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Appendix C1: Transportation Needs Report

December 2023



King County

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50 Chapter 1. Planning Context and Introduction

51 1.1 What Is the Transportation Needs Report?

52 The King County Transportation Needs Report (TNR) is a long-term, comprehensive list of
53 improvement needs for the roads, bridges, and related infrastructure located in unincorporated
54 King County. It includes consideration of significant projects in adjacent cities and counties, and
55 on state highways, as they relate to the overall functioning of the transportation system. The
56 transportation needs outlined in the TNR include those that are currently known, as well as
57 those that are forecast based on regionally
58 adopted targets for growth and development.

59 The TNR is a functional plan of the *King*
60 *County Comprehensive Plan*. Together with
61 the King County Department of Local
62 Services Road Services Division (Roads)
63 Six-Year Capital Improvement Program
64 (CIP) and the biennial operating budget, the
65 TNR fulfills the requirement of growth
66 management legislation (RCW 36.70A.070)
67 as the transportation capital facilities plan
68 element of the *King County Comprehensive*
69 *Plan*.

70 The TNR also fulfills requirements of
71 Washington Administrative Code Chapter
72 136-14 to describe the process through
73 which roadway needs are prioritized. These
74 requirements are met by Chapter 2 of this
75 report, which describes how Roads meets
76 the standards of good practice established
77 by the Washington State County Road
78 Administration Board, the agency
79 responsible for statutory oversight of
80 Washington’s county road departments.

81 1.2 Relationship to the King County 82 Comprehensive Plan

83 A primary purpose of the TNR is to fulfill specific requirements of state growth management
84 legislation for comprehensive planning. The schedule for updating the TNR corresponds to
85 updates of the *King County Comprehensive Plan*.

86 King County’s TNR fulfills these requirements, as outlined in state legislation (RCW 36.70A.070
87 (6)):

- 88 • Specific actions and requirements for bringing into compliance locally owned
89 transportation facilities or services that are below the comprehensive plan established
90 level of service standards;
- 91 • Forecasts of traffic of at least ten years based on the adopted growth targets and land
92 use plan to provide information on the location, timing, and capacity needs of future
93 growth;
- 94 • Identification of state and local system needs to meet current and future demands;

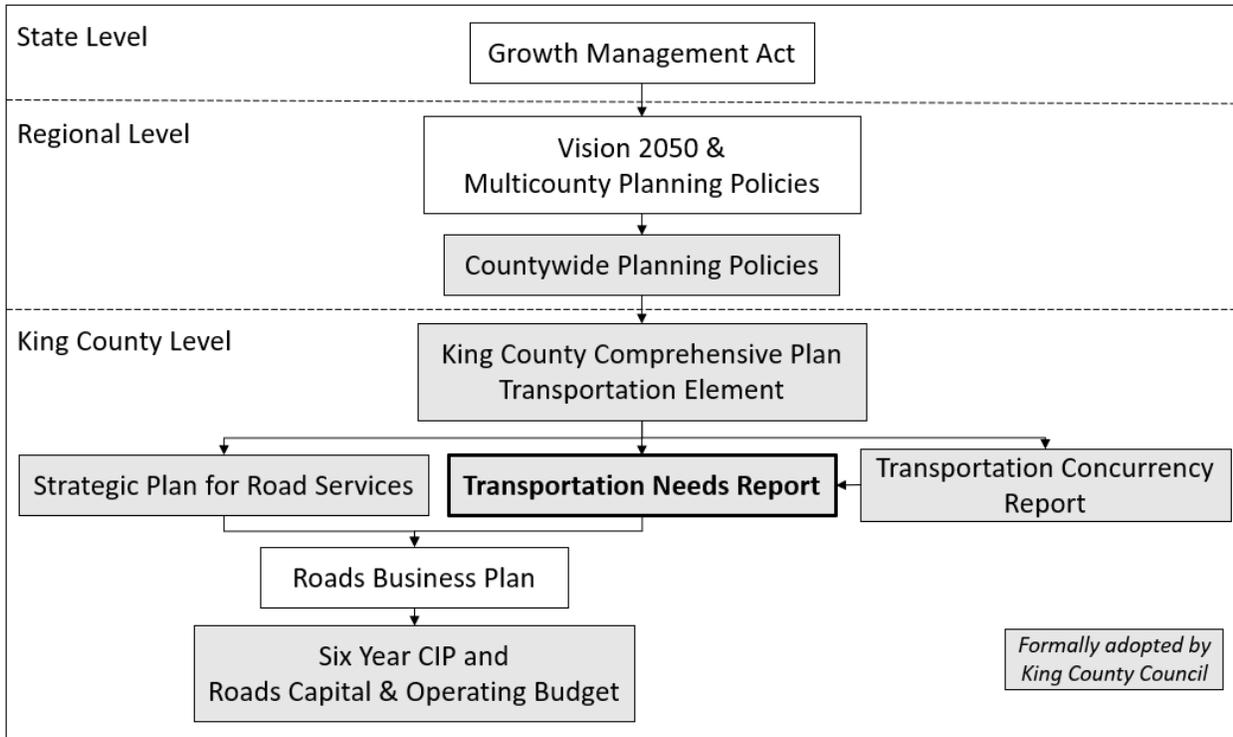
How does the King County Transportation Needs Report comply with the law?

1. It is based on the land use element of the *Comprehensive Plan*.
2. The list of transportation needs and recommended improvements for capacity projects was developed using travel forecasts that are based on the regionally adopted growth targets.
3. It includes a financial analysis that reflects the most recent land use changes, project amendments, costs, and financial revenue assumptions.
4. It documents intergovernmental coordination, with particular attention to potential impacts on adjacent jurisdictions.
5. It includes active transportation (bicycle and pedestrian) needs.

- 95 • An analysis of funding capability to judge needs against probable funding resources;
- 96 • A multiyear financing plan based on the needs identified.

97 The development of the TNR is part of a comprehensive planning process guided by state
 98 growth management legislation. Figure 1 summarizes the relationships between state
 99 regulations, the *King County Comprehensive Plan* and the *Strategic Plan for Road Services* with
 100 the development of the TNR, the Transportation Concurrency Report, the Roads Six-Year CIP,
 101 and the Roads biennial budget.

102 Figure 1. Relationship among Planning Documents



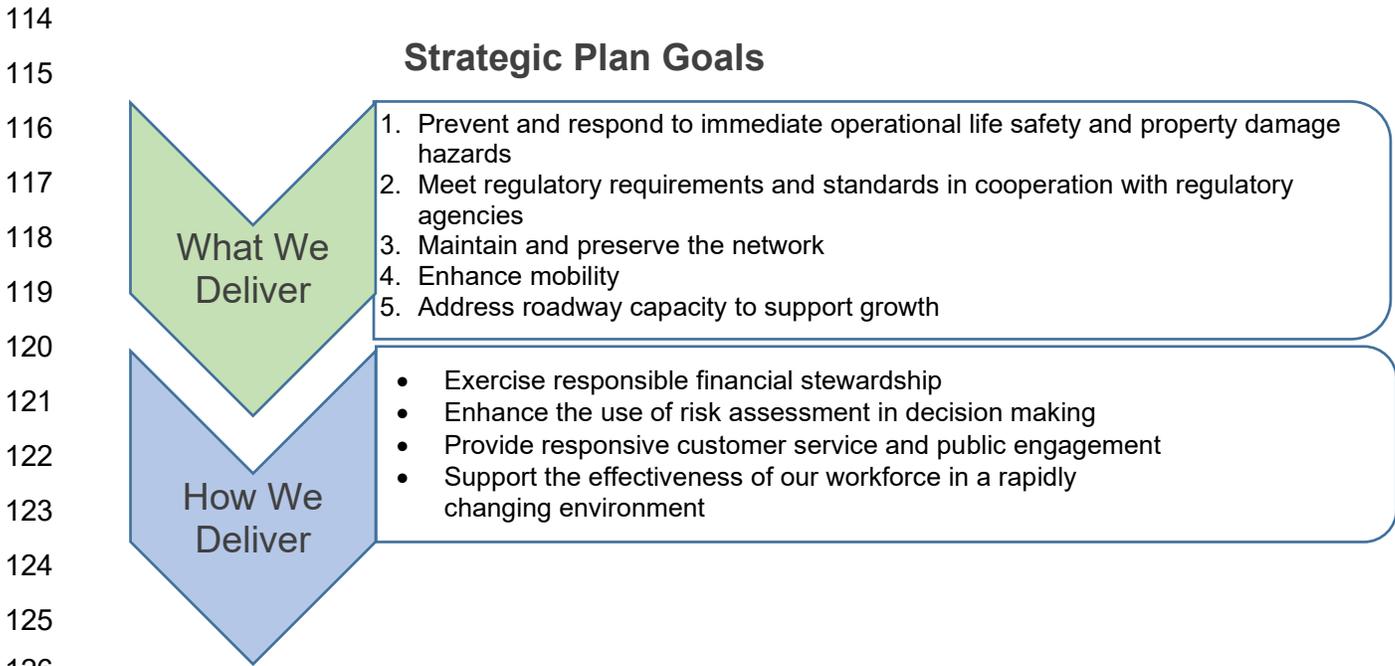
103
 104 **1.3 Strategic Context**

105 The strategic context for preparation of the TNR includes insufficient funds, an aging system of
 106 roads and bridges, and a backlog of maintenance and preservation needs. Roads employs a
 107 risk management approach to its roads and bridges, and the *Strategic Plan for Road Services*
 108 (July 2014) responds to the dilemma of significantly constrained resources by setting clear
 109 priorities to guide the division’s decision making.¹ The strategic plan’s goals prioritize
 110 operational safety, regulatory compliance, and the maintenance and preservation of
 111 infrastructure (Figure 2).

112

¹ *Strategic Plan for Road Services* (2014 Update) [\[LINK\]](#)

113 Figure 2. *Strategic Plan for Road Services Strategic Goals*



127 While Roads recognizes that it is not able to fully accomplish all of the concepts outlined within
128 its strategic plan, these goals are used to guide work that meets the most critical needs within
129 available funding and resources. This strategic context is exceptionally important as the agency
130 grapples with near-term funding uncertainties.

131 Revenue projections indicate that the agency does not have the capital funds to address the
132 majority of the project needs identified within the 2024 TNR. Roads applies its strategic plan
133 goals and priorities to build its biennial budget and six-year capital improvement program, which
134 results in funding safety and regulatory work first and then, due to revenue constraints, a limited
135 amount of preservation and maintenance activities. The division lacks resources to fund
136 roadway capacity improvements. The strategic guidance provided by the 2014 *Strategic Plan for*
137 *Road Services* and the *Road Services Business Plan* will continue to play an important role in
138 the division’s decision making, especially as funding for the Roads capital program decreases
139 over time.

140 **1.4 King County’s Transportation Needs and Funding**

141 The TNR evaluates the difference between identified transportation needs and revenues
142 associated with a twenty-year planning horizon. This needs analysis augments work undertaken
143 by Roads to assess the County’s ability to maintain the condition of its roads and bridges given
144 declining dedicated revenues.

145 King County continues to experience a structural roads funding crisis. The lack of revenue is
146 significantly impacting the County’s ability to maintain and improve roads. The Roads Fund
147 relies on a small tax base relative to the size and age of the unincorporated road network.
148 Without additional funding, it is increasingly difficult to monitor, maintain, and operate the
149 system of bridges and roads in unincorporated King County. Aging infrastructure and
150 maintenance facilities, and an inability to adequately invest in infrastructure asset management,
151 have resulted in a system of roads, bridges, and buildings in decline and at risk of failure.
152 Critical safety work remains the top priority. Without the resources to perform timely

153 preventative maintenance, Roads is forced into a more reactive maintenance mode. Deferring
154 maintenance leads to an exponential increase in the cost to repair and sustain roads in the
155 future.

156 It has been more than a decade since a new capacity project has been funded, and
157 preservation projects have been primarily associated with one-time funding. The six-year capital
158 improvement program is focused on addressing critical safety needs and deterioration rather
159 than planned preservation and maintenance. The division anticipates the need to continue to
160 focus available resources on unplanned failures and system deterioration; not all of these needs
161 will be met, which will result in restricted or closed roads and bridges.

162 Additionally, the unincorporated county road network needs restorative infrastructure investment
163 in traditionally underserved communities. Mobility connects people with opportunities; whether
164 for school, work, or play, the ability to safely and efficiently navigate King County is critical for
165 creating an environment for people to thrive. Investments in these communities were deferred
166 due to anticipated annexations, which have not occurred. Urban segments of the
167 unincorporated road network have some of the oldest infrastructure in the county. This
168 infrastructure was not built to meet current urban standards or to support multimodal
169 transportation. Historic methods for evaluating and prioritizing infrastructure investments have
170 not centered equity. County planning and engagement efforts have highlighted the needs and
171 opportunities for an enhanced, pro-equity, anti-racism, approach to managing and investing in
172 the road system.

173 In 2015, King County convened a panel of regional leaders and community members to explore
174 solutions for maintaining and preserving the aging bridge and road system in unincorporated
175 King County. The Bridges and Roads Task Force reviewed the history of the roads funding
176 crisis, its current context, and an independent consultant analysis that identified a funding gap of
177 \$250 million to \$400 million a year to maintain, replace, and improve county bridges and roads.
178 In 2017 and 2018, King County collaborated with the Sound Cities Association, King County
179 cities, the Puget Sound Regional Council, and the Washington State Department of
180 Transportation on a Regional Transportation System Initiative to identify the critical connecting
181 roads that comprise the regional road network and to identify unmet maintenance, operations,
182 and capital needs. King County continues to work with local and regional partners to advance
183 regional transportation funding solutions. See Chapter 6 of this report for additional Roads
184 funding detail.

185 **1.5 Rural Regional Corridors**

186 Rural Regional Corridors are recognized in the *King County Comprehensive Plan* as segments
187 of certain arterials that pass through rural lands to primarily connect urban areas. This type of
188 roadway plays a key mobility role in the regional transportation system. While county policy
189 generally prohibits adding capacity on arterial roads in the rural area, a limited exception is
190 made for Rural Regional Corridors. These corridors may receive capacity improvements if the
191 increased capacity is designed to serve mobility and safety needs of the urban population, while
192 discouraging inappropriate development in the surrounding Rural Area and Natural Resource
193 Lands.

194 Rural Regional Corridors must be classified as Principal Arterials and carry high traffic volumes,
195 defined as a minimum of 15,000 average daily trips. They also have at least half of their p.m.
196 peak (evening commute) trips traveling to cities or other counties. They connect one urban area
197 to another, or to a highway of statewide significance that provides such connection, by
198 traversing the rural area.

199 Based on the criteria set by the comprehensive plan, the following King County unincorporated
200 area roads currently qualify as Rural Regional Corridors (Table 1).

201 Table 1. Rural Regional Corridors of Unincorporated King County

	NE Woodinville Duvall Road	NE Novelty Hill Road	Issaquah Hobart Road SE	Avondale Road NE
Limits	Woodinville city limits to Duvall city limits	Redmond city limits to West Snoqualmie Valley Road	Issaquah city limits to SR-18	NE 116 th to Woodinville-Duvall Road
King County Arterial Classification	Principal Arterial	Principal Arterial	Principal Arterial	Principal Arterial
2021 Average Daily Traffic	18,000	24,000	19,000	22,000

202 **1.6 How is the TNR Used?**

203 Roads makes use of the TNR in a variety of ways, including to support interagency and intra-
204 agency coordination, to inform annexation discussions, to assess proposed development
205 actions, to review proposed road vacations, and to inform the Roads grant program.

206 **Interagency Coordination:** The TNR leverages improved coordination between the Puget
207 Sound Regional Council (PSRC), King County, and other jurisdictions, including the Washington
208 State Department of Transportation (WSDOT), cities, and counties. The PSRC transportation
209 model incorporates the capacity projects anticipated by local agencies. By clearly showing the
210 scope, location, and cost of unincorporated King County road system needs, the TNR provides
211 PSRC and other jurisdictions with information that supports regional collaboration, modeling,
212 and cooperative solutions.

213 **King County Intra-Agency Collaboration:** The TNR supports collaboration among King
214 County agencies. The TNR project list is consulted to understand the relationship between road
215 system needs and other county priorities and to help identify projects with multiple benefits.

216 **Annexations:** As cities consider annexation of portions of unincorporated King County, the
217 TNR provides useful summary information regarding transportation needs associated with those
218 areas.

219 **Development Review:** The TNR project list is one of the tools used during reviews of proposed
220 developments to better understand how the proposals relate to broader transportation needs of
221 the unincorporated King County road system.

222 **Road Vacation:** Property owners can petition King County to have portions of the county’s
223 unused road rights-of-way sold to them if the property is not needed for current or future road
224 purposes. The TNR is used to identify future projects on the road system and is one tool in the
225 road vacation process.

226 **Grants:** As grant opportunities emerge, the TNR is consulted to identify transportation project
227 needs that are consistent with the granting authority’s requirements.

228 **1.7 2024 Transportation Needs Report Changes**

229 The adopted 2020 TNR served as a starting point for this update. The 2020 needs list was
230 updated to reflect recently completed capital projects as well as current technical information
231 regarding traffic safety, asset condition, regulatory requirements, community needs, and local or
232 regional considerations. The 2024 TNR list reflects the following changes:

- 233 • 129 new needs were added;
- 234 • High-priority needs to meet Americans with Disabilities Act standards were added;
- 235 • 33 needs identified within the adopted 2020 TNR were addressed through completed
236 capital projects and were removed;
- 237 • 27 needs identified within the 2020 TNR were removed due to updated technical
238 information and completed studies.

239
240 Table 2 provides a summary of these changes by TNR category. Exhibit A contains a complete
241 list of proposed transportation needs to be included within the 2024 TNR. Exhibit B contains
242 TNR maps.

243 Table 2. 2024 Transportation Needs Report (TNR) Summary of Changes

Transportation Needs Report Category	2020 TNR				2024 TNR		
	Proj- ects	Completed since 2020	Deleted for 2024	Added for 2024	Proj- ects	Estimated cost	% of TNR cost
Bridge: Vehicular and pedestrian bridge replacement projects improve safety and asset conditions of the county’s bridges.	44	4	9	11	42	\$473,000,000	19%
Capacity-Major: Capacity projects increase the size of the road to improve its ability to safely accommodate higher traffic volumes.	17	0	2	0	15	\$404,360,000	17%
Reconstruction: Road reconstruction projects improve safety and typically involve full removal and replacement of the surface layer, road base, and related road infrastructure (drainage, guardrails, etc.).	36	0	0	0	36	\$337,730,000	17%
Active Transportation: Safety improvements to benefit people walking, biking, or using other active transportation. Sidewalk construction or shoulder widening/paving are common active transportation projects.	73	4	1	14	82	\$350,280,000	14%
Intersection and Traffic Safety Operations: Projects typically incorporate one or more traffic safety measures, such as sightline improvements, re-channelization (“striping”), signals, and roundabouts.	43	0	1	23	65	\$270,740,000	11%
Vulnerable Road Segments: Roads frequently impacted by flooding, tides, wave action, storm surges, or slides are often protected through infrastructure, such as seawalls, armored slopes, and retaining walls.	47	3	0	4	48	\$191,320,000	8%
Accessibility Improvements: Projects that improve existing pedestrian facilities to current Americans with Disabilities Act standards.	-	-	-	-	*	\$118,157,000	5%
Drainage: Projects that preserve road integrity and improve safety by moving water away from the road. Projects typically improve infrastructure such as culverts, ditches, and catch basins.	99	8	0	44	135	\$253,060,000	10%
Guardrail: Projects to improve safety by reducing the severity of run-off-the-road collisions.	44	14	14	33	49	\$11,294,000	0%
Intelligent Transportation Systems: Projects that advance safety and mobility by integrating communications technologies, such as cameras, vehicle detection, traffic signal equipment, and timing upgrades into transportation infrastructure.	16	0	0	0	16	\$10,880,000	0%
Total	419	33	27	129	488	\$2,420,821,000	100%

244 * Due to the large number of accessibility needs and relatively low project costs for individual accessibility improvements, the TNR reports only the
245 total estimated cost to address high-priority needs identified in the *2021 King County Road Services Division Americans with Disabilities Act*
246 *Transition Plan*.

247 Chapter 2. Unincorporated King County Road and Bridge Assets

248 Roads organizes its road and bridge assets into five product families: roadway, bridges/structures,
249 drainage, traffic control/safety, and roadside. This chapter describes each product family and
250 briefly summarizes its assets, the processes used to identify and prioritize projects, and the
251 associated maintenance and operations programs.²

252 2.1 Roadway

253 The roadway enables the 24/7 movement of people
254 and goods, serving residents, commerce, emergency
255 services, and other users. Cars, trucks, buses, and
256 bicycles all use the roadway for their travel needs.

257 This category of assets includes the drivable surface
258 and the supporting road base (the layers of gravel,
259 dirt, and other materials of the road that provide the
260 structural integrity of the road). Road pavement
261 protects against deterioration of the road base. If the
262 road base becomes deteriorated, no amount of
263 repaving will keep the surface smooth or provide the
264 expected pavement lifespan.

265 Pavement deteriorates naturally over time. As it
266 ages, the pavement and underlying road base
267 become increasingly susceptible to the impacts of stormwater, weather and temperature changes,
268 and growing traffic volumes. Roads monitors the condition of unincorporated King County roads by
269 assessing and tracking pavement condition and other testing over time. These methods are
270 discussed in detail below.

271 2.1.a Pavement Inspection and Testing

272 Inspection

273 Roads conducts regular field assessments of all
274 roadways to visually determine the condition of the
275 pavement using the County Road Administration
276 Board visual data collection system (VisRate). Arterial
277 roads are inspected every two years; local roads are
278 inspected every three years.

279 These assessments use the Pavement Condition
280 Index rating scale, which ranges from 0 to 100, with 0 representing the worst and 100 representing
281 the best possible condition. Roads categorizes pavement condition as Very Poor (<25), Poor (25-
282 49), Fair (50-70), and Good to Excellent (71-100). As the ratings are based on a visual assessment
283 of the road surface, they may not accurately indicate the condition of the underlying base and
284 subgrade of the pavement.

285 Pavement Condition Index scores inform the selection of pavement preservation treatment options,
286 including crack sealing, overlay, and pavement rehabilitation.

Roadway Facts

There are **nearly 1,500 miles of unincorporated King County roads** (more than the distance from Canada to Mexico).

About 1/3 of the road system consists of arterials.

Over 1 million trips per day occur on unincorporated King County roads.

The state **County Road Administration Board** requires the County to rate and report on pavement condition for the County to receive state gas tax revenues.

² This chapter fulfills Washington Administrative Code Chapter 136-14 requirements to describe the process through which roadway needs are prioritized, following standards of good practice established by the Washington State County Road Administration Board.

287 Deflection Testing

288 Between 2003 and 2012, Roads conducted deflection testing on all unincorporated county arterials
289 to evaluate the subsurface condition. The falling weight deflectometer testing used trailer mounted
290 equipment consisting of a load package, load plate, load cell, and geophones (“deflection
291 sensors”). The load package was made of steel plates balanced on either side of the load cell and
292 tower assembly. This package was raised to a set height and dropped onto the load plate. The
293 load cell recorded the amount of load applied to the plate. Testers repeated the process
294 approximately every 200 feet, then analyzed the data using AREA and EVERCALC 5.0 programs
295 to determine the condition of the roadway. The 2003 and 2007 deflection testing efforts collected
296 core samples of road material, which were then analyzed for surface composition, base course
297 thickness, composition and course condition, subgrade soil type, and subgrade strength.

298 The data and calculated parameters identified sections of roadway for potential reconstruction,
299 road base or pavement rehabilitation, or overlay.

300 **2.1.b Pavement Preservation Program**

301 King County employs a risk management approach to its pavement preservation program as funding
302 levels are insufficient to manage the system through a typical asset management program. The
303 pavement preservation program has been focused only on arterial roadways, with the goal of keeping
304 these roads functioning at their current level. No major investment in preserving non-arterial roadways,
305 other than minor maintenance activities, has been made for over ten years.

306 By conducting minor rehabilitation and maintenance
307 activities, King County’s pavement preservation
308 program seeks to delay the decline of pavement
309 surface conditions and extend the service life of the
310 road system. Roads uses a variety of pavement
311 management methods, including:

- 312 • Crack sealing, patching, minor
313 reconstruction, seal coating, paving, and
314 shoulder restoration;
- 315 • Chip sealing and hot mix asphalt;
- 316 • Pilot project testing of emergent pavement materials.

Unincorporated King County’s arterial road system will be subject to considerable deterioration over the next ten years due to recent and projected lack of resources to invest in pavement maintenance or reconstruction. Portions of the system may be subject to speed limitations or partial closure in the future.

317 Additionally, the county’s pavement preservation program employs the following program management
318 strategies:

- 319 • Conducting benefit-cost analyses to inform
320 the identification of appropriate techniques
321 in a given location.
- 322 • Collecting life-cycle costs for each
323 resurfacing type and updating maintenance
324 and rehabilitation costs at the end of each
325 construction season. Cost and performance
326 data is compared to peer agency data.
- 327 • Preparing a yearly accomplishment report
328 for the Governmental Accounting Standards
329 Board (GASB), and both projection and
330 accomplishment reports for the County
331 Road Administration Board.



332 As data accumulates over time, Roads uses it to establish performance measures and targets that
333 support informed programmatic decision making.

334 Prioritization

335 Roadway preservation prioritization follows the
336 strategic goals in the *Strategic Plan for Road*
337 *Services*. This approach directs funding to the
338 highest priority locations; however, the lack of
339 available funding leaves portions of the county
340 roadway network inadequately preserved.

341 Selection

342 Selection of roadway preservation candidates
343 starts with the collection and entry of pavement
344 inspection data into the division’s Pavement
345 Management System Database, which provides
346 the specific roadway condition data needed to
347 assist engineers in establishing smaller year-,
348 tier-, or pavement condition score-specific
349 candidate lists. Road engineers and
350 maintenance staff jointly review these lists to
351 coordinate pavement preservation efforts
352 throughout the county. See inset for details.

Pavement Prioritization Process	
1.	Process visual condition rating data.
2.	Update the Pavement Management System as new data is received.
3.	Create candidate list to facilitate collaboration between maintenance and engineering staff, Capital Improvement Program planning, and potential grant funding opportunities.
4.	Evaluate potential preservation options based on projected funding.
5.	Publish final list for High-Risk Roadway Candidates to be implemented by maintenance staff.
6.	Develop the preservation project candidate list to be implemented by a contractor in the upcoming year.

353 **2.1.c Roadway Reconstruction**

354 Roadway reconstruction involves full removal
355 and replacement of the surface layer, road base, and ancillary structures (culverts, guardrail, etc.).
356 No reconstruction projects have been performed in the last 10 years, other than a few grant-funded
357 projects.

358 In 2007, deflection testing identified 82 road segments requiring further assessment for potential
359 reconstruction. This assessment led to preliminary scope of work and cost estimates for the
360 reconstruction of 30 road segments, which were subsequently added to the TNR. This list has
361 been updated to reflect additional deflectometer testing in 2012, routine pavement condition testing
362 and other studies, completed rehabilitation projects, and completed annexations.

363 Roads has used pavement overlay, rehabilitation, or crack sealing and patching to temporarily
364 preserve many of the roads identified in the 2024 TNR Reconstruction category. Depending on the
365 original road design, these preservation measures can extend the life of the road for three to ten
366 years.

367 **2.1.d Roadway Maintenance and Operations**

368 Roads programs facilitate routine inspections, maintenance, repair, and operation of the roadway.
369 These programs fall into the following categories:

370 Small Surface Repairs: Pothole filling; square cut, skin surface, and grinder patching; acute
371 pavement surface repair; crack sealing and pouring; curb and gutter replacement and repair; and
372 gravel roadway grading and patching.

373 General Roadway Maintenance: Routine—but important—safety and environmental compliance
374 work, such as sweeping and dust control, to remove leaves, rocks, fallen trees, and debris from the
375 roadway for safety. Prompt cleaning also prevents sediments from polluting creeks and streams,
376 endangering salmon and water quality.

377 Storm - Quick Response: Emergency or urgent
378 maintenance and operations activities to address the
379 effects of storms, floods, and slides, such as snow and
380 ice control and washout repair.



381 **2.2 Roadside**

382 The roadside product family includes road system
383 features and components within the road right-of-way,
384 but outside the travel lanes of the road. Drainage
385 facilities may be located in the roadside area but are
386 treated as a separate category. Roadside infrastructure
387 includes:

- 388 • Active transportation assets including sidewalks, pathways, and curb ramps to enhance
389 pedestrian safety and mobility;
- 390 • Road shoulders to provide space for slow-moving and disabled vehicles, active
391 transportation, construction and maintenance activities, and police and other emergency
392 activities;
- 393 • Guardrail to prevent or mitigate the impacts of run-off-the-road collisions;
- 394 • Landscaping and vegetation, such as landscaped walls, slopes, and planters.

395 **2.2.a Active Transportation Safety and Mobility**

396 Active transportation is an essential component of King County’s multimodal transportation system.
397 Pedestrians, bicyclists, and in some parts of the county, equestrians, are active transportation
398 users of the unincorporated King County network.

399 In unincorporated King County, Roads maintains active transportation facilities such as bicycle
400 lanes, sidewalks, and shoulders. The division provides crosswalks, signals, pavement markings,
401 and signage to help facilitate safer active travel. The King County Road Design and Construction
402 Standards include accommodation for active transportation uses, including specific criteria for
403 marked bicycle lanes, sidewalks, or road shoulders on unincorporated roads.

404 Active Transportation Evaluation

405 Active transportation needs are assessed using criteria that include connectivity to travel
406 destinations, proximity to public transit, road traffic volumes and speeds, existing shoulder widths
407 and roadside conditions, customer requests and feedback from public engagement, proximity of a
408 school or other community gathering place, and overall network connectivity. Roads also considers
409 additional contextual information such as King County arterial classification, surrounding land uses,
410 community plan recommendations, the Puget Sound Regional Bike Network Plan, and best
411 available traffic safety data.

412 A small portion of the King County Regional Trails network coincides with the unincorporated King
413 County road network. In some locations, a regional trail crosses a King County road; in other
414 locations, a short regional trail segment follows an existing unincorporated King County road.
415 Roads collaborated with the Parks Division of the King County Department of Natural Resources to
416 update a list of King County regional trail needs that coincide with the unincorporated King County

417 road network (Table 3). While these regional trail projects are not included within the
418 Transportation Needs Report project lists, they are included within this chapter to support future
419 planning, collaboration, and implementation by the King County Parks Division.

420 Table 3. King County Parks Division Proposed Future Projects with Potential King County Road
421 Connections

Regional Trail Project	Location	Description	From	To	Note
East Plateau Trail	Unincorporated King County near Klahanie; SE Duthie Hill Rd near SE Issaquah-Fall City Rd	SE Duthie Hill Rd, signalized crossing and other ROW improvements			Likely signalized crossing of SE Duthie Hill Rd near SE Issaquah-Fall City Rd to access Duthie Hill Park and continue trail to the northeast
East Plateau Trail	Unincorporated King County west of Trossachs Blvd SE	SE Duthie Hill Rd Trail crossing and sidepath and/or other trail/road ROW project	Duthie Hill Park west of Trossachs Blvd SE	Trossachs Blvd SE	Planning envisions the trail exiting the north entrance of Duthie Hill Park and running as a sidepath in SE Duthie Hill Rd right-of-way before crossing at Trossachs Blvd SE intersection and continuing north along Trossachs Blvd SE
Green to Cedar Rivers Trail (South Segment)	Maple Valley/Black Diamond Green River Valley at 218th Ave SE	Trail sidepath or other trail/road ROW project	218th Ave SE at Green to Cedar Rivers Trail	SE Green Valley Rd	Current feasibility study uses 218th Ave SE as possible route for trail in south Black Diamond to SE Green Valley Rd
Green to Cedar Rivers Trail (South Segment)	Upper Green Valley at 218th Ave SE	SE Green Valley Rd crossing			Current feasibility study would have the trail cross SE Green Valley Rd at 218th Ave SE
Green to Cedar Rivers Trail (South Segment)	Upper Green Valley at SE Green Valley Rd	SE Green Valley Rd sidepath	218th Ave SE	SE Flaming Geyser Rd	Current feasibility study envisions sidepath along SE Green Valley Rd from 218th Ave SE to SE Flaming Geyser Rd

Regional Trail Project	Location	Description	From	To	Note
Green River Trail, North Extension (Green to Duwamish)	Tukwila and Unincorporated King County at W Marginal PI S	W Marginal PI S sidepath or other trail/road right-of-way project	S 102nd St	S Director St	Design underway for Green River Trail along and incorporating portions of W Marginal PI S between Cecil Moses Park in Tukwila to Seattle South Park community
Green River Trail 2.2	S 259th St, Kent at Green River Trail	Trail sidepath or other trail/road right-of-way project	S 259th St at Union Pacific Railway bridge	S 259th St at 80th Ave S sidepath	Design underway by City of Kent. Project assumes relocation and redesign of S 259th St with sidepath between the Union Pacific RR bridge and 80th Ave S sidepath
Green River Trail, Phase 3, North	94th Place S, Unincorporated King County	Trail sidepath or other trail/road right-of-way project	North terminus of 94th PI S at Green River Rd	South terminus of 94th PI S at Green River Rd S	Feasibility report recommends possible trail sidepath or other trail project within road right-of-way along west side of 94th PI S
Green River Trail, Phase 3, South	Green River Rd S, Unincorporated King County	Trail crossing and sidepath or other trail/road right-of-way project	Green River Rd S at south terminus of 94th Place S	Green River Rd at S 277th St	Feasibility report proposes possible trail crossing of Green River Rd S at south terminus of 94th PI S and sidepath along west side of Green River Rd S to pedestrian bridge near S 277th Street
Green River Trail, Phase 5	Green River Valley	SE Green Valley Rd sidepath or other trail/road right-of-way project	SR-18	SE Flaming Geyser Rd	Upper Green River Trail concept would develop a sidepath along SE Green Valley Rd and Green River
Landsburg-Kanaskat Trail	Landsburg Rd SE at Landsburg	Landsburg Rd SE signalized crossing			Likely signalized crossing of Landsburg Rd SE from existing Cedar River Trail

Regional Trail Project	Location	Description	From	To	Note
Preston Snoqualmie Trail	Preston Fall City Rd SE/Raging River	Trail crossing and alignment evaluation			Evaluate location and design alternatives at Fall City Rd SE
Redmond Ridge Trail	North side of NE Novelty Hill Rd	Trail widening			Links two regional trails
Snoqualmie Valley Trail, Snoqualmie Mill Gap	Unincorporated King County, Snoqualmie River Bridge at SE Reinig Rd	SE Reinig Rd Trail Bridge crossing			New trail bridge structure needed to cross SE Reinig Rd to facilitate trail development through Mill Gap from the Snoqualmie River Bridge. Interim at-grade crossing may be used.
Soos Creek Trail Extension	Soos Creek Trail at SE 192nd St	Crossing improvement and trail extension			
Tolt Pipeline Trail and Bridge – Snoqualmie River	W Snoqualmie Valley Rd NE north of NE 124th St	W Snoqualmie Valley Rd NE signalized crossing and/or other trail/road right-of-way project			Likely crossing of W Snoqualmie Valley Rd to continue trail to the Snoqualmie River

422

423 **2.2.b Guardrail**

424 King County’s guardrail programs install, refurbish, and upgrade existing guardrail to meet current
425 standards. King County uses a quantitative methodology for identifying and ranking potential safety
426 mitigation sites into three categories: new roadside barriers, retrofits to existing barriers, and
427 retrofits to bridge railings.

428 Risk potential and severity are the primary considerations when considering guardrail and bridge
429 railing prioritization. Risk potential is a function of the probability of vehicles running off the road.
430 Severity is the quantitative potential for personal injury if a run-off-the-road collision were to occur.
431 Factors included in the analysis of guardrail or bridge railing need and priority include collision
432 data, average daily traffic, road functional classification, corridor geometry, bridge geometry, speed
433 limit, embankment slope, and roadside obstacles.

434 New Roadside Barriers

435 Roads maintains a priority array of new guardrail locations using an algorithm to assess the factors
436 described above. This method was fully tested following development, using statistically valid
437 sample sizes, field review by county engineering staff, and a comparison between staff ranking
438 and algorithm results. The testing indicated a 90 percent or better correlation between staff and
439 algorithm ranking. Planned installations of new guardrail are identified in the TNR Guardrail
440 category.

441 Roadside Barrier Retrofits

442 Federal standards for guardrail design and construction have evolved over time, and older
443 infrastructure is replaced to comply with the latest and best practices. The roadside barrier retrofit
444 program improves road safety by upgrading existing guardrail and guardrail end terminals, often by
445 raising them to meet current height standards.

446 All sites with existing roadside barriers that are not compliant with current standards are included
447 as candidates for retrofits. Risk exposure, degree of deficiency, and tier service level are the
448 primary considerations in the prioritization process for barrier retrofits.

449 Bridge Railing Retrofits

450 Federal standards for bridge railings have changed over time. Roads reviews all existing bridge
451 railings for compliance with current standards. Roads maintains a priority array of bridge railing
452 upgrade locations using an algorithm that considers structural factors related to the existing
453 railing’s geometry and strength, the complexity and feasibility of upgrading the railing, the
454 sufficiency of the bridge-to-roadway transition, the risk potential based on average daily traffic,
455 potential collision severity based on posted speed limits, and planned bridge replacement projects.
456 Railing upgrades can be challenging to implement due to the age of the county’s bridges, structural
457 design and weight limitations, and other factors. The highest priority bridge railing replacements
458 are identified in the TNR Guardrail category.

459 **2.2.c Americans with Disabilities Act (ADA) Program**

460 The Federal Highway Administration issues regulations to implement the federal Americans with
461 Disabilities Act (ADA). These regulations require that pedestrian facilities such as curb ramps,
462 sidewalks, and signal pushbuttons be upgraded to be accessible to people with disabilities
463 whenever a roadway is altered. Roadway alterations include reconstruction, rehabilitation, or
464 simple asphalt surface overlay.

465 Accessibility improvements are guided by the *2021*
466 *King County Road Services Division Americans with*
467 *Disabilities Act Transition Plan*. The plan identifies the
468 highest priority unincorporated county road
469 pedestrian facilities to improve based on each
470 facility’s geometric design, condition, and proximity to
471 important destinations such as bus stops, schools,
472 and businesses. The plan estimates a total cost of
473 \$118,160,000 to address the highest priority needs,
474 and an additional \$432,790,000 to address low and
475 medium priority needs. ADA upgrades are completed
476 through a dedicated ADA program, as funding allows,
477 and as incidental elements of other capital projects.
478 The total cost for high-priority needs is included in the
479 TNR.



480 **2.2.d Roadside Maintenance and Operations**

481 Maintenance and operation activities in and along roadsides are done to enhance pedestrian
482 safety and mobility on pathways and sidewalks and to mitigate the impacts of run-off-the-road
483 collisions. Properly maintained roadsides have good sight distance and are free of hazards,
484 obstructions, and vegetation.

485 Roads employs a continuous cycle of inspections, maintenance, repairs, replacement, and
486 improvements to its roadside features. These programs fall into the following categories:

- 487 • Vegetation Management includes mowing
488 and maintaining trees, brush, and natural
489 areas on the roadside to provide clear
490 sightlines for drivers, improve drainage, keep
491 signs and traffic signals from being obscured,
492 provide pedestrians space to walk outside of
493 the roadway, and prevent roadways from
494 being blocked by dangerous or downed trees.
495 Related activities include noxious weed
496 control and shoulder or roadside spraying.
- 497 • Shoulder Cleaning and Restoration includes
498 maintenance of paved and gravel shoulders, such as gravel patching, grading and
499 restoration, and landscape maintenance. Maintaining shoulders prevents standing water
500 and reduces deterioration of the roadway.
- 501 • Storm Response includes bank stabilization, material removal and disposal, repairs, and
502 other responses to storms and landslides. Roads conducts a preventive maintenance
503 program that identifies areas with the greatest washout risk and implements measures to
504 prevent future damage. Most critical washout repairs are made immediately, while others
505 take more time to complete.
- 506 • Minor Maintenance of roadside features includes repair or replacement of guardrails,
507 retaining walls, fences, sidewalks, and walkways, and removal of hazardous material,
508 debris, and other material that may pose a risk to the traveling public.

Slope and shoulder mowing serves a critical safety function by removing vegetation from lines of sight, from blocking visibility of traffic control devices, and from obstructing pedestrian walkways. Limited funding has reduced the frequency of slope and shoulder mowing activities.

509 **2.3 Traffic Control**

510 The traffic control product family includes traffic-related safety devices and other measures used to
511 regulate, warn, or guide traffic. King County use and prioritization of these devices is based on
512 King County Code Title 14 *Roads and Bridges* and the *Manual on Uniform Traffic Control Devices*
513 (MUTCD). The MUTCD is published by the Federal Highway Administration to set national
514 standards for road managers when installing and maintaining traffic control devices on public
515 streets, highways, bikeways, and private roads open to public travel. National standards set by the
516 MUTCD apply to all traffic control devices, including:

- 517 • Traffic signs to warn the public of sharp curves and intersections, provide speed limits,
518 guide traffic, control intersections, and prohibit parking.
- 519 • Traffic signals or controls, including
520 warning flashers, exclusive and
521 protected left turn lanes, traffic signals,
522 signal timing, signal head and phasing
523 revision (ex., flashing yellow arrow
524 phases), and roundabouts.
- 525 • Roadway delineation or pavement
526 markings, including centerline and
527 edge line markings, raised pavement
528 markers, markings for crosswalks,
529 rumble strips, or post delineators.
- 530 • Street lighting



- 531 • Channelization, including left and right turn lanes, acceleration or deceleration lanes, and
532 access restrictions (i.e., curbs and medians).
- 533 • Pavement treatments such as high friction surface treatments.
- 534 • Alignment alterations that modify the horizontal and vertical alignment and curve geometry.

535 Traffic control devices optimize traffic performance, promote uniformity nationwide, and help
536 improve safety by reducing the number and severity of traffic crashes. Additionally, by enabling the
537 orderly movement of all road users, traffic control devices and intelligent transportation systems
538 can promote safety, increase efficiency, and enhance transit speed and reliability. The following
539 sections describe the processes developed for identifying projects and managing programs to
540 address collisions, congestion, MUTCD requirements, and design constraints.

541 **2.3.a Traffic Signals and Other Intersection Controls**

542 Prior to selecting signalization as a preferred intersection control solution, intersections first
543 undergo an extensive evaluation of alternatives, as listed in the MUTCD, Section 4B.04. The list of
544 alternative evaluations includes, but is not limited to, the construction of additional lanes, revising
545 the intersection geometrics to channelize movements and realign the intersection, installing street
546 lighting, improving sight distance, installing roundabouts, installing measures to reduce approach
547 speeds, changing lane use assignments, restricting movements, or adding stop controls or
548 intersection flashers. Particular attention is given to the predominant type of collision occurring at
549 the intersection. Intersection evaluations also include analyses of existing and future traffic
550 patterns to determine the effectiveness of each alternative, and development of cost estimates for
551 alternative comparisons. Safety outcomes and cost effectiveness are primary determinants for
552 selecting intersection improvement solutions.

553 Traffic Signal Priority Array

554 King County’s process to identify and prioritize intersection control needs conforms to the *Strategic*
555 *Plan for Road Services* goals, federal and state law, and the MUTCD. Prioritization and selection
556 of intersections for signalization or other intersection controls starts with data collection. Roads
557 collect vehicle and pedestrian volumes, prevailing speeds, and collision history at each
558 intersection for the most recent three-year period.

559 Each intersection is then evaluated using MUTCD signal warrants, which define the minimum
560 conditions under which installing a traffic signal might be justified; traffic signals are typically not
561 installed unless one or more of the nine signal warrants are met. Three of the warrants are based
562 on traffic volumes at several periods during the day: the peak hour, the fourth highest hour, and the
563 eighth highest hour. One warrant examines the traffic collision history, focusing on collisions
564 correctable by signalization (left-turn and right-angle types). Two warrants examine whether
565 pedestrian volumes warrant signalization. Two warrants examine whether signalization would
566 improve traffic flow in a coordinated signal system or roadway network. The final warrant examines
567 the proximity to a railway (“grade”) crossing.

568 Roads uses the five primary warrants described
569 in the inset to evaluate signalization need and
570 relative priority across locations. While the
571 remaining warrants are also considered in the
572 evaluation process, they are less applicable to
573 the largely suburban and rural nature of
574 unincorporated King County.

575 In addition to the MUTCD warrants, King County
576 adds a factor for proximity to a school site. While
577 this factor does not replace the pedestrian-
578 related warrants, it addresses the potential for
579 pedestrian activity outside of average-day
580 activities. For locations near schools, shopping,
581 and other pedestrian attractors, the volume of
582 pedestrian activity is examined as well as
583 pedestrian warrants.

584 For each intersection, Roads assigns values representing the degree to which each of the primary
585 warrants is met, then sums the total for the intersection. Intersections are categorized and sorted
586 first by the number of collisions within the last three years that could be corrected through
587 signalization, then by warrant rating values. The resulting list of rank-ordered intersections forms
588 the Traffic Signal Priority Array, which serves as a starting point for determining locations to
589 construct a signal, roundabout, or other form of intersection control. Ultimately, the selection and
590 use of traffic control signals are based on the warrant analysis, careful analysis of traffic
591 operations, pedestrian and bicyclist needs, engineering judgment, and other factors. Table 4
592 summarizes intersection criteria and high, medium, and low priority categories.

593 Table 4. King County Intersection Categories

Category	Intersections that meet:
High	<ul style="list-style-type: none"> Warrant 1 (Eight-Hour Vehicular Volume) OR Both Warrants 2 (Four-Hour Vehicular Volume) and 7 (Crash Experience)
Medium	<ul style="list-style-type: none"> Warrant 2 (Four-Hour Vehicular Volume) OR Warrant 3 (Peak Hour) OR Warrant 4 (Pedestrian Volume) OR Warrant 5 (School Crossing)
Low	<ul style="list-style-type: none"> Warrant 6 (Coordinated Signal System) OR Warrant 8 (Roadway Network) OR Warrant 9 (Intersection Near a Grade Crossing)

594

595 Traffic Signal Programmatic Needs: Phasing, Operations, and Lighting

596 King County regularly reviews existing signalized intersections for left turn phasing revisions,
597 safety needs, and congestion concerns.

Five Primary Warrants Used for Unincorporated King County

Warrant 1 – Eight-Hour Vehicular Volume

- Condition A: Minimum Vehicular Volume
- Condition B: Interruption of Continuous Traffic

Warrant 2 – Four-Hour Vehicular Volume

Warrant 4 – Pedestrian Volume

Warrant 6 – Coordinated Signal System

Warrant 7 – Crash Experience

598 *Phasing* – Monitoring and evaluating the left turn phasing at existing traffic signal locations ensures
599 that the appropriate level of protection and capacity is provided. Engineers determine whether the
600 left turn phase should be permissive (left-turning drivers see a solid green light or flashing yellow
601 arrow and yield to through traffic), protected-permissive (left-turning drivers see a green arrow
602 while through traffic is stopped, then a solid green light when they must yield), or protected-only
603 (left-turning drivers may only turn when they see a green arrow and do not have to yield). Roads
604 updates phasing as needed, then continues to monitor altered intersections for safety.

605 *Signal Operations* – Existing traffic signal operations are field-reviewed on a three-year cycle to
606 ensure that changes in conditions such as adjacent new development, shifts in vehicle volumes,
607 new or improved pathways or other pedestrian attractors, vegetation growth, queue lengths
608 relative to length of existing turn pockets, vehicle delays, and other elements of the traffic signal
609 operation are acceptable based on engineering judgment.

610 *Street Lighting* – Street lighting helps motorists and other road users safely maneuver. King
611 County Road Design and Construction Standards require street lighting on all roadways with three
612 or more lanes of travel or where local roads intersect arterials.

613 **2.3.b Intelligent Transportation Systems**

614 Intelligent Transportation Systems (ITS) equipment promotes safety and efficiency, and can
615 enhance transit speed and reliability, by enabling the orderly movement of all road users on streets
616 and highways. This equipment also provides real-time traffic information to King County traffic
617 operators, the media, and the traveling public. Installation of new county ITS infrastructure has
618 been primarily funded through grant programs.

619 Intelligent Transportation Systems Corridor Project Prioritization Criteria

620 Criteria for prioritizing projects were established through the *2005 ITS Strategic Plan*, and were
621 based on examples from the 2004 Transportation Needs Report, criteria specific to ITS projects,
622 and the county's needs. Each criterion was rated on a scale of 1 to 5 points. The relative priority
623 (low, medium, or high) of each project was established by totaling its points. Criteria included:

- 624 • Average Daily Traffic: A traffic volume scale was used to assign priority for ITS projects
625 along roads with the highest average daily traffic.
- 626 • Volume to Capacity Ratios: Roads whose volumes were approaching or exceeding
627 capacity were scored higher.
- 628 • Collision Rates: Corridors with high collision rates were scored higher.
- 629 • Transit Ridership: Corridors with greater volumes of transit ridership were scored higher.
- 630 • Potential for Annexation: Corridors with little probability of annexation were scored higher.
- 631 • Availability of Communications: Corridors with access to communications infrastructure
632 were scored higher.
- 633 • Links to Other Existing or Planned Projects: Corridor projects that could coordinate or
634 leverage other county ITS corridor projects were scored higher.
- 635 • Hazard Areas: Corridors with two or more locations with hazards (collision history, flooding,
636 icing, landslides, etc.) were scored higher than other corridors.

637 All but two of the high-priority ITS corridor projects have been completed or annexed by other
638 jurisdictions. The remaining projects are low-to-medium priority. Uncompleted projects from the
639 *2005 ITS Strategic Plan* are included on the 2024 TNR project list.

640 Programmatic Intelligent Transportation System Projects

641 Programmatic ITS projects provide the information processing and dissemination capability to add
642 value to the data collected by field devices. They include projects that can be implemented
643 countywide and are not focused on one corridor. Regional ITS projects include Emergency
644 Management, Traffic Management, Data Management, Weather and Hazard Detection,
645 Communications, Maintenance and Construction Activity Coordination, and Traveler Information.
646 The *2005 ITS Strategic Plan* prioritizes programmatic ITS projects using the following criteria:

- 647 • Improvement to traffic flow
- 648 • Improvement to incident response time
- 649 • Improvement to regional information sharing for traveling public
- 650 • Improvement to the efficiency of county service delivery
- 651 • Potential for phased implementation
- 652 • Relative ease of implementation
- 653 • Eligibility to leverage non-county funding sources
- 654 • Potential to leverage existing infrastructure and other projects

655 **2.3.c High Collision Location Analysis**

656 Critical safety work remains the top priority for Roads. King County completes a systemwide study
657 of collision locations every two years. The High Collision Location analysis is consistent with the
658 goals and criteria established by the Washington Traffic Safety Commission Target Zero program.
659 The methodology is updated as needed to reflect current best practices.

660 The initial list of study locations is compiled by analyzing the spatial density of ten years of collision
661 data to produce heat maps of intersections and road segments with a concentration of crashes.
662 Locations with the highest concentrations receive additional study, including analyses of crash
663 frequency and trends over time, crash rate (the number of crashes compared to the amount of
664 traffic and/or length of road), and the crash history relative to other locations. Locations that meet
665 thresholds from these analyses receive in-depth analysis of collision history, patterns, and trends;
666 traffic volumes; and site conditions and roadway characteristics.

667 These location-specific studies are used to develop countermeasures (improvements intended to
668 reduce the occurrence of collisions). There are a broad range of countermeasures, ranging from
669 changing roadway geometrics to altering traffic signal timing. Countermeasures are selected based
670 on predominant collision patterns, field observations, King County practices and context, and the
671 expertise of the review team. Countermeasures may not be developed at locations where recent
672 improvements have been completed, where no clear collision pattern or deficiencies are noted, or
673 where the location is no longer under King County jurisdiction.

674 Once countermeasures are developed, Roads prepares a benefit-cost analysis for each location.
675 Benefit-cost analysis is used to determine whether an improvement is cost-effective (the benefits
676 outweigh the costs) and to compare the relative cost-effectiveness of improvements across all
677 locations.

678 To determine a potential improvement's benefits, the expected reduction in collisions is estimated
679 using nationally published "crash reduction factors" for the selected countermeasures, with
680 modifications based on the past effectiveness of the countermeasure in King County. The crash
681 reduction factor is used in combination with typical collision costs to determine the expected
682 societal benefit (in dollars) of completing the improvement. Benefits are then normalized by
683 converting to a present value based on the expected service life of the improvement. Finally, the

684 normalized benefit is divided by a planning-level cost estimate to obtain the benefit-cost ratio for
685 the project.

686 The culmination of this analysis identifies a list of safety improvements, which are further prioritized
687 according to their respective benefit-cost ratio. Many of the proposed projects are smaller,
688 targeted, operational improvements. The analysis informs prioritization across several TNR
689 categories, including the Intersection and Traffic Safety Operations category.

690 **2.3.d Traffic Control Devices: Maintenance and Operations**

691 Common maintenance tasks to ensure the proper functioning of traffic control devices include:

- 692 • Maintenance of street lighting, signals,
693 flashers, and ITS equipment, and all
694 associated components such as
695 controllers, lights, mast arms, timers,
696 cameras, cabinets, and loop detectors.
- 697 • Sign maintenance including replacement
698 and installation, fabrication, inspection,
699 cleaning, and responding to community
700 member concerns.
- 701 • Pavement marking maintenance including
702 replacement of pavement markings,
703 including paint striping, thermoplastic, and
704 raised pavement markings (sometimes
705 referred to as “buttons”).

Regular maintenance of traffic control devices ensures that:

- Safety standards are met
- Damaged signs are replaced
- Traffic signs, stripes, and markings are replaced so that they are visible night and day
- Intersections operate efficiently
- Traffic control systems operate correctly
- Traffic information is accurate, clear, and appropriate
- Traffic restrictions are clearly marked

706 **2.4 Drainage Systems**

707 Standing water can be a safety hazard to road
708 users and accelerates the deterioration of the roadway surface and substructure. The drainage
709 asset product family includes infrastructure that moves stormwater away from the roadway and
710 reduces flood risk to the built environment (man-made structures) by collecting and redirecting
711 stormwater to natural bodies of water and designated collection points. Drainage infrastructure
712 reduces water pollution by collecting stormwater and filtering out pollutants and sediment via
713 settlement, infiltration, or other processes.

714 Roads is responsible for the drainage infrastructure within, alongside, and under unincorporated
715 road right-of-way, including pipes, ditches, catch basins, manholes, retention/detention ponds, rain
716 gardens, vaults, and bio-swales.

717 **2.4.a Large Drainage Project Identification and Prioritization**

718 The largest and most costly components of King County’s aging
719 system are enclosed pipes 24 inches and greater in diameter.
720 These pipes serve a critical role in conveying regional surface
721 water. Due to their size and function, failure of these pipes would
722 have significant consequences for public safety, property, and
723 aquatic resources. In unincorporated King County, regional pipe
724 systems represent about 2 percent of the drainage system in the
725 road right-of-way.



726 This section discusses how larger-scale drainage projects are identified and prioritized. These
727 large projects are included in the 2024 TNR project list. Smaller projects, constructed by county

728 staff under the Countywide Drainage Preservation Program, are prioritized in the same manner but
729 are not included in the TNR project list.

730 Field Confirmation

731 Drainage problems and concerns are brought to
732 the attention of Roads in variety of ways,
733 including community member inquiries, routine
734 road patrol and field work, and notification from
735 other agencies. Drainage concerns are
736 reviewed to determine the agency responsible
737 for the infrastructure. When Roads is
738 responsible, a project is created in Roadworks,
739 Roads' asset management database.

740 Two evaluation systems are used to prioritize
741 drainage projects: Field Priority Score and
742 Habitat Evaluation. A third system based on
743 water quality benefits is under development.

744 *Field Priority Score:* Scores for field priority
745 reflect the problem's threat to public safety and
746 impact on private property. There are eight
747 criteria used to evaluate each problem (see
748 inset). These criteria help identify system-wide
749 impacts of each drainage problem.

750 Field priority criteria are assigned point values
751 (from 0 to 10) and weights (from 1 to 5) based
752 on their importance to the maintenance of the
753 county road system.

754 *Habitat Evaluation Process:* To address federal, state, and local regulatory requirements (such as
755 the Endangered Species Act, the Washington State Hydraulic Code, and the King County Critical
756 Areas Ordinance), and to improve environmental health, a staff biologist completes a field visit and
757 habitat evaluation for projects that affect aquatic areas, fish habitats, and their buffers. The
758 project's impacts or benefits are identified using the habitat evaluation criteria. The Habitat
759 Evaluation also documents potential regulatory mitigation requirements.

760 The Field Priority Score, Habitat Evaluation, and other available information are entered into the
761 Roadworks database. Roadworks is then used to monitor the status of the projects through design,
762 permitting, and project completion. This software can also be used to evaluate lifecycle costs once
763 fully populated, track problems by area, and help guide coordination with other departments using
764 its geospatial analysis and countywide drainage layer.

Drainage Project Prioritization

Field Priority Criteria

1. Threat to public safety
2. Threat to public property
3. Threat to private property
4. Water quality improvement
5. Maintenance problem resolved
6. Road closure severity (detour length and availability, if needed)
7. Road classification (principal/minor or collector arterial vs. local access)
8. Road failure potential

Habitat Evaluation Criteria

1. Fish stock status (species of concern or listed under Endangered Species Act)
2. Site specific information (fish passage, water quality, wetland improvement or risk of habitat damage)
3. Basin/system concerns

765 Life-Cycle Analysis and Condition Assessment

766 A large portion of King County’s unincorporated
767 drainage system is at or nearing the end of its useful
768 life, and its current condition is largely unknown. To
769 address this lack of knowledge, an effort was
770 developed to identify the location, age, type, size,
771 and condition of regional drainage facilities in
772 unincorporated King County right-of-way. This
773 information was necessary to identify and assess the
774 urgency and cost of drainage facility maintenance
775 and renewal needs. In 2015, Roads coordinated this
776 effort with the King County Water and Land
777 Resources Division for the most at-risk system
778 elements, which are estimated to comprise 40
779 percent of the pipes that are 24” in diameter and
780 larger, or 2 percent of the entire system in the
781 roadway. This program identified 33 regional system
782 projects deemed critical. Work to address these
783 deficient systems is currently underway; these
784 projects are included in the TNR Drainage category.

Drainage infrastructure is doing its job when...

- Safety and environmental standards are met.
- Water on the roadway causes minimal impact to travelers, infrastructure, or private property.
- Surrounding streams, rivers and lakes enjoy good water quality.
- Ponds, ditches, and enclosed drainage systems are free of litter/debris.
- Road-related ponds or ditches are mosquito free.

785 This effort provided information for completing an inventory and condition assessment of the
786 remaining drainage system. The assessment also informed policy discussions regarding the
787 responsibility and funding structure for operation, maintenance, and renewal of regional drainage
788 systems in the unincorporated areas.

789 Fish Passage Prioritization

790 In order to support the county’s Fish Passage
791 Restoration Program, Roads has developed a
792 Culvert Replacement and Fish Passage Program.
793 Projects selected for this program are identified
794 through collaboration with the King County Water
795 and Land Resources Division. The selection
796 process considers the benefits to the safety and
797 condition of the public road system (using the field
798 confirmation process described above), and to fish
799 passage (using Washington Department of Fish
800 and Wildlife guidelines and an analysis of current
801 habitat conditions, upstream and downstream
802 barriers, the amount of potentially restored habitat,
803 and other habitat restoration factors). This selection
804 process may evolve over time. These projects are included in the TNR Drainage category.



805 Emergency projects and project schedules

806 Projects are scheduled in the Countywide Drainage Preservation Program annually. Scheduling
807 annually helps reduce frequent reallocation of resources. However, drainage problems are
808 reported to Roads almost daily. Some of these concerns are so urgent that they must be included
809 in the current year’s work program. Project priorities are reevaluated every time a new project is
810 identified to ensure that effort is expended on the most urgent safety and preservation projects.

811 **2.4.b Drainage Program Programmatic Needs**

812 Roads prioritizes all known major and minor drainage infrastructure needs, from the replacement
813 of small segments of pipe to large cross-culvert replacements. Drainage improvements may be
814 needed to meet regulatory requirements, safety, or preservation needs. Projects that impact
815 streams undergo a significantly different planning process. These projects are required to meet
816 state or federal design standards for fish passage or other aquatic habitat needs relating to vertical
817 drops, water depth, water velocity, and other factors. Projects that do not impact streams typically
818 include stormwater system retrofits and the installation or replacement of catch basins, vaults, or
819 pipes.

820 **2.4.c Drainage Maintenance and Operations**

821 To ensure successful drainage management, Roads employs routine inspections, and regular
822 maintenance, repair, and infrastructure replacement that fall into the following categories:

- 823 • Quick response: Work associated with unanticipated failures of the drainage system.
- 824 • Drainage system cleaning: Routine inspection and maintenance of the drainage system,
825 including cleaning pipes and catch basins, removing sediment, and completing incidental
826 repairs.
- 827 • Ditch maintenance: Reshaping and cleaning roadside ditches to ensure proper drainage.
828 This work is primarily performed through bucket ditching with a front end loader or a
829 backhoe.
- 830 • Other repair: Using best management practices to repair or replace drainage pipes, catch
831 basins, catch basin lids, trash racks and headers, and rip-rap; to mark pipes to ensure
832 infrastructure visibility; to prevent erosion; to install stream bypasses; and to restore
833 streams.
- 834 • Stormwater pond maintenance: Mowing, brush removal, and cleaning of stormwater ponds.

835 **2.5 Bridges and Structures**

836 Bridges and structures are key components of the
837 county road network, providing routes over bodies of
838 water, roads, lowlands, railroad tracks, and other
839 obstacles. Structures enable county roads to exist in
840 diverse landscapes by controlling and shaping the
841 natural environment and providing protection from
842 environmental impacts such as flooding, tides,
843 waves, storm surges, or landslides. Types of
844 roadway structures include seawalls, retaining walls,
845 and mechanically stabilized earth walls.



846 **2.5.a Bridge Program**

847 Roads owns and maintains 185 bridges in the
848 unincorporated area of King County. Built over many
849 generations, these bridges are made of concrete, steel, timber, or a combination of the three
850 building materials. The Roads bridge inventory includes long-span bridges (those over 20 feet in
851 span length, which appear on the national bridge inventory), short-span bridges, safety
852 enhancement bridges that keep wildlife off roadways, and pedestrian bridges.

853 The Bridge Program employs a comprehensive, integrated strategy to maintain and preserve the
854 county's bridges and the continuity of the road network. Primary bridge program goals include:

- 855 • Keeping bridges open and safe for public use;

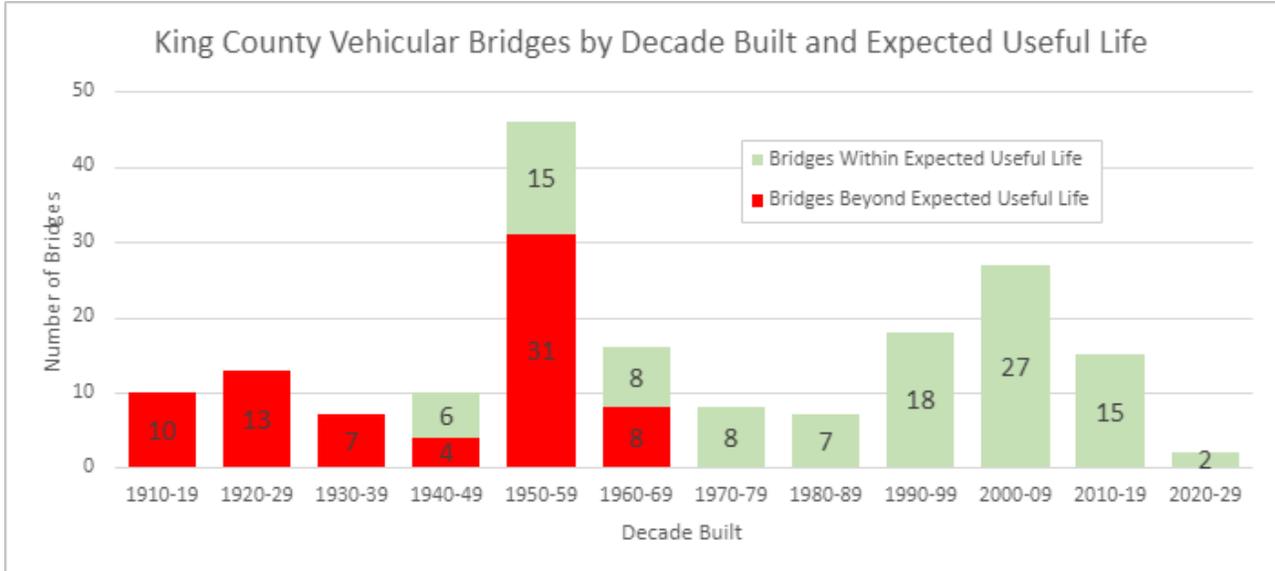
- 856 • Preserving bridge infrastructure by maximizing its useful life through active maintenance,
857 repair, load upgrades, or rehabilitation;
- 858 • When possible, replacing existing bridges with reliable new structures when repair, load
859 upgrades, or rehabilitation is not feasible.

860 Essential to meeting these goals are a well-documented inspection program coupled with a robust
861 bridge preservation program. Once preservation is no longer an option, it becomes necessary to
862 close or replace bridges. Management challenges for the county-owned bridge inventory include:

- 863 • Bridges are aging beyond their useful life and exceeding their theoretical design life;
- 864 • Traffic volumes are continuing to grow;
- 865 • Type and size of highway trucks are changing, resulting in more concentrated loads on
866 bridges;
- 867 • Costs to replace bridges are increasing.

868 King County-owned bridges range in age from less than two years old to over 100 years old, and
869 many are failing. The average age of the Roads bridge inventory is 52 years old. At the end of
870 2021, there were 76 bridges beyond their expected useful life. The issue is particularly pronounced
871 with timber bridges, which make up about one-third of the inventory. Although timber bridges have
872 a typical useful life of 50 years, the average age of the Roads timber bridge inventory is 69 years
873 old. The issue of the aging inventory is compounded by the steep revenue decline over the last
874 eight years. Figure 3 summarizes the number of King County vehicle bridges built by decade.

875 Figure 3. Number of King County Vehicle Bridges Built by Decade (2021 King County Annual
876 Bridge Report)



877

878 Roads prepares an Annual Bridge Report to fulfill the requirements of Washington Administrative
879 Code (WAC) 136-20-060. The annual report summarizes best available information about the
880 county’s bridges and includes information regarding inspections, the priority array for bridge
881 replacement and rehabilitation, capital project status, and other maintenance and operations
882 information. The report, and the included prioritization, guides bridge replacement and
883 rehabilitation decisions. It is published annually as a supporting document to the Roads budget.

884 Inspection, Assessment, and Prioritization

885 Annual assessment and prioritization of bridge needs begins with bridge inspections. Roads
886 inspects and assesses all of its bridges regularly to ensure the safety of the traveling public.
887 Inspection of each King County roadway bridge occurs on a two-year or shorter cycle and aims to
888 implement the National Bridge Inspection Standards by calculating a sufficiency rating for each
889 bridge. The sufficiency rating is based on factors such as structural adequacy and safety,
890 serviceability and functional obsolescence, and how essential the bridge is for public use.
891 Sufficiency rating ranges from zero (worst) to 100 (best).

892 In addition to the sufficiency rating, the County considers several factors to prioritize bridges for
893 replacement or rehabilitation, such as load limitations, hydraulics, geometric deficiency, and
894 expected useful life. The prioritization factors, their rationale, and other elements of the King
895 County bridge priority process were adopted in 1994 by the King County Council (Ordinance
896 11693).

897 One element of the annual bridge ranking process is bridge weight-carrying capacity information.
898 In 2022, Roads completed its mandate to reevaluate the weight-carrying capacity for all of its 181
899 vehicular bridges using current bridge condition information and new federal standards. Under the
900 new standards, 11 bridges have been posted with weight restrictions.

901 The Washington State Department of Transportation Local Programs Division (WSDOT) allocates
902 federal bridge funds to local agencies using a technical, competitive process. WSDOT focuses on
903 funding local agency bridges that are classified as “structurally deficient.” Structurally deficient
904 bridges have significant load-carrying elements in poor condition, or an inadequate waterway
905 opening under the bridge that causes significant flooding over the bridge deck.

906 Minor maintenance, repair, and quick response activities are addressed by maintenance and
907 operations. Larger projects are designated as stand-alone preservation projects or are addressed
908 through preservation programs, including bridge preservation and painting programs.

909 Bridge Preservation

910 The Bridge Preservation program addresses bridge needs outside of routine operations. Its goal is
911 to perform cost-effective projects that extend the useful life of King County bridges. The program
912 includes the following work categories:

- 913 • Load upgrades
- 914 • Re-decks
- 915 • Painting
- 916 • Scour protection
- 917 • Seismic retrofits
- 918 • Bridge Priority Maintenance repairs

919 Bridge Painting

920 The Roads bridge inventory includes 22 bridges with
921 painted steel components requiring regular repainting to prevent premature corrosion, including
922 trusses, steel girders and floor beams, and secondary stabilizing members. Of these bridges,
923 approximately one-third have lead paint that was applied prior to 1970. All lead paint must be
924 properly removed prior to applying new paint, which necessitates a costly full lead containment and
925 abatement system.



926 Bridge Inspection Program

927 All bridges are inspected at two-year or shorter intervals. Inspection reports for bridges on the
928 National Bridge Inventory are provided to the Federal Highway Administration by WSDOT. Some
929 bridges require more frequent or special
930 inspections when deterioration is being closely
931 monitored.

932 Bridge Replacement

933 The 20-year projected need for bridge
934 replacement includes 42 bridges selected based
935 on three factors: the current bridge condition and
936 projected remaining useful life, the King County
937 Council-approved prioritization criteria, and a
938 review of candidate bridges by technical subject
939 matter experts and Roads management. The resultant list is the best current representation of the
940 bridges that will be most in need of replacement over the next 20 years. The list includes both
941 short-span and long-span bridges. These projects are included in the 2024 TNR Bridge
942 Replacement Category.

Routinely inspected and maintained bridges and structures serve the public by ensuring that:

- Bridges are kept safe for public use
- Structures are free of hazards
- Roads remain open to travel
- Crossing delays are minimized

943 **2.5.b Structures Needed to Protect Vulnerable Road Segments**

944 A subset of unincorporated King County roads has suffered repeated failures requiring expensive
945 or frequent repairs following storm or prolonged rain events. The 2005 Vulnerable Road Segments
946 (VRS) study identified, quantified, and prioritized vulnerable road segments throughout the county
947 and developed projects to resolve their vulnerability. The study developed a list of unstable slopes
948 and other locations requiring frequent reactive maintenance.
949 Sixty-three road segments were initially identified as
950 candidates. Each of the road segments was grouped into one
951 of six problem categories: steep slopes, landslide, seawall,
952 river erosion, flood, and roadway settlement. Roads identified
953 proposed solutions, possible environmental impacts, and cost
954 estimates for each category.

955 Data was gathered for each road segment, including
956 descriptions of the segment and its location. Each segment
957 was then analyzed regarding:

- 958 • Traffic data
- 959 • Engineering assessment of the problem
- 960 • Estimated cost to remedy the problem
- 961 • Guardrail needs
- 962 • Roadway classification
- 963 • Detour length

964 Recommendations for potential long-term fixes or continued maintenance were developed, then
965 prioritized based on:

- 966 • Maintenance Cost per Year: This factor reflects the average estimated annual cost of
967 repairing the road segment to its pre-damage condition (temporary repair). Projects with
968 higher annual maintenance costs were given a higher priority.



- 969 • Construction Cost per Vehicle: This factor divides the cost of the permanent construction fix
970 by the average daily number of vehicles that travel the road. Projects with a lower cost
971 benefitting a higher number of vehicles were given a higher priority.
- 972 • Impact of Failure: This factor addressed the importance of correcting a vulnerable road
973 segment. Scoring reflected the likelihood and extent of road failure and closure if the
974 segment was left unaddressed beyond routine maintenance.
- 975 • Driver Inconvenience: This factor measured the overall level of driver inconvenience if a
976 road segment was closed, taking into consideration the detour length and traffic volume.
977 Road segments involving longer detours with higher traffic volumes were given a higher
978 priority.
- 979 • Inclusion in a Future Project: This factor gave a higher priority to segments that were
980 included in the Roads capital improvement program or Transportation Needs Report to
981 account for the opportunity to address two needs with one project.
- 982 • Guardrail Need: This factor gave a higher
983 priority to road segments slated for future
984 guardrail improvements to account for the
985 opportunity to address two needs with one
986 project.



987 The team selected and refined the factors above
988 through an iterative process, adjusting the scoring
989 and factor weighting for reasonableness after each
990 iteration. The final ranking process distributed the
991 full numerical range of each factor across the
992 segments, and the factor weights resulted in a
993 logical ranking.

994 Proposed permanent solutions to these vulnerabilities include:

- 995 • Constructing retaining walls to prevent slides on steep slopes above and below the
996 roadway, stabilizing the slope and adjacent riverbanks.
- 997 • Replacing seawalls to adequately support the road prism, protect the road from storm wave
998 action, and eliminate routine road failures.
- 999 • Replacing undersized culverts with bridges to provide better conveyance of water, silt, and
1000 debris.
- 1001 • Raising the roadway using walls or other armored structures to minimize flooding and
1002 erosion impacts to the roadway. Typically, these projects require perforations in the
1003 armored walls to allow for the conveyance of water and the inclusion of guardrails.
- 1004 • Armoring road shoulders with hardened structures to prevent routine washouts during flood
1005 events.

1006 Projects were not proposed for some locations with
1007 low average daily traffic, difficulty in obtaining
1008 regulatory approvals, limited right-of-way, or sufficient
1009 minor repair or routine maintenance options. In 2011,
1010 the original study was reevaluated based on current
1011 conditions and three new road segments were added.
1012 In 2019, the vulnerable road segment list was
1013 reviewed with respect to best available information
1014 and eight additional vulnerable road segments were
1015 added.

1016 The 2024 TNR Vulnerable Road Segment category of
1017 needs includes the recommended projects from the
1018 2005 VRS study, and the 2011 and 2019 updates.
1019 This category also includes needs identified within the
1020 adopted six-year capital improvement program.



1021 **2.5.c Bridges and Structures – Maintenance and Operations**

1022 If bridges and road structures are not regularly inspected and maintained, they may become
1023 unsafe and require closures, which can result in loss of access to property or longer travel times.
1024 To minimize these consequences and maximize the outcomes listed above, Roads employs
1025 programs that facilitate routine maintenance and repair of bridges and structures. These programs
1026 fall into the following categories:

- 1027 • Minor bridge maintenance and repair: Includes the Maintenance Operations Program’s
1028 routine bridge maintenance and repair activities, such as small repairs, debris removal,
1029 surface cleaning, and graffiti removal. Routine inspections inform the need for the minor
1030 maintenance and repair of structures.
- 1031 • Operations: Includes the resources needed to operate King County’s bascule (“moveable”)
1032 South Park Bridge, including funding for staff to raise the bridge for boat traffic.
- 1033 • Quick response: Includes work associated with unexpected bridge and seawall failures.

1034 **2.6 Facilities**

1035 Roads has five regional maintenance facilities that provide routine maintenance and emergency
1036 services to the road system throughout the unincorporated area, including remote facilities on
1037 Vashon Island and in the Skykomish area near Stevens Pass. Roads also has a maintenance
1038 headquarters campus in the City of Renton that provides centralized maintenance and
1039 administration functions; a regional maintenance facility; a regional vector decant facility; and
1040 specialized services such as a materials lab, traffic sign and signal shops, and other specialty
1041 services and equipment used throughout the system. Ten satellite maintenance sites located
1042 throughout King County are used for project staging and for the stockpiling and storage of waste,
1043 supplementary equipment, and snow and ice or other emergency response materials.

1044 Many of King County’s existing road maintenance facilities are old and require significant capital
1045 improvements or have exceeded their useful lives and require replacement. Most are between 40
1046 and 60 years old, with a few dating back to the early 1900s. As a result, some do not meet current
1047 building standards or do not readily accommodate the needs of a modern workforce and
1048 equipment inventory. Some facilities have inadequate heat, insufficient restrooms, failing septic
1049 systems, leaking roofs, mold, or rodent infestations.

1050 The conditions of Roads maintenance facilities compromise the agency’s ability to provide routine
1051 and emergency services in a timely and efficient manner. These maintenance activities are vital for

1052 keeping the county’s road-related assets in working condition to maximize the public’s investment
1053 and to provide for the safety of users. Some common maintenance activities include routine
1054 maintenance and repair of pavement, bridge components, ditches, culverts, shoulders, and
1055 guardrail; vegetation management; debris removal; maintenance of traffic control devices; and
1056 road striping. Examples of Roads emergency response activities include responding to significant
1057 collisions that impede travel; winter storm response activities such as plowing, sanding, and salting
1058 of the roads; removing downed trees and clearing other debris caused by landslides; managing
1059 flood-related or other types of emergency road closures; and completing storm-related repairs to
1060 roadways and other assets such as bridges, drainage systems, shoulders, and adjacent slopes.

1061 Adequate maintenance facilities located in the right places and kept in operational condition are
1062 necessary for the efficient provision of vital services to the traveling public. Investments in Roads
1063 maintenance facilities are necessary for continued delivery of essential safety and routine
1064 maintenance services.

1065 **2.6.a Assessment of current facilities**

1066 The *Strategic Plan for Road Services* reflects an extensive evaluation of the division’s
1067 maintenance facilities. This effort identified the need to deliver maintenance services more
1068 efficiently, consolidate facilities, and complete priority facility repairs. Roads maintenance facilities
1069 were evaluated according to physical condition, location suitability, and functional/operation
1070 sufficiency.

- 1071 • Physical Condition. To establish a baseline and get a comprehensive understanding of the
1072 condition of existing maintenance facilities, buildings and properties were assessed and
1073 site-specific capital needs with cost estimates were generated.
- 1074 • Location Suitability. The location of each maintenance facility was assessed based on
1075 travel time, size, land use issues, and other contextual factors. The unincorporated service
1076 area has changed significantly with annexations and incorporations over the past two
1077 decades; as a result, a number of facilities are no longer sited in the best locations to serve
1078 the core unincorporated service areas. In addition, the facility sites have certain size, land
1079 use, zoning, environmental, and other requirements and constraints. Because Roads
1080 facilities have been sited, acquired, and developed ad hoc over a very long period of time,
1081 many facilities have issues related to their location (e.g., the Fall City site is located in the
1082 Snoqualmie River floodplain). In order to deliver the most service possible with limited
1083 resources and to be able to respond to emergencies, crews need to be located centrally
1084 within their maintenance districts.
- 1085 • Functional/Operational Deficiencies. Each facility’s functional and operational deficiencies
1086 were assessed to evaluate covered and heated bays for vehicle and equipment storage;
1087 covered sand and bulk salt storage for snow and ice operation; and adequate, safe
1088 administrative and crew facilities.

1089 The facility planning and assessment effort identified the following types of facility needs:

- 1090 • Exploration of facility co-location opportunities with WSDOT;
- 1091 • Construction, relocation, and/or expansion of permanent facilities;
- 1092 • Enhancement of two emergency response satellite facilities;
- 1093 • Major renovation of existing facilities; and
- 1094 • High-priority maintenance, repair, or installation of septic systems, fencing, doors and
1095 windows, HVAC systems, roofs, and interior improvements such as electrical and plumbing
1096 systems.

1097 The 2017 *King County Road Services Regional Maintenance Facility Siting Assessment* identifies
1098 candidate site alternatives for two maintenance facilities: Vashon and Cadman. Consistent with
1099 county financial policies, Roads intends to use the proceeds of future property sales to fund facility
1100 replacement activities.

1101 The Vashon Island maintenance facility is very old, significantly undersized, and failing. There are
1102 a limited number of suitable land parcels on Vashon Island in terms of size, location, allowable
1103 zoning, and site conditions. Roads has prioritized advancing the acquisition of a suitable site(s)
1104 from the few identified as viable in the 2017 siting assessment study and 2019 study update,
1105 before there are no options left for replacing the failing facility.

1106 The Cadman facility in northeast King County is sub-optimally located within the City of Redmond.
1107 It does not best serve current and future operational needs. Roads has proposed replace the
1108 Cadman facility by acquiring land and constructing a new, centrally located maintenance facility to
1109 better serve northeastern King County.

1110 **2.6.b Facility Maintenance and Operations**

1111 The needs associated with efficiently maintaining and operating facilities include, but are not
1112 limited to, yard maintenance, cleaning, utility service, building security, carpentry, electrical repair,
1113 painting, fence repair, machinery service, structural repairs, and plumbing.

1114 **Chapter 3. Transportation Modeling**

1115 The Transportation Needs Report is informed by a regional travel forecasting model that is
1116 maintained by the Puget Sound Regional Council (PSRC). The PSRC model is activity-based and
1117 uses mathematical and statistical processes to estimate daily travel patterns within the Puget
1118 Sound region. This regional model uses existing traffic, population, employment, trip rates, and
1119 other data to develop a traffic demand model for a base year, then uses forecast population,
1120 employment, and other data to estimate future traffic. These forecasts are used to understand
1121 demand versus capacity (level of service), and to meet other policy, planning, and engineering
1122 needs. For additional information regarding PSRC’s regional model, please visit the PSRC
1123 website.³

1124 Roads collaborates closely with PSRC and uses the regional transportation model to ensure
1125 regional planning consistency with the TNR. The regional model also satisfies the following
1126 requirements of the Growth Management Act (RCW 36.70A.070(6)(a)):

- 1127 1. Traffic forecasts of 10 years or more: The model forecasts to 2044, 20 years from the
1128 expected adoption of the TNR in 2024.
- 1129 2. Land use assumptions: The model incorporates regionally adopted household, population,
1130 and employment data.
- 1131 3. Intergovernmental coordination: The model incorporates growth targets agreed to by a
1132 coalition of King County jurisdictions.
- 1133 4. Estimated traffic impacts to state-owned facilities: Projected travel on state facilities was
1134 included in the sufficiency analysis.
- 1135 5. Consistency of plans: PSRC solicited input from member jurisdictions in the development of
1136 the travel model, including forecast land use and road improvement assumptions.

1137 The 2024 TNR was prepared using best available information, including findings from the PSRC
1138 regional model.

³ Puget Sound Regional Council, *Activity-Based Travel Model: SoundCast* [\[LINK\]](#).

1139 **Chapter 4. Drivers of Change Affecting Transportation in**
1140 **Unincorporated King County**

1141 **4.1 Puget Sound Regional Demographic and Employment Trends**

1142 The most powerful indicators of how people travel are where they live and work. The Puget
1143 Sound region is expected to continue to grow jobs and urbanize, creating more demands on an
1144 already burdened transportation system. New forecasts from the Puget Sound Regional
1145 Council (PSRC) indicate population in the region is expected to reach about 5.8 million people
1146 by 2050, a nearly 35 percent increase from 2021.⁴ This substantial increase in population will
1147 create a need for more housing, employment, and services, and in turn will create significant
1148 impacts to existing roads, travel patterns, and demands.

1149 The Puget Sound region’s current transportation system reflects and is guided by land use
1150 patterns developed through decades of growth. As the region continues to grow, its demographic
1151 profile will continue to evolve. On average, future transportation system users will be older and
1152 more ethnically and racially diverse. The region is and will remain relatively affluent, with higher
1153 wages led by workers in information, technical, and management sectors, historically located in a
1154 few urban areas.⁵ However, lower-income populations within the region will face increasing
1155 economic challenges as housing, transportation, and other living costs continue to escalate.⁶

1156 Increasing public preference for living in compact, walkable neighborhoods may encourage
1157 increased density in the county’s urban core. As jobs increasingly locate into large city centers,
1158 transit and active transportation will become increasingly important.⁷ Residents’ willingness to
1159 pay for transportation choices that they value—particularly transit—remains high, as evidenced
1160 by voter support for the 2016 Sound Transit 3 levy and the 2015 Move Seattle levy.

1161 Affordability issues and low housing inventory often force residents to move farther from their
1162 jobs, thereby increasing reliance on single-occupancy vehicles and road congestion.⁸ The
1163 Washington State Growth Management Act and its implementation in King County have
1164 produced both intended and unintended consequences related to transportation and road
1165 congestion. Urban centers will continue to experience intended densities with improved access
1166 to multimodal transportation systems, while rural unincorporated King County areas have
1167 experienced increased road congestion due to travel to, from, and between urban areas.

1168 **4.2 Puget Sound Transportation Trends**

1169 Travel by car is expected to remain the predominant transportation mode in the region, despite
1170 significant increases in the share of trips made by transit, walking, and biking. In 2021, 80 percent
1171 of trips were made by car.⁹ The PSRC *Regional Transportation Plan 2022-2050* forecasts that by
1172 2050 the share of trips made by car will drop to 72 percent regionally.¹⁰ The share of trips made
1173 by transit will increase to 8 percent, and the share of trips made by walking or biking will increase
1174 to 20 percent.¹¹ These shifts will be particularly pronounced for work-related trips, for which the

⁴ Puget Sound Regional Council, *VISION 2050*, October 2020 [\[LINK\]](#) (accessed November 18, 2022), p. 2.

⁵ Puget Sound Regional Council, *VISION 2050*, p. 92.

⁶ Puget Sound Regional Council, *VISION 2050*, p. 92, 102.

⁷ Puget Sound Regional Council, *VISION 2050*, p. 103.

⁸ National Association of Realtors, *Millennials and Silent Generation Drive Desire for Walkable Communities, Say Realtors*, December 19, 2017 [\[LINK\]](#) (accessed October 11, 2022); Puget Sound Regional Council, *VISION 2050: Housing Background Paper*, June 2018 [\[LINK\]](#) (accessed November 18, 2022), p.28.

⁹ Puget Sound Regional Council, 2021 Household Travel Survey Explorer, [\[LINK\]](#) (accessed November 29, 2022).

¹⁰ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, [\[LINK\]](#) (accessed November 18, 2022), p.159.

¹¹ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.161.

1175 share of trips made by transit is expected to double.

1176 While personal vehicle travel will continue to be an important mode choice throughout the county,
1177 it will remain particularly important in the rural areas, where the lack of density and scarcity of
1178 funding makes mass transit service impractical. The *Regional Transportation Plan 2022-2050*
1179 forecasts that the proportion of the region’s trips made by car in 2050 will drop significantly in the
1180 region’s Metropolitan and Core Cities, but will decrease only 2 to 4 percent in urban
1181 unincorporated areas, and 1 percent in rural areas.¹² In the region’s urban unincorporated and
1182 rural areas, the share of trips made by cars is expected to remain between 86 percent and 90
1183 percent. Daily vehicle miles traveled per capita are also expected to remain relatively high for
1184 urban unincorporated and rural areas (17.8 and 24.4 miles, respectively).¹³

1185 Driving is also expected to remain the primary travel mode for commuting, although the share of
1186 the region’s work trips made by car is expected to drop from 83 percent in 2018 to 69 percent in
1187 2050.¹⁴ Congestion, which typically takes place during commuting periods, will remain high.
1188 During peak commute hours in 2018, over 20 percent of the regional road system experienced
1189 heavy to severe congestion (i.e., average speeds were less than half of the posted speed limit).¹⁵
1190 By 2050, the portion of roads experiencing heavy to severe commute congestion is expected to
1191 rise slightly to 25 percent. Regionally, congestion-related delay is expected to increase most
1192 significantly for urban unincorporated and rural areas. While annual delay per capita is expected
1193 to drop or rise only slightly for Metropolitan Cities, Core Cities, High-Capacity Transit
1194 Communities, and Cities & Towns, the annual delay per capita in urban unincorporated areas is
1195 expected to increase to 53 minutes (a 20 percent increase) and to 63 minutes in rural areas (a 26
1196 percent increase).

1197 Transit use is likely to play an increasingly large role in urban and suburban travel. In 2018,
1198 regional transit agencies provided 216 million regular transit boardings; by 2050, annual
1199 boardings are planned to more than triple to 747 million, outpacing the growth of population and
1200 jobs. Regionally, the share of jobs within one half-mile of a high-capacity transit station is
1201 expected to increase from 47 percent in 2018 to 76 percent in 2050; within King County, the
1202 share is expected to rise to 85 percent.¹⁶ The share of households living within one half-mile of a
1203 high capacity transit station is expected to grow from 25 percent in 2018 to 60 percent in 2050.¹⁷
1204 However, the share of households within one half-mile of a high capacity transit station will be
1205 much smaller in the region’s urban unincorporated area (5 percent in 2018 vs. 20 percent in
1206 2050) and rural areas (0 percent in 2018 vs. 1 percent in 2050).¹⁸

1207 Roadway tolling of state highways may play a role in shaping regional housing and employment
1208 trends. The PSRC *Regional Transportation Plan 2022-2050* sets broad direction for a regional
1209 tolling system and other user fees to raise critical funding for transportation investments, and to
1210 reduce peak-period demand on the transportation system.¹⁹ The Washington State Department
1211 of Transportation (WSDOT) has implemented tolls on I-405 and state routes 520, 99, and 167.
1212 WSDOT is planning for additional tolling on I-405 and State Route 509 in the future, and will likely
1213 finance major highway capacity projects at least partially through tolls.²⁰ In 2020, based on a

¹² Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, [\[LINK\]](#) (accessed September 6, 2023), Appendix H, p.18.

¹³ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, Appendix H, p.10.

¹⁴ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.159.

¹⁵ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.68.

¹⁶ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.163.

¹⁷ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.18.

¹⁸ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.162.

¹⁹ Puget Sound Regional Council, *Regional Transportation Plan 2022-2050*, p.141.

²⁰ Washington State Transportation Commission, 2022 WSTC Tolling Report & Tacoma Narrows Bridge Loan Update, [\[LINK\]](#) (accessed November 30, 2022), p.11.

1214 multi-year investigation, extensive analysis, and a pilot project, the Washington State
1215 Transportation Commission recommended enactment of a small-scale road usage charge
1216 program. The commission’s recommendation is intended to be the first step in a 10- to 25-year
1217 transition away from gas taxes to fund the state highway system.²¹

1218 Gas prices may also encourage location of housing near employment. The second highest
1219 expense for a typical U.S. household is transportation.²² Gasoline prices are volatile and affected
1220 by multiple factors: worldwide demand for and supply of crude oil; disruptions due to geopolitical
1221 events, severe weather, and infrastructure failures; seasonal changes in demand and gasoline
1222 specifications; and the amount of gasoline reserves.²³ As of December 2022, Washington’s gas
1223 price (\$4.42 per gallon of regular gas) was the fourth-highest in the nation; Washington gas taxes
1224 (49.4 cents per gallon state tax plus 18.4 cents per gallon federal tax) were third-highest in the
1225 nation.²⁴ The effect of electric vehicle technology and teleworking on housing choice and the
1226 transportation system are not yet known.

1227 **4.3 Transportation Trends in Unincorporated King County**

1228 Unincorporated King County’s nearly 1,500-mile road network supports more than one million
1229 trips per day, with people across the region traveling to work, school, and other destinations.²⁵
1230 Decades of annexations, limited sales tax revenues, flat/declining gas taxes, and the effects of
1231 voter initiatives have contributed to the decline of revenues needed to maintain the road system.
1232 Roads has an unsustainable financial model with insufficient revenue to support the preservation
1233 of unincorporated road and bridge infrastructure, or address capacity and congestion.

1234 The majority of King County’s population, development, and employment growth has been within
1235 the Urban Growth Area, not within rural King County.²⁶ Following adoption of King County’s first
1236 comprehensive plan in 1994, the percent of growth in rural areas declined sharply, and this trend is
1237 expected to continue.²⁷ Since 2006, less than 3 percent of new housing in King County has
1238 occurred in the rural area.²⁸ With the majority of people and jobs located within the urban growth
1239 area, there are few employment options in the county’s rural area and many rural residents drive
1240 long distances to urban employment centers. PSRC estimates that close to 92 percent of
1241 employed residents outside the contiguous urban growth boundary (those in unincorporated rural
1242 areas, freestanding cities and towns, tribal reservations, military installations, etc.) travel to jobs
1243 inside the Urban Growth Boundary, and they travel about twice as far, with an average commute of
1244 22 miles.²⁹

²¹ Washington State Transportation Commission, Washington State Road Usage Charge Assessment Final Report, [LINK](#) (accessed November 30, 2022).

²² U.S. Department of Transportation, Bureau of Transportation Statistics, “Transportation Economic Trends,” [LINK](#) (accessed December 1, 2022).

²³ U.S. Energy Information Administration, “Gasoline explained,” [LINK](#) (accessed November 18, 2022); “Oil and petroleum products explained,” [LINK](#) (accessed November 18, 2022).

²⁴ AAA, “State Gas Price Averages,” [LINK](#) (accessed December 1, 2022); Lord, Debbie, “How much tax does your state charge on gasoline? What makes up the price of a gallon?” June 2022, [LINK](#) (accessed December 1, 2022).

²⁵ King County Department of Transportation, *Strategic Plan for Road Services*, July 2014, [LINK](#) (accessed October 18, 2022), p. 1.

²⁶ Puget Sound Regional Council, *Regional Growth Strategy: Background Paper*, March 2019, [LINK](#) (accessed November 18, 2022), p. 18.

²⁷ King County, 2021 King County Urban Growth Capacity Report, June 2021, [LINK](#) (accessed November 18, 2022), p.46.

²⁸ King County, 2021 King County Urban Growth Capacity Report, p.30.

²⁹ Puget Sound Regional Council, *Transportation 2040 Update - Appendix R: Rural Transportation Study*, May 29, 2014, p. 5.

1245 Urban unincorporated King County has also seen relatively low growth; since 2006, the number of
1246 urban unincorporated King County housing units grew by just 4 percent.³⁰ Combined, urban and
1247 rural unincorporated King County has experienced a population decrease of 14 percent from 2011
1248 to 2022, including population lost through annexations.³¹

1249 Unless changes are made to the state and regional transportation funding allocation process,
1250 federal, state, and local transportation investments will continue to be focused within King County’s
1251 Urban Growth Boundary, serving the densest residential and employment centers. Transportation
1252 funding allocated in support of improved local and regional transit will benefit urban portions of
1253 unincorporated King County, while more geographically dispersed populations of rural King County
1254 will continue to receive less transit and multimodal investment. King County Metro is developing
1255 innovative and cost-efficient transit service delivery options, such as reservation-based or flexible
1256 route shuttles, community vans, real-time ridesharing, and partnerships with taxi and transportation
1257 network companies in areas that don’t have the infrastructure, density, or land use to support
1258 regular, fixed-route bus service.³² In spite of these efforts, limited transit service within rural King
1259 County will continue to result in many unincorporated King County residents relying on their
1260 personal vehicles for transport to work and other destinations. Additionally, demand and usage of
1261 unincorporated roads by residents of incorporated areas and other counties will likely continue to
1262 increase.³³

1263 The policies set forth within Washington State’s Growth Management Act have successfully
1264 created public benefits such as protected parks, farmland, and open spaces by focusing growth
1265 within designated cities and urban areas. However, this has created regional traffic demand on the
1266 unincorporated road network without commensurate funding. Funding availability for
1267 unincorporated King County roads has decreased dramatically as a direct outcome of annexations
1268 and associated reductions in property and sales tax contributions to the King County Road Fund.
1269 Yet traffic volumes and use of the unincorporated King County road system have increased over
1270 time, and portions of the network experience extreme congestion because road capacity has been
1271 exceeded. Additionally, many county road facilities have reached the end of their useful life,
1272 requiring complete replacement or reconstruction. Insufficient funding has resulted in a backlog of
1273 road and bridge projects, and portions of the system are faced with imminent closure if unmet road
1274 funding needs are not addressed. This issue is regional, and Roads will continue to work with
1275 residents, cities, Washington State, and other partners to achieve scaled-up, regional funding
1276 solutions. Chapter 5. TNR Project Needs and Cost Analysis

1277 The 2024 Transportation Needs Report represents King County’s contemporary thinking regarding
1278 transportation needs across its system of unincorporated roads and bridges. The underlying
1279 approaches taken to identify needs and evaluate road and bridge assets are summarized within
1280 Chapter 2 of this report. This chapter provides the cost analysis associated with the 488 identified
1281 transportation project needs, organized using ten TNR categories:

- 1282 • **Bridge:** Vehicular and pedestrian bridge projects include design, compliance, and
1283 construction to improve safety and asset conditions of the county’s bridges.
- 1284 • **Capacity-Major:** Capacity projects increase the size of the road to improve its ability to
1285 safely accommodate higher traffic volumes.

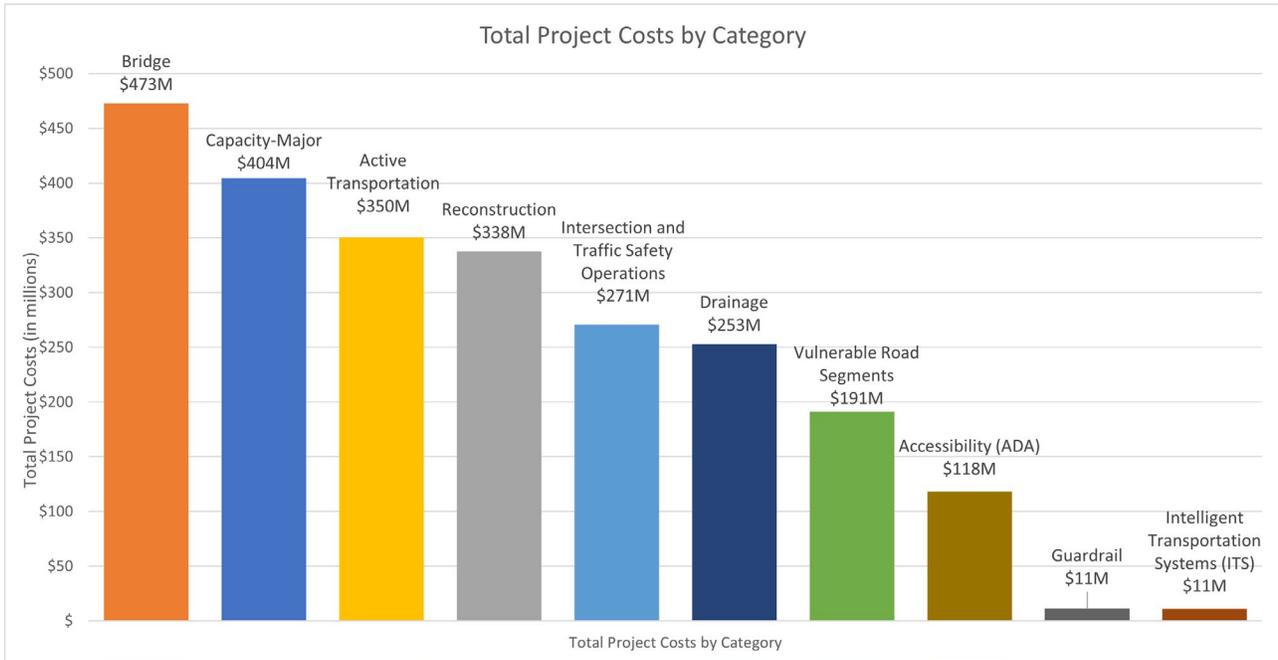
³⁰ King County, 2021 King County Urban Growth Capacity Report, p.30.
³¹ Puget Sound Regional Council, Puget Sound Trends, [\[LINK\]](#) (accessed November 30, 2022), p. 8.
³² King County Metro, “Our Programs,” [\[LINK\]](#) (accessed November 18, 2022); King County Metro, “On-demand services,” [\[LINK\]](#) (accessed November 18, 2022).
³³ King County Department of Transportation, *Strategic Plan for Road Services*, p. 12.

- 1286 • **Reconstruction:** Road reconstruction projects improve safety and typically involve full
1287 removal and replacement of the surface layer, road base, and related road infrastructure,
1288 such as drainage and guardrails.
- 1289 • **Active Transportation:** Safety improvements to benefit people walking, biking, or
1290 participating in other active recreation activities. Sidewalk construction or shoulder
1291 widening/paving are common active transportation projects.
- 1292 • **Intersection and Traffic Safety Operations:** Projects typically incorporate one or more
1293 traffic safety measures, such as sightline improvements, traffic signals, re-channelization
1294 (“striping”), and roundabouts.
- 1295 • **Vulnerable Road Segments:** Roads frequently impacted by flooding, tides, wave action,
1296 storm surges or slides are often protected through infrastructure such as seawalls, armored
1297 slopes, and retaining walls.
- 1298 • **Accessibility Improvements:** Projects that improve existing pedestrian facilities to current
1299 Americans with Disabilities Act standards.
- 1300 • **Drainage:** Projects that preserve the integrity of the road and improve safety by moving
1301 water away from the road. Projects typically improve infrastructure such as culverts,
1302 ditches, catch basins, and drainage systems.
- 1303 • **Guardrail:** Roadside guardrail and bridge railing projects to improve safety by reducing the
1304 severity of run-off-the-road collisions.
- 1305 • **Intelligent Transportation Systems (ITS):** Projects that advance safety and mobility by
1306 integrating communications technologies such as cameras, vehicle detection, traffic signal
1307 equipment, and timing upgrades into transportation infrastructure.

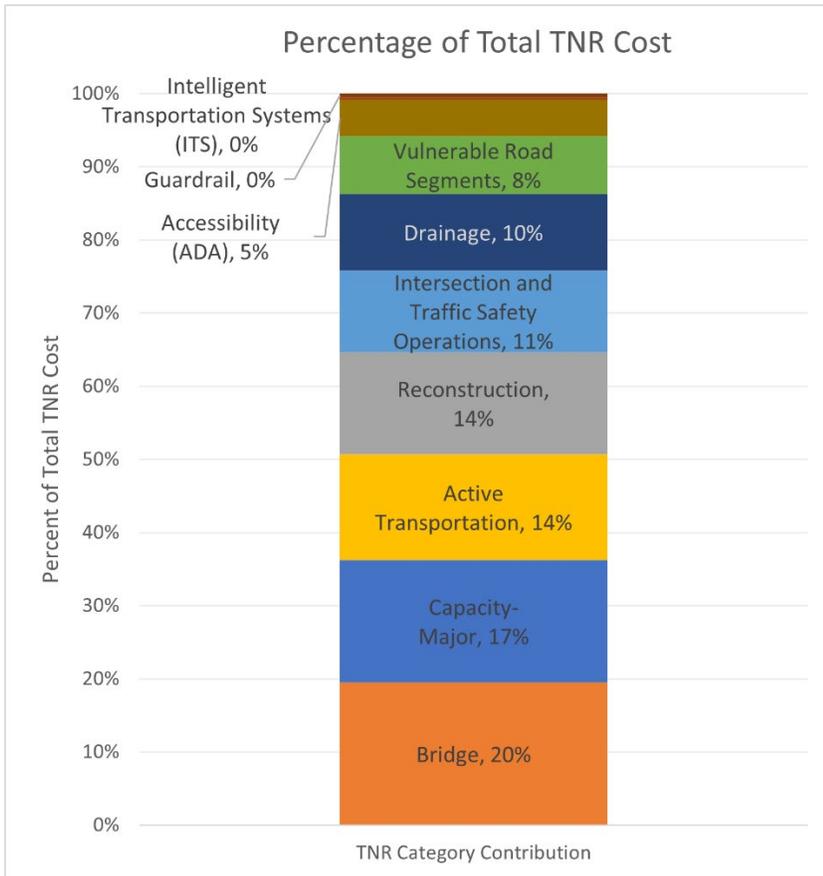
1308 Together the total cost estimates for Capacity and Bridge projects account for over one-third of the
1309 total cost of the TNR Project Needs List (see Figures 4 and 5). This is due to the significantly
1310 higher cost of engineering, materials, labor, environmental permitting, and right-of-way that goes
1311 into rebuilding and widening roads and replacing bridges compared to relatively smaller-scale
1312 projects associated with other TNR categories. Figure 6 summarizes the average project cost by
1313 TNR category and reveals similar cost patterns. For example, the average Capacity-Major project
1314 costs over five times the average TNR project cost. Note that Accessibility (ADA) needs are not
1315 included in Figure 6, as the TNR includes these needs at the programmatic rather than project
1316 level.

1317

1318 Figure 4. 2024 TNR Summary of Costs, by Category
 1319

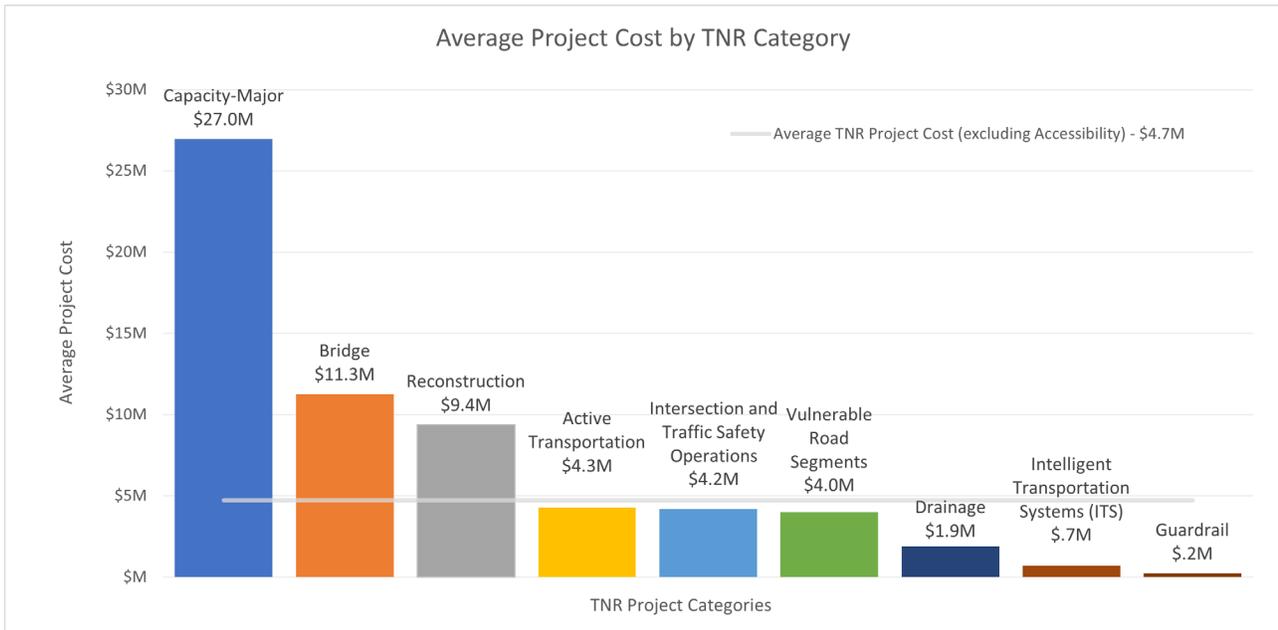


1320
 1321 Figure 5. 2024 TNR Percentage of Total Cost, by Category



1322

1323 Figure 6. Average Project Cost, by Category



1324

1325

1326 **Chapter 6. Financial Analysis**

1327 A financial analysis was completed to compare the estimated costs, over twenty years, of
 1328 projected transportation needs to Roads' anticipated revenue. Planning level cost estimates were
 1329 generated for each of the 488 transportation needs identified within the 2024 TNR. Cost
 1330 estimating in support of the 2024 TNR reflects contemporary estimation methods, market rates,
 1331 and best available information. Table 5 summarizes these estimated costs across ten thematic
 1332 TNR needs categories. The total estimated cost associated with the identified needs exceeds \$2.4
 1333 billion.

1334 Table 5. 2024 TNR Financial Summary of Estimated Cost

2024 TNR Category	2024 TNR Project Count	2024 Estimated TNR Costs
Capacity-Major	15	\$404,360,000
Bridge	42	\$473,000,000
Reconstruction	36	\$337,730,000
Active Transportation	80	\$350,280,000
Intersection and Traffic Safety Operations	65	\$270,740,000
Vulnerable Road Segments	48	\$191,320,000
Accessibility (ADA) Improvements	*	\$118,157,000
Drainage	135	\$253,060,000
Intelligent Transportation Systems (ITS)	16	\$10,880,000
Guardrail	49	\$11,294,000
Total Estimated 2024 TNR Cost	488	\$2,420,821,000

* Due to the large number of accessibility needs and relatively low project costs for individual improvements, the TNR reports only the total estimated cost to address high-priority needs identified in the *2021 King County Road Services ADA Transition Plan*.

1335

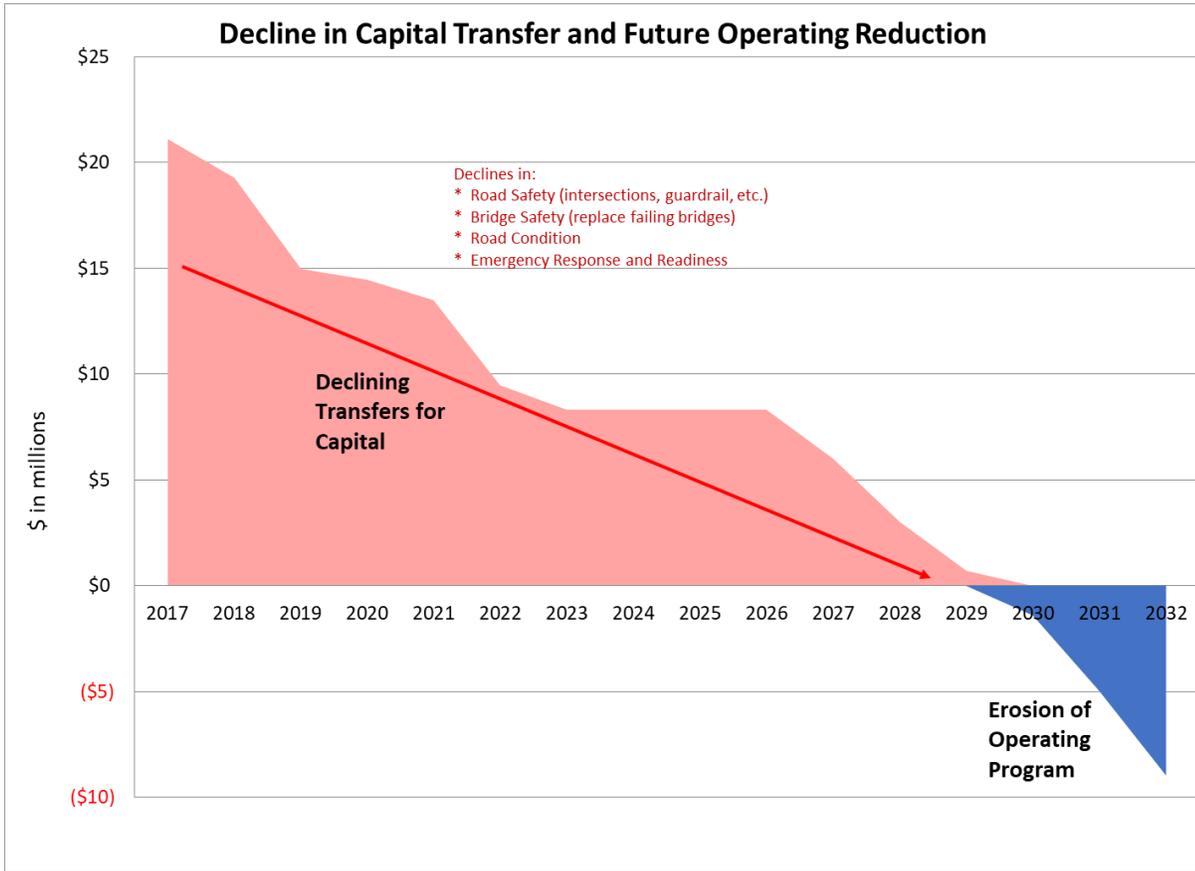
1336 King County continues to experience a road funding crisis as a result of a structural gap. This is a
1337 result of an unincorporated—and largely rural—tax base supporting a local and regional system,
1338 municipal annexations reducing the taxpayer base, Washington’s outdated tax structure, voter
1339 initiatives limiting property tax growth, and an aging bridge and road system. The lack of sufficient
1340 revenue significantly impacts the county’s ability to maintain and improve roads. It has been more
1341 than a decade since a project adding new capacity to the system has been funded, and
1342 preservation projects have been primarily associated with one-time funding. Dedicated funds for
1343 the six-year capital improvement program—gas and property taxes not used for operating
1344 expenses—have significantly diminished from past years. The capital improvement program is
1345 focused on addressing deterioration, high-priority safety needs, and a small amount of
1346 preservation and maintenance. The 2024 TNR was prepared with this funding crisis as a backdrop.

1347 This structural gap between dedicated revenues and expenditures has resulted in insufficient funds
1348 for a full preservation program or timely replacement of infrastructure. Available revenues are
1349 focused on reacting to the higher risks associated with the deteriorating road system. Expenditures
1350 are increasing at a greater rate than the growth of dedicated revenue. The increasing cost of
1351 current service levels without a commensurate increase in revenues directly impacts Roads capital
1352 and maintenance programs. By 2029, if no sustainable revenue source is identified, the Road
1353 Fund contributions to the Roads capital program will end.³⁴ Figure 7 summarizes the effect of the
1354 loss of this revenue source from 2029 onward, which includes a dramatically reduced capital

³⁴ The Road Fund Contribution is funded primarily by a dedicated unincorporated area property tax and gas tax distribution. Property tax revenue projections are based on the most recent approved King County, Office of Economic and Financial Analysis forecast. Projections shown here reflect the current balance in the operating fund (the source of funds for the capital transfer) and current economic assumptions.

1355 program and a reduction in operating programs.

1356 Figure 7. Decline in Roads CIP Contribution and Future Operating Reduction



1357

1358 Primary revenue sources for Roads capital projects include the Road Fund contribution, as well as
1359 state and federal grants. A portion of the Roads capital program is also funded through other
1360 agencies and their revenue sources, such as Surface Water Management Fee funding for certain
1361 drainage projects, and grants from the Flood Control District. Across these revenue sources,
1362 approximately \$289 million is forecast to be available to fund 2024 TNR identified needs over a
1363 twenty-year period, which translates to an overall funding shortfall of approximately \$2.1 billion
1364 (Table 6).

1365 Table 6. 2024 TNR Funding Shortfall

Item	Amount
Total estimated 2024 TNR Cost	\$2,420,821,000
Projected revenue (2024-2043 forecast) that is available to fund TNR Needs	\$288,985,000
Funding shortfall associated with the 2024 TNR	\$2,131,836,000

1366

1367

1368 Of the revenues available to fund needs identified within the 2024 TNR, over \$85 million is through
1369 the adopted 2023-2028 Six-Year Capital Improvement Program using Roads funding sources,
1370 including 30-year bonds backed by the Real Estate Excise Tax. In addition, it is anticipated that
1371 non-Road Fund revenue sources will fund approximately \$204 million of 2024 TNR identified
1372 needs through 2043 (Table 7).

1373 Table 7. Projected Funding of 2024 TNR Needs, 2024-2043

TNR Category	Funded 2024 TNR Needs (2024-2028)³⁵	Anticipated Revenue to Fund 2024 TNR Needs (2025-2043)³⁶	Total Projected Revenue to Fund TNR Needs (2024-2043)
Capacity-Major	\$0	\$0	\$0
Bridge	\$57,959,000	\$0	\$57,959,000
Reconstruction	\$0	\$0	\$0
Active Transportation	\$1,093,000	\$0	\$1,093,000
Intersection and Traffic Safety Operations	\$551,000	\$0	\$551,000
Vulnerable Road Segments	\$2,336,000	\$0	\$2,336,000
Accessibility (ADA) Improvements	\$847,000	\$0	\$847,000
Drainage	\$22,683,000	\$31,016,000	\$53,699,000
Intelligent Transportation Systems	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0
Grants (All Categories)	(included above)	\$172,500,000	\$172,500,000
Total Projected Funded TNR Needs (2024-43)	\$85,469,000	\$203,516,000	\$288,985,000

1374
1375 The county has identified several potential strategies to address the funding shortfall for 2024 TNR
1376 needs.³⁷

1377 The options include:

- 1378 • Increased pursuit of grant funding. Roads actively seeks grant funding to meet the needs of
1379 the unincorporated county road network in alignment with the division’s strategic priorities.
1380 However, grant funds typically require matching funds from the recipient, and have a
1381 narrow range of allowable uses.
- 1382 • Raising Transportation Benefit District revenue. Under this strategy, revenues could be
1383 raised through a vehicle licensing fee, sales tax increases, general obligation bonds, impact

³⁵ Existing TNR funding reflects years 2024-2028 of the adopted Roads 2023-2028 Six-Year CIP. CIP funding for other categories of work, such as pavement preservation and facility replacement, are not included in the analysis.

³⁶ Anticipated TNR funding (2029-2043) reflects a continuation of grant funding and other non-Road Fund revenue sources at approximately current levels and assumes no Road Fund contributions to the capital program.

³⁷ Unincorporated King County Fiscal Sustainability Plan, December 2021, [\[LINK\]](#), (accessed April 24, 2023).

- 1384 fees on certain development, vehicle tolls, or a combination of measures—many of which
1385 would require voter approval.
- 1386 • Levy lid lift. A roads levy lid lift would temporarily increase the property tax levy to the
1387 statutory limit. At the conclusion of the levy lid lift period, property tax increases would
1388 return to their legal maximum—currently 1 percent of the total proceeds—plus proceeds
1389 from new construction. As of January 2023, a levy lid lift would require council and voter
1390 approval.
 - 1391 • Advocate for state funding. State funding dedicated to management of the county road
1392 system would offset the unintended consequences of the Growth Management Act and
1393 provide a predictable revenue source for financial planning.
 - 1394 • Advocate for state legislative changes. County leadership will use its political leadership to
1395 ask the legislature to provide additional or more flexible tools, such as raising the 1 percent
1396 property tax limit, giving counties more tools to facilitate annexations, and addressing the
1397 broken fiscal underpinnings of the Growth Management Act.
 - 1398 • Regional funding. The county anticipates that a regional funding solution would offer the
1399 most effective and comprehensive solution to the road funding crisis. County roads form
1400 one element in a regional road network and are used to travel to and between urban
1401 residential and employment centers. The county will continue to collaborate with regional
1402 partners to identify mutually beneficial transportation funding solutions.
 - 1403

1404 **Exhibit A. 2024 Transportation Needs Report Project List**

1405 The 2024 Transportation Needs Report (TNR) contains a project list that is comprised of 488
1406 project needs. Individual project needs are organized geographically, using 23 tables (Exhibit A)
1407 and corresponding maps (Exhibit B). Due to the large number of accessibility needs and
1408 relatively low project costs for individual improvements, the TNR reports only the total estimated
1409 cost to address high-priority needs identified in the *2021 King County Road Services ADA*
1410 *Transition Plan*.

1411 TNR project list tables provide the following information for each identified TNR need:

- 1412 • **TNR Project Number.** The TNR project number is a unique identifier for the 2024 TNR.
1413 TNR project numbers are referenced in the corresponding TNR map, in Exhibit B,
1414 proximate to the project location.
- 1415 • **TNR Category.** Each TNR project need is categorized using one of nine TNR categories:
 - 1416 ○ Capacity-Major
 - 1417 ○ Bridge
 - 1418 ○ Reconstruction
 - 1419 ○ Active Transportation
 - 1420 ○ Intersection and Traffic Safety Operations
 - 1421 ○ Vulnerable Road Segments (VRS)
 - 1422 ○ Drainage
 - 1423 ○ Intelligent Transportation Systems (ITS)
 - 1424 ○ Guardrail
- 1425 • **Location.** The location of each TNR project is provided using the nearest intersection or
1426 street address.
- 1427 • **Project Scope.** A high-level preliminary scope is identified for each TNR project need.
1428 Scope information is highly conceptual.
- 1429 • **Estimated Cost.** A planning level cost estimate is provided for each identified 2024 TNR
1430 project need. Estimates reflect best available unit costs, market rate, and other
1431 contemporary approaches to generating planning level cost estimates.
- 1432 • **Community Service Area.** Unincorporated King County is divided into seven Community
1433 Service Areas (CSA). The related CSA is identified for each TNR project need.

1434 Map Number 1: North Vashon

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-19	Drainage	Beall Rd SW at SW 188 St	Replace/Construct drainage infrastructure	\$1,610,000	Vashon/Maury Island	
DR-20-20	Drainage	SW 156 St E of Vashon Hwy SW	Replace/Construct drainage infrastructure	\$1,320,000	Vashon/Maury Island	
DR-20-67	Drainage	11010 SW Cemetery Rd	Replace/Construct drainage infrastructure	\$1,350,000	Vashon/Maury Island	
DR-8	Drainage	SW 171st St & 93rd Ave SW (Gorsuch Creek)	Replace/Construct drainage infrastructure	\$340,000	Vashon/Maury Island	
NM-0106	Active Transportation	SW Bank Rd: 97 PI SW to Beall Rd SW	Provide active transportation facility	\$710,000	Vashon/Maury Island	
NM-0203	Active Transportation	SW 177th St/98th PI SW: Vashon Hwy SW to SW Bank Rd, Vashon Hwy SW north of SE SW 177th St, SW Bank Road: Vashon Hwy SW to 98th PI SW	Provide active transportation facility	\$590,000	Vashon/Maury Island	
NM-15-9	Active Transportation	SE Cemetery Rd/ Beall Rd SW: 107th Ave SW to SW 184th St	Provide active transportation facility	\$9,420,000	Vashon/Maury Island	
NM-5054	Active Transportation	SW Bank Rd: 107th Ave SW to Vashon Hwy SW	Provide active transportation facility	\$6,320,000	Vashon/Maury Island	
RC-56	Vulnerable Road Segments	Westside Highway SW: Crescent Dr SW to McIntyre Rd SW	Reconstruct roadway	\$700,000	Vashon/Maury Island	
RC-58	Vulnerable Road Segments	Crescent Dr SW: Westside Highway SW to SW Cove Road	Reconstruct roadway	\$880,000	Vashon/Maury Island	

1435

1436 Map Number 2: South Vashon

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-15-13	Drainage	Chautauqua Beach Rd SW & Ellisport Creek	Pipe replacement, seawall removal, contaminated solid removal	\$2,250,000	Vashon/Maury Island	
DR-20-18	Drainage	SW 232 St at Old Mill Rd SW	Replace/Construct drainage infrastructure	\$4,250,000	Vashon/Maury Island	
DR-20-49	Drainage	23737 Old Mill Rd SW	Replace/Construct drainage infrastructure	\$2,530,000	Vashon/Maury Island	
GR-15-40	Guardrail	Dockton Rd SW: SW Ellisport Rd to SW 222nd St	Construct guardrail along seawall	\$912,000	Vashon/Maury Island	
GR-15-41	Guardrail	Vashon Hwy SW Seawall: SW 240th PI to 115th Ave SW	Construct guardrail along seawall	\$768,000	Vashon/Maury Island	
GR-15-42	Guardrail	SW Quartermaster Dr: Monument Rd SW to Dockton Rd SW	Construct guardrail along seawall	\$444,000	Vashon/Maury Island	
NM-9975	Active Transportation	SW Tahlequah Rd near Tahlequah Ferry Dock	Provide active transportation facility	\$160,000	Vashon/Maury Island	
RC-10	Vulnerable Road Segments	Dockton Rd SW: SW Ellisport Road to Portage Way SW	Replace seawall	\$47,710,000	Vashon/Maury Island	
RC-15	Vulnerable Road Segments	Vashon Hwy SW: 115th Ave SW to SW 240th PI	Replace seawall	\$23,790,000	Vashon/Maury Island	
RC-54	Vulnerable Road Segments	SW Governors Lane: 99th Ave SW to 96th Ave SW	Replace seawall	\$4,250,000	Vashon/Maury Island	
RC-59	Vulnerable Road Segments	Kingsbury Rd SW: SW 234th St to 80th Ave SW	Reconstruct roadway	\$880,000	Vashon/Maury Island	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
VRS-20-11	Vulnerable Road Segments	SW Quartermaster Drive	Rebuild seawall and raise road	\$6,750,000	Vashon/Maury Island	

1437

1438

Map Number 3: White Center/Skyway

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-15-5	Drainage	S 96th St: 4th Ave S to 10th Ave S	Replace/Construct drainage infrastructure	\$620,000	West King County Areas	
DR-20-21	Drainage	SW 108 St at 10 Ave SW	Replace/Construct drainage infrastructure	\$670,000	West King County Areas	
DR-6	Drainage	60th Ave S/S Langston Rd: S 129th St to S 124th St	Replace/Construct drainage infrastructure	\$3,370,000	West King County Areas	
INT-TSO-20-12	Intersection and Traffic Safety Operations	64th Ave S & S 129th St	Intersection Improvement	\$5,400,000	West King County Areas	
INT-TSO-20-14	Intersection and Traffic Safety Operations	Myers Way S & 6th Ave S	Intersection improvement	\$4,270,000	West King County Areas	
INT-TSO-22-18	Intersection and Traffic Safety Operations	Rainier Ave S at S 115th PI	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
INT-TSO-22-3	Intersection and Traffic Safety Operations	Rainier Ave S & S Lakeridge Dr	Intersection Improvement	\$1,600,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
INT-TSO-22-9	Intersection and Traffic Safety Operations	12th Ave SW at SW 112th St	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
ITS-12	ITS	Renton Ave S: Seattle city limits (S 112th St) to Renton city limits (S 130th St)	Cameras, vehicle detection, sync signals, fiber	\$280,000	West King County Areas	
IPA-35	Active Transportation	Renton Ave S: 74th Ave S to 75th Ave S	Provide active transportation facility	\$1,110,000	West King County Areas	
IPA-36	Active Transportation	Renton Ave S: 76th Ave S to Renton City Limits	Provide active transportation facility	\$4,005,000	West King County Areas	
IPA-37	Active Transportation	S 114th St: Cornell Ave S to 80th Ave S	Provide active transportation facility	\$1,620,000	West King County Areas	
IPA-38	Active Transportation	S 126th St: 76th Ave S to 78th Ave S	Provide active transportation facility	\$320,000	West King County Areas	
NM-0004	Active Transportation	76th Ave S: S 114th St to S 116th St	Provide active transportation facility	\$670,000	West King County Areas	
NM-0302	Active Transportation	1st Ave SW: From SW 110th St to SW 112th St	Provide active transportation facility	\$540,000	West King County Areas	
NM-15-1	Active Transportation	S Langston Rd: 64th Ave S to S 132nd St	Provide active transportation facility	\$4,970,000	West King County Areas	
NM-15-10	Active Transportation	14th Ave SW: SW 110th St to SW 114th St	Provide active transportation facility	\$760,000	West King County Areas	
NM-15-2	Active Transportation	S 132nd St: S Langston Rd to S 133rd St	Provide active transportation facility	\$1,570,000	West King County Areas	
NM-15-3	Active Transportation	S 120th St: Beacon Ave S to 68th Ave S	Provide active transportation facility	\$2,700,000	West King County Areas	
NM-15-4	Active Transportation	S 133rd St: State Route 900 to S 132nd St	Provide active transportation facility	\$11,180,000	West King County Areas	
NM-15-5	Active Transportation	84th Ave S: Rainier Ave S to S 124th St	Provide active transportation facility	\$15,620,000	West King County Areas	
NM-15-6	Active Transportation	S 120th Pl: 68th Ave S to Skyway Park	Provide active transportation facility	\$1,090,000	West King County Areas	
NM-15-7	Active Transportation	S 123rd St: S 125th St to S 124th St	Provide active transportation facility	\$1,710,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
NM-15-8	Active Transportation	81st PI S/S 124th St: SE side of middle school to 84th Ave S	Provide active transportation facility	\$1,780,000	West King County Areas	
NM-20-22	Active Transportation	S Langston Rd between S 132nd St and 76th Avenue S	Provide active transportation facility	\$1,080,000	West King County Areas	
NM-20-23	Active Transportation	69th Avenue S/S 125th Street between S 128th Street and 70th Avenue S	Provide active transportation facility	\$490,000	West King County Areas	
NM-20-6	Active Transportation	8th Ave S: S 105th St to S 96th St	Provide active transportation facility	\$2,517,000	West King County Areas	
NM-22-1	Active Transportation	57th PI S from State Route 900 to S Langston Rd	Provide active transportation facility	\$1,400,000	West King County Areas	
NM-22-12	Active Transportation	1st Ave S from S 116th St to Myers Way S	Provide active transportation facility	\$9,335,000	West King County Areas	
NM-22-13	Active Transportation	28th Ave SW from SW 102nd St to SW 106th	Provide active transportation facility	\$807,000	West King County Areas	
NM-22-14	Active Transportation	12th Ave SW from SW 106th St to SW 107th St	Provide active transportation facility	\$439,000	West King County Areas	
NM-22-5	Active Transportation	14th Avenue S between S 99th St and existing sidewalk on S 100th Street	Provide active transportation facility	\$446,000	West King County Areas	
NM-22-6	Active Transportation	SW 102nd Street between 13th Avenue SW & 4th Avenue SW	Provide active transportation facility	\$1,859,000	West King County Areas	
NM-22-8	Active Transportation	S 124th Street between 68th Avenue S & 71st Avenue S	Provide active transportation facility	\$864,000	West King County Areas	
NM-4012	Active Transportation	80th Ave S: S 114th St to S 118th St	Provide active transportation facility	\$400,000	West King County Areas	
NM-4077	Active Transportation	SW 112th St: 16th Ave SW to 10th Ave SW	Provide active transportation facility	\$2,160,000	West King County Areas	
NM-5018	Active Transportation	SW 104th St: 15th Ave SW to 17th Ave SW	Provide active transportation facility	\$2,190,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
NM-5020	Active Transportation	8th Ave SW: SW 108th St to SW 100th St	Provide active transportation facility	\$4,790,000	West King County Areas	
NM-5021	Active Transportation	76th Ave S: S 124th St to S 128th St	Provide active transportation facility	\$930,000	West King County Areas	
NM-9920	Active Transportation	28th Ave SW: SW Roxbury St to SW 102nd St	Provide active transportation facility	\$400,000	West King County Areas	
NM-9922	Active Transportation	SW 112th St: 16th Ave SW to 26th Ave SW	Provide active transportation facility	\$1,090,000	West King County Areas	
NM-9930	Active Transportation	SW 112th St: From 2nd Ln SW to 4th Ave SW	Provide active transportation facility	\$1,220,000	West King County Areas	
NM-9936	Active Transportation	75th Ave S / S 122nd St: Renton Ave S to 80th Ave S	Provide active transportation facility	\$1,000,000	West King County Areas	
NM-9937	Active Transportation	S 120th St: 76th Ave S to 80th Ave S	Provide active transportation facility	\$700,000	West King County Areas	
NM-9938	Active Transportation	78th Ave S: S 120th St to S 124th St	Provide active transportation facility	\$1,750,000	West King County Areas	
NM-9939	Active Transportation	76th Ave S: S 120th St to S 124th St	Provide active transportation facility	\$700,000	West King County Areas	
RC-41	Vulnerable Road Segments	68th Ave S: from State Route 900 to Renton city limits	Construct retaining wall	\$3,320,000	West King County Areas	

1439

1440 Map Number 4: Kent/Des Moines

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
CP-15-6	Capacity-Major	S 277th St & 55th Ave S / S Star Lake Rd	Construct congestion relief measures	\$5,090,000	West King County Areas	
CP-5	Capacity-Major	Military Rd S: S 272nd St to S Star Lake Rd	Construct congestion relief measures	\$9,150,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-15-9	Drainage	Green River Rd S & 94th PI S	Replace/Construct drainage infrastructure	\$1,550,000	West King County Areas	
DR-2	Drainage	S 277th St & 55th Ave S	Replace pipe, retaining wall, and signal	\$2,810,000	West King County Areas	
DR-22-23	Drainage	86th Ave S .2 mi north of S 277th St	Replace/Construct drainage infrastructure	\$1,278,000	SE King County	
INT-TSO-22-2	Intersection and Traffic Safety Operations	Military Rd S & S Star Lk Rd (N-Intersection)	Intersection Improvement	\$800,000	West King County Areas	
OP-INT-120	Intersection and Traffic Safety Operations	40th Ave S & S 272nd St	Add turn lanes on 272nd, rebuild traffic signal	\$5,060,000	West King County Areas	
NM-20-25	Active Transportation	Military Rd S from SR 516 to S 240th St	Provide active transportation facility	\$3,830,000	West King County Areas	
NM-20-26	Active Transportation	Military Rd S from S 272nd St to S Star Lake Rd	Provide active transportation facility	\$2,380,000	West King County Areas	
NM-5015	Active Transportation	Green River Rd: Kent city limits (S 259th St) to Kent city limits (S 277th St)	Provide active transportation facility	\$5,950,000	West King County Areas	
VRS-20-14	Vulnerable Road Segments	S 272nd Way debris slump	Construct retaining wall	\$1,120,000	West King County Areas	

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1442 Map Number 5: East Federal Way

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-15-10	Drainage	West Valley Hwy N, 1300 Ft S of S 277th	Replace/Construct drainage infrastructure	\$880,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-13	Drainage	S 370 St east of Enchanted Parkway S	Replace/Construct drainage infrastructure	\$901,000	West King County Areas	
GR-15-29	Guardrail	S 282nd St: 46th Ave SE to 48th Ave SE	Construct guardrail	\$48,000	West King County Areas	
INT-TSO-20-1	Intersection and Traffic Safety Operations	28th Ave S & S 360th St	Intersection Improvement	\$2,850,000	West King County Areas	
INT-TSO-20-2	Intersection and Traffic Safety Operations	Military Rd S & S 342nd St	Intersection Improvement	\$2,920,000	West King County Areas	
INT-TSO-20-3	Intersection and Traffic Safety Operations	48th Ave S & S 288th St	Intersection Improvement	\$2,420,000	West King County Areas	
INT-TSO-20-4	Intersection and Traffic Safety Operations	Military Rd S & 42nd Ave S	Construct turn lanes	\$2,510,000	West King County Areas	
INT-TSO-20-9	Intersection and Traffic Safety Operations	SE Auburn Black Diamond Rd & Green Valley Rd	Intersection Improvement	\$2,420,000	SE King County	
INT-TSO-22-1	Intersection and Traffic Safety Operations	Military Rd S & Peasley Canyon Way S	Intersection Improvement	\$6,500,000	West King County Areas	
INT-TSO-22-10	Intersection and Traffic Safety Operations	42nd Ave S at S 288th St	Replace spanwire signal with mast arms	\$800,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
INT-TSO-22-14	Intersection and Traffic Safety Operations	Military Rd S at 31st Ave S	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
INT-TSO-22-22	Intersection and Traffic Safety Operations	Peasley Canyon Road at S 321st	Intersection Improvement	\$1,200,000	West King County Areas	
INT-TSO-22-8	Intersection and Traffic Safety Operations	3203 S 360th St	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
IPA-25	Intersection and Traffic Safety Operations	Military Rd S & S 360th St	Intersection Improvement	\$5,850,000	West King County Areas	
OP-INT-100	Intersection and Traffic Safety Operations	S 321st St: S Peasley Canyon Rd to 46th Pl S	Reconstruct 321st St approach; expand turn lanes	\$5,400,000	West King County Areas	
OP-RD-48	Intersection and Traffic Safety Operations	S 360th St: State Route 161 to 28th Ave S	Construct turn lanes	\$8,890,000	West King County Areas	
SW-21	Intersection and Traffic Safety Operations	51st Ave S & S 316th St	Intersection Improvement	\$5,400,000	West King County Areas	
SW-73	Intersection and Traffic Safety Operations	46th Pl S & S 321st St	Intersection Improvement	\$4,720,000	West King County Areas	
NM-20-17	Active Transportation	S 304th Street between 32nd Ave S and 37th Ave S	Provide active transportation facility	\$380,000	West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
NM-20-27	Active Transportation	Military Rd S from 31st Ave S to S 320th	Provide active transportation facility	\$13,980,000	West King County Areas	
NM-20-8	Active Transportation	S 285th Pl: 46th Ave S to 48th Ave S	Provide active transportation facility	\$320,000	West King County Areas	
NM-20-9	Active Transportation	S 308th St: 38th Ave S to 42nd Ave S	Provide active transportation facility	\$300,000	West King County Areas	
NM-22-11	Active Transportation	S 298th Street between 36th Place S and 39th Place S	Provide active transportation facility	\$1,318,000	West King County Areas	
NM-22-2	Active Transportation	37th Avenue S from S 300th Place north to existing sidewalk	Provide active transportation facility	\$130,000	West King County Areas	
NM-4066	Active Transportation	28th Ave S: S 349 St to S 360th St	Provide active transportation facility	\$2,020,000	West King County Areas	
NM-5014	Active Transportation	Military Rd S: Federal Way City Limits to State Route 161	Provide active transportation facility	\$47,510,000	West King County Areas	
NM-9970	Active Transportation	34th Ave S: S 288th St to S 298th St	Provide active transportation facility	\$1,460,000	West King County Areas	
NM-9971	Active Transportation	36th Pl S/ S 294 St/ 45 Pl S: S 298th St to S 288th St	Provide active transportation facility	\$2,540,000	West King County Areas	
RC-137	Reconstruction	SE Auburn Black Diamond Rd: Highway 18 to SE Green Valley Rd	Reconstruct roadway	\$1,030,000	SE King County	
RC-138	Reconstruction	SE Auburn Black Diamond Rd: SE Green Valley Rd to SE Lake Holm Dr	Reconstruct roadway	\$1,150,000	SE King County	
RC-139	Reconstruction	SE Auburn Black Diamond Rd: SE Lake Holm Rd to 148th Way SE	Reconstruct roadway	\$13,040,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
RC-140	Reconstruction	SE Lake Holm Rd: SE Auburn Black Diamond Rd to 147th Ave SE	Reconstruct roadway	\$9,810,000	SE King County	*
RC-24	Vulnerable Road Segments	S 304th St: from 32nd Ave S to 37th Ave S	Armor shoulders to reduce road washouts	\$300,000	West King County Areas	
RC-42	Vulnerable Road Segments	Peasley Canyon Way S: S Peasley Canyon Rd to Military Rd S	Construct retaining wall	\$840,000	West King County Areas	
VRS-20-16	Vulnerable Road Segments	S Peasley Canyon Road Shallow Debris Slide	Construct retaining wall	\$11,250,000	West King County Areas	
VRS-20-5	Vulnerable Road Segments	SE Green Valley Road	Elevate roadway	\$110,000	SE King County	

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Map Number 6: Woodinville

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-1136B	Bridge	Woodinville-Duvall Road Bridge Duvall Slough: NE Woodinville Duvall Rd 0.3 mile west of State Route 203	Replace bridge	\$105,600,000	Snoqualmie Valley NE King County	
BR-240A	Bridge	Cottage Lake Creek Bridge: NE 132nd St at Cottage Lake Creek, east of Avondale Rd NE	Replace bridge	\$3,810,000	Bear Creek/Sammamish	
BR-333A	Bridge	Bear Creek Bridge: NE 133rd St at Bear Creek, east of Bear Creek Rd NE	Replace bridge	\$3,710,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-480A	Bridge	Bear Creek Bridge: NE 116th St at Bear Creek, east of Avondale Rd NE	Replace bridge	\$2,360,000	West King County Areas, Bear Creek/Sammamish	
BR-5011	Bridge	Walter Shults Bridge: NE 106th St, 0.1 miles E of Avondale Rd	Replace bridge	\$4,110,000	Bear Creek/Sammamish	
BR-5042	Bridge	Cottage Lake Creek Bridge: NE 130th St, 0.1 miles W of Avondale Rd	Replace bridge	\$4,000,000	Bear Creek/Sammamish	
CP-12	Capacity-Major	Woodinville-Duvall Rd: 171st Ave NE to Avondale Rd NE	Construct congestion relief measures	\$19,520,000	Bear Creek/Sammamish	
CP-15-5	Capacity-Major	Avondale Rd NE: NE 133rd St to NE Woodinville Duvall Rd	Construct congestion relief measures	\$44,090,000	Bear Creek/Sammamish	
CP-15-3	Capacity-Major	W Snoqualmie Valley Rd: NE 124th St to NE Novelty Hill Rd	Construct congestion relief measures	\$10,730,000	Bear Creek/Sammamish	
CP-15-8	Capacity-Major	NE Novelty Hill Rd: 243rd Ave NE to W Snoqualmie Valley Rd NE	Construct congestion relief measures	\$92,010,000	Bear Creek/Sammamish	
CP-16	Capacity-Major	NE Woodinville Duvall Rd: Avondale Rd NE to 194th Ave NE	Construct congestion relief measures	\$4,550,000	Bear Creek/Sammamish	
CP-8	Capacity-Major	Novelty Hill Rd: 197th Pl NE to 234th Pl NE	Construct congestion relief measures	\$51,900,000	Bear Creek/Sammamish	
OP-RD-52	Capacity-Major	NE 128th St/Avondale Rd NE/NE 132nd St: 181st Ave NE to NE 133rd St	Construct congestion relief measures	\$40,140,000	Bear Creek/Sammamish, West King County Areas	
DR-15-1	Drainage	185th Ave NE, north of NE 179th St	Elevate roadway	\$4,891,000	Bear Creek/Sammamish	
DR-15-7	Drainage	NE 124th St & 162nd Pl NE	Replace/Construct drainage infrastructure	\$630,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-12	Drainage	NE Woodinville Duvall Rd at NE 172 St	Replace/Construct drainage infrastructure	\$5,330,000	Bear Creek/Sammamish	
DR-20-3	Drainage	18430 NE 128 St	Replace/Construct drainage infrastructure	\$810,000	Bear Creek/Sammamish	
DR-20-31	Drainage	243 Ave NE at NE Novelty Hill Rd	Replace/Construct drainage infrastructure	\$170,000	Bear Creek/Sammamish	
DR-20-33	Drainage	NE 138 St West & SR 203	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
DR-20-41	Drainage	15165 148 Ave NE	Replace/Construct drainage infrastructure	\$1,010,000	Bear Creek/Sammamish	
DR-20-47	Drainage	NE 133 St & 227 Ave NE	Replace/Construct drainage infrastructure	\$840,000	Bear Creek/Sammamish	
DR-20-50	Drainage	17502 NE 131 St	Replace/Construct drainage infrastructure	\$670,000	West King County Areas	
DR-20-53	Drainage	148 Ave NE & 140 PI NE	Replace/Construct drainage infrastructure	\$1,010,000	Bear Creek/Sammamish	
DR-20-54	Drainage	148th Ave NE & 140th PI NE	Replace/Construct drainage infrastructure	\$1,010,000	Bear Creek/Sammamish	
DR-20-56	Drainage	16116 140 PI NE	Replace/Construct drainage infrastructure	\$1,350,000	Bear Creek/Sammamish	
DR-20-59	Drainage	NE Woodinville-Duvall Rd at NE Old Woodinville-Duvall Rd	Replace/Construct drainage infrastructure	\$1,350,000	Bear Creek/Sammamish	
DR-20-60	Drainage	187th Ave NE & NE 161st PI	Replace/Construct drainage infrastructure	\$670,000	Bear Creek/Sammamish	
DR-20-61	Drainage	20229 NE 198 St	Replace/Construct drainage infrastructure	\$670,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-66	Drainage	NE 124th St and SR 203	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	*
DR-20-69	Drainage	19020 NE Woodinville/Duvall Rd	Replace/Construct drainage infrastructure	\$1,690,000	Bear Creek/Sammamish	
DR-20-7	Drainage	Avondale Rd NE at NE 144 PI	Replace/Construct drainage infrastructure	\$1,820,000	Bear Creek/Sammamish	
DR-20-70	Drainage	12527 183 Ave NE	Replace/Construct drainage infrastructure	\$340,000	West King County Areas	
DR-20-8	Drainage	NE 165 St at 176 NE	Replace/Construct drainage infrastructure	\$920,000	Bear Creek/Sammamish	
DR-22-25	Drainage	Avondale Rd NE north of NE 151st St	Replace/Construct drainage infrastructure	\$7,711,000	Bear Creek/Sammamish	
DR-22-43	Drainage	NE Woodinville-Duvall Rd east of 176th Ave NE	Replace/Construct drainage infrastructure	\$4,984,000	Bear Creek/Sammamish	
GR-15-21	Guardrail	NE Redmond Rd: NE Novelty Hill Rd and 204th Ave NE	Construct guardrail	\$150,000	Bear Creek/Sammamish	
GR-22-11	Guardrail	Walter Shults Bridge (#5011) on NE 106th St 0.1 Mi E of Avondale Rd	Upgrade bridge rail	\$110,000	Bear Creek/Sammamish	
GR-22-18	Guardrail	Bear Creek Bridge (#480A) on NE 116th St 0.1 Mi E of Avondale	Upgrade bridge rail	\$150,000	Bear Creek/Sammamish	
GR-22-26	Guardrail	Woodinville-Duvall Bridge (#1136E) on Woodinville Duvall Rd 0.9 Mi W of SR-203	Upgrade bridge rail	\$150,000	Snoqualmie Valley NE King County	
GR-22-35	Guardrail	Woodinville-Duvall Rd Bridge (#1136D) on Woodinville Duvall Rd 0.8 Mi W of SR-203	Upgrade bridge rail	\$220,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
INT-TSO-20-11	Intersection and Traffic Safety Operations	Novelty Hill Rd & NE Redmond Rd	Construct roundabout	\$3,500,000	Bear Creek/Sammamish	
INT-TSO-20-13	Intersection and Traffic Safety Operations	NE Woodinville-Duvall Rd & 194th Ave NE	Construct turn lanes	\$2,320,000	Bear Creek/Sammamish	
INT-TSO-22-12	Intersection and Traffic Safety Operations	172nd Ave NE & NE 128th St	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
INT-TSO-22-13	Intersection and Traffic Safety Operations	Woodinville Duvall Rd at 182nd Ave NE	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-15	Intersection and Traffic Safety Operations	Avondale Rd NE at Cottage Lake Elem	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-16	Intersection and Traffic Safety Operations	Avondale Rd NE at NE 132nd St	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-17	Intersection and Traffic Safety Operations	Avondale Rd NE at NE 151st Trail Crossing	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-19	Intersection and Traffic Safety Operations	Bear Creek Rd at NE 133rd St	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-20	Intersection and Traffic Safety Operations	Novelty Hill Rd at 208th Ave NE	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
INT-TSO-22-21	Intersection and Traffic Safety Operations	Novelty Hill Rd at W Snoqualmie Valley Rd	Replace spanwire signal with mast arms	\$800,000	Snoqualmie Valley NE King County	
INT-TSO-22-5	Intersection and Traffic Safety Operations	Avondale Rd NE & Woodinville Duvall Rd	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
INT-TSO-22-6	Intersection and Traffic Safety Operations	Avondale Rd NE & NE 128th St	Replace spanwire signal with mast arms	\$800,000	Bear Creek/Sammamish	
IPA-23	Intersection and Traffic Safety Operations	162nd PI NE & NE 124th St	Intersection Improvement	\$3,940,000	West King County Areas	
IPA-40	Intersection and Traffic Safety Operations	NE Woodinville-Duvall Rd & West Snoqualmie Valley Rd NE	Intersection and drainage improvements	\$7,710,000	Snoqualmie Valley NE King County, Bear Creek/Sammamish	
OP-INT-122	Intersection and Traffic Safety Operations	NE 124th St & West Snoqualmie Valley Rd NE	Construct turn pockets and replace signal	\$5,770,000	Snoqualmie Valley NE King County	
OP-INT-81	Intersection and Traffic Safety Operations	155th Ave NE & NE 146th PI	Reconstruct intersection to improve sight distance	\$3,090,000	Bear Creek/Sammamish	
OP-INT-99	Intersection and Traffic Safety Operations	Avondale Road NE & NE 165th St	Turn lanes, replace traffic signal	\$5,230,000	Bear Creek/Sammamish	
ITS-13	ITS	NE Woodinville Duvall Rd: 212th Ave NE to Duvall city limits	Install weather sensors, travel time equipment	\$130,000	Bear Creek/Sammamish, Snoqualmie Valley NE King County	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
ITS-16	ITS	NE 124th Way/NE 128th St: Redmond city limits to Avondale Road NE	Cameras, vehicle and flood detection	\$4,160,000	West King County Areas, Bear Creek/Sammamish	
ITS-18	ITS	W Snoqualmie Valley Rd NE: NE Woodinville Duvall Road to Ames Lake Carnation Rd NE	Vehicle detection, flood detection, cameras	\$930,000	Snoqualmie Valley NE King County	*
ITS-35	ITS	NE Novelty Hill Rd: 208th Ave NE to West Snoqualmie Valley Road	Weather sensors, travel time, and EB DMS	\$220,000	Bear Creek/Sammamish	
NM-20-7	Active Transportation	NE 150th St: 216th Ave NE to 221st Ave NE	Provide active transportation facility	\$1,520,000	Bear Creek/Sammamish	
NM-5001	Active Transportation	204th Ave NE/NE 198th St/197th Ave: NE Woodinville Duvall Rd to Snohomish County line	Provide active transportation facility	\$11,230,000	Bear Creek/Sammamish	
NM-5002	Active Transportation	NE Woodinville Duvall Rd: Avondale Rd NE to Duvall city limits	Provide active transportation facility	\$29,530,000	Bear Creek/Sammamish, Snoqualmie Valley NE King County	
NM-5026	Active Transportation	172nd Ave NE: NE 134th PI to NE 125th St	Provide active transportation facility	\$3,340,000	West King County Areas	
NM-5027	Active Transportation	171st/174th Ave NE: NE Woodinville Duvall Rd to NE 172nd PI	Provide active transportation facility	\$3,520,000	Bear Creek/Sammamish	
OP-RD-18	Reconstruction	NE 175 St/NE 172nd PI NE: 164th Ave NE to 174th Ave NE	Reconstruct roadway	\$3,760,000	Bear Creek/Sammamish	
OP-RD-45	Reconstruction	232nd Ave NE: NE 142nd PI to Old Woodinville Duvall Rd	Reconstruct roadway	\$9,750,000	Bear Creek/Sammamish	
OP-RD-7	Reconstruction	NE 165th St: 179th PI NE to 183rd PI NE	Reconstruct roadway	\$3,080,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
OP-RD-9	Reconstruction	NE Old Woodinville-Duvall Rd: NE Woodinville-Duvall Rd to NE Woodinville-Duvall Rd	Reconstruct roadway	\$10,020,000	Bear Creek/Sammamish	
RC-113	Reconstruction	West Snoqualmie Valley Rd NE: NE 124th St to NE Novelty Hill Rd	Reconstruct roadway	\$1,980,000	Snoqualmie Valley NE King County	
RC-151	Reconstruction	Avondale Rd NE: NE 133rd St to NE Woodinville Duvall Road	Reconstruct roadway	\$37,400,000	Bear Creek/Sammamish	
RC-150	Vulnerable Road Segments	West Snoqualmie Valley Rd NE: Snohomish County line to NE Woodinville Duvall Rd	Replace seawall	\$4,610,000	Snoqualmie Valley NE King County	
RC-39	Vulnerable Road Segments	West Snoqualmie Valley Rd NE: NE 124th St to Ames Lake Carnation Rd NE	Construct retaining wall to prevent slides	\$4,940,000	Snoqualmie Valley NE King County	*
RC-43	Vulnerable Road Segments	NE Woodinville Duvall Rd: Old Woodinville-Duvall Rd to W Snoqualmie Valley Rd NE	Construct retaining wall	\$730,000	Bear Creek/Sammamish, Snoqualmie Valley NE King County	
RC-48	Vulnerable Road Segments	NE 146th Pl: Woodinville city limits to 155th Ave NE	Construct retaining wall	\$180,000	Bear Creek/Sammamish	
VRS-20-1	Vulnerable Road Segments	NE 124th St, NE Woodinville Duvall Rd, NE Carnation Farm Rd, Tolt Hill Rd	Study major cross-Snoqualmie Valley roadways to determine cost effectiveness of flood-improvement.	\$560,000	Snoqualmie Valley NE King County	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
VRS-20-20	Vulnerable Road Segments	NE 124 St east of 162 Way NE	Reinforce slope	\$560,000	West King County Areas	
VRS-22-3	Vulnerable Road Segments	NE 165th St near Cottage Lake	Raise roadway to reduce flood risk	\$745,000	Bear Creek/Sammamish	

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Map Number 7: Redmond/Sammamish

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-180A	Bridge	Evans Creek Bridge: NE 50th St, about 0.1 mile west of State Route 202	Replace bridge	\$1,660,000	Bear Creek/Sammamish	
BR-578A	Bridge	Evans Creek Bridge: 196th Ave NE, 0.1 miles S of SR-202	Replace bridge	\$3,660,000	Bear Creek/Sammamish	
CP-15-1	Capacity-Major	NE Union Hill Rd: 196th Ave NE to 208th Ave NE	Construct congestion relief measures	\$15,230,000	Bear Creek/Sammamish	
OP-RD-5	Capacity-Major	NE Union Hill Rd: 208th Ave NE to 238th Ave NE	Construct congestion relief measures	\$22,850,000	Bear Creek/Sammamish	
DR-20-30	Drainage	208 Ave NE at NE 89 St	Replace/Construct drainage infrastructure	\$670,000	Bear Creek/Sammamish	
DR-20-4	Drainage	238 Ave NE at NE 70 St	Replace/Construct drainage infrastructure	\$1,841,000	Bear Creek/Sammamish	
DR-20-40	Drainage	NE Union Hill Rd & 247 Ave NE	Replace/Construct drainage infrastructure	\$670,000	Bear Creek/Sammamish	
DR-20-9	Drainage	NE 80 St at 240 PI NE	Replace/Construct drainage infrastructure	\$4,861,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-22-3	Drainage	4810 236 Ave NE	Replace/Construct drainage infrastructure	\$1,680,000	Bear Creek/Sammamish	
DR-22-8	Drainage	NE 45 St & 260 Ave NE	Replace/Construct drainage infrastructure	\$1,800,000	Bear Creek/Sammamish	
DR-7	Drainage	NE 40th St & 264th Ave NE (Dry Creek)	Replace/Construct drainage infrastructure	\$710,000	Bear Creek/Sammamish	
GR-15-27	Guardrail	NE 50th St: 196th Ave NE to Sahalee Way NE	Construct guardrail	\$240,000	Bear Creek/Sammamish	
GR-22-27	Guardrail	Evans Creek Bridge (#578A) on 196th Ave NE 0.1 Mi S of SR-202	Upgrade bridge rail	\$130,000	Bear Creek/Sammamish	
OP-INT-113	Intersection and Traffic Safety Operations	208th Ave NE & NE Union Hill Rd	Construct turn lanes	\$2,470,000	Bear Creek/Sammamish	
SW-51	Intersection and Traffic Safety Operations	238th Ave NE & NE 63rd Pl	Intersection Improvement	\$3,940,000	Bear Creek/Sammamish	
ITS-11	ITS	NE Union Hill Rd: 238th Ave NE to NE Ames Lake Rd	Cameras, speed warning system, vehicle detection	\$260,000	Bear Creek/Sammamish	*
ITS-18	ITS	W Snoqualmie Valley Rd NE: NE Woodinville Duvall Road to Ames Lake Carnation Rd NE	Vehicle detection, flood detection, cameras	\$930,000	Snoqualmie Valley NE King County	*
ITS-20	ITS	NE Union Hill Rd: 196th Ave NE to 238rd Ave NE	Utilize fiber between 196th and 208th Ave NE, curve warning system, weather station, and travel time equipment	\$380,000	Bear Creek/Sammamish	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
NM-20-24	Active Transportation	208th Ave NE: NE Union Hill Road to 204th PI NE	Provide active transportation facility	\$4,990,000	Bear Creek/Sammamish	
RC-116	Reconstruction	NE Union Hill Rd: 238th Ave NE to 258th Ave NE	Reconstruct roadway	\$7,770,000	Bear Creek/Sammamish	
RC-35	Vulnerable Road Segments	NE 50th St: 214th Ave NE to State Route 202	Armor shoulders to reduce road washouts	\$100,000	Bear Creek/Sammamish	
RC-38	Vulnerable Road Segments	NE 100th St: West Snoqualmie Valley Rd to 284th Ave NE	Armor shoulders to reduce road washouts	\$890,000	Snoqualmie Valley NE King County	*
RC-39	Vulnerable Road Segments	West Snoqualmie Valley Rd NE: NE 124th St to Ames Lake Carnation Rd NE	Construct retaining wall to prevent slides	\$4,940,000	Snoqualmie Valley NE King County	*
RC-44	Vulnerable Road Segments	NE Union Hill Rd: 196th Ave NE to 206th PI NE	Construct retaining wall	\$240,000	Bear Creek/Sammamish	
RC-51	Vulnerable Road Segments	NE Union Hill Rd: 229th PI NE to 238th Ave NE	Construct retaining wall	\$3,230,000	Bear Creek/Sammamish	
VRS-20-10	Vulnerable Road Segments	NE 8th St at Lake Allen Outlet	Study culvert replacement and road-raising options and implement flood reduction measures.	\$3,150,000	Bear Creek/Sammamish	
VRS-20-18	Vulnerable Road Segments	NE Ames Lake Road	Construct retaining wall and/or flatten slope	\$560,000	Bear Creek/Sammamish	
VRS-22-1	Vulnerable Road Segments	264th Ave NE off of SR-202	Raise roadway to reduce flood risk	\$2,700,000	Bear Creek/Sammamish	

1448 Map Number 8: Newcastle/Issaquah

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
CP-15-2	Capacity-Major	Issaquah Hobart Rd SE: Issaquah city limits to Cedar Grove Rd SE	Construct congestion relief measures	\$45,850,000	Four Creeks/Tiger Mountain	*
GR-15-34	Guardrail	169th Ave SE/SE Licorice Way: SE 112th St to end of road (173rd Ave SE)	Construct guardrail	\$84,000	Four Creeks/Tiger Mountain	
GR-22-6	Guardrail	May Creek Bridge (#593C) on 164th Ave SE .05 Mi N of SR-900	Upgrade bridge rail	\$180,000	Four Creeks/Tiger Mountain	
OP-RD-24	Intersection and Traffic Safety Operations	SE May Valley Rd: Renton city limits (148th Ave SE) to State Route 900	Widen travel lanes	\$17,770,000	Four Creeks/Tiger Mountain, West King County Areas	
ITS-15	ITS	Issaquah Hobart Road: Issaquah City Limits to SR 18	Cameras, message signs, weather stations, and travel time equipment	\$1,080,000	Four Creeks/Tiger Mountain	*
ITS-34	ITS	164th Ave SE: SE 128th St to SE May Valley Rd	Cameras, data collection station, weather station	\$120,000	Four Creeks/Tiger Mountain	*
RC-118	Reconstruction	Issaquah Hobart Rd SE: S Issaquah city limits to SE May Valley Rd	Reconstruct roadway	\$9,850,000	Four Creeks/Tiger Mountain	*

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1450 Map Number 9: East Renton/Lake Youngs

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-1741A	Bridge	Issaquah Creek Bridge: 252nd Ave SE at Issaquah Creek, south of Issaquah Hobart Rd SE	Replace bridge	\$16,430,000	Four Creeks/Tiger Mountain	
BR-3109A	Bridge	Soos Creek Bridge: SE 216th St at Big Soos Creek, about 0.3 mile east of 132nd Ave SE	Replace bridge	\$5,410,000	West King County Areas, Greater Maple Valley/Cedar River	
BR-3109B	Bridge	Lake Youngs Way Bridge: SE Lake Youngs Way at Big Soos Creek. 0.3 miles northeast of SE 208th St	Replace bridge	\$3,200,000	West King County Areas	
BR-3110	Bridge	Soos Creek Bridge: SE 208th St at Big Soos Creek 0.3 Mi E of SE 204th	Replace bridge	\$2,930,000	West King County Areas	
BR-3202	Bridge	Maxwell Road Bridge: 225th Ave SE/Maxwell Rd SE cattle crossing	Replace bridge	\$1,660,000	Greater Maple Valley/Cedar River	
BR-493C	Bridge	Fifteen Mile Creek Bridge: SE May Valley Rd at Fifteenmile Creek, west of Issaquah Hobart Rd SE	Replace bridge	\$6,000,000	Four Creeks/Tiger Mountain	
BR-83D	Bridge	Issaquah Creek Bridge: Cedar Grove Rd, 2 miles E of SR 169	Replace bridge	\$16,570,000	Four Creeks/Tiger Mountain	
CP-15	Capacity-Major	140th Ave SE & SE Petrovitsky Rd	Construct congestion relief measures	\$14,930,000	West King County Areas	
CP-15-2	Capacity-Major	Issaquah Hobart Rd SE: Issaquah city limits to Cedar Grove Rd SE	Construct congestion relief measures	\$45,850,000	Four Creeks/Tiger Mountain	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
CP-15-4	Capacity-Major	SE Petrovitsky Rd: 151st Ave SE to SE 184th St	Construct congestion relief measures	\$19,930,000	West King County Areas	
OP-RD-25	Capacity-Major	154 PI SE / SE 142 PI: SE Jones Rd to 156th Ave SE (Renton city limits)	Construct congestion relief measures	\$8,390,000	West King County Areas	
DR-20-1	Drainage	13515 208 Ave SE	Replace/Construct drainage infrastructure	\$1,501,000	Four Creeks/Tiger Mountain	
DR-20-16	Drainage	SE Fairwood Blvd at 151 Ave SE	Replace/Construct drainage infrastructure	\$4,860,000	West King County Areas	
DR-20-17	Drainage	SE Petrovitsky RD at 134 Ave SE	Replace/Construct drainage infrastructure	\$4,860,000	West King County Areas	
DR-20-24	Drainage	134 Ave SE at SE 187 PI	Replace/Construct drainage infrastructure	\$3,040,000	West King County Areas	
DR-20-48	Drainage	20530 140 Ave SE	Replace/Construct drainage infrastructure	\$840,000	Greater Maple Valley/Cedar River	
DR-20-57	Drainage	21015 148 Ave SE	Replace/Construct drainage infrastructure	\$1,010,000	Greater Maple Valley/Cedar River	
DR-20-68	Drainage	26803 SE 200 St	Replace/Construct drainage infrastructure	\$510,000	Greater Maple Valley/Cedar River	
DR-22-12	Drainage	Issaquah Hobart Rd SE at SE 132 Way	Replace/Construct drainage infrastructure	\$1,800,000	Four Creeks/Tiger Mountain	
DR-22-16	Drainage	26803 SE 200th St	Replace/Construct drainage infrastructure	\$1,800,000	Greater Maple Valley/Cedar River	
DR-22-17	Drainage	17601 SE Jones Rd	Replace/Construct drainage infrastructure	\$840,000	Greater Maple Valley/Cedar River	
DR-22-39	Drainage	208 SE at SE 135	Replace/Construct drainage infrastructure	\$1,500,000	Four Creeks/Tiger Mountain	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-22-6	Drainage	Issaquah Hobart Rd & SE 156 St	Replace/Construct drainage infrastructure	\$1,680,000	Four Creeks/Tiger Mountain	
GR-15-35	Guardrail	SE 156th St: SE Cedar Grove Rd to Issaquah Hobart Rd SE	Construct guardrail	\$48,000	Four Creeks/Tiger Mountain	
GR-15-36	Guardrail	SE Mirrmont Dr: Issaquah Hobart Rd SE to Tiger Mountain Rd SE	Replace jersey barrier with improved barrier	\$96,000	Four Creeks/Tiger Mountain	
GR-15-38	Guardrail	184th Ave SE / Peter Grubb Rd: SE Lake Youngs Rd to SE 224th St	Construct guardrail	\$42,000	Greater Maple Valley/Cedar River	*
GR-22-13	Guardrail	Soos Creek Bridge (#3109A) on SE 216th St 0.3 Mi E of 132nd Ave SE	Upgrade bridge rail	\$140,000	West King County Areas	
GR-22-22	Guardrail	Jem Creek Bridge (#3099A) on SE 206th St 0.5 Mi E of SR 169	Upgrade bridge rail	\$160,000	Greater Maple Valley/Cedar River	
GR-22-30	Guardrail	Issaquah Creek Bridge (#83B) on SE 156th St 2 Mi E of SR 169	Upgrade bridge rail	\$200,000	Four Creeks/Tiger Mountain	
GR-22-31	Guardrail	Issaquah Creek Bridge (#1741A) on 252nd Ave SE (Issaq) 0.1 Mi S of Issaquah Hobart Rd	Upgrade bridge rail	\$160,000	Four Creeks/Tiger Mountain	
INT-TSO-20-5	Intersection and Traffic Safety Operations	SE Petrovitsky Rd & 162nd PI SE	Intersection Improvement	\$3,550,000	West King County Areas	
INT-TSO-20-6	Intersection and Traffic Safety Operations	Issaquah Hobart Rd SE & SE Cedar Grove Rd	Intersection Improvement	\$6,640,000	Four Creeks/Tiger Mountain	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
INT-TSO-20-7	Intersection and Traffic Safety Operations	148th Ave SE & SE 208th St	Intersection Improvement	\$3,940,000	Greater Maple Valley/Cedar River	
INT-TSO-20-8	Intersection and Traffic Safety Operations	SE Petrovitsky & 140th Ave SE	Replace and upgrade signal equipment and detection	\$1,050,000	West King County Areas	
INT-TSO-22-7	Intersection and Traffic Safety Operations	Patriot Way & SE 128th St	Replace spanwire signal with mast arms	\$800,000	Four Creeks/Tiger Mountain	
IPA-1	Intersection and Traffic Safety Operations	SE Petrovitsky Rd: 140th Ave SE to 143rd Ave SE	Street lighting for existing turn lanes and tapers	\$480,000	West King County Areas	
OP-INT-124	Intersection and Traffic Safety Operations	Issaquah Hobart Rd SE & SE May Valley Rd	Intersection Improvement	\$6,880,000	Four Creeks/Tiger Mountain	
OP-RD-22	Intersection and Traffic Safety Operations	SE May Valley Rd: SE 128th Way to Issaquah Hobart Rd SE	Widen travel lanes	\$22,610,000	Four Creeks/Tiger Mountain	
OP-RD-26	Intersection and Traffic Safety Operations	SE May Valley Rd: State Route 900 to SE 128th Way	Improve sight distance	\$14,290,000	Four Creeks/Tiger Mountain	
SW-81	Intersection and Traffic Safety Operations	140th Ave SE & SE 200th St	Construct turn lanes	\$2,440,000	West King County Areas	
ITS-15	ITS	Issaquah Hobart Rd: Issaquah City Limits to SR 18	Cameras, message signs, weather stations, and travel time equipment	\$1,080,000	Four Creeks/Tiger Mountain	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
ITS-19	ITS	154th PI SE / SE 142nd PI: State Route 169 to 156th Ave SE	Cameras, pavement sensors, speed warning system	\$300,000	West King County Areas	
ITS-24	ITS	SE Petrovitsky Rd: 151st Ave SE to SR 18	Cameras, vehicle detection, data collection station, weather station, DMS, Travel time (to 134th)	\$830,000	Greater Maple Valley/Cedar River, West King County Areas	*
ITS-28	ITS	SE 128th St: 158th Ave SE to SE May Valley Rd	Cameras, data collection station, weather station, curve warning system	\$440,000	Four Creeks/Tiger Mountain, West King County Areas	
ITS-29	ITS	SE May Valley Rd: State Route 900 to Issaquah Hobart Rd SE	Cameras, vehicle detection, road weather sensors, travel time equipment	\$420,000	Four Creeks/Tiger Mountain	
ITS-34	ITS	164th Ave SE: SE 128th St to SE May Valley Rd	Cameras, data collection station, weather station	\$120,000	Four Creeks/Tiger Mountain	*
NM-20-4	Active Transportation	169th Ave SE: SE 136th St to SE 144th St	Provide active transportation facility	\$5,620,000	West King County Areas	
NM-22-3	Active Transportation	171st Ave SE between SE 136th St and SE 144th St	Provide active transportation facility	\$4,010,000	West King County Areas	
NM-22-4	Active Transportation	SE 144th Street between 169th Ave SE and Renton/KC Boundary	Provide active transportation facility	\$3,554,000	West King County Areas	
NM-22-7	Active Transportation	SE 192nd St between 140th Ave SE to 146th Ave SE	Provide active transportation facility	\$4,246,000	West King County Areas	
NM-5038	Active Transportation	SE 208th St: 148th Ave SE to Kent city limits	Provide active transportation facility	\$3,780,000	Greater Maple Valley/Cedar River, West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
RC-118	Reconstruction	Issaquah Hobart Rd SE: S Issaquah city limits to SE May Valley Rd	Reconstruct roadway	\$9,850,000	Four Creeks/Tiger Mountain	*
RC-119	Reconstruction	Issaquah Hobart Rd SE: SE May Valley Rd to Cedar Grove Rd SE	Reconstruct roadway	\$12,920,000	Four Creeks/Tiger Mountain	
RC-120	Reconstruction	Issaquah Hobart Rd SE: SE 156th St to Cedar Grove Rd SE	Reconstruct roadway	\$11,270,000	Four Creeks/Tiger Mountain	
RC-121	Reconstruction	Issaquah Hobart Rd SE: SE 156th St to Highway 18	Reconstruct roadway	\$17,530,000	Four Creeks/Tiger Mountain	*
RC-129	Reconstruction	SE 216th Way: State Route 169 to 244th Ave SE	Reconstruct roadway	\$8,400,000	Greater Maple Valley/Cedar River	*
RC-3	Reconstruction	SE Petrovitsky Rd: 134th Ave SE to 143rd Ave SE	Reconstruct roadway	\$10,750,000	West King County Areas	
RC-50	Vulnerable Road Segments	196th Ave SE: SE 162nd St to SE 170th St	Construct retaining wall	\$1,420,000	Greater Maple Valley/Cedar River	
VRS-20-4	Vulnerable Road Segments	Cedar Grove Road	Elevate roadway	\$110,000	Greater Maple Valley/Cedar River	

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1452 Map Number 10: Covington/Black Diamond

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-3085	Bridge	Covington Bridge: Covington-Sawyer Rd at Jenkins Creek 0.7 Mi SE of SR-516	Replace bridge	\$16,820,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-3086OX	Bridge	Berrydale OX Bridge: Kent Black Diamond Rd SE over the railroad, at SE 292nd St (Jenkins Creek)	Replace bridge	\$15,290,000	SE King County	
BR-3108	Bridge	Soos Creek Bridge: 148th Ave SE at Soos Creek, about 0.2 mile north of SE 240th	Replace bridge	\$3,660,000	West King County Areas	
DR-10	Drainage	SE 240th St & 172nd Ave SE at Little Soos Creek	Replace undersized culvert with a bridge structure	\$5,281,000	Greater Maple Valley/Cedar River	
DR-15-17	Drainage	Kent Black Diamond Rd SE & SE 292nd St at Jenkins Creek	Replace/Construct drainage infrastructure	\$4,649,000	SE King County	
DR-20-14	Drainage	SE 317 Pl and Thomas Rd SE	Replace/Construct drainage infrastructure	\$1,801,000	SE King County	
DR-20-43	Drainage	156 Ave SE and SE 240 St	Replace/Construct drainage infrastructure	\$4,298,000	Greater Maple Valley/Cedar River	
DR-22-11	Drainage	29030 188th Ave SE	Replace/Construct drainage infrastructure	\$1,680,000	SE King County	
DR-22-20	Drainage	268th Ave SE south of SE 273rd Pl	Replace/Construct drainage infrastructure	\$2,598,000	Greater Maple Valley/Cedar River	
DR-22-42	Drainage	SE Ravensdale Way south of 272nd Ave SE	Replace/Construct drainage infrastructure	\$6,293,000	Greater Maple Valley/Cedar River	
DR-22-7	Drainage	156th Ave SE & SE 234th St	Replace/Construct drainage infrastructure	\$1,440,000	Greater Maple Valley/Cedar River	
DR-22-9	Drainage	SE 224 St, 150 feet east of #18023	Replace/Construct drainage infrastructure	\$1,680,000	Greater Maple Valley/Cedar River	
DR-9	Drainage	164th Ave SE & SE 225th St	Replace/Construct drainage infrastructure	\$1,410,000	Greater Maple Valley/Cedar River	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
GR-15-25	Guardrail	SE 224th St: 244th Ave SE to 276th Ave SE	Construct guardrail	\$120,000	Greater Maple Valley/Cedar River	*
GR-15-38	Guardrail	184th Ave SE / Peter Grubb Rd: SE Lake Youngs Rd to SE 224th St	Construct guardrail	\$42,000	Greater Maple Valley/Cedar River	*
GR-22-17	Guardrail	Berrydale OX Bridge (#3086OX) on SE Kent-Black Diamond Rd at SE 291st	Upgrade bridge rail	\$610,000	SE King County	
GR-22-28	Guardrail	Covington Bridge (#3085) on Covington-Sawyer Rd 0.7 Mi SE of SR 516	Upgrade bridge rail	\$210,000	SE King County	
GR-88	Guardrail	156th Ave SE: SE 240th St to SE 251st St/Covington city limits	Construct guardrail	\$60,000	Greater Maple Valley/Cedar River	
INT-TSO-22-11	Intersection and Traffic Safety Operations	Soos Creek Trail at SE 240th St	Replace spanwire signal with mast arms	\$800,000	West King County Areas	
INT-TSO-22-23	Intersection and Traffic Safety Operations	Covington Way SE east of 164th Place SE	Sightline improvement	\$1,770,000	SE King County	
INT-TSO-22-4	Intersection and Traffic Safety Operations	SE 240th Street & 172nd Ave SE	Vertical Realignment	\$1,600,000	Greater Maple Valley/Cedar River	
IPA-33	Intersection and Traffic Safety Operations	164th PI SE & SE Covington-Sawyer Rd	Intersection Improvement	\$4,260,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
OP-RD-41	Intersection and Traffic Safety Operations	SE Covington-Sawyer Rd: Thomas Rd to 216th Ave SE	Realign roadway	\$21,030,000	SE King County, West King County Areas	
SW-20	Intersection and Traffic Safety Operations	148th Ave SE & SE 224th St	Intersection Improvement	\$4,720,000	Greater Maple Valley/Cedar River	
SW-56	Intersection and Traffic Safety Operations	164th Ave SE & SE 240th St	Intersection Improvement	\$3,940,000	Greater Maple Valley/Cedar River	
ITS-24	ITS	SE Petrovitsky Rd: 151st Ave SE to Highway 18	Cameras, vehicle detection, data collection station, weather station, DMS, Travel time (to 134th)	\$830,000	Greater Maple Valley/Cedar River, West King County Areas	*
NM-0202	Active Transportation	195th Ave SE: E Lake Morton Dr SE to SE 320th St	Provide active transportation facility	\$300,000	SE King County	
NM-20-5	Active Transportation	SE Covington Sawyer Way: 164th Pl SE to 216th Ave SE	Provide active transportation facility	\$9,310,000	SE King County, West King County Areas	
NM-4033	Active Transportation	164th Ave SE: SE 224th St to SE 240th St	Provide active transportation facility	\$2,500,000	Greater Maple Valley/Cedar River	
NM-4041	Active Transportation	SE 240th St: 156th Ave SE to 172nd Ave SE	Provide active transportation facility	\$4,290,000	Greater Maple Valley/Cedar River	
NM-5034	Active Transportation	168th Ave SE: Kent-Black Diamond Rd SE to SE Auburn Black Diamond Rd	Provide active transportation facility	\$4,540,000	SE King County	
NM-5049	Active Transportation	SE 216th St: 276th Ave SE to Maxwell Rd SE	Provide active transportation facility	\$11,910,000	Greater Maple Valley/Cedar River	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
NM-5051	Active Transportation	Black Diamond-Ravensdale Rd SE: State Route 169 to SE Kent-Kangley Rd	Provide active transportation facility	\$17,760,000	Greater Maple Valley/Cedar River	*
NM-5068	Active Transportation	SE 240th St: 148th Ave SE to 164th Ave SE	Provide active transportation facility	\$5,530,000	Greater Maple Valley/Cedar River, West King County Areas	
NM-5069	Active Transportation	SE 240th St: 164th Ave SE to 180th Ave SE	Provide active transportation facility	\$5,510,000	Greater Maple Valley/Cedar River	
NM-9980	Active Transportation	168th Way SE & Covington Creek	Construct pedestrian bridge	\$2,590,000	SE King County	
RC-129	Reconstruction	SE 216th Way: State Route 169 to 244th Ave SE	Reconstruct roadway	\$8,400,000	Greater Maple Valley/Cedar River	*
RC-130	Reconstruction	SE 216th St: 244th Ave SE to 276th Ave SE	Reconstruct roadway	\$11,320,000	Greater Maple Valley/Cedar River	*
RC-132	Reconstruction	SE Kent-Kangley Rd: Kent city limits to Landsburg Rd SE	Reconstruct roadway	\$8,030,000	Greater Maple Valley/Cedar River	*
RC-135	Reconstruction	SE Ravensdale Way: SE Kent-Kangley Rd to 268th Ave SE	Reconstruct roadway	\$3,080,000	Greater Maple Valley/Cedar River	*
RC-139	Reconstruction	SE Auburn Black Diamond Rd: SE Lake Holm Rd to 148th Way SE	Reconstruct roadway	\$13,040,000	SE King County	*
RC-15-3	Reconstruction	SE Summit Landsburg Rd: Kent city limits (244th Ave SE) to Landsburg Rd SE	Reconstruct roadway	\$11,890,000	Greater Maple Valley/Cedar River	*
RC-6	Reconstruction	SE Covington-Sawyer Rd: Covington city limits to 216th Ave SE	Reconstruct roadway	\$28,430,000	SE King County, West King County Areas	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
VRS-20-19	Vulnerable Road Segments	SE Auburn Black Diamond	Relocate road	\$22,500,000	SE King County	

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Map Number 11: North Enumclaw

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-3015	Bridge	Patton Bridge: SE Green Valley Rd at Green River, about 1.5 miles southeast of Highway 18	Replace bridge	\$46,290,000	SE King County	
BR-3020	Bridge	Green Valley Rd Bridge: SE Green Valley Rd, about 5.5 miles east of Highway 18	Replace bridge	\$2,960,000	SE King County	
BR-3022	Bridge	Green Valley Road Bridge: SE Green Valley Rd, 6.7 miles E of SR-18	Replace bridge	\$3,200,000	SE King County	
BR-3030	Bridge	SE 380th St Bridge: SE 380th St & SE 383rd Way, about 1 mile west of State Route 169	Replace bridge	\$980,000	SE King County	
BR-3056A	Bridge	SE 408th St Bridge: SE 408th St, 0.2 miles E of SR-164	Replace bridge	\$2,560,000	SE King County	
DR-15-16	Drainage	SE Auburn Black Diamond Rd at Krisp Creek	Replace/Construct drainage infrastructure	\$1,430,000	SE King County	
DR-20-2	Drainage	180 Ave SE at SE 408 St	Replace/Construct drainage infrastructure	\$1,410,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-37	Drainage	13405 Auburn Black Diamond Rd	Replace/Construct drainage infrastructure	\$1,010,000	SE King County	
DR-20-6	Drainage	36500 200 Ave SE	Replace/Construct drainage infrastructure	\$1,170,000	SE King County	
DR-22-1	Drainage	13604 SE Auburn Black Diamond Rd	Replace/Construct drainage infrastructure	\$600,000	SE King County	
DR-22-14	Drainage	17110 SE 384 St	Replace/Construct drainage infrastructure	\$1,035,000	SE King County	
DR-22-21	Drainage	SE 384th St & 176th SE	Replace/Construct drainage infrastructure	\$1,642,000	SE King County	
DR-22-27	Drainage	196th Ave SE south of 192nd PI SE	Replace/Construct drainage infrastructure	\$2,126,000	SE King County	
DR-22-33	Drainage	40316 196th Ave SE	Replace/Construct drainage infrastructure	\$2,178,000	SE King County	
DR-22-34	Drainage	249th Ave SE 360' south of SE 370th Ln	Replace/Construct drainage infrastructure	\$3,700,000	SE King County	
DR-22-36	Drainage	SE 400th St west of 228th Ave SE	Replace/Construct drainage infrastructure	\$8,541,000	SE King County	
DR-22-45	Drainage	212th Ave SE at SE 396th St	Replace/Construct drainage infrastructure	\$2,132,000	SE King County	
GR-22-10	Guardrail	Green Valley Road Bridge (#3020) on SE Green Valley Rd 5.5 Mi E of SR-18	Upgrade bridge rail	\$100,000	SE King County	
GR-22-21	Guardrail	SE 380 St Bridge (#3030) on SE 308th St 0.8 Mi W of SR-169	Upgrade bridge rail	\$120,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
GR-22-33	Guardrail	Green Valley Rd Bridge (#3022) on SE Green Valley Rd 6.7 Mi E of SR-18	Upgrade bridge rail	\$140,000	SE King County	
INT-TSO-20-10	Intersection and Traffic Safety Operations	Kent Black Diamond Rd & SE Auburn Black Diamond Rd	Intersection Improvement	\$13,610,000	SE King County	
IPA-12	Intersection and Traffic Safety Operations	SE Auburn Black Diamond Rd & 190th Ave SE	Realign intersection	\$2,290,000	SE King County	
ITS-27	ITS	SE Auburn Black Diamond Rd: Kent Black Diamond Rd SE to SE Lake Holm Rd	Vehicle detection/flasher system, slide detection	\$220,000	SE King County	
NM-20-15	Active Transportation	212th Ave SE: SE 409th St to SE 416th St	Provide active transportation facility	\$930,000	SE King County	
NM-5012	Active Transportation	244th Ave SE: Enumclaw city limits (SE 436th) to SE 400th St	Provide active transportation facility	\$9,640,000	SE King County	*
NM-5010	Reconstruction	SE 400th Way: SE 400th St to SE 392nd St	Reconstruct roadway	\$3,440,000	SE King County	*
RC-139	Reconstruction	SE Auburn Black Diamond Rd: SE Lake Holm Rd to 148th Way SE	Reconstruct roadway	\$13,040,000	SE King County	*
RC-140	Reconstruction	SE Lake Holm Rd: SE Auburn Black Diamond Rd to 147th Ave SE	Reconstruct roadway	\$9,810,000	SE King County	*
RC-142	Reconstruction	SE Green Valley Rd: 243rd Ave SE to State Route 169	Reconstruct roadway	\$12,050,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
VRS-20-6	Vulnerable Road Segments	SE 384 St at 176 Ave SE	Replace culvert	\$1,860,000	SE King County	

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Map Number 12: South Enumclaw

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-3055A	Bridge	Boise X Connection Bridge: SE Mud Mountain Dam Rd at Boise Creek, southeast of State Route 410	Replace bridge	\$4,700,000	SE King County	
BR-3060	Bridge	208th Ave SE Bridge: 208th Ave SE at drainage ditch 0.5 Mi S of SR 164	Replace bridge	\$2,990,000	SE King County	
DR-20-32	Drainage	27609 SE 432 St	Replace/Construct drainage infrastructure	\$1,550,000	SE King County	
DR-20-55	Drainage	46913 284 Ave SE	Replace/Construct drainage infrastructure	\$840,000	SE King County	
DR-22-15	Drainage	20702 SE 424th St	Replace/Construct drainage infrastructure	\$1,440,000	SE King County	
DR-22-31	Drainage	42406 228th Ave SE	Replace/Construct drainage infrastructure	\$2,472,000	SE King County	
DR-22-32	Drainage	45326 196th Ave SE	Replace/Construct drainage infrastructure	\$3,679,000	SE King County	
DR-22-35	Drainage	216th Ave SE at SE 436th St	Replace/Construct drainage infrastructure	\$1,457,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-22-37	Drainage	26124 SE 472 St	Replace/Construct drainage infrastructure	\$893,000	SE King County	
DR-22-38	Drainage	25414 SE 424 St	Replace/Construct drainage infrastructure	\$1,501,000	SE King County	
GR-20-2	Guardrail	SE 472nd St: 288th Ave SE to 303rd Ave SE	Construct guardrail	\$90,000	SE King County	
GR-22-25	Guardrail	208th Ave SE Bridge (#3060) on 208th Ave SE 0.5 Mi S of SR-164	Upgrade bridge rail	\$140,000	SE King County	
GR-22-36	Guardrail	Newaukum Creek Bridge (#3071) on SE 424th St 0.5 Mi W of SR-169	Upgrade bridge rail	\$170,000	SE King County	
GR-22-5	Guardrail	Boise Creek Bridge (#3051) on 276th Ave SE 0.3 Mi S of SR-410	Upgrade bridge rail	\$120,000	SE King County	
GR-22-8	Guardrail	284 Ave SE Bridge (#3049) on 284th Ave SE 1.0 Mi S of SR-410	Upgrade bridge rail	\$170,000	SE King County	
NM-5008	Active Transportation	SE 432nd St: 284th Ave SE to Enumclaw city limits	Provide active transportation facility	\$2,830,000	SE King County	
NM-5012	Active Transportation	244th Ave SE: Enumclaw city limits (SE 436th) to SE 400th St	Provide active transportation facility	\$9,640,000	SE King County	*
VRS-20-12	Vulnerable Road Segments	212 Ave SE at 43200 Block	Study to reduce flooding and improve flow capacity.	\$220,000	SE King County	

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1458 Map Number 13: Duvall

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-39	Drainage	NE Stossel Creek Way @ 4.5 Mi mark off Paved Rd	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
DR-20-46	Drainage	27033 NE Cherry Valley Rd	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	
DR-20-62	Drainage	28810 NE Cherry Valley Rd	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	
DR-20-66	Drainage	NE 124th St and SR 203	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	*
DR-20-73	Drainage	29925 NE Big Rock Rd	Replace/Construct drainage infrastructure	\$840,000	Snoqualmie Valley NE King County	
DR-22-22	Drainage	33416 NE Stossel Creek Way	Replace/Construct drainage infrastructure	\$4,679,000	Snoqualmie Valley NE King County	
DR-22-24	Drainage	33632 NE Stossel Creek Way	Replace/Construct drainage infrastructure	\$4,006,000	Snoqualmie Valley NE King County	
DR-22-26	Drainage	33932 NE Stossel Creek Way	Replace/Construct drainage infrastructure	\$3,590,000	Snoqualmie Valley NE King County	
DR-22-28	Drainage	20121 W Snoqualmie River Rd NE	Replace/Construct drainage infrastructure	\$4,315,000	Snoqualmie Valley NE King County	
DR-22-29	Drainage	18321 W Snoqualmie River Rd NE	Replace/Construct drainage infrastructure	\$1,278,000	Snoqualmie Valley NE King County	
DR-22-30	Drainage	Parcel 2326079008, NE Stossel Creek Way	Replace/Construct drainage infrastructure	\$3,592,000	Snoqualmie Valley NE King County	
DR-22-4	Drainage	15866 Kelly Rd NE	Replace/Construct drainage infrastructure	\$2,400,000	Snoqualmie Valley NE King County	
DR-4	Drainage	NE 106th St & 314th Ave NE	Replace/Construct drainage infrastructure	\$1,120,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-5	Drainage	NE 195th St & Margaret Creek, west of 327th Ave NE	Replace/Construct drainage infrastructure	\$1,120,000	Snoqualmie Valley NE King County	
GR-22-2	Guardrail	Stossel Creek Bridge (#5032) on Stossel Creek Rd 6.2 Mi NE of Kelly Rd	Upgrade bridge rail	\$110,000	Snoqualmie Valley NE King County	
GR-22-37	Guardrail	Lake Joy Bridge (#5034A) on 346th Pl NE 2.5 Mi NE of SR-203	Upgrade bridge rail	\$110,000	Snoqualmie Valley NE King County	

1459

1460 Map Number 14: Carnation

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-1320A	Bridge	Ames Lake Trestle Bridge: Ames Lake-Carnation Rd at Ames Creek .2 Mi S of W Snoqualmie Rd	Replace bridge	\$6,330,000	Snoqualmie Valley NE King County	
BR-2133A	Bridge	Sikes Lake Trestle: 284th Ave NE at Sikes Lake, about 0.5 mile east of State Route 202	Replace bridge	\$21,770,000	Snoqualmie Valley NE King County	
BR-257Z	Bridge	Horseshoe Lake Creek Bridge: 310th Ave NE at Horseshoe Lake Creek	Replace bridge	\$2,560,000	Snoqualmie Valley NE King County	
BR-916A	Bridge	W Snoqualmie River Road Bridge: W Snoqualmie River Rd, 1.5 miles W of SR-203	Replace bridge	\$1,660,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-10	Drainage	NE 80 St at West Snoqualmie Valley Rd NE	Replace/Construct drainage infrastructure	\$1,420,000	Snoqualmie Valley NE King County	
DR-20-26	Drainage	W Snoqualmie River Rd at NE Tolt Hill Rd	Replace/Construct drainage infrastructure	\$170,000	Snoqualmie Valley NE King County	
DR-20-5	Drainage	33609 NE 24 St	Replace/Construct drainage infrastructure	\$1,240,000	Snoqualmie Valley NE King County	
DR-22-19	Drainage	NE 80th St east of West Snoqualmie Valley Rd NE	Replace/Construct drainage infrastructure	\$4,970,000	Snoqualmie Valley NE King County	
DR-22-40	Drainage	8402 W Snoqualmie Valley Rd NE	Replace/Construct drainage infrastructure	\$2,041,000	Snoqualmie Valley NE King County	
DR-22-41	Drainage	NE 100th St .2 mi east of West Snoqualmie Valley Rd NE	Replace/Construct drainage infrastructure	\$2,976,000	Snoqualmie Valley NE King County	
GR-22-19	Guardrail	W Snoqualmie River Road Bridge (#916A) on W Snoqualmie River Rd 1.5 Mi W of SR-203	Upgrade bridge rail	\$150,000	Snoqualmie Valley NE King County	
ITS-11	ITS	NE Union Hill Rd: 238th Ave NE to NE Ames Lake Rd	Cameras, speed warning system, vehicle detection	\$260,000	Bear Creek/Sammamish	*
ITS-25	ITS	W Snoqualmie River Rd SE: SE 24th St to NE Tolt Hill Rd and State Route 203	Cameras, vehicle detection, pavement sensors	\$660,000	Snoqualmie Valley NE King County	*
OP-RD-37	Reconstruction	NE Tolt Hill Rd: Tolt Hill Bridge to 500 feet west of State Route 203	Reconstruct roadway	\$2,240,000	Snoqualmie Valley NE King County	
RC-18	Vulnerable Road Segments	West Snoqualmie River Rd NE: NE Tolt Hill Rd to SE 24th St	Armor shoulders to reduce road washouts	\$480,000	Snoqualmie Valley NE King County	*

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
RC-32	Vulnerable Road Segments	Tolt Hill Rd: Tolt Hill Bridge to State Route 203	Armor shoulders to reduce road washouts	\$130,000	Snoqualmie Valley NE King County	
RC-34	Vulnerable Road Segments	284th Ave NE: NE 100 St to NE Carnation Farm Rd	Armor shoulders to reduce road washouts	\$270,000	Snoqualmie Valley NE King County	
RC-36	Vulnerable Road Segments	NE 80th St: West Snoqualmie Valley Rd NE to Ames Lake-Carnation Rd	Armor shoulders to reduce road washouts	\$2,000,000	Snoqualmie Valley NE King County	
RC-38	Vulnerable Road Segments	NE 100th St: West Snoqualmie Valley Rd to 284th Ave NE	Armor shoulders to reduce road washouts	\$890,000	Snoqualmie Valley NE King County	*
RC-39	Vulnerable Road Segments	West Snoqualmie Valley Rd NE: NE 124th St to Ames Lake Carnation Rd NE	Construct retaining wall to prevent slides	\$4,940,000	Snoqualmie Valley NE King County	
RC-40	Vulnerable Road Segments	Neal Rd SE: State Route 203 to State Route 203	Armor shoulders to reduce road washouts	\$1,690,000	Snoqualmie Valley NE King County	*
VRS-20-1	Vulnerable Road Segments	NE 124th St, NE Woodinville Duvall Rd, NE Carnation Farm Rd, Tolt Hill Rd	Study major cross-Snoqualmie Valley roadways to determine cost effectiveness of flood-improvement.	\$560,000	Snoqualmie Valley NE King County	*
VRS-20-17	Vulnerable Road Segments	NE Tolt Hill Road Debris Slide	Construct retaining wall and/or flatten slope	\$560,000	Bear Creek/Sammamish	
VRS-22-4	Vulnerable Road Segments	NE Tolt Hill Road near Tolt Bridge	Replace gabion wall	\$3,155,000	Snoqualmie Valley NE King County	

1462 Map Number 15: Snoqualmie

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-1086A	Bridge	Kimball Creek Bridge: SE 80th St at Kimball Creek, 0.4 mile west of State Route 202	Replace bridge	\$5,030,000	Snoqualmie Valley NE King County	
BR-1239A	Bridge	Upper Preston Bridge: Upper Preston Rd SE at Echo Lake Creek, north of SE 110th St	Replace bridge	\$5,340,000	Snoqualmie Valley NE King County	
BR-249B	Bridge	C.W. Neal Road Bridge: Neal Rd SE, about 1.5 mile south of State Route 203	Replace bridge	\$1,660,000	Snoqualmie Valley NE King County	
BR-249C	Bridge	C.W. Neal Road Bridge: CW Neal Rd, 0.3 miles W of SR-203	Replace bridge	\$1,660,000	Snoqualmie Valley NE King County	
DR-15-14	Drainage	Just east of Preston Fall City Rd SE & on SE 47th St	Replace/Construct drainage infrastructure	\$1,070,000	Snoqualmie Valley NE King County	
DR-20-15	Drainage	SE Duthie Hill Rd at 270 Ave SE	Replace/Construct drainage infrastructure	\$1,650,000	Snoqualmie Valley NE King County	
DR-20-35	Drainage	30829 SE 40 St	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	
DR-20-38	Drainage	About 250' East Of 41502 SE Reinig Rd	Replace/Construct drainage infrastructure	\$1,180,000	Snoqualmie Valley NE King County	
DR-20-42	Drainage	5935 Preston/Fall City Rd SE	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	
DR-20-51	Drainage	35827 SE David Powell Rd	Replace/Construct drainage infrastructure	\$670,000	Snoqualmie Valley NE King County	
DR-20-52	Drainage	28405 SE High Point Way	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-63	Drainage	8106 382 Ave SE	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
DR-20-64	Drainage	8416 Preston/Fall City Rd SE	Replace/Construct drainage infrastructure	\$1,350,000	Snoqualmie Valley NE King County	
DR-20-71	Drainage	SE North Bend Way & Meadowbrook Way	Replace/Construct drainage infrastructure	\$1,520,000	Snoqualmie Valley NE King County	
DR-20-72	Drainage	30211 SE 40 St	Replace/Construct drainage infrastructure	\$1,010,000	Snoqualmie Valley NE King County	
DR-20-75	Drainage	SE David Powell Rd & 347 PI SE	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
DR-20-77	Drainage	30415 SE 40 St	Replace/Construct drainage infrastructure	\$670,000	Snoqualmie Valley NE King County	
DR-20-78	Drainage	8528 378 Ave SE	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
DR-22-44	Drainage	SE High Point Way north of I-90	Replace/Construct drainage infrastructure	\$6,426,000	Snoqualmie Valley NE King County	
DR-22-5	Drainage	33638 SE 55 St	Replace/Construct drainage infrastructure	\$3,000,000	Snoqualmie Valley NE King County	
GR-22-34	Guardrail	Tokul Cr Park Bridge (#61G) on Fish Hatchery Rd 0.8 Mi S of SR-202	Upgrade bridge rail	\$490,000	Snoqualmie Valley NE King County	
GR-22-39	Guardrail	Fire Station Bridge (#186J) on Preston Fall City Rd 0.5 Mi SE of I-90	Upgrade bridge rail	\$120,000	Snoqualmie Valley NE King County	
GR-22-40	Guardrail	Patterson Creek Bridge (#927B) on 300th Ave SE 0.1 Mi S of SR-202	Upgrade bridge rail	\$100,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
GR-22-41	Guardrail	Patterson Creek Bridge (#228E) on Snoqualmie River Rd 0.8 Mi N of SR-202	Upgrade bridge rail	\$330,000	Snoqualmie Valley NE King County	
GR-28	Guardrail	SE David Powell Rd: Preston Fall City Road to 340th block	Construct guardrail	\$300,000	Snoqualmie Valley NE King County	
IPA-27	Intersection and Traffic Safety Operations	SE 82nd St/ SE High Point Way & SE 82nd St	Intersection Improvement	\$4,840,000	Snoqualmie Valley NE King County	
OP-INT-88	Intersection and Traffic Safety Operations	Preston Fall City Rd SE & SE 43rd St	Realign intersection	\$5,500,000	Snoqualmie Valley NE King County	
ITS-14	ITS	Preston Fall City Rd SE: I-90 to State Route 202	Cameras, road sensors, weather station, data collection station	\$450,000	Snoqualmie Valley NE King County	
ITS-25	ITS	W Snoqualmie River Rd SE: SE 24th St to NE Tolt Hill Rd and State Route 203	Cameras, vehicle detection, pavement sensors	\$660,000	Snoqualmie Valley NE King County	*
RC-15-4	Reconstruction	Preston Fall City Road: the 7600 block to 7800 block	Reconstruct roadway	\$1,510,000	Snoqualmie Valley NE King County	
RC-7	Reconstruction	Neal Rd SE: State Route 203 to State Route 203	Reconstruct roadway	\$4,490,000	Snoqualmie Valley NE King County	
RC-15-5	Vulnerable Road Segments	Upper Preston Rd: SE 97th St to SE 97th St	Stabilize downhill side and improve drainage	\$3,400,000	Snoqualmie Valley NE King County	
RC-17	Vulnerable Road Segments	SE 24th St: 309th Ave SE to W Snoqualmie River Rd SE	Armor shoulders to reduce road washouts	\$480,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
RC-18	Vulnerable Road Segments	West Snoqualmie River Rd NE: NE Tolt Hill Rd to SE 24th St	Armor shoulders to reduce road washouts	\$480,000	Snoqualmie Valley NE King County	*
RC-40	Vulnerable Road Segments	Neal Rd SE: State Route 203 to State Route 203	Armor shoulders to reduce road washouts	\$1,690,000	Snoqualmie Valley NE King County	*
VRS-20-13	Vulnerable Road Segments	SE David Powell Rd	Reinforce slope	\$1,120,000	Snoqualmie Valley NE King County	
VRS-20-15	Vulnerable Road Segments	356th Dr SE	Construct horizontal drains and retaining wall	\$1,120,000	Snoqualmie Valley NE King County	
VRS-20-2	Vulnerable Road Segments	SE Reining Road	Elevate roadway	\$60,000	Snoqualmie Valley NE King County	*
VRS-22-2	Vulnerable Road Segments	334th Avenue SE and SE 43rd Place	Construct drainage system	\$2,500,000	Snoqualmie Valley NE King County	

1463

1464

Map Number 16: Tiger Mountain/Hobart

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-909B	Bridge	Clough Creek Bridge: 415th Way SE & SE 141st St	Replace bridge	\$5,800,000	Snoqualmie Valley NE King County	
DR-15-18	Drainage	276th Ave SE at Carey Creek	Replace/Construct drainage infrastructure	\$3,599,000	Greater Maple Valley/Cedar River	
DR-20-36	Drainage	11429 Upper Preston Rd SE	Replace/Construct drainage infrastructure	\$670,000	Snoqualmie Valley NE King County	
DR-20-45	Drainage	13918 415 Way SE	Replace/Construct drainage infrastructure	\$340,000	Snoqualmie Valley NE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-58	Drainage	Kerriston Rd 4 Mi past end of pvmnt - Marker 44	Replace/Construct drainage infrastructure	\$510,000	Greater Maple Valley/Cedar River	
DR-22-2	Drainage	Issaquah Hobart Rd SE & SR 18 Ramp	Replace/Construct drainage infrastructure	\$600,000	Four Creeks/Tiger Mountain	
GR-22-12	Guardrail	Kerriston Bridge (#896B) on 208th SE 6.8 Mi E of Issaquah-Hobart Rd	Upgrade bridge rail	\$130,000	Greater Maple Valley/Cedar River	
GR-22-14	Guardrail	Kerriston Bridge (#896C) on 208th SE 6.8 Mi E of Issaquah-Hobart Rd	Upgrade bridge rail	\$180,000	Greater Maple Valley/Cedar River	
ITS-15	ITS	Issaquah Hobart Road: Issaquah City Limits to SR 18	Cameras, message signs, weather stations, and travel time equipment	\$1,080,000	Four Creeks/Tiger Mountain	
RC-121	Reconstruction	Issaquah Hobart Rd SE: SE 156th St to Highway 18	Reconstruct roadway	\$17,530,000	Four Creeks/Tiger Mountain	*
RC-125	Reconstruction	276th Ave SE: Highway 18 to SE 200th St	Reconstruct roadway	\$5,950,000	Greater Maple Valley/Cedar River	
RC-126	Reconstruction	276th Ave SE: SE 200th St to SE 216th St	Reconstruct roadway	\$9,290,000	Greater Maple Valley/Cedar River	

1465

1466 Map Number 17: Ravensdale

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-22	Drainage	Landsberg RD SE at SE Summit Landsberg Rd	Replace/Construct drainage infrastructure	\$170,000	Greater Maple Valley/Cedar River	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
DR-20-65	Drainage	346 Ave SE and SE 268 St	Replace/Construct drainage infrastructure	\$510,000	Greater Maple Valley/Cedar River	
DR-22-18	Drainage	290th Ave SE north of SE 312th Way	Replace/Construct drainage infrastructure	\$1,727,000	SE King County	
GR-15-25	Guardrail	SE 224th St: 244th Ave SE to 276th Ave SE	Construct guardrail	\$120,000	Greater Maple Valley/Cedar River	*
IPA-22	Intersection and Traffic Safety Operations	SE Kent-Kangley Rd & Landsburg Rd SE	Intersection Improvement	\$5,410,000	Greater Maple Valley/Cedar River	
OP-INT-92	Intersection and Traffic Safety Operations	SE Kent-Kangley Rd & Retreat Kanaskat Rd	Realign Intersection and install turn lanes	\$2,340,000	Greater Maple Valley/Cedar River	
NM-5049	Active Transportation	SE 216th St: 276th Ave SE to Maxwell Rd SE	Provide active transportation facility	\$11,910,000	Greater Maple Valley/Cedar River	*
NM-5051	Active Transportation	Black Diamond-Ravensdale Rd SE: State Route 169 to SE Kent-Kangley Rd	Provide active transportation facility	\$17,760,000	Greater Maple Valley/Cedar River	*
RC-127	Reconstruction	276th Ave SE: SE 216th St to SE Summit Landsburg Rd	Reconstruct roadway	\$14,550,000	Greater Maple Valley/Cedar River	*
RC-128	Reconstruction	Landsburg Rd SE: SE Summit Landsburg Rd to SE Kent Kangley Rd	Reconstruct roadway	\$6,940,000	Greater Maple Valley/Cedar River	
RC-130	Reconstruction	SE 216th St: 244th Ave SE to 276th Ave SE	Reconstruct roadway	\$11,320,000	Greater Maple Valley/Cedar River	*
RC-132	Reconstruction	SE Kent-Kangley Rd: Kent city limits to Landsburg Rd SE	Reconstruct roadway	\$8,030,000	Greater Maple Valley/Cedar River	*
RC-133	Reconstruction	SE Kent Kangley Rd: Landsburg Rd SE to Retreat Kanaskat Rd	Reconstruct roadway	\$5,790,000	Greater Maple Valley/Cedar River	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
RC-135	Reconstruction	SE Ravensdale Way: SE Kent-Kangley Rd to 268th Ave SE	Reconstruct roadway	\$3,080,000	Greater Maple Valley/Cedar River	*
RC-136	Reconstruction	Retreat Kanaskat Rd: SE Kent Kangley Rd to Cumberland Kanasket Rd SE	Reconstruct roadway	\$17,680,000	Greater Maple Valley/Cedar River	
RC-15-3	Reconstruction	SE Summit Landsburg Rd: Kent city limits (244th Ave SE) to Landsburg Rd SE	Reconstruct roadway	\$11,890,000	Greater Maple Valley/Cedar River	*

1467

1468 Map Number 18: Cumberland

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-3032	Bridge	Green River Gorge Bridge: Franklin Road, 4.0 miles E of SR-169	Replace bridge	\$31,720,000	SE King County	
DR-20-74	Drainage	SE Kuzak Rd and Cumberland-Kanasket Rd	Replace/Construct drainage infrastructure	\$1,010,000	SE King County	
DR-20-76	Drainage	292nd Ave SE at Stonequarry Creek (n/o Fell Hill Park)	Replace/Construct drainage infrastructure	\$1,010,000	SE King County	
DR-22-13	Drainage	SE Kuzak Rd ~0.35 Miles east of Veazie-Cumberland Rd SE	Replace/Construct drainage infrastructure	\$1,200,000	SE King County	
GR-15-32	Guardrail	292nd Ave SE/SE 416th St: SE 392nd St to 284th Ave SE	Construct guardrail	\$180,000	SE King County	
GR-15-33	Guardrail	278th Way SE: SE 392nd St to SE 416th St	Construct guardrail	\$312,000	SE King County	

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
GR-22-9	Guardrail	Veazie Bridge (#3038) on Veazie-Cumberland Rd 0.6 Mi E of SR-169	Upgrade bridge rail	\$210,000	SE King County	
NM-5007	Active Transportation	Veazie-Cumberland Rd SE: SE 384th St to SE 416th St	Provide active transportation facility	\$11,770,000	SE King County	
NM-5010	Reconstruction	SE 400th Way: SE 400th St to SE 392nd St	Reconstruct roadway	\$3,440,000	SE King County	*

1469

1470 Map Number 19: Mount Si

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-364A	Bridge	Deep Creek Bridge: North Fork Rd SE, about 13.7 miles north of North Bend	Replace bridge	\$3,400,000	Snoqualmie Valley NE King County	
DR-20-34	Drainage	North Fork Rd SE, 5.3 Miles Past Ernies Grove Rd	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
GR-22-4	Guardrail	Deep Creek Bridge (#364A) on North Fork Rd SE 13.7 Mi N of 1-90	Upgrade bridge rail	\$1,550,000	Snoqualmie Valley NE King County	
RC-8	Reconstruction	N Fork Rd SE: 428th Ave SE to Lake Hancock Rd	Reconstruct roadway	\$12,990,000	Snoqualmie Valley NE King County	*

1471

1472 Map Number 20: East North Bend

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-122I	Bridge	North Fork Rd Bridge: 428th Ave SE at North Fork Snoqualmie Rd 2.4 Mi E of SR 202	Replace bridge	\$30,840,000	Snoqualmie Valley NE King County	
BR-122N	Bridge	Tate Creek Bridge: SE 73rd St at Tate Creek, west of 440th Ave SE	Replace bridge	\$6,890,000	Snoqualmie Valley NE King County	
BR-359A	Bridge	Granite Creek Bridge: Private Road, 5.1 miles N of I-90	Replace bridge	\$4,670,000	Snoqualmie Valley NE King County	
DR-20-25	Drainage	SE Reinig Rd west of 428 Ave SE	Replace/Construct drainage infrastructure	\$1,767,000	Snoqualmie Valley NE King County	
GR-22-1	Guardrail	Tate Creek Bridge (#122N) on SE 73rd St 4.0 Mi N of I-90	Upgrade bridge rail	\$110,000	Snoqualmie Valley NE King County	
OP-RD-54	Reconstruction	SE Middle Fork Rd: 496th Ave SE to 476th Ave SE	Reconstruct roadway	\$8,030,000	Snoqualmie Valley NE King County	
RC-8	Reconstruction	N Fork Rd SE: 428th Ave SE to Lake Hancock Rd	Reconstruct roadway	\$12,990,000	Snoqualmie Valley NE King County	*
VRS-20-2	Vulnerable Road Segments	SE Reining Road	Elevate roadway	\$60,000	Snoqualmie Valley NE King County	*
VRS-20-21	Vulnerable Road Segments	SE Middle Fork Road lower couplet	Construct retaining walls, widen road, improve clear zone and sight distance.	\$21,260,000	Snoqualmie Valley NE King County	
VRS-20-3	Vulnerable Road Segments	SE 92nd Street	Install box culvert to reduce flooding	\$840,000	Snoqualmie Valley NE King County	

1473

1474 Map Number 21: Greenwater

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
GR-22-24	Guardrail	Greenwater Bridge (#3050A) on SE 496th PI 0.3 Mi NE of SR-410	Upgrade bridge rail	\$80,000	SE King County	
GR-22-32	Guardrail	Greenwater River Bridge (#3050B) on Two County Road 0.2 Mi NE of SR-410	Upgrade bridge rail	\$350,000	SE King County	

1475

1476 Map Number 22: Skykomish

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-509A	Bridge	Baring Bridge: Index Creek Rd over the South Fork Skykomish River, west of Highway 2	Replace bridge	\$22,790,000	Snoqualmie Valley NE King County	
BR-999W	Bridge	Miller River Bridge: Old Stevens Pass Hwy, 1.5 miles SE of SR-2	Replace bridge	\$36,350,000	Snoqualmie Valley NE King County	
DR-20-27	Drainage	NE 179 St at 644 Ave NE	Replace/Construct drainage infrastructure	\$510,000	Snoqualmie Valley NE King County	
RC-57	Reconstruction	NE Old Cascade Highway at Miller River	Reconstruct roadway	\$520,000	Snoqualmie Valley NE King County	
RC-55	Vulnerable Road Segments	NE Money Creek Rd & Money Creek	Construct retaining wall	\$1,050,000	Snoqualmie Valley NE King County	

1477

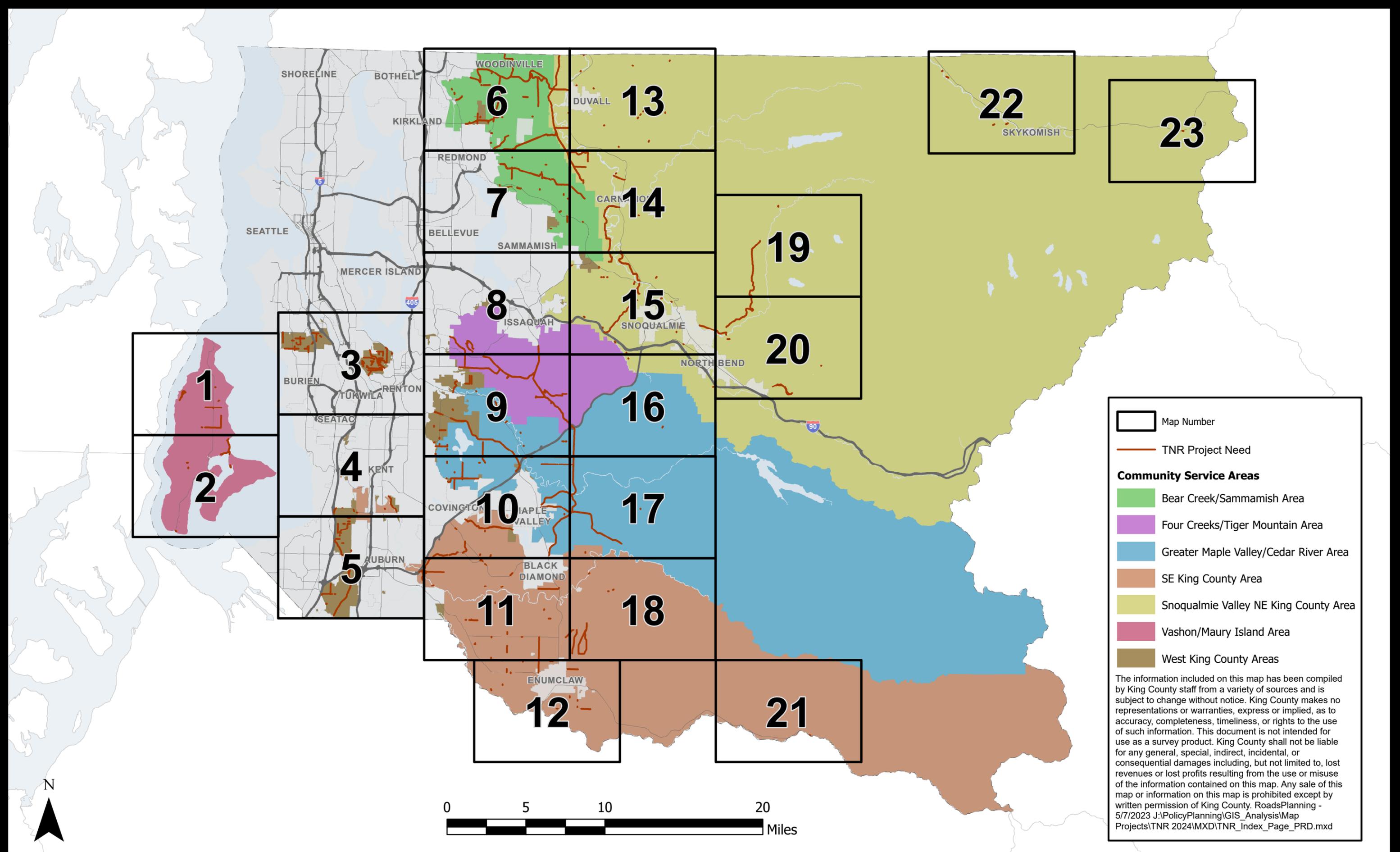
1478 Map Number 23: Scenic

TNR Project Number	TNR Category	Location	Scope	Estimated Cost	Community Service Area	Appears on Multiple Maps
BR-999K2	Bridge	Scenic Bridge: County Road at Tye River 0.1 Mi S of SR-2	Replace bridge	\$3,970,000	Snoqualmie Valley NE King County	

1479

1480 **Exhibit B. 2024 Transportation Needs Report Maps**

1481 Exhibit B contains 23 maps that identify the approximate location of each needed project. Maps
1482 are formatted to print at 11x17. Please see Exhibit A project list tables for additional information
1483 associated with each TNR project referenced on the 2024 TNR maps.



Map Number

TNR Project Need

Community Service Areas

- Bear Creek/Sammamish Area
- Four Creeks/Tiger Mountain Area
- Greater Maple Valley/Cedar River Area
- SE King County Area
- Snoqualmie Valley NE King County Area
- Vashon/Maury Island Area
- West King County Areas

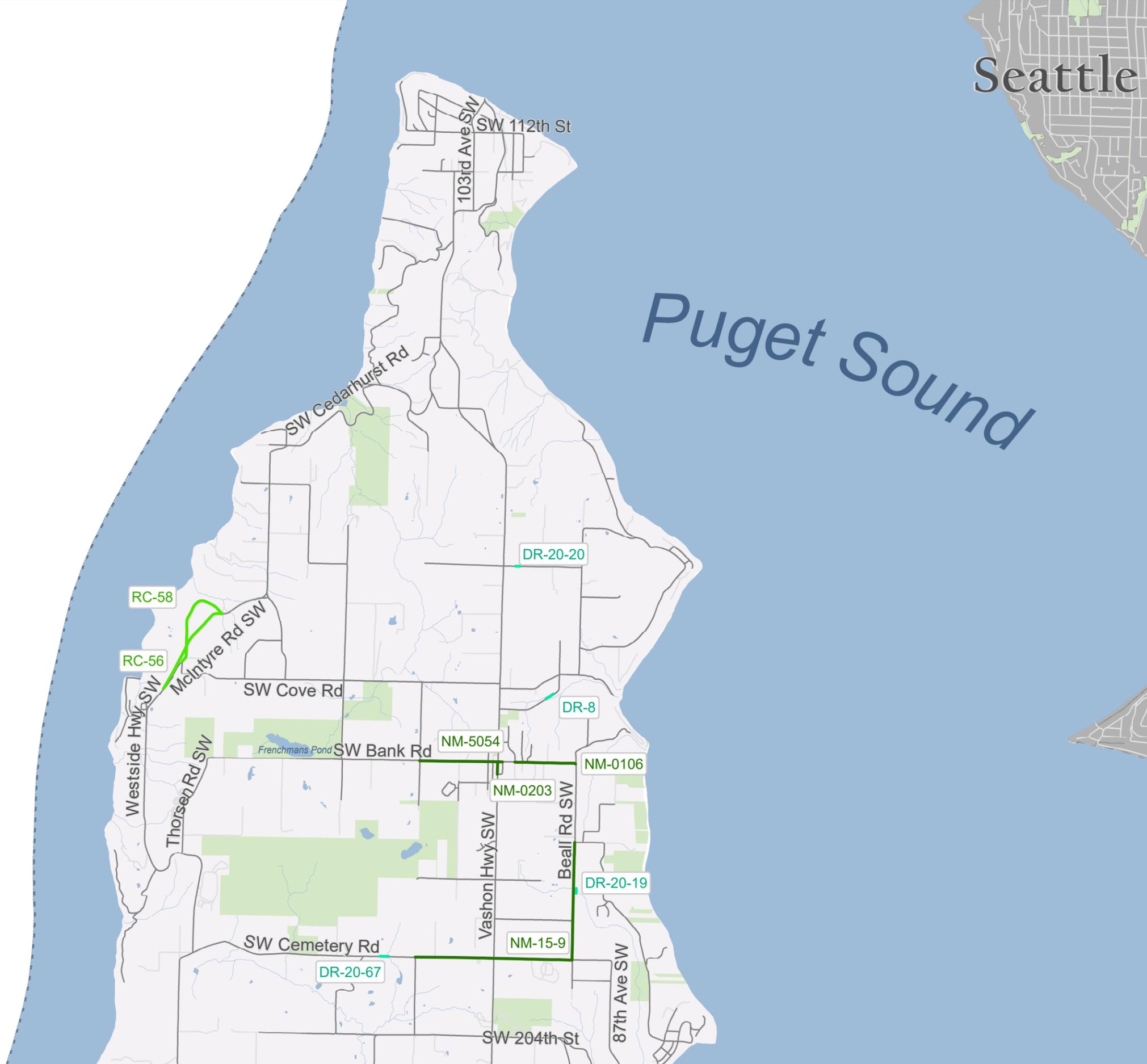
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**North Vashon
Map Number: 1**

Seattle

Puget Sound

K I T S A P
C O U N T Y

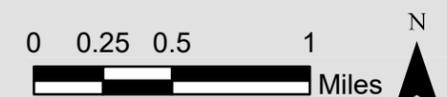
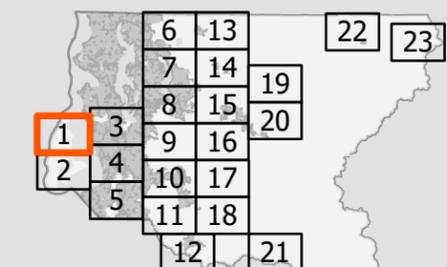


TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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KITSAP
COUNTY

PIERCE
COUNTY



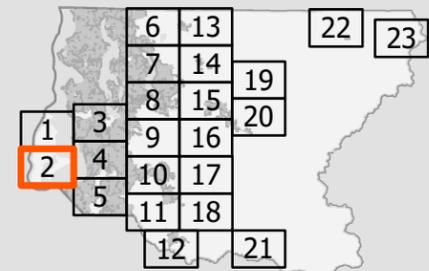
South Vashon Map Number: 2

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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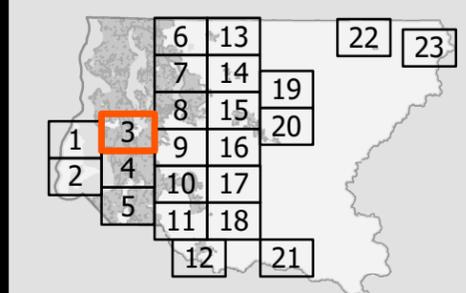
**White Center/Skyway
Map Number: 3**

TNR Project Type

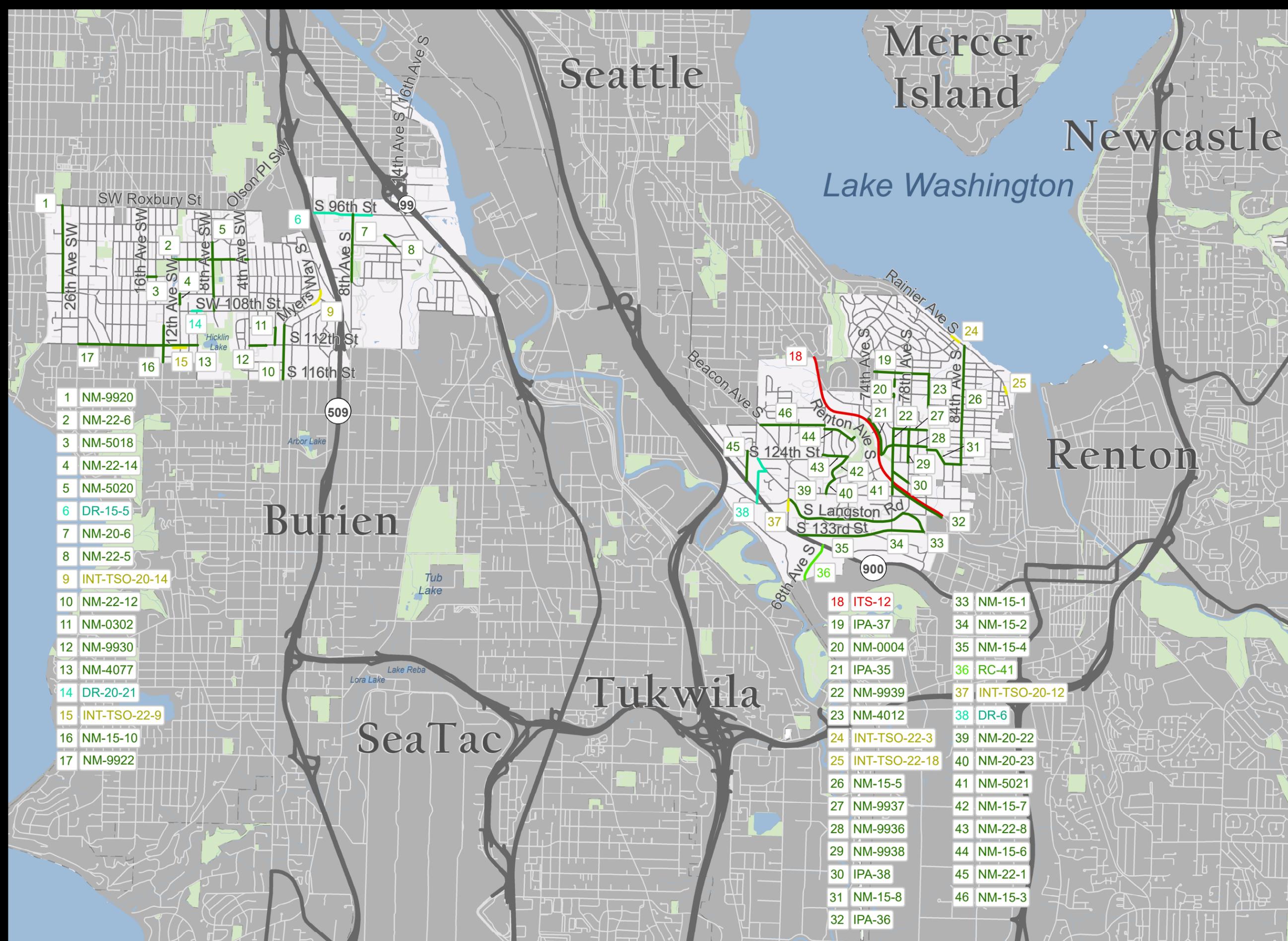
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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- 1 NM-9920
- 2 NM-22-6
- 3 NM-5018
- 4 NM-22-14
- 5 NM-5020
- 6 DR-15-5
- 7 NM-20-6
- 8 NM-22-5
- 9 INT-TSO-20-14
- 10 NM-22-12
- 11 NM-0302
- 12 NM-9930
- 13 NM-4077
- 14 DR-20-21
- 15 INT-TSO-22-9
- 16 NM-15-10
- 17 NM-9922

- 18 ITS-12
- 19 IPA-37
- 20 NM-0004
- 21 IPA-35
- 22 NM-9939
- 23 NM-4012
- 24 INT-TSO-22-3
- 25 INT-TSO-22-18
- 26 NM-15-5
- 27 NM-9937
- 28 NM-9936
- 29 NM-9938
- 30 IPA-38
- 31 NM-15-8
- 32 IPA-36
- 33 NM-15-1
- 34 NM-15-2
- 35 NM-15-4
- 36 RC-41
- 37 INT-TSO-20-12
- 38 DR-6
- 39 NM-20-22
- 40 NM-20-23
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- 42 NM-15-7
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- 45 NM-22-1
- 46 NM-15-3

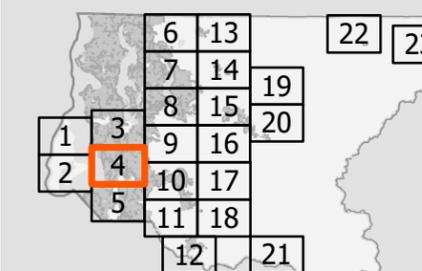
Kent/Des Moines
Map Number: 4

TNR Project Type

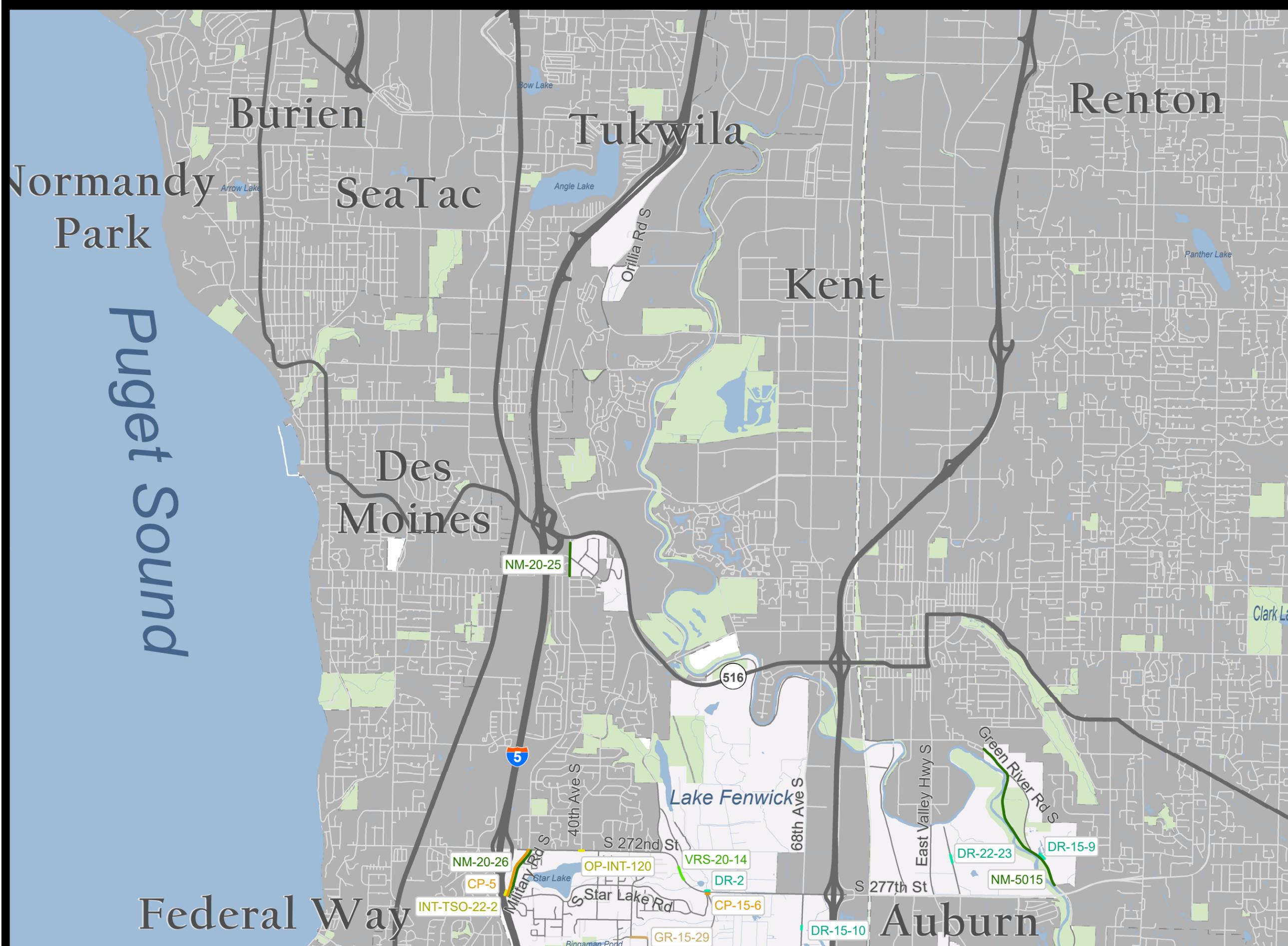
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

-  State or Federal Highway
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2024 Transportation Needs Report Project Locations

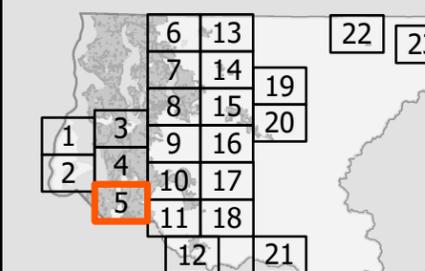
East Federal Way Map Number: 5

TNR Project Type

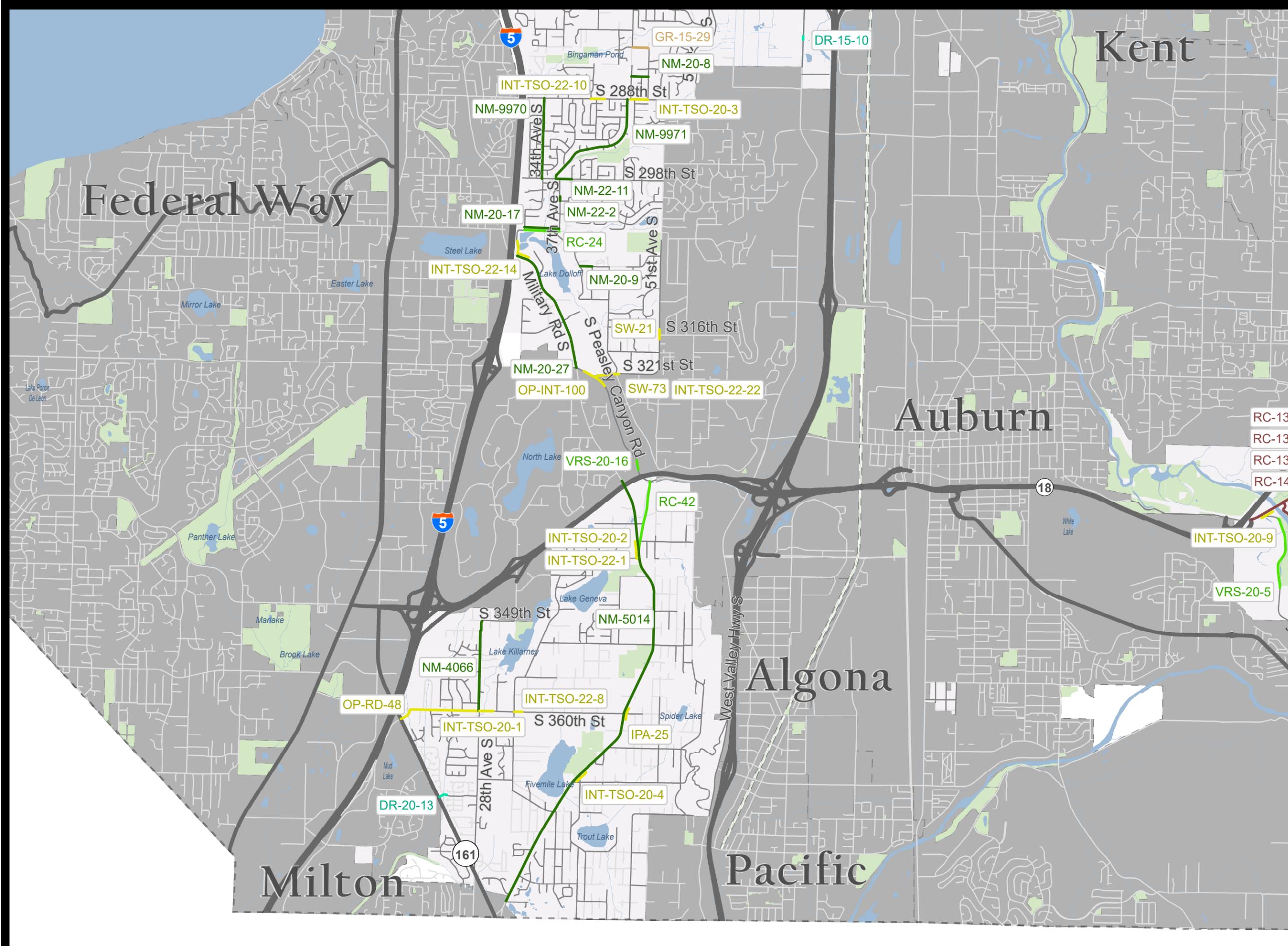
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

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2024 Transportation Needs Report Project Locations

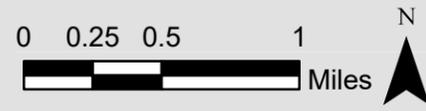
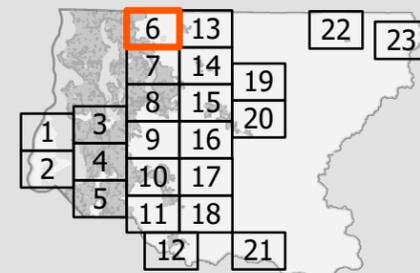
Woodinville Map Number: 6

TNR Project Type

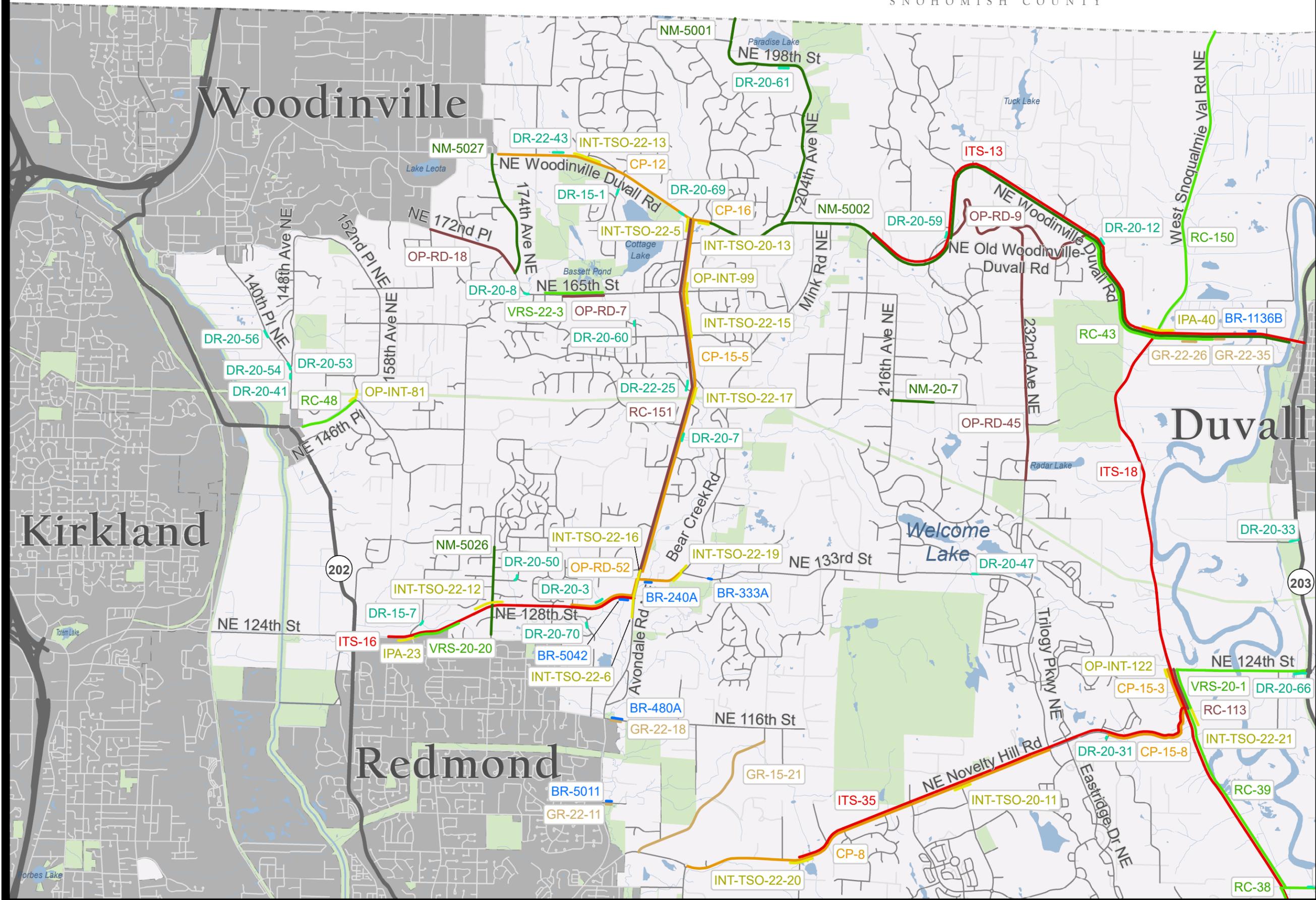
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

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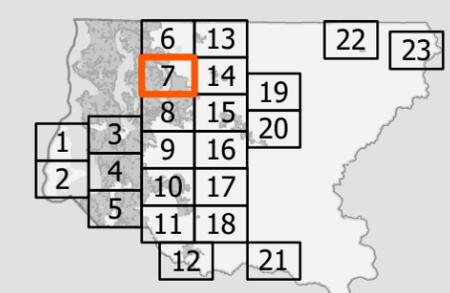
**Redmond/Sammamish
Map Number: 7**

TNR Project Type

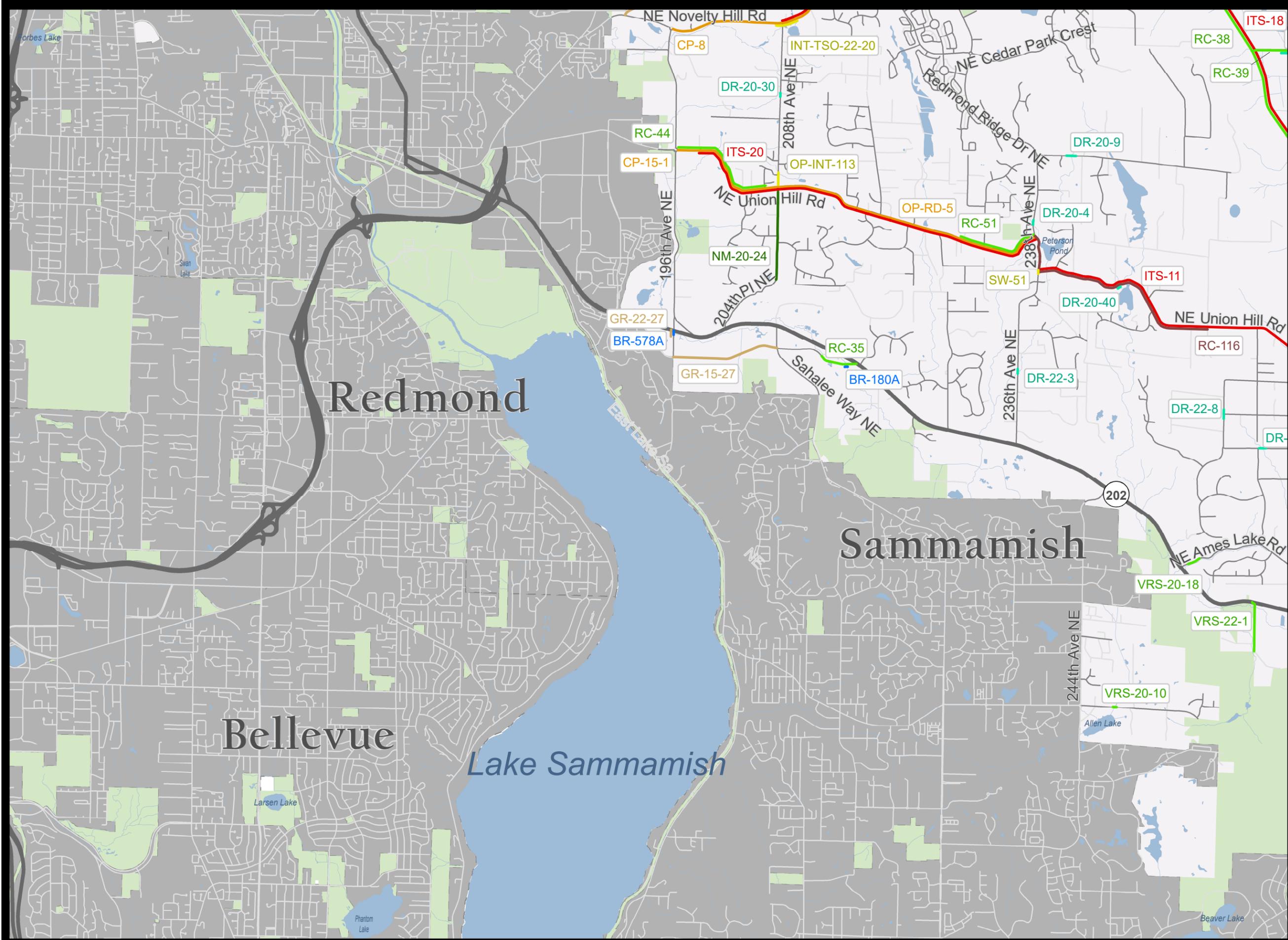
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

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2024 Transportation Needs Report Project Locations

Sammamish

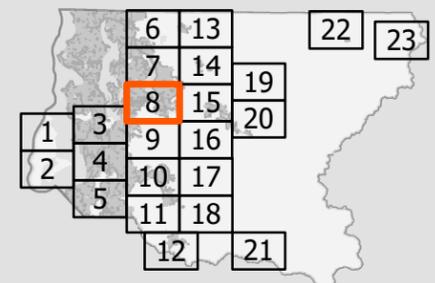
Newcastle/Issaquah Map Number: 8

TNR Project Type

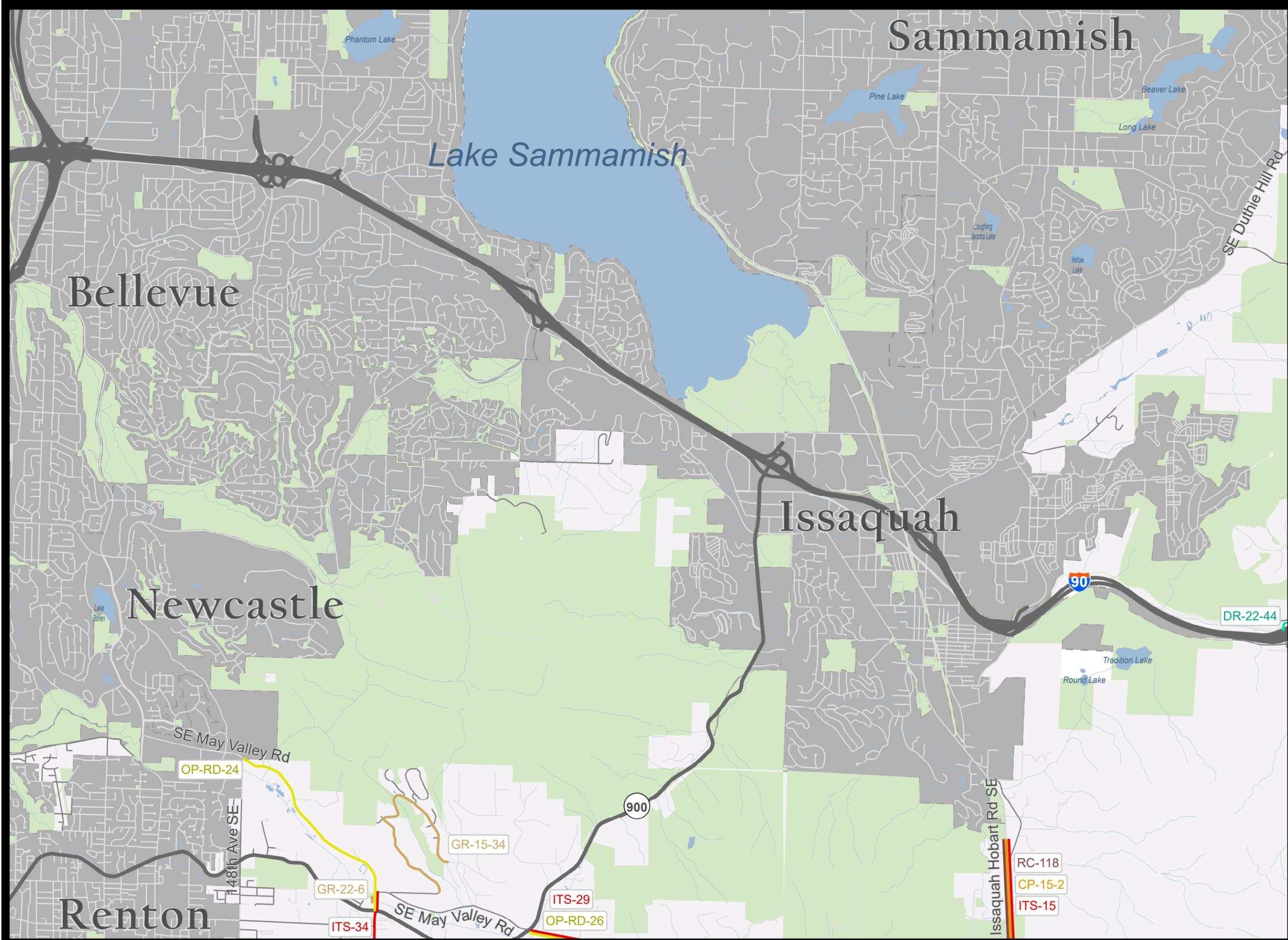
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King
- County Maintained Road
- City or Private Road
- King County
- Incorporated Area



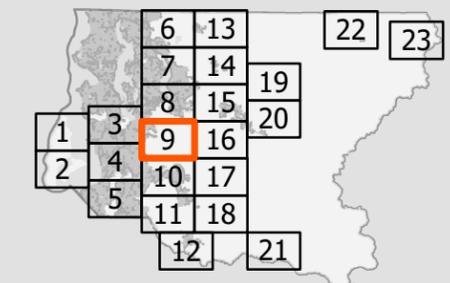
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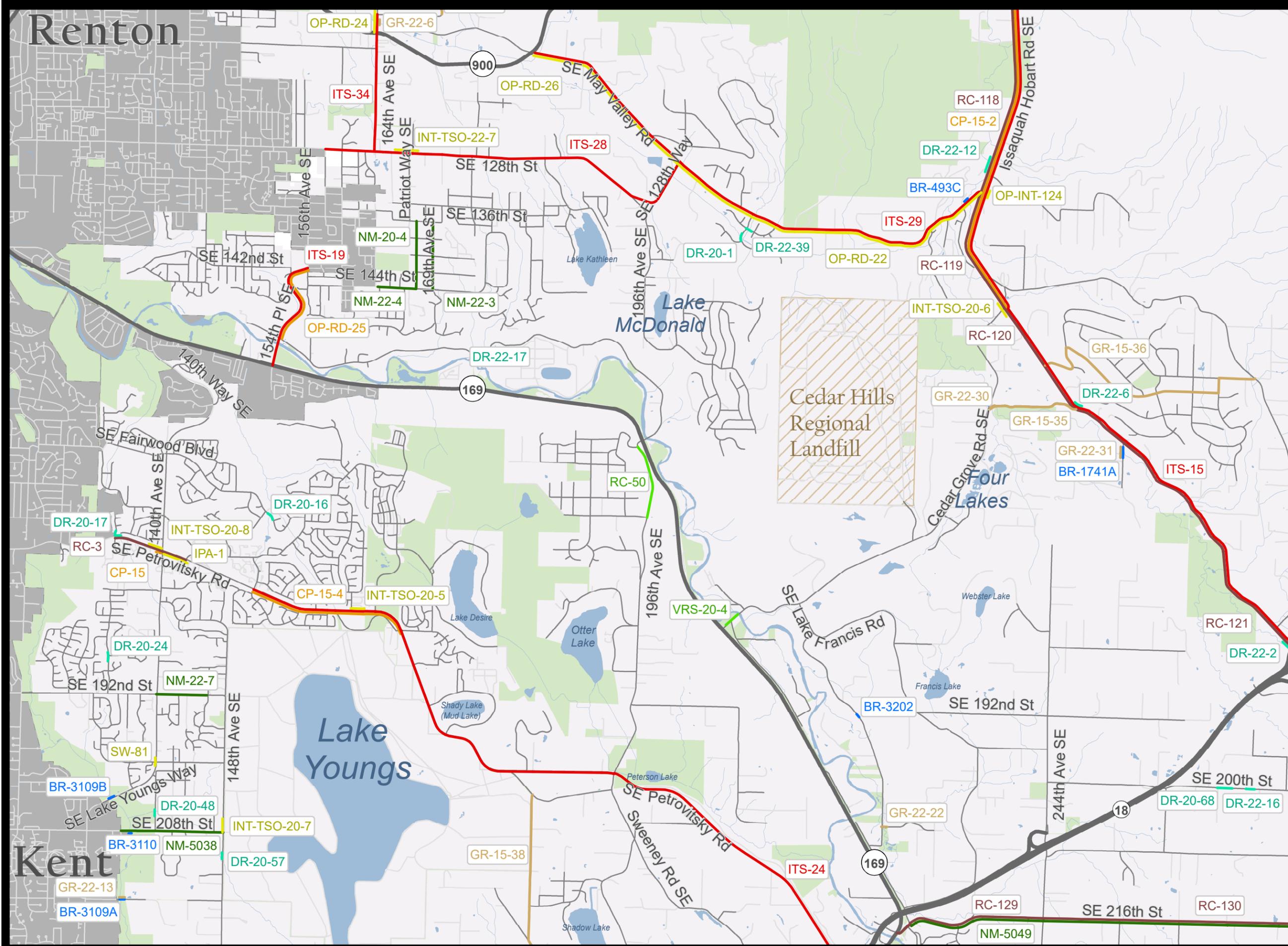
2024 Transportation Needs Report Project Locations

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

- ### Jurisdiction
- State or Federal Highway
 - Unincorporated King
 - County Maintained Road
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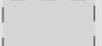


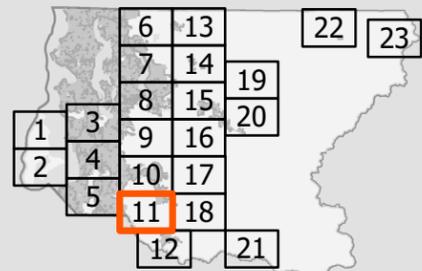
North Enumclaw Map Number: 11

TNR Project Type

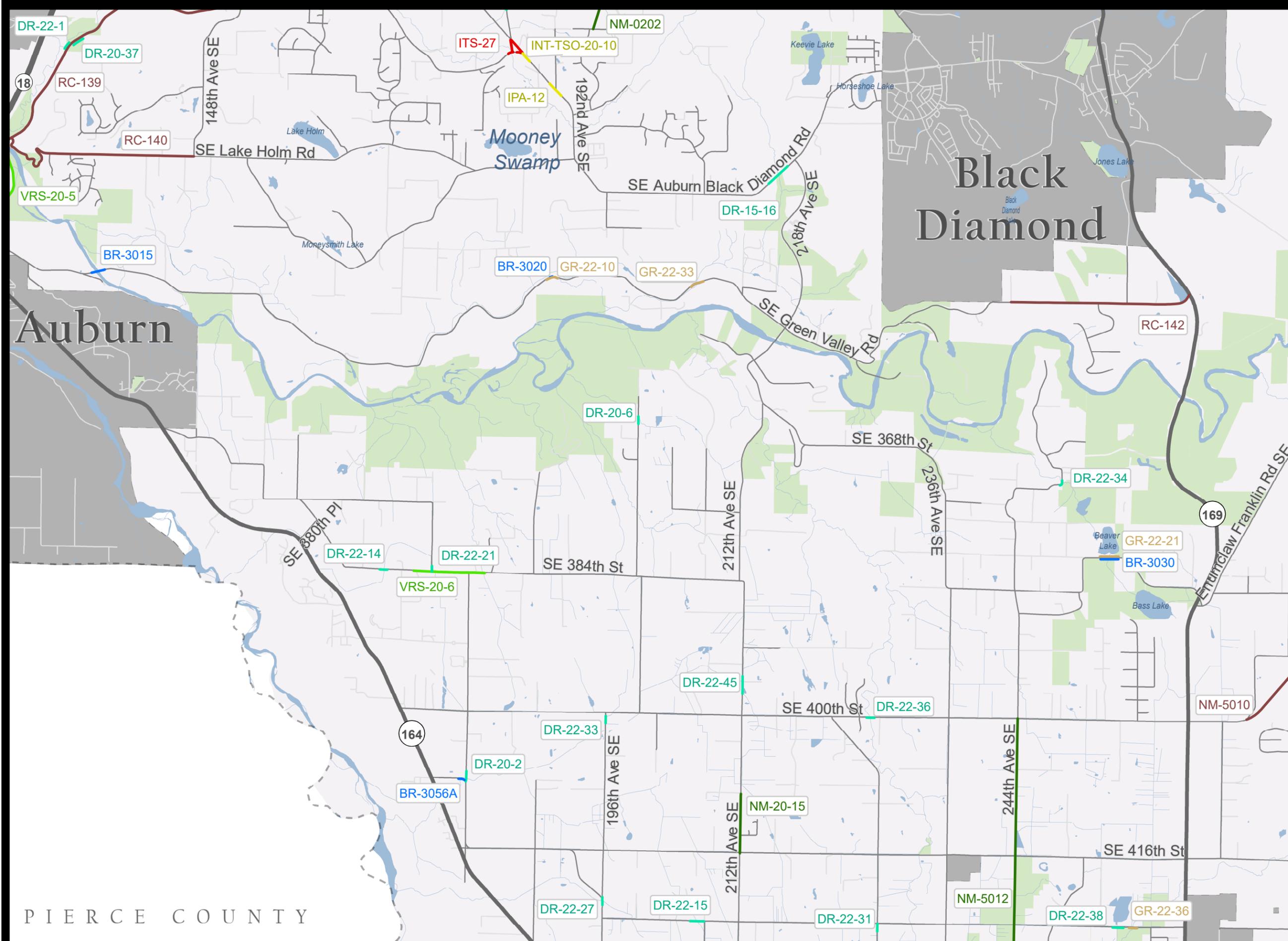
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
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Jurisdiction

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PIERCE COUNTY

2024 Transportation Needs Report Project Locations

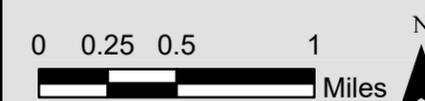
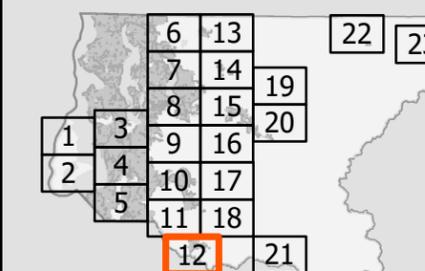
South Enumclaw Map Number: 12

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

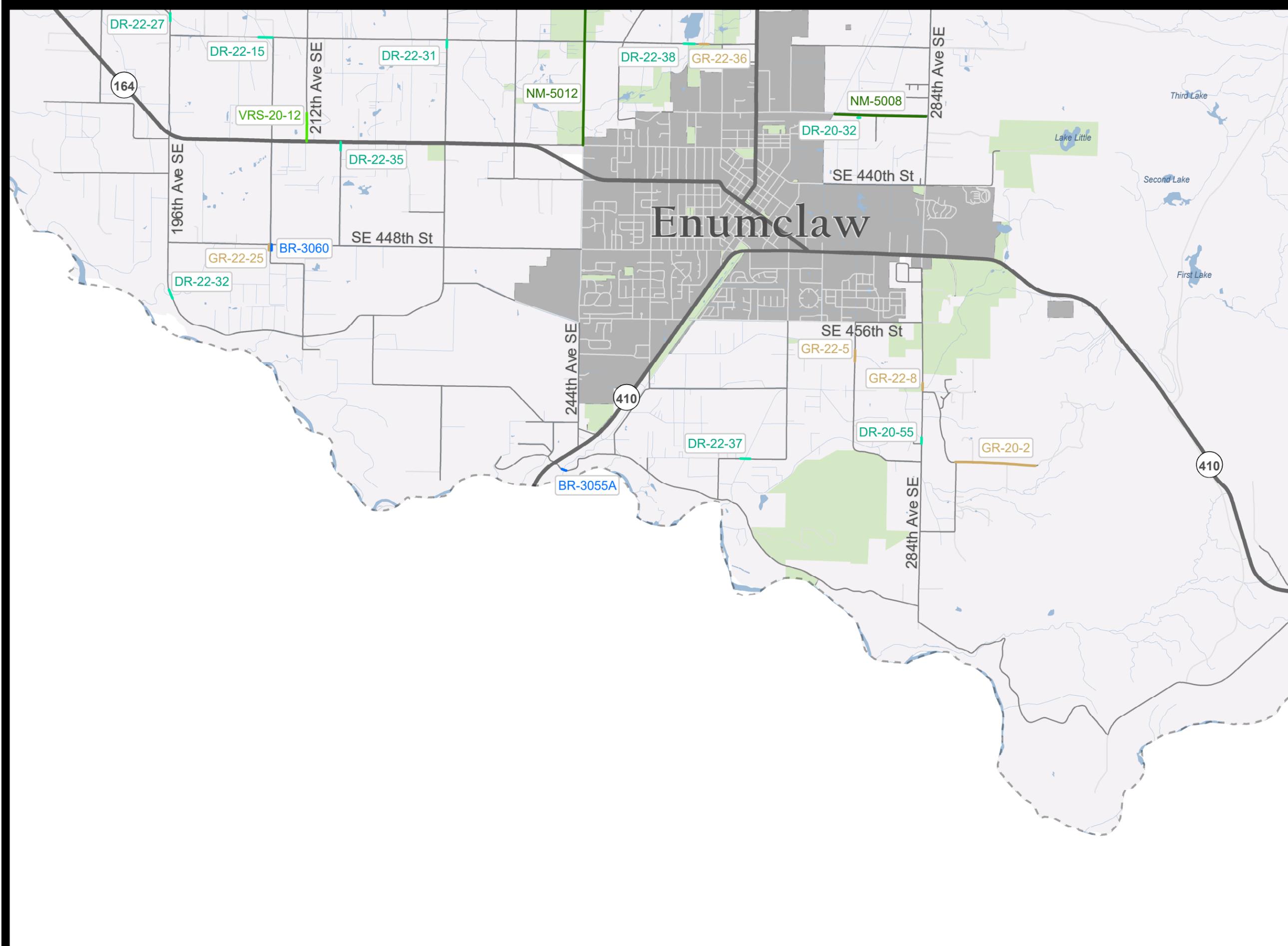
Jurisdiction

-  State or Federal Highway
-  Unincorporated King
-  County Maintained Road
-  City or Private Road
-  King County
-  Incorporated Area



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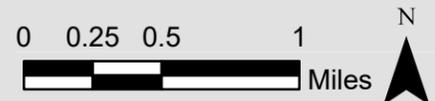
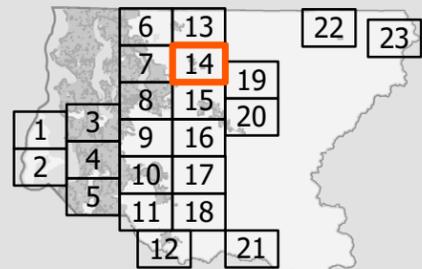
Carnation Map Number: 14

TNR Project Type

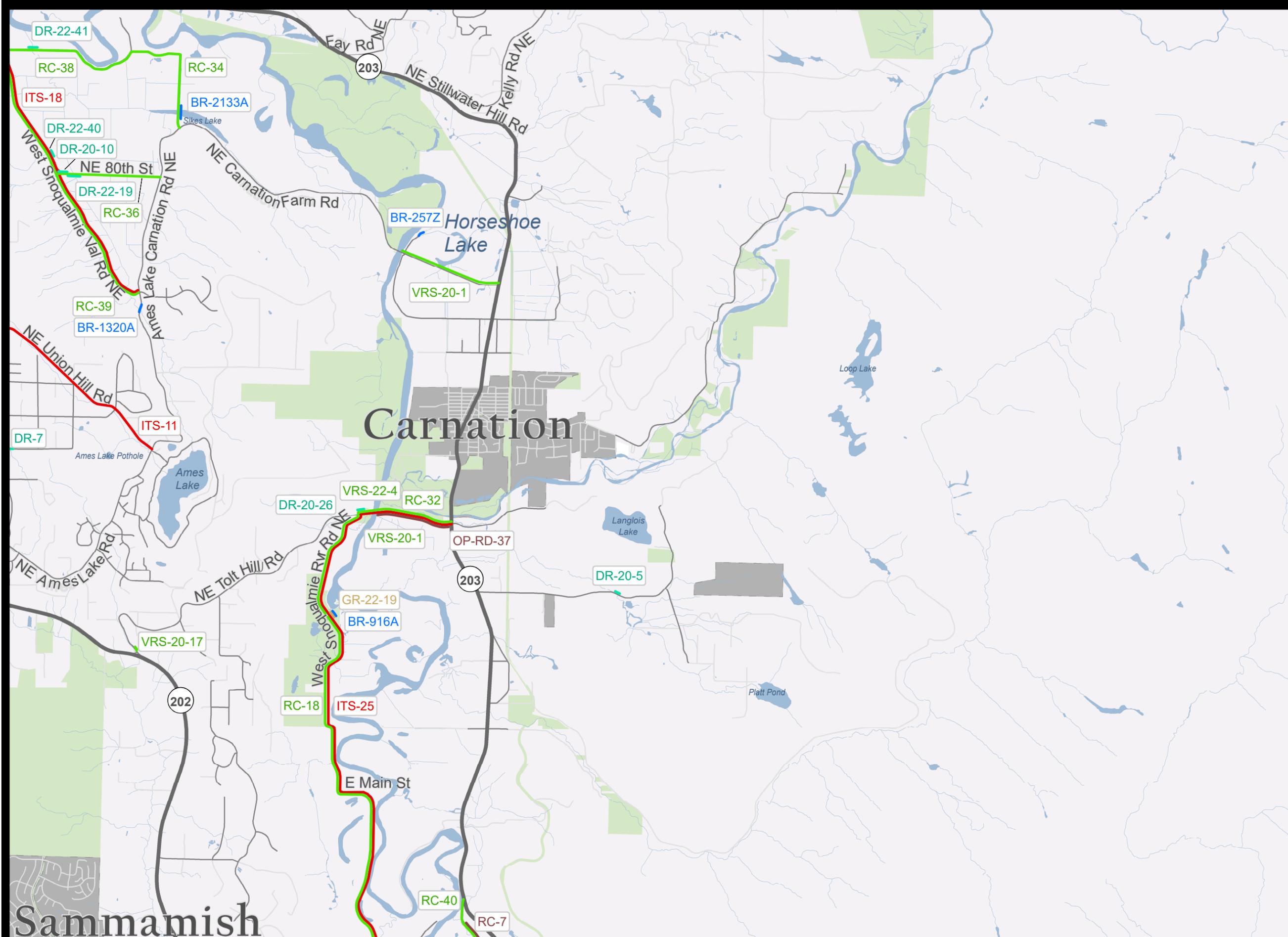
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

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2024 Transportation Needs Report Project Locations

Sammamish

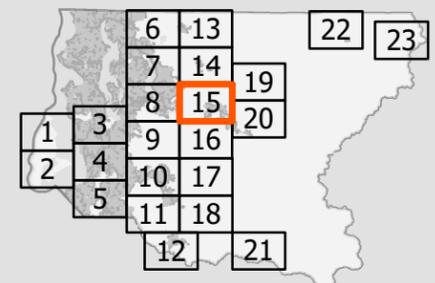
Snoqualmie Map Number: 15

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

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2024 Transportation Needs Report Project Locations

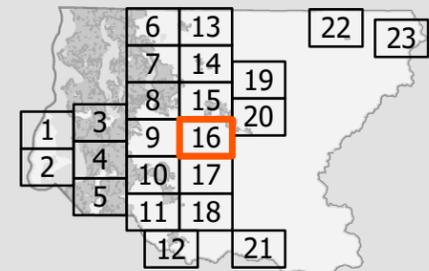
**Tiger Mountain/Hobart
Map Number: 16**

TNR Project Type

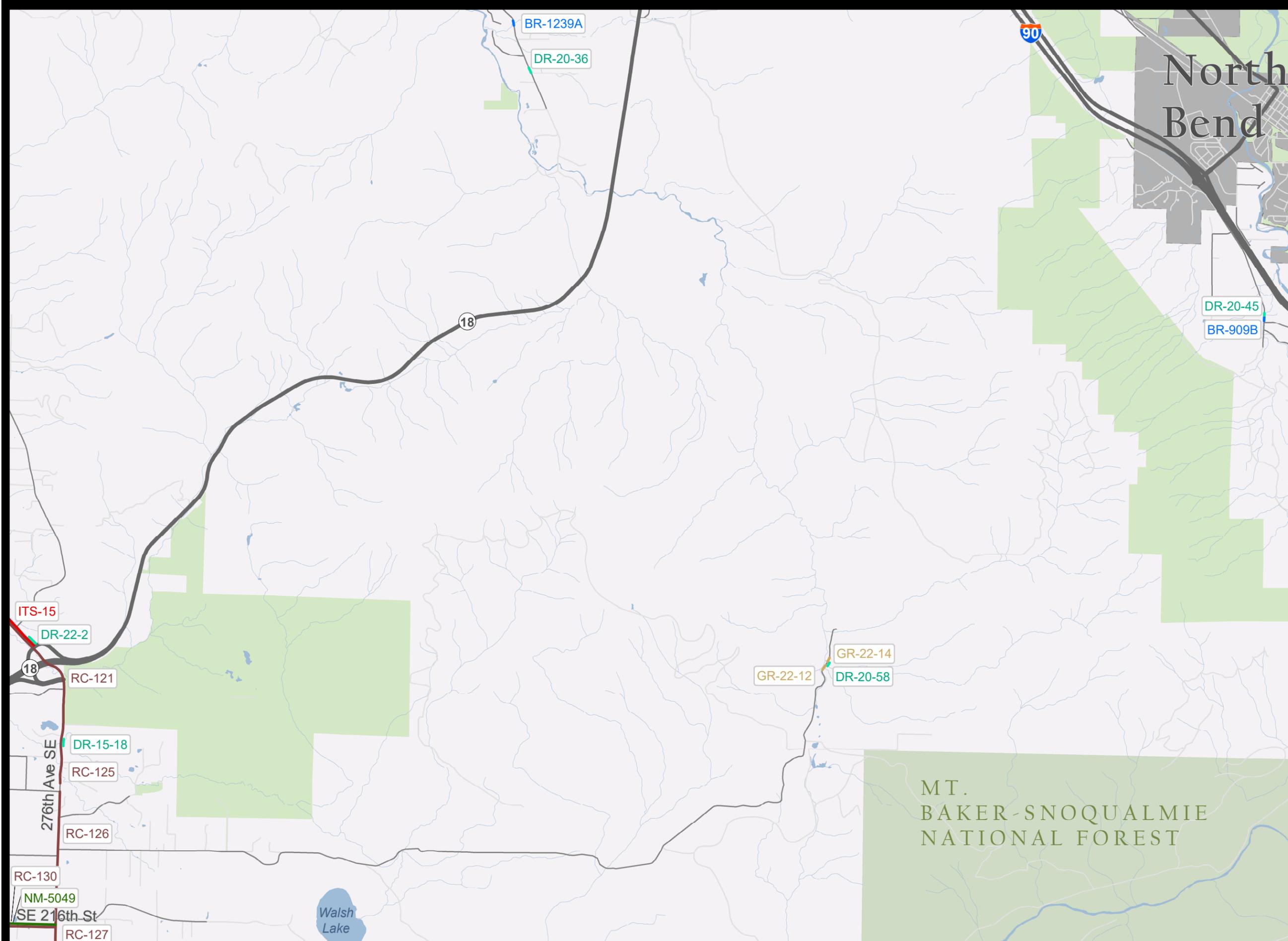
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

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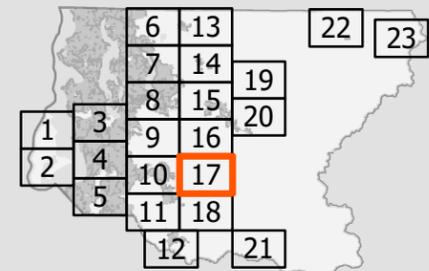
Ravensdale Map Number: 17

TNR Project Type

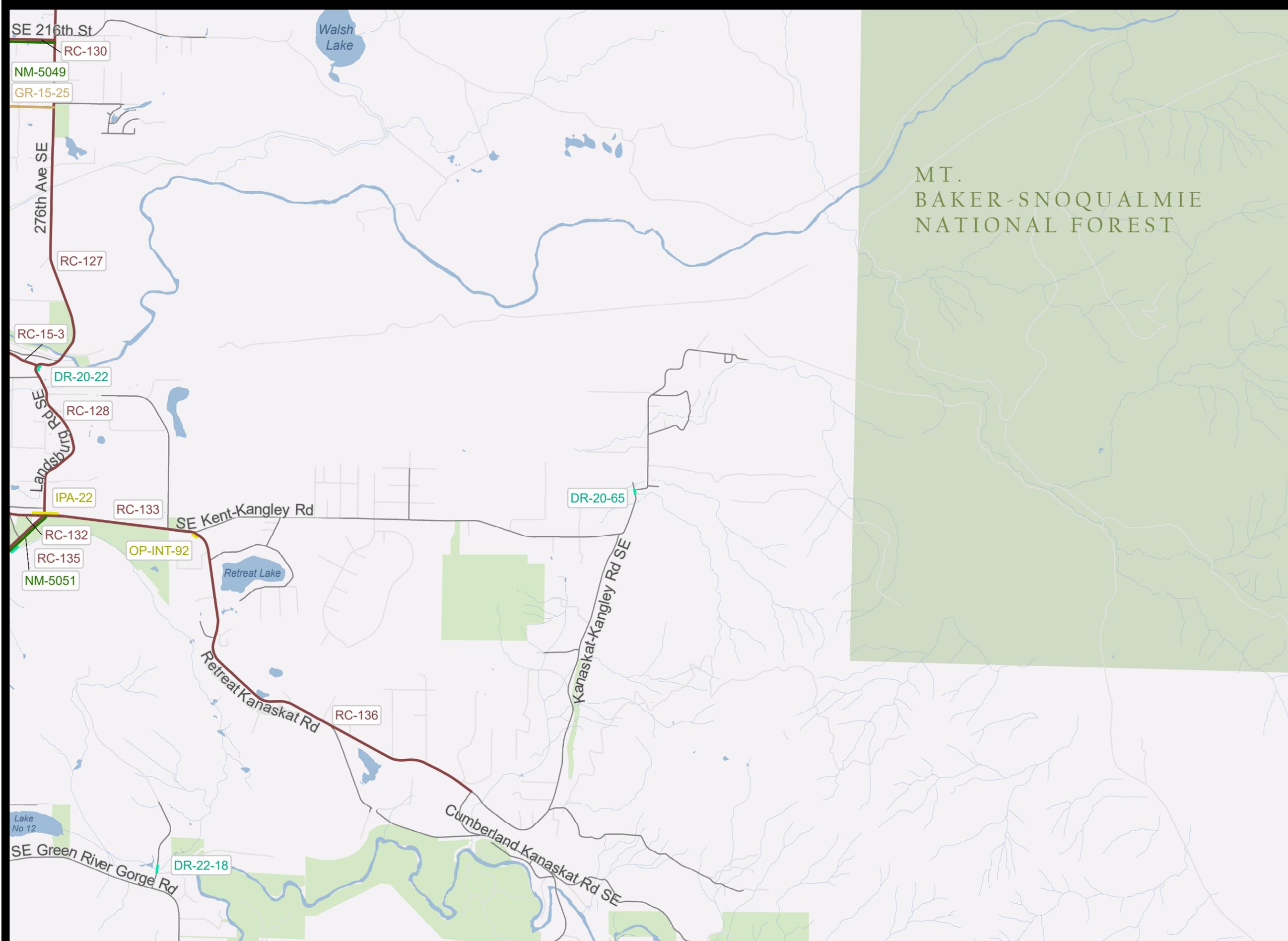
- Bridge
- Capacity-Major
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- Intersection and Traffic Safety Operations
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2024 Transportation Needs Report Project Locations

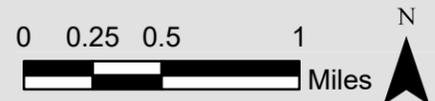
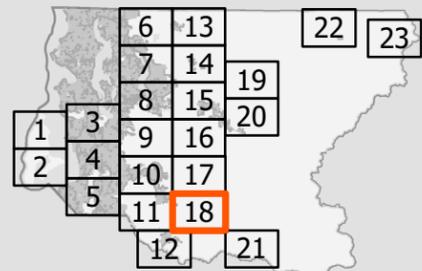
Cumberland Map Number: 18

TNR Project Type

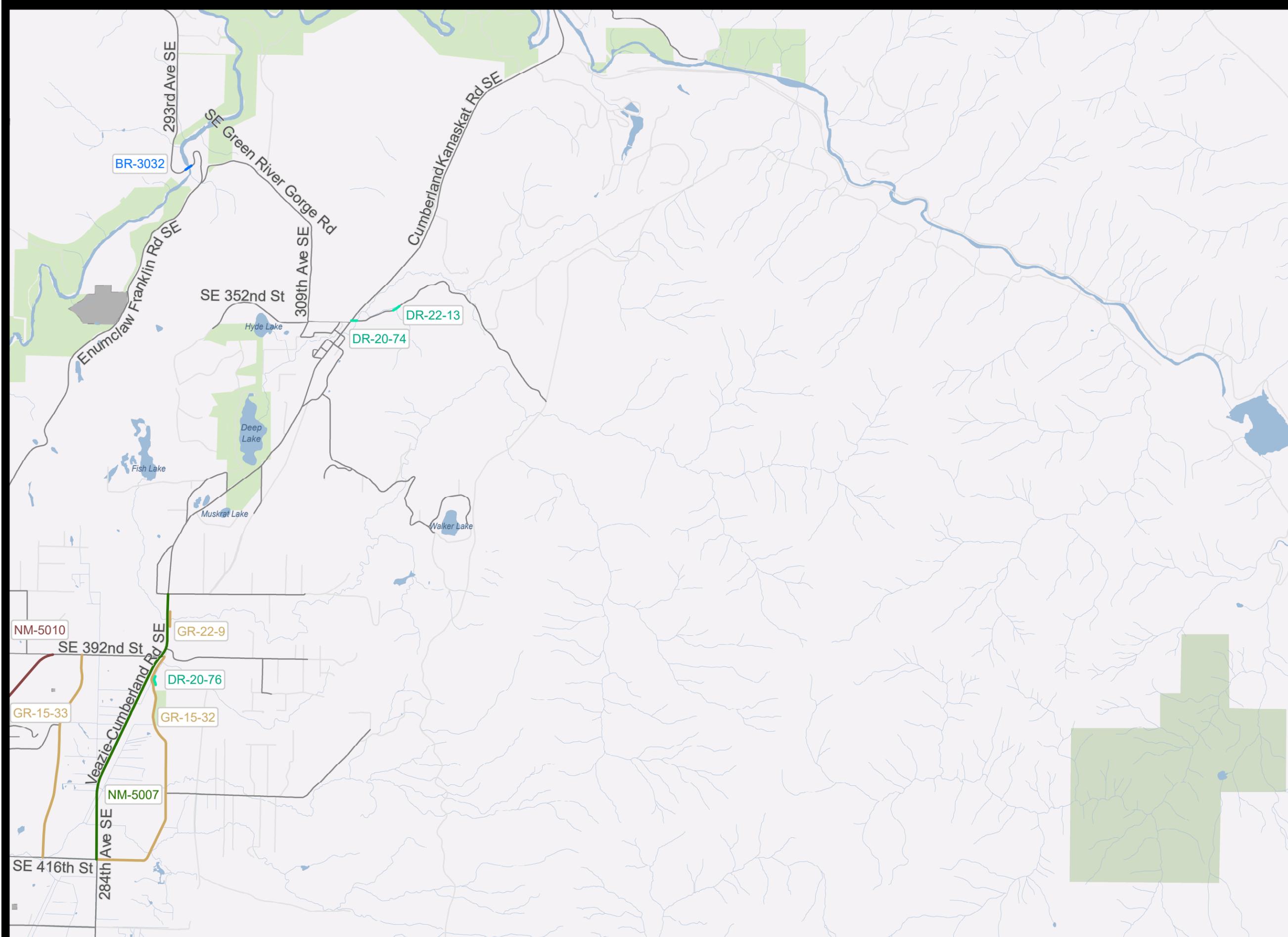
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
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Jurisdiction

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2024 Transportation Needs Report Project Locations

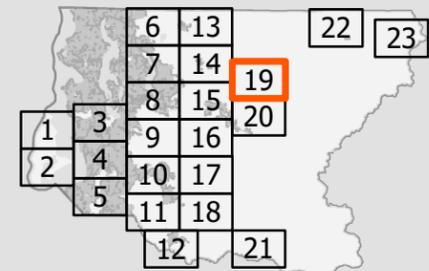
Mount Si Map Number: 19

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

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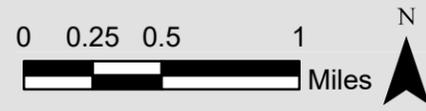
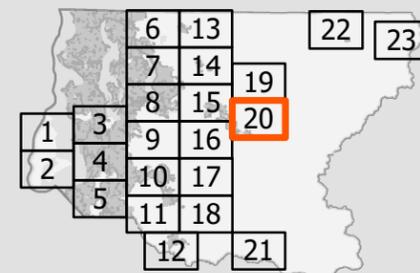
East North Bend Map Number: 20

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

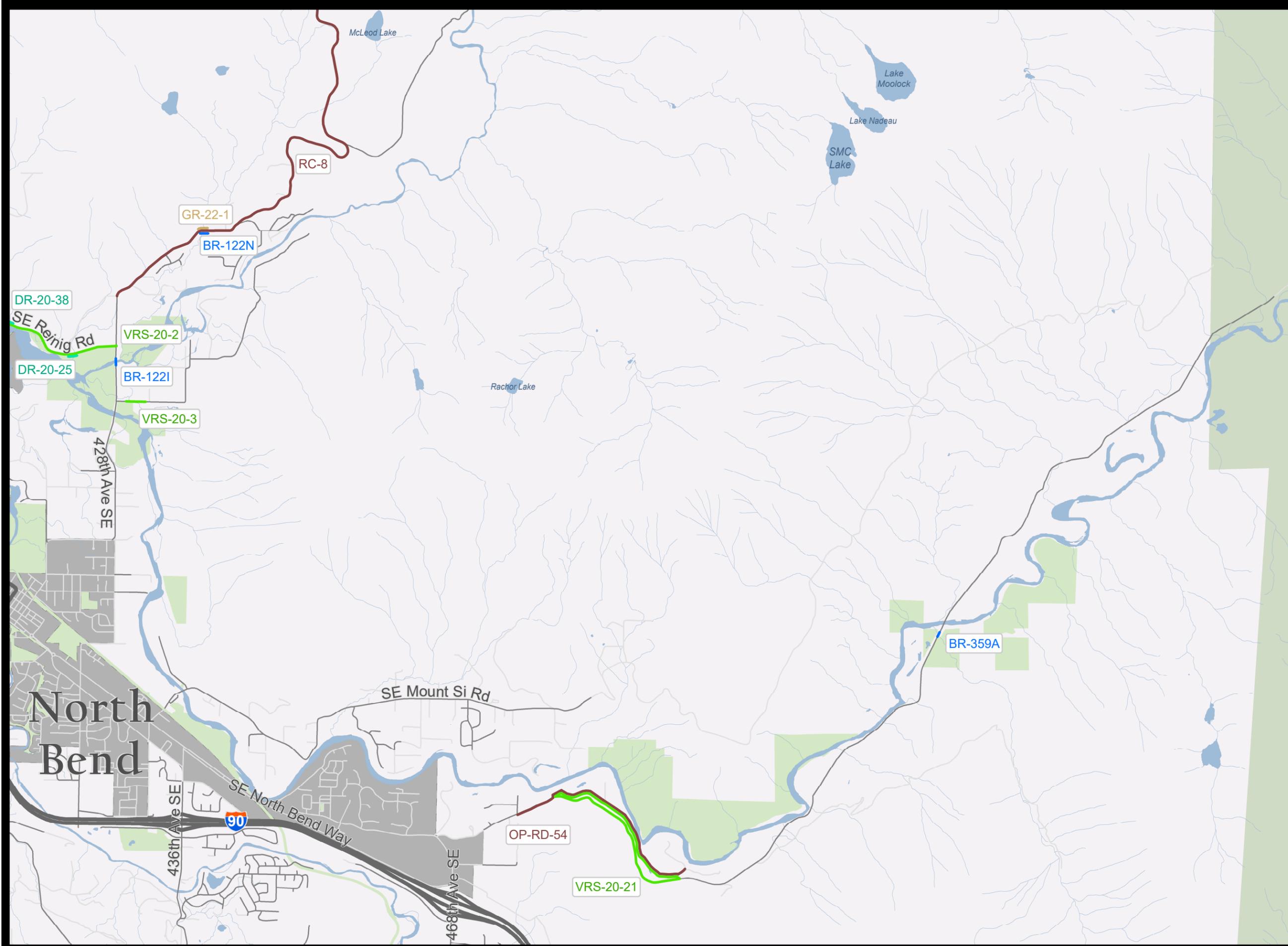
Jurisdiction

- State or Federal Highway
- Unincorporated King
- County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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2024 Transportation Needs Report Project Locations

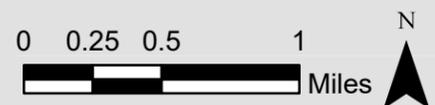
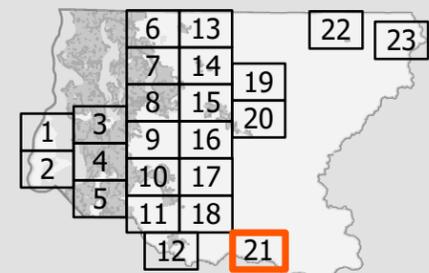
**Greenwater
Map Number: 21**

TNR Project Type

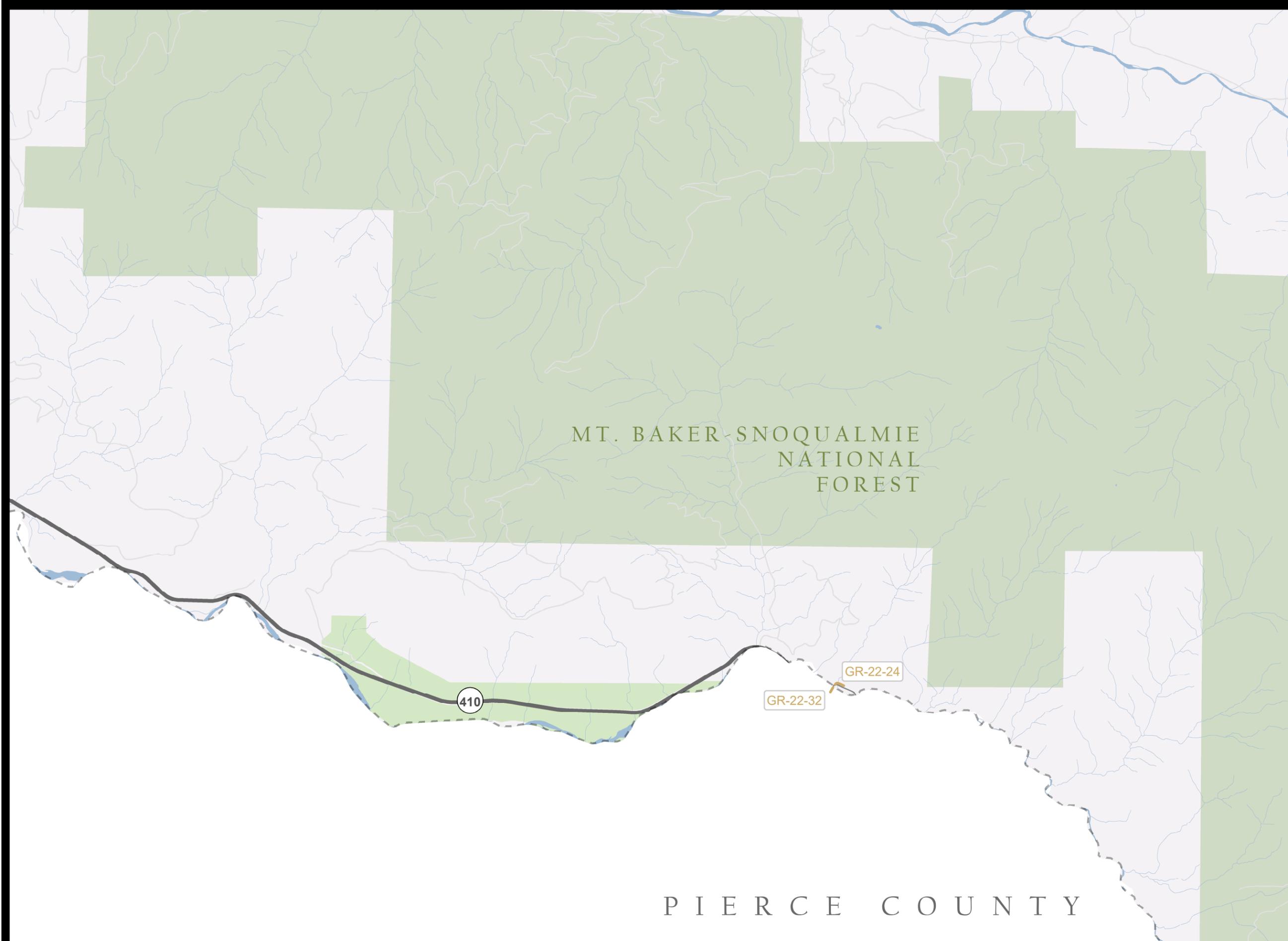
- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King
- County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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MT. BAKER-SNOQUALMIE
NATIONAL
FOREST

P I E R C E C O U N T Y

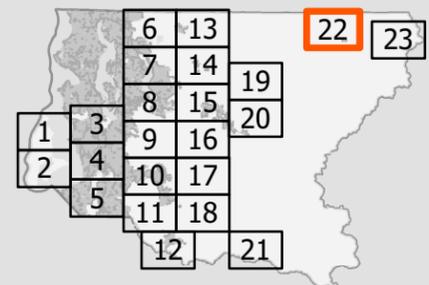
2024 Transportation Needs Report Project Locations

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King County Maintained Road
- City or Private Road
- King County
- Incorporated Area



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Wild Sky Wilderness

Bertha Lake

Jakes Lake

Embro Lake

Skyline Lake

2

BR-999K2

Murphy Lakes

Spark Plug Lake

Surprise Lake

MT. BAKER-SNOQUALMIE NATIONAL FOREST

C H E L A N C O U N T Y

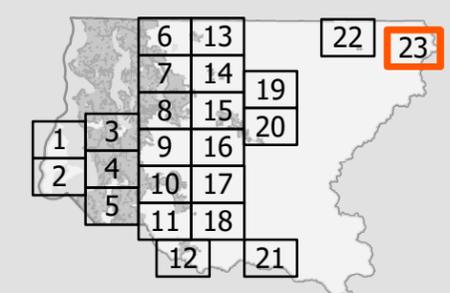
Scenic Map Number: 23

TNR Project Type

- Bridge
- Capacity-Major
- Drainage
- Guardrail
- ITS
- Intersection and Traffic Safety Operations
- Active Transportation
- Reconstruction
- Vulnerable Road Segment

Jurisdiction

- State or Federal Highway
- Unincorporated King County Maintained Road
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