



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

**PROJECT HISTORY REPORT**

1. Fresno, California – GAB – 200' of 18" – Kinder Morgan – Completed July 2021
2. Eureka, California – GAB – 300' of 4" – PG&E – Completed June 2021
3. Chowchilla, California – GAB – 227' of 12" – PG&E – Completed April 2021
4. Patterson, California – HDD – 7,215' of 24" – PG&E – Completed February 2021
5. Bakersfield, California – GAB – 240' of 12" – PG&E – Completed February 2021
6. Bakersfield, California – GAB – 280' of 12" – PG&E – Completed January 2021
7. Reedsport, Oregon - HDD - 4,340' of 5.5" - Zayo Group - Completed December 2020
8. Florence, Oregon - HDD - 2,005' of 5.5" - Zayo Group - Completed December 2020
9. Clackamas, Oregon - HDD - 1,400' of 12" - NW Natural - Completed October 2020
10. Kelso, Washington - HDD - 800' of 4" - Cascade Natural Gas - Completed October 2020
11. Kalama, Washington - HDD - 2,400' of 4" - Cascade Natural Gas - Completed October 2020
12. Sandy, Oregon - HDD - 10,500' of 8" - Multiple Bores (14 Total) - NW Natural - Completed September 2020
13. Hillsboro, Oregon - HDD - 1,400' of 8" - NW Natural - Completed September 2020
14. Ukiah, California - HDD - 800' of 8" - Pacific Gas and Electric - Completed August 2020
15. Chandler, Oklahoma - HDD - 3,750' of 24" - Plains All American - Completed July 2020
16. Lodi, California - HDD - 1,011' of 4" - Pacific Gas and Electric - Completed July 2020
17. Chino, California - HDD - 1,600' of 36" - So Cal Gas - Completed April 2020
18. Santa Margarita, California - HDD - 620' & 700' of 10" - So Cal Gas - Completed April 2020
19. Santa Margarita, California - GAB - 160' of 16" - So Cal Gas - Completed April 2020
20. Bakersfield, California - HDD - 200' of 12" - So Cal Gas - Completed February 2020
21. California - HDD - Beach Approach - Approximately 4,000' - Completed January 2020
22. San Luis Obispo, California - GAB - 40' of 10" - So Cal Gas - Completed January 2020
23. Fort Lupton, Colorado - HDD - Multiple Bores (15 total) Ranging From 444' to 1,185' of 4" - Completed December 2019
24. Enumclaw, Washington - HDD - 1,525' of 6" - City of Enumclaw - Completed December 2019

25. Salinas, California – HDD – 1,206' of 12" – Pacific Gas and Electric  
Completed October 2019
26. Pueblo, Colorado – HDD – 1,332' of 4" – Xcel Energy  
Completed October 2019
27. American Canyon, California – GAB – 160' & 350' of 24" – Pacific Gas and Electric  
Completed August 2019
28. Santa Margarita, California – HDD – 1,391' of 16" – So Cal Gas  
Completed August 2019
29. Wasco, California – HDD – 1,848' & 2,661' of 8" - California Rail Builders  
Completed August 2019
30. Willows, California – GAB – 130' of 4" – Pacific Gas and Electric  
Completed June 2019
31. Hawaii – HDD – Beach Approach (6 total) – Ranging from 3,000' to 6,500'  
June 2018 - May 2019
32. Victorville, California – HDD – 1,234' & 1,365' of 10" - Pacific Gas and Electric  
Completed February 2019
33. California – HDD – Beach Approach – 4,000'  
Completed February 2019
34. Fremont, California – HDD – 4,800' of 36" - Pacific Gas and Electric  
Completed December 2018
35. Brighton, Colorado – HDD – 880' of 8" – Xcel Energy  
Completed November 2018
36. Aurora, Colorado – HDD – 1,100' of 20" – Xcel Energy  
Completed October 2018
37. Thornton, California – HDD – 3,000' of 24" – Pacific Gas and Electric  
Completed October 2018
38. Thornton, California – GAB – 1,455' of 24" – Pacific Gas and Electric  
Completed October 2018
39. San Mateo, California – HDD – 2,400' of 24" - Pacific Gas and Electric  
Completed August 2018
40. San Mateo, California – HDD – 1,800' & 2,900' of 16" - Verizon  
Completed August 2018
41. Puerto Rico – HDD – Beach Approach – 2,500'  
Completed August 2018
42. Oregon – HDD – Beach Approach (2 total) – 5,500'  
Completed July 2018

43. Burnsville-Black Dog, Minnesota – GAB – 150' of 16" – Xcel Energy  
Completed March 2018
44. Barstow-Kramer Junction, California – GAB – 130' of 34" – Pacific Gas and Electric  
Completed February 2018
45. Pueblo West, Colorado – HDD – 2,400' of 6" – Xcel Energy  
Completed January 2018
46. Camas, Washington – HDD – 605' of 6" – NW Natural  
Completed November 2017
47. Tracy, California – GAB – 150' of 20 – 380' of 36" – Shell  
Completed October 2017
48. La Grande, Oregon – HDD – 1,300' of 6" – Avista Utilities  
Completed September 2017
49. Tacoma, Washington – HDD – 13,000' of 16" – Puget Sound Energy  
Completed September 2017
50. Turlock, California – HDD – 800' of 12" – Pacific Gas and Electric  
Completed September 2017
51. Sacramento, California – HDD – 2,450' of 30" – Pacific Gas and Electric  
Completed August 2017
52. Richland-Kennewick, Washington – HDD – 3,790' of 6" – Cascade Natural Gas  
Completed – August 2017
53. The Dalles, Oregon – HDD – 677' of 6" – NW Natural Gas  
Completed April 2017
54. Buttonwillow, California – HDD – 305' of 12" – SoCal Gas  
Completed January 2017
55. Knappa, Oregon – HDD – 1,065' of 10" – NW Natural  
Completed October 2016
56. Sonoma, California – HDD – 800' of 6" – Pacific Gas and Electric  
Completed September 2016
57. Lemoore, California – HDD – 5,740' of 16" – SoCal Gas  
Completed 2016
58. Lemoore, California – GAB – 116' of 16" – SoCal Gas  
Completed 2016
59. Bakersfield, California – GAB – 1,054' of 12" – SoCal Gas  
Completed 2016
60. Santa Clarita, California – HDD – 1900' of 14" – Plains Pipeline  
Completed February 2016 – Various Sandstone Layers

61. Castaic, California – HDD – 2,148' of 14" – Plains Pipeline  
Completed February 2016 – Various Sandstone Layers
62. Larkspur, California – HDD – 700' of 30" HDPE – City of Larkspur  
Completed September 2015 - Fat Clay
63. Elk Grove, California – HDD – 3600' of 24" – Pacific Gas and Electric  
Completed January 2015 - Soft\Fat Clay
64. Elk Grove, California – HDD – 2300' of 24" – Pacific Gas and Electric  
Completed December 2014 - Soft\Fat Clay
65. Vacaville, California – HDD – 1708' of 42" – Pacific Gas and Electric  
Completed November 2014 – Fat Clay under Wetland with Intersect
66. Roseville, California – HDD – 3300' of 16" – Pacific Gas and Electric  
Completed September of 2014
67. Roseville, California – HDD – 3600' of 16" – Pacific Gas and Electric  
Completed October of 2014
68. Albany, Oregon – HDD – 3200' of 30" HDPE – City of Albany  
October 2012 – Solid Rock under Willamette and Calapooia River
69. Corvallis\Monmouth, Oregon – HDD – 1200',3400',4200',5200' of 12" – NW Natural Gas  
Completed May 2012 - Fat Clay under City of Monmouth
70. Sunnyvale, California – HDD – 950' of 24" – Pacific Gas and Electric  
Completed July 2012 Fat Clay – Bay Mud
71. Sunnyvale, California – HDD – 2800' of 24" – Pacific Gas and Electric  
Completed August 2012 – Fat Clay – Bay Mud
72. Monmouth, Oregon – HDD – 4300' of 12" – NW Natural Gas  
Completed April 2012 – Fat Clay under Environmentally Sensitive Farmland
73. Fresno, California – HDD – 2000' of 24" – Pacific Gas and Electric  
Completed November 2012
74. Medford, Oregon – HDD – 2800' 12" – Avista Utilities  
Completed November 2010 – Sandstone Intersect under Larson Creek
75. Grants Pass, Oregon – HDD – 3000' 6" HDPE – Avista Utilities  
Completed November 2010 – Sandstone\Cobble under the Rogue River
76. Cranberry Township, Pennsylvania – HDD  
3000' of 12" – Charles Machine Works / Ditch Witch  
Completed February 2012 – Fractured Rock
77. Avon, Colorado 2800' of 16" – HDD – Xcel Energy  
Completed December 2011 – Cemented Cobble – Emergency Bore