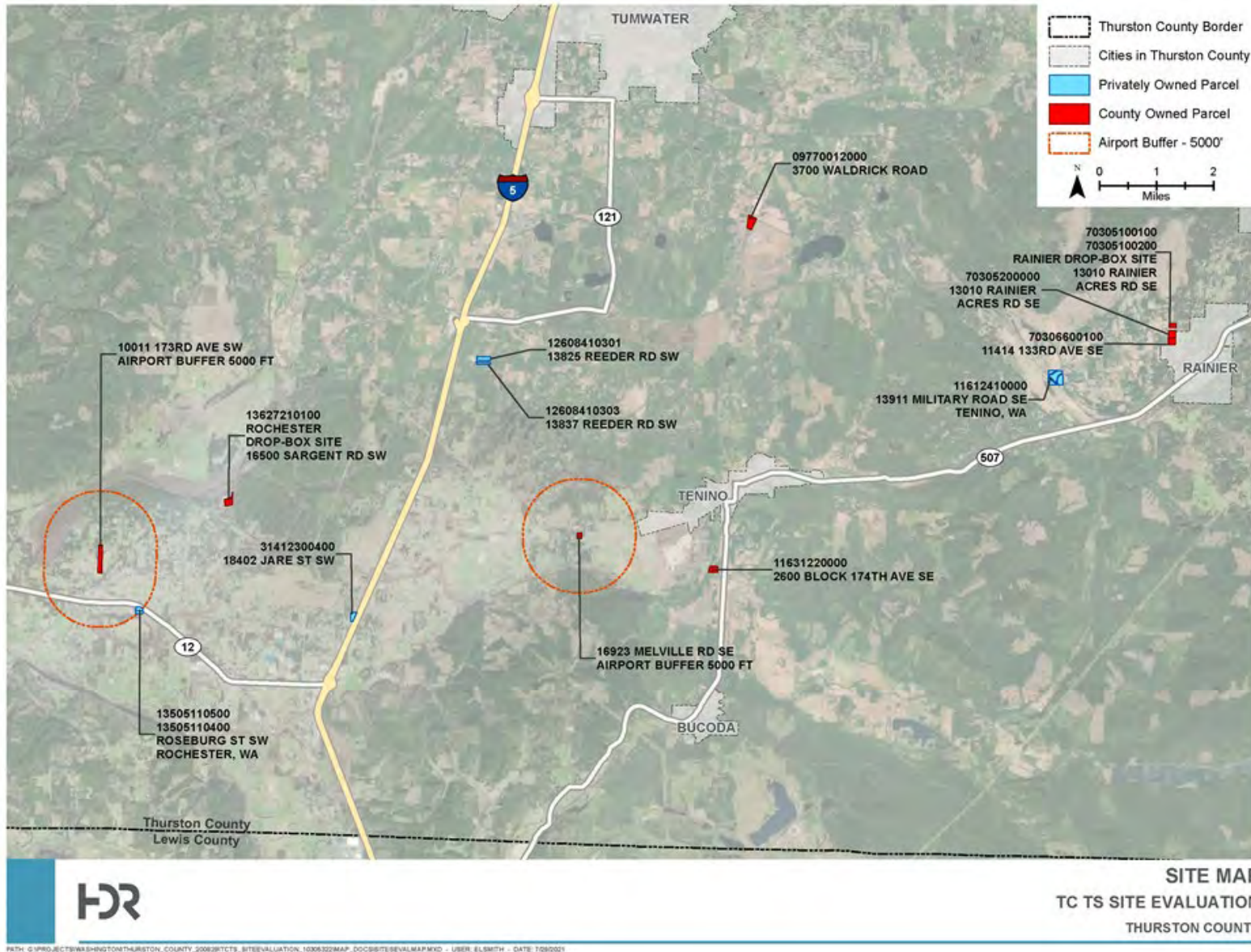


Figure 3-1. Thurston County Potential Transfer Station Sites 2021 Study

The seven 2021 potential sites were individually assessed using the following weighted criteria:

- **Legal and Regulatory Requirements** – Site meets zoning and siting requirements and is outside the residential zone, prime agricultural land, the FAA Airport restricted zone, forest designated area, and land designated as a park.
- **Level of Service** – Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of potential system users in the southern portion of the County.
- **Meets County Goals and Objectives** – Site meets Plan goals and objectives for infrastructure and system, sustainability, and outside influences as follows:
 - Enhances and improves the overall efficiency of waste and recyclables collection and transfer.
 - Considers environmental impacts to climate, air, water, and land.
 - Incorporates principles of equity of social justice.
- **Meets Public Safety Requirements** – Site meets municipal goals for traffic and vehicle types on streets.
- **Site Size/Topography** – Site is adequately sized and has gently sloping topography suitable for transfer station construction.
- **Utility Availability** – Existing utility connections for power, water, and sewer are located within 1 mile of the site, or there is the ability to install a well with reservoir capability and septic on the site.
- **Efficiency and Cost** – Site is a cost-effective alternative that meets Solid Waste System needs through 2050.

Table 3-2 provides the individual site scores based on weighted criteria.

Table 3-2. 2021 Site Scores Based on Weighted Criteria				
Site	Site Address	Parcel Number	Parcel Sizes	Site Rank Score (100 Points Possible)
Private Parcels				
Private Site A	13825–13841 Reeder Road SW – Tenino	12608410301 12608410303	1–10 acres 3–5 acres	62 points
Private Site B	18402 Jare Street SW – Rochester	31412300400	7.46 acres	68 points
Private Site C	Roseburg Street SW – Rochester	13505110500 13505110400	10 acres	56 points
Private Site D	13911 Military Road SE – Tenino	11612410000	33.71 acres	88 points

Table 3-2. 2021 Site Scores Based on Weighted Criteria

Site	Site Address	Parcel Number	Parcel Sizes	Site Rank Score (100 Points Possible)
County-Owned Parcels				
County Site A	13010 Rainier Acres Road SW – Rainier 11414 133 rd Avenue SE – Rainier	70305100100 70305100200 70305200000 70306600100	29.13 acres	91 points
County Site B	2600 174 th Avenue SE – Tenino	11631220000	9.88 acres	82 points
County Site C	3700 Waldrick Road – Tenino	09770012000	12 acres	81 points

3.2 2021 Prioritized List of Potential Sites

Upon completion of the ranking of the seven sites, a prioritized list of potential sites was developed. Table 3-3 provides a summary of the top two prioritized potential sites for consideration.

Table 3-3. Prioritized List of Potential Sites

Site	Parcel Number	Description	Zoning
County Site A	70305100100 70305100200 70305200000 70306600100	County Owned – 13010 Rainier Acres Road SW – 29.13 acres	RRR 1/5 ¹
Private Site D	11612410000	Privately Owned – 13911 Military Road SE – 33.71 acres	RRR 1/5 ¹

¹ Rural Residential/Resource one house to 5 acres zoning. Requires application for essential public facility.

This page is intentionally left blank.

4 Stakeholder Engagement

The County partnered with HDR to engage the community about potentially siting a new transfer station in south Thurston County as a replacement for the Rainier and Rochester Drop-Box sites. This section provides an overview of the stakeholder engagement process.

4.1 Stakeholder Engagement Goals and Objectives

Following completion of the 2021 South County Transfer Station Site Evaluation, the County determined that community engagement (see Figure 4-1) would be a critical component in review of community needs and future facility details and service provisions.

The County set goals for stakeholder engagement that included:

- Raise awareness of the problems with the current drop-box sites and demonstrate how a solution is needed to properly accommodate the growing population and waste in the southern portion of the County.
- Provide clear and consistent messaging to the community that includes articulation of project scope and milestones as well as future service opportunities.
- Demonstrate a thorough process of thoughtful consideration of options and trade-offs.
- Build momentum towards future public engagement opportunities.
- Create equitable and accessible opportunities for local stakeholders to engage in the process.
- Foster community trust in Thurston County by providing transparent information regarding project status and ways to stay involved to promote continued public engagement.
- Build community ownership of the project.



Figure 4-1. Stakeholder Engagement

4.2 Community Engagement Methods

The stakeholder engagement team used various methods to engage the community and stakeholders in order to solicit input. Engagement efforts were guided by a public participation plan that included engagement goals, a list of potential stakeholders, key

messages, equity considerations, and a draft schedule. Engagement methods utilized included:

- **Intercept surveys** – 168 intercept surveys completed over a 2-day period through direct feedback at the Rainier and Rochester Drop-Box sites.
- **Online surveys** – 247 online surveys were completed over the course of 6 weeks.
- **Stakeholder briefings** – Stakeholder meetings were conducted with Waste Connections, Republic Services, and Lewis County to share information about the siting process.
- **Virtual public meeting** – A virtual (Zoom) public meeting was hosted with 50 registrants. After the presentation, the team responded to submitted questions and encouraged participants to complete the online survey.

4.3 Stakeholder Engagement Conclusions

Stakeholder responses to the intercept survey and online survey were compiled along with information from the stakeholder briefings. The following were conclusions for consideration, based on the overall stakeholder engagement process, that were ultimately considered as part of the 2023 South County Transfer Station Site Evaluation:

Survey Results

- A total of 84 percent of those surveyed were residential self-haul customers.
- A total of 57 percent of those surveyed subscribed to curbside collection services.
- A total of 58 percent of those surveyed travel to the Waste and Recovery Center (WARC) for recycling and disposal services.
- The majority of drop-box site customers use the sites for recycling, household garbage, and bulky item disposal.
- Additional services were requested, in order of ranking:
 - Organics
 - Household hazardous waste
 - Tires
 - Appliances
- Survey respondents would like to see 7-day per week availability of a site.
- Of the survey respondents, the super-majority response related to willingness to travel to a disposal site was up to 10 miles. Forty percent of those surveyed would be willing to travel between 11 and 20 miles.

Waste Connections

- Estimate 80 tons per day average to a transfer station facility located in the southern portion of the County. Estimate 20,800 tons per year, which would provide some relief to tonnage processed at the WARC.
- A facility location near Tenino would best accommodate their haul routes.
- Recommend early morning access to the facility through RFID cards.
- Recommend that the County consider upsizing the facility to allow for population and tonnage growth and to accommodate waste in the case of WARC outages.

Republic Services

- Recommend a facility located with easy access to truck routes and the Interstate 5 (I-5) corridor.
- Recommend a facility location near Grand Mound/Tenino; the closer to I-5, the more cost savings to the County for hauling to rail.
- Support 7-day per week operations with 10-hour shifts being standard for Republic employees.
- Additional operational equipment would be needed to operate a transfer station at an initial added cost, which would be offset by not having to haul the small drop-box loads to the WARC for compaction and transport to the intermodal.
- Organics could be transloaded and transported to the WARC for processing.
- Recyclables could be transloaded on site for direct haul to the Materials Recycling Facility.

Lewis County

- Centralia Transfer Station has traffic and operational issues, but it is currently unlikely that they will work cooperatively with Thurston County for a new transfer station facility to service both Lewis County and Thurston County.

Lewis County does not keep a record of customer counts arriving at their Centralia facility from Thurston County. Thurston County also does not maintain records of out-of-county residents utilizing County solid waste facilities.

This page is intentionally left blank.

5 2023 South County Transfer Station Site Evaluation

This section provides information on the 2023 South County Transfer Station Site Evaluation.

5.1 2023 Criteria for Assessing Suitable Site Locations

In 2023, the 2021 Criteria for Assessing Suitable Site Locations remained the same with the exception that this new study increased site sizing from 8 acres to 10 acres. Site assessment criteria are outlined as follows:

- Site is more than 10 acres in size and is vacant land or has limited buildings.
- Site will serve the southern portion of Thurston County.
- Site is located outside of residential zoning, and current zoning allows for a transfer station through a conditional use process.
- Site is outside prime agricultural lands.
- Site is outside forest designated lands.
- Site is not designated as a wetland or in the 100-year floodplain.
- Endangered and protected flora and fauna habitats are not located on the site.
- Site is not protected for historical, archeological, or cultural significance.

Utilizing the above criteria, the GIS search did not initially locate any parcels in the south end of the County. County staff investigated and found that solid waste facilities are potentially allowed in a number of rural residential zones, as noted in County Code Chapter 20.54.³ Upon modification of the GIS search, 177 potential parcels throughout the County were identified, with 37 parcels available for transfer station siting in the southern portion of the County.

Upon completion of initial screening, 12 potential sites were selected to move forward for further assessment, which included four parcels from the 2021 site evaluation (Private Site D; County Sites A, B, and C) as presented in Table 5-1. Additional parcels from the 2021 site evaluation were not moved forward, as they were no longer available for development or had been sold.

³ [Thurston County Code Chapter 20.54 - SPECIAL USE* | Code of Ordinances | Thurston County, WA | Municode Library](#)

Table 5-1. 2023 Sites Identified for Further Assessment			
Site	Site Address	Parcel Number	Size
Private Parcels			
Private Site D	13911 Military Road SE – Tenino	11612410000	33.71 acres
Private Site E	16424 Old Hwy 99 SE – Tenino	12625420000 12625130102	20.4 acres 17.17 acres
Private Site F	16722 Leitner Rd – Rochester	12630110600	20.7 acres
Private Site G	18221 Danby Dr SW – Rochester	12632320600	10.6 acres
Private Site H	16816 Old Hwy 99 SE – Tenino	12635110000 12626320000 12626310000	18.2 acres 21.27 acres 209.22 acres
Private Site I	11545 Vail Cut Off Rd SE – Rainier	21616230000	15.5 acres
Private Site J	14505 Waddell Rd SE – Rainier	21617110100	13.2 acres
Private Site K	13541 Vail Cut Off Rd SE – Rainier	21622410200	19 acres
Private Site L	16821 Gibson Rd SW – Tenino	37800000401	34.81 acres
County-Owned Parcels			
County Site A	13010 Rainier Acres Road SW – Rainier 11414 133 rd Avenue SE – Rainier	70305100100 70305100200 70305200000 70306600100	29.13 acres
County Site B	2600 174 th Avenue SE – Tenino	11631220000	9.88 acres ¹
County Site C	3700 Waldrick Road – Tenino	09770012000	12 acres

¹Site size does not meet initial siting criteria. Site assessed due to location, utilities, and zoning.

Sites with multiple parcels are assessed as a single potential site for consideration. Figure 5-1 provides a map for location of sites identified for further assessment. Also included on the map are the current locations of the County-owned drop-box sites and one privately owned airport with FAA buffer zones delineated.

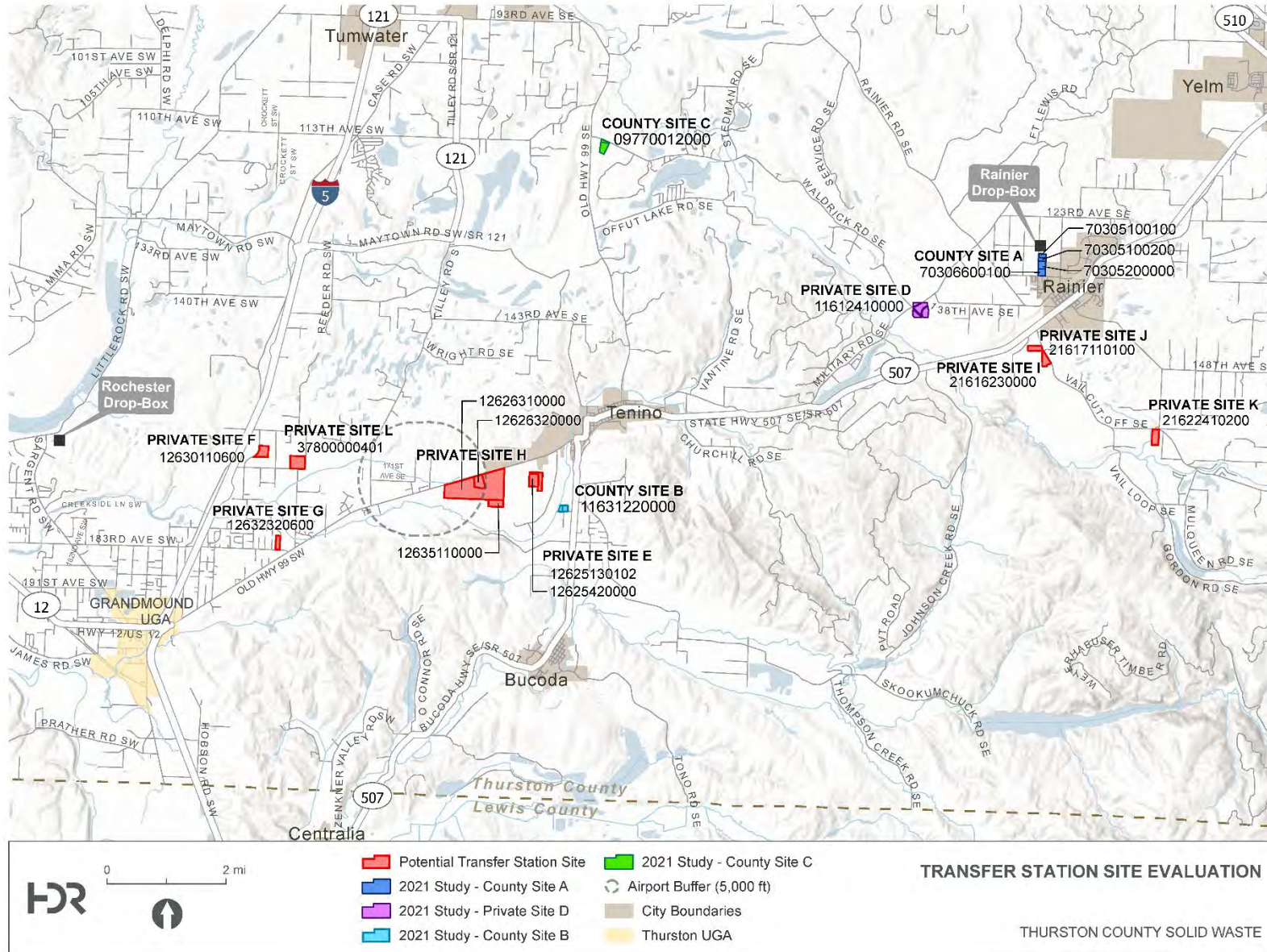


Figure 5-1. Thurston County Potential Transfer Station Sites 2023 Study

The 12 sites were individually assessed using the same weighted criteria as in 2021, as follows:

- **Legal and Regulatory Requirements** – Site meets zoning and siting requirements and is outside the residential zone, prime agricultural land, the FAA Airport restricted zone, forest designated area, and land designated as a park.
- **Level of Service** – Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of potential system users in the southern portion of the County.
- **Meets County Goals and Objectives** – Site meets Plan goals and objectives for infrastructure and system, sustainability, and outside influences as follows:
 - Enhances and improves the overall efficiency of waste and recyclables collection and transfer.
 - Considers environmental impacts to climate, air, water, and land.
 - Incorporates principles of equity of social justice.
- **Meets Public Safety Requirements** – Site meets municipal goals for traffic and vehicle types on streets.
- **Site Size/Topography** – Site is adequately sized and has gently sloping topography suitable for transfer station construction.
- **Utility Availability** – Existing utility connections for power, water, and sewer are located within 1 mile of the site, or there is the ability to install a well with reservoir capability and septic on the site.
- **Efficiency and Cost** – Site is a cost-effective alternative that meets Solid Waste System needs through 2050.

Table 5-2 provides the individual site scores based on the above weighted criteria.

Table 5-2. 2023 Site Scores Based on Weighted Criteria				
Site	Site Address	Parcel Number	Parcel Sizes	Site Rank Score (100 Points Possible)
Private Parcels				
Private Site D	13911 Military Road SE – Tenino	11612410000	33.71 acres	88 points ¹
Private Site E	16424 Old Hwy 99 SE – Tenino	12625420000 12625130102	20.4 acres 17.17 acres	68 points
Private Site F	16722 Leitner Rd – Rochester	12630110600	20.7 acres	60 points
Private Site G	18221 Danby Dr SW – Rochester	12632320600	10.6 acres	66 points

Table 5-2. 2023 Site Scores Based on Weighted Criteria

Site	Site Address	Parcel Number	Parcel Sizes	Site Rank Score (100 Points Possible)
Private Site H	16816 Old Hwy 99 SE – Tenino	12635110000 12626320000 12626310000	18.2 acres 21.27 acres 209.22 acres	60 points
Private Site I	11545 Vail Cut Off Rd SE – Rainier	21616230000	15.5 acres	47 points
Private Site J	14505 Waddell Rd SE – Rainier	21617110100	13.2 acres	51 points
Private Site K	13541 Vail Cut Off Rd SE – Rainier	21622410200	19 acres	48 points
Private Site L	16821 Gibson Rd SW – Tenino	37800000401	34.81 acres	84 points
County-Owned Parcels				
County Site A	13010 Rainier Acres Road SW – Rainier 11414 133 rd Avenue SE – Rainier	70305100100 70305100200 70305200000 70306600100	29.13 acres	91 points ¹
County Site B	2600 174 th Avenue SE – Tenino	11631220000	9.88 acres ²	82 points ¹
County Site C	3700 Waldrick Road – Tenino	09770012000	12 acres	81 points ¹

¹ Site rank score from 2021 Study

² Site size does not meet initial siting criteria. Site assessed due to location, utilities, and zoning.

5.2 2023 Prioritized List of Potential Sites

After the 12 sites were ranked, a prioritized list of potential sites was developed. Table 5-3 provides a summary of the top three prioritized potential sites for consideration. A complete list of the individual sites with associated rankings can be found in Appendix A.

It should be noted that an area of Private Site D may be located in existing LTA zoning. The property owner of Private Site D has multiple parcels in that same area and has noted a willingness to work with the County on potential property available for development.

Table 5-3. 2023 Prioritized List of Potential Sites

Site	Parcel Number	Description	Zoning
County Site A	70305100100 70305100200 70305200000 70306600100	County Owned – 13010 Rainier Acres Road SW – 29.13 acres	RRR 1/5 ¹
Private Site D	11612410000	Privately Owned – 13911 Military Road SE – 33.71 acres	RRR 1/5 ¹
Private Site L	37800000401	Privately Owned – 16821 Gibson Road SW – 34.81 acres	RRR 1/5 ¹

¹ Rural Residential/Resource one house to 5 acres zoning. Requires application for essential public facility.

Figure 5-2, Figure 5-3, and Figure 5-4 below provide site pictures for each potential site.



Figure 5-2. County-Owned Site A



Figure 5-3. Privately Owned Site D



Figure 5-4. Privately Owned Site L

6 Preliminary Sizing, Site Layouts, and Probable Costs

This section provides information on preliminary transfer station sizing on the three potential sites, preliminary site layouts, and probable construction costs.

6.1 Preliminary Transfer Station Sizing

In 2021, to confirm that the highest-ranked sites could accommodate the size transfer station required, preliminary building size was evaluated. The potential transfer station would include an area for emergency waste storage, self-haul and commercial disposal stalls, and hopper space including a loadout tunnel. This study assumes that municipal solid waste (MSW) collected via curbside collection in the southern portion of the County will be hauled directly to the new transfer station facility. Waste Connections, Inc., provided preliminary tonnage and truck trip information for inclusion in the sizing calculations.

The evaluation, described below, estimates that approximately 24,000 SF will be required for anticipated tonnage in 2050.

Assuming a 20 percent population increase through 2050, the annual throughput to the transfer station is estimated at a peak of 527 customers per day, which equals a peak tonnage of 629 tons. Peak customers and tonnage include both self-haul and commercial based on the current customer base serviced at the Rainier and Rochester Drop-Box sites plus estimates provided for commercial customers from Waste Connections, Inc. The 2021 estimated peak customer and tonnage was reviewed in 2023 for confirmation of potential facility sizing and customer expectations. Additional information on facility sizing is included in the sections below.

6.1.1 Sizing Assumptions

The following assumptions were used to evaluate the preliminary transfer station sizing:

- **Customer Queue** – An approximate 10 percent of peak self-haul customers are assumed to enter a queue prior to proceeding through weigh scales, thus reducing the number of self-haul customers assumed to be disposing of MSW simultaneously. A zero-queue scenario is assumed following the weigh scales, which allows customers to dispose of MSW simultaneously once they pass the scales.
- **Organics Disposal** – Design assumes that approximately 10 percent of self-haul customers in 2050 will access the site for organics disposal. These customers will be permitted to bypass the transfer station facility; therefore, this assumption reduces the number of self-haul stalls required for the zero-queue scenario discussed above.
- **Population Growth** – A 20 percent population growth rate is assumed between 2021 and 2050.

- **One-Day Emergency Storage and Operating Hours** – For sizing assumptions, the transfer station is assumed to accept MSW waste for 9 hours per day, 7 days per week. Storage is calculated for the tipping floor to accommodate a 1-day emergency MSW stockpile (e.g., the open-top loadout is down, waste cannot be transported off site due to inclement weather or landfill implications). The density of MSW received at the facility is assumed to be approximately 400 pounds per cubic yard, or 15 pounds per cubic foot. To accommodate access around the stockpile, 12-foot equipment corridors are assumed on three sides, with the final side adjacent to the open top loadout. The maximum height of the stockpile is assumed to be 14 feet, with a 45-degree angle from the tipping floor.
- **Tons per Commercial Customer and Tons per Trailer** – Based on industry experience, an approximate 7 tons per commercial customer is assumed to be disposed of on the tipping floor, and 25 tons per open top trailer is assumed for loadout from the facility.
- **Customer Stalls** – Customer Stalls needed were calculated based on traffic flow at the County's Waste and Recovery Center, which indicates that self-haul customers and commercial customers require approximately 13 minutes and 8 minutes, respectively, to dispose of MSW at transfer stations. This calculation falls within industry standards. Stalls for both self-haul and commercial customers are assumed to be 12 feet wide. Maneuvering required to accommodate customers backing into stalls is assumed to occur outside of the station.
- **Trailer Loadout** – An approximate 20 minutes to loadout trailers is assumed. One front loader is assumed to accommodate trailer loadout.

6.1.2 Sizing Calculations

Using the assumptions described above, calculations were developed to size the unloading area for self-haul and commercial customers, tipping floor area required for emergency waste storage, and open top loadout.

Self-Haul and Commercial Unloading Areas

- **Thirteen Self-Haul Stalls** – The self-haul unloading area is sized to accommodate zero-queue beyond the scalehouse. Peak daily self-haul transactions in 2050 are estimated at 527 customers per day, or 59 vehicles per hour. Assuming 13 minutes per customer to unload, each self-haul disposal bay can accommodate four to five customers per hour. To accommodate 59 vehicles per hour, 13 bays are assumed for self-haul customers.
- **Two Commercial Stalls** – Peak daily commercial transactions in 2050 are estimated by dividing daily tonnage by tons per packer and then by daily operational hours, and are then multiplied by a peak hour factor of 20 percent. A total of 629 tons per day divided by 7 tons per packer, divided by 9 hours per day, and increased by 20 percent for a peak hour results in an anticipated 12 packers per hour. Assuming 8 minutes per commercial customer to unload, two bays are assumed for commercial customers. Stalls needed to accommodate both commercial transactions and self-hauls transactions total 13.

Tipping Floor Area

Per the assumptions described above, the MSW emergency stockpile is sized for a 14-foot stacking height, sloped at a 45-degree angle, with 12-foot equipment corridors on three sides of the stockpile. Assuming 629 tons per day is received in 2050, space is required to accommodate approximately 84,900 cubic feet of MSW. An approximate **11,300 SF** (67 feet wide by 168 feet long) is required for the emergency MSW stockpile.

Total Area

To accommodate customers backing into stalls (20 feet), a corridor for waste pushing (12 feet), and a loadout tunnel (34 feet), the overall facility width is calculated at 133 feet. To accommodate an equipment corridor on the tipping floor and the overall width of the self-haul disposal stalls, the overall facility length is calculated at 180 feet. Summing up the self-haul and commercial customer disposal stalls with space required for emergency waste storage and MSW loadout, approximately **24,000 SF** is required for the overall transfer building.

6.2 Preliminary Conceptual Site Layouts

6.2.1 Conceptual Site Layouts

The prioritized list of potential sites noted in Appendix A provided County Site A, Private Site D, and Private Site L as the top three sites for consideration. Preliminary conceptual site layouts were developed for all sites, each consisting of a preliminary site plan and building arrangement to illustrate facility features and orientations on each site.

County Site A, Private Site D, and Private Site L layouts are illustrated in Figure 6-1, Figure 6-2, and Figure 6-3, respectively. In addition, the County requested potential haul route maps from each site, which are included in Appendix B.

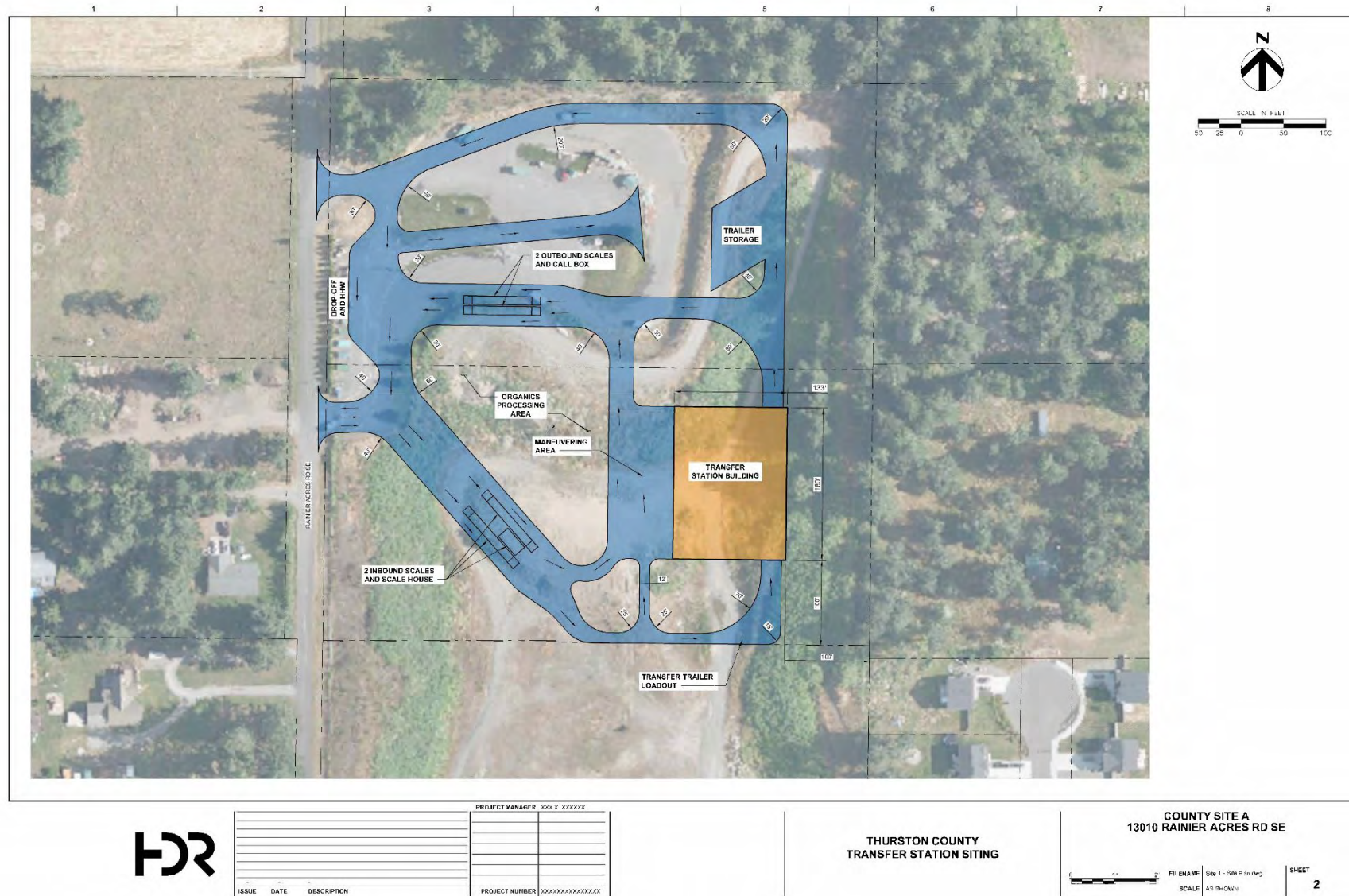


Figure 6-1. County-Owned Site A Layout

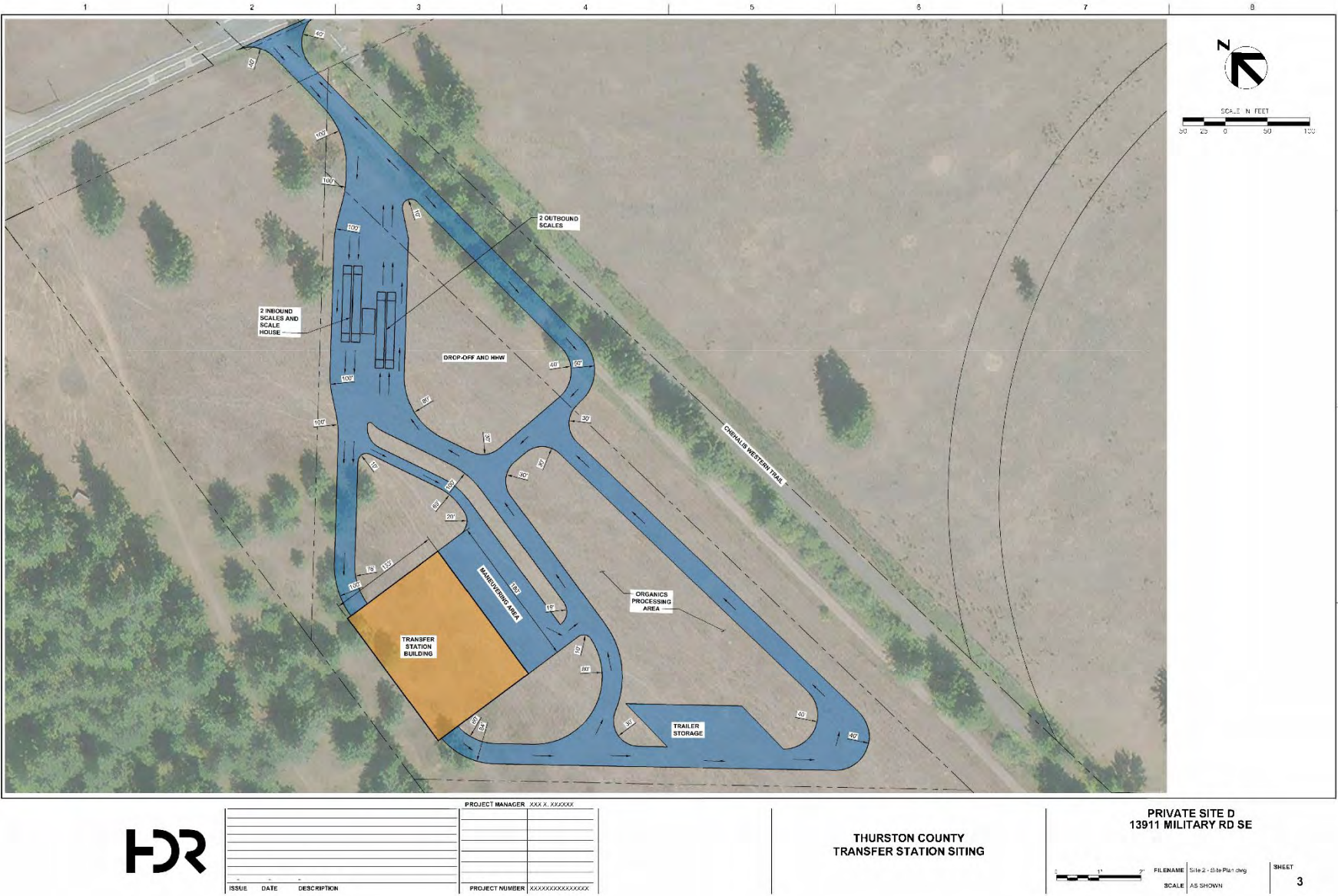


Figure 6-2. Privately Owned Site D Layout

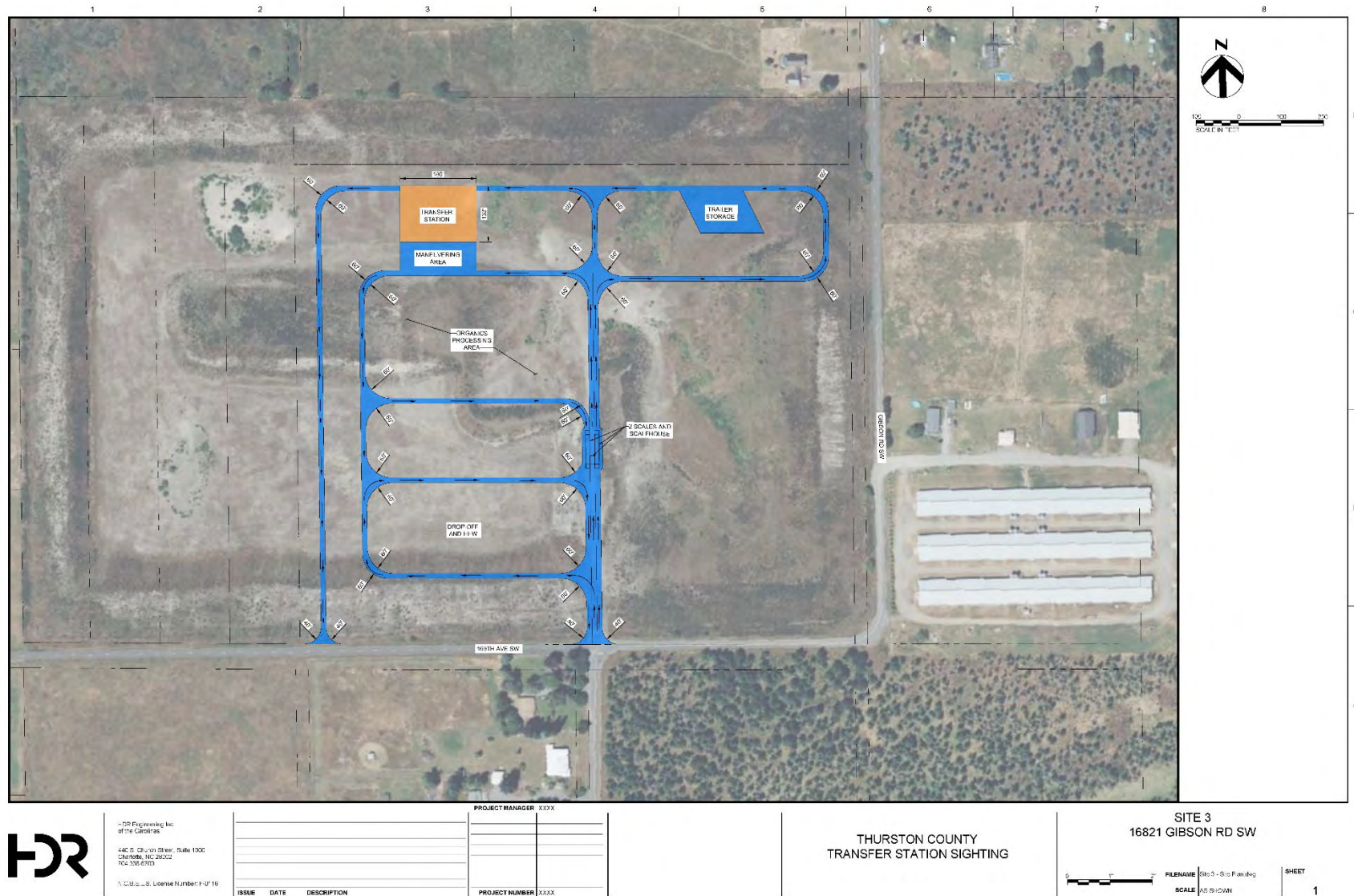


Figure 6-3. Privately Owned Site L Layout

6.3 Opinion of Probable Construction Costs

Opinions of probable construction costs for the three preliminary conceptual site layout options are provided in Table 6-1, Table 6-2 and Table 6-3 below.

Due to the impacts on construction costs, materials, and labor from Covid-19, costs for construction including general earthwork, sitework, roadways, concrete, utilities, and vertical building construction are experiencing increases in the 30 percent range. Construction markets are currently very good, and contractors are increasing their markups as a result of increased demand. Construction prices are expected to trend high until demand recedes. Contingency and Covid-19 pricing impact factors are not applied to site acquisition costs.

Capital costs for each preliminary site plan include key components of a conceptual transfer station, including the following:

- An approximate 24,000-SF transfer station building – high bay, column-free interior, metal building with corrosion protection features and maneuvering area inside the building
- Thirteen customer unloading bays
- Two load-out hoppers to trailers in drive-through tunnel below
- Paved roadway network
- Transfer trailer parking area
- Recycling and household hazardous waste collection area
- Organics collection and processing area
- Scales and scalehouses
- Extension/expansion of utilities for electricity, water, and sewer
- Site investigations and earthwork to provide full elevation separation between tipping floor and load-out tunnel

Table 6-1. Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – County Site A

Task	Features	Transfer Station Total
Site Acquisition	Site is currently owned by County	\$0
Site Work	Earthwork, roadways, utilities, storm water control, surveying, etc.	\$1,962,300
Facilities		
Transfer Station	24,000 SF	\$4,657,400
Scalehouse and Scales	Building, in-bound and out-bound scales	\$890,400

Table 6-1. Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – County Site A		
Task	Features	Transfer Station Total
Subtotal Facilities		\$5,547,800
Subtotal Costs		\$7,510,100
Contingency (30%)		\$2,253,000
Post-Pandemic Pricing Impact (30%)		\$2,928,900
Total		\$12,692,000

Table 6-2. Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – Private Site D		
Task	Features	Transfer Station Total
Site Acquisition	35 acres	\$1,011,300
Site Work	Earthwork, roadways, utilities, storm water control, surveying, etc.	\$1,560,300
Facilities		
Transfer Station	24,000 SF	\$4,557,200
Scalehouse and Scales	Building, in-bound and out-bound scales	\$890,400
Subtotal Facilities		\$5,447,600
Subtotal Costs		\$8,019,200
Contingency (30%)		\$2,102,400
Post-Pandemic Pricing Impact (30%)		\$2,733,100
Total		\$12,854,700

Table 6-3. Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – Private Site L		
Task	Features	Transfer Station Total
Site Acquisition	35 acres	\$1,020,000
Site Work	Earthwork, roadways, utilities, storm water control, surveying, etc.	\$2,200,500
Facilities		
Transfer Station	24,000 SF	\$4,557,200
Scalehouse and Scales	Building, in-bound and out-bound scales	\$890,400
Subtotal Facilities		\$5,447,600

Table 6-3. Transfer Station Opinion of Probable Cost Estimate (2023 \$) Summary – Private Site L

Task	Features	Transfer Station Total
Subtotal Costs		\$8,668,100
Contingency (30%)		\$2,294,400
Post-Pandemic Pricing Impact (30%)		\$2,982,800
Total		\$13,945,300

6.4 Report Limitations Affecting the Project

The data used in this report are derived from current and projected Thurston County tonnages, current waste diversion and recycling goals, and population estimates. In the future, if tonnages change due to the adoption of more stringent waste recycling and diversion goals, markets change due to commodity pricing and product acceptability, or population growth increases or decreases substantially differently from the projections, costs for the transfer station may increase or decrease and will need to be adjusted accordingly.

In addition, purchase price of a private site may vary depending upon the timing of purchase. Construction pricing is also fluctuating with unprecedented high costs and variability post-pandemic.

This page is intentionally left blank.

7 Next Steps

The following are next steps for the County to consider as a result of this South County Transfer Station Site Evaluation:

- Confirm in January 2024 whether the County LTA update is approved by the Board of County Commissioners and verify if the County preferred parcel(s) continues to be located outside the new designated LTA zone.
- Narrow selection to preferred site and, if appropriate, negotiate property acquisition cost and purchase.
- Select the preferred site and proceed with zoning, permitting, and design.
- Review construction costs for stability and the return to normal based on construction demand and proceed with project bidding.

This page is intentionally left blank.



Appendix A: 2023 Individual Site Rankings

This page intentionally left blank.



Project Site ID	Site Description	Site Score
Private Site D	13911 Military Road SE - Tenino - 33.71 Acres	88

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2

Project Site ID	Site Description	Site Score
Private Site E	16424 Old Hwy 99 SE - Tenino - 20.4 Acres and 17.17 acres	68

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1

Project Site ID	Site Description	Site Score
Private Site F	16722 Leitner Rd, Rochester - 20.7 Acres	60

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3

Project Site ID	Site Description	Site Score
Private Site G	18221 Danby Dr SW - Rochester - 10.6 Acres	66

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3



Project Site ID	Site Description	Site Score
Private Site H	16816 Old Hwy 99 SE - Tenino - 18.2 Acres, 21.27 Acres, 209.22 Acres	60

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1

Project Site ID	Site Description	Site Score
Private Site I	11545 Vail Cut Off Rd SE - Rainier- 15.5 Acres	47

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2



Project Site ID	Site Description	Site Score
Private Site J	14505 Waddell Rd SE - Rainier - 13.2 Acres	51

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2

Project Site ID	Site Description	Site Score
Private Site K	13541 Vail Cut Off Rd SE - Rainier - 19 Acres	48

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	2
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1

Project Site ID	Site Description	Site Score
Private Site L	16821 Gibson Rd SW - Tenino - 34.81 Acres	84

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	1
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4

Project Site ID	Site Description	Site Score
County Site A	13010 Rainier Acres Road SW and 11414 - 133rd Ave SE - Rainier - 4 parcels 29.13 acres	91

Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5

Project Site ID	Site Description	Site Score
County Site B	2600 - 174th Ave SE - Tenino - 9.88 Acres	82

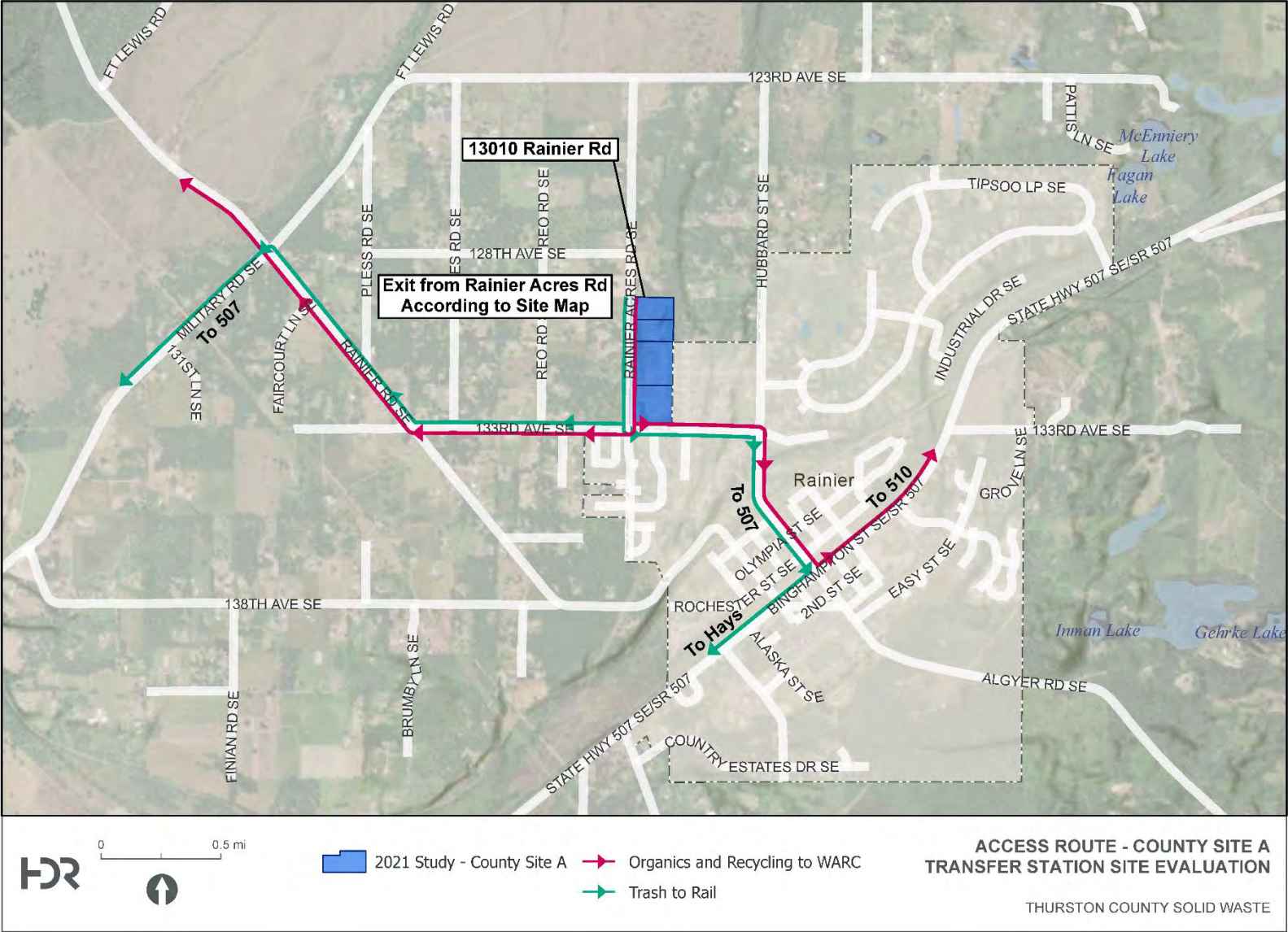
Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5

Project Site ID	Site Description	Site Score
County Site C	3700 Waldrick Rd - Tenino - 12 Acres	81

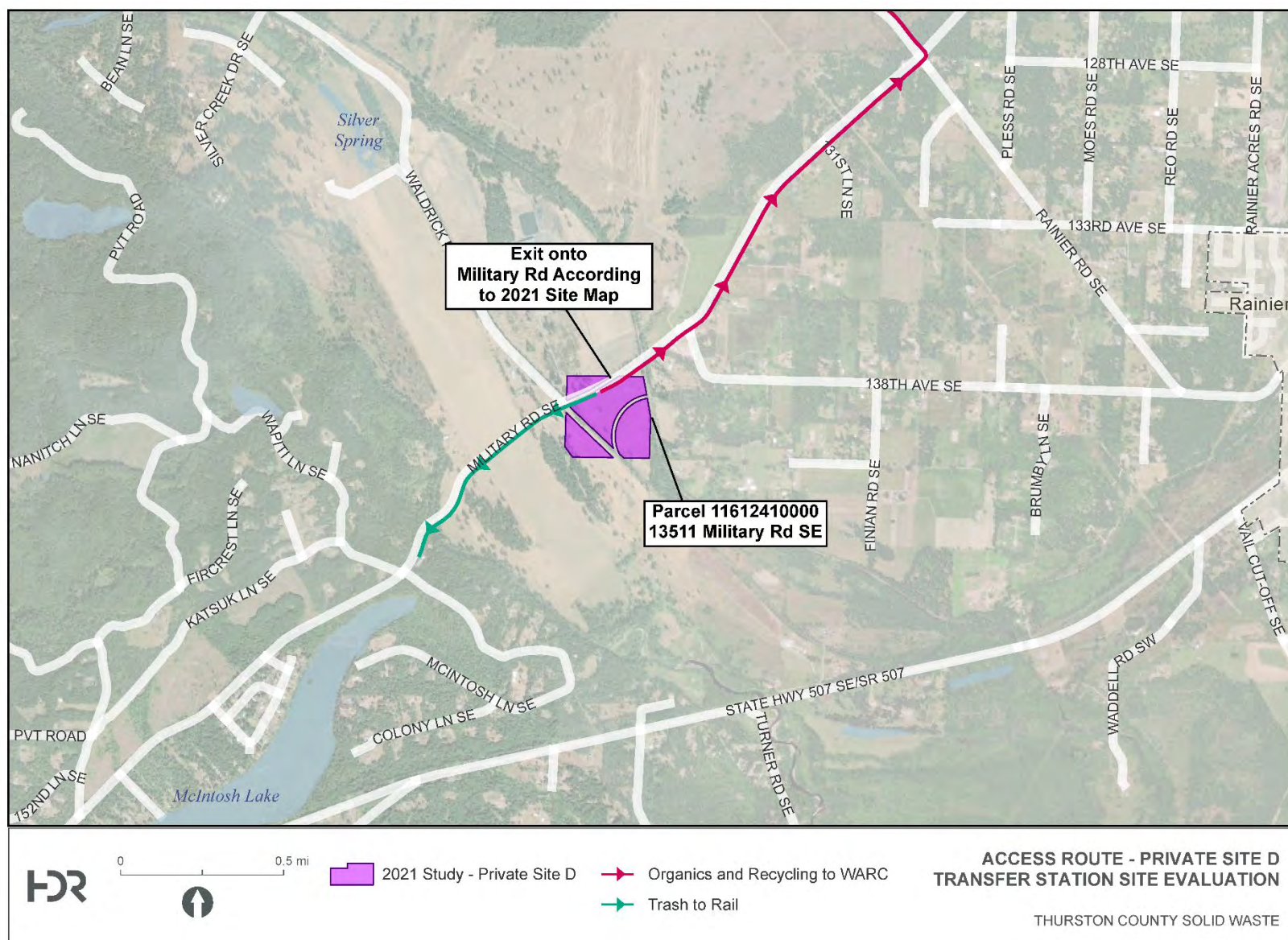
Criteria	Description	Qualitative Weight	Weight	Scoring Criteria	Score
Legal and Regulatory Requirements	Site meets zoning and siting requirements, is outside the residential zone, prime agricultural land, FAA Airport restricted zone, forest designated area and land designated as a park.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Level of Service (flexibility)	Site is centrally located to waste collection routes and has an estimated time/distance to the proposed site of less than 20 minutes/20 miles for the majority of system users.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Meets County Goals and Objectives	Meets County Solid Waste Management Plan goals and objectives for infrastructure and system, sustainability and outside influences including enhancement and improvement to the overall system, considers environmental impacts to climate, air, water and land and incorporates principles of equity of social justice.	High	4	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	3
Meets Public Safety Requirements	Meets municipal goals for traffic and vehicle types on streets.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Site Size/Topography	Site is adequately sized and has gently sloping topography suitable for transfer station construction.	High	3	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5
Utility Availability	Existing utility connections for power, water and sewer are located within 1 mile of the site or ability to install well with reservoir capability and septic.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	4
Efficiency and Cost	Site is a cost effective alternative that meets the Solid Waste System needs through 2050.	Medium	2	Scoring on a 1 to 5 scale with 1 being the lowest and 5 being the highest score.	5

Appendix B: Potential Haul Route Maps

This page intentionally left blank.



County Site A – Access Route Layout



Private Site D – Access Route Layout



This page intentionally left blank.