



HORIZONTAL DIRECTIONAL DRILL (HDD) & GUIDED AUGER BORE (GAB)

PROJECT HISTORY REPORT

1. Patterson, California – HDD – 7,215' of 24" – PG&E – Completed February 2021
2. Bakersfield, California – GAB – 240' of 12" – PG&E – Completed February 2021
3. Bakersfield, California – GAB – 280' of 12" – PG&E – Completed January 2021
4. Reedsport, Oregon - HDD - 4,340' of 5.5" - Zayo Group - Completed December 2020
5. Florence, Oregon - HDD - 2,005' of 5.5" - Zayo Group - Completed December 2020
6. Clackamas, Oregon - HDD - 1,400' of 12" - NW Natural - Completed October 2020
7. Kelso, Washington - HDD - 800' of 4" - Cascade Natural Gas - Completed October 2020
8. Kalama, Washington - HDD - 2,400' of 4" - Cascade Natural Gas - Completed October 2020
9. Sandy, Oregon - HDD - 10,500' of 8" - Multiple Bores (14 Total) - NW Natural - Completed September 2020
10. Hillsboro, Oregon - HDD - 1,400' of 8" - NW Natural - Completed September 2020
11. Ukiah, California - HDD - 800' of 8" - Pacific Gas and Electric - Completed August 2020
12. Chandler, Oklahoma - HDD - 3,750' of 24" - Plains All American - Completed July 2020
13. Lodi, California - HDD - 1,011' of 4" - Pacific Gas and Electric - Completed July 2020
14. Chino, California - HDD - 1,600' of 36" - So Cal Gas - Completed April 2020
15. Santa Margarita, California - HDD - 620' & 700' of 10" - So Cal Gas - Completed April 2020
16. Santa Margarita, California - GAB - 160' of 16" - So Cal Gas - Completed April 2020
17. Bakersfield, California - HDD - 200' of 12" - So Cal Gas - Completed February 2020
18. California - HDD - Beach Approach - Approximately 4,000' - Completed January 2020
19. San Luis Obispo, California - GAB - 40' of 10" - So Cal Gas - Completed January 2020
20. Fort Lupton, Colorado - HDD - Multiple Bores (15 total) Ranging From 444' to 1,185' of 4" - Completed December 2019
21. Enumclaw, Washington - HDD - 1,525' of 6" - City of Enumclaw - Completed December 2019
22. Salinas, California – HDD – 1,206' of 12" – Pacific Gas and Electric
Completed October 2019
23. Pueblo, Colorado – HDD – 1,332' of 4" – Xcel Energy
Completed October 2019

24. American Canyon, California – GAB – 160’ & 350’ of 24” – Pacific Gas and Electric
Completed August 2019
25. Santa Margarita, California – HDD – 1,391’ of 16” – So Cal Gas
Completed August 2019
26. Wasco, California – HDD – 1,848’ & 2,661’ of 8” - California Rail Builders
Completed August 2019
27. Willows, California – GAB – 130’ of 4” – Pacific Gas and Electric
Completed June 2019
28. Hawaii – HDD – Beach Approach (6 total) – Ranging from 3,000’ to 6,500’
June 2018 - May 2019
29. Victorville, California – HDD – 1,234’ & 1,365’ of 10” - Pacific Gas and Electric
Completed February 2019
30. California – HDD – Beach Approach – 4,000’
Completed February 2019
31. Fremont, California – HDD – 4,800’ of 36” - Pacific Gas and Electric
Completed December 2018
32. Brighton, Colorado – HDD – 880’ of 8” – Xcel Energy
Completed November 2018
33. Aurora, Colorado – HDD – 1,100’ of 20” – Xcel Energy
Completed October 2018
34. Thornton, California – HDD – 3,000’ of 24” – Pacific Gas and Electric
Completed October 2018
35. Thornton, California – GAB – 1,455’ of 24” – Pacific Gas and Electric
Completed October 2018
36. San Mateo, California – HDD – 2,400’ of 24” - Pacific Gas and Electric
Completed August 2018
37. San Mateo, California – HDD – 1,800’ & 2,900’ of 16” - Verizon
Completed August 2018
38. Puerto Rico – HDD – Beach Approach – 2,500’
Completed August 2018
39. Oregon – HDD – Beach Approach (2 total) – 5,500’
Completed July 2018
40. Burnsville-Black Dog, Minnesota – GAB – 150’ of 16” – Xcel Energy
Completed March 2018
41. Barstow-Kramer Junction, California – GAB – 130’ of 34” – Pacific Gas and Electric
Completed February 2018

42. Pueblo West, Colorado – HDD – 2,400' of 6" – Xcel Energy
Completed January 2018
43. Camas, Washington – HDD – 605' of 6" – NW Natural
Completed November 2017
44. Tracy, California – GAB – 150' of 20 – 380' of 36" – Shell
Completed October 2017
45. La Grande, Oregon – HDD – 1,300' of 6" – Avista Utilities
Completed September 2017
46. Tacoma, Washington – HDD – 13,000' of 16" – Puget Sound Energy
Completed September 2017
47. Turlock, California – HDD – 800' of 12" – Pacific Gas and Electric
Completed September 2017
48. Sacramento, California – HDD – 2,450' of 30" – Pacific Gas and Electric
Completed August 2017
49. Richland-Kennewick, Washington – HDD – 3,790' of 6" – Cascade Natural Gas
Completed – August 2017
50. The Dalles, Oregon – HDD – 677' of 6" – NW Natural Gas
Completed April 2017
51. Buttonwillow, California – HDD – 305' of 12" – SoCal Gas
Completed January 2017
52. Knappa, Oregon – HDD – 1,065' of 10" – NW Natural
Completed October 2016
53. Sonoma, California – HDD – 800' of 6" – Pacific Gas and Electric
Completed September 2016
54. Lemoore, California – HDD – 5,740' of 16" – SoCal Gas
Completed 2016
55. Lemoore, California – GAB – 116' of 16" – SoCal Gas
Completed 2016
56. Bakersfield, California – GAB – 1,054' of 12" – SoCal Gas
Completed 2016
57. Santa Clarita, California – HDD – 1900' of 14" – Plains Pipeline
Completed February 2016 – Various Sandstone Layers
58. Castaic, California – HDD – 2,148' of 14" – Plains Pipeline
Completed February 2016 – Various Sandstone Layers
59. Larkspur, California – HDD – 700' of 30" HDPE – City of Larkspur
Completed September 2015 - Fat Clay
60. Elk Grove, California – HDD – 3600' of 24" – Pacific Gas and Electric
Completed January 2015 - Soft\Fat Clay

- 61.** Elk Grove, California – HDD – 2300' of 24" – Pacific Gas and Electric
Completed December 2014 - Soft\Fat Clay
- 62.** Vacaville, California – HDD – 1708' of 42" – Pacific Gas and Electric
Completed November 2014 – Fat Clay under Wetland with Intersect
- 63.** Roseville, California – HDD – 3300' of 16" – Pacific Gas and Electric
Completed September of 2014
- 64.** Roseville, California – HDD – 3600' of 16" – Pacific Gas and Electric
Completed October of 2014
- 65.** Albany, Oregon – HDD – 3200' of 30" HDPE – City of Albany
October 2012 – Solid Rock under Willamette and Calapooia River
- 66.** Corvallis\Monmouth, Oregon – HDD – 1200',3400',4200',5200' of 12" – NW Natural Gas
Completed May 2012 - Fat Clay under City of Monmouth
- 67.** Sunnyvale, California – HDD – 950' of 24" – Pacific Gas and Electric
Completed July 2012 Fat Clay – Bay Mud
- 68.** Sunnyvale, California – HDD – 2800' of 24" – Pacific Gas and Electric
Completed August 2012 – Fat Clay – Bay Mud
- 69.** Monmouth, Oregon – HDD – 4300' of 12" – NW Natural Gas
Completed April 2012 – Fat Clay under Environmentally Sensitive Farmland
- 70.** Fresno, California – HDD – 2000' of 24" – Pacific Gas and Electric
Completed November 2012
- 71.** Medford, Oregon – HDD – 2800' 12" – Avista Utilities
Completed November 2010 – Sandstone Intersect under Larson Creek
- 72.** Grants Pass, Oregon – HDD – 3000' 6" HDPE – Avista Utilities
Completed November 2010 – Sandstone\Cobble under the Rogue River
- 73.** Cranberry Township, Pennsylvania – HDD
3000' of 12" – Charles Machine Works / Ditch Witch
Completed February 2012 – Fractured Rock
- 74.** Avon, Colorado 2800' of 16" – HDD – Xcel Energy
Completed December 2011 – Cemented Cobble – Emergency Bore