Appendix B – Noise

The proposed project is classified as a Type 1 project under FHWA noise regulation 23 CFR 772. As such, a detailed noise analysis was performed for the project in November 2007. The noise analysis indicated that while some residential properties along the project corridor would experience noise impacts, noise barriers would not be a reasonable means to reduce noise along the proposed project corridor. Traffic conditions were reviewed to determine whether additional noise modeling is necessary at this time. Analysis of the 2040 traffic volumes indicates that the majority of the traffic in the project area would be lower than the traffic volumes modeled for design year 2025 in the original EA (see Table B-1: Traffic Volumes). The decreases in the modeled traffic numbers likely reflect changes and efficiencies in the transportation network over the past seven years since the noise analysis was completed.

Table B-1: Traffic Volumes

Roadway Segment	2025 Design Hour Volumes	2040 Design Hour Volumes	Change from 2025 to 2040	Increase from 2006 to 2025	Increase from 2010 to 2040
West of Argonne	1380	1316	-4.16%	13.96%	13.68%
East of Argonne	1250	1364	9.14%	67.56%	77.18%
Forker/ Sullivan	1900	1589	-16.35%	75.93%	57.49%
Argonne South	1185	1138	-3.97%	-10.57%	-23.93%

The new traffic modeling indicates that one segment of the proposed project may see an increase in traffic. The forecasted traffic volumes east of Argonne increased from 1250 DHV to 1364 DHV. The increase in traffic represents a 9.14 percent increase from the 2025 Design Year to 2040 Design Year numbers. The segment of Bigelow Gulch Road that experiences the 9% increase in traffic volume is roughly 3 miles long. In the 2007 EA, this 3-mile segment had four (4) homes on each side of the road that had noise impacts. This is too sparse for mitigation to be considered reasonable and feasible. The density has not changed. Additional modeling was not warranted because the conclusion will be the same – that noise mitigation will not be feasible.

Another change from the 2007 EA Noise model analysis is the addition of five (5) new residences along the corridor. The noise analysis will not be changed by the new houses because they are spread sparsely through the corridor. There are five (5) new homes, four(4) on the north and one(1) on the south side spread out over 1.75 miles. These new dwellings set back quite a distance from the road, the closest at 440 ft. All of the new homes are set back further than adjacent existing homes that were determined to have no noise impacts. Figure B-1 below shows the locations of the new homes in relation to the previously studied homes on the 2007 EA Noise Impacts Maps. The area is rural and low density and the changes are minimal from the conditions during the 2007 study. Per the modeled results for adjacent homes in the 2007 study, these new homes will see no noise impacts.

The construction activities associated with the proposed project would result in increased noise levels relative to existing conditions. These impacts would be short in duration and directly related to the use of construction equipment. Construction noise would be reduced with the implementation of BMPs.

No additional noise modeling is recommended.

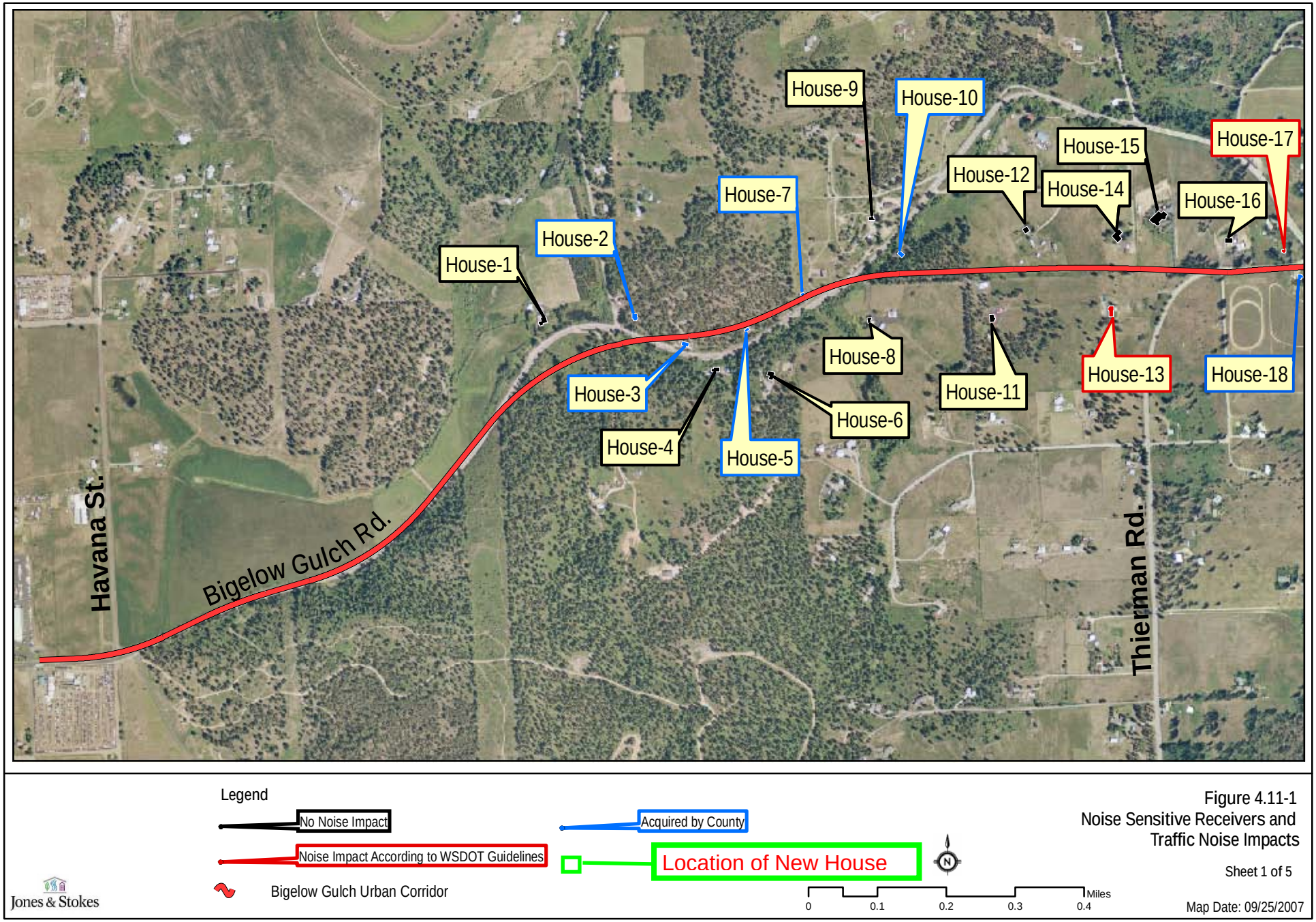

Figure B-1 : New House Locations shown on 2007 Noise Impact Maps

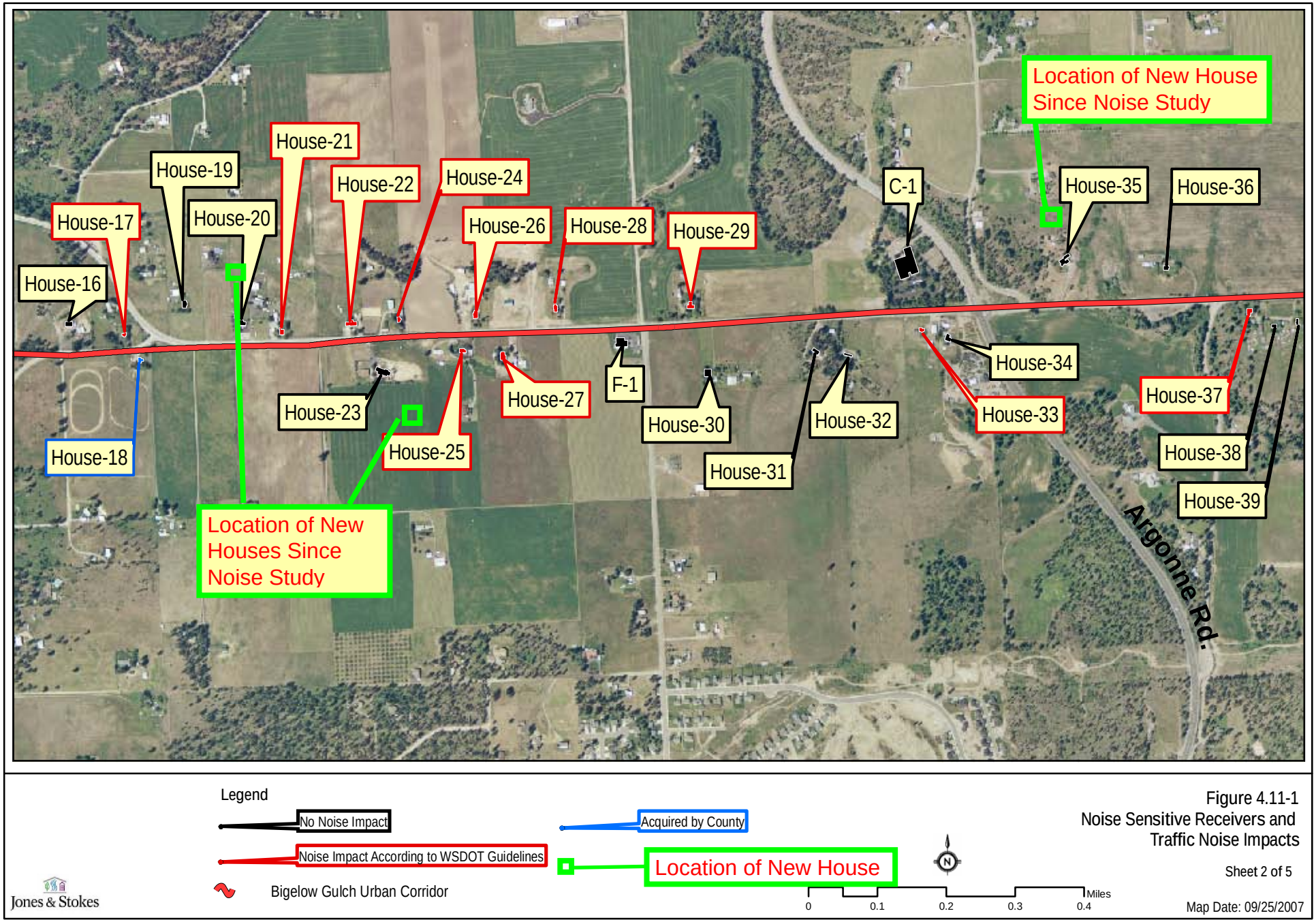

Figure B-1 : New House Locations shown on 2007 Noise Impact Maps

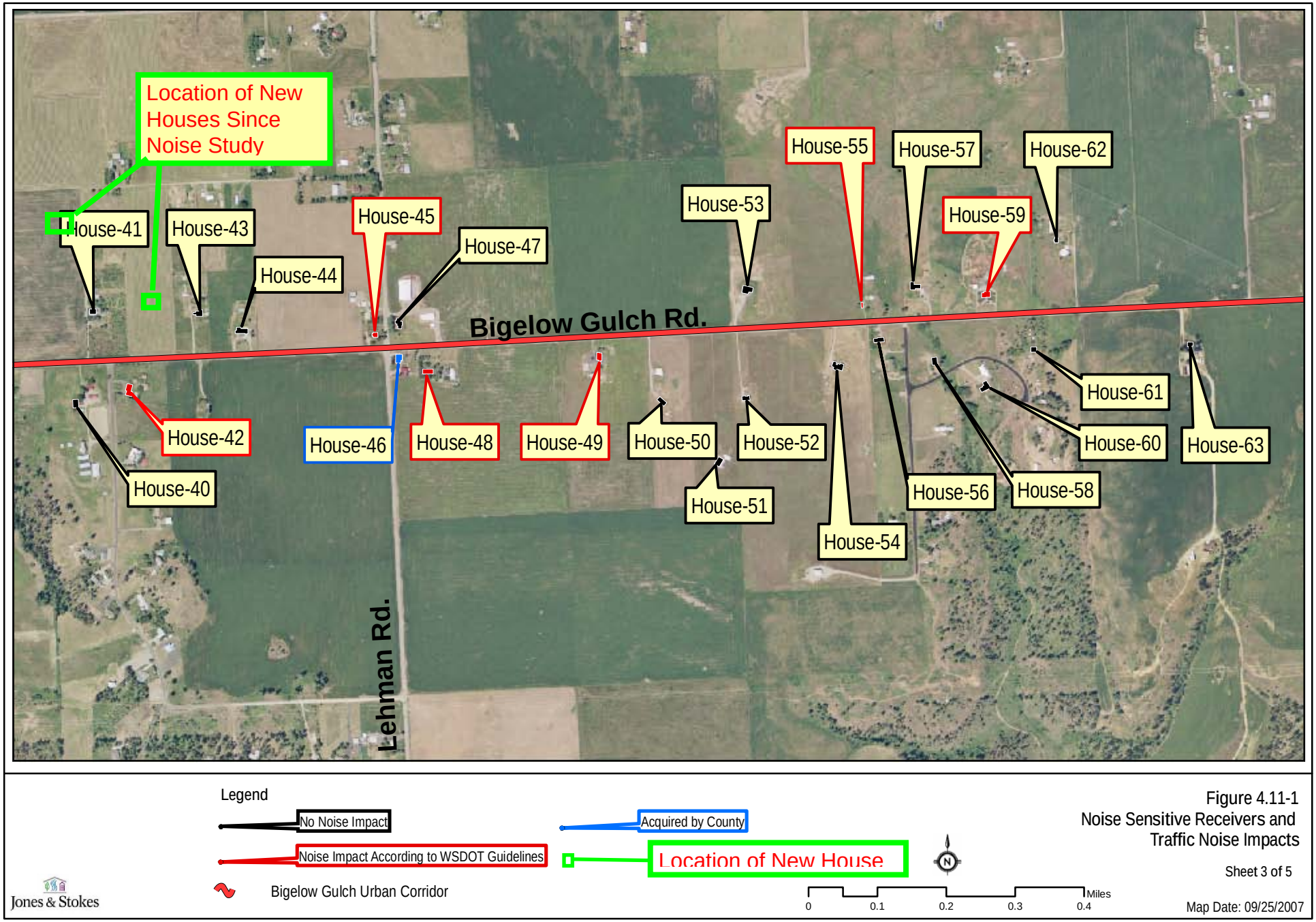

Figure B-1 : New House Locations shown on 2007 Noise Impact Maps

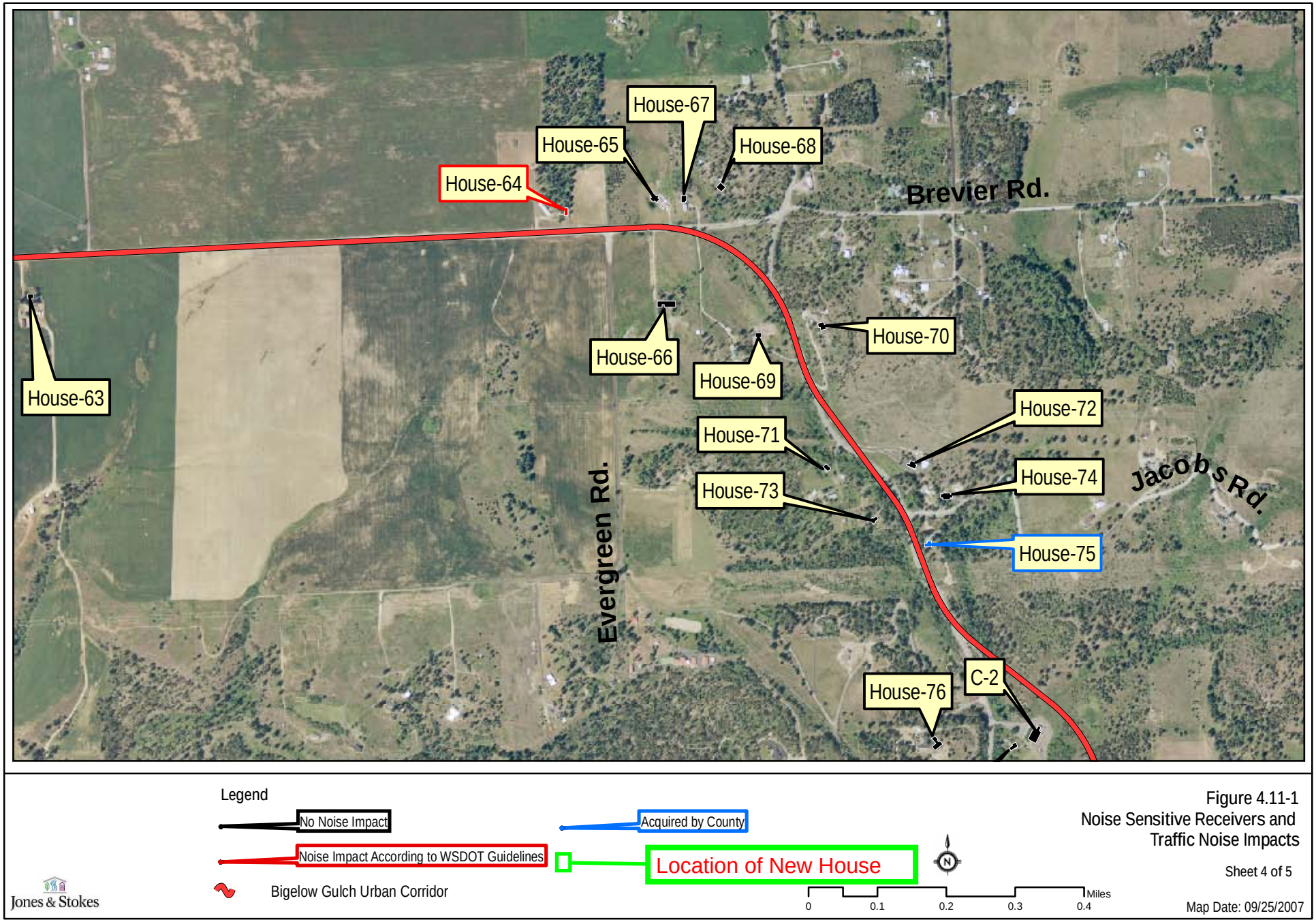

Figure B-1 : New House Locations shown on 2007 Noise Impact Maps

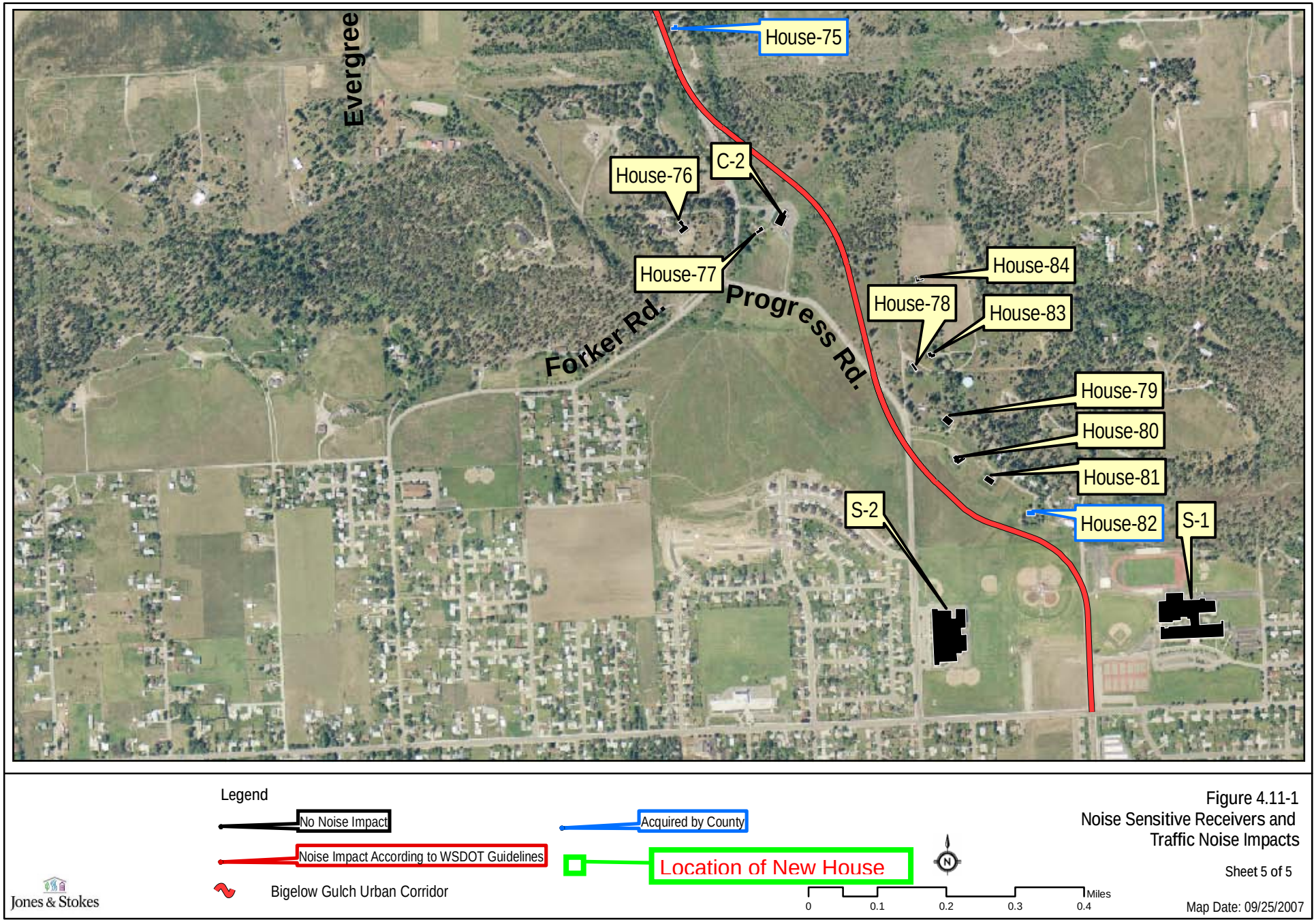

Figure B-1 : New House Locations shown on 2007 Noise Impact Maps