

SR 20, SOUTH OAK HARBOR TO SHARPES CORNER

CHARACTERISTICS

Segment Description:

This corridor starts at the intersection with Swantown Road, and ends at the intersection with SR 20 Spur.

County/Counties: Island/Skagit

Cities/Towns Included: This corridor starts in the City of Oak Harbor, passes through unincorporated areas of Island and Skagit counties, and ends in the City of Anacortes.

Number of lanes in the corridor: 2 to 4

Lane width: 10 to 13 feet.

Speed limit: 30 to 55 mph.

Median width: 0 to 0 feet.

Shoulder width: 0 to 10 feet.

Highway Characteristics:

This section of SR 20 is classified as U1 (Urban-Principal Arterial) from MP 30.85 to MP 34.72. From MP 34.72 to MP 47.45, the highway is classified as R1 (Rural-Principal Arterial). This corridor has a freight classification of T-3, with 4,330,000 tons of freight hauled annually. This corridor is HSS, NHS, a STAHNET route, and a State Scenic Byway.

Special Use Lane Information (HOV, Bicycle, Climbing):

There are two-way turn lanes at numerous locations in or near the City of Oak Harbor. Truck climbing shoulders are located at numerous locations between Oak Harbor and Anacortes.

Access Control Type(s):

Non Limited Access Less Restrictive from Oak Harbor to Deception Pass State Park. Non-Limited Access becomes the Most Restrictive access class 1 through the State Park (SRMP 41.00 to 43.17) and remains high (access classification 2) for the remainder of the corridor north to SRMP 47.89.

Terrain Characteristics:

This corridor is comprised entirely of rolling terrain.

Natural Features:

The highway passes through Deception Pass State Park, which attracts a large number of recreational/tourist trips. The highway also travels adjacent to tribal lands of the Samish Nation.

Adjacent Land Description:

Zoning varies along the corridor. Zoning designations are: municipality, federal land, rural, rural agriculture, rural forest, rural village, and, park.

Environmental Issues:

There are two bald eagle nests adjacent to the corridor within 700 feet and 350 feet of the roadway. There are several wetlands mapped proximal to the right of way. Bald eagle nests and wetlands would require ground verification. Several streams cross the highway but none support federally protected species. There are no other GIS mapped points of sensitive habitat or species. Need appropriate tribal consultation during planning, design and construction of projects in this corridor.

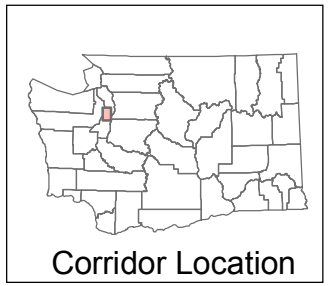
Major Economic Issues:

This corridor provides the only land-based access to Whidbey Island, therefore serves as the conduit for the vast majority of freight traffic on and off the island. NAS Whidbey is a major employer in the area and relies heavily on this corridor as a primary supply route as well as the daily commute route for a large number of base personnel. Deception Pass State Park is one of the most frequently visited state parks and can only be accessed by vehicle via this SR 20 corridor.



HSP Congested Corridor Analysis Characteristics

- Milepost Markes
- ▬ HSP Corridor Location
- ▬ U.S. Interstate
- ▬ U.S. Highway
- ▬ State Route
- ▬ Local Roads
- ▬ Railroad
- ▬ Wetlands
- ▬ Military Reservation
- ▬ Tribal Lands
- ▬ City Limits
- ▬ Urban Area
- ▬ County Line



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ASSETS

Pavement:

The entire corridor is Hot Mix Asphalt.

Signal:

There are fourteen signalized intersections located on the route segment.

Structures:

There are three structures in this corridor that consist of: one Concrete Slab, one Steel Arch Concrete T-Beam and one Steel Truss Concrete T-Beam.

(Ramps, and locally owned structures (if any exist) are not identified in this section and may not be reflected on maps.)

Features Crossed:

The highway crosses over Deception and Canoe Passes, the boundary between Whidbey and Fidalgo Islands. These passes also serve as the boundary between Island and Skagit Counties.

ITS Facilities:

There are no intelligent Transportation systems on this corridor.

Railroad Crossings:
























There are no at-grade rail crossings within this route segment.

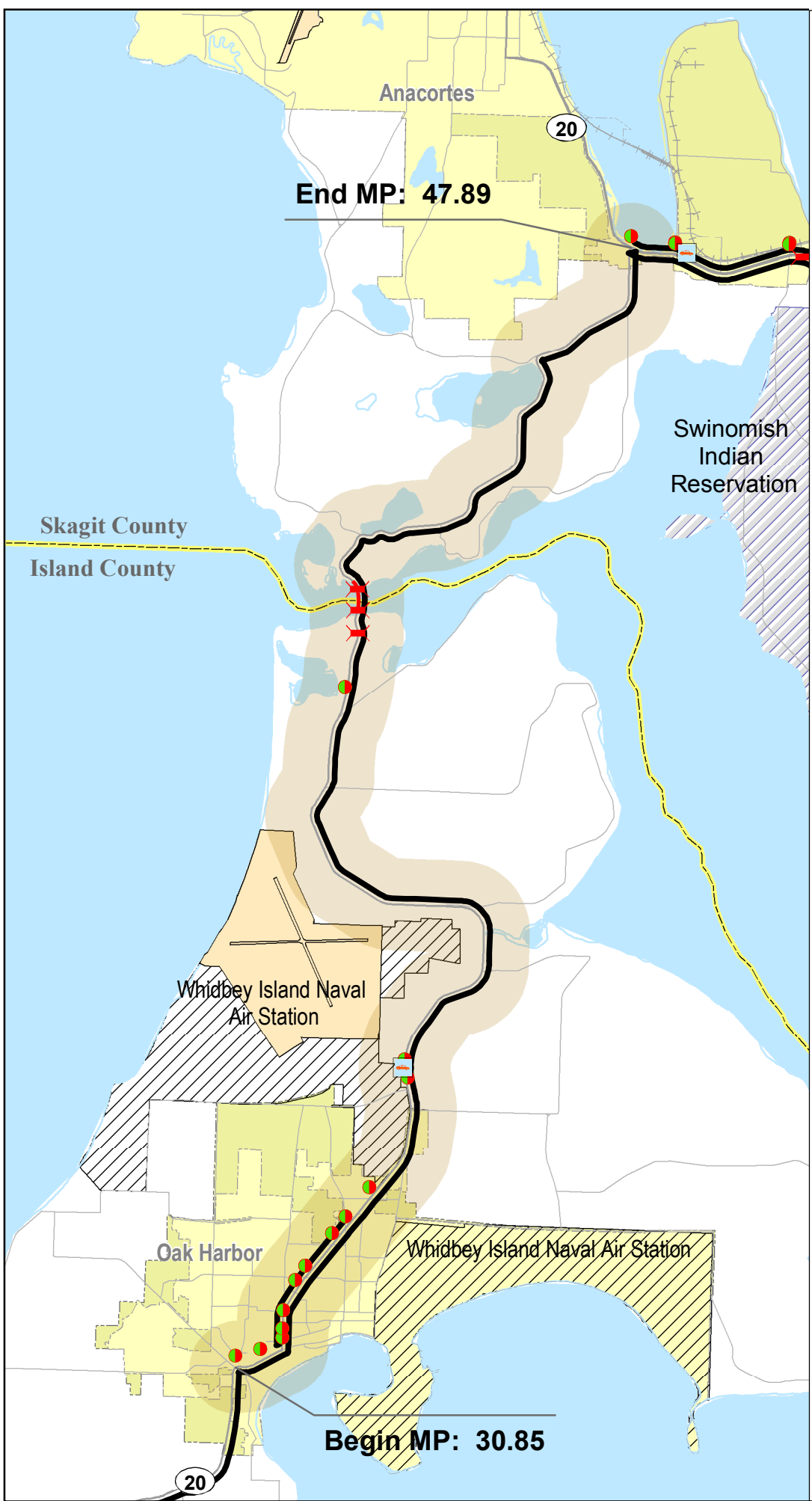
Asset Other:

None Identified.

HSP Congested Corridor Analysis

Assets

-  Corridor Location
- Assets**
-  Signalized Intersection
-  At Grade Railroad Crossings
-  Bridge
-  Ferry Terminals
-  Park and Ride
-  Weigh Stations
-  Rest Area Sites
- Corridor Pavement Type**
-  HMA
-  BST
-  PCCP
- Other Features**
-  U.S. Interstate
-  U.S. Highway
-  State Route
-  Local Roads
-  Ferry Route
-  Railroad
-  Military Reservation
-  Tribal Lands
-  City Limits
-  Urban Area
-  Airport
-  County Line



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USAGE

General Origin and Destination Travel Characteristics:

None Identified.

Snow/ice Issues:

There are no sections within this corridor which present a problem for normal snow/ice control.

Annual Average Daily Traffic:

Ranges from 12,000 to 24,000.

Significant Seasonal Average Annual Daily Traffic Changes:

None identified.

General Description of Major Average Annual Daily Traffic Locations:

None identified.

Freight:

Freight Classification: T3

Yearly Tonnage: 4.3M

Truck Percentage of Annual Average Daily Traffic: None identified.

Additional Usage Comments:

There are no additional comments.

Average Annual Societal Cost of All Collisions: None Identified

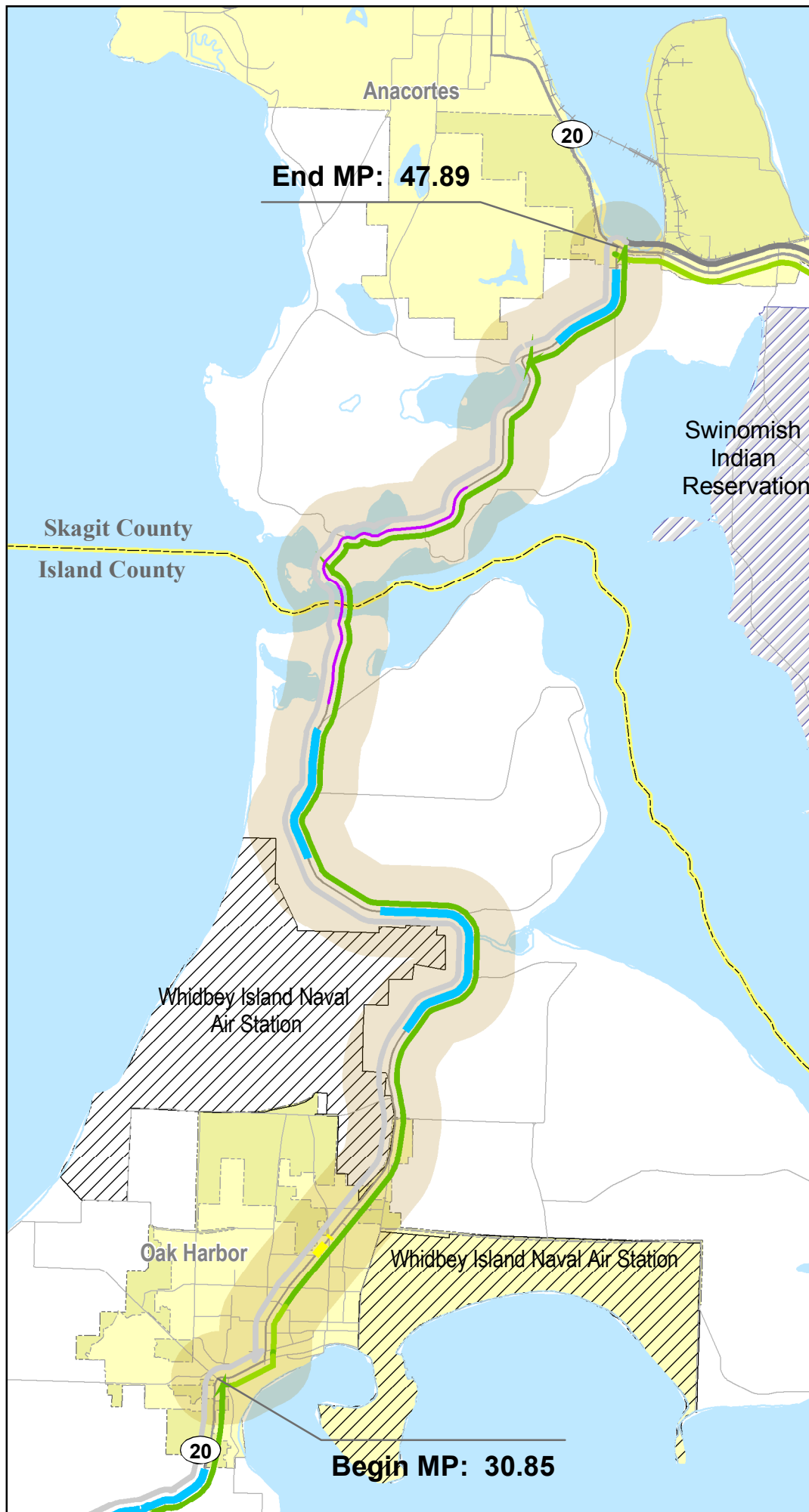
Collisions:

Severe No of Collisions: 21

Less Severe No of Collisions: 1,621

List Data Years: None identified.

HSP Congested Corridor Analysis Usage



- HSP Corridor Location
- Safety Analysis Areas**
- PAL Spot 07-09
- PAL Corridor 07-09
- HAC 07-09
- HAL Corridor 07-09
- HAL Spot 07-09
- Freight Classification**
- T-1
- T-2
- T-3
- Traffic Sections AADT**
- < 3,000
- 3,001 - 10,000
- 10,001 - 20,000
- 20,001 - 40,000
- 40,001 - 80,000
- 80,001 - 100,000
- 100,001 - 120,000
- > 120,000
- Trucks 10% and Over
- Other Features**
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads
- Railroad
- Tribal Lands
- Military Reservation
- City Limits
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NEEDS AND STRATEGIES

Preservation

Pavement Condition and Needs:

This corridor's pavement type is hot mix asphalt throughout. The pavement within the Oak Harbor urban area is 7 to 15 years old with most of it near due for resurfacing. Approximately 25% of the pavement from North Oak Harbor to the Deception Pass bridge was resurfaced in 2005 during construction of SR 20 safety projects that realigned and widened sections of the highway. The remaining pavement in this section is 10 years old and generally in good condition. Pavement on the Deception Pass Bridge is 12 years old. On the Canoe Pass Bridge it is 22 years old. North of Deception Pass out to the end of this corridor the pavement is 10 to 12 years old and in good condition.

Pavement Management Strategies:

Hot mix asphalt resurfacing of 2.3 lane mile of SR 20 in the Oak Harbor urban area is programmed for 2009. Another 1.5 miles near the northern segment of the corridor is programmed for resurfacing in 2008. All other segments of the corridor, representing approximately 77% of the entire corridor length, will be due for resurfacing between 2013 and 2018.

Structures Condition and Needs:

The following structures have preservation and improvement needs: Deception Pass Bridge and Canoe Pass Bridge. Both bridges were built in 1935 and are functionally obsolete. These are landmark/historical bridges and are extremely valuable to the surrounding communities.

Structures Management Strategies:

There are none identified.

Additional Condition and Needs:

There are none identified.

Additional Management Strategies:

There are none identified.

Improvement

Mobility Condition and Needs:

SR 20 is a two-lane facility outside of the Oak Harbor city limits. Most of this corridor shows a peak hour low speed of less than 70% of posted speed. The Deception pass bridge is also a chokepoint as the speed limits drops from 50 mph to 25 mph in the vicinity of the bridges.

Mobility Management Strategies:

Most of the turn channelization will be taken care of in the next few years of construction.

Safety Condition and Needs:

There are several safety projects occurring in this area. There are also six roundabouts planned for the SR 20 Corridor through Oak Harbor.

Safety Management Strategies:

There are none identified.

Environmental Condition and Needs:

There are none identified.

Environmental Management Strategies:

There are none identified.

Restrictions:

There are none identified.

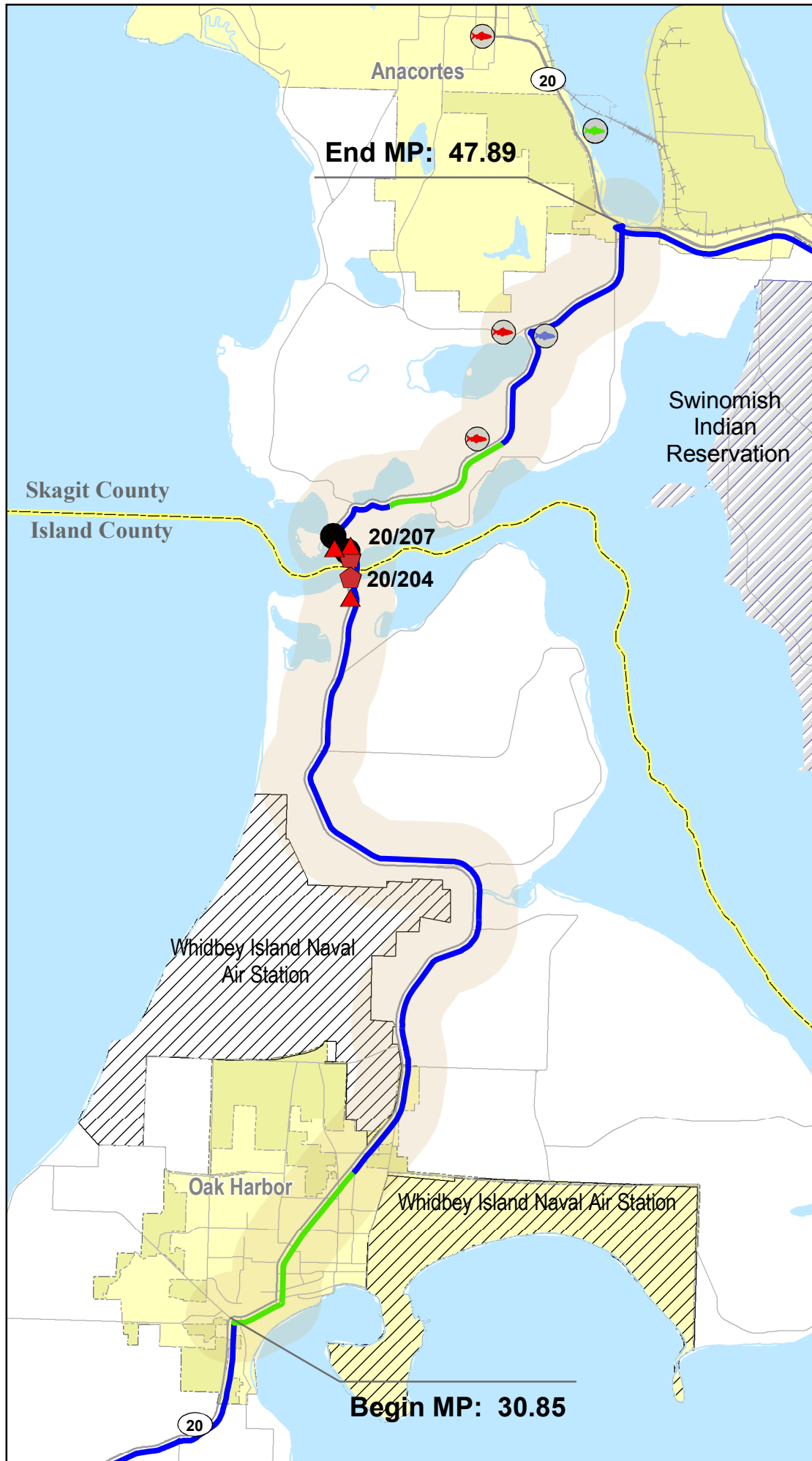
50-Year Configuration:

For the last two decades there has been discussion and study of a Ferry or bridge route to the north end of the island. Until now, studies have concluded that these options are financially and environmentally infeasible. At some point in time it will be more cost effective to replace the Deception Pass and Canoe Pass Bridges rather than continuing to maintain them. Replacement will be very difficult, these are beloved bridges to the local community and are on the Washington Heritage Register and the National Register of Historic Places. Currently (2006), the cost of replacing these bridges is in the \$200M-\$250M range.

HSP Congested Corridor Analysis

Needs

- HSP Corridor Location
- Bridge Priorities**
- Replacement
- Special
- Seismic
- Scour
- Painting
- Miscellaneous
- Bridge Deck
- Other Bridge Issues**
- ▲ 2 Lane BW Narrow Bridge
- Restricted Bridge
- Posted Bridge
- ▲ Vert. Clearance < 15.5'
- Unstable Slope**
- ▲ Debris Flow
- ▲ Erosion
- ▲ Landslide
- ▲ Rockfall
- ▲ Settlement
- Fish Passage Barriers**
- Require Repair
- Little Gain
- Undetermined
- Paving Due**
- Past Due
- 2005 - 2007
- 2008 - 2009
- 2010 - 2011
- 2012 - 2026
- Other Features**
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads
- Railroad
- Military Reservation
- Tribal Lands
- City Limits
- Urban Area
- County Line



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TIERED PROPOSED SOLUTIONS

Minimum Fix

Description:

Incorporating access management strategies in the corridor will help to reduce accidents and delays caused by the many driveways which exist here. Intelligent Transportation Systems (ITS) strategies will help to make the corridor more efficient by providing real-time information to drivers, as well as the traffic operations staff. Transportation Demand Management will help to reduce the demand of vehicles using the corridor. The pavement in this corridor will need to be rehabilitated, based on data from the WSPMS.

Delay Reduction: None identified.

Collision Reduction: 46%

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$70 M

Cost Estimate Explanation:

Access Management Strategies approximately \$10M, ITS approximately \$10M, TDM approximately \$30M, and Pavement Rehab approximately \$20.

Minimum Fix Benefits:

Better flow of traffic using existing facilities as much as possible. Eliminating left turns out of driveway will reduce accidents.

Moderate Fix

Description:

Incorporating access management strategies in the corridor will help to reduce collisions and delays caused by the many driveways which exist here. Intelligent Transportation Systems (ITS) strategies will help to make the corridor more efficient by providing real-time information to drivers, as well as the traffic operations staff. Transportation Demand Management will help to reduce the demand of vehicles using the corridor. The pavement in this corridor will need to be rehabilitated, based on data from the WSPMS. Some intersection and spot capacity improvements will be needed to address congestion/delay issues. These improvements could include signals, roundabouts, turn lanes, and auxiliary lanes. Some local street enhancements will be needed to address traffic operation problems which will arise in the future. These enhancements will allow drivers to have a choice of routes, and will reduce the demand on the State Route.

Delay Reduction: None identified.

Collisions Reduction: 51%

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$160 M

Cost Estimate Explanation:

Access Management Strategies approximately \$10M, ITS approximately \$10M, TDM approximately \$30M, Pavement Rehab approximately \$20, 6 improvement. int's @ \$5M each approximately 30M, 2 new miles of climbing/passing lanes approximately \$10M, and Local Street Improvements approximately \$50M.

Moderate Fix Benefits:

Better flow of traffic using existing facilities as much as possible. Improve local roads to reduce highway trips.

Maximum Fix

Description:

Incorporating access management strategies in the corridor will help to reduce collisions and delays caused by the many driveways which exist here. Intelligent Transportation Systems (ITS) strategies will help to make the corridor more efficient by providing real-time information to drivers, as well as the traffic operations staff. Transportation Demand Management will help to reduce the demand of vehicles using the corridor. The pavement in this corridor will need to be rehabilitated, based on data from the WSPMS. Some intersection and spot capacity improvements will be needed to address congestion/delay issues. These improvements could include signals, roundabouts, turn lanes, and auxiliary lanes. Some local street enhancements will be needed to address traffic operation problems which will arise in the future. These enhancements will allow drivers to have a choice of routes, and will reduce the demand on the State Route. For the last two decades there has been discussion and study of a Ferry or bridge route to the north end of the island. Until now, studies have concluded that these options are financially and environmentally infeasible at this point in time. At some point in time it will be more cost effective to replace the Deception Pass and Canoe Pass Bridges rather than continuing to maintain them. Replacement will be very difficult; these are beloved bridges to the local community and are on the Washington Heritage Register and the National Register of Historic Places. Currently (2006), the cost of replacing these bridges is in the \$200M-\$250M range.

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Delays Reduction: None identified.

Collisions Reduction: 51%

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$410 M

Cost Estimate Explanation:

Access Management Strategies approximately \$10M, ITS approximately \$10M, TDM approximately \$30M, Pavement Rehab approximately \$20, 6 improvement. int's @ \$5M each approximately 30M, 2 new miles of climbing/passing lanes approximately \$10M, Replace Deception Pass and Canoe Pass Bridges in their current configuration approximately \$250M, and Local Street Improvements approximately \$50M.

Maximum Fix Benefits:

Improve flow of traffic using existing facilities as much as possible. Improve local roads to reduce highway trips. Replace Deception pass bridges to increase capacity and for the safety of peds and auto/trucks.

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Off-System Solutions:

None identified.

Special Studies/Reports:

SR 20 RDP.

SR 20 Sharpes Corner.

Whidbey Scenic Isle Way CMP.

North Whidbey Access Feasibility Study.

Required Studies

None identified.

Start/Completion Date of Study:

None identified.

Expected Results

None identified.

Funded Projects within Corridor Limits

Project No	Title
A02017I	SR 20 / Sidney St Vic. to Scenic Heights Realignment and Widening
A02020P	SR 20 / SW Barlow Street to SE 3rd Ave Paving
A02021H	SR 20 / Oak Harbor NCL to Frostad Rd ACP Overlay and Safety Improvements
A02021W	SR 20 / Whiskey Creek Wetland Mitigation Site Plant Establishment
A02022H	SR 20 / Monkey Hill Rd to Troxell Rd Roadway Realignment and Channelization
A02023B	SR 20 / Troxell Rd to Cornet Bay Rd Widening and Channelization Improvements
A02023D	SR 20 / Cornet Bay Rd to Old Park Entrance Widening and Channelization Improvements
A02023I	SR 20 / Deception Pass Vic. to Rosario Rd Vic Safety Improvements
A02026S	SR 20 / Deception Pass State Park Vic. Rock Work
A02027C	SR 20 / Quiet Cove Rd Vic. to SR 20 Spur Safety Improvements
A02027D	SR 20 / Quiet Cove Rd Vic. to SR 20 Spur Safety Improvements
A02028Q	SR 20 / Vicinity Campbell Lake Rd Plant Establishment
A02029S	SR 20 / Sharpe's Corner Vicinity New Interchange

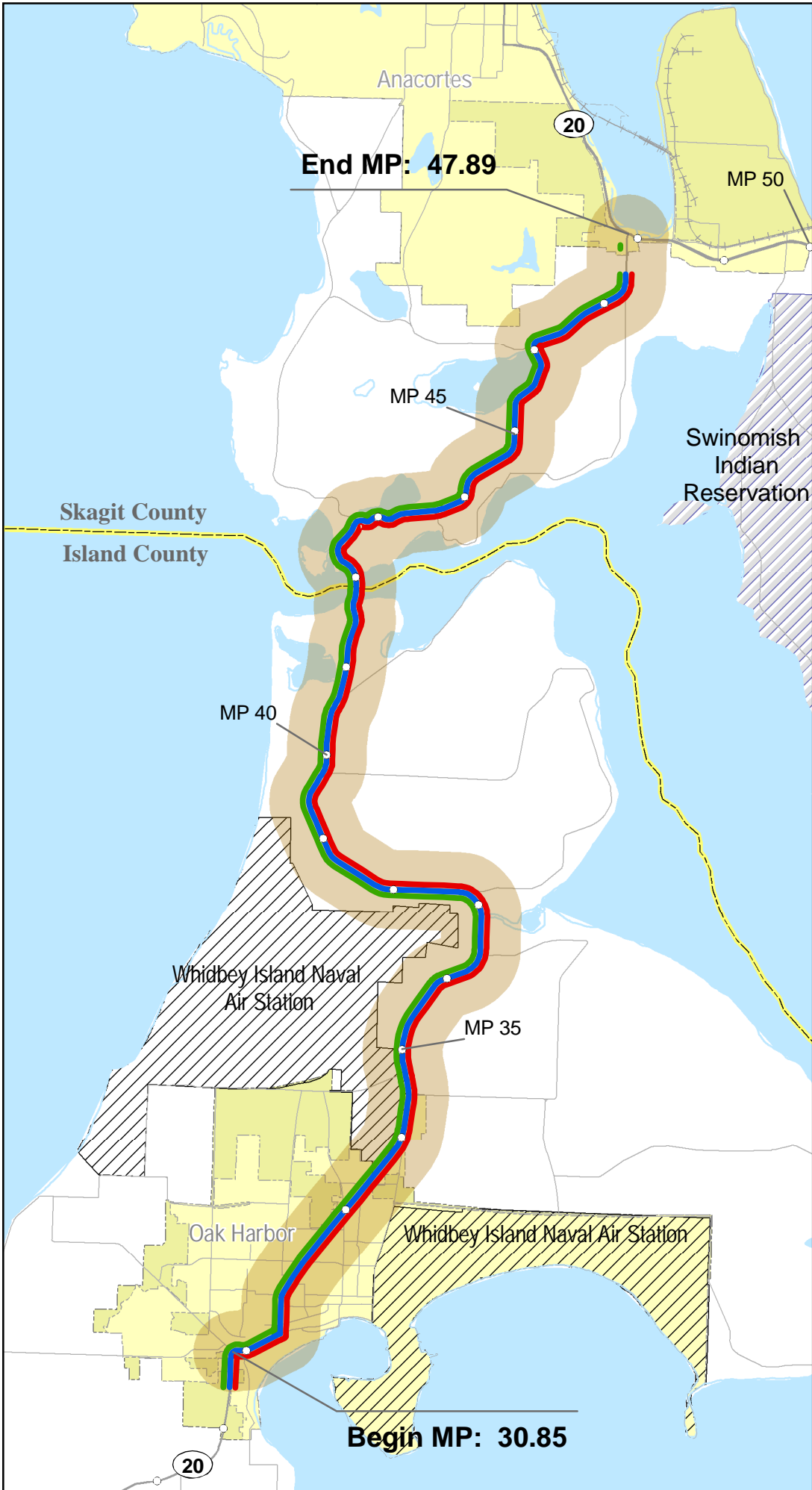
Additional Comments:

None identified.

Data Sources and Contacts used:

None identified.

HSP Congested Corridor Analysis Solutions



- HSP Corridor Location
- Solutions**
- Tier 1
- Tier 2
- Tier 3
- U.S. Interstate
- U.S. Highway
- State Route
- Milepost Marker
- Local Roads
- Railroad
- Military Reservation
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- Urban Area
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