Commonwealth™
LAND TITLE INSURANCE COMPANY

TITLE REPORT

SCHEDULE A

Title Report No.: 450-HS0807100-412, Amendment No. 1

1. **Effective Date:** August 18, 2022 at 12:00 AM
2. The estate or interest in the land described or referred to in this Title Report is:
   Fee Simple
3. Title to the estate or interest in the land is at the Effective Date vested in:
   OEO 2, LLC, a Colorado limited liability company
4. The land referred to in this Title Report is described as follows:
   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF
   (for informational purposes only) Parkdale North, Erie, CO 80516

EXHIBIT "A"

Legal Description

PARKDALE FILING NO. 6
10.11.2023

AN UNPLATTED PARCEL OF LAND LOCATED IN THE NORTH HALF OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO;

ALONG WITH TRACT AL, PARKDALE FILING NO. 1, A SUBDIVISION RECORDED AT RN: 03816093 ON SEPTEMBER 17, 2020 IN THE RECORDS OF THE BOULDER COUNTY CLERK & RECORDER;

ALONG WITH TRACT A, PARKDALE FILING NO. 1, AMENDMENT NO. 2, A SUBDIVISION RECORDED AT RN: 03991024 ON DECEMBER 5, 2022 IN THE RECORDS OF THE BOULDER COUNTY CLERK AND RECORDER;

MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36 BEING S 89°00'36" W AND MONUMENTED AS FOLLOWS:

-EAST CENTER 1/16 CORNER SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846 PER MON REC DATED 8-22-02.

-CENTER 1/4 CORNER OF SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP, PLS 38445 PER MON REC DATED 7-26-22.

POINT OF BEGINNING AT SAID EAST CENTER 1/16 CORNER OF SECTION 36 BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846;

THENCE S 89°00'36" W ALONG THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 36 A DISTANCE OF 131.79 FEET TO THE NORTHEAST CORNER OF TRACT A, PARKDALE FILING NO. 1, AMENDMENT NO. 2, A SUBDIVISION RECORDED AT RN: 03991024 ON DECEMBER 5, 2022 IN THE RECORDS OF THE BOULDER COUNTY CLERK AND RECORDER

THENCE ALONG THE SOUTHERLY BOUNDARY OF SAID TRACT A, PARKDALE FILING NO. 1, AMENDMENT NO. 2 THE FOLLOWING FOUR (4) COURSES:

1) S 00°18'01" E A DISTANCE OF 5.95 FEET;

2) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 44°41'59" W, 21.21 FEET, A RADIUS OF 15.00 FEET, AN ARC OF 23.56 FEET, AND A DELTA OF 90°00'00";

3) S 89°41'59" W A DISTANCE OF 735.00 FEET;

4) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF N 51°33'44" W, 18.77 FEET, A RADIUS OF 15.00 FEET, AN ARC OF 20.28 FEET, AND A DELTA OF 77°28'33" TO A POINT ON SAID SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 36;

THENCE S 89°00'36" W ALONG SAID SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 36 A DISTANCE OF 444.97 FEET TO THE CENTER 1/4 CORNER OF SAID SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP, PLS 38445;

EXHIBIT "A"

Legal Description

THENCE N 89°56'15" W ALONG THE SOUTH LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 36 A DISTANCE OF 1319.94 FEET TO THE CENTER WEST 1/16 CORNER OF SAID SECTION 36 TO A POINT BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846;

THENCE N 00°04'29" E ALONG THE WEST LINE OF SAID SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 36 A DISTANCE OF 1345.89 FEET TO THE NORTHWEST 1/16 CORNER SAID SECTION 36 TO A POINT BEING A FOUND 2" ALUMINUM CAP, PLS 28273;

THENCE S 89°58'43" E ALONG THE NORTH LINE OF SAID SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 36 A DISTANCE OF 1332.41 FEET TO THE CENTER NORTH 1/16 CORNER SAID SECTION 36 TO A POINT BEING A FOUND 2" ALUMINUM CAP, PLS 28273;

THENCE N 00°00'45" W ALONG THE WEST LINE OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36 A DISTANCE OF 659.63 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3678382 BEING A FOUND NO. 5 REBAR W/ YELLOW PLASTIC CAP PLS 22584;

THENCE N 89°56'07" E ALONG THE SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3878382 A DISTANCE OF 659.86 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 2710442 BEING A FOUND NO. 5 REBAR W/ 2" ALUMINUM CAP "SCOTT COX";

THENCE N 89°56'49" E ALONG THE SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3878386 A DISTANCE OF 660.11 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3878386 BEING A FOUND NO. 5 REBAR;

THENCE N 00°01'24" W ALONG THE EASTERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3878386 A DISTANCE OF 634.63 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF ARAPAHOE ROAD;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE AND THE WESTERLY RIGHT-OF-WAY LINE OF COUNTY LINE ROAD THE FOLLOWING SEVEN (7) COURSES:

1) S 89°57'39" E A DISTANCE OF 1218.83 FEET;

2) S 00°02'23" W A DISTANCE OF 30.00 FEET;

3) S 89°57'37" E A DISTANCE OF 40.24 FEET;

4) ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 44°45'36" E, 35.48 FEET, A RADIUS OF 25.00 FEET, AN ARC OF 39.44 FEET, AND A DELTA OF 90°23'23";

5) S 00°26'06" W A DISTANCE OF 40.00 FEET;

6) S 89°33'54" E A DISTANCE OF 40.00 FEET;

7) S 00°26'06" W A DISTANCE OF 1199.64 FEET TO A POINT ON THE NORTHERLY BOUNDARY OF MUHR SUBDIVISION, A SUBDIVISION RECORDED AT RECEPTION NO. 03235164;

THENCE S 89°59'09" W ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 654.24 FEET TO THE SOUTHEAST CORNER OF TRACT R-6 ON PLAT OF SURVEY RECORDED AT RECEPTION NO. 807363 TO A POINT BEING A FOUND 1.5" ALUMINUM CAP, LS 25614;

EXHIBIT "A"

Legal Description

THENCE S 89°59'59" W ALONG THE SOUTHERLY BOUNDARY OF SAID TRACT R-6 ON PLAT OF SURVEY RECORDED AT RECEPTION NO. 807363 A DISTANCE OF 376.07 FEET TO THE NORTHEAST CORNER OF TRACT AL, PARKDALE FILING NO. 1, A SUBDIVISION RECORDED AT RN: 03816093 ON SEPTEMBER 17, 2020 IN THE RECORDS OF THE BOULDER COUNTY CLERK & RECORDER

THENCE S 68°08'37" W ALONG THE SOUTHERLY BOUNDARY OF SAID TRACT AL A DISTANCE OF 305.11 FEET TO A POINT ON THE EAST LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 36

THENCE S 00°18'01" E ALONG SAID EAST LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 36 A DISTANCE OF 1209.58 FEET TO THE **POINT OF BEGINNING**.

COMBINED TOTAL CONTAINS A NET AREA OF 6,165,836 SQUARE FEET OR 141.5481 ACRES MORE OR LESS.

Said legal description was prepared by Brian Swain for and on behalf of KT Engineerng

SCHEDULE B
Exceptions

1. Notice of Oil and Gas Interest and Surface Use recorded January 23, 2001 at Reception No. 2112330

2. Request for Notification of Surface Development recorded October 23, 2007 at Reception No. 2890878

3. Request for Notification (Mineral Estate Owner) recorded December 21, 2007 at Reception No. 2900941

4. Notice of General Description of Ares Serviced by Panhandle Eastern Pipe Line Company recorded June 25, 1986 at Reception No. 00768891

5. Easement created by Parcel Map recorded February 15, 1966 at Reception No. 807363 and October 25, 1966 at Reception No. 830620

   NOTE: Termination of Easement in connection therewith recorded March 9, 2018 at Reception No. 3644433, May 5, 2020 at Reception No. 3782060 , August 14, 2020 at Reception No. 3806588 September 1, 2020 at Reception No. 3811850 and May 4, 2021 at Reception No. 3882208

6. Terms, conditions, provisions, agreements and obligations contained in the easement for the purpose of ingress and egress as described in Deed recorded March 6, 1967 as Reception No. 840827and March 8,1967 as Reception No. 841098and841099 , Termination of Easement (portion) recorded April 1, 2020 at Reception No. 3775329 , May 5, 2020 at Reception No. 3782060 , August 14, 2020 at Reception No. 3806588 , September 1, 2020 at Reception No. 3811850and May 4, 2021 at Reception No. 3882208

7. All rights to any and all minerals, ore and metals of any kind and character, and all coal, asphaltum, oil, gas and other like substances in or under the land, the rights of ingress and egress for the purpose of mining, together with enough of the surface of the same as may be necessary for the proper and convenient working of such minerals and substances, as reserved in Patent from the State of Colorado, recorded April 3, 1880 in Book 59 at Page 95

8. Oil and Gas Lease recorded February 3, 1981 at Reception No. 432902 and any and all Assignments thereof or interests therein.

   NOTE: Affidavit of Lease Extension or Production in connection therewith recorded August 29, 1983 at Reception No. 571669 .

   NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180 .

9. An easement for access, ingress and egress and for utilities and incidental purposes granted to Jack K. Dortch and Elaine J. Dortch, as set forth in instrument recorded October 2, 1995 at Reception No. 01551894 .

10. Any rights of others as the ditch that traverses the subject property.

11. Terms, conditions and reservations (which also contains relinquishment language) of all oil and gas and oil and gas rights on or under the property as shown in Special Warranty Deed recorded November 5, 2019 at Reception No. 03746859 .

12. Mineral rights as conveyed by Warranty Deed recorded September 7, 1966 at Reception No. 826252 and Quit Claim Deed recorded September 7, 1966 at Reception No. 826253 , and any and all assignments thereof or interests therein.

SCHEDULE B
Exceptions
(continued)

13. An easement for ingress and egress and incidental purposes granted to use of owners of tracts, as set forth in an instrument recorded October 9, 1969 at Reception No. 926741 .

14. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487554 , and any and all assignments thereof or interests therein.

    NOTE: Affidavit of Lease Extension or Production in connection therewith recorded November 21, 1986 at Reception No. 806857 .

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

15. Terms, conditions, provisions, obligations, easements and agreements as set forth in the Right-Of-Way Grant recorded April 3, 1987 at Reception No. 838683 .

16. Terms, conditions and reservations of oil, gas and other mineral as reserved in Warranty Deed recorded November 7, 1990 at Reception No. 1073012 , and any and all assignments thereof or interests therein.

17. Terms, conditions, provisions, obligations and agreements as set forth in the Road Maintenance Waiver recorded January 11, 2000 at Reception No. 2013507 .

18. Terms, conditions, provisions and obligations of Agreement Regarding Issuance of Certificate of Occupancy recorded January 23, 1980 at Reception No. 380140 .

19. Terms, conditions, provisions and obligations of Agreement Regarding Access recorded January 23, 1980 at Reception No. 380139 .

20. Oil and Gas Lease to Todd T. Hitchings recorded March 19, 1982 at Reception No. 487559 and any and all assignments thereof or interests therein.

    NOTE: Affidavit of Lease Extension or Production recorded November 21, 1986 at Reception No. 806846 .

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

21. Terms, conditions, provisions and obligations of Agreement Regarding Access recorded March 20, 1984 at Reception No. 609864 .

22. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487561 , and any and all assignments thereof or interests therein.

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

23. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487552 , and any and all assignments thereof or interests therein.

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

24. An easement for utilities and incidental purposes granted to Public Service Company of Colorado March 29, 2005 at Reception No. 2675511 .

SCHEDULE B
Exceptions
(continued)

25. Terms, conditions and reservations (which also contains relinquishment language) of all oil and gas and oil and gas rights on or under the property as shown in Special Warranty Deed recorded May 4, 2021 at Reception No. 3882209 .

26. Right of Way for County Road No. 54, also known as Arapahoe Drive, and County Road 901, also known as East County Line Road, insofar as the same may affect the Land.

27. Terms, conditions, provisions, agreements and obligations contained in the Declaration of Covenants to the Boulder County Board of Health recorded October 15, 1975 at Reception No. 154699 .

28. An oil and gas lease recorded December 6, 1984 at Reception No. 660926, and any and all assignments thereof or interests therein.

    NOTE: Affidavit of Lease Extension or Production recorded November 21, 1986 at Reception No. 806847 .

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

29. Terms, conditions, provisions, agreements and obligations in the Zahn Annexation Map to the Town of Erie recorded March 15, 1996 at Reception No. 1591418 and Annexation Agreement recorded March 22, 1996 at Reception No. 1593210 and Ordinance recorded March 17, 1997 at Reception No. 1683819 .

30. An easement for utilities and incidental purposes granted to Public Service Company of Colorado March 26, 1997 at Reception No. 1685921 .

31. Any taxes or assessments by reason of the inclusion of the Land in the Northern Colorado Water Conservancy District as evidenced by Order of Inclusion recorded January 24, 2000 at Reception No. 2016279 , January 24, 2000 at Reception No. 2016280, February 21, 2023 at Reception No. 03997814.

32. Terms, conditions, provisions, obligations, easements and agreements as set forth in the Permanent Slope and Drainage easement Agreement recorded January 27, 2016 at Reception No. 3497923 .

33. Oil and Gas Lease recorded April 18, 1975 at Reception No. 135044 , and any and all assignments thereof or interests therein.

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

34. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487556 and any and all assignments thereof or interest therein.

    NOTE: Affidavit of Lease Extension or Production in connection therewith recorded November 21,1986 at Reception No. 806856 .

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180 .

35. Terms, conditions, provisions, obligations and agreements as set forth in the Road Maintenance Waiver recorded June 23, 1987 at Reception No. 858696 .

SCHEDULE B
Exceptions
(continued)

36. An easement for utilities and incidental purposes granted to Public Service Company of Colorado, as set forth in an instrument recorded October 15, 1999 at Reception No. 1991091 .

37. Terms, conditions and reservation in QuitClaim Mineral Deed from Noble Energy, Inc., a Delaware corporation to Donald L. Jung recorded January 2, 2020 at Reception No. 3758208 .

38. Terms, conditions and reservations (which also contains relinquishment language) of all oil and gas and oil and gas rights on or under the property as shown in Special Warranty Deed recorded March 1, 2021 at Reception No. 3862912 .

39. Terms, conditions, provisions, obligations, easements and agreements as set forth in the Right of Way Grant recorded April 3, 1987 at Reception No. 838684 .

40. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487558 , and any and all assignments thereof or interests therein.

    NOTE: Affidavit of Production in connection therewith recorded November 21, 1986 at Reception No. 806852 .

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180

41. Reservation of all rights in and to the Morrison lateral ditch as set forth in Warranty Deed recorded May 1, 1986 at Reception No. 756385 .

42. An easement for utility lines and incidental purposes granted to Public Service Company of Colorado, as set forth in an instrument recorded May 3, 2005 at Reception No. 2684896 .

43. Terms, conditions, provisions, obligations and agreements as set forth in the Memorandum of Agreement recorded August 20, 2018 at Reception No. 3671973 .

44. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487560 and any and all assignments thereof or interest therein.

    NOTE: Relinquishment of Surface Rights recorded July 12, 2021 at Reception No. 3899180 .

45. Any tax, lien, fee or assessment by reason of Order for Conditional Inclusion of Land within the Boundaries of the Northern Colorado Water Conservancy District recorded April 14, 2020 at Reception No. 3777565and3777577 and Recorded February 16, 2023 at Reception No. 3997621.

46. Terms, conditions, provisions, obligations and agreements as set forth in the Pre-Annexation Agreement (Parkdale) recorded March 11, 2021 at Reception No. 3866801 and Reception No. 3867074

47. Terms, conditions, provisions, obligations and agreements as set forth in Memorandum of Agreement recorded November 4, 2021 at Reception No. 3926105

48. Any taxes or assessments by reason of the inclusion of the Land in the Parkdale Metropolitan District No. 2 (Zahn Parcel) as evidenced by Order of Inclusion recorded May 4, 2022 at Reception No. 3960199, December 21, 2022 at Reception No. 3992791, December 27, 2022 at Reception No. 3992985.. Special District Public Disclosure Parkdale Metropolitan District No. 2 recorded 3960893.

SCHEDULE B
Exceptions
(continued)

49. Any tax, lien, fee or assessment by reason of inclusion to the Mountain View Fire Protection District recorded May 1, 2023 at Reception No. 4005542.

50. Terms, conditions, provisions, agreements and obligations in the Annexation Agreement (Erie Gateway South) recorded September 26, 2022 at Reception No. 03982499, Erie Gateway South Annexation No. 9 to the Town of Erie Annexation Map recorded September 19, 2022 at Reception No. 03981639 and September 19, 2022 at
Reception No. 03981513, Erie Gateway South Annexation No. 9 PD Zoning Map recorded September 20, 2022 at Reception No. 03981786.

51. Easements and Restrictions as shown on the plat of Parkdale Filing No. 4 recorded September 19, 2022 at Reception No. 3981633.and Reception No. 3981507.

52. An easement for ingress and egress and incidental purposes as reserved in Deed recorded March 6,1967 at Reception No. 840827.

53. Oil and Gas Lease recorded March 19, 1982 at Reception No. 487551, and any and all assignments thereof or interests therein.

54. Oil and Gas Lease recorded September 30, 1986 at Reception No. 00792819 , and any and all assignments thereof or interests therein.

55. Notice of Oil and Gas Interests and Surface Use recorded July 23, 2001 at Reception No. 2112331.

56. Reservation of oil, gas and other minerals as reserved in Special Warranty Deed recorded October 11, 2017 at Reception No. 3619319 , and any and all assignments thereof or interests therein.

    NOTE: Relinquishment of Surface Rights in connection therewith recorded October 11, 2017 at Reception No. 3619320.

57. Any tax, lien, fee or assessment by reason of inclusion of subject property in the Northern Colorado Water Conservancy District, as evidenced by instruments recorded November 7, 2017 at Reception Nos. 3624326 and 3624327.

58. Any tax, lien, fee or assessment by reason of inclusion of subject property in the Parkdale Metropolitan District No. 1, as evidenced by instrument recorded June 15, 2018 at Reception No.3660913 and Order of Inclusion recorded March 11, 2020 at Reception No. 3771278.

    NOTE: Special District Public Disclosure in connection therewith recorded August 3, 2018 at Reception No. 3669548, and March 1, 2023 at Reception No. 3998704.

59. Any tax, lien, fee or assessment by reason of inclusion of subject property in the The Mountain View Fire Protection District, as evidenced by instrument recorded December 13, 2018 at Reception No. 3689958.

60. Easements, notes, covenants, restrictions and rights-of-way as shown on the Parkdale P.U.D. Overlay Map recorded October 10, 2019 at Reception No. 3741705, Parkdale P.U.D. Overlay Map, Amendment No. 1 recorded January 30, 2020 at Reception No. 3763467 and Parkdale P.U.D. Overlay Map, Amendment No. 1 recorded February 5, 2020 at Reception No. 3764344, Parkdale P.U.D. Overlay Map, Amendment No. 2
    recorded June 30, 2020 at Reception No. 3795126.

SCHEDULE B
Exceptions
(continued)

61. Any tax, lien, assessment or fee created by Joint Resolution of the Board of Directors of the Parkdale Community Authority and Parkdale Metropolitan District Nos. 1-3 Concerning the Imposition of an Operations Fee recorded April 20, 2020 at Reception No. 3778400 , Amended and Restated Joint Resolution of the Board of Directors of the Parkdale Community Authority and Parkdale Metropolitan District Nos. 1-3 Concerning the Imposition of an Operations Fee recorded November 9, 2020 at Reception No. 3831742, Second Amended and Restated Joint Resolution of the Board of Directors of the Parkdale Community Authority and Parkdale Metropolitan District NOS. 1-3 Concerning the Imposition of and Operations Fee recorded June 12, 2023 at Reception No. 4010602.

62. Terms, conditions, provisions, agreements and obligations contained in the Fence Relocation Agreement by and between JMJC Eleven, LLC and OEO, LLC, a Colorado limited liability company recorded May 11, 2020 at Reception No. 3783332.

63. Easements, notes, covenants, restrictions and rights-of-way as shown on the plat of Parkdale Filing No. 1 recorded September 17, 2020 at Reception No. 3816093 and Parkdale Filing No. 1, Amendment No. 2 recorded December 5, 2022 at Reception No. 3991024.

64. Terms, conditions, provisions, obligations, easements and agreements as set forth in the Amended and Restated Development Agreement (Parkdale Filing No. 1) recorded May 1, 2023 at Reception No. 4005608.

65. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the Declaration of Covenants, Conditions and Restrictions of Parkdale recorded January 25, 2021 at Reception No. 3853180 , Assignment of Rights Under The Declaration of Covenants, Conditions and Restrictions of Parkdale recorded January 26, 2021 at Receptio Nos. 3853786, 3853787 and 3853788.First Amendment recorded October 27, 2021 at Reception No. 3924029.

66. Terms, conditions, provisions, obligations, easements and agreements as set forth in the Grant of Permanent Avigation Easement Agreement recorded June 21, 2022 at Reception No. 3967742.

67. Any tax, lien, assessment or fee created by Order of Inclusion into the Parkdale Metropolitan District No. 3 recorded June 21, 2023 at Reception No. 4011552 and Special District Public Disclosure recorded June 21, 2023 at Reception No. 4011620.

68. Deed of Trust:
Amount: $4,486,006.00
Trustor/Grantor OEO 2, LLC, a Colorado limited liability company
Trustee: Public Trustee of Boulder County
Beneficiary: Elaine J. Dortch, Debra L. Dortch and Kenneth R. Dortch
Recording Date: November 5, 2019
Recording No: 3746861

69. Deed of Trust:
Amount: $2,365,000.00
Trustor/Grantor: OEO 2, LLC, a Colorado limited liability company
Trustee: Public Trustee of Boulder County
Beneficiary: Helen Pew Booth Owens and Melvin Paul Owens, Jr.
Recording Date: November 23, 2020

Recording No: 3835505

70. Deed of Trust:
Amount: $2,950,000.00
Trustor/Grantor: OEO 2, LLC, a Colorado limited liability company
Trustee: Public Trustee of Boulder County
Beneficiary: Donald L. Jung
Recording Date: March 1, 2021
Recording No: 3862913

71. Deed of Trust:
Amount: $875,000.00
Trustor/Grantor: OEO 2, LLC, a Colorado limited liability company
Trustee: Public Trustee of Boulder County
Beneficiary: David M. Leiker
Recording Date: October 27, 2021
Recording No: 3924152

72. Deed of Trust:
Amount: $3,250,000.00
Trustor/Grantor OEO 2, LLC, a Colorado limited liability company
Trustee: Public Trustee of Boulder County
Beneficiary:The Rosemarie Zahn Trust under agreement dated January 13, 2014 and the John H. Zahn Trust under agreement dated January 13, 2014
Recording Date: January 19, 2022
Recording No: 3941373

END OF EXCEPTIONS

THIS IS A TITLE REPORT ONLY. **This is not a commitment to insure.**

The information set forth herein is based on information supplied to Heritage Title Company - Denver Metro Title by sources believed to be reliable and is provided for accommodation purposes only. Heritage Title Company - Denver Metro Title assumes no liability hereunder unless a policy or policies of title insurance are issued by Heritage Title Company - Denver Metro Title and fully paid for and the insured under said policy or policies and party to whom this report was issued have no knowledge of any defect in title not disclosed. Reliance on the information set forth herein is subject to the issuance of a mortgage and/or owner's policy of title insurance by Heritage Title Company - Denver Metro Title within six (6) months from the effective date hereof. If a title insurance policy is not issued insuring the property within such time, this title report shall be null and void as of its effective date and shall be deemed to have been furnished for informational purposes only.

EXHIBIT "B"

LIMITATION LANGUAGE FOR LIMITATION TO AMOUNT OF FEE PAID FOR SEARCH

YOU EXPRESSLY AGREE AND ACKNOWLEDGE THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REPORT. YOU RECOGNIZE THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, YOU UNDERSTAND THAT THE COMPANY WAS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REQUESTED REPORT BUT FOR YOUR AGREEMENT THAT THE COMPANY'S LIABILITY IS STRICTLY LIMITED.

YOU AGREE THAT MATTERS AFFECTING TITLE BUT WHICH DO NOT APPEAR AS A LIEN OR ENCUMBRANCE AS DEFINED IN THE CUSTOMER AGREEMENT OR APPLICATION ARE OUTSIDE THE SCOPE OF THE REPORT.

YOU AGREE, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THIS REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW, TO LIMIT THE LIABILITY OF THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE, OR ANY OTHER THEORY OF RECOVERY OR FROM ANY PERSON'S USE, MISUSE, OR INABILITY TO USE THE REPORT, SO THAT **THE TOTAL AGGREGATE LIABILITY OF THE COMPANY, ITS EMPLOYEES, AGENTS AND SUBCONTRACTORS SHALL NOT EXCEED THE COMPANY'S TOTAL FEE FOR THIS REPORT.**

YOU AGREE THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE YOU ARE PAYING WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO YOU WITHOUT SAID TERM. YOU RECOGNIZE THAT THE COMPANY WOULD NOT ISSUE THIS REPORT, BUT FOR YOUR AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THIS REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THIS REPORT.

THIS REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. IN PROVIDING THIS REPORT, THE COMPANY IS NOT ACTING AS AN ABSTRACTOR OF TITLE. THIS REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THIS REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTIES AS TO THE REPORT, ASSUMES NO DUTIES TO YOU, DOES NOT INTEND FOR YOU TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THIS REPORT OR OTHERWISE.

IF YOU DO NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND YOU DESIRE THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, YOU MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. YOU EXPRESSLY AGREE AND ACKNOWLEDGE THAT YOU HAVE AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCTS OR SERVICES PURCHASED.

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THIS REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

YOU AGREE THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR

ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSES WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGES.

THESE LIMITATIONS WILL SURVIVE THE CONTRACT.

LIMITATIONS OF LIABILITY

APPLICANT EXPRESSLY AGREES AND ACKNOWLEDGES THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REPORT. APPLICANT RECOGNIZES THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, APPLICANT UNDERSTANDS THAT THE COMPANY IS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REQUESTED REPORT UNLESS THE COMPANY'S LIABILITY IS STRICTLY LIMITED. APPLICANT AGREES WITH THE PROPRIETY OF SUCH LIMITATION AND AGREES TO BE BOUND BY ITS TERMS.

THE LIMITATIONS ARE AS FOLLOWS AND THE LIMITATIONS WILL SURVIVE THE CONTRACT:

MATTERS AFFECTING TITLE BUT WHICH DO NOT APPEAR AS A LIEN OR ENCUMBRANCE, AS DEFINED ABOVE, AMONG THE TITLE INSTRUMENTS ARE OUTSIDE THE SCOPE OF THE REPORT.

APPLICANT AGREES, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THE REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW, TO LIMIT THE LIABILITY OF THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE, OR ANY OTHER THEORY OF RECOVERY, OR FROM ANY PERSON'S USE, MISUSE, OR INABILITY TO USE THE REPORT OR ANY OF THE MATERIALS CONTAINED THEREIN OR PRODUCED, **SO THAT THE TOTAL AGGREGATE LIABILITY OF THE COMPANY AND ITS, AGENTS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS SHALL NOT IN ANY EVENT EXCEED THE COMPANY'S TOTAL FEE FOR THE REPORT.**

APPLICANT AGREES THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE THE APPLICANT IS PAYING WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO THE APPLICANT WITHOUT SAID TERM. APPLICANT RECOGNIZES THAT THE COMPANY WOULD NOT ISSUE THE REPORT, BUT FOR THIS CUSTOMER AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THE REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THE REPORT.

THE REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. THE REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THE REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTIES AS TO THE REPORT, ASSUMES NO DUTIES TO APPLICANT, DOES NOT INTEND FOR APPLICANT TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THE REPORT OR OTHERWISE.

IF APPLICANT DOES NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND APPLICANT DESIRES THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, APPLICANT MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. APPLICANT EXPRESSLY AGREES AND ACKNOWLEDGES IT HAS AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCTS OR SERVICES PURCHASED.

LIMITATIONS OF LIABILITY
(continued)

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THE REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

APPLICANT AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSES WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGES.

645 Holbrook, - PO Box 750
Erie, CO 80516

RE: Parkdale North Property - OEO 2,LLC
- Town of Erie, Colorado - Letter of Authorization

The land being submitted for consideration of this application is owned by the applicant and therefore the Letter of Authorization is not application to this application.

Sincerely,

John Prestwich

John Prestwich - President, PCS Group, Inc. - RLA

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NORTH HALF OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1

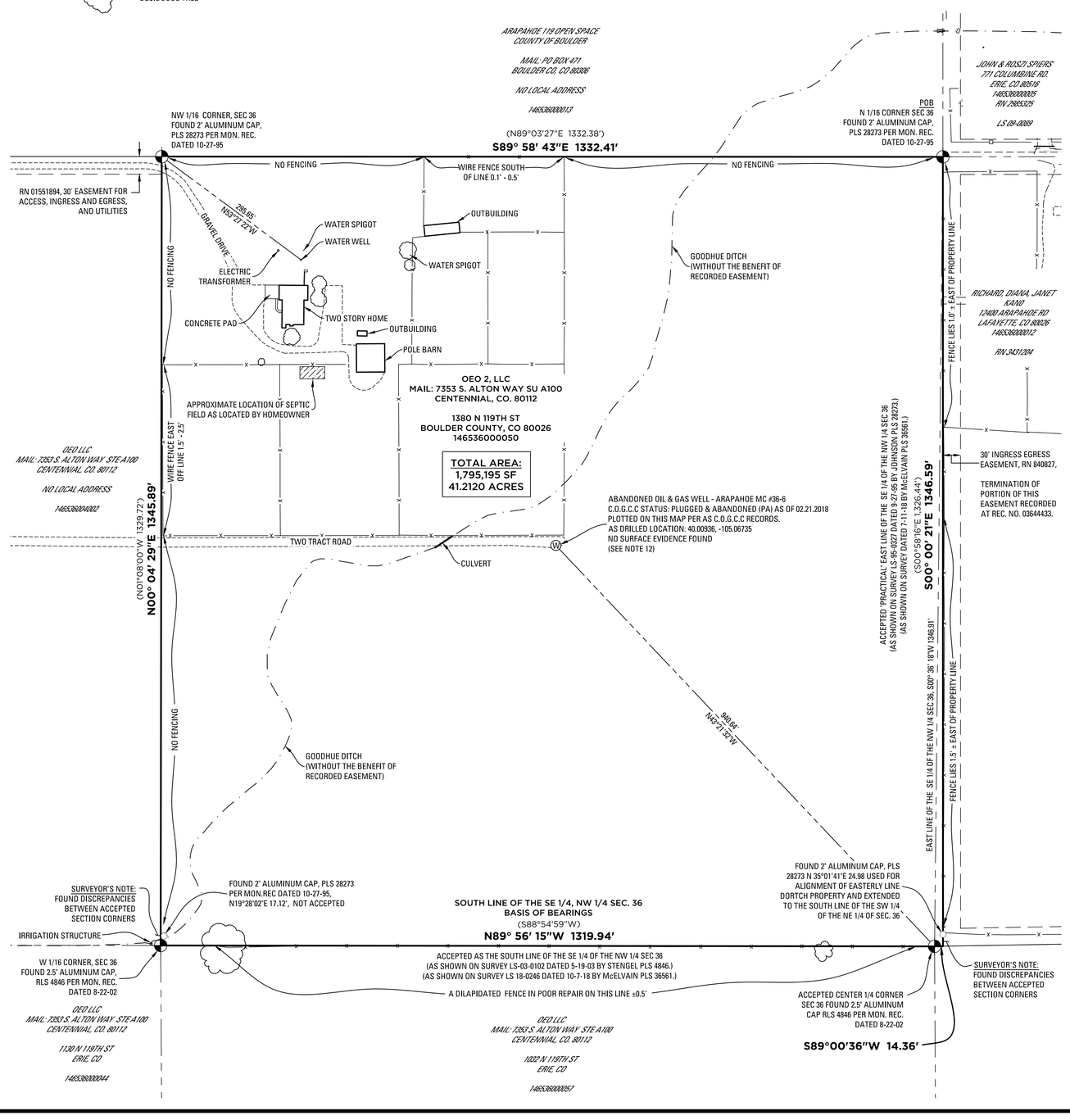
LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIBED
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- WIRE FENCE W/ WOOD POSTS
- DECIDUOUS TREE

N

100 0 50 100 200

SCALE: 1"= 100 ' HORIZ.



PROVIDED DESCRIPTION:

COMMONWEALTH LAND INSURANCE TITLE COMPANY
TITLE REPORT NO.: H0590795-023-CN4-CN, AMENDMENT NO. 1

A TRACT OF LAND LOCATED IN THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST OF THE 6TH P.M., BOULDER COUNTY, COLORADO, SAID TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER FROM WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 36 BEARS N00°58'16"W, 1376.44 FEET AND WITH ALL OTHER BEARINGS CONTAINED HEREIN RELATIVE THERETO; THENCE S00°58'16"E, 1326.44 FEET TO THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE S88°54'59"W, 1328.62 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE N01°08'00"W, 1329.72 FEET TO THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE N89°03'27"E, 1332.38 FEET TO THE POINT OF BEGINNING,
COUNTY OF BOULDER, STATE OF COLORADO.

REVISED DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTH 1/2 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 36 BEING S 89°56'15" E AND MONUMENTED AS FOLLOWS:

-W 1/16 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

-CENTER 1/4 CORNER OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

BEGINNING AT THE CENTER 1/4 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

THENCE N 89°56'15" W ALONG THE SOUTH LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 36 A DISTANCE OF 1319.94 FEET TO THE W 1/16 CORNER OF SECTION 36 BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846;

THENCE N 00°04'29" E ALONG THE WEST LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 36 A DISTANCE OF 1345.89 FEET TO THE NW 1/16 SECTION 36 BEING A FOUND 2" ALUMINUM CAP, PLS 28273;

THENCE S 89°58'43" E ALONG THE NORTH LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 36 A DISTANCE OF 1332.41 FEET TO THE N 1/16 SECTION 36 BEING A FOUND 2" ALUMINUM CAP, PLS 28273;

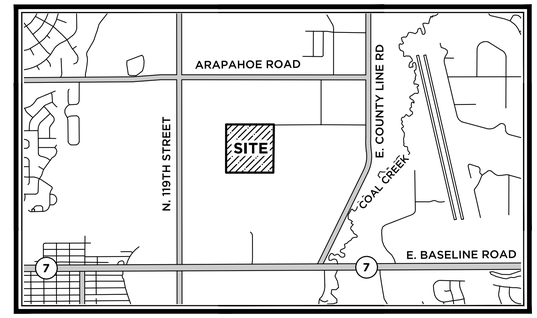
THENCE S 00°00'21" E ALONG THE ACCEPTED PRACTICAL EAST LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 36 A DISTANCE OF 1346.59 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 SECTION 36;

THENCE S 89°00'36" W ALONG SAID SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 SECTION 36 A DISTANCE OF 14.36 FEET TO THE POINT OF BEGINNING;

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 1,795,195 SQUARE FEET, OR 41.2120 ACRES MORE OR LESS.

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON SOUTH LINE OF THE SE 1/4, NW 1/4 SECTION 36 BEARING N89° 56' 15"W.
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY FILE NO. H0590795-023-CN4-CN, AMENDMENT NO. 1 WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. THIS IS AN ABOVE GROUND SURVEY. THE UNDERGROUND UTILITIES SHOWN, IF ANY, ARE BASED ON ABOVE GROUND EVIDENCE AND THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND UNVERIFIED. THERE ARE MOST LIKELY UNDERGROUND UTILITIES NOT SHOWN ON THIS SURVEY.
11. A SEARCH WAS MADE FOR THE OIL & GAS WELLS LOCATED ON AND ADJACENT TO THE SUBJECT PROPERTY AS DEPICTED IN GIS MAPPING SHOWN ON THE COLORADO OIL & GAS COMMISSION (COGCC) WEB SITE. ALL WELLS APPEARING ON COGCC GIS MAPPING WERE LOCATED AND THEIR POSITIONS SHOWN ON THIS SHEET. THERE MAY BE BUILDING RESTRICTIONS ASSOCIATED WITH THE GAS AND OIL WELL FACILITIES. SPECIFIC RESTRICTIONS SHOULD BE VERIFIED WITH THE COGCC, LOCAL FIRE PROTECTION DISTRICTS, AND LOCAL JURISDICTIONS.
12. DATE OF FIELD SURVEY - AUGUST 21, 2019.



VICINITY MAP
1" = 2000'

NOTES REGARDING THE TITLE COMMITMENT:

ITEMS 1-8: 1-8 EXCEPTIONS ARE STANDARD EXCEPTIONS.

ITEMS 9: NOTICE OF OIL AND GAS INTEREST AND SURFACE USE RECORDED JANUARY 23, 2001 AT RECEPTION NO. 2112330.

ITEMS 10: REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 11: REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 12: NOTICE OF GENERAL DESCRIPTION OF ARES SERVICED BY PANHANDLE EASTERN PIPE LINE COMPANY RECORDED JUNE 25, 1986 AT RECEPTION NO. 00768891.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 13: OIL AND GAS LEASE RECORDED FEBRUARY 3, 1981 AT RECEPTION NO. 432902 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED AUGUST 29, 1983 AT RECEPTION NO. 571669.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

NOTE: AFFIDAVIT OF EXTENSION OF OIL AND GAS LEASE BY PRODUCTION IN CONNECTION THEREWITH RECORDED MARCH 10, 2005 AT RECEPTION NO. 2670961.
DOES NOT AFFECT PROPERTY.

ITEM 14: AN EASEMENT FOR ACCESS, INGRESS AND EGRESS AND FOR UTILITIES AND INCIDENTAL PURPOSES GRANTED TO JACK K. DORTCH AND ELAINE J. DORTCH, AS SET FORTH IN INSTRUMENT RECORDED OCTOBER 2, 1995 AT RECEPTION NO. 01551894.
SHOWN AT NORTHWEST CORNER OF SITE.

ITEM 15: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,
TRUSTOR/GRANTOR: OEO 2, LLC, A COLORADO LIMITED LIABILITY COMPANY
TRUSTEE: PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY: ELAINE J. DORTCH, DEBRA L. DORTCH AND KENNETH R. DORTCH
RECORDING DATE: NOVEMBER 5, 2019
RECORDING NO: 03746861
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 16: ANY RIGHTS OF OTHERS AS THE DITCH THAT TRAVERSES THE SUBJECT PROPERTY.
AFFECTS PROPERTY, AS SHOWN HEREON

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
COMMONWEALTH LAND INSURANCE TITLE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 8/21/2019.

DATE OF PLAT OR MAP: 3/12/2021

COLORADO REGISTERED
CHRISTOPHER H. McELVAIN
36561
PROFESSIONAL LAND SURVEYOR
3/12/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 03/12/2021
PROJECT NO. 0043-1814

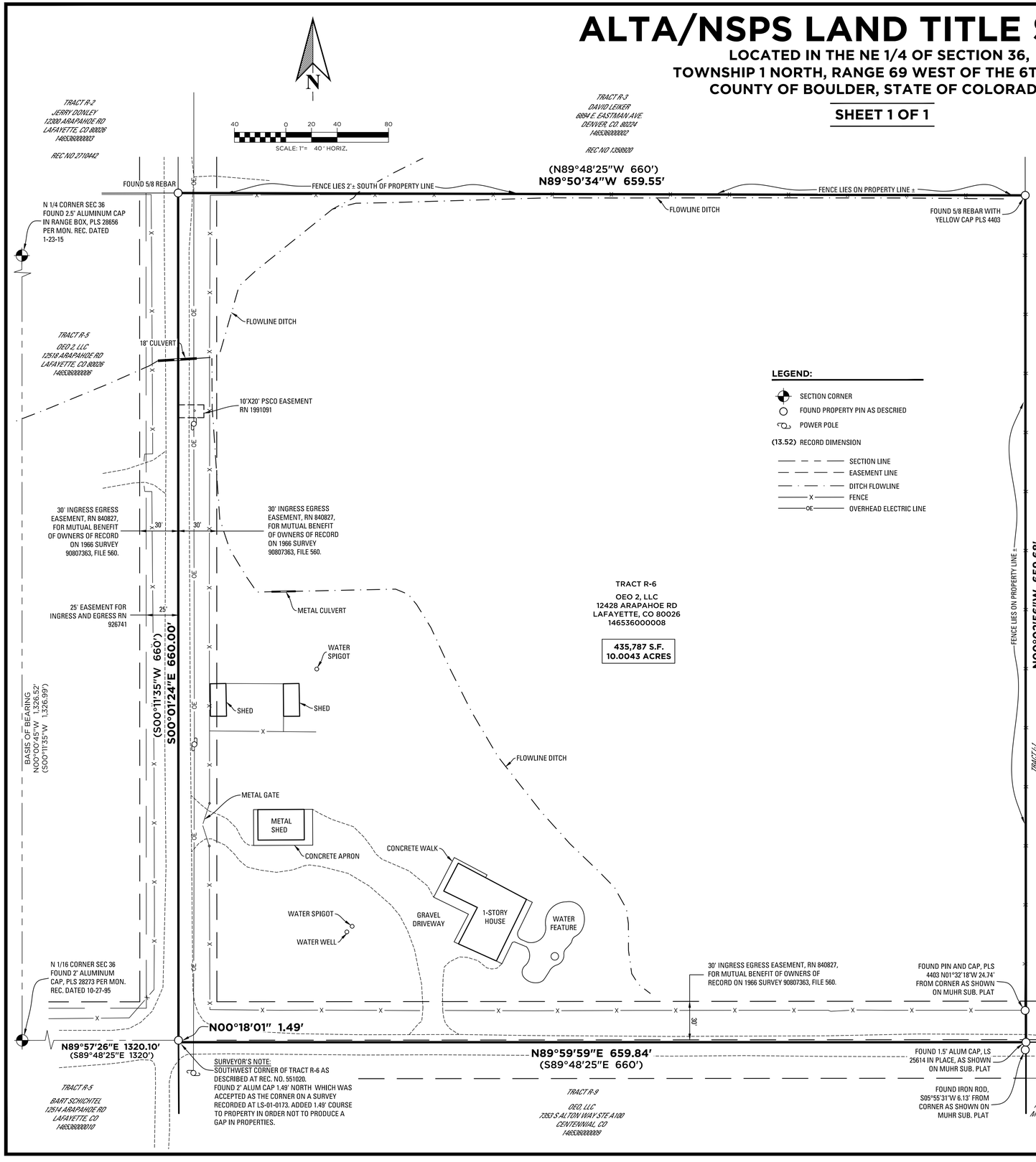
KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\DORTCH\1814-ALTA-DORTCH.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIED
- POWER POLE
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- FENCE
- OVERHEAD ELECTRIC LINE

PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NUMBER NO.: H0595643-023-CN4-CN , AMENDMENT NO. 1

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
A TRACT OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTH 1/4 CORNER OF SECTION 36; THENCE SOUTH 0 DEGREES 11'35" EAST ALONG THE CENTERLINE OF SECTION 36, A DISTANCE OF 1326.99 FEET; THENCE SOUTH 89 DEGREES 48'25" EAST ALONG THE SOUTH LINE OF TRACTS SHOWN AS TRACT R-4 AND R-5 ON SURVEY RECORDED IN BOULDER COUNTY FEBRUARY 15, 1966 AS RECEPTION NO. 807363, 1320 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING SOUTH 89 DEGREES 48'25" EAST, 660 FEET; THENCE NORTH 0 DEGREES 11'35" EAST ALONG THE WEST LINE OF A TRACT SHOWN AS TRACT I-1 ON SURVEY RECORDED IN BOULDER COUNTY AS RECEPTION NO. 807363, A DISTANCE OF 660 FEET; THENCE NORTH 89 DEGREES 48'25" WEST ALONG THE SOUTH LINE OF A TRACT SHOWN AS TRACT R-3 ON SURVEY RECORDED IN BOULDER COUNTY AS RECEPTION NO. 807636, 660 FEET; THENCE SOUTH 0 DEGREE 11'35" WEST ALONG THE EAST LINE OF A TRACT SHOWN AS TRACT R-5 ON SURVEY RECORDED IN BOULDER COUNTY AS RECEPTION NO. 807363, A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 2:
AN EASEMENT FOR INGRESS AND EGRESS TO AND FROM BOULDER COUNTY ROAD NO. 54 (ARAPAHOE ROAD) AS GRANTED BY DEEDS RECORDED MARCH 8, 1967 IN FILM 597 AT RECEPTION NOS. 841098 AND 841099 OF THE RECORDS OF BOULDER COUNTY, COLORADO.

NOTES REGARDING THE TITLE COMMITMENT:

NOTES REGARDING THE TITLE COMMITMENT PREPARED BY COMMONWEALTH LAND TITLE INSURANCE INSURANCE COMPANY TITLE REPORT NO. H0595643-23-CN4-CN , AMENDMENT NO. 1
EFFECTIVE DATE APRIL 02. 2020 AT 8:00 A.M.

ITEMS 1-7: EXCEPTIONS ARE STANDARD EXCEPTIONS

ITEM 8: OIL AND GAS LEASE RECORDED APRIL 18, 1975 AT RECEPTION NO. 135044 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTEREST THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 9: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO, 487556 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTEREST THEREIN.
NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED NOVEMBER 21, 1986 AT RECEPTION NO. 806856.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 10: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE DECLARATION OF UNITIZATION RECORDED OCTOBER 14, 1986 AT RECEPTION NO. 796727, AND AMENDED DECLARATION OF UNITIZATION RECORDED JULY 15, 1987 AT RECEPTION NO. 863845, AND AMENDED DECLARATION OF UNITIZATION RECORDED NOVEMBER 21, 1992 AT RECEPTION NO. 1231404.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 11: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE ROAD MAINTENANCE WAIVER RECORDED JUNE 23, 1987 AT RECEPTION NO. 858696.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 12: AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES GRANTED TO PUBLIC SERVICE COMPANY OF COLORADO, AS SET FORTH IN AN INSTRUMENT RECORDED OCTOBER 15, 1999 AT RECEPTION NO. 1991091.
AFFECTS PROPERTY, AS SHOWN ON WESTERLY LINE

ITEM 13: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE NOTICE OF OIL AND GAS INTEREST AND SURFACE USE RECORDED JANUARY 23, 2001 AT RECEPTION NO. 2112331.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 14: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 15: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 16: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE WELLBORE FARMOUT AGREEMENT RECORDED OCTOBER 27, 2015 AT RECEPTION NO. 3481913.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 17: TERMS, CONDITIONS AND RESERVATION IN QUITCLAIM MINERAL DEED FROM NOBLE ENERGY, INC., A DELAWARE CORPORATION TO DONALD L. JUNG RECORDED JANUARY 2, 2020 AT RECEPTION NO. 03758208.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

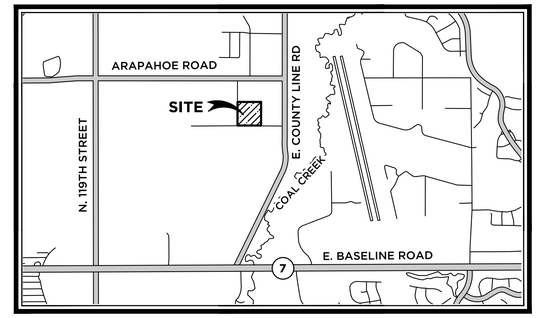
ITEM 18: EXISTING LEASES AND TENANCIES.

ITEM 19: THE FOLLOWING MATTERS AS DISCLOSED ON THE ALTA/NSPS LAND TITLE SURVEY PREPARED BY CHRISTOPHER H. MCELVAIN FOR AND ON BEHALF OF KT ENGINEERING DATED JULY 2, 2018:
A) ANY LOSS OR DAMAGE ARISING FROM THE FACT THAT FENCE LINES ON OR NEAR THE PERIMETER OF THE LAND DO NOT COINCIDE WITH PROPERTY LINES.
REFERS TO A PERVIOUS VERSION OF THIS ALTA

ITEM 20: TERMS, CONDITIONS, RESERVATIONS AND AGREEMENTS CONTAINED IN THE SPECIAL WARRANTY DEED BETWEEN DONALD L. JUNG AND OEO 2 LLC, A COLORADO LIMITED LIABILITY COMPANY RECORDED MARCH 1, 2021 AT RECEPTION NO. 3862912
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 21: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	OEO 2 LLC, A COLORADO LIMITED LIABILITY COMPANY
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	DONALD L. JUNG
RECORDING DATE:	MARCH 1, 2021
RECORDING NO.:	3862913



VICINITY MAP
1" = 2000'

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NW 1/4 OF THE NE 1/4 SECTION 36 BEING S00°00'45"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. H0595643-023-CN4-CN, AMENDMENT NO. 1 WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. DATE OF FIELD SURVEY - JUNE 20, 2018.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/20/18.

DATE OF PLAT OR MAP: 3/12/21

COLORADO REGISTERED
CHRISTOPHER H. McELVAIN
36561
PROFESSIONAL LAND SURVEYOR
3/12/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

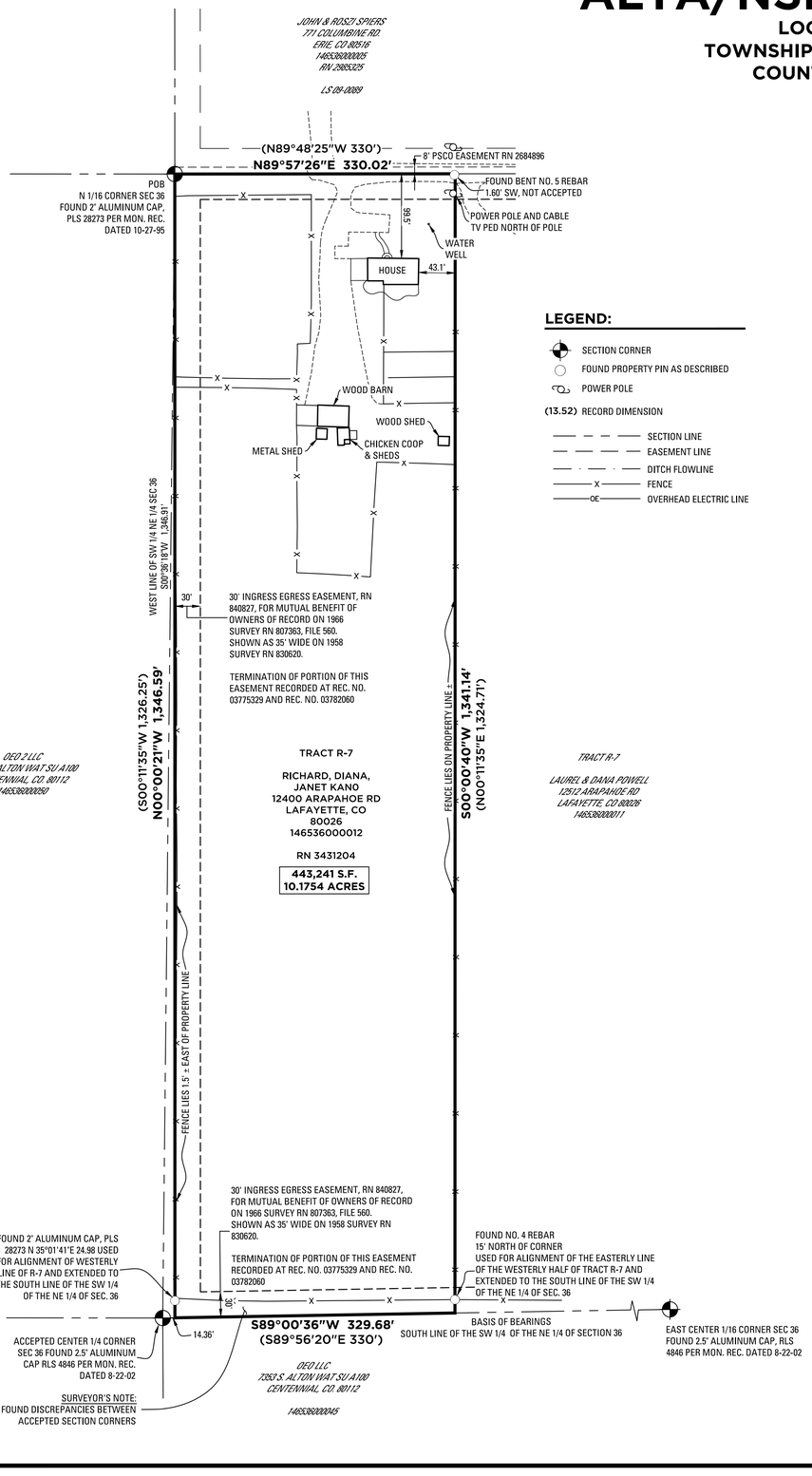
DATE: 03.12.2021
PROJECT NO. 0043-1814

KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\JUNG1814-ALTA-JUNG.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIBED
- POWER POLE
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- FENCE
- OE OVERHEAD ELECTRIC LINE

PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY
TITLE REPORT NO.: H0637216-023-CN4-CN

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
THE WEST 1 /2 OF A TRACT OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTH 1/4 CORNER OF SECTION 36, THENCE SOUTH 0 DEGREES 11'35" WEST, 1,326.99 FEET ALONG THE CENTERLINE OF SAID SECTION 36 TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING SOUTH 0 DEGREES 11'35" WEST ALONG SAID CENTERLINE 1,326.25 FEET TO THE CENTER OF SECTION 36; THENCE SOUTH 89 DEGREES 56'20" EAST ALONG THE EAST-WEST CENTERLINE OF SECTION 36 A DISTANCE OF 330 FEET; THENCE NORTH 0 DEGREES 11'35" EAST, A DISTANCE OF 1,324.71 FEET; THENCE NORTH 89 DEGREES 48'25" WEST, A DISTANCE OF 330 FEET TO THE TRUE POINT BEGINNING.

PARCEL 2:
TOGETHER WITH EASEMENT FOR PURPOSE OF INGRESS AND EGRESS AS DESCRIBED IN DEED RECORDED MARCH 6, 1967 AS RECEPTION NO. 840827 AND MARCH 8, 1967 AS RECEPTION NO. 841098 AND 841099,
COUNTY OF BOULDER,
STATE OF COLORADO.

REVISED DESCRIPTION:

THE WEST HALF OF TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 AND LOCATED IN THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36 BEING N 89°00'36" E AND MONUMENTED AS FOLLOWS:

-EAST CENTER 1/16 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

-CENTER 1/4 CORNER OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

BEGINNING AT THE NORTH 1/16 CORNER SECTION 36, BEING A FOUND 2" ALUMINUM CAP, PLS 28273,

THENCE ALONG THE BOUNDARY OF SAID WEST HALF OF TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 THE FOLLOWING FOUR (4) COURSES:

1) N 89°57'26" E A DISTANCE OF 330.02 FEET;
2) S 00°00'40" W A DISTANCE OF 1341.14 FEET;
3) S 89°00'36" W A DISTANCE OF 329.68 FEET;
4) N 00°00'21" W A DISTANCE OF 1346.59 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 443,241 SQUARE FEET, OR 10.1754 ACRES MORE OR LESS.

NOTES REGARDING THE TITLE COMMITMENT:

COMMONWEALTH LAND TITLE INSURANCE COMPANY
TITLE REPORT NO.: H0637216-023-CN4-CN
EFFECTIVE DATE: FEBRUARY 23, 2021 AT 8:00 A.M.

ITEMS 1-8: 1-8 EXCEPTIONS ARE STANDARD EXCEPTIONS.

ITEM 9: ALL MATTERS SHOWN ON THE PLAT OF SURVEY RECORDED FEBRUARY 15, 1966 AT RECEPTION NO. 807363. TERMINATION OF EASEMENT (PORTION) RECORDED APRIL 1, 2020 AT RECEPTION NO. 03775329, MAY 5, 2020 AT RECEPTION NO. 03782060.
AFFECTS PROPERTY, AS SHOWN HEREON.

ITEM 10: TERMS, CONDITIONS, PROVISIONS, AGREEMENTS AND OBLIGATIONS CONTAINED IN THE EASEMENT FOR THE PURPOSED OF INGRESS AND EGRESS AS DESCRIBED IN DEED RECORDED MARCH 6, 1967 AS RECEPTION NO. 840827 AND MARCH 8, 1967 AS RECEPTION NO. 841098 & 841099. TERMINATION OF EASEMENT (PORTION) RECORDED APRIL 1, 2020 AT RECEPTION NO. 03775329 AND MAY 5, 2020 AT RECEPTION NO. 03782060
AFFECTS PROPERTY, AS SHOWN HEREON ALONG WEST AND SOUTH LINES.

ITEM 11: TERMS, CONDITIONS, PROVISIONS AND OBLIGATIONS OF AGREEMENT REGARDING ISSUANCE OF CERTIFICATE OF OCCUPANCY RECORDED JANUARY 23, 1980 AT RECEPTION NO. 380140.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 12: TERMS, CONDITIONS, PROVISIONS AND OBLIGATIONS OF AGREEMENT REGARDING ACCESS RECORDED JANUARY 23, 1980 AT RECEPTION NO. 380139.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 13: OIL AND GAS LEASE TO TODD T. HITCHINGS RECORDED MARCH 19, 1982 AT RECEPTION NO. 487559 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN. AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION RECORDED NOVEMBER 21, 1986 AT RECEPTION NO. 806846.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 14: TERMS, CONDITIONS, PROVISIONS AND OBLIGATIONS OF AGREEMENT REGARDING ACCESS RECORDED MARCH 20, 1984 AT RECEPTION NO. 609864.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

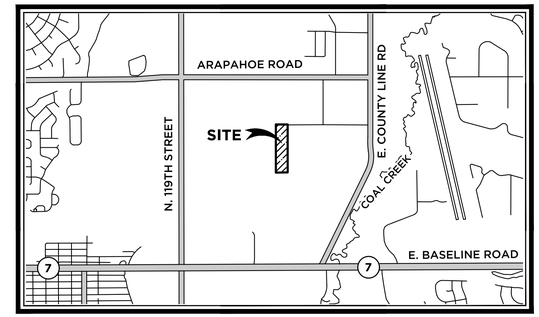
ITEM 15: REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED JANUARY 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 16: REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 17: THE FOLLOWING MATTERS AS DISCLOSED ON THE ALTA/NSPS LAND TITLE SURVEY DATED APRIL 20, 2020, PREPARED BY CHRISTOPHER H. MCELVAIN FOR AND ON BEHALF OF KT ENGINEERING WITH JOB NO. 0043-1814
A) FENCE LINES DO NOT COINCIDE WITH THE PROPERTY LINES TO THE EAST, WEST AND SOUTH.
B) DISCREPANCIES IN THE HISTORIC LEGAL DESCRIPTION VS REVISED DESCRIPTION SHOWN THEREON.
REFERS TO PREVIOUS VERSION OF THIS ALTA

ITEM 18: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	DIANA L. KANO, RICHARD KANO AND JANET KANO
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	LOANDEPOT.COM, LLC DBA MORTGAGE MASTER., AND MORTGAGE ELECTRONIC REGISTRATION SYSTEMS, INC., ACTING SOLELY AS NOMINEE FOR LENDER
RECORDING DATE:	MARCH 4, 2015
RECORDING NO.	3431205



VICINITY MAP
1" = 2000'

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NW 1/4 OF THE NE 1/4 SECTION 36 BEING S00°00'45"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO.: H0637216-023-CN4-CN WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED
9. PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
10. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
11. DATE OF FIELD SURVEY - JUNE 20, 2018.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC, A COLORADO LIMITED LIABILITY COMPANY
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/20/18.

DATE OF PLAT OR MAP: 3/12/2021

COLORADO REGISTERED LAND SURVEYOR CHRISTOPHER H. McELVAIN 36561
3/12/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 03.12.2021
PROJECT NO. 0043-1814

N

80 0 40 80 160
SCALE: 1"= 80' HORIZ.

KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

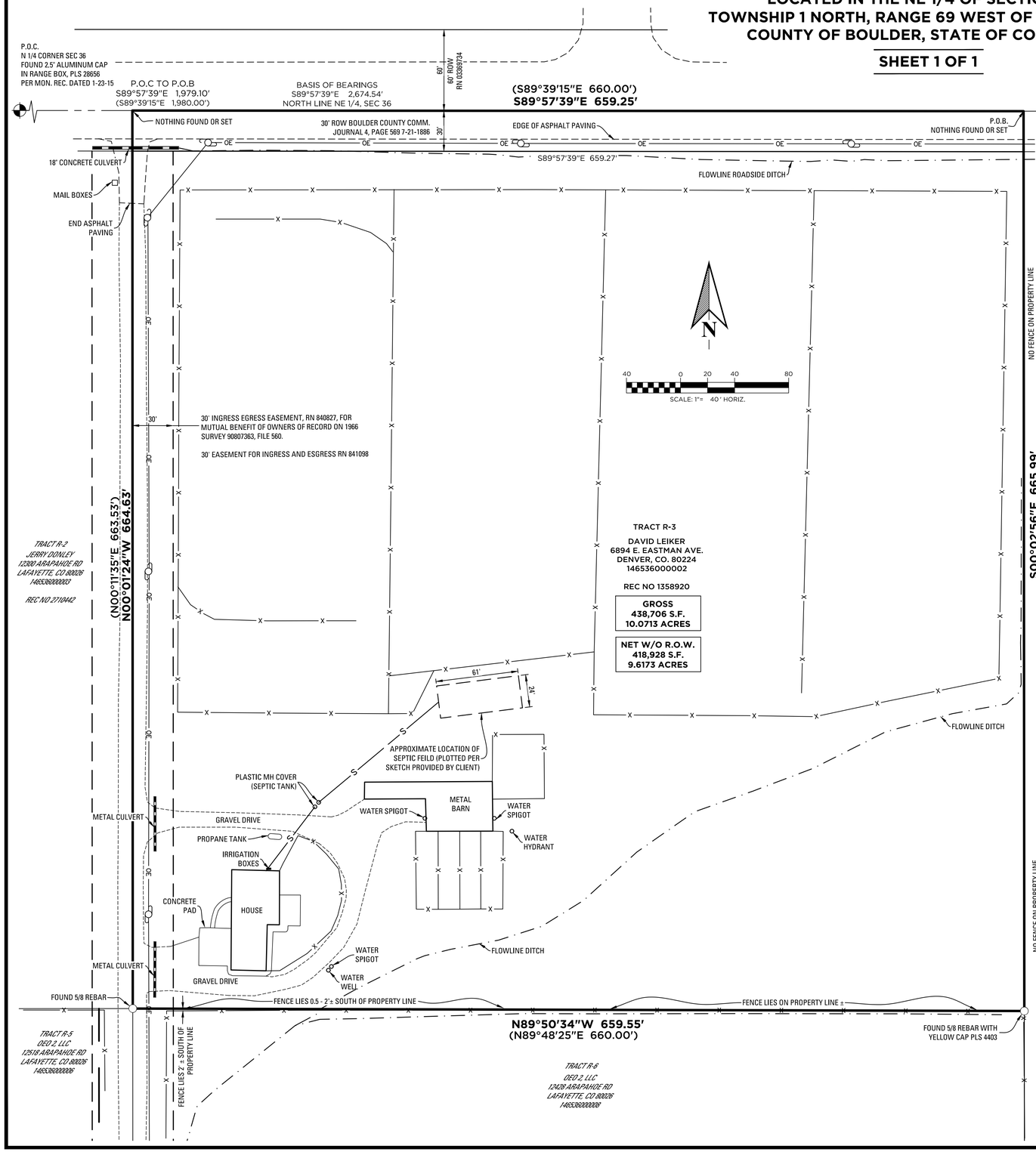
SHEET 1 OF 1

J:\0043\1814\SURVEY\ALTA\ANO\1814-ALTA-KANO.DWG

ALTA/NSPS LAND TITLE SURVEY

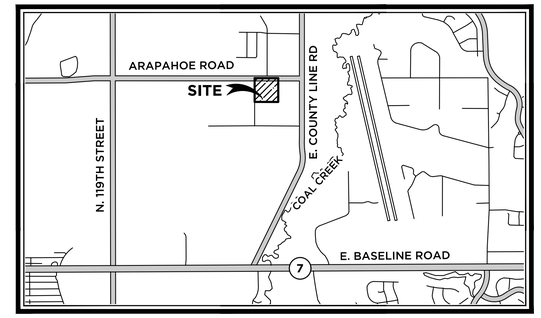
LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIED
- POWER POLE
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- PVC FENCE
- OE OVERHEAD ELECTRIC LINE
- S APPROXIMATE SEPTIC LINES



VICINITY MAP
1" = 2000'

PROVIDED DESCRIPTION:

TITLE REPORT NO: 450-H0649951-023-CN4, AMENDMENT NO. 1

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:

A TRACT OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 W OF THE 6TH P.M., DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTH QUARTER CORNER; THENCE SOUTH 89 DEGREES 39'15" EAST, ALONG THE NORTH LINE OF SAID SECTION 36, A DISTANCE OF 1980 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 01 DEGREES 11'35" WEST, 661.80 FEET; THENCE NORTH 89 DEGREES 48'25" WEST, 660.00 FEET; THENCE NORTH 0 DEGREES 11'35" EAST ALONG THE EAST LINE OF A TRACT SHOWN AS TRACT R-2 ON SURVEY RECORDED IN BOULDER COUNTY ON FEBRUARY 15, 1966, RECEPTION NO. 807363, A DISTANCE OF 663.53 FEET TO A POINT ON THE NORTH LINE OF SECTION 36; THENCE SOUTH 89 DEGREES 39'15" EAST ALONG SAID NORTH LINE, A DISTANCE OF 660.00 FEET TO THE TRUE POINT OF BEGINNING, EXCEPT ANY PORTION THEREOF LYING WITH THE COUNTY ROAD,
COUNTY OF BOULDER,
STATE OF COLORADO.

TRACT I-1
ROSEMARY ZAHN ET AL
JOHN ZAHN TRUST ET AL
205 GRANDVIEW CIRCLE MEAD, CO
146536000041

NOTES REGARDING THE TITLE COMMITMENT:

NOTES REGARDING THE TITLE COMMITMENT PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. 450-H0649951-023-CN4, AMENDMENT NO. 1
COMMITMENT DATE: AUGUST 30, 2021
AMENDMENT DATE: SEPTEMBER 10, 2021

ITEMS 1-7: 1-7 EXCEPTIONS ARE STANDARD EXCEPTIONS

ITEM 8: ALL RIGHTS TO ANY AND ALL MINERALS, ORE AND METALS OF ANY KIND AND CHARACTER, AND ALL COAL, ASPHALTUM, OIL, GAS AND OTHER LIKE SUBSTANCES IN OR UNDER THE LAND, THE RIGHTS OF INGRESS AND EGRESS FOR THE PURPOSE OF MINING, TOGETHER WITH ENOUGH OF THE SURFACE OF THE SAME AS MAY BE NECESSARY FOR THE PROPER AND CONVENIENT WORKING OF SUCH MINERALS AND SUBSTANCES, AS RESERVED IN PATENT FROM THE STATE OF COLORADO, RECORDED APRIL 3, 1880 IN BOOK 59 AT PAGE 95.
NOTE: AFFIRMATIVE PROTECTION AGAINST THE ABOVE ITEM NO. 8 WILL BE AFFORDED TO THE BUYER BY MEANS OF ENDORSEMENT 100.33.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 9: EASEMENT CREATED BY PARCEL MAP RECORDED FEBRUARY 15, 1966 AT RECEPTION NO. 807363 AND OCTOBER 25, 1966 AT RECEPTION NO. 830620.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 3644433, SEPTEMBER 1, 2020 AT RECEPTION NO. 3811850.
EASEMENT SHOW ALONG WESTERN PROPERTY LINE. THE TERMINATED PORTION OF THIS EASEMENT DOES NOT AFFECT SUBJECT PROPERTY.

ITEM 10: TERMS, CONDITIONS, PROVISIONS, AGREEMENTS AND OBLIGATIONS CONTAINED IN THE EASEMENT FOR THE PURPOSE OF INGRESS AND EGRESS AS DESCRIBED IN DEED RECORDED MARCH 6, 1967 AS RECEPTION NO. 840827, AND MARCH 8,1967 AS RECEPTION NO. 841098 AND 841099.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 3644433, TERMINATION OF EASEMENT (PORTION) RECORDED APRIL 1, 2020 AT RECEPTION NO. 3775329. AND TERMINATION OF EASEMENT RECORDED SEPTEMBER 1, 2020 AT RECEPTION NO. 3811850.
EASEMENT SHOW ALONG WESTERN PROPERTY LINE. THE TERMINATED PORTION OF THIS EASEMENT DOES NOT AFFECT SUBJECT PROPERTY

ITEM 11: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO. 487560 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTEREST THEREIN.
DECLARATION OF UNITIZATION RECORDED OCTOBER 14, 1986 AT RECEPTION NO. 796727, AND AMENDED DECLARATION OF UNITIZATION RECORDED JULY 15, 1987 AT RECEPTION NO. 863845, AND AMENDED DECLARATION OF UNITIZATION RECORDED OCTOBER 31, 1992 AT RECEPTION NO. 1231404.
RELINQUISHMENT OF SURFACE RIGHTS RECORDED JULY 12, 2021 AT RECEPTION NO. 3899180.
NOTE: AFFIRMATIVE PROTECTION AGAINST THE ABOVE ITEM NO. 11 WILL BE AFFORDED TO THE BUYER BY MEANS OF ENDORSEMENT 100.31.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 12: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE NOTICE OF OIL AND GAS INTERESTS AND SURFACE USE RECORDED JANUARY 23, 2001 AT RECEPTION NO. 2112331.
NOTE: AFFIRMATIVE PROTECTION AGAINST THE ABOVE ITEM NO. 12 WILL BE AFFORDED TO THE BUYER BY MEANS OF ENDORSEMENT 100.31.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 13: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
NOTE: AFFIRMATIVE PROTECTION AGAINST THE ABOVE ITEM NO. 13 WILL BE AFFORDED TO THE BUYER BY MEANS OF ENDORSEMENT 100.31.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 14: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
NOTE: AFFIRMATIVE PROTECTION AGAINST THE ABOVE ITEM NO. 14 WILL BE AFFORDED TO THE BUYER BY MEANS OF ENDORSEMENT 100.31.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEM 15: INTENTIONALLY OMITTED

ITEM 16: THE FOLLOWING MATTERS AS SHOWN ON THE ALTA/NSPS LAND TITLE SURVEY PREPARED BY CHRISTOPHER H. MCELVAIN. PLS #36561 FOR AND ON BEHALF OF KT ENGINEERING, DATED JULY 2, 2018:
A. INTENTIONALLY OMITTED.
B. OVERHEAD ELECTRIC LINES WITHOUT THE BENEFIT OF A RECORDED EASEMENT
REFERS TO A PREVIOUS VERSION OF THIS ALTA

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE NE 1/4, SEC 36 BEING S89°57'39"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. 450-H0649951-023-CN4, AMENDMENT NO. 1 WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. DATE OF FIELD SURVEY - SEPTEMBER 13, 2021.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
DAVID M. LEIKER
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 9/13/2021.

DATE OF PLAT OR MAP: 9/14/2021

COLORADO REGISTERED CHRISTOPHER H. McELVAIN 36561 PROFESSIONAL LAND SURVEYOR
9/17/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 09/13/2021
PROJECT NO. 0043-1814

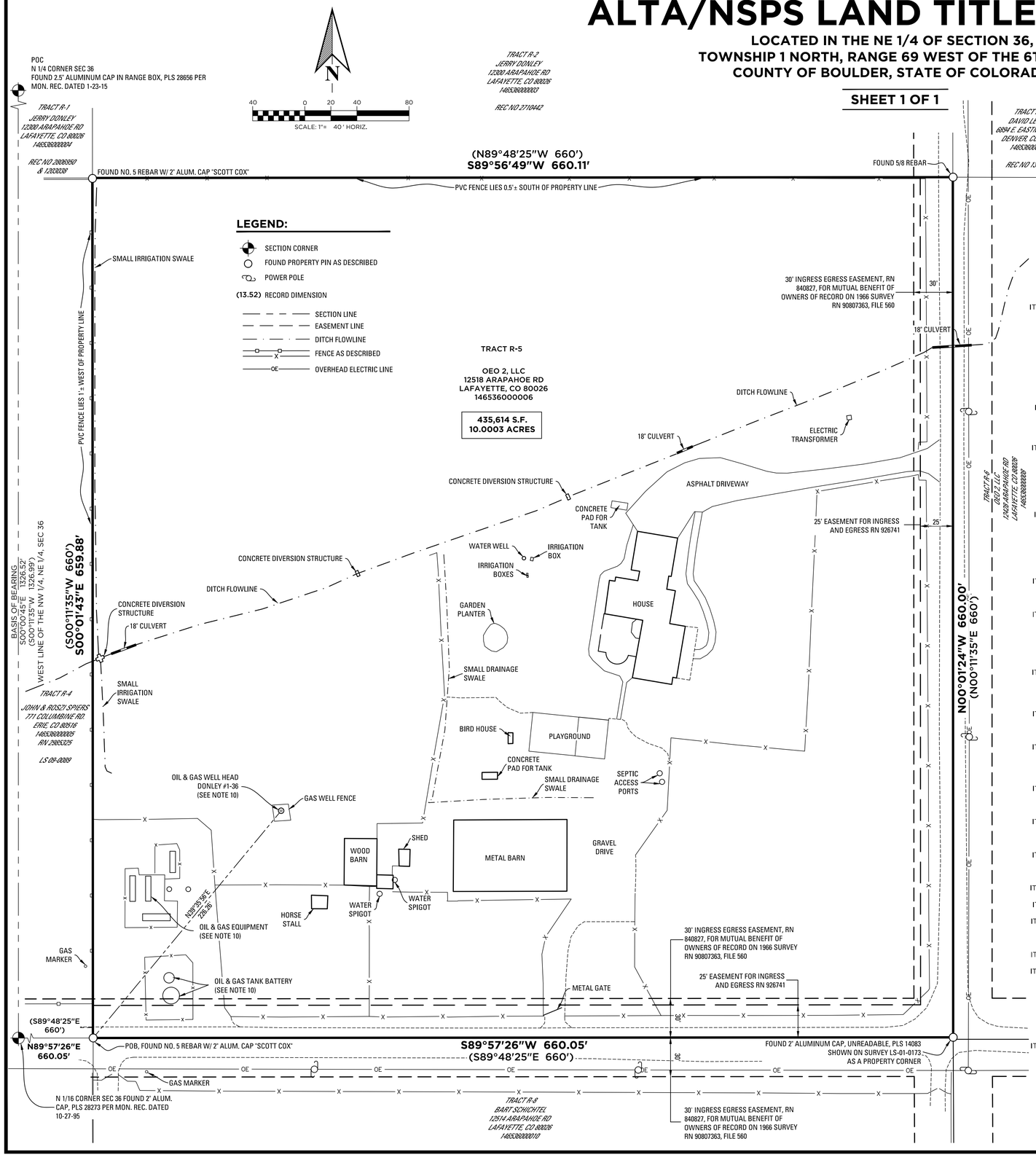
KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\LEIKER\1814-ALTA-LEIKER.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



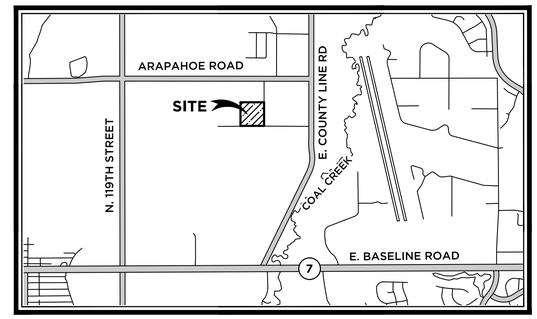
PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY
TITLE REPORT NO.: H0595644-023-CN4-CN

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:

THAT PART OF THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 36; THENCE SOUTH 00°11'35" WEST ALONG THE CENTERLINE OF SAID SECTION A DISTANCE OF 1,326.99 FEET; THENCE SOUTH 89°48'25" EAST, A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89°48'25" EAST, A DISTANCE OF 660 FEET; THENCE NORTH 00°11'35" EAST, A DISTANCE OF 660 FEET; THENCE NORTH 89°48'25" WEST, A DISTANCE OF 660 FEET; THENCE SOUTH 00°11'35" WEST, A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING, COUNTY OF BOULDER, STATE OF COLORADO.



VICINITY MAP
1" = 2000'

NOTES REGARDING THE TITLE COMMITMENT:

NOTES REGARDING THE TITLE COMMITMENT PREPARED BY COMMONWEALTH TITLE INSURANCE COMPANY TITLE REPORT NO.: H0595644-023-CN4-CN EFFECTIVE DATE: FEBRUARY 23, 2021 AT 8:00 A.M.

ITEMS 1-7: EXCEPTIONS 1-7 ARE STANDARD EXCEPTIONS

ITEM 8: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE PLAT OF SURVEY RECORDED OCTOBER 25, 1958 AT RECEPTION NO. 830620.
AFFECTS PROPERTY, AS SHOWN HEREON ALONG SOUTH AND EAST BOUNDARIES.
TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED SEPTEMBER 1, 2020 AT RECEPTION NO. 3811850.

NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO.: 03644433.
AFFECTS ONLY THE RIGHTS OF THE OWNERS OF TRACT R-4 OF SURVEY 807363, FILE 560.

ITEMS 9: MINERAL RIGHTS AS CONVEYED BY WARRANTY DEED RECORDED SEPTEMBER 7, 1966 AT RECEPTION NO. 826252 AND QUIT CLAIM DEED RECORDED SEPTEMBER 7, 1966 AT RECEPTION NO. 826253, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 10: AN EASEMENT FOR INGRESS AND EGRESS ALONG ROADWAY AND INCIDENTAL PURPOSES GRANTED TO ALL OWNERS OF RECORD, AS SET FORTH IN AN INSTRUMENT RECORDED MARCH 6, 1967 AT RECEPTION NO. 840827, TERMINATION OF EASEMENT (PORTION) RECORDED SEPTEMBER 1, 2020 AT RECEPTION NO.: 3811851.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AFFECTS PROPERTY, AS SHOWN HEREON (SEE ITEM 8)

ITEMS 11: AN EASEMENT FOR INGRESS AND EGRESS ALONG ROADWAY AND INCIDENTAL PURPOSES GRANTED TO ALL OWNERS OF RECORD, AS SET FORTH IN AN INSTRUMENT RECORDED MARCH 8, 1967 AT RECEPTION NO. 841098, TERMINATION OF EASEMENT (PORTION) RECORDED SEPTEMBER 1, 2020 AT RECEPTION NO.: 3811850.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AFFECTS PROPERTY, AS SHOWN HEREON (SEE ITEM 8)

ITEMS 12: AN EASEMENT FOR INGRESS AND EGRESS AND INCIDENTAL PURPOSES GRANTED TO USE OF OWNERS OF TRACTS, AS SET FORTH IN AN INSTRUMENT RECORDED OCTOBER 9, 1969 AT RECEPTION NO. 926741.
AFFECTS PROPERTY, AS SHOWN HEREON ALONG SOUTH AND EAST BOUNDARIES

ITEMS 13: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO. 487554, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED NOVEMBER 21, 1986 AT RECEPTION NO. 00806857.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 14: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE NOTICE OF GENERAL DESCRIPTION OF AREA SERVED BY PANHANDLE EASTERN PIPE LINE COMPANY CONCERNING UNDERGROUND FACILITIES RECORDED JUNE 25, 1986 AT RECEPTION NO.: 00768891.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 15: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE RIGHT-OF-WAY GRANT RECORDED APRIL 3, 1987 AT RECEPTION NO. 00838683.
AFFECTS PROPERTY, HOWEVER LOCATION NO DESCRIBED

ITEMS 16: RESERVATION OF OIL, GAS AND OTHER MINERAL AS RESERVED IN WARRANTY DEED RECORDED NOVEMBER 7, 1990 AT RECEPTION NO. 01073012, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 17: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE ROAD MAINTENANCE WAIVER RECORDED JANUARY 11, 2000 AT RECEPTION NO. 2013507.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 18: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 19: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 20: INTENTIONALLY OMITTED

ITEMS 21: INTENTIONALLY OMITTED

ITEMS 22: TERMS CONDITIONS, PROVISIONS, OBLIGATION AND AGREEMENTS AS SET FORTH IN THE WELLBORE FARMOUNT AGREEMENT RECORDED OCTOBER 27, 2015 AT RECEPTION NO.: 03481913.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 23: EXISTING LEASES AND TENANCIES.

ITEMS 24: THE FOLLOWING MATTERS AS DISCLOSED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY CHRISTOPHER H. MCELVAIN FOR AND ON BEHALF OF KT ENGINEERING, DATED JULY 2, 2018:

A) ANY LOSS OR DAMAGE ARISING FROM THE FACT THAT THE FENCE LINES ON OR NEAR THE PERIMETER OF THE LAND DO NOT COINCIDE WITH PROPERTY LINES.
B) ANY RESTRICTIONS AS TO OIL AND GAS FACILITIES IN THE SOUTHWEST PORTION OF THE SUBJECT PROPERTY AND ALSO DESCRIBED IN NOTE 10 ON SAID SURVEY.
REFERS TO A PREVIOUS VERSION OF THIS ALTA

ITEMS 25: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	OEO 2 LLC, A COLORADO LIMITED LIABILITY COMPANY
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	HELEN PEW BOTH OWENS AND MELVIN PAUL OWENS, JR
RECORDING DATE:	NOVEMBER 23, 2020
RECORDING NO.:	3835505

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NW 1/4 OF THE NE 1/4 SECTION 36 BEING S00°00'45"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO.: H0595644-023-CN4-CN WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. A SEARCH WAS MADE FOR THE OIL & GAS WELLS LOCATED ON AND ADJACENT TO THE SUBJECT PROPERTY AS DEPICTED IN GIS MAPPING SHOWN ON THE COLORADO OIL & GAS COMMISSION (COGCC) WEB SITE. ALL WELLS APPEARING ON COGCC GIS MAPPING WERE LOCATED AND THEIR POSITIONS SHOWN ON THIS SHEET. THERE MAY BE BUILDING RESTRICTIONS ASSOCIATED WITH THE GAS AND OIL WELL FACILITIES. SPECIFIC RESTRICTIONS SHOULD BE VERIFIED WITH THE COGCC, LOCAL FIRE PROTECTION DISTRICTS, AND LOCAL JURISDICTIONS.
11. DATE OF FIELD SURVEY - JUNE 20, 2018.

SURVEYOR'S CERTIFICATE:

TO: OEO TWO, LLC
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4, 7A AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/20/18.

DATE OF PLAT OR MAP: 3/12/2021

COLORADO REGISTERED CHRISTOPHER H. McELVAIN 38561 LAND SURVEYOR

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

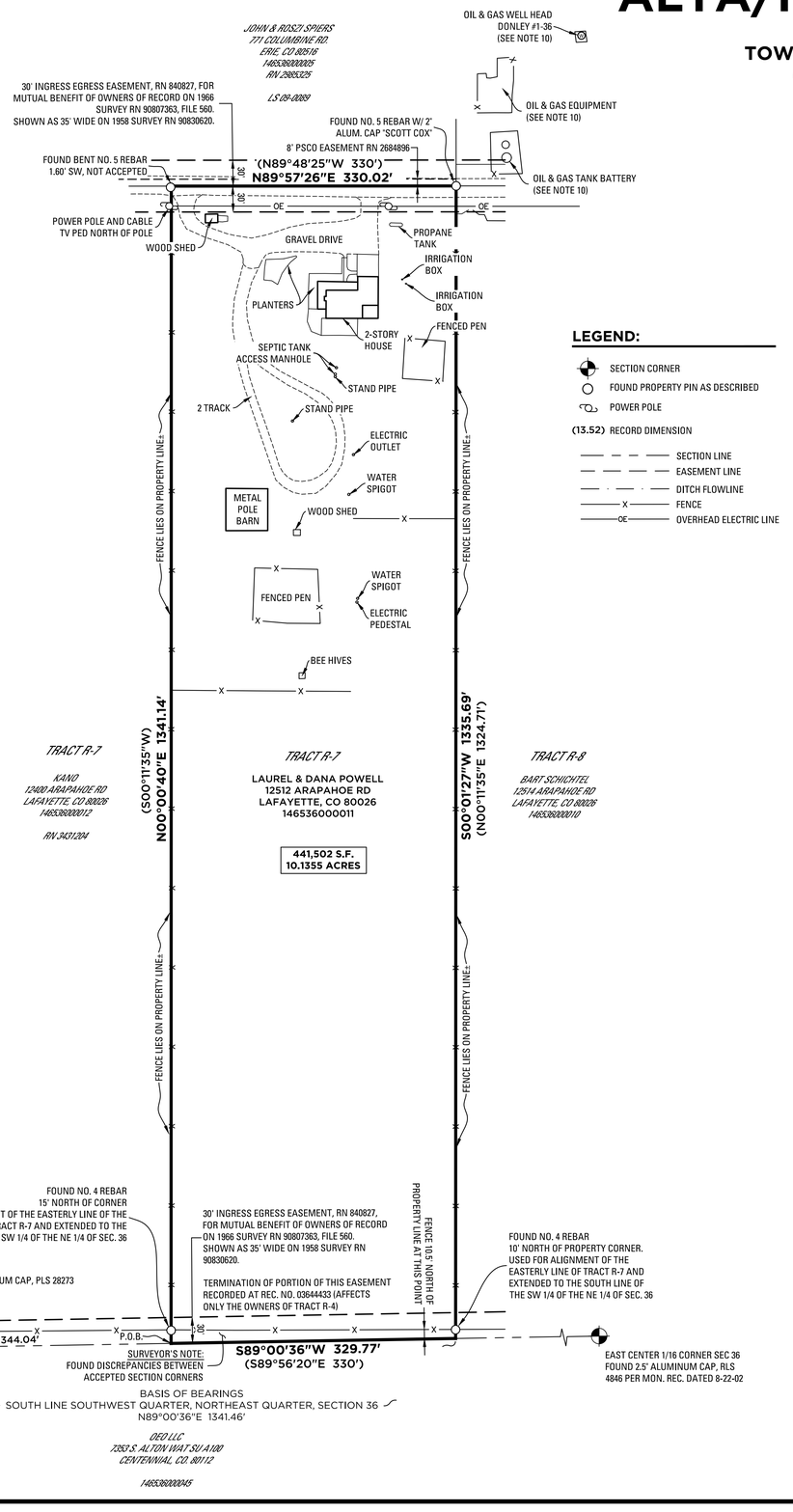
DATE REV1: 03/12/2021
PROJECT NO. 0043-1814-OWENS

J:\00\43\1814\SURVEY\ALTA\OWENS1814-ALTA-OWENS.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIBED
- POWER POLE
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- FENCE
- OVERHEAD ELECTRIC LINE

PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY
TITLE REPORT NO.: H0595639-023-CN4-CN

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:

THE EAST HALF OF A TRACT OF LAND SHOWN AS TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 BEING THAT PART OF THE NORTHEAST QUARTER OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 36; THENCE SOUTH 00°11'35" WEST ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 36, A DISTANCE OF 1,326.99 FEET; THENCE CONTINUING SOUTH 00°11'35" WEST ALONG SAID CENTERLINE, A DISTANCE OF 1,326.25 FEET TO THE CENTER OF SAID SECTION 36; THENCE SOUTH 89°56'20" EAST ALONG THE EAST-WEST CENTERLINE OF SAID SECTION 36, A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 00°11,35" EAST ALONG THE WEST LINE OF A TRACT OF LAND SHOWN AS TRACT R-8 ON SURVEY RECORDED AT RECEPTION NO. 807363, A DISTANCE OF 1,324.71 FEET; THENCE NORTH 89°48'25" WEST ALONG THE SOUTH LINE OF A TRACT OF LAND SHOWN AS TRACT R-4 ON SURVEY RECORDED AT RECEPTION NO. 807363, A DISTANCE OF 330 FEET; THENCE SOUTH 00°11'35" WEST TO THE EAST-WEST CENTERLINE OF SAID SECTION 36; THENCE SOUTH 89°56'20" EAST ALONG SAID EAST-WEST CENTERLINE, A DISTANCE OF 330 FEET TO THE TRUE POINT OF BEGINNING, COUNTY OF BOULDER, STATE OF COLORADO.

REVISED DESCRIPTION:

THE EAST HALF OF TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 AND LOCATED IN THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36 BEING N 89°00'36" E AND MONUMENTED AS FOLLOWS:

-EAST CENTER 1/16 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,
-CENTER 1/4 CORNER OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

COMMENCING AT THE CENTER 1/4 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

THENCE N 89°00'36" E ALONG THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 SECTION 36 A DISTANCE OF 344.04 FEET TO SOUTHWEST CORNER OF THE EAST HALF OF TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 AND THE POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY OF SAID EAST HALF OF TRACT R-7 ON SURVEY RECORDED AT RECEPTION NO. 807363 THE FOLLOWING FOUR (4) COURSES:

1) N 00°00'40" E A DISTANCE OF 1341.14 FEET;
2) N 89°57'26" E A DISTANCE OF 330.02 FEET;
3) S 00°01'27" W A DISTANCE OF 1335.69 FEET;
4) S 89°00'36" W A DISTANCE OF 329.77 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 441,502 SQUARE FEET, OR 10.1355 ACRES MORE OR LESS.

NOTES REGARDING THE TITLE COMMITMENT:

NOTES REGARDING THE TITLE COMMITMENT PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO.: H0595639-023-CN4-CN EFFECTIVE DATE FEBRUARY 23. 2021 AT 8:00 A.M.

ITEMS 1-7: 1-7 EXCEPTIONS ARE STANDARD EXCEPTIONS

ITEMS 8: EASEMENTS, NOTES, COVENANTS, RESTRICTIONS AND RIGHTS-OF-WAY AS SHOWN ON THE PLAT OF SURVEY, RECORDED FEBRUARY 15, 1966 AT RECEPTION NO. 807363.
AFFECTS PROPERTY, AS SHOWN HEREON

ITEMS 9: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE DEED RECORDED MARCH 6, 1967 AT RECEPTION NO. 840827, TERMINATION OF EASEMENT (PORTION) RECORDED AUGUST 14, 2020 AT RECEPTION NO. 3806588.
AFFECTS PROPERTY, AS SHOWN HEREON

ITEMS 10: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO. 487561, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

NOTE: NOTICE OF OIL AND GAS INTERESTS AND SURFACE USE IN CONNECTION THEREWITH RECORDED JANUARY 23, 2001 AT RECEPTION NO. 2112331.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

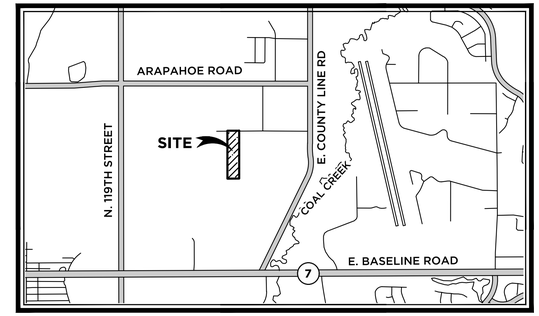
NOTE: REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT IN CONNECTION THEREWITH RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878 AND DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

NOTE: OPERATING AGREEMENT AND FINANCING STATEMENT IN CONNECTION THEREWITH RECORDED JUNE 16, 2010 AT RECEPTION NO. 3080637.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 11: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE MEMORANDUM OF OIL AND GAS PURCHASE AGREEMENT RECORDED OCTOBER 13, 1995 AT RECEPTION NO. 1555140.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

ITEMS 12: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	DANA R. POWELL AND LAUREL E POWELL
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	OAKTREE FUNDING CORP.
RECORDING DATE:	FEBRUARY 26, 2019
RECORDING NO:	03699445



VICINITY MAP
1" = 2000'

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NW 1/4 OF THE NE 1/4 SECTION 36 BEING S00°00'45"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. H0595639-023-CN4-CN WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. A SEARCH WAS MADE FOR THE OIL & GAS WELLS LOCATED ON AND ADJACENT TO THE SUBJECT PROPERTY AS DEPICTED IN GIS MAPPING SHOWN ON THE COLORADO OIL & GAS COMMISSION (COGCC) WEB SITE. ALL WELLS APPEARING ON COGCC GIS MAPPING WERE LOCATED AND THEIR POSITIONS SHOWN ON THIS SHEET. THERE MAY BE BUILDING RESTRICTIONS ASSOCIATED WITH THE GAS AND OIL WELL FACILITIES. SPECIFIC RESTRICTIONS SHOULD BE VERIFIED WITH THE COGCC, LOCAL FIRE PROTECTION DISTRICTS, AND LOCAL JURISDICTIONS.
11. DATE OF FIELD SURVEY - JUNE 20, 2018.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
LAURAL E. POWELL AND DANA R. POWELL
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/20/18.

DATE OF PLAT OR MAP: 3/12/2021

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 03/12/2021
PROJECT NO. 0043-1814

80 0 40 80 160
SCALE: 1"= 80' HORIZ.

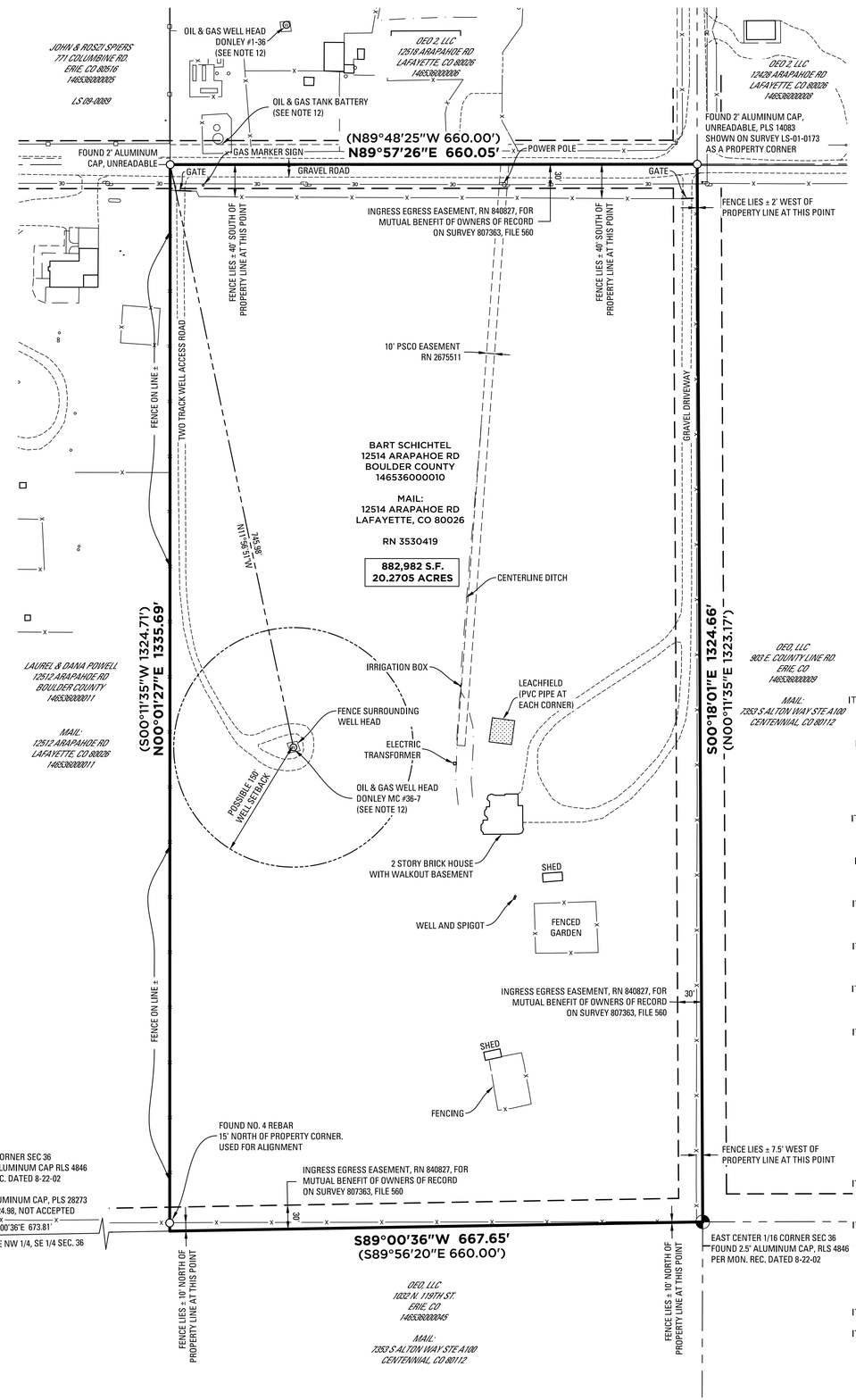
SHEET 1 OF 1

KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\PDWELL\1814-ALTA-PDWELL.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



N

80 0 40 80 160

SCALE: 1"= 80 ' HORIZ.

LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIED
- APPARENT GAS WELL HEAD
- POWER POLE
- (13.52) RECORD DIMENSION
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- WIRE FENCE
- OVERHEAD ELECTRIC LINE

PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY, TITLE REPORT NO. H0595641-023-CN4-CN, EFFECTIVE DATE FEBRUARY 23, 2021 AT 8:00 A.M.

A TRACT OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., BOULDER COUNTY, COLORADO, DESCRIBED AS FOLLOWS:

BEGINNING AT THE N1/4 CORNER, THENCE SOUTH 0°11'35" WEST ALONG THE NORTH-SOUTH CENTERLINE OF SECTION 36, A DISTANCE OF 2653.24 FEET TO THE CENTERLINE OF SECTION 36; THENCE SOUTH 89°56'20" EAST ALONG THE EAST-WEST CENTERLINE OF SAID SECTION 36, A DISTANCE OF 1320 FEET TO THE TRUE POINT OF BEGINNING,

THENCE NORTH 0°11'35" EAST ALONG THE WEST LINE OF A TRACT SHOWN AS TRACT R-9 ON SURVEY, RECORDED BOULDER COUNTY, RECEPTION NO. 807363, A DISTANCE OF 1323.17 FEET; THENCE NORTH 89°48'25" WEST ALONG THE SOUTH LINE OF A TRACT SHOWN AS TRACT R-5 ON SURVEY, RECORDED BOULDER COUNTY, RECEPTION NO. 807363, A DISTANCE OF 660 FEET;

THENCE SOUTH 0°11'35" WEST ALONG THE EAST LINE OF A TRACT SHOWN AS TRACT R-7 ON SURVEY RECORDED BOULDER COUNTY, RECEPTION NO. 807363, A DISTANCE OF 1324.71 FEET, TO A POINT ON THE EAST-WEST CENTERLINE OF SECTION 36;

THENCE SOUTH 89°56'20" EAST ALONG SAID EAST-WEST CENTERLINE A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING, COUNTY OF BOULDER, STATE OF COLORADO.

AS SURVEYED DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE NORTHEAST 1/4 SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 36 BEING S 89°56'15" E AND MONUMENTED AS FOLLOWS:

-NORTHWEST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

-CENTER 1/4 CORNER OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

COMMENCING AT SAID NORTHWEST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846,

THENCE ALONG THE EAST-WEST CENTERLINE OF SECTION 36 THE FOLLOWING TWO (2) COURSES;

1) S 89°56'15" E A DISTANCE OF 1319.94 FEET TO SAID CENTER 1/4 CORNER OF SECTION 36 TO A POINT BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846;

2) N 89°00'36" E A DISTANCE OF 673.81 FEET TO THE SOUTHWEST CORNER OF TRACT R-8, OF PLAT OF SURVEY BY EUGENE PADON RLS 2065 AND RECORDED AT RECEPTION NO. 807363 (AKA 90807363) SAID POINT ALSO BEING THE POINT OF BEGINNING,

THENCE N 00°01'27" E A DISTANCE OF 1335.69 FEET TO THE NORTHWEST CORNER OF SAID TRACT R-8 BEING A FOUND 2" ALUMINUM CAP, UNREADABLE;

THENCE N 89°57'26" E ALONG THE NORTHERLY LINE OF SAID TRACT R-8 A DISTANCE OF 660.05 FEET TO THE NORTHEAST CORNER OF SAID TRACT R-8 BEING A FOUND 2" ALUMINUM CAP, PARTIALLY UNREADABLE, PLS 14083;

THENCE S 00°18'01" E ALONG THE EASTERLY LINE OF SAID TRACT R-8 A DISTANCE OF 1324.66 FEET TO THE SOUTHEAST CORNER OF SAID TRACT R-8, SAID POINT ALSO BEING THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846;

THENCE S 89°00'36" W ALONG SAID EAST-WEST CENTERLINE OF SECTION 36 A DISTANCE OF 667.65 FEET TO THE POINT OF BEGINNING

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 882,982 SQUARE FEET, OR 20.2705 ACRES MORE OR LESS.

NOTES REGARDING THE TITLE COMMITMENT:

ITEMS 1-8: THE FOLLOWING ARE TAKEN FROM AND CORRESPOND TO THE SCHEDULE B, SECTION TWO ITEMS WITHIN COMMONWEALTH LAND TITLE INSURANCE COMPANY, TITLE REPORT NO. H0595641-023-CN4-CN
ITEMS 1-8 ARE STANDARD EXCEPTIONS.

ITEMS 9: ALL RIGHTS TO ANY AND ALL MINERALS, ORE AND METALS OF ANY KIND AND CHARACTER, AND ALL COAL, ASPHALTUM, OIL, GAS AND OTHER LIKE SUBSTANCES IN OR UNDER THE LAND, THE RIGHTS OF INGRESS AND EGRESS FOR THE PURPOSE OF MINING, TOGETHER WITH ENOUGH OF THE SURFACE OF THE SAME AS MAY BE NECESSARY FOR THE PROPER AND CONVENIENT WORKING OF SUCH MINERALS AND SUBSTANCES, AS RESERVED IN PATENT FROM THE STATE OF COLORADO, RECORDED APRIL 3, 1880 IN BOOK 59 AT PAGE 95.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEMS 10: EASEMENTS, NOTES, COVENANTS, RESTRICTIONS AND RIGHTS-OF-WAY SHOWN ON PLAT OF SURVEY RECORDED FEBRUARY 15, 1966 AT RECEPTION NO. 807363.
AFFECTS PROPERTY, AS SHOWN HEREON.

ITEMS 11: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE DEED RECORDED MARCH 6, 1967 AT RECEPTION NO. 840827.
AFFECTS PROPERTY, AS SHOWN HEREON.

ITEMS 12: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO. 487552, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEMS 13: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEMS 14: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE REQUEST FOR NOTIFICATION RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEMS 15: ANY RIGHTS, INTERESTS, OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING FACTS SHOWN ON THE ALTA/NSPS LAND TITLE SURVEY DATED FEBRUARY 28, 2018, PREPARED BY KT ENGINEERING, AS JOB NUMBER N/A:

A) TWO TRACK WELL ACCESS ROAD AND OIL & GAS WELL HEAD; AND
B) FENCE NOT COINCIDENT WITH THE NORTHERLY, EASTERLY AND SOUTHERLY PROPERTY LINES.
REFERS TO A PREVIOUS VERSION OF THIS ALTA.

THE FOLLOWING IS INCLUDED FOR INFORMATIONAL PURPOSES:

TERMS, CONDITIONS, PROVISIONS, OBLIGATION AND AGREEMENTS AS SET FORTH IN THE NOTICE CONCERNING UNDERGROUND FACILITIES RECORDED JUNE 25, 1986 AT RECEPTION NO.: 768891.

ITEMS 16: TERMS, CONDITIONS, PROVISIONS, AGREEMENTS AND OBLIGATIONS CONTAINED IN THE AGREEMENT FOR REPAIR TO AN ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) RECORDED JULY 13, 2016 AT RECEPTION NO. 03529972.

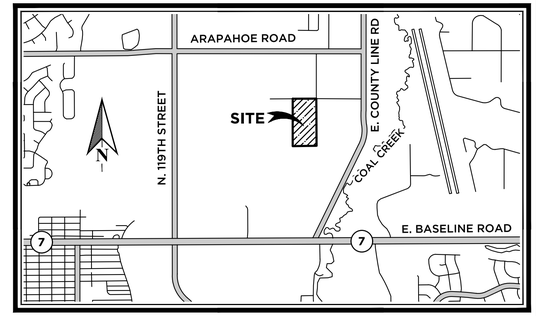
ITEMS 17: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	BART SCHICHTEL
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	ENVOY MORTGAGE. LTD
LOAN NO.:	3790300895
RECORDING DATE:	JULY 15, 2016
RECORDING NO.:	03530420

ITEMS 18: INTENTIONALLY OMITTED

ITEMS 19: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	BART SCHICHTEL
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	THE HOME LOAN ARRANGER
RECORDING DATE:	JUNE 17, 2020
RECORDING NO.:	3791586



VICINITY MAP
1" = 2000'

GENERAL NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, INC. TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT(S) MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. SURVEY FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SEC. 36 BEING S89°56'15"E . BEARINGS ARE GRID BASED ON NAD 83 (2011) (EPOCH: 2010.0000), COLORADO STATE PLANE NORTH ZONE 0501.
6. AREA OF THIS SURVEY IS 882,982 S.F. OR 20.2705 ACRES MORE OR LESS.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. DATE OF SURVEY - JANUARY 2018
11. THIS IS AN ABOVE GROUND SURVEY. THE UNDERGROUND UTILITIES SHOWN, IF ANY, ARE BASED ON ABOVE GROUND EVIDENCE AND THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND UNVERIFIED. THERE ARE MOST LIKELY UNDERGROUND UTILITIES NOT SHOWN ON THIS SURVEY.
12. A SEARCH WAS MADE FOR THE OIL & GAS WELLS LOCATED ON AND ADJACENT TO THE SUBJECT PROPERTY AS DEPICTED IN GIS MAPPING SHOWN ON THE COLORADO OIL & GAS COMMISSION (COGCC) WEB SITE. ALL WELLS APPEARING ON COGCC GIS MAPPING WERE LOCATED AND THEIR POSITIONS SHOWN ON THIS SHEET. THERE MAY BE BUILDING RESTRICTIONS ASSOCIATED WITH THE GAS AND OIL WELL FACILITIES. SPECIFIC RESTRICTIONS SHOULD BE VERIFIED WITH THE COGCC, LOCAL FIRE PROTECTION DISTRICTS, AND LOCAL JURISDICTIONS.
13. ACCORDING TO THE FIRM FLOOD INSURANCE RATE MAP PANEL 0443J, MAP NO. 08013C0443J (REVISED TO REFLECT LOMR, EFFECTIVE: DECEMBER 28, 2012.) NO PORTION OF THE SITE LIES WITHIN THE 100 YR FLOODPLAIN, AS SHOWN.

SURVEYOR'S CERTIFICATE:

TO: BART SCHICHTEL
OEO, LLC
HERITAGE TITLE COMPANY.
COMMONWEALTH LAND TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, AND 13 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED IN JANUARY OF 2018.

DATE OF PLAT OR MAP: 3/12/2021

COLORADO REGISTERED 36561 CHRISTOPHER H. McELVAIN PROFESSIONAL LAND SURVEYOR
3/12/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

SHEET 1 OF 1
DATE: 03/12/2021
PROJECT NO. 0043-1814

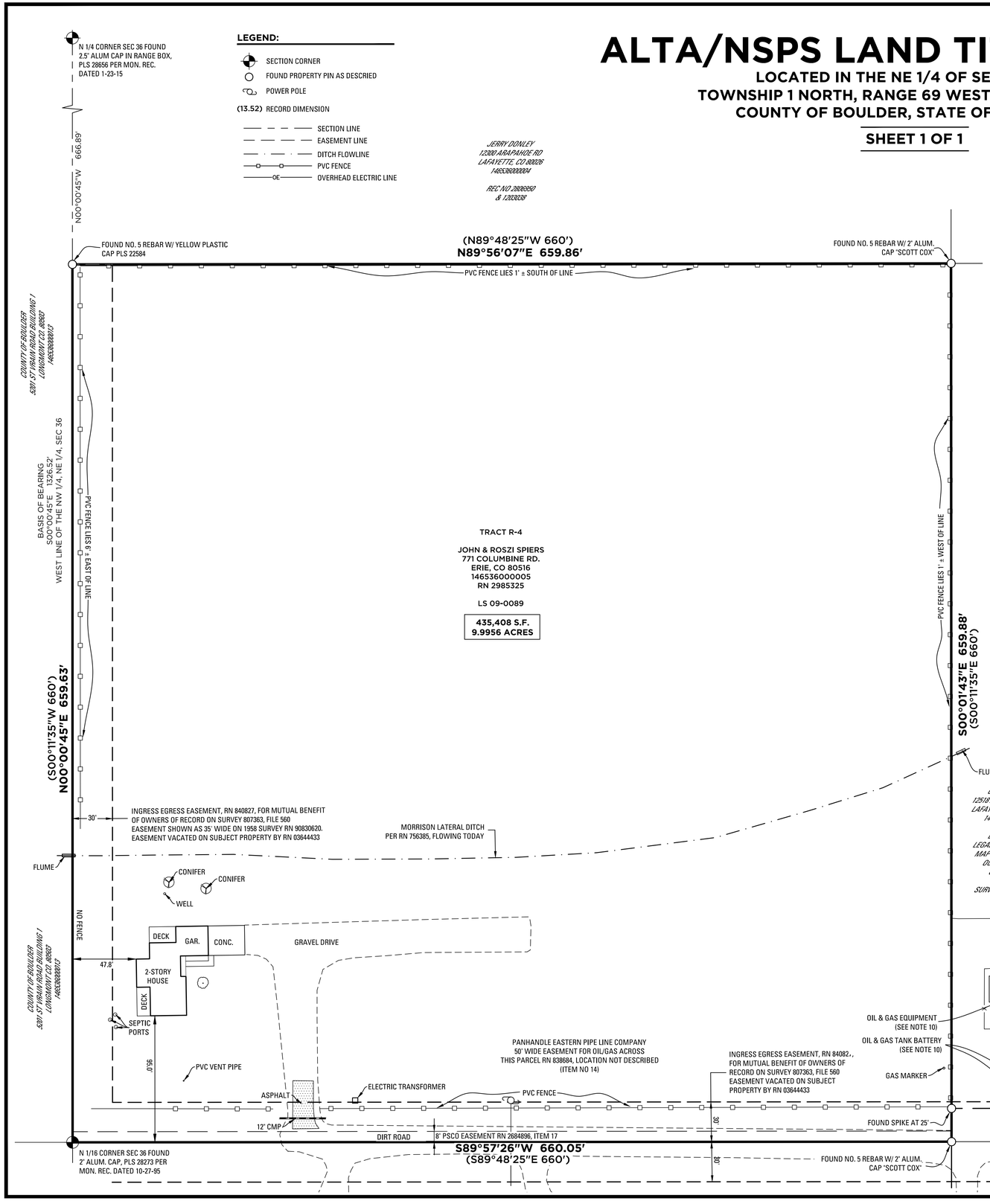
KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

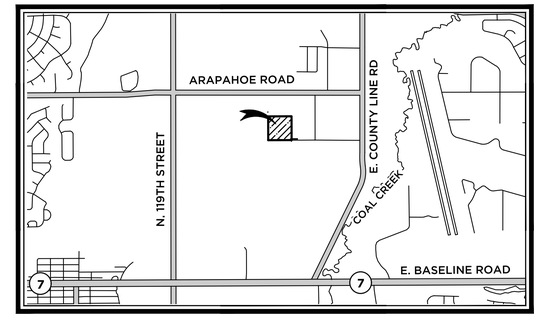
J:\0043\1814\SURVEY\ALTA\SCHICHTEL\ALTA1532-ALTA-SCHICHTEL.DWG

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1





VICINITY MAP
1" = 2000'

PROVIDED DESCRIPTION:

THE LAND REFERRED TO IN SCHEDULE A IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO AND IS DESCRIBED AS FOLLOWS:
A TRACT OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., BOULDER COUNTY, COLORADO, DESRICBED AS FOLLOWS:

BEGINNING AT THE N 1/4 CORNER; THENCE SOUTH 0°11'35" WEST ALONG THE CENTERLINE OF SAID SECTION 36, A DISTANCE OF 666.99 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID CENTERLINE, A DISTANCE OF 660 FEET; THENCE SOUTH 89°48'25" EAST ALONG THE NORTH LINE A DISTANCE OF 660 FEET; THENCE NORTH 0°11'35" EAST, 660 FEET; THENCE NORTH 89°48'25" WEST ALONG THE SOUTH LINE, A DISTANCE OF 660 FEET TO THE TRUE POINT OF BEGINNING.

COUNTY OF BOULDER, STATE OF COLORADO.

NOTES REGARDING THE TITLE COMMITMENT:

NOTES REGARDING THE TITLE COMMITMENT PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. H0595646-023-CN4-CN
EFFECTIVE DATE FEBRUARY 23, 2021 AT 8:00 A.M.

ITEMS 1-7: EXCEPTIONS 1-7 ARE STANDARD EXCEPTIONS

ITEM 8: ALL RIGHTS TO ANY AND ALL MINERALS, ORE AND METALS OF ANY KIND AND CHARACTER, AND ALL COAL, ASPHALTUM, OIL, GAS AND OTHER LIKE SUBSTANCES IN OR UNDER THE LAND, THE RIGHTS OF INGRESS AND EGRESS FOR THE PURPOSE OF MINING, TOGETHER WITH ENOUGH OF THE SURFACE OF THE SAME AS MAY BE NECESSARY FOR THE PROPER AND CONVENIENT WORKING OF SUCH MINERALS AND SUBSTANCES, AS RESERVED IN PATENT FROM THE STATE OF COLORADO, RECORDED APRIL 3, 1880 BOOK 59 AT PAGE 95.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 9: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE PLAT OF SURVEY RECORDED OCTOBER 25, 1958 AT RECEPTION NO. 830620 NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AS SHOWN ON WESTERN AND SOUTHERN PROPERTY BOUNDARIES.

ITEM 10: MINERAL RIGHTS AS CONVEYED BY WARRANTY DEED RECORDED QUIT CLAIM DEED RECORDED SEPTEMBER 7, 1966 AT RECEPTION NO. 826253, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 11: AN EASEMENT FOR INGRESS AND EGRESS ALONG ROADWAY AND INCIDENTAL PURPOSES GRANTED TO ALL OWNERS OF RECORD, AS SET FORTH IN AN INSTRUMENT RECORDED MARCH 6, 1967 AT RECEPTION NO. 840827.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AS SHOWN ON WESTERN AND SOUTHERN PROPERTY BOUNDARIES.

ITEM 12: AN EASEMENT FOR INGRESS AND EGRESS ALONG ROADWAY AND INCIDENTAL PURPOSES GRANTED TO ALL OWNERS OF RECORD, AS SET FORTH IN AN INSTRUMENT RECORDED MARCH 8, 1967 AT RECEPTION NO. 841098.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AS SHOWN ON WESTERN AND SOUTHERN PROPERTY BOUNDARIES.

ITEM 13: AN EASEMENT FOR INGRESS AND EGRESS ALONG ROADWAY AND INCIDENTAL PURPOSES GRANTED TO ALL OWNERS OF RECORD, AS SET FORTH IN AN INSTRUMENT RECORDED MARCH 8, 1967 AT RECEPTION NO. 841099.
NOTE: TERMINATION OF EASEMENT IN CONNECTION THEREWITH RECORDED MARCH 9, 2018 AT RECEPTION NO. 03644433.
AS SHOWN ON WESTERN AND SOUTHERN PROPERTY BOUNDARIES.

ITEM 14: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS, EASEMENTS AND AGREEMENTS AS SET FORTH IN THE RIGHT OF WAY GRANT RECORDED APRIL 3, 1987 AT RECEPTION NO. 838684.
AFFECTS PROPERTY, UNABLE TO PLOT, AS SHOWN HEREON

ITEM 15: OIL AND GAS LEASE RECORDED MARCH 19, 1982 AT RECEPTION NO. 487558 AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
NOTE: AFFIDAVIT OF PRODUCTION IN CONNECTION THEREWITH RECORDED NOVEMBER 21, 1986 AT RECEPTION NO. 806852.
NOTE: AMENDED DECLARATION OF UNITIZATION IN CONNECTION THEREWITH RECORDED OCTOBER 21, 1992 AT RECEPTION NO. 1231404.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 16: RESERVATION OF ALL RIGHTS IN AND TO THE MORRISON LATERAL DITCH AS SET FORTH IN WARRANTY DEED RECORDED MAY 1, 1986 AT RECEPTION NO. 756385.
AFFECTS PROPERTY, AS SHOWN TRAVERSING PROPERTY WEST TO EAST.

ITEM 17: AN EASEMENT FOR UTILITY LINES AND INCIDENTAL PURPOSES GRANTED TO PUBLIC SERVICE COMPANY OF COLORADO, AS SET FORTH IN AN INSTRUMENT RECORDED MAY 3, 2005 AT RECEPTION NO. 2684896.
AFFECTS PROPERTY, AS SHOWN ALONG SOUTH LINE.

ITEM 18: REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED OCTOBER 23, 2007 AT RECEPTION NO. 2890878.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 19: REQUEST FOR NOTIFICATION (MINERAL ESTATE OWNER) RECORDED DECEMBER 21, 2007 AT RECEPTION NO. 2900941.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 20: *INTENTIONALLY LEFT BLANK*

ITEM 21: ANY EXISTING LEASES OR TENANCIES, AND ANY AND ALL PARTIES CLAIMING BY, THROUGH OR UNDER SAID LEASE.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 22: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE MEMORANDUM OF AGREEMENT RECORDED AUGUST 20, 2018 AT RECEPTION NO. 03671973.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 23: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	JOHN SPIERS AND ROSZI SPIERS
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	BOFI FEDERAL BANK
RECORDING DATE:	JANUARY 31, 2018
RECORDING NO:	03638704

AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

ITEM 24: A DEED OF TRUST TO SECURE AN INDEBTEDNESS,

TRUSTOR/GRANTOR:	JOHN SPIERS AND ROSZI SPIERS
TRUSTEE:	PUBLIC TRUSTEE OF BOULDER COUNTY
BENEFICIARY:	OEO 2, LLC, A COLORADO LIMITED LIABILITY COMPANY
RECORDING DATE:	OCTOBER 4, 2019
RECORDING NO:	03740691

AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW.

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NW 1/4 OF THE NE 1/4 SECTION 36 BEING S00°00'45"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. H0595646-023-CN4-CN WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. A SEARCH WAS MADE FOR THE OIL & GAS WELLS LOCATED ON AND ADJACENT TO THE SUBJECT PROPERTY AS DEPICTED IN GIS MAPPING SHOWN ON THE COLORADO OIL & GAS COMMISSION (COGCC) WEB SITE. ALL WELLS APPEARING ON COGCC GIS MAPPING WERE LOCATED AND THEIR POSITIONS SHOWN ON THIS SHEET. THERE MAY BE BUILDING RESTRICTIONS ASSOCIATED WITH THE GAS AND OIL WELL FACILITIES. SPECIFIC RESTRICTIONS SHOULD BE VERIFIED WITH THE COGCC, LOCAL FIRE PROTECTION DISTRICTS, AND LOCAL JURISDICTIONS.
11. DATE OF SURVEY - JUNE 10, 2018.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
JOHN SPIERS AND ROSZI SPIER
HERITAGE TITLE COMPANY
COMMONWEALTH LAND TITLE INSURANCE COMPANY

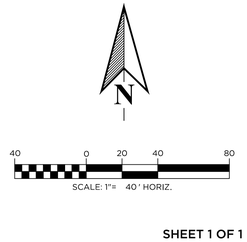
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4 AND 8 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/10/18.

DATE OF PLAT OR MAP: 3/12/21

COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR 36561 CHRISTOPHER H. McELVAIN 3/12/21

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 03/12/2021
PROJECT NO. 0043-1814



SHEET 1 OF 1

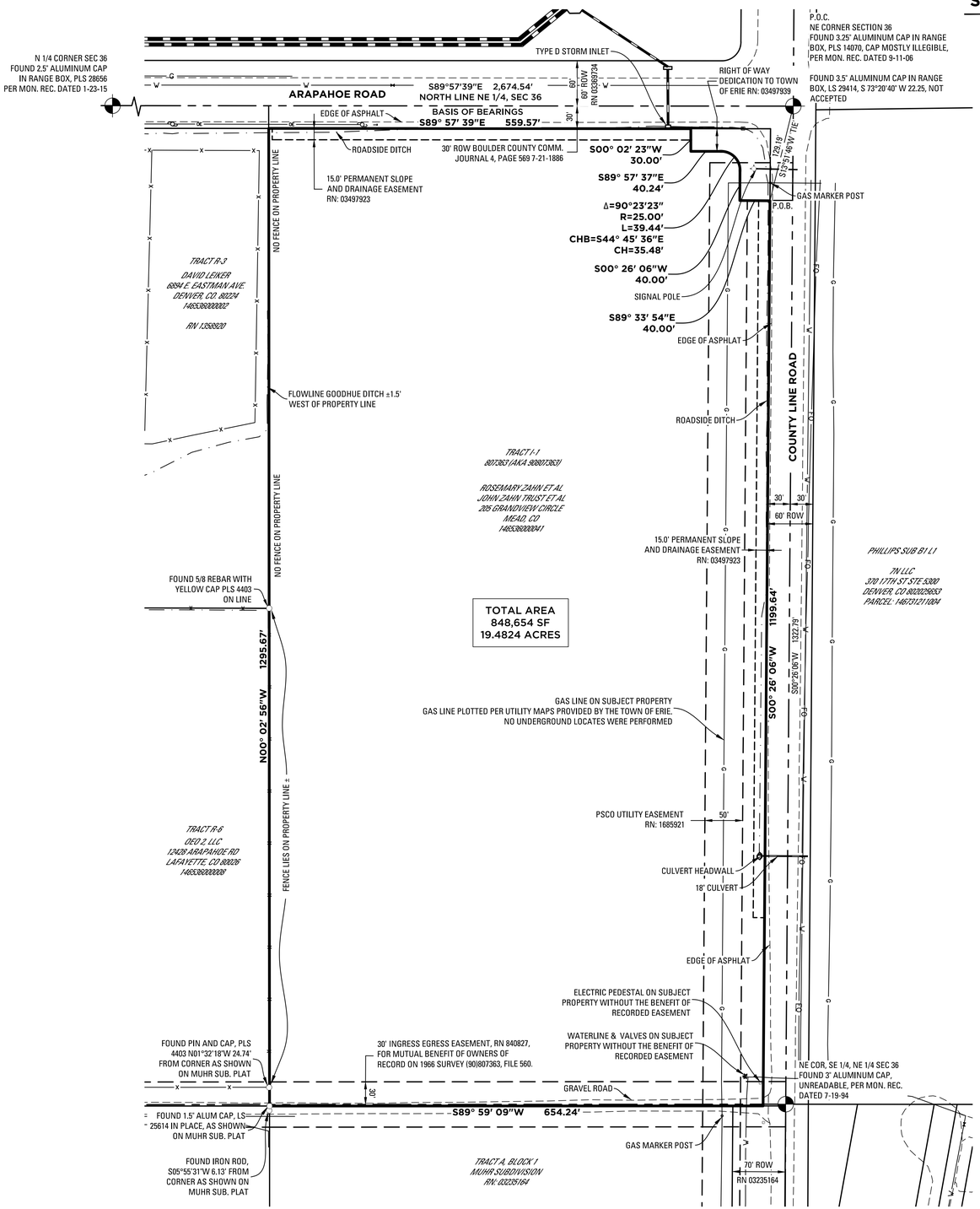
KT ENGINEERING
ENGINEERS + SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\SPIERS\1814-ALTA-SPIERS.DWG

LAND SURVEY PLAT

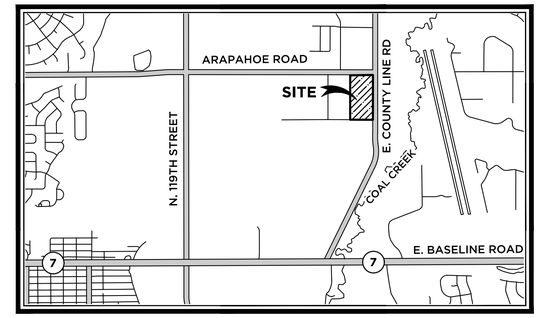
LOCATED IN THE NE 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., TOWN OF ERIE, COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



LEGEND:

- SECTION CORNER
- FOUND PROPERTY PIN AS DESCRIED
- POWER POLE
- SECTION LINE
- EASEMENT LINE
- DITCH FLOWLINE
- WIRE FENCE
- OVERHEAD ELECTRIC LINE
- GAS LINE
- WATER LINE
- FIBER OPTIC LINE
- STORM SEWER



VICINITY MAP
1" = 2000'

PROVIDED DESCRIPTION:

COMMONWEALTH LAND TITLE INSURANCE COMPANY
TITLE REPORT NO: H0642794-023-CN4-CN

THAT PORTION OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTH QUARTER CORNER; THENCE SOUTH 89°39'15" EAST, ALONG SAID NORTH LINE, 2,670.85 FEET TO THE NORTHEAST CORNER OF SAID SECTION 36, THE TRUE POINT OF BEGINNING; THENCE SOUTH 0°31' WEST ALONG THE EAST LINE OF SAID SECTION 36, A DISTANCE OF 1,320 FEET; THENCE NORTH 89°48'25" WEST, 683.34 FEET; THENCE NORTH 0°11'35" EAST, ALONG THE EAST LINES OF TRACTS SHOWN AS TRACT R-6 AND R-3 ON SURVEY RECORDED IN BOULDER COUNTY ON FEBRUARY 1966 AS RECEPTION NO. 807363, A DISTANCE OF 1,321.80 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION 36; THENCE SOUTH 89°39'15" EAST, ALONG SAID NORTH LINE, A DISTANCE OF 690.85 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT THAT PORTION CONVEYED TO THE TOWN OF ERIE, COLORADO, A MUNICIPAL CORPORATION AND POLITICAL SUBDIVISION OF THE STATE OF COLORADO IN WARRANTY DEED RECORDED JANUARY 27, 2016 AT RECEPTION NO. 03497939.

AS-SURVEYED DESCRIPTION:

A PORTION OF TRACT I-1 OF PLAT OF SURVEY BY EUGENE PADON RLS 2065 AND RECORDED AT RECEPTION NO. 807363 (AKA 90807363) AND LOCATED IN THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF ERIE, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 36 BEING S 89°57'39" E AND MONUMENTED AS FOLLOWS:

-NORTHEAST CORNER OF SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP IN RANGE BOX, PLS 14070.

-NORTH 1/4 CORNER OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, PLS 28656.

COMMENCING AT SAID NORTHEAST CORNER OF SECTION 36;

THENCE S 13°51'46" W A DISTANCE OF 129.19 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3497939 SAID POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF EAST COUNTY LINE ROAD AND THE POINT OF BEGINNING;

THENCE S 00°26'06" W ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 1199.64 FEET TO A POINT ON THE SOUTHERLY LINE OF SAID TRACT I-1 OF PLAT OF SURVEY BY EUGENE PADON RLS 2065 AND RECORDED AT RECEPTION NO. 807363 (AKA 90807363);

THENCE ALONG THE SOUTHERLY AND WESTERLY BOUNDARY OF SAID TRACT I-1 OF PLAT OF SURVEY BY EUGENE PADON RLS 2065 AND RECORDED AT RECEPTION NO. 807363 (AKA 90807363) THE FOLLOWING TWO (2) COURSES:

1. S 89°59'09" W A DISTANCE OF 654.24 FEET;
2. N 00°02'56" W A DISTANCE OF 1295.67 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF ARAPAHOE ROAD AS RECORDED IN BOULDER COUNTY COMMISSIONERS JOURNAL 4 AT PAGE 569;

THENCE S 89°57'39" E ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 559.57 FEET TO THE NORTHWEST CORNER OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3497939;

THENCE ALONG THE WESTERLY AND SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3497939 TO FOLLOWING FIVE (5) COURSES;

1. S 00°02'23" W A DISTANCE OF 30.00 FEET;
2. S 89°57'37" E A DISTANCE OF 40.24 FEET;
3. ALONG A CURVE TO THE RIGHT HAVING A CHORD OF S 44°45'36" E 35.48 FEET, A RADIUS OF 25.00 FEET, AN ARC OF 39.44 FEET, AND A DELTA OF 90°23'23";
4. S 00°26'06" W A DISTANCE OF 40.00 FEET;
5. S 89°33'54" E A DISTANCE OF 40.00 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 848,654 SQUARE FEET, OR 19.4824 ACRES MORE OR LESS.

NOTES:

1. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
2. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
3. KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
4. THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
5. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE NE 1/4, SEC 36 BEING S89°57'39"E (NAD83).
6. COMMONWEALTH LAND TITLE INSURANCE COMPANY TITLE REPORT NO. H0642794-023-CN4-CN WAS RELIED UPON FOR THIS LAND SURVEY PLAT.
7. DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
8. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
9. THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
10. DATE OF FIELD SURVEY - MAY 27, 2021.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC
HERITAGE TITLE CONMANY
COMONWEALTH LAND TITLE INSURANCE COMPANY

I, CHRISTOPHER H. McELVAIN, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE COLORADO DO HEREBY STATE THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE UNDER MY SUPERVISION AND THAT THE MONUMENTS SHOWN HEREON ACTUALLY EXIST AND THAT THIS PLAT AND NOTES SHOWN HEREON ACCURATELY REPRESENTS SAID SURVEY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

DATE OF PLAT OR MAP: 12/15/2020

COLORADO REGISTERED LAND SURVEYOR
CHRISTOPHER H. McELVAIN
36561
6/17/2021

CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.

DATE: 06/17/2021
PROJECT NO. 0043-1814-ZAHN

N

80 0 40 80 160
SCALE: 1"= 80' HORIZ.

SHEET 1 OF 1

KT ENGINEERING
ENGINEERS • SURVEYORS
12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

J:\0043\1814\SURVEY\ALTA\ZAHN LSP\1814-LSP-ZAHN.DWG

Geotechnical Site Development Study
A Portion of Parkdale, Filing 6
Erie, Colorado

Richmond American Homes of Colorado, Inc.
4350 South Monaco Street
Denver, Colorado 80237

A.G. WASSENAAR, INC.
3211 South Zuni Street
Englewood, Colorado 80110
www.agwco.com (303) 759-8100

Project Number 213216
March 31, 2022

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT'D)

ATTACHMENTS

1.0 EXECUTIVE SUMMARY

A. G. Wassenaar, Inc. (AGW) completed the geotechnical site development study for the proposed residential development at the subject site. The data collected during our field exploration and laboratory work and our analysis, opinions, and conclusions are presented. The purpose of our study is to provide design recommendations for planning and site development and preliminary design concepts for foundation systems, interior floor support, and streets.

The subsurface materials encountered in our test borings consist of topsoil, clay, sand, and gravel overlying sedimentary bedrock. Sandstone or siltstone bedrock was encountered at depths ranging from 7½ to 33 feet. Ground water was encountered at depths ranging from 17 to 34 feet.

Site development considerations should include provisions for the presence of existing structures, existing fill, underground utilities, soft and loose soils, expansive clays and claystone bedrock, and lignite.

Based upon the results of this preliminary study, if portions of the site are overexcavated, it is likely that most of the structures could be founded on spread or pad-type footings bearing on the natural soils or on moisture treated fill below frost depth. Areas of overexcavation could not be determined since grading plans were not available. Densification or stabilization of the loose sands may be necessary prior to foundation construction. Preliminary foundation design concepts are presented.

Floors and flatwork being considered for construction on-grade will require a specific risk analysis by the Client because of the potential for movement of the soils and bedrock encountered. Slabs supported by soil will be subject to movement. Options for floor support are discussed. Foundation subsurface drainage systems will be necessary for all below grade areas. Water soluble sulfate test results indicate that site and foundation concrete should be designed for moderate sulfate exposure. Preliminary pavement and other geotechnical-related recommendations are presented. We encourage the Client to read this report in its entirety and not to solely rely on the cursory information contained in this summary.

2.0 PURPOSE

This report presents the results of a geotechnical site development study for the proposed residential development to be located southwest of Arapahoe Road and Coal Creek Boulevard in Erie, Colorado. The study was conducted by AGW to assist in determining geotechnical design criteria for planning, site evaluation, and development considerations. Preliminary geotechnical design concepts are also presented for foundations, interior floor support, foundation drainage, and street construction. Factual data gathered during the field and laboratory work are summarized on Figures 1 through 16 and in Appendix A. Our opinions and recommendations presented in this report are based on the data generated during our field exploration, laboratory testing, and our experience with similar type projects.

This study was performed in general conformance with our Proposal Number 213216, dated November 12, 2021. This report is not intended to provide design criteria for individual foundations or street construction. Additional geotechnical studies will be required to develop these types of final design criteria and construction recommendations.

3.0 PROPOSED CONSTRUCTION

The proposed 98-acre development will include 400 single-family residences and the associated utility and roadway infrastructure. Products with basements are planned. The Client prefers to develop the site to avoid, if possible, the use of drilled piers and interior structural floors. Preliminary grading plans were not available. Once completed, the grading plans should be provided to AGW for review.

4.0 SITE CONDITIONS

Numerous occupied residential structures, outbuildings, and detached garages occupy the site. Livestock was present on portions of the site. Vegetation consists of native grasses, weeds, bushes, and trees. A large stockpile was located in the southwest corner of the site. The ground surface slopes gently to the southeast. Previous filings of the Parkdale subdivision are located to the west and south, a commercial parcel is located to the east, and large lot residences and Arapahoe Road are located to the north. An irrigation ditch traverses the site from the southwest corner to the northeast. No bedrock outcrops were observed on the site.

5.0 FIELD EXPLORATION

Subsurface conditions were explored by drilling 81 test borings at the approximate locations indicated on Figure 1. The test borings were advanced using a 4-inch diameter, continuous flight auger powered by a truck-mounted drill rig. At frequent intervals, samples of the subsurface materials were obtained using a Modified California sampler which was driven into the soil by dropping a 140-pound hammer through a free fall of 30 inches. The Modified California sampler is a 2.5-inch outside diameter by 2-inch inside diameter device. The number of blows required for the sampler to penetrate 12 inches and/or the number of inches that the sampler is driven by 50 blows gives an indication of the consistency or relative density of the soils and bedrock materials encountered. Results of the penetration tests and locations of sampling are presented on the "Test Boring Logs", Figures 2 through 16. Ground water measurements were made at the time of drilling and after drilling.

6.0 LABORATORY TESTING

The samples obtained during drilling were returned to the laboratory where they were visually classified by a geotechnical engineer. Laboratory testing was then assigned to specific samples to evaluate their engineering properties. The laboratory tests included swell-consolidation tests to evaluate the effect of wetting and loading on the selected samples. Gradation analysis and Atterberg limits tests were conducted to evaluate grain size distribution and plasticity. Standard Proctor tests and remolded swell-consolidation tests were performed on blended bulk samples of the soils anticipated to be used as fill. In addition, representative samples were tested for water soluble

sulfates, pH, resistivity, and chlorides. The test results are summarized on Figures 2 through 16 and presented in Appendix A.

7.0 SUBSURFACE CONDITIONS

The subsurface materials encountered in our test borings consist of topsoil, clay, sand, and gravel overlying sedimentary bedrock. Sandstone or siltstone bedrock was encountered at depths ranging from 7½ to 33 feet. Ground water was encountered at depths ranging from 17 to 34 feet. A more complete description of the subsurface conditions is shown on Figures 2 through 16.

7.1 Fill

Fill was encountered in two of the 81 test borings and was 3 feet thick. The fill encountered consisted of clay and was stiff, silty, sandy to very sandy, moist, and mottled brown. The fill samples tested had moderate expansion potential. The existing fill is discussed under "Geotechnical Concerns".

7.2 Natural Soil

Topsoil was encountered in 72 of the 81 test borings. The topsoil consisted of clayey sand up to 1-foot thick. It was organic, moist, and dark brown.

Clay was encountered in 75 of the 81 test borings. The clay was soft to very stiff, silty to very silty, slightly sandy to very sandy, calcareous, with sand and silt lenses, with trace gravel, slightly moist to very moist, and brown. The medium stiff to very stiff clays have low to very high expansion potential and low consolidation potential. The soft clays have high consolidation potential.

Sand was encountered in 60 of the 81 test borings. The sand was loose to very dense, with trace silt to very silty, slightly clayey to very clayey, with trace gravel to slightly gravelly, with silt and clay lenses, moist to wet, and brown to light brown. The sand has low expansion potential and low to high settlement potential.

Sand and gravel was encountered in 69 of the 81 test borings. The sand and gravel was medium dense to very dense, with trace silt to silty, slightly clayey to clayey, moist to wet, and brown. The sand and gravel has low expansion and settlement potential.

7.3 Bedrock

Claystone bedrock was encountered in 60 of the 81 test borings at depths ranging from 7½ to 33 feet. The claystone was weathered to very hard, with trace sand to very sandy, with sandstone and siltstone lenses, iron stained, slightly moist to very moist, and brown to rust to gray. Claystone bedrock with lignite lenses was encountered in 14 test borings at depths ranging from 20 to 31 feet. These layers were between 1 and 4 feet thick. Lignite layers were encountered in two test borings at depths of 29 and 32 feet and were 1½ and 3 feet thick. The claystone has very high expansion potential.

Siltstone bedrock was encountered in three of the 81 test borings at depths ranging from 32 to 34 feet. The siltstone was hard to very hard, clayey, moist, and gray. The siltstone has low expansion potential.

7.4 Ground Water

Ground water was encountered in 31 of the 81 test borings at depths ranging from 18 to 34 feet at the time of drilling. When we returned one to seven days after drilling, ground water was encountered in 38 of the 81 test borings at depths ranging from 17 to 33 feet. Additionally, ten of the 81 test borings caved at depths ranging from 22 to 34 feet when checked one to six days after drilling. Ground water level fluctuate with changing seasons and irrigation patterns and are expected to rise after construction is complete and landscape irrigation commences.

8.0 GEOTECHNICAL CONCERNS

8.1 Existing Structures, Existing Fill, and Underground Utilities

The existing structures, including shallow foundation elements, must be removed from the site. If the existing structures were founded on piers, the piers should be removed or cut off down to a depth of at least 2 feet below the bottom of any planned construction. Any below grade appurtenances encountered should also be removed. Our experience indicates that other below grade or undisclosed structures such as root cellars, wells, cisterns, septic tanks, etc. may be present. Any of these structures encountered should also be removed. Any wells encountered should be abandoned in accordance with the regulations of the Colorado State Engineer. All concrete pads should be removed.

Any existing fill encountered during development should be considered to have not been placed as fill capable of supporting a structure. The existing fill should be excavated prior to placement of new fill, structures, or other structural appurtenances. Any fill encountered should be evaluated for quality at the time of removal to determine its suitability for placement as new fill on the site.

Underground utilities that are to be abandoned should be removed. This includes any pipes and trench backfill. After removal, the existing utility trenches should be widened at the base to a minimum of 8-feet and the sides of the trench should be sloped per the soil types described in Appendix B. Any new fill placed in the trench area should be placed and compacted as described in Appendix B.

8.2 Soft Clays and Loose Sands

Soft clays and loose sands were encountered near the ground surface or assumed excavation elevations in five of the 81 test borings. These layers were between 2 and 8 feet thick. The soft clays and loose sands present concerns for site grading, foundation excavations, and pavement construction. Any significant fills or foundation loads placed on top of the loose soils could cause significant settlement over time. Movement of large, rubber-tired equipment may cause severe rutting which may result in not being able to traverse the areas. It may be necessary to stabilize the loose areas prior to fill placement. It may be necessary to densify or stabilize the loose areas prior to foundation construction.

8.3 Expansive Soils and Bedrock

Clay and claystone bedrock with low to very high expansion potential were encountered across the site. Depending upon the site grading and depth of foundation construction, foundations and any slabs constructed on grade will need to be designed for the potential of future movement of the soils unless modification of the clay and claystone bedrock is performed. A separation of 10 feet between the bottom of basement footing and the claystone is recommended. **The extent of the overexcavation could not be determined as grading plans were not available.**

8.4 Lignite

Claystone bedrock with lignite lenses was encountered in 14 test borings at depths ranging from 20 to 31 feet. These layers were between 1 and 4 feet thick. Lignite layers were encountered in two test borings at depths of 29 and 32 feet and were 1½ and 3 feet thick. Lignite is a soft coal which is commonly found within the bedrock formation which underlies this site. It can be found in thin layers within claystone or in layers that are very soft and wet to relatively hard and dry. Our experience in areas underlain by this bedrock formation indicates that the presence and amount of lignite in the bedrock can be very erratic in consistency and distribution, exhibiting itself in a random manner across the site. Additionally, placement of excavated lignite during the site grading process will require close monitoring and may require placement in non-structural areas or exporting from the site. Review of "Ground Subsidence and Land-Use Considerations Over Coal Mines in the Boulder-Weld Coal Field, Colorado" prepared by Amuedo and Ivey for the Colorado Geological Survey (1975) indicates there are no mines beneath the site.

9.0 SITE DEVELOPMENT

9.1 Overlot Grading

We understand the fill materials to be used at the site will be from on-site cut areas. In general, suitable inorganic on-site or off-site soils may be used for structural fill. Existing fill should be excavated prior to placement of new fill. Topsoil, soil containing significant vegetation, organic debris or other deleterious material should be excavated and removed from the structural areas. Off-site material considered for new fill should be evaluated by AGW prior to importing to the site. Construction of the fill embankments throughout the site should consist of proper foundation preparation, constructing embankment benching where necessary, disposition of strippings, proper fill placement and compaction, and designing slopes in accordance with the recommendations provided in this report and the applicable governing regulations. The following are general site grading recommendations:

1. The overlot grading plans should be reviewed by AGW prior to commencement of work at the site.
2. It is recommended that AGW be retained on an essentially full-time basis to observe and test the fill placement. AGW should also be retained to provide observations and/or testing of the other items discussed below. The purpose of this observation and testing is to provide the Client with a greater degree of confidence that the work is being performed within the recommendations of this geotechnical study and the project specifications.

3. Various structures were observed across the site. All the existing structures, including their foundations, should be completely removed from the site. Our experience indicates that other below grade or undisclosed structures such as root cellars, wells, septic tanks, cisterns, etc. may be present. Any of these structures encountered should also be removed. Any wells encountered should be abandoned in accordance with the regulations of the Colorado State Engineer.
4. Utilities beneath structural areas that are to be abandoned should be entirely removed. The excavation should then be widened to allow access to a self-propelled compactor. New fill should be placed and compacted as described in this section and Appendix B.
5. All topsoil and vegetation should be stripped and removed prior to fill placement. The vegetation, organic soils, or topsoil should be wasted from the site, placed in non-structural areas (e.g., parks, landscaping, tracts, etc.) and/or stockpiled for future use in revegetating the surface of exposed slopes. In no case should these materials be used in the structural areas or where the stability of slopes will be affected.
6. Where loose sands or soft clays are found beneath planned fill areas, densification or stabilization may be necessary.
7. Where the existing slopes are steeper than a 5:1 (horizontal:vertical), benching will be required for structural integrity of any fills (see Figure 17).
8. The stripped foundation areas should be observed by AGW prior to fill placement. Any loose soils found in these areas must be removed or stabilized as necessary prior to fill placement.
9. After the fill areas have been cleared, the exposed soils should be scarified to a minimum depth of 6 inches, brought to the proper moisture content, and then compacted according to Appendix B.
10. Should significant amounts of lignite be excavated by individual scrapers, it should be stockpiled or wasted. Significant layers of lignite must not be constructed within the grading fills.
11. The compaction and moisture content of the soils will be dependent upon material types and the depth and location of placement. The specifications outlined in Appendix B are based upon providing a fill with sufficient shear strength to support structures and sufficient moisture to reduce the potential of swell of the expansive soil used in the fill. The results of standard Proctor tests performed on a bulk samples of the upper-level soils likely to be used for fill is shown on Figures A-126 and A-127 in Appendix A. These results can be used as guideline for contractors to estimate how much additional moisture may be required to bring the on-site soils to the required moisture content.
12. Particular attention should be paid to compaction of the exterior faces of slopes.
13. Placement and compaction of fill should continue to final overlot grade. We recommend that the lots not be left low or "dished-out" and that placement of fill not stop at foundation elevation.
14. Other specifications outlined in Appendix B should be followed.

9.2 Overexcavation and Placement of Moisture Treated Fill

Based on the expansion potential of the clays and claystone bedrock and depending upon site grading, we recommend that a portion of the site be overexcavated if the use of shallow foundations is desired. **The extent of the overexcavation could not be determined as grading plans were not available.** Our experience indicates that overexcavation and placement of a moisture treated fill would be most effectively performed using mass grading techniques. The ideal time to do this would be during site development operations. The following recommendations should be followed to enable the placement of a moisture treated fill that could be used for slab and foundation support. These recommendations may be modified during construction if soil conditions differing from those anticipated are encountered.

1. **The overlot grading plans should be provided to AGW prior to commencement of work to evaluate which areas and to what depth overexcavation is required.**
2. These recommendations are based upon our understanding that basement products will be constructed. If a different product is considered, these recommendations must be reviewed by AGW.
3. The clay and claystone should be excavated to a depth of at least 10 feet below the lowest foundation elevation. The base of the excavation should extend, at a minimum, to a width of at least 5 feet beyond the foundation footprint (including any counterforts, covered porches, patios, decks, etc.). Excavations that do not extend to these minimums risk future foundation performance issues. It may be prudent to extend the base of the excavation to 5 feet outside of the front and rear setbacks to accommodate potential changes in structure dimension. Additionally, the street subgrade should be overexcavated as described in "Preliminary Street Pavement Design". The excavation should be sloped following current OSHA regulations. We will not be responsible for testing near excavations that do not meet OSHA regulations. A licensed surveyor must verify the extents of the excavation prior to any fill placement.
4. Once the excavation depth and width have been verified, fill placement may begin. The bottom of the excavation should be scarified and moistened prior to fill placement. The fill, consisting of the excavated materials, should be placed in maximum 8-inch loose lifts. Moisture should be added and the lift processed. The use of a construction disc to mix and process each lift is suggested. Mixing should be performed until the moisture content is relatively uniform throughout the lift and the majority of the particles are less than 3 inches in dimension. The fill should then be compacted as described in Appendix B.
5. The results of standard Proctor tests performed on a bulk sample of the upper-level soils likely to be used for fill is shown on Figures A-126 and A-127 in Appendix A. These results can be used as guideline for contractors to estimate how much additional moisture may be required to bring the on-site soils to the required moisture content.
6. Essentially full-time observation and testing of fill placement must be performed by AGW. Testing should include in-place moisture content and dry density. Swell-consolidation or other testing may also be performed at the discretion of AGW.
7. Placement and compaction of fill should continue to final overlot grade. We recommend that the lots not be left low or "dished-out" and that placement of fill not stop at foundation elevation. If the residences will not be constructed within two years of

completion of the fill, additional effort may be necessary to help maintain the moisture within the fill. This may include the addition of more soil to blanket the compacted fill, the placement of mechanical or chemical barriers, or applying water periodically to the fill surface. We are available to discuss this with you.

It must be understood that while this method is used to reduce the likelihood of future heave, it is not free of risk of foundation movement. While future heave is less likely, the possibility of settlement induced by excess moisture is increased. Therefore, the control and removal of surface water at the site will continue to be very important.

Our experience indicates that clay materials of the type encountered at this site will likely exhibit an average swell of less than 2% under a surcharge load of 1,000 pounds per square foot (psf) when thoroughly mixed with water and processed with typical earthmoving equipment. It is anticipated that if this level of swell reduction is achieved, the foundations may be constructed by placing footings upon the fill. This level of swell should also provide for a low to moderate risk of basement slab movement. However, it must be understood that even with the procedures outlined above, there is a possibility that moderate to high measured swells may be found in the fill. This may require rework of portions of the fill or the use of pier foundations and structural support of interior floors. Additional drilling after the soil modification has been completed will be required to provide final foundation recommendations and basement slab risk assessments for each residence.

9.3 Slopes and Retaining Walls

Slope stability and retaining wall analyses were not conducted as part of this study. In areas where existing slopes exceed 5:1 (horizontal:vertical), benching prior to fill placement will be required (see Figure 17). Construction of conventional fill slopes should be limited to 3 to 1 or flatter. Cut slopes steeper than 2 to 1 should be evaluated for stability. Specific analysis will also be necessary if retaining walls are to be constructed.

9.4 Construction Excavation

In our opinion, the majority of the site grading, utility, and foundation excavations may be constructed using conventional earth-moving equipment for the Front Range area. In some areas, unstable soils beneath earth-moving equipment may be encountered. Care should be taken so that the foundation soils are not disturbed or are properly stabilized. Excavations deeper than 3 feet should be properly sloped or braced to prevent collapse of potentially caving soils. For planning purposes, sand, gravel, and any soil influenced by ground water are "Type C" soils, the clay is a "Type B" soil, and the underlying bedrock is a "Type A" soil according to OSHA regulations. A final determination of the soil type must be made by the Contractor's "Competent Person" (as defined by OSHA Regulation). Local, city, county, state, and federal (OSHA) regulations should be followed.

9.5 Utility Construction

In our experience, utility excavations may be constructed using conventional earth-moving equipment for the Front Range area. All excavations should be sloped or shored in the interest of safety, following local and federal (OSHA) regulations. For planning purposes, OSHA soil type

designations are discussed under "Construction Excavations". Final determination of the soil types must be made by the contractor's "Competent Person" (as defined by OSHA) at the time of construction.

Trench backfill within all structural areas should, as a minimum, be compacted using the same methods and to the same specifications as required for overlot grading. This is especially important where utility lines and laterals are constructed beneath foundation, alley, and driveway areas. Trenches in streets should be compacted to the Town of Erie specifications. Observation and testing of fill placement must be performed during trench backfilling.

The choice of compaction equipment can have a significant effect on the performance of trench fills. It is our experience that utility trench backfills compacted with a compaction wheel attached to an excavator experience more settlement (both in area and magnitude) than those compacted with self-propelled equipment. While the contractor has control of the means and methods of construction, the Client should be aware of this issue.

9.6 Subsurface Drainage

The existing ground water levels are not anticipated to cause significant problems across the site during development. Clay soils and bedrock were encountered in the test borings drilled for this study. These types of material have a relatively low permeability and can develop a perched water condition. Perched water conditions generally occur after development and construction have taken place, when landscape irrigation and surface drainage conditions are changed.

An overall area drain (underdrain) should be considered for the site. In addition, the overall area drain could also provide for a discharge and collection point for individual foundation drains. If an area drain discharge is not available, the individual foundation drains will discharge collected water to the ground surface near each residence. Surface discharge can result in water recycling to the foundation drain and ponding of water where surface grading is not sufficient for water flow. Foundation drain discharge can also result in algae growth where water continually crosses sidewalks which become ice hazards on walkways and gutters in the winter months.

Typically, overall area drains can be designed and constructed with installation of the sanitary sewer system. However, the Town of Erie should be consulted to determine where an overall system is allowed. The civil engineering company contracted to design the infrastructure should be able to provide this design. We are available to assist in drain design. For the system to work, the area drain must be graded to a positive discharge point. If a permanent outfall for an area drain cannot be determined, the area drain should not be constructed.

If it is decided not to install an overall area drain, an alternative would be to establish points of positive gravity discharge for the gravel bedding beneath the sewer. We also recommend any basement or below grade area be provided with a perimeter subsurface drainage system sloped to drain to a positive gravity discharge such as a sump or connected directly to the overall area drain system.

9.7 Surface Drainage

We recommend that provisions be made to divert surface runoff away from development areas. This may reduce potential problems associated with excess water in structure bearing soils. The site grading should consider a slope of 10% away from the foundation at the completion of construction. All other drainage swales in landscaped areas should slope at a minimum of 2%.

10.0 SITE CONCRETE AND CORROSIVITY

Laboratory tests conducted on selected soil samples yielded water soluble sulfates ranging from less than 100 parts per million (ppm) to 1,600 ppm. Based upon these results and our experience in the area, the site soils and bedrock are assigned to possess moderate (S1 or RS1) sulfate exposure per ACI 318 or ACI 332. We recommend the "ACI Manual of Concrete Practice", of the most recent edition be used for proper concrete mix design properties as they relate to these conditions.

The pH test results ranged from 8.2 to 9.1, resistivity test results at in-situ moisture ranged from 900 to 3,600 ohm·cm, and chloride test results ranged from 0.0001% to 0.0061%. These results are summarized on Figures 2 through 16 and in Appendix A. The results of this testing should be used as an aid in choosing the construction materials in contact with these soils which will be resistant to the various corrosive forces. Manufacturer's representatives should be contacted regarding the specific corrosivity resistance for their products. In addition, local specifications should be consulted when selecting pipe materials.

11.0 PRELIMINARY FOUNDATION DESIGN CONCEPTS

The foundation recommendations for each structure are dependent upon the subsurface profile and engineering properties of the materials encountered at and near the depth of the proposed foundation. These are dependent upon the final configuration of and construction methods used during overlot grading at the site. The information in the following sections presents preliminary foundation concepts which must be finalized for each building site upon completion of the overlot grading operations. AGW should be retained to perform design level soil and foundation studies after completion of site grading.

11.1 Footings

If portions of the site are overexcavated, it likely that the structures could be founded on spread or pad type footings bearing on the moisture treated fill or on the natural soils. The footings must be founded below frost depth. The footings will likely be designed for maximum soil bearing pressures ranging from 1,000 to 3,000 psf. Minimum dead load pressure on the order of 700 to 1,000 psf will likely be required. Densification or stabilization of the loose sands and soft clays may be necessary.

11.2 Lateral Earth Pressures

Foundation walls with fill on only one side will need to be designed for lateral earth pressures. For this site, lateral earth pressures calculated based upon equivalent fluid densities on the order of 50

to 80 pcf should be anticipated. The preliminary estimates are for properly placed and compacted fill at foundation walls. They should not be used for site retaining walls.

11.3 Interior Floors (Basement Products)

If portion of the site are overexcavated, it is likely that the sites will be assessed with a low to moderate slab risk performance. Structural floors are generally recommended on sites with higher evaluations and for finished basements or any site where floor movement or cracking cannot be tolerated. If slab movement cannot be tolerated, structural floors should be constructed.

11.4 Drain Systems

Drain systems will be required around the lowest excavation level for below grade spaces for each structure. Either interior or exterior drains may be used for most of the site. The drains must be led to a positive gravity outfall or sump. If an overall subdivision area drain is constructed, individual drains should be connected into this system if allowed by the jurisdiction. Subsurface drainage systems will not be necessary for structures with no below grade areas.

11.5 Backfill and Surface Drainage

Foundation backfill should be moistened and compacted to reduce future settlement. The site grading should consider a slope of 10% away from the foundation at the completion of construction. All other drainage swales in landscaped areas should slope at a minimum of 2%.

12.0 PRELIMINARY STREET PAVEMENT DESIGN

Pavement design is based on the engineering properties of the subgrade and pavement materials, the assumed design traffic conditions, and the Town of Erie pavement regulations. Effective pavement structures are composed of various pavement materials bearing upon properly prepared subgrade soils. The following preliminary pavement recommendations are based upon the subsurface conditions encountered and our experience in the area.

It appears the proposed subgrade materials will likely sand, clay, claystone, or fill constructed from these materials with AASHTO Soil Classifications of A-2-4, A-4, A-6, and A-7-6. The clays and claystone should be overexcavated to a depth of at least 5 feet below the subgrade elevation. The overexcavation should be performed during site grading prior to construction of utilities within the right-of-way. Overexcavation should cover the area from 1 foot beyond back of sidewalk (for attached sidewalk areas) or back of curb (for detached sidewalks). The excavated material may be placed as moisture treated fill (see Appendix B) within the right-of-way. This should result in a reduction in pavement thickness. All fill placed within 5 feet of the subgrade elevation should be placed as moisture treated fill.

Moisture treatment is the process of removing subgrade materials, adding moisture between 0 to 4% above optimum moisture content, and compacting the subgrade to at least 95% of Proctor maximum dry density. The Client should understand soils treated to 4% above optimum moisture content will have low support values and may be soft and yielding under load. Stabilization by chemical or mechanical means may be necessary to achieve a stable paving platform.

Based upon the subgrade soil classifications, we have estimated the relative strengths of the subgrade soils presented above to determine the preliminary pavement thicknesses. Based on this information and utilizing the design methodology determined from the pavement design regulations for the Town of Erie, the alternatives presented below were calculated. These preliminary thickness recommendations are based on a design life of 20 years. It should be emphasized that the design alternatives provided below are preliminary for the materials anticipated. The final design thicknesses could be more or less than indicated depending upon the materials sampled during the final pavement design.

Pavement Thickness Alternatives for Interior Streets

Street Type	HBP / ABC (in)	Concrete (in)
Arterial	8.0 to 9.0 / 10.0 to 12.0	-
Collector	5.5 to 7.0 / 8.0 to 10.0	-
Local	4.0 to 5.0 / 8.0 to 10.0	-
Alleys	-	6.0 to 8.0 *

HBP = Hot Bituminous Pavement, ABC = Aggregate Base Course, * 8.0 if inverted

Proper surface and subsurface drainage are essential for adequate performance of pavements. It has been our experience that water from landscaped areas can infiltrate pavement subgrade soils and result in softening of the subgrade followed by pavement damage. Therefore, provisions should be made to maintain adequate drainage and/or contain runoff from such areas. The Town of Erie requires pavement edge drains for all streets. In addition, water and irrigation lines should be thoroughly pressure tested for leaks prior to placement of pavement materials.

The information contained in this section is preliminary in nature. More detailed information will be required by the Town of Erie prior to issuance of a paving permit. Therefore, when overlot grading is complete at the site, a final pavement evaluation must be performed.

13.0 FINAL DESIGN CONSULTATION AND CONSTRUCTION OBSERVATION

This report has been prepared for the exclusive use of Richmond American Homes of Colorado, Inc. to provide geotechnical criteria for the proposed project. The data gathered and the conclusions and recommendations presented herein are based upon the consideration of many factors including, but not limited to, the type of structures proposed, the configuration of the structures, the proposed usage of the site, the configuration of surrounding structures, the geologic setting, the materials encountered, and our understanding of the level of risk acceptable to the Client. Therefore, the conclusions and recommendations contained in this report should not be considered valid for use by others unless accompanied by written authorization from AGW.

AGW should be contacted if the Client desires an explanation of the contents of this report. AGW should be retained to provide future geotechnical services for the site including, but not limited to, design level geotechnical studies, consultation during design, observation and testing during construction, and other geotechnically related services. Failure to contract with AGW for these

services or selection of a firm other than AGW to provide these services will eliminate liability for AGW. We are available to discuss this with you.

14.0 GEOTECHNICAL RISK

The concept of risk is an important aspect of any geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which geotechnical engineers use are generally empirical and must be tempered by engineering judgment and experience. Therefore, the solutions or recommendations presented in any geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structures will perform as desired or intended. What the engineering recommendations presented in the preceding sections do constitute is our judgement of those measures that increase the chances for the structures and improvements performing satisfactorily. The Developer, Builder, and Owner must understand this concept of risk, as it is they who must ultimately decide what is an acceptable level of risk for the proposed development of the site.

15.0 LIMITATIONS

We believe the professional judgments expressed in this report are consistent with that degree of skill and care ordinarily exercised by practicing design professionals performing similar design services in the same locality, at the same time, at the same site and under the same or similar circumstances and conditions. No other warranty, express or implied, is made. In the event that any changes in the nature, design or location of the facility are made, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing. Because of the constantly changing state of the practice in geotechnical engineering, and the potential for site changes after our field exploration, this report must not be relied upon after a period of three years without AGW being given the opportunity to review and, if necessary, revise our findings.

The test borings drilled for this study were spaced to obtain an understanding of subsurface conditions for design purposes. Variations frequently occur from these conditions which are not indicated by the test borings. These variations are sometimes sufficient to necessitate modifications in the designs. If unexpected subsurface conditions are observed by any party during site development, we must be notified to review our recommendations.

Our scope of services for this project did not include, either specifically or by implication, any research, identification, testing, or assessment relative to past or present contamination of the site by any source, including biological (i.e., mold, fungi, bacteria, etc.). If such contamination were present, it is likely that the exploration and testing conducted for this report would not reveal its existence. If the Client is concerned about the potential for such contamination or pollution, additional studies should be undertaken. We are available to discuss the scope of such studies with you. Our scope of services for this project did not include a local or global geological risk assessment. Therefore, issues such as mine subsidence, slope stability, faults, etc. were not researched or

addressed as part of this study. If the Client is concerned about these issues, we are available to discuss the scope of such studies upon your request.

Sincerely,

A. G. Wassenaar, Inc.

Kathleen A. Noonan, M.S., P.E.
Senior Geotechnical Engineer

Reviewed by:

Ashley A. McDaniels, P.E.
Senior Engineer

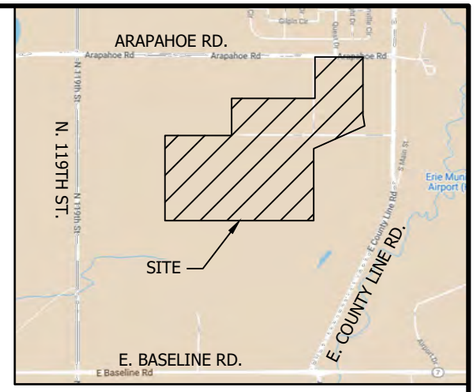
KAN/AAM/kan

N

0 500 1000

Scale in Feet

PARKDALE, FILING 6
ERIE, COLORADO



VICINITY MAP
NOT TO SCALE

NOTES:
1. TEST BORINGS ARE OVERLAID ON THE "PARKDALE CONCEPT PLAN", PREPARED BY PCS GROUP, DATED OCTOBER 12, 2021.
2. ALL LOCATIONS ARE APPROXIMATE.

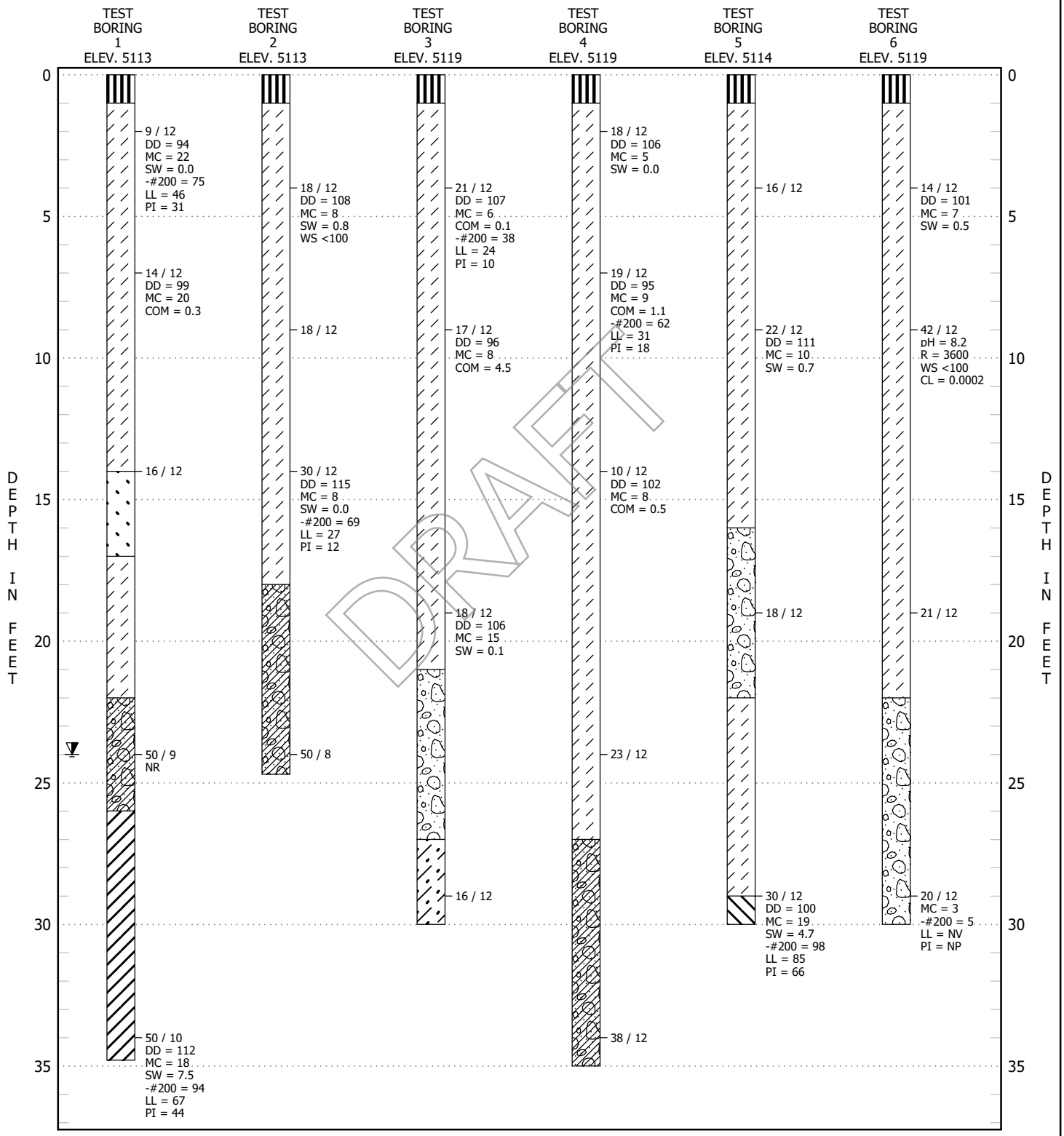
AGW
A.G. WASSENAAR, INC.

SITE PLAN AND VICINITY MAP	PROJECT NO. 213216 FIGURE 1

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

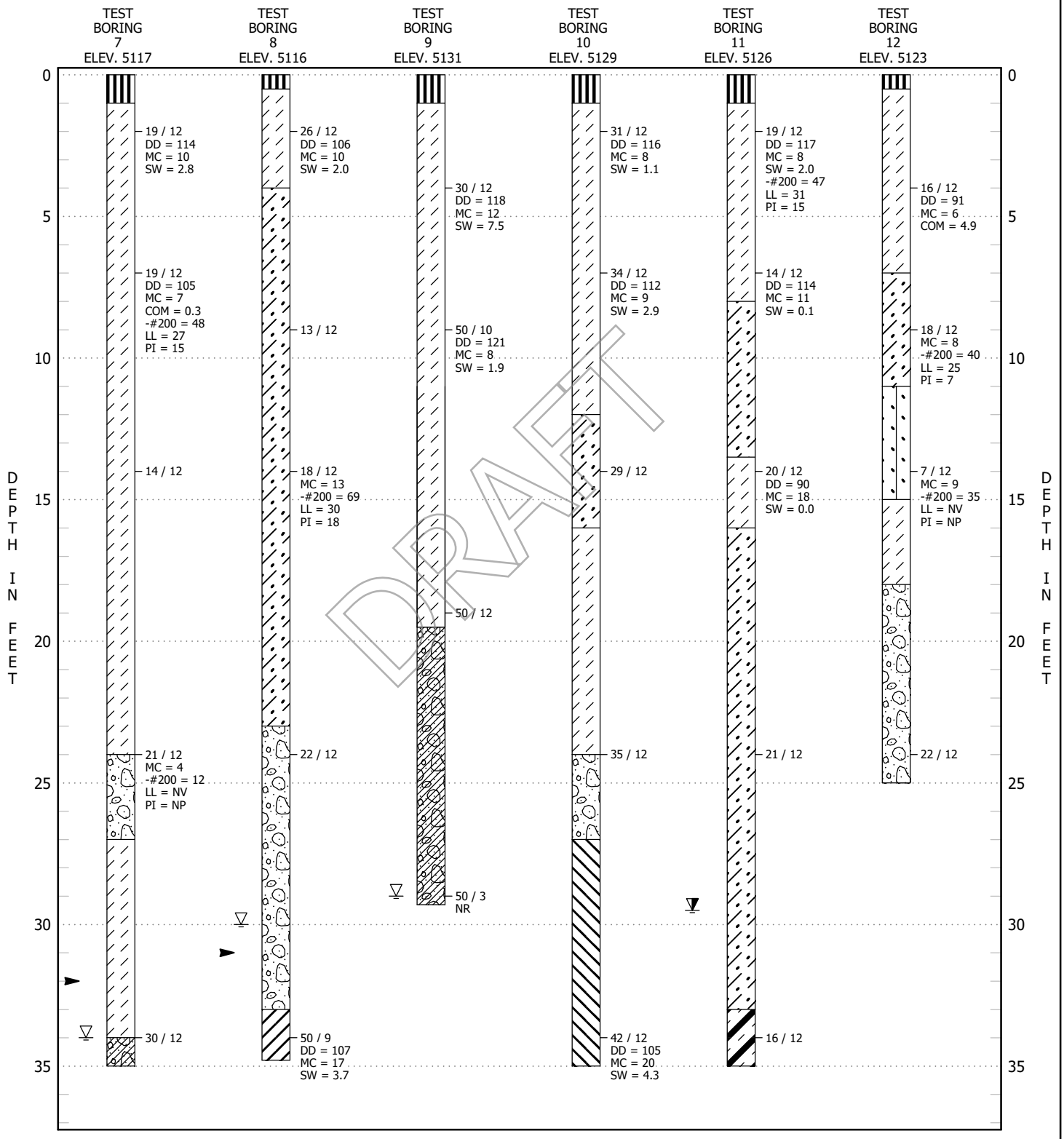
TEST BORING LOGS

FIGURE 2

A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

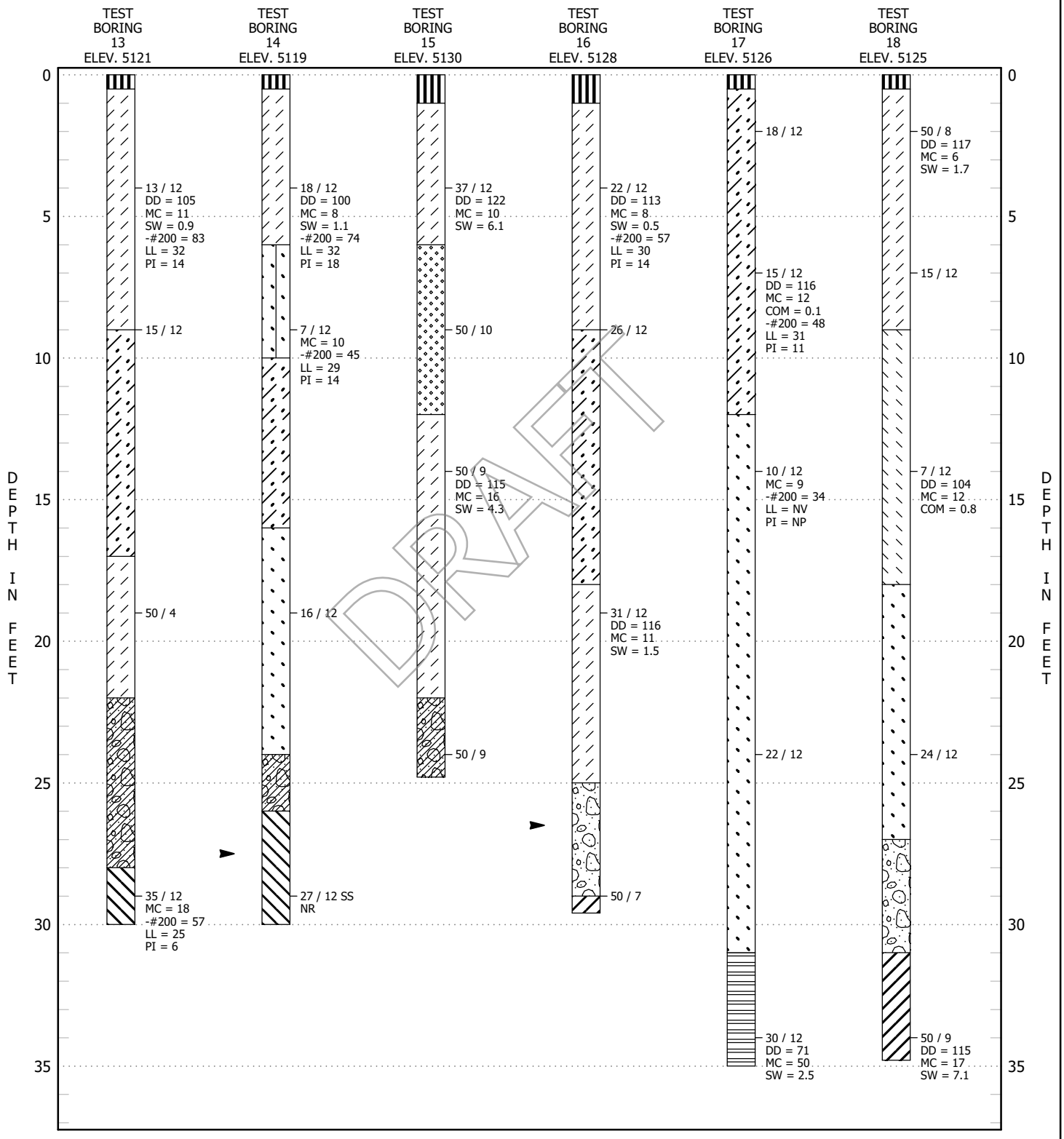
TEST BORING LOGS

FIGURE 3

A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

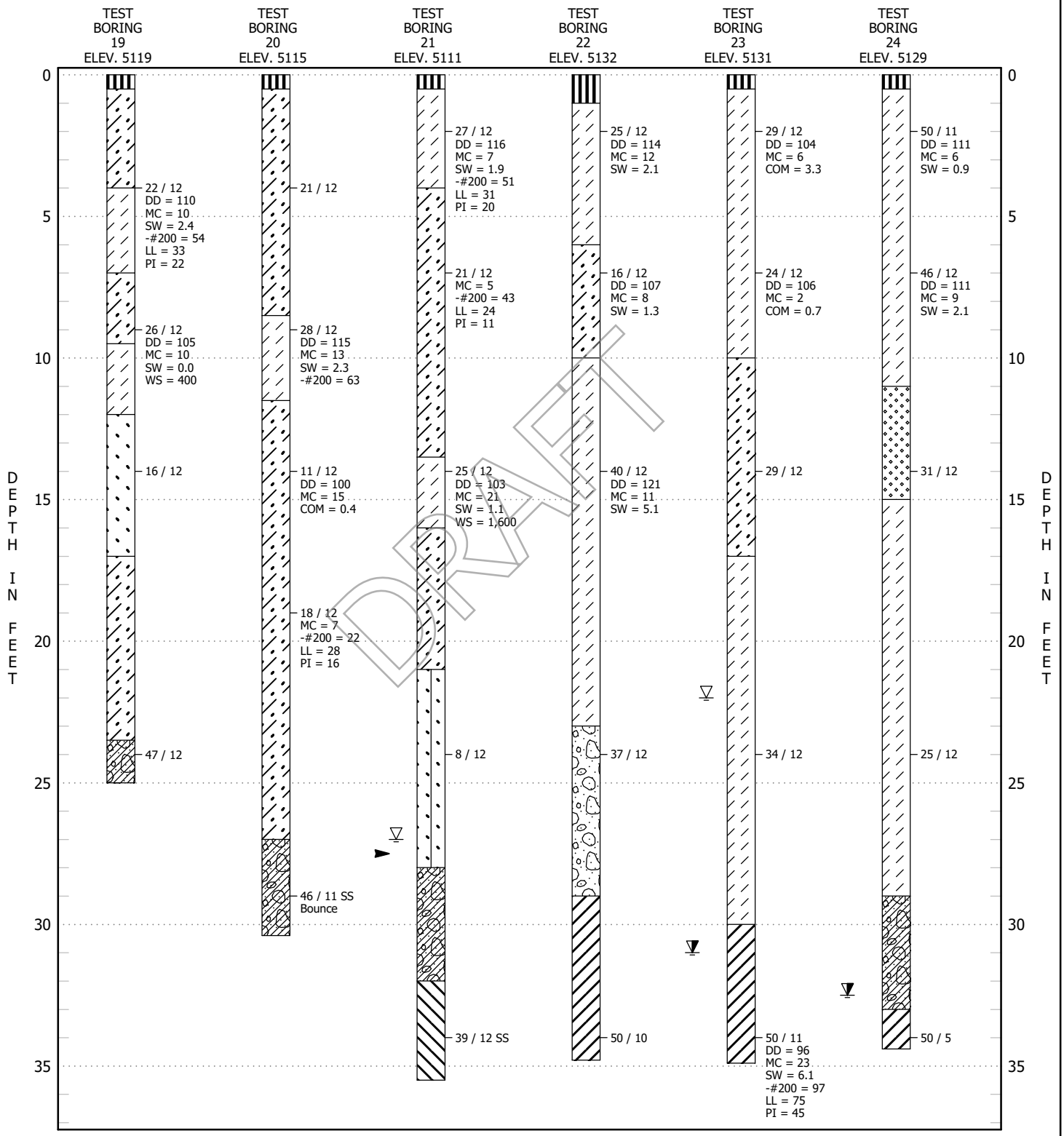
TEST BORING LOGS

FIGURE 4

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

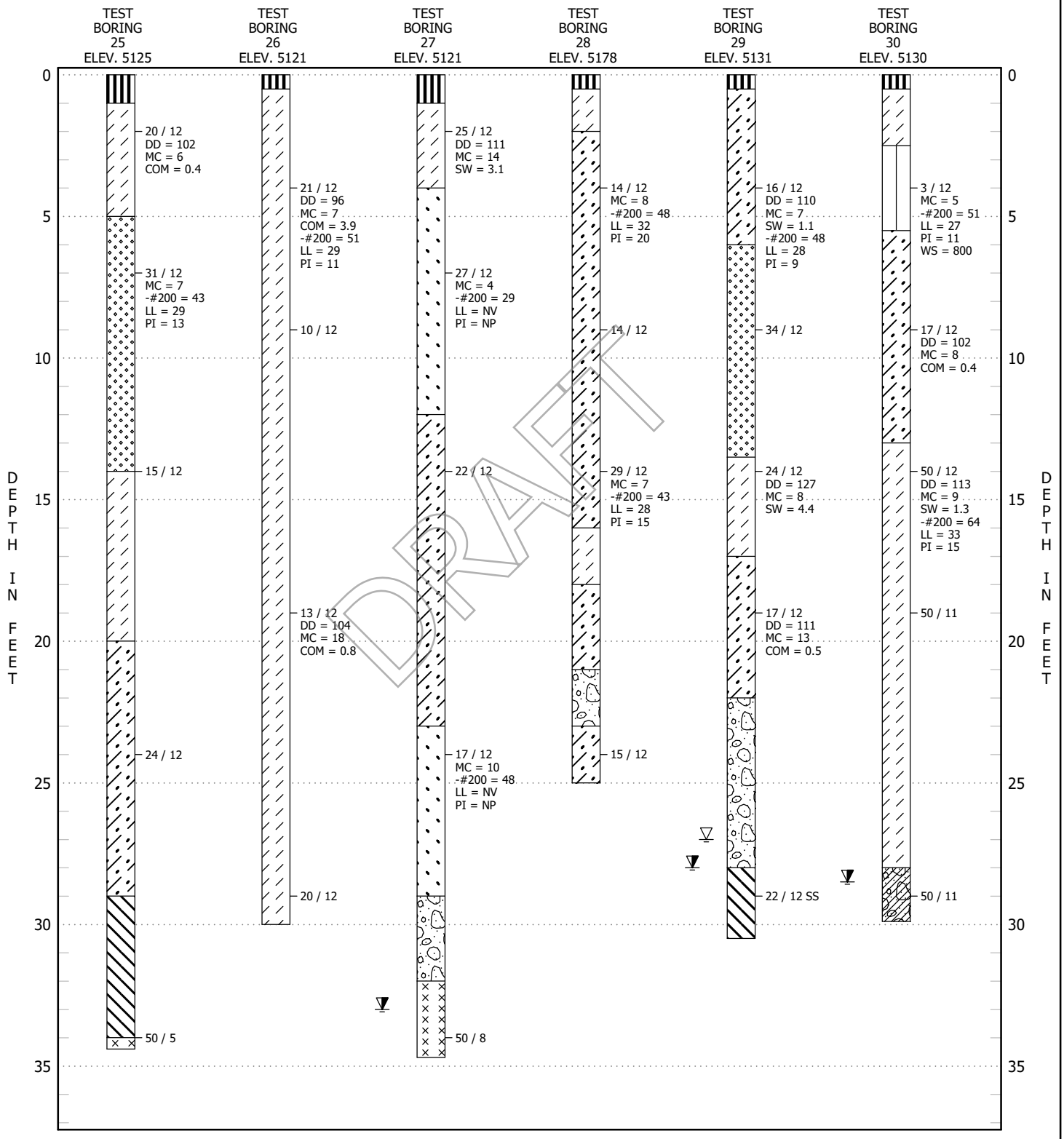
TEST BORING LOGS

FIGURE 5

A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

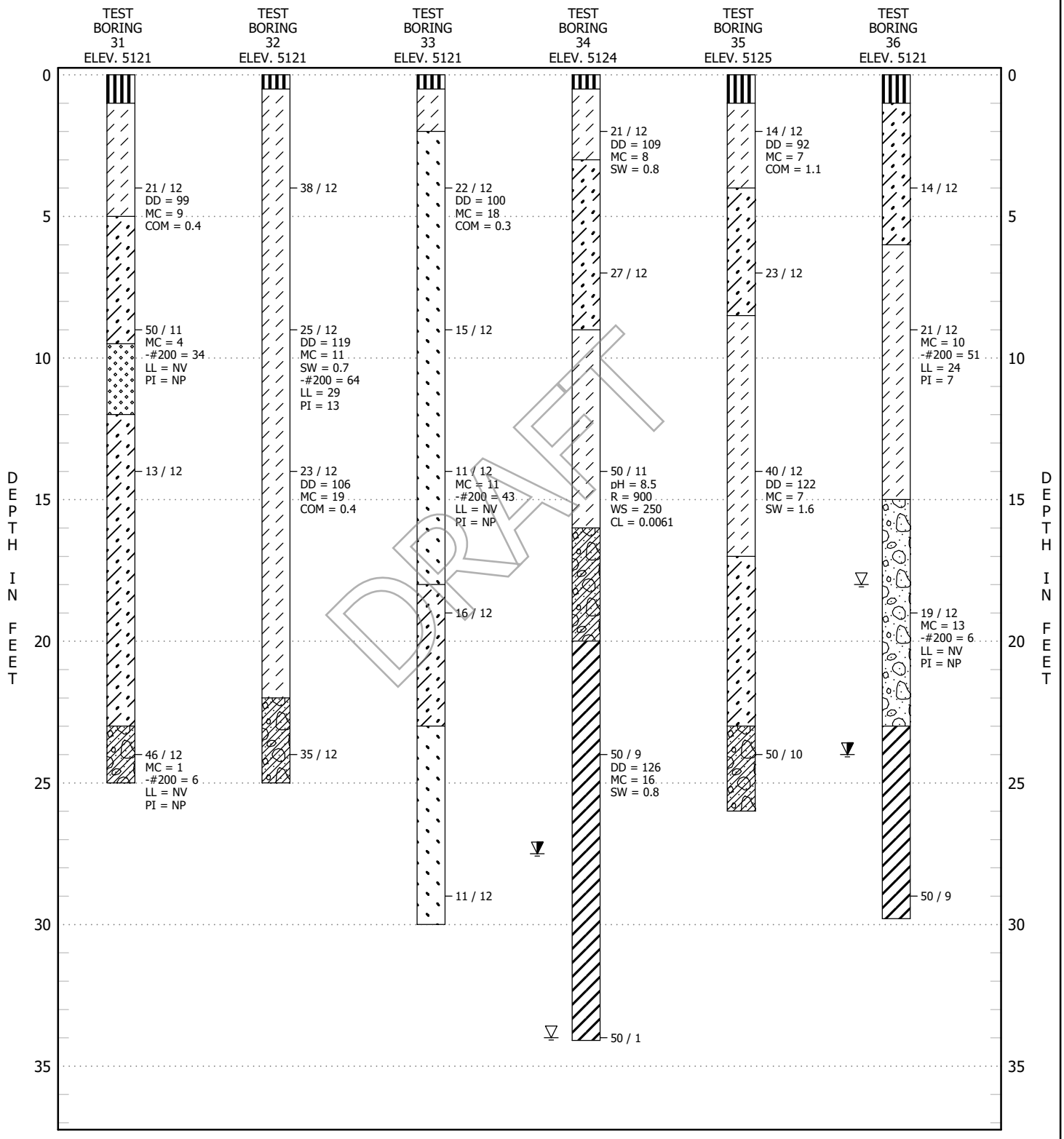
TEST BORING LOGS

FIGURE 6

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

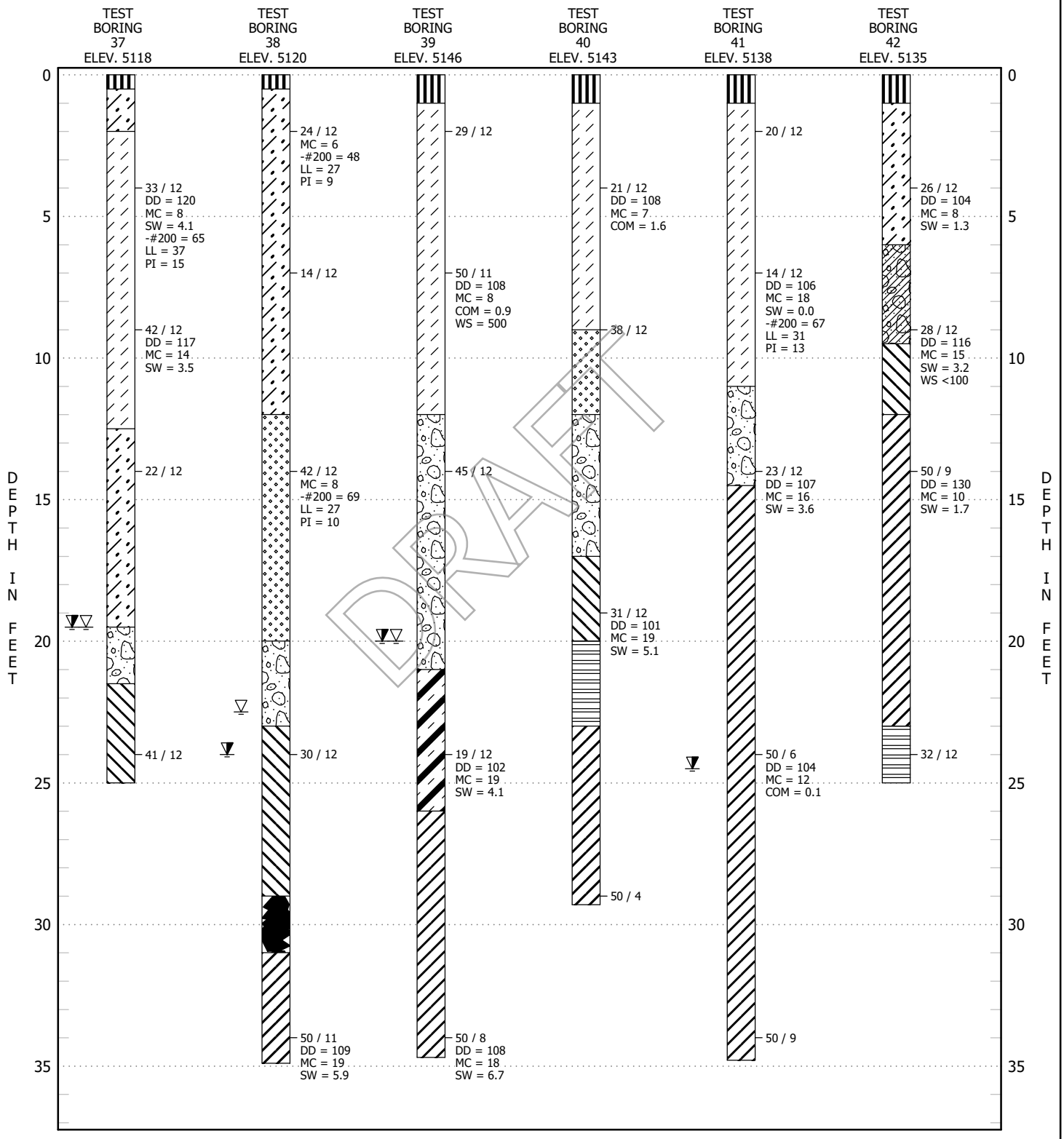
TEST BORING LOGS

FIGURE 7

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

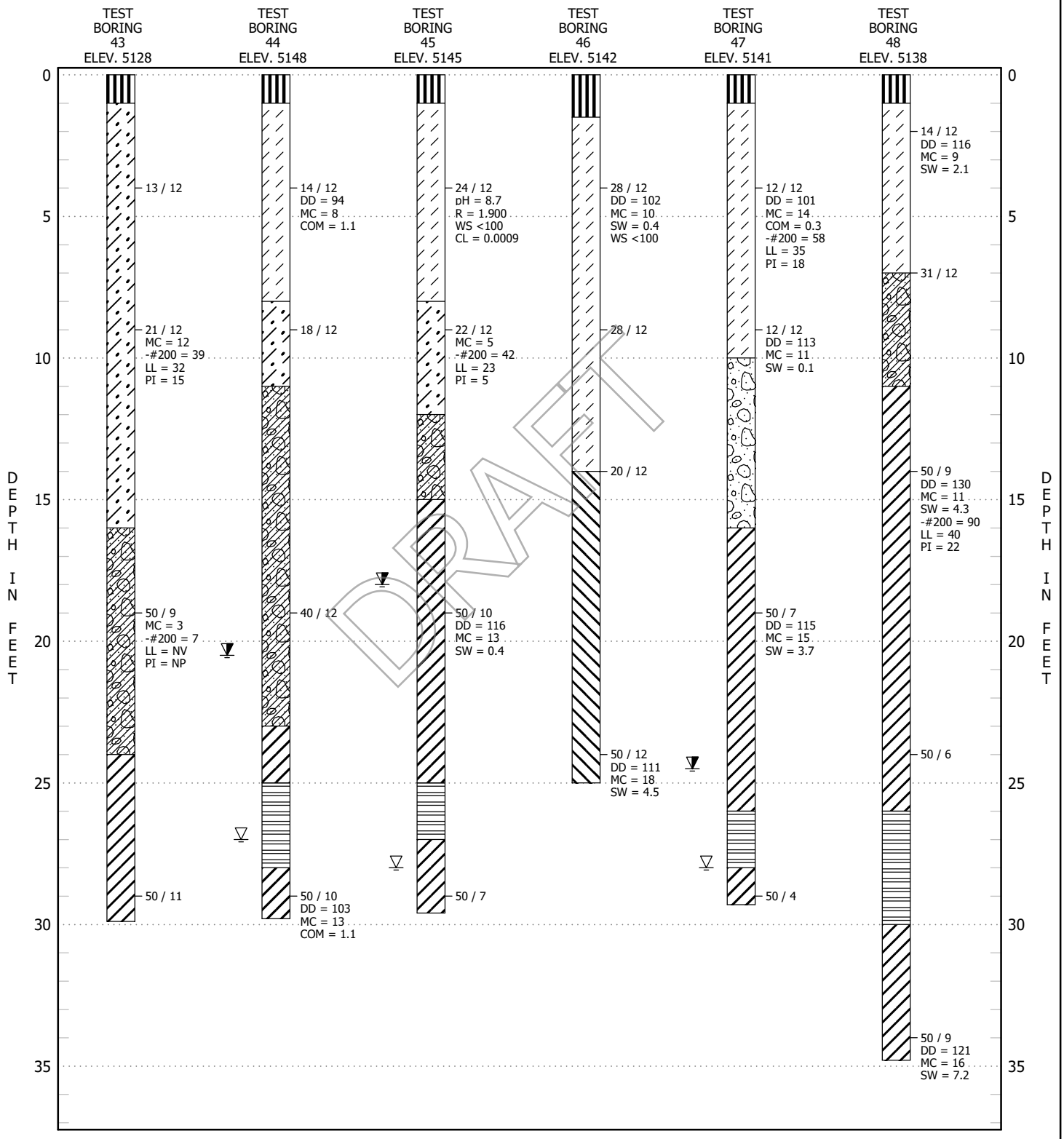
TEST BORING LOGS

FIGURE 8

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

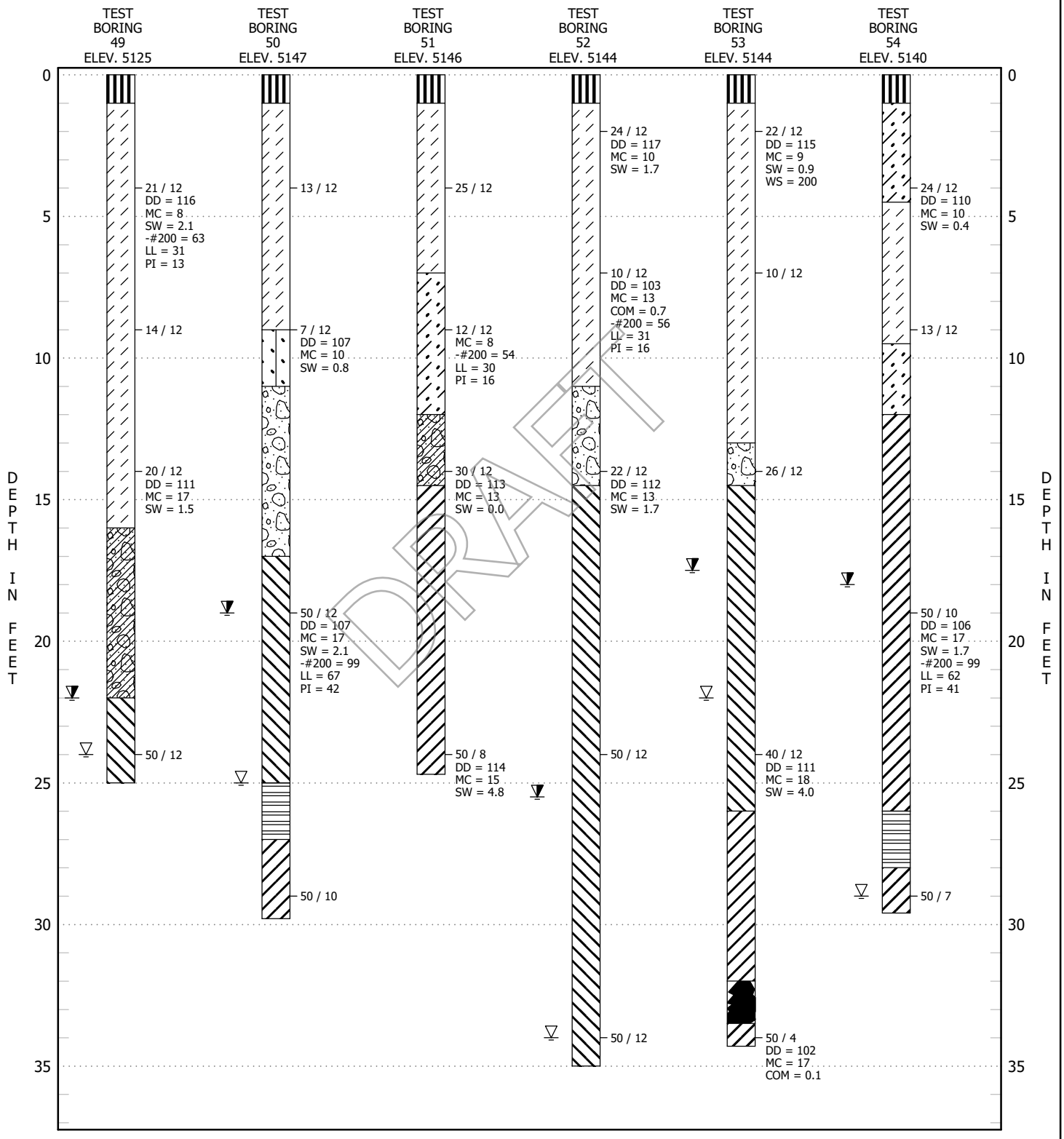
TEST BORING LOGS

FIGURE 9

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

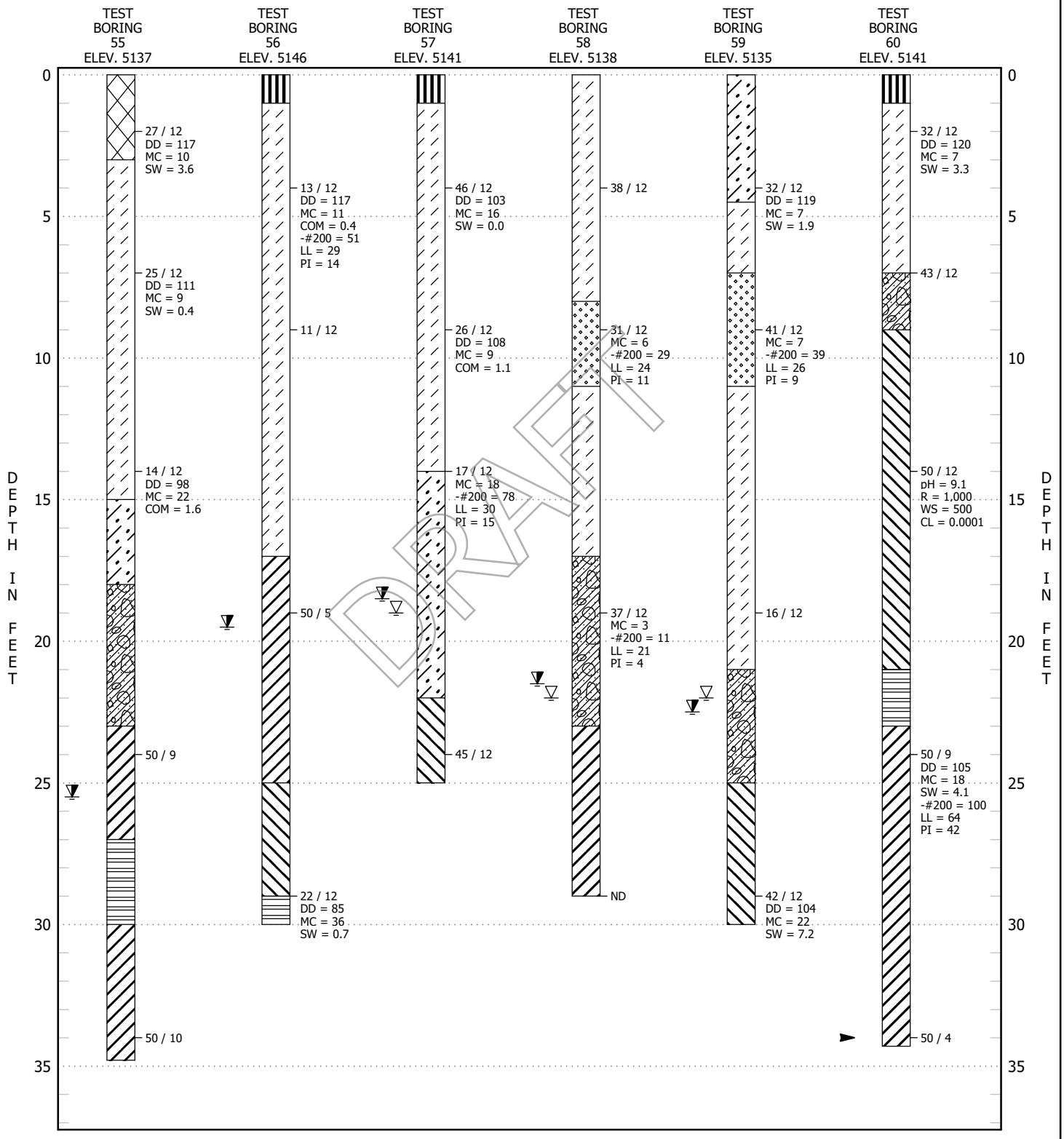
TEST BORING LOGS

FIGURE 10

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

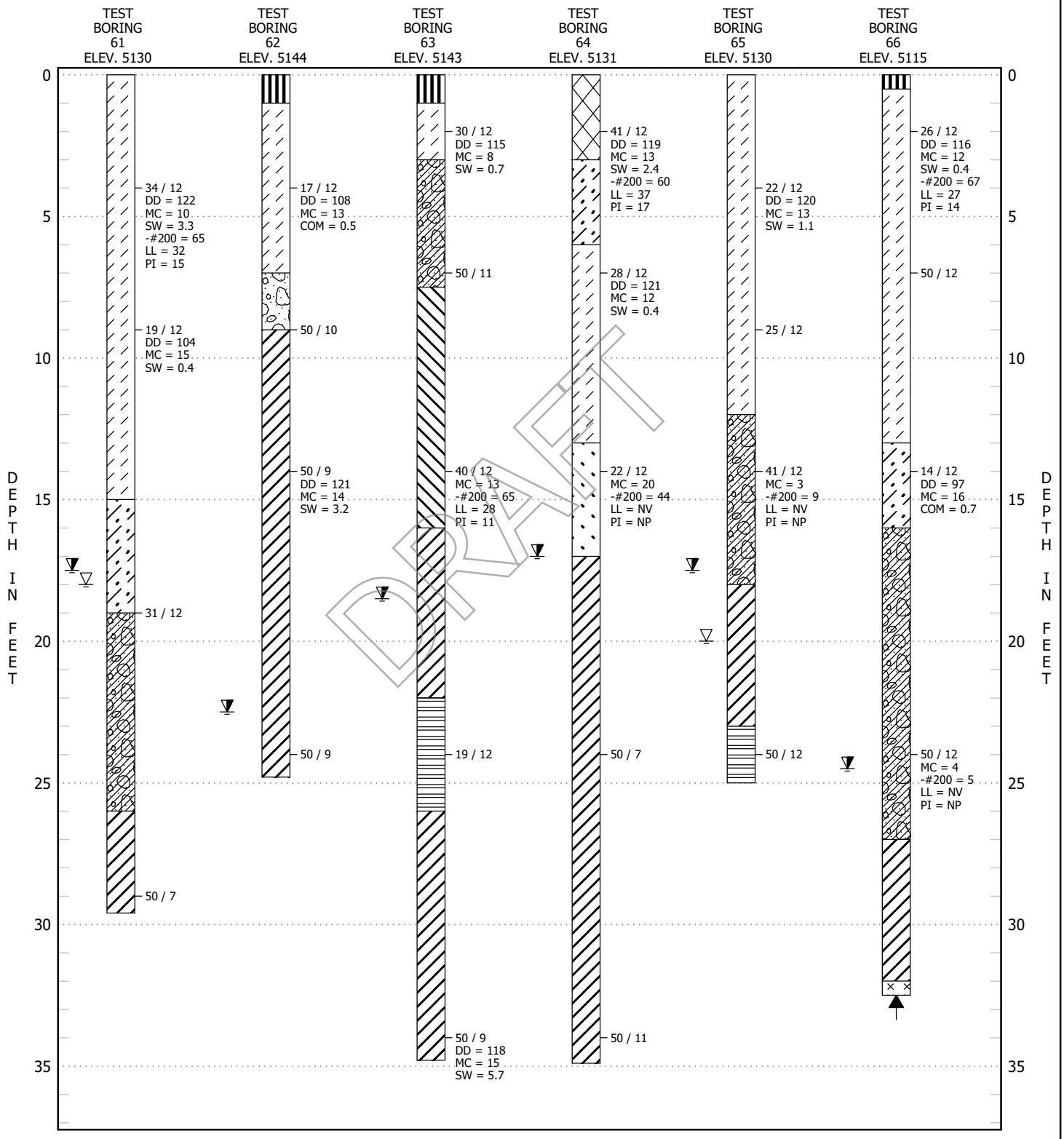
TEST BORING LOGS

FIGURE 11

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

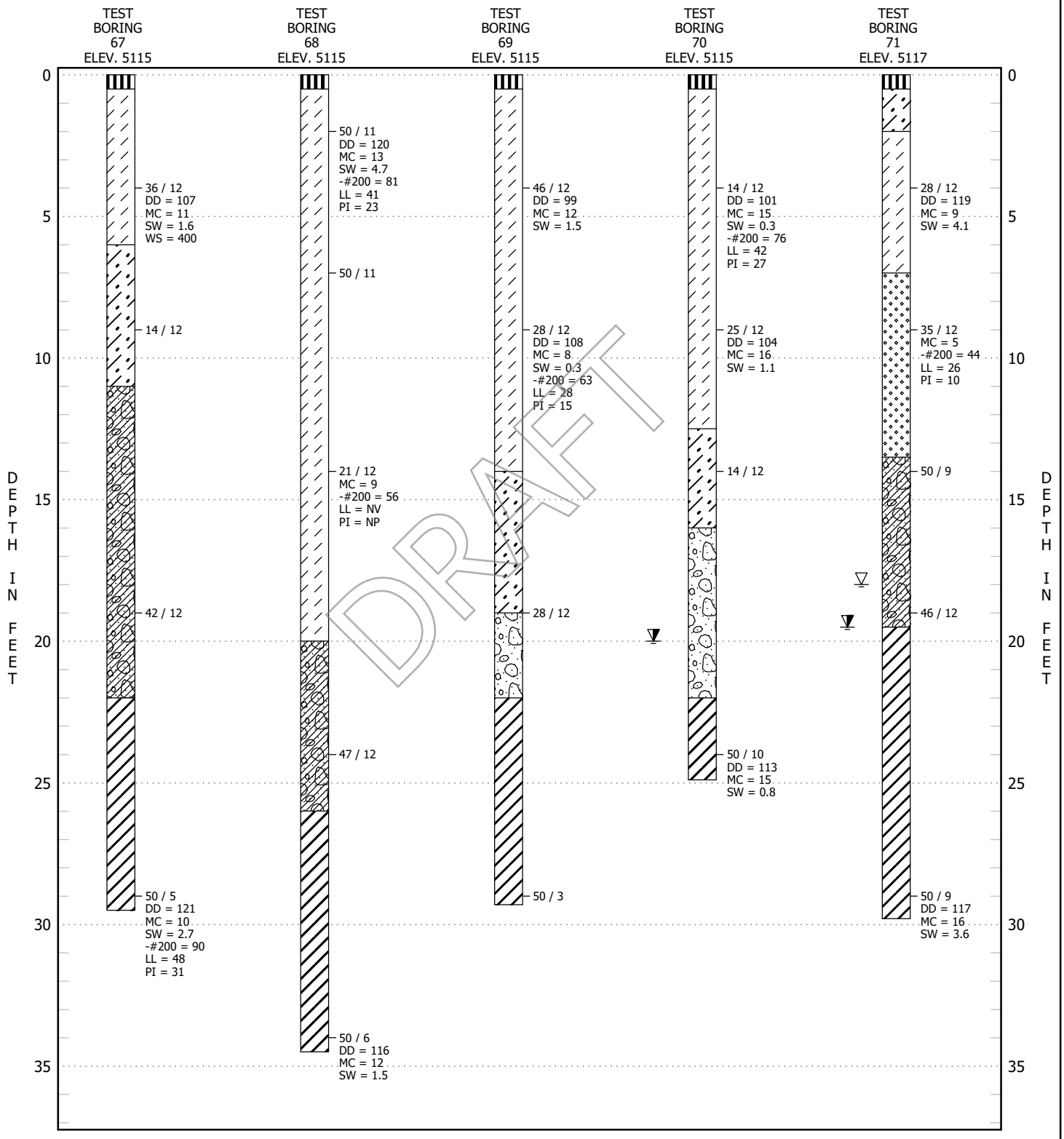
TEST BORING LOGS

FIGURE 12

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

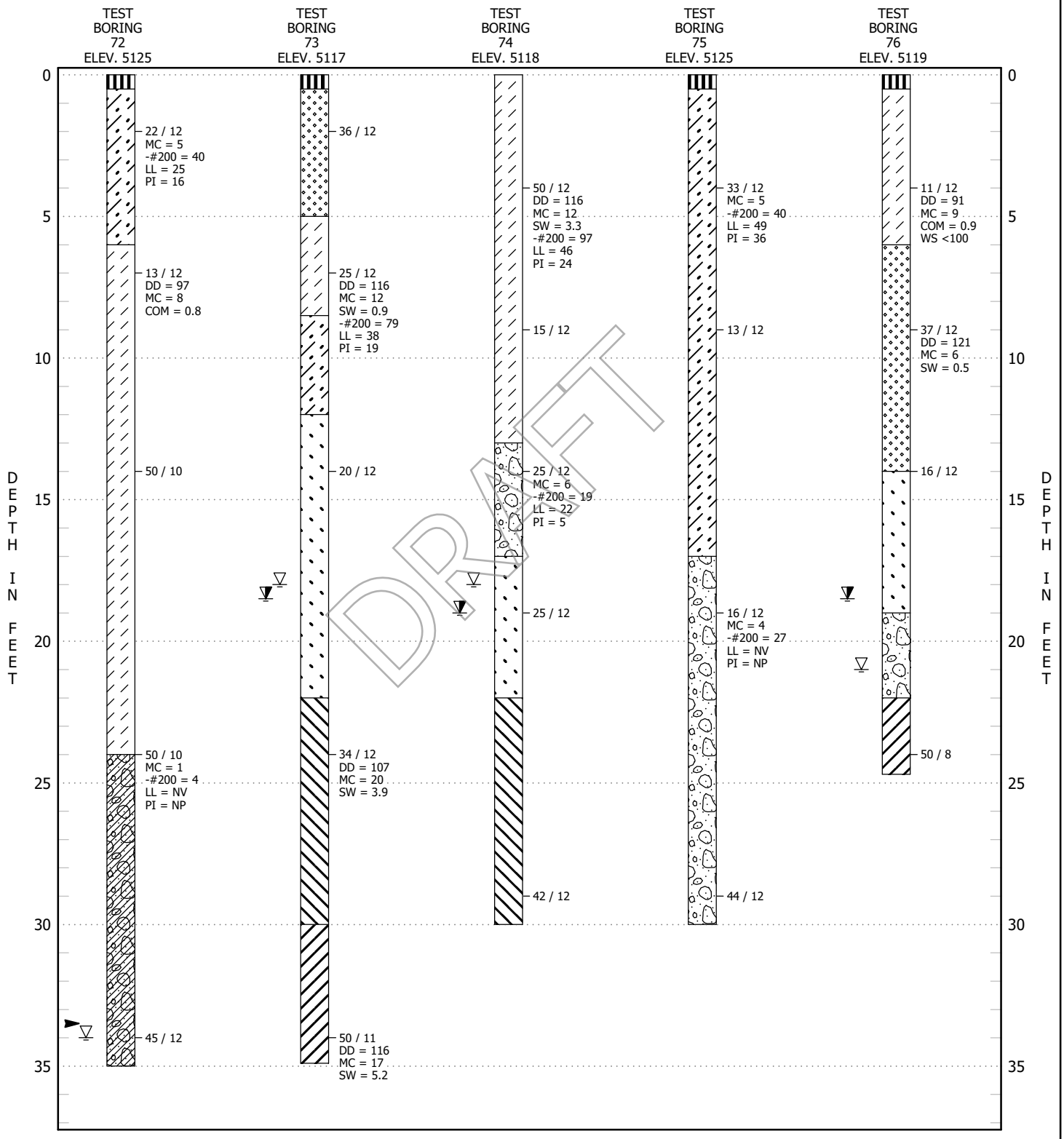
TEST BORING LOGS

FIGURE 13

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

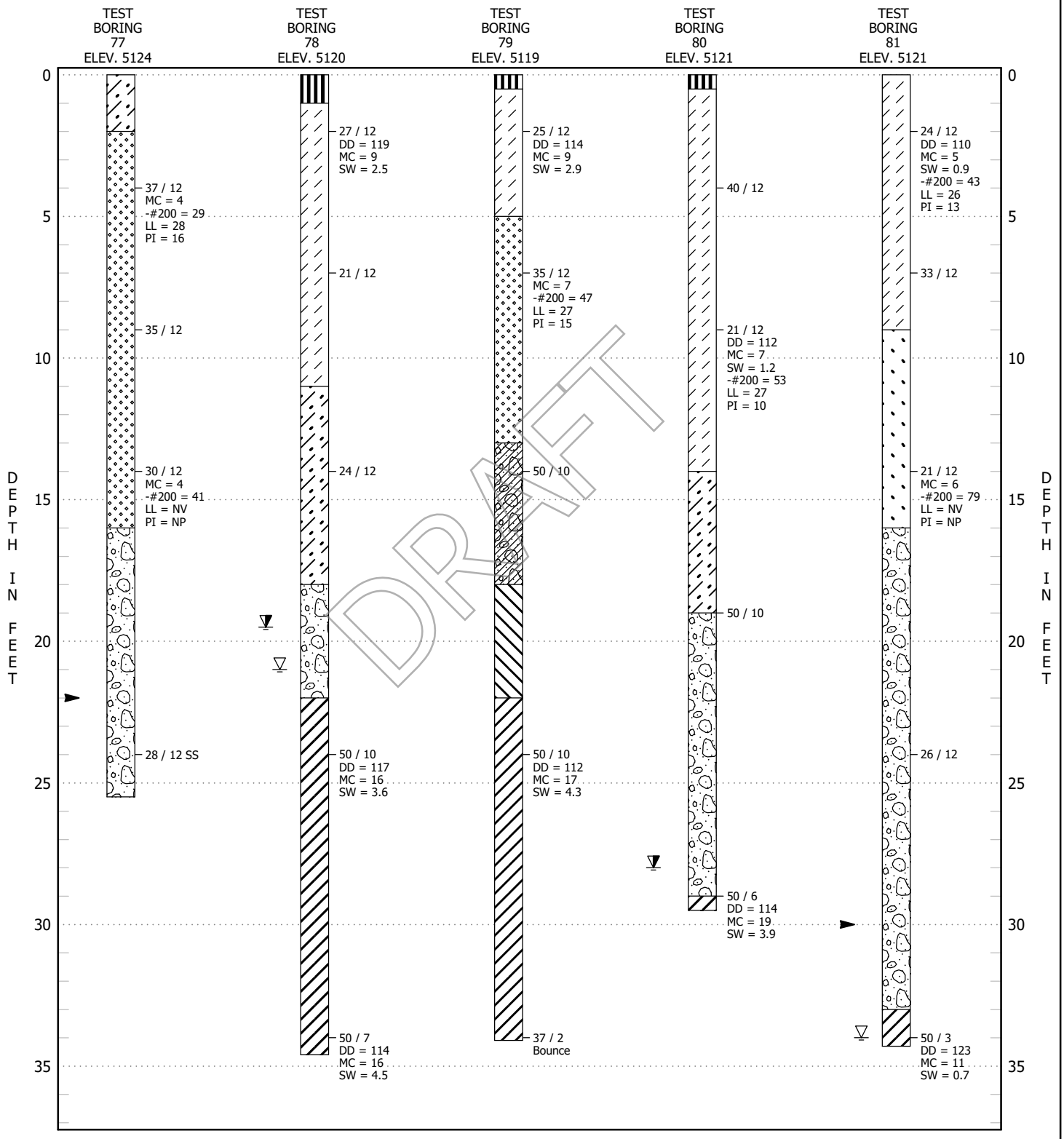
TEST BORING LOGS

FIGURE 14

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



SEE FIGURE 16 FOR LEGEND AND NOTES

TEST BORING LOGS

FIGURE 15

AGW
A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc.
PROJECT NAME Parkdale, Filing 6
PROJECT NUMBER 213216
PROJECT LOCATION Erie, Colorado

SOIL DESCRIPTIONS


Fill, clay, stiff to very stiff, silty, sandy


Topsoil, clay, sandy, organic


Clay, soft


Clay, medium stiff


Clay, stiff to very stiff


Sand, loose


Sand, medium dense, silty


Sand, medium dense, silty, clayey


Sand, dense to very dense, silty


Sand and gravel, medium dense to dense, silty


Sand and gravel, dense to very dense, clayey


Clay (weathered claystone), medium stiff to stiff


Claystone (Bedrock), firm to medium hard


Claystone (Bedrock), hard to very hard


Claystone (Bedrock), with lignite


Lignite, black

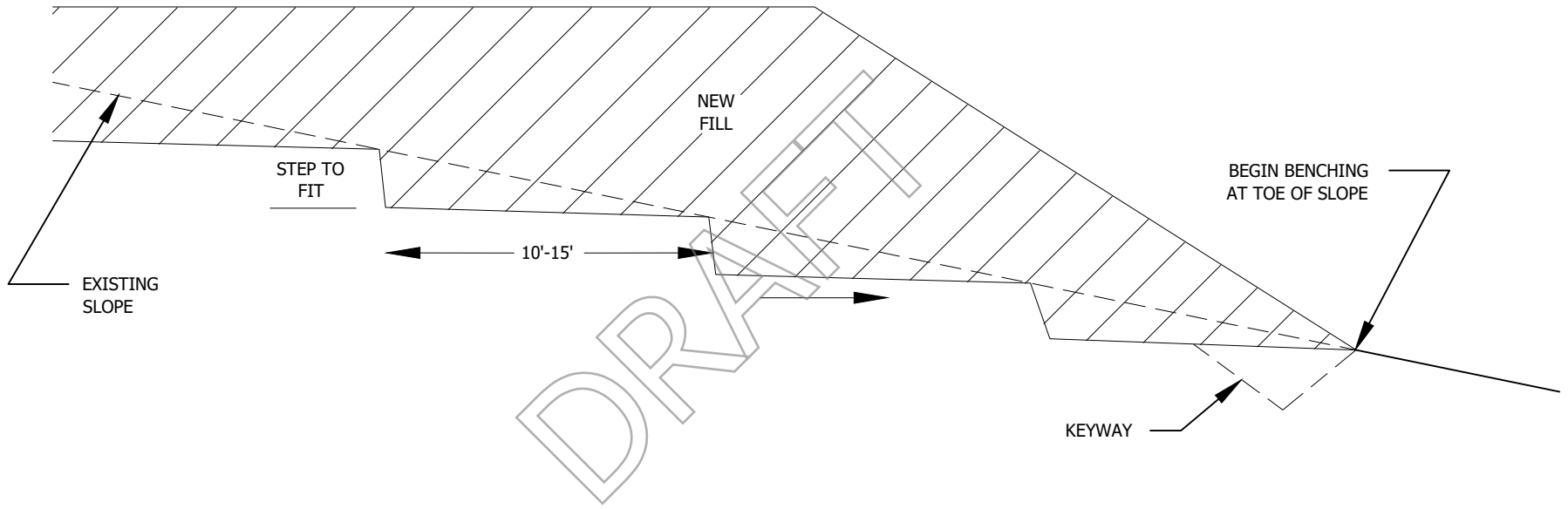
ABBREVIATIONS

DD	Dry density of sample in pounds per cubic foot (pcf)
MC	Moisture content as a percentage of dry weight of soil (%)
SW	Percent swell under a surcharge of 1000 pounds per square foot (psf) upon wetting (%)
COM	Percent compression under a surcharge of 1000 pounds per square foot (psf) upon wetting (%)
UC	Unconfined compressive strength in pounds per square foot (psf)
-#200	Percent passing the Number 200 sieve (%)
LL	Liquid Limit
PI	Plasticity Index
NP	Non-Plastic
NV	No Value
pH	Acidity or alkalinity of sample in pH units
R	Resistivity in ohms.cm
WS	Water soluble sufates in parts per million (ppm)
CL	Chlorides in percent (%)
x/y	X blows of a 140-pound hammer falling 30 inches were required to drive a 2.5-inch outside diameter sampler Y inches
x/y SS	X blows of a 140-pound hammer falling 30 inches were required to drive a 2.0-inch outside diameter sampler Y inches
C-x	Depth of cut to grade (rounded to the nearest foot)
F-x	Depth of fill to grade (rounded to the nearest foot)
FG	Finished grade (rounded to the nearest foot)
NR	No sample recovered
Bounce	Sampler bounced during driving
B	Bulk sample
AS	Auger sample
	Moderately to well cemented layer
—	Approximate depth of cut
	Depth at which practical drilling refusal was encountered
	Water level at time of drilling
	Caved depth at time of drilling
	Water level 1 to 7 day(s) after drilling
	Caved depth 1 to 7 day(s) after drilling

Notes:

1. Test borings were drilled November 21, 2021 to March 15, 2022.
2. Location of the test borings were staked by others at locations chosen by this firm.
3. The horizontal lines shown on the logs are to differentiate materials and represent the approximate boundaries between materials. The transitions between materials may be gradual.
4. Elevations were obtained from staking provided by others and have been rounded to the nearest foot.
5. Boring logs shown in this report are subject to the limitations, explanations, and conclusions of this report.

LEGEND AND NOTES
FIGURE 16



NOTES:

1. BENCHING REQUIRED WHEN EXISTING SLOPE IS 5 : 1 (HORIZONTAL : VERTICAL) OR STEEPER
2. CONTINUE BENCHING UNTIL NATURAL SLOPE FLATTENS OR DAYLIGHTS
3. DRAINS MAY BE REQUIRED IF GROUND WATER IS ENCOUNTERED
4. ADDITIONAL EXCAVATION MAY BE REQUIRED BY AGW IF SLOPE INSTABILITY IS NOTED
5. A KEYWAY MAY BE REQUIRED BY AGW DEPENDING UPON SLOPE CONFIGURATION
6. NOT TO SCALE

AGW
A.G. WASSENAAR, INC.

GENERALIZED BENCHING DETAIL	PROJECT NO. 213216 FIGURE 17

APPENDIX A
LABORATORY TEST RESULTS

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
1	2	Clay, very sandy	94	22	0.0	NA	75	46	31				
1	7	Clay, very sandy	99	20	-0.3	NA							
1	34	Claystone, slightly sandy	112	18	7.5	16,000	94	67	44				
2	4	Clay, very sandy	108	8	0.8	2,400						<100	
2	14	Clay, very sandy	115	8	0.0	NA	69	27	12				
3	4	Sand, very clayey (lens)	107	6	-0.1	NA	38	24	10				
3	9	Clay, very sandy	96	8	-4.5	NA							
3	19	Clay, very sandy	106	15	0.1	1,900							
4	2	Clay, very sandy	106	5	0.0	NA							
4	7	Clay, very sandy	95	9	-1.1	NA	62	31	18				
4	14	Clay, very sandy	102	8	-0.5	NA							
5	9	Clay, very sandy	111	10	0.7	2,600							
5	29	Claystone, trace sand	100	19	4.7	6,800	98	85	66				
6	4	Clay, very sandy	101	7	0.5	2,200							
6	9	Clay, very sandy								8.2	3,600	<100	0.0002
6	29	Sand, slightly gravelly, slightly silty		3			5	NV	NP				
7	2	Clay, sandy	114	10	2.8	5,300							
7	7	Sand, very clayey (lens)	105	7	-0.3	NA	48	27	15				
7	24	Sand, gravelly, slightly silty		4			12	NV	NP				
8	2	Clay, sandy	106	10	2.0	3,400							
8	14	Clay, very sandy (lens)		13			69	30	18				
8	34	Claystone, sandy	107	17	3.7	6,700							
9	4	Clay, sandy	118	12	7.5	24,900							
9	9	Clay, sandy	121	8	1.9	5,000							
10	2	Clay, very sandy	116	8	1.1	2,500							

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
10	7	Clay, sandy	112	9	2.9	10,000							
10	34	Claystone, slightly sandy	105	20	4.3	6,800							
11	2	Sand, very clayey (lens)	117	8	2.0	5,200	47	31	15				
11	7	Clay, sandy	114	11	0.1	2,000							
11	14	Clay, sandy	90	18	0.0	NA							
12	4	Clay, sandy	91	6	-4.9	NA							
12	9	Sand, very silty, very clayey		8			40	25	7				
12	14	Sand, very silty		9			35	NV	NP				
13	4	Clay, sandy	105	11	0.9	3,700	83	32	14				
13	29	Claystone, very silty, very sandy		18			57	25	6				
14	4	Clay, sandy	100	8	1.1	2,200	74	32	18				
14	9	Sand, very clayey		10			45	29	14				
15	4	Clay, sandy	122	10	6.1	21,700							
15	14	Clay, sandy	115	16	4.3	17,800							
16	4	Clay, very sandy	113	8	0.5	1,900	57	30	14				
16	19	Clay, sandy	116	11	1.5	3,600							
17	7	Sand, very clayey	116	12	-0.1	NA	48	31	11				
17	14	Sand, very silty		9			34	NV	NP				
17	34	Claystone, sandy	71	50	2.5	3,200							
18	2	Clay, very sandy	117	6	1.7	5,300							
18	14	Clay, sandy	104	12	-0.8								
18	34	Claystone, slightly sandy	115	17	7.1	12,600							
19	4	Clay, very sandy	110	10	2.4	6,900	54	33	22				
19	9	Clay, sandy	105	10	0.0	NA						400	
20	9	Clay, very sandy	115	13	2.3	5,300	63						

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
20	14	Sand, clayey	100	15	-0.4	NA							
20	19	Sand, clayey, trace gravel		7			22	28	16				
21	2	Clay, very sandy	116	7	1.9	5,900	51	31	20				
21	7	Sand, very clayey		5			43	24	11				
21	14	Clay, sandy	103	21	1.1	3,000						1,600	
22	2	Clay, sandy	114	12	2.1	5,600							
22	7	Sand, very clayey	107	8	1.3	3,200							
22	14	Clay, slightly sandy	121	11	5.1	16,200							
23	2	Clay, sandy	104	6	-3.3	NA							
23	7	Clay, sandy	106	2	-0.7	NA							
23	34	Claystone, trace sand	96	23	6.1	8,400	97	75	45				
24	2	Clay, sandy	111	6	0.9	3,000							
24	7	Clay, sandy	111	9	2.1	2,900							
25	2	Clay, sandy	102	6	-0.4	NA							
25	7	Sand, very clayey		7			43	29	13				
26	4	Clay, very sandy	96	7	-3.9	NA	51	29	11				
26	19	Clay, sandy	104	18	-0.8	NA							
27	2	Clay, sandy	111	14	3.1	11,000							
27	7	Sand, silty		4			29	NV	NP				
27	24	Sand, very silty		10			48	NV	NP				
28	4	Sand, very clayey		8			48	32	20				
28	14	Sand, very clayey		7			43	28	15				
29	4	Sand, very clayey	110	7	1.1	3,000	48	28	9				
29	14	Clay, sandy	127	8	4.4	18,900							
29	19	Sand, clayey	111	13	-0.5	NA							

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
30	4	Clay, very sandy		5			51	27	11			800	
30	9	Sand, clayey	102	8	-0.4	NA							
30	14	Clay, very sandy	113	9	1.3	3,000	64	33	15				
31	4	Clay, sandy	99	9	-0.4	NA							
31	9	Sand, very silty		4			34	NV	NP				
31	24	Gravel, sandy, slightly silty		1			6	NV	NP				
32	9	Clay, very sandy	119	11	0.7	2,100	64	29	13				
32	14	Clay, very sandy	106	19	-0.4	NA							
33	4	Sand, very silty	100	18	-0.3	NA							
33	14	Sand, very silty		11			43	NV	NP				
34	2	Clay, very sandy	109	8	0.8	2,600							
34	14	Clay, sandy								8.5	900	250	0.0061
34	24	Claystone, sandy	126	16	0.8	4,200							
35	2	Clay, very sandy	92	7	-1.1	NA							
35	14	Clay, very sandy	122	7	1.6	4,000							
36	9	Clay, very silty, very sandy		10			51	24	7				
36	19	Sand, gravelly, slightly silty		13			6	NV	NP				
37	4	Clay, very sandy	120	8	4.1	8,600	65	37	15				
37	9	Clay, sandy	117	14	3.5	7,700							
38	2	Sand, very clayey		6			48	27	9				
38	14	Clay, very sandy		8			69	27	10				
38	34	Claystone, slightly sandy	109	19	5.9	14,400							
39	7	Clay, sandy	108	8	-0.9	NA						500	
39	24	Clay (Weathered Claystone), slightly sandy	102	19	4.1	5,500							
39	34	Claystone, slightly sandy	108	18	6.7	11,800							

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
40	4	Clay, sandy	108	7	-1.6	NA							
40	19	Claystone, slightly sandy	101	19	5.1	4,900							
41	7	Clay, very sandy	106	18	0.0	NA	67	31	13				
41	14	Claystone, slightly sandy	107	16	3.6	5,900							
41	24	Claystone, sandy	104	12	-0.1	NA							
42	4	Sand, very clayey	104	8	1.3	3,000							
42	9	Claystone, slightly sandy	116	15	3.2	6,600						<100	
42	14	Claystone, sandy	130	10	1.7	7,100							
43	9	Sand, very clayey		12			39	32	15				
43	19	Sand, gravelly, slightly silty		3			7	NV	NP				
44	4	Clay, very sandy	94	8	-1.1	NA							
44	29	Claystone, sandy	103	13	-1.1	NA							
45	4	Clay, sandy								8.7	1,900	<100	0.0009
45	9	Sand, very silty, very clayey		5			42	23	5				
45	19	Claystone, sandy	116	13	0.4	2,500							
46	4	Clay, sandy	102	10	0.4	2,100						<100	
46	24	Claystone, slightly sandy	111	18	4.5	7,600							
47	4	Clay, very sandy	101	14	-0.3	NA	58	35	18				
47	9	Clay, sandy	113	11	0.1	1,800							
47	19	Claystone, slightly sandy	115	15	3.7	6,400							
48	2	Clay, sandy	116	9	2.1	7,600							
48	14	Claystone, slightly sandy	130	11	4.3	15,300	90	40	22				
48	34	Claystone, slightly sandy	121	16	7.2	14,600							
49	4	Clay, very sandy	116	8	2.1	5,300	63	31	13				
49	14	Clay, very sandy	111	17	1.5	3,700							

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
50	9	Sand, clayey	107	10	0.8	2,300							
50	19	Claystone, trace sand	107	17	2.1	2,600	99	67	42				
51	9	Clay, very sandy, trace gravel (lens)		8			54	30	16				
51	14	Claystone, sandy	113	13	0.0	NA							
51	24	Claystone, slightly sandy	114	15	4.8	10,000							
52	2	Clay, sandy	117	10	1.7	4,300							
52	7	Clay, very sandy, trace gravel	103	13	-0.7	NA	56	31	16				
52	14	Claystone, sandy	112	13	1.7	3,500							
53	2	Clay, sandy	115	9	0.9	3,600						200	
53	24	Claystone, sandy	111	18	4.0	6,300							
53	34	Claystone, sandy	102	17	-0.1	NA							
54	4	Clay, sandy	110	10	0.4	2,400							
54	19	Claystone, trace sand	106	17	1.7	3,000	99	62	41				
55	2	Fill, clay, sandy	117	10	3.6	10,400							
55	7	Clay, sandy	111	9	0.4	2,000							
55	14	Clay, very sandy	98	22	-1.6	NA							
56	4	Clay, very sandy, trace gravel	117	11	-0.4	NA	51	29	14				
56	29	Claystone, sandy	85	36	0.7	2,000							
57	4	Clay, sandy	103	16	0.0	NA							
57	9	Clay, sandy	108	9	-1.1	NA							
57	14	Clay, sandy (lens)		18			78	30	15				
58	9	Sand, clayey, slightly gravelly		6			29	24	11				
58	19	Gravel, very sandy, slightly silty, slightly clayey		3			11	21	4				
59	4	Clay, sandy	119	7	1.9	4,800							
59	9	Sand, very clayey		7			39	26	9				

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
59	29	Claystone, sandy	104	22	7.2	9,700							
60	2	Clay, sandy	120	7	3.3	11,400							
60	14	Claystone, sandy								9.1	1,000	500	0.0001
60	24	Claystone, silty	105	18	4.1	5,500	100	64	42				
61	4	Clay, very sandy	122	10	3.3	10,000	65	32	15				
61	9	Clay, sandy	104	15	0.4	2,000							
62	4	Clay, sandy	108	13	-0.5	NA							
62	14	Claystone, slightly sandy	121	14	3.2	8,200							
63	2	Clay, very sandy	115	8	0.7	3,500							
63	14	Claystone, very sandy		13			65	28	11				
63	34	Claystone, slightly sandy	118	15	5.7	12,400							
64	2	Fill, clay, very sandy	119	13	2.4	9,200	60	37	17				
64	7	Clay, sandy	121	12	0.4	2,400							
64	14	Sand, very silty, trace gravel		20			44	NV	NP				
65	4	Clay, sandy	120	13	1.1	5,000							
65	14	Sand, slightly silty, slightly gravellly		3			9	NV	NP				
66	2	Clay, very sandy	116	12	0.4	1,500	67	27	14				
66	14	Sand, very clayey	97	16	-0.7	NA							
66	24	Sand, very gravelly, slightly silty		4			5	NV	NP				
67	4	Clay, sandy	107	11	1.6	4,000						400	
67	29	Claystone, slightly sandy	121	10	2.7	6,700	90	48	31				
68	2	Clay, sandy	120	13	4.7	15,000	81	41	23				
68	14	Silt, very sandy (lens)		9			56	NV	NP				
68	34	Claystone, sandy	116	12	1.5	2,900							
69	4	Clay, very sandy	99	12	1.5	3,700							

AGW
A.G. WASSENAAR, INC.

TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
69	9	Clay, very sandy	108	8	0.3	2,200	63	28	15				
70	4	Clay, sandy	101	15	0.3	2,000	76	42	27				
70	9	Clay, sandy	104	16	1.1	1,900							
70	24	Claystone, sandy	113	15	0.8	2,200							
71	4	Clay, slightly sandy	119	9	4.1	7,400							
71	9	Sand, very clayey, trace gravel		5			44	26	10				
71	29	Claystone, slightly sandy	117	16	3.6	13,100							
72	2	Sand, very clayey		5			40	25	16				
72	7	Clay, sandy	97	8	-0.8	NA							
72	24	Sand, gravelly, trace silt		1			4	NV	NP				
73	7	Clay, sandy	116	12	0.9	3,400	79	38	19				
73	24	Claystone, slightly sandy	107	20	3.9	7,200							
73	34	Claystone, slightly sandy	116	17	5.2	15,000							
74	4	Clay, trace sand	116	12	3.3	8,800	97	46	24				
74	14	Sand, gravelly, silty, clayey		6			19	22	5				
75	4	Sand, very clayey		5			40	49	36				
75	19	Sand, gravelly, silty		4			27	NV	NP				
76	4	Clay, sandy	91	9	-0.9	NA						<100	
76	9	Sand, very clayey	121	6	0.5	2,400							
77	4	Sand, gravelly, clayey		4			29	28	16				
77	14	Sand, very silty		4			41	NV	NP				
78	2	Clay, sandy	119	9	2.5	7,300							
78	24	Claystone, slightly sandy	117	16	3.6	11,500							
78	34	Claystone, slightly sandy	114	16	4.5	16,100							
79	2	Clay, sandy	114	9	2.9	6,000							

AGW
A.G. WASSENAAR, INC.

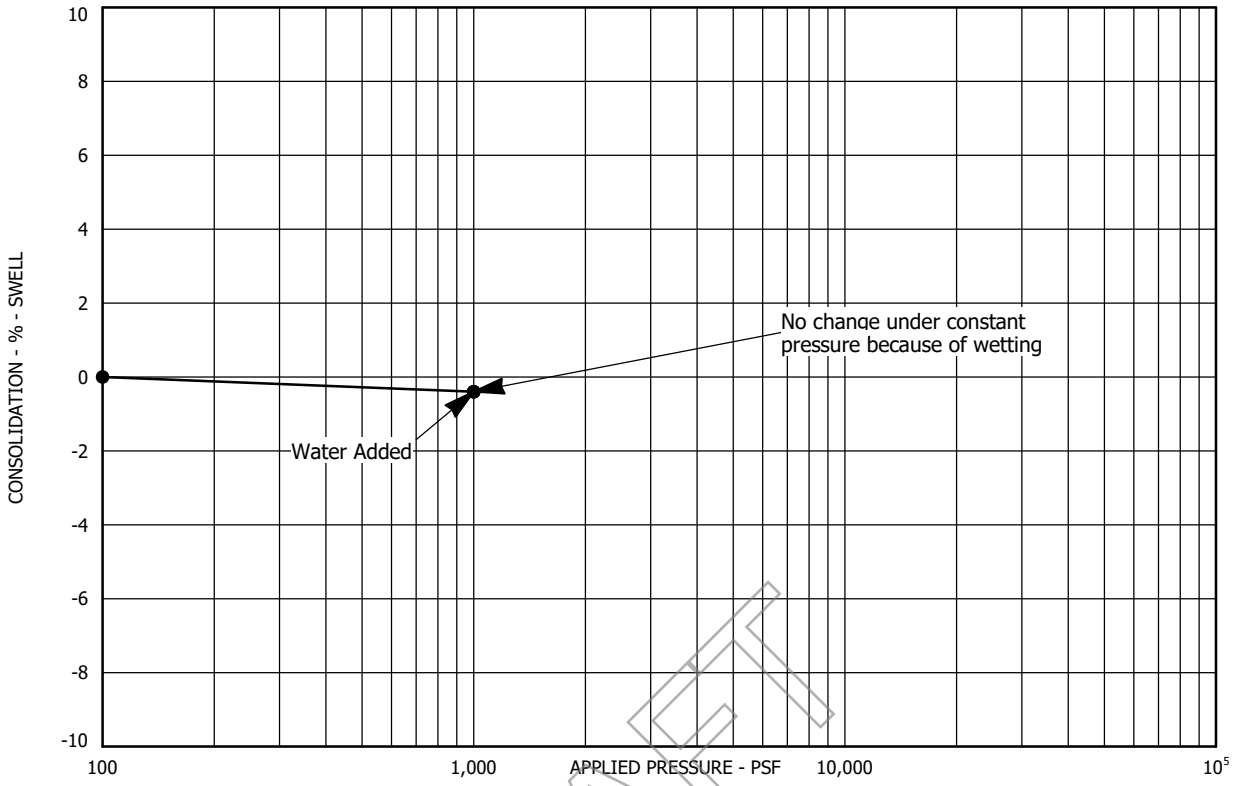
TABLE A-1
SUMMARY OF LABORATORY TEST RESULTS
March 31, 2022

Test Boring Number	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture (%)	Swell / Consolidation (-) (%) [1]	Swell Pressure (psf)	% Passing #200 Sieve	Atterberg		pH	Resistivity (ohm•cm)	Water Soluble Sulfates (ppm)	Chlorides (%)
								Liquid Limit LL	Plasticity Index PI				
79	7	Sand, very clayey, trace gravel		7			47	27	15				
79	24	Claystone, slightly sandy	112	17	4.3	13,200							
80	9	Clay, very sandy	112	7	1.2	3,300	53	27	10				
80	29	Claystone, slightly sandy	114	19	3.9	10,400							
81	2	Sand, very clayey, trace gravel (lens)	110	5	0.9	3,000	43	26	13				
81	14	Silt, sandy (lens)		6			79	NV	NP				
81	34	Claystone, sandy	123	11	0.7	2,100							
Bulk 1 [2]	-	Clay, very sandy	113.0 [3]	13.7 [3]			61	27	10			<100	
Bulk 1 [2]	-	Clay, very sandy	108	14	0.1 [4]	-							
Bulk 2 [2]	-	Clay, very sandy	115.6 [3]	13.9 [3]			58	26	9			<100	
Bulk 2 [2]	-	Clay, very sandy	109	15	0.1 [4]	-							

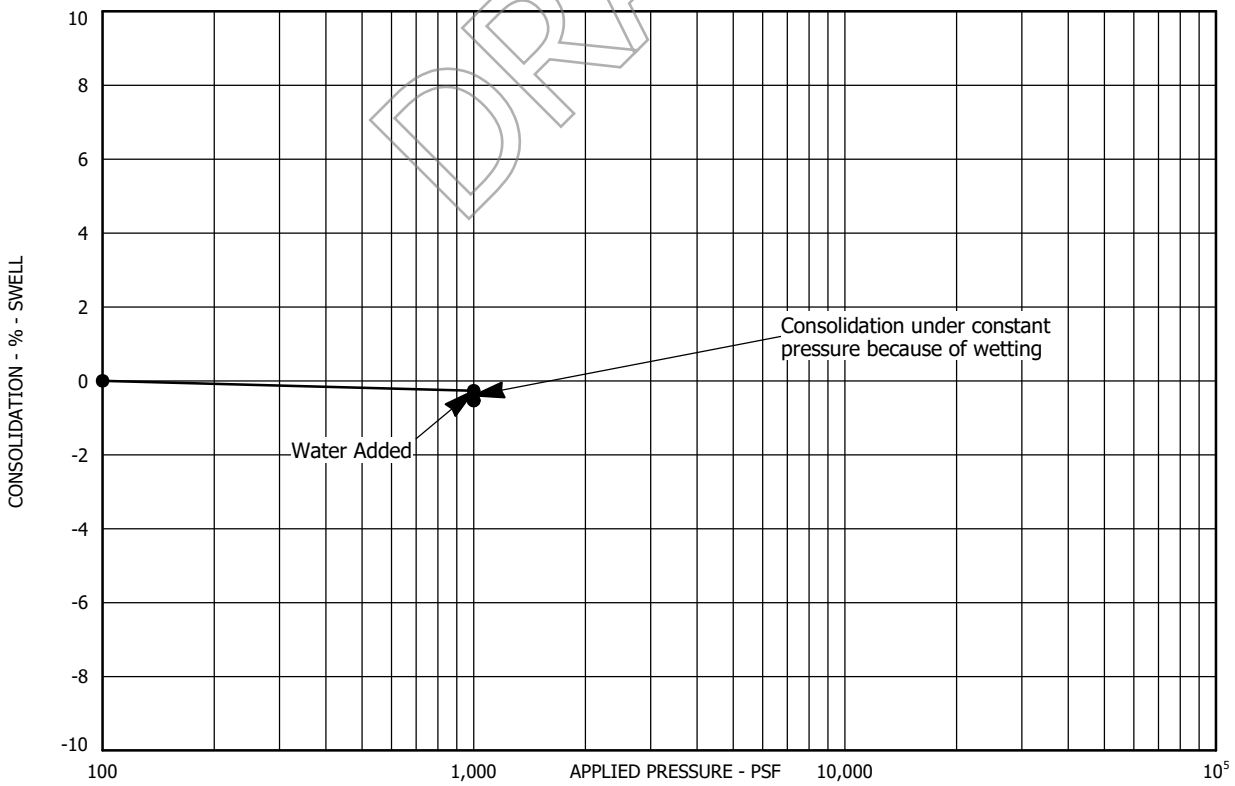
Notes:
NA - Not Applicable, NV - No Value, NP - Nonplastic

[1] Indicates percent swell or consolidation (-) when wetted under a 1,000 psf load
[2] Bulk is a blended bulk sample obtained from the auger cuttings of various test borings
[3] Maximum dry density (MDD) and optimum moisture content (OMC)
[4] Sample was remolded to approximately 95% MDD

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 1 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 94
Moisture Content (%): 22



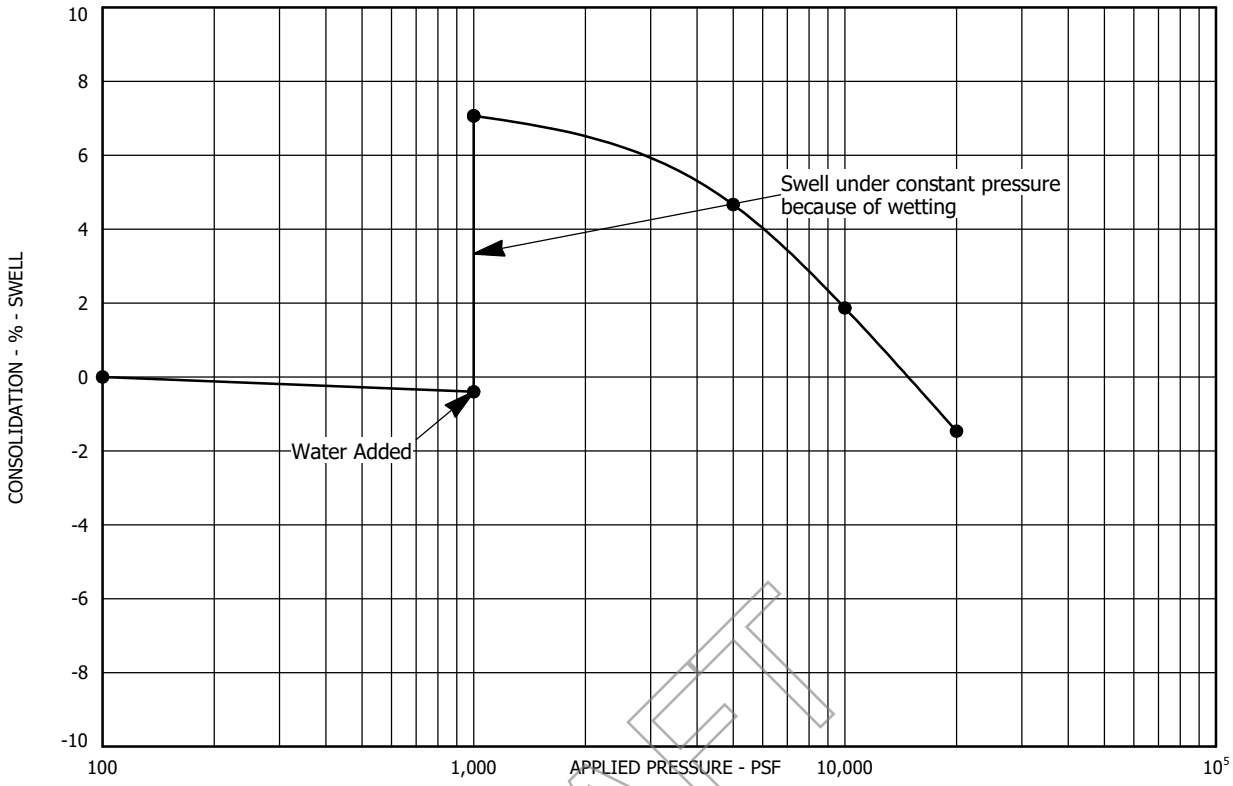
Sample Location: Test Boring No. 1 at a depth of 7 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 99
Moisture Content (%): 20

SWELL - CONSOLIDATION TEST RESULTS

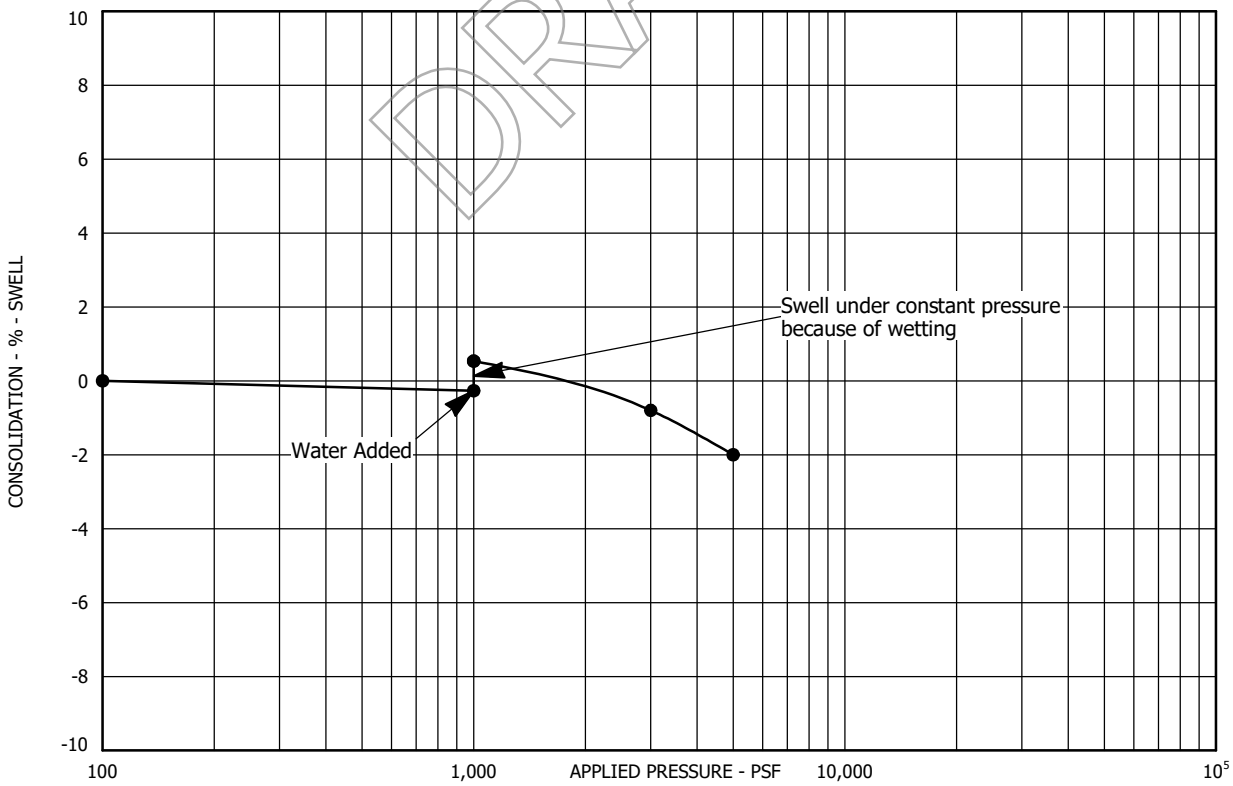
FIGURE A-1

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 1 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 112
Moisture Content (%): 18



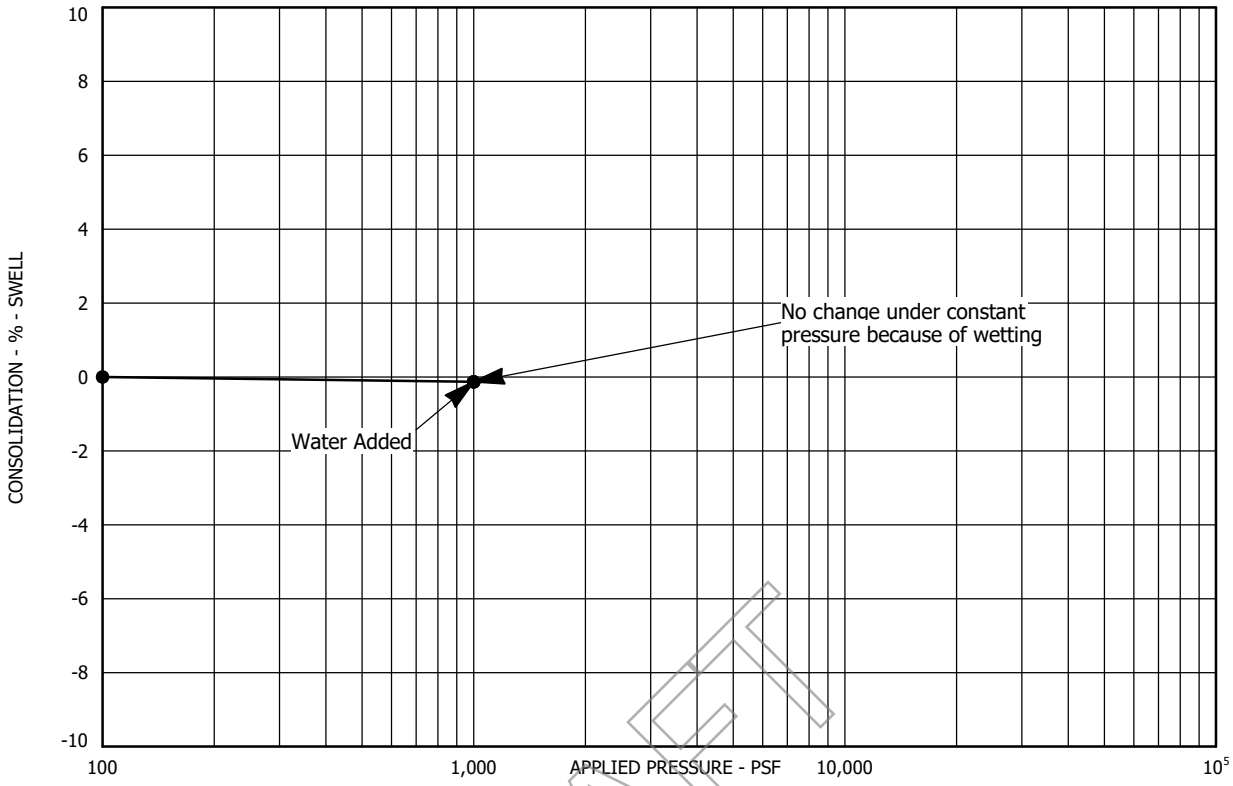
Sample Location: Test Boring No. 2 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

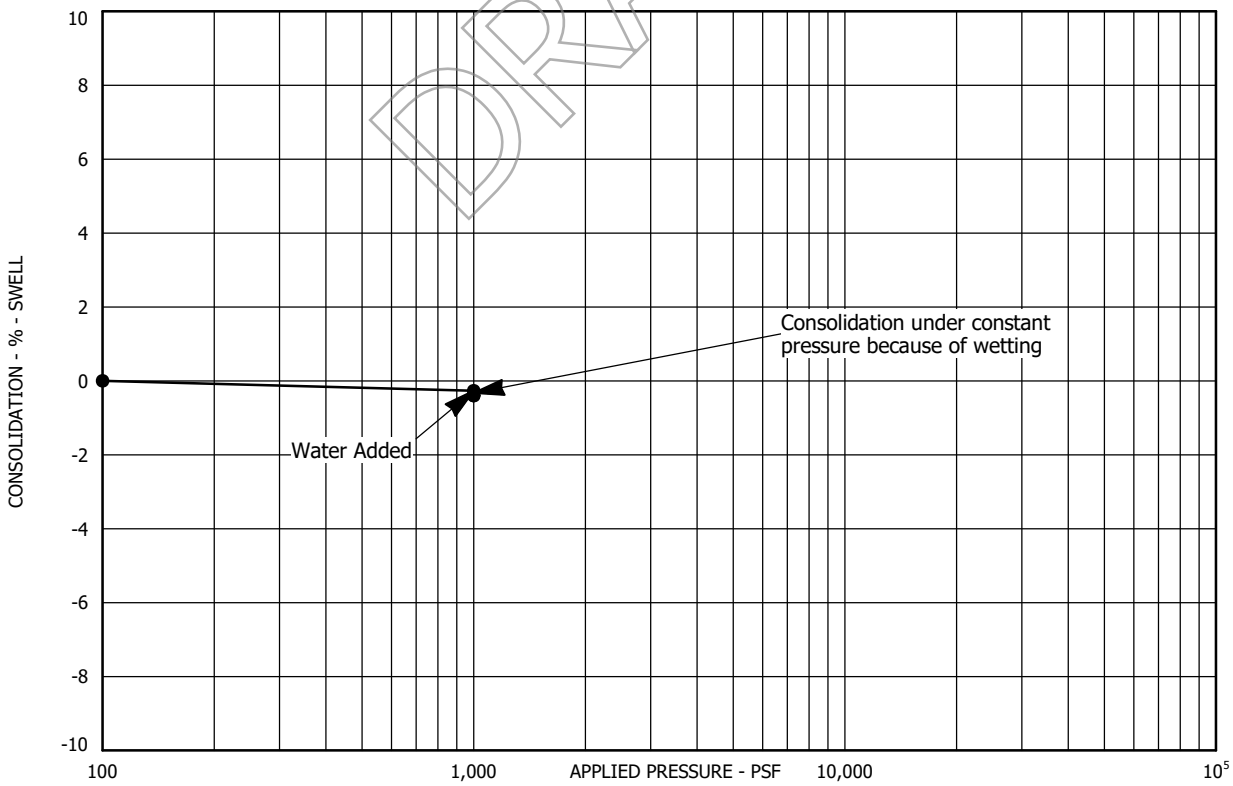
FIGURE A-2

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 2 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 8



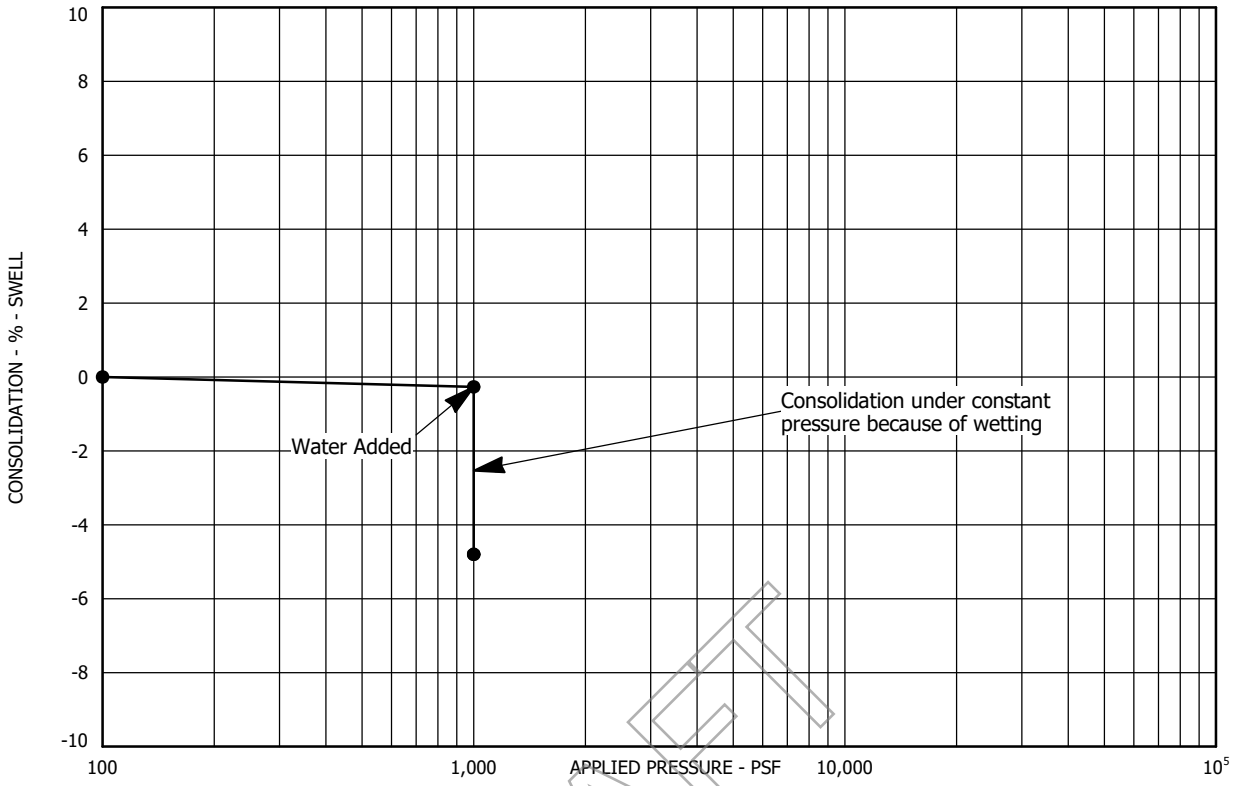
Sample Location: Test Boring No. 3 at a depth of 4 feet
Sample Description: Sand, very clayey (lens)
Dry Unit Weight (pcf): 107
Moisture Content (%): 6

SWELL - CONSOLIDATION TEST RESULTS

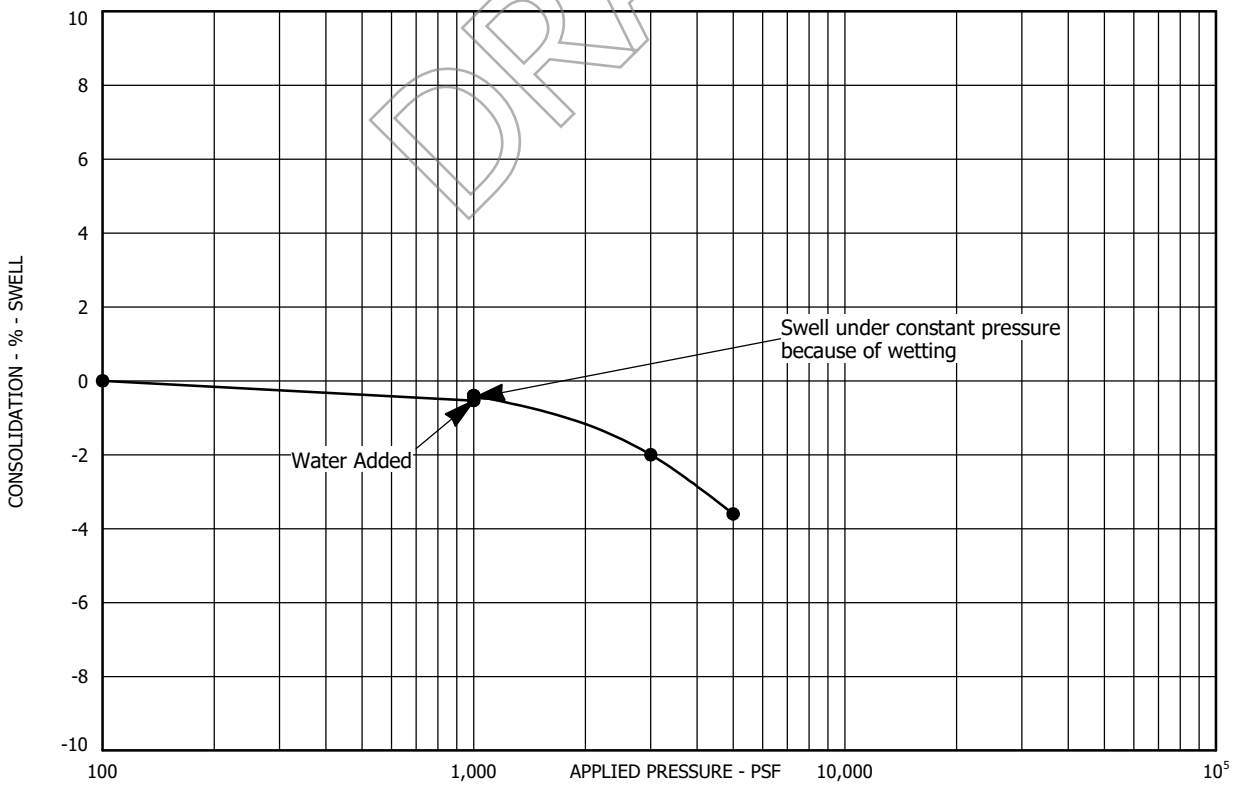
FIGURE A-3

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 3 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 96
Moisture Content (%): 8



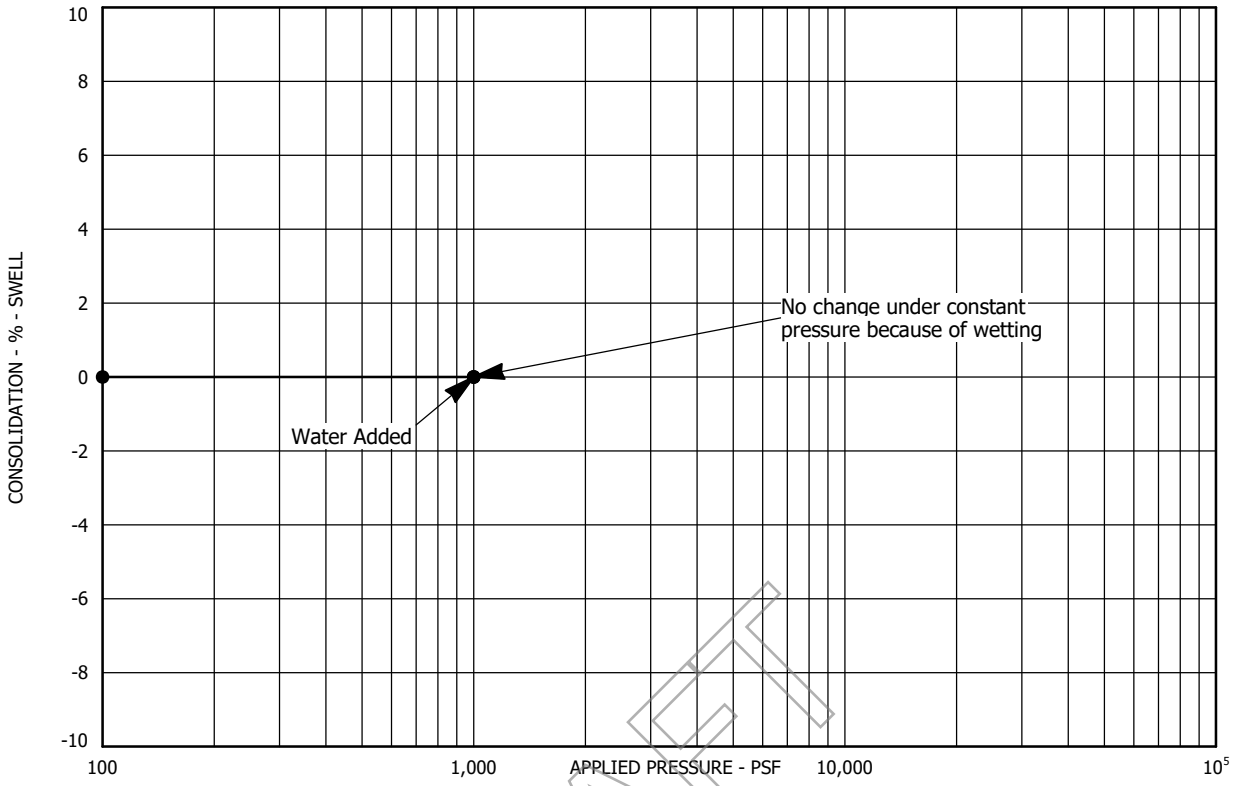
Sample Location: Test Boring No. 3 at a depth of 19 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 15

SWELL - CONSOLIDATION TEST RESULTS

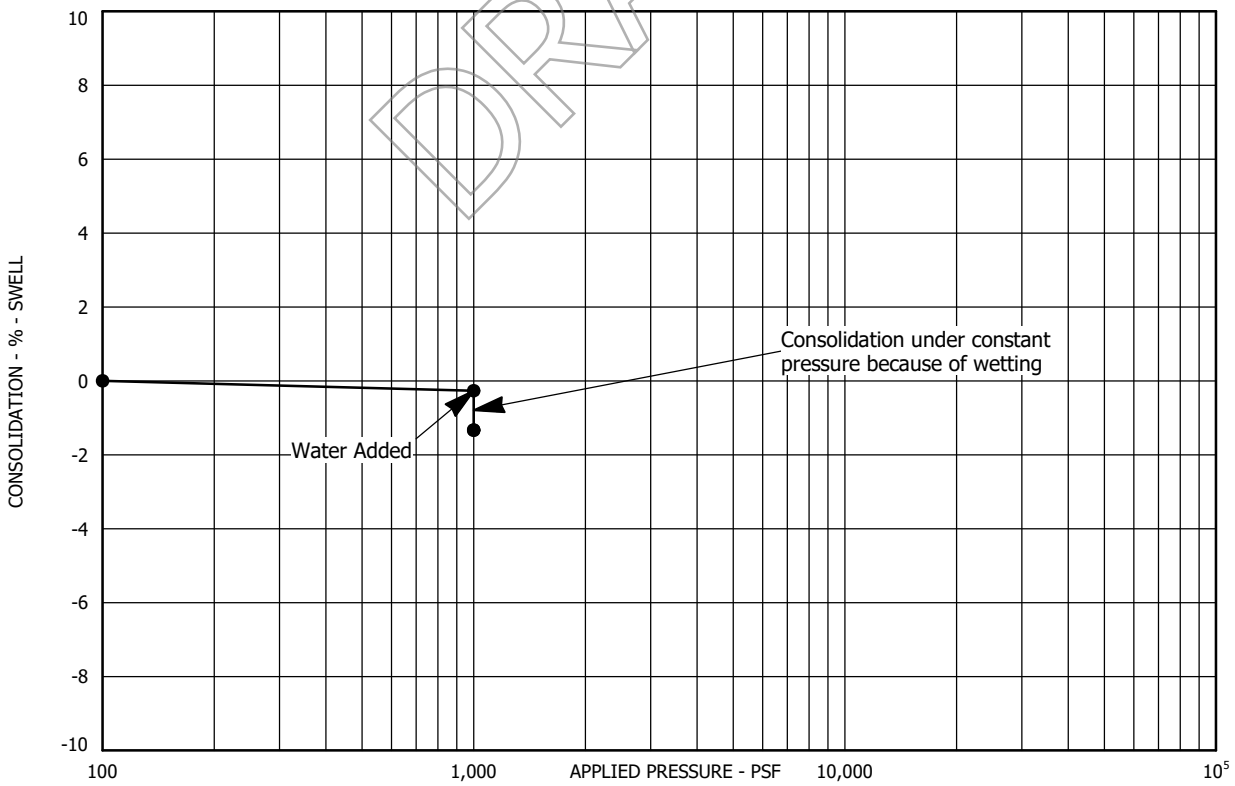
FIGURE A-4

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 4 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 5



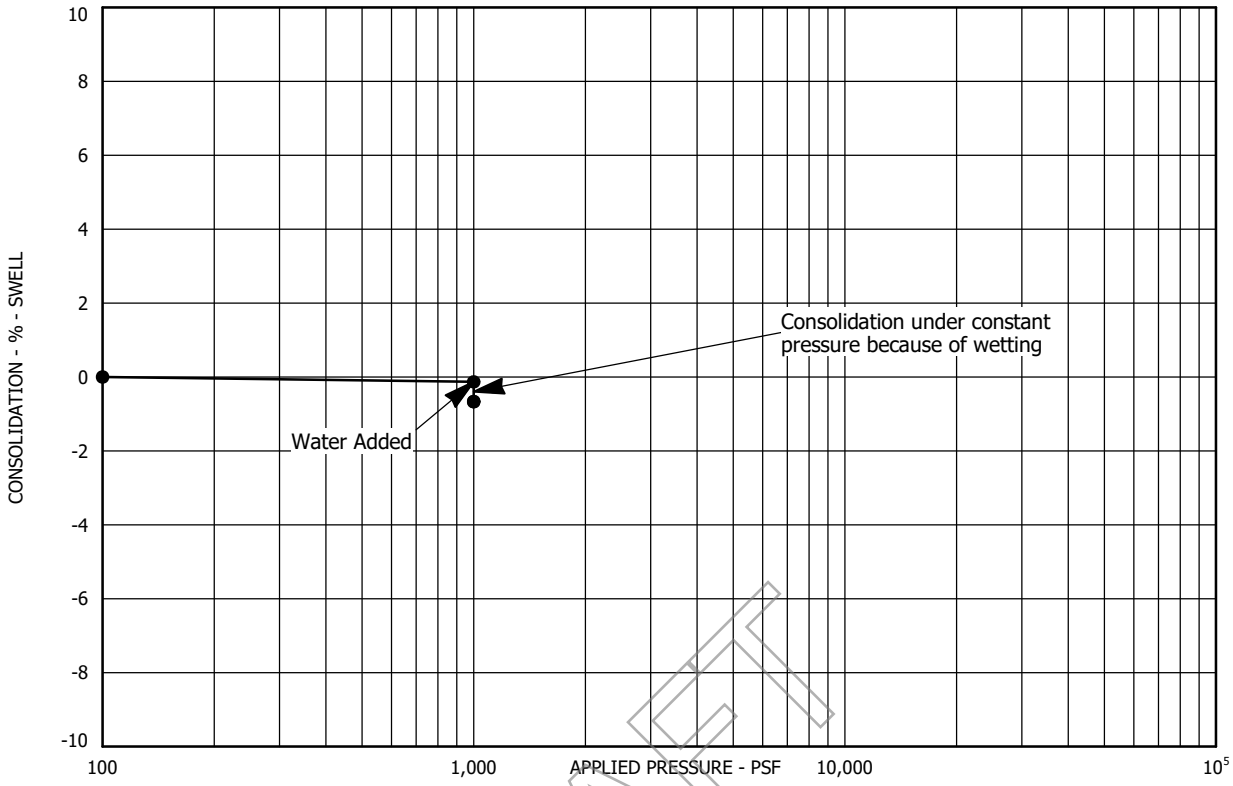
Sample Location: Test Boring No. 4 at a depth of 7 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 95
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS

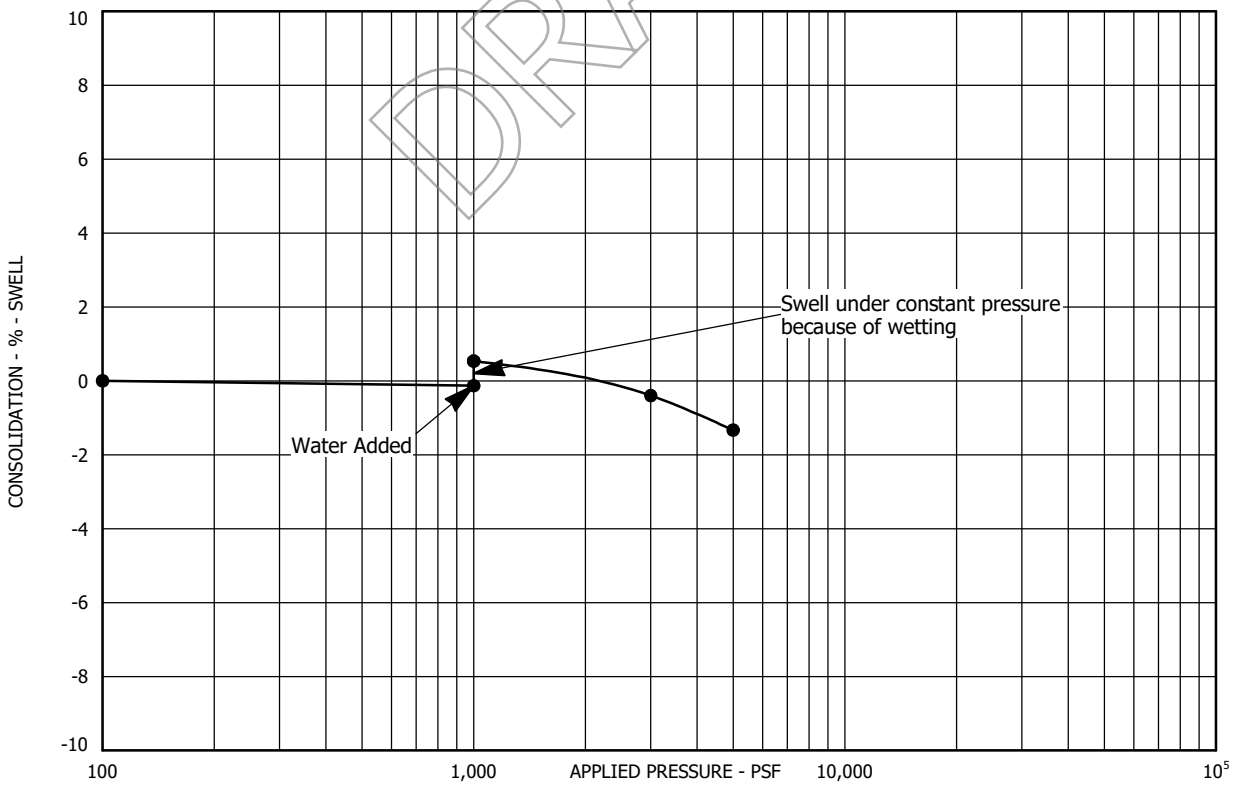
FIGURE A-5

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 4 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 102
Moisture Content (%): 8



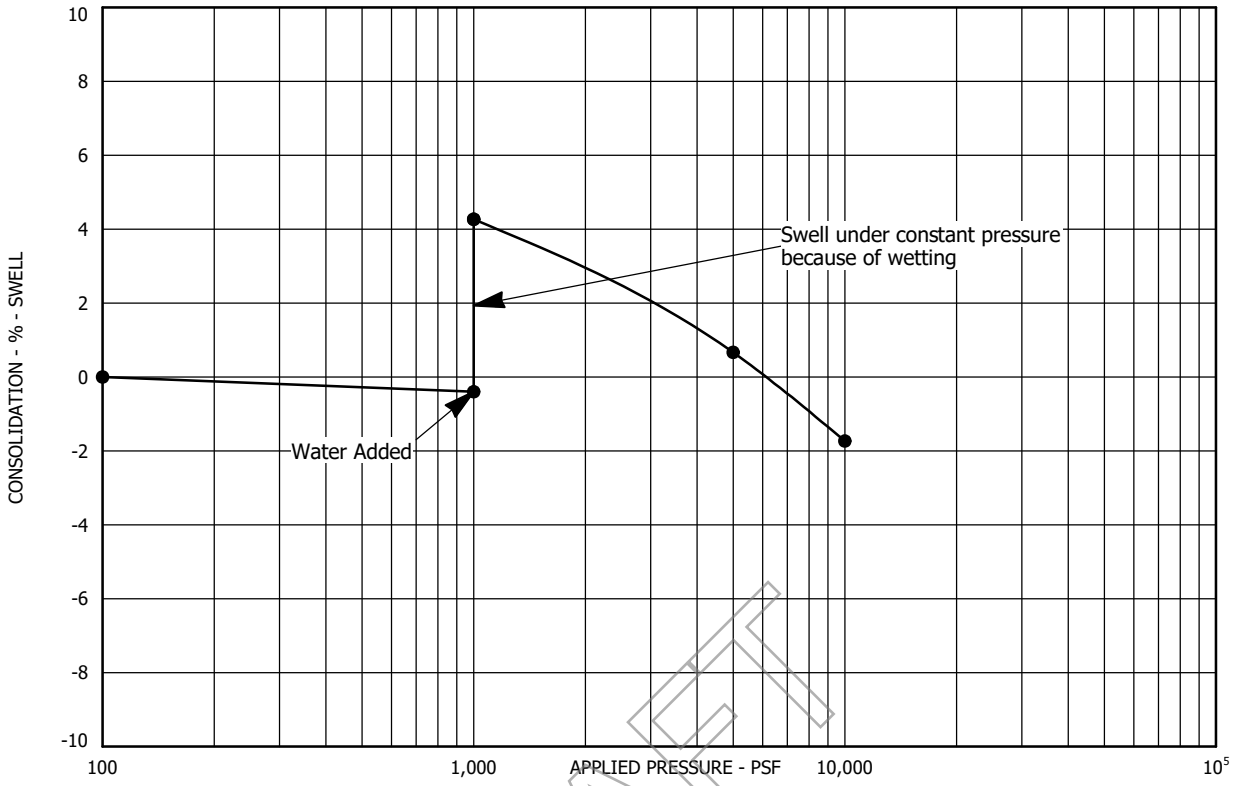
Sample Location: Test Boring No. 5 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 10

SWELL - CONSOLIDATION TEST RESULTS

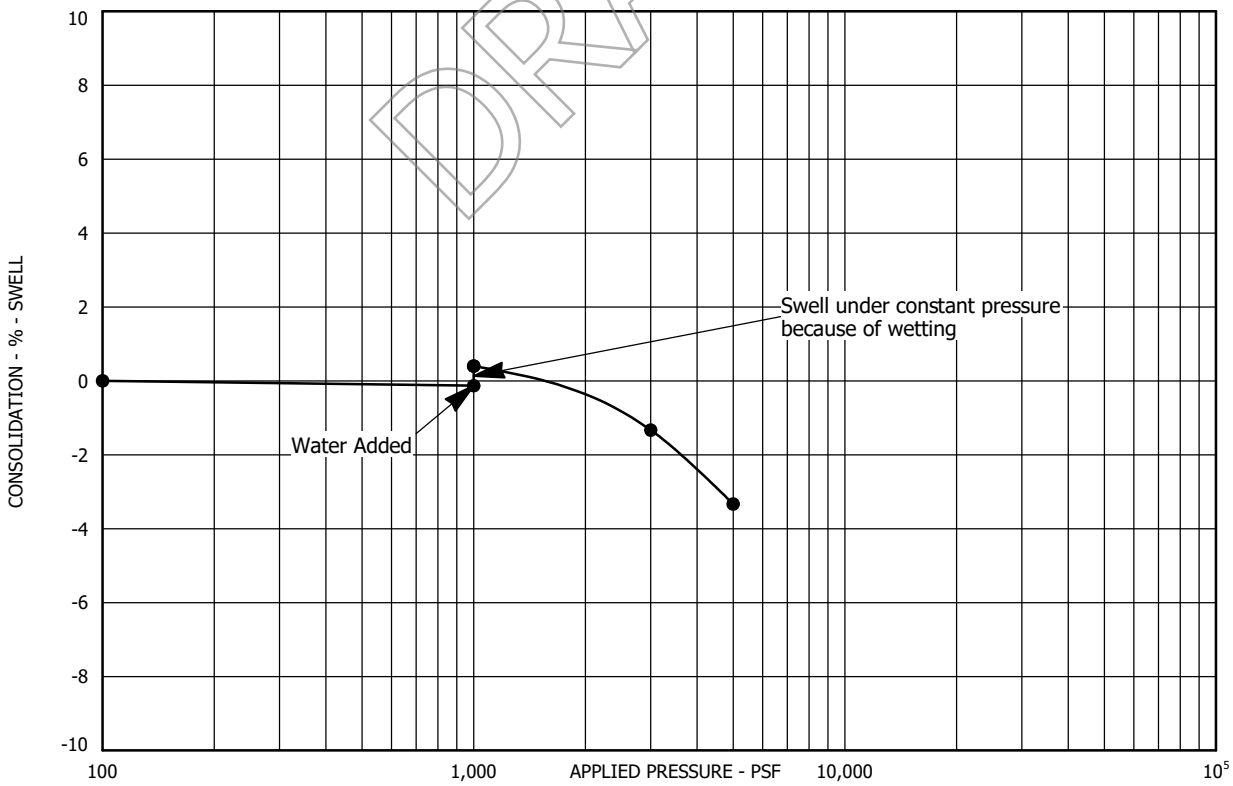
FIGURE A-6

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 5 at a depth of 29 feet
Sample Description: Claystone, trace sand
Dry Unit Weight (pcf): 100
Moisture Content (%): 19

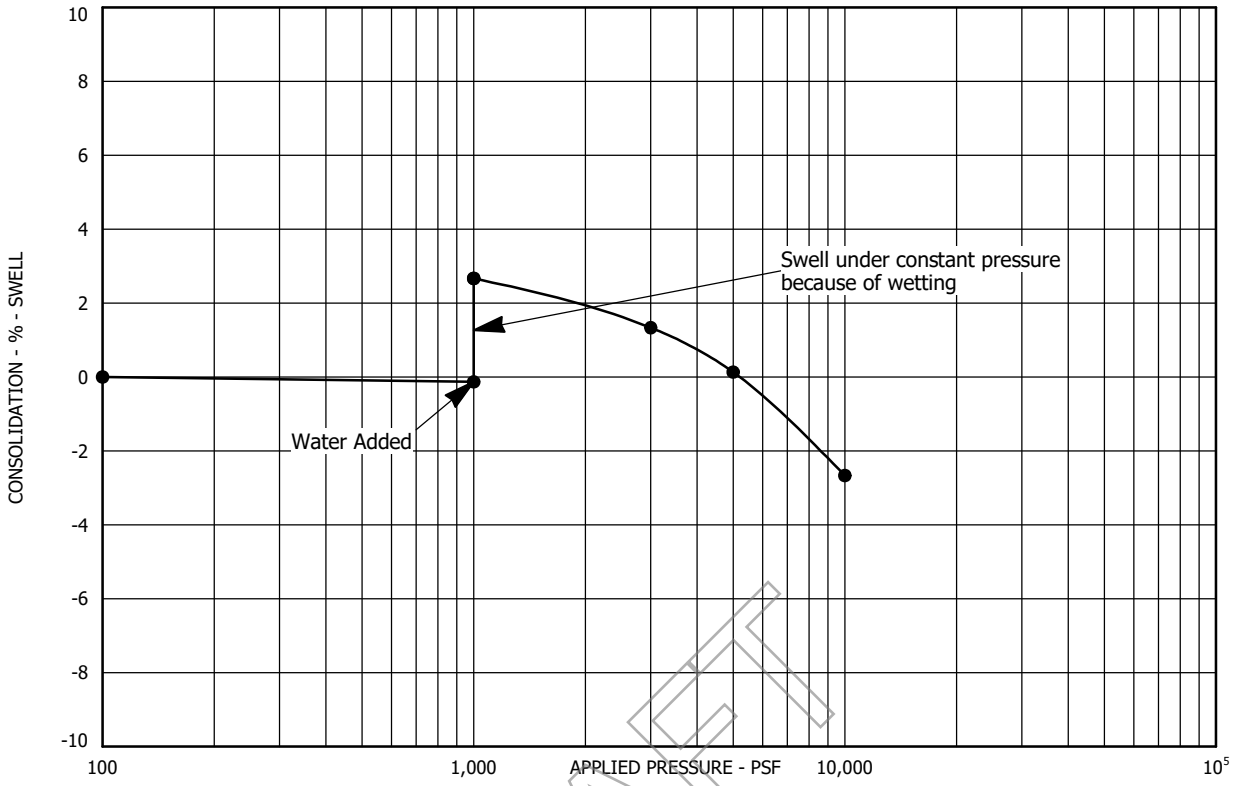


Sample Location: Test Boring No. 6 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 101
Moisture Content (%): 7

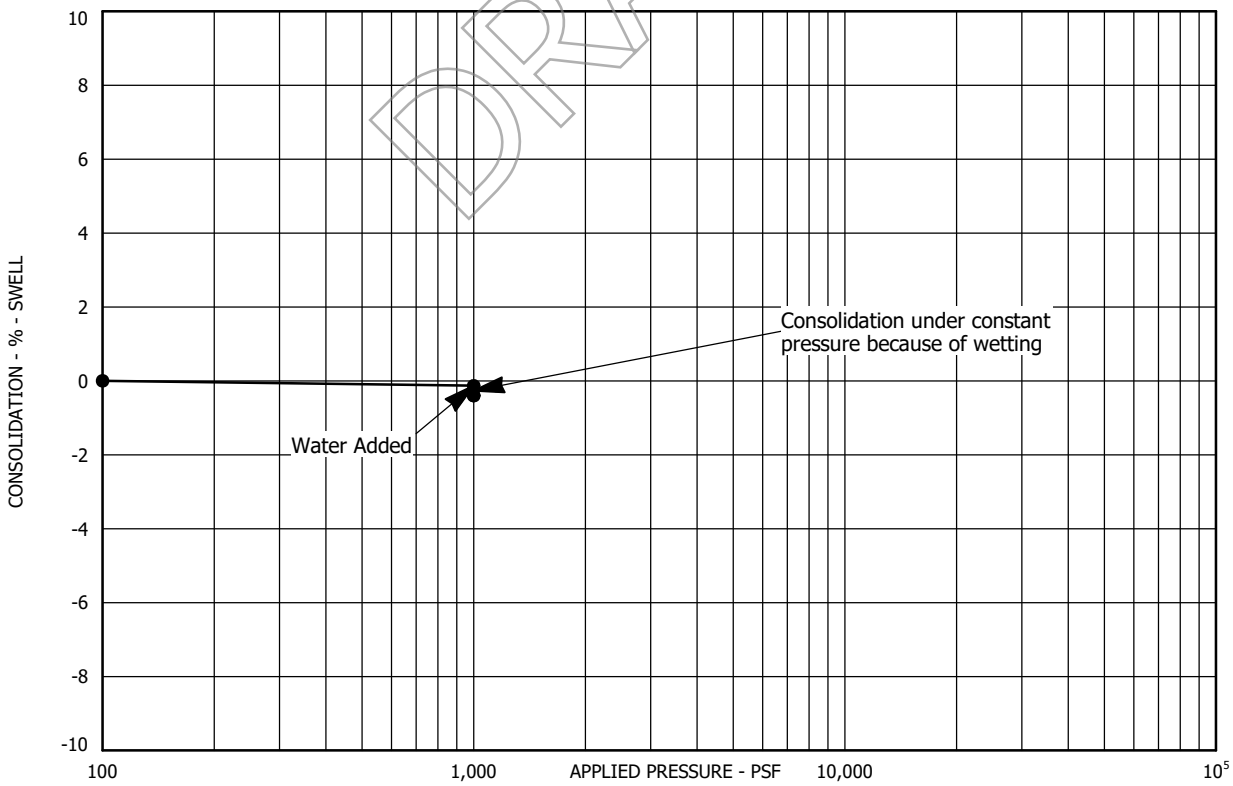
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-7

PROJECT NO. 213216



Sample Location: Test Boring No. 7 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 10



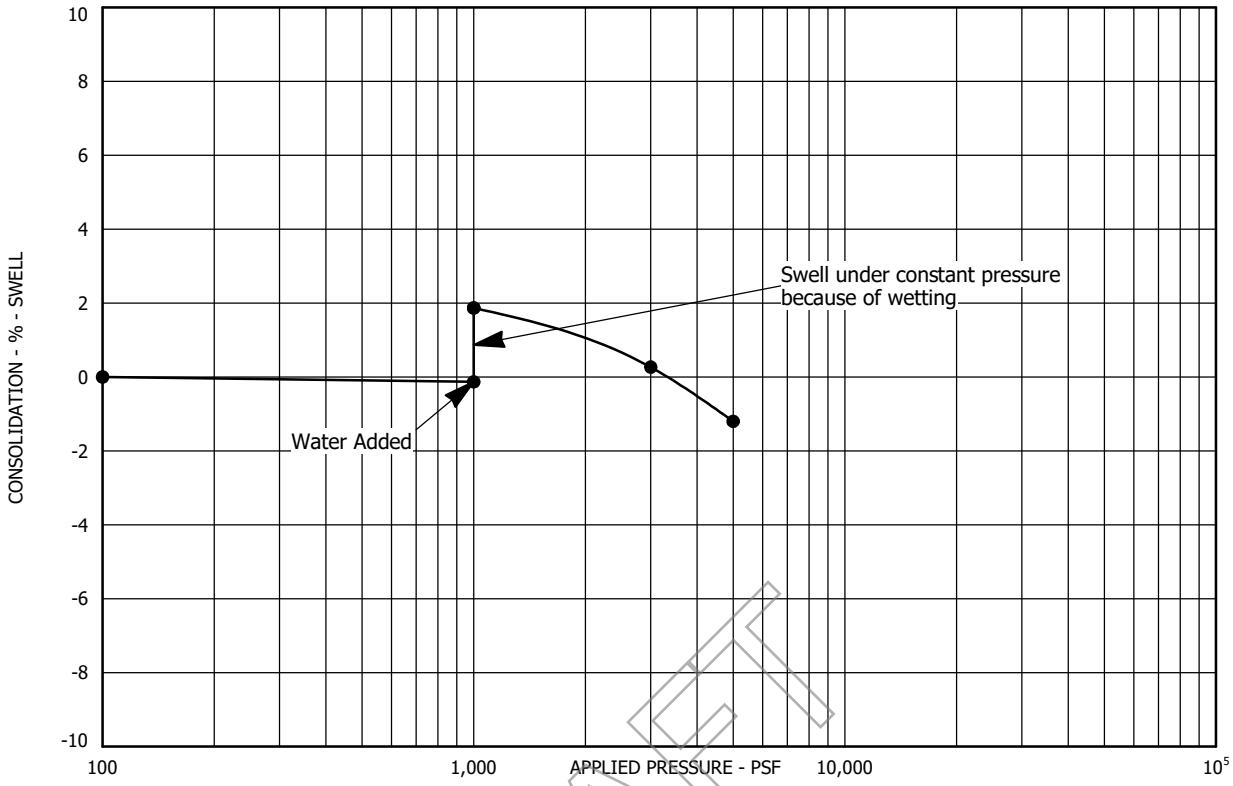
Sample Location: Test Boring No. 7 at a depth of 7 feet
Sample Description: Sand, very clayey (lens)
Dry Unit Weight (pcf): 105
Moisture Content (%): 7

SWELL - CONSOLIDATION TEST RESULTS

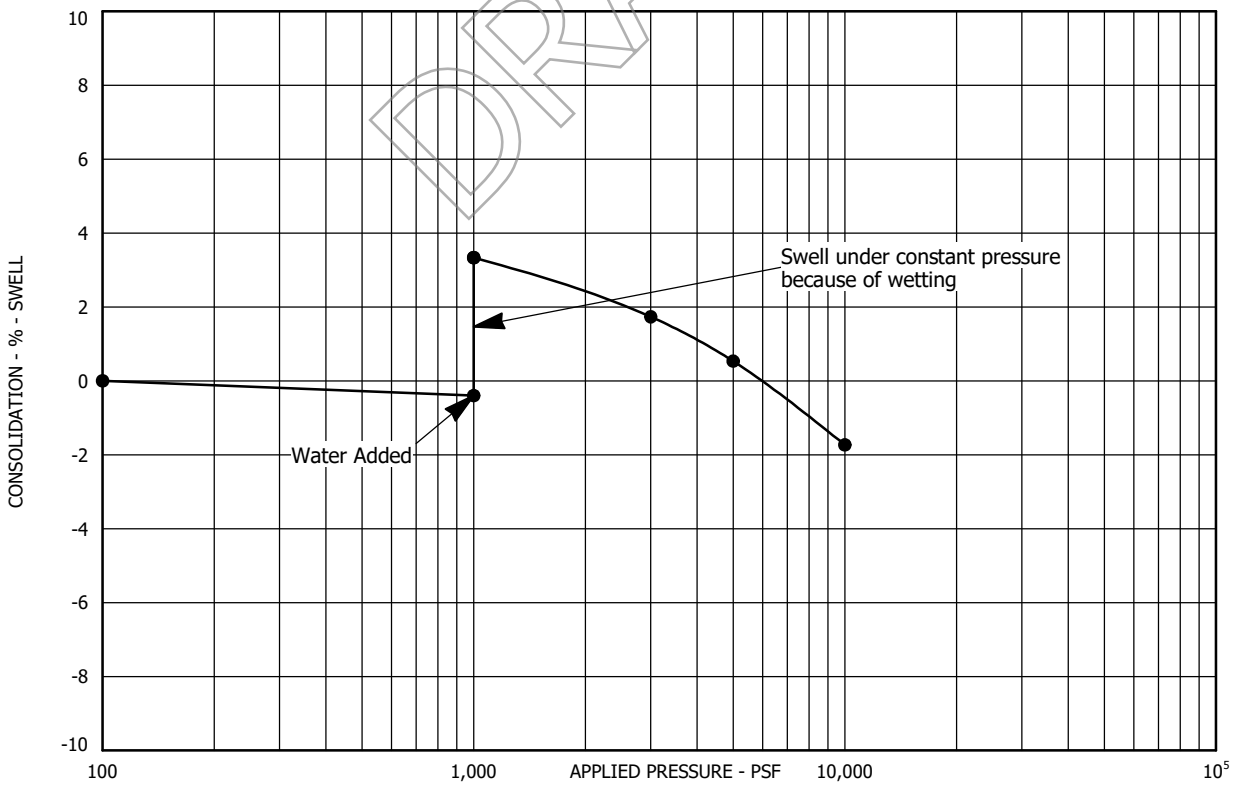
FIGURE A-8

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 8 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 10



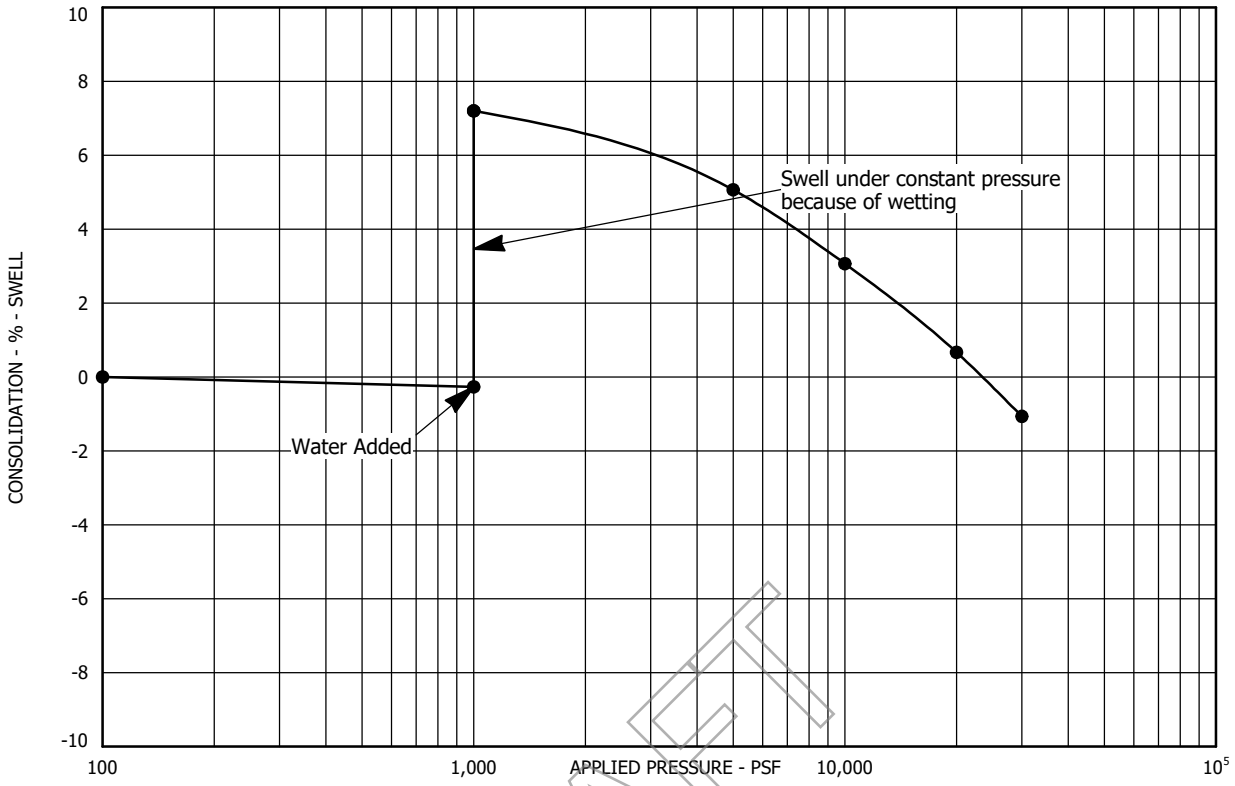
Sample Location: Test Boring No. 8 at a depth of 34 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 107
Moisture Content (%): 17

SWELL - CONSOLIDATION TEST RESULTS

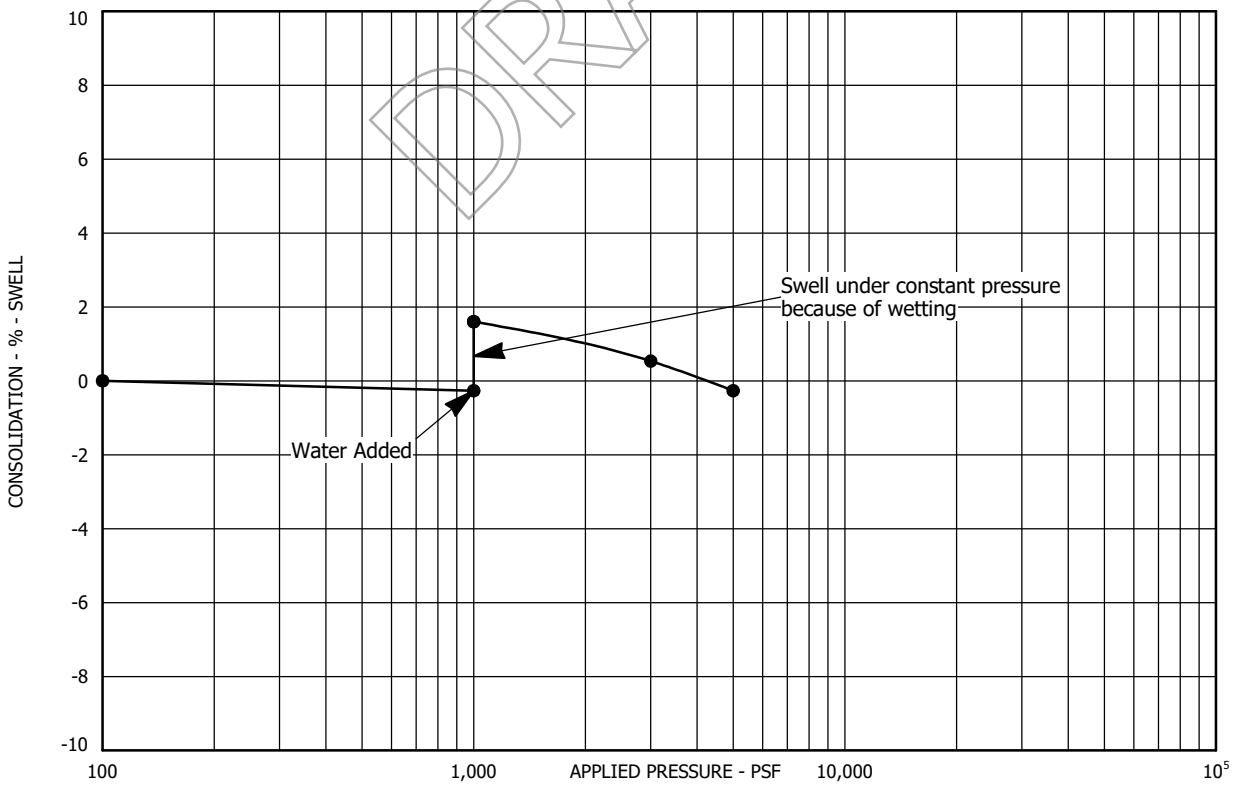
FIGURE A-9

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



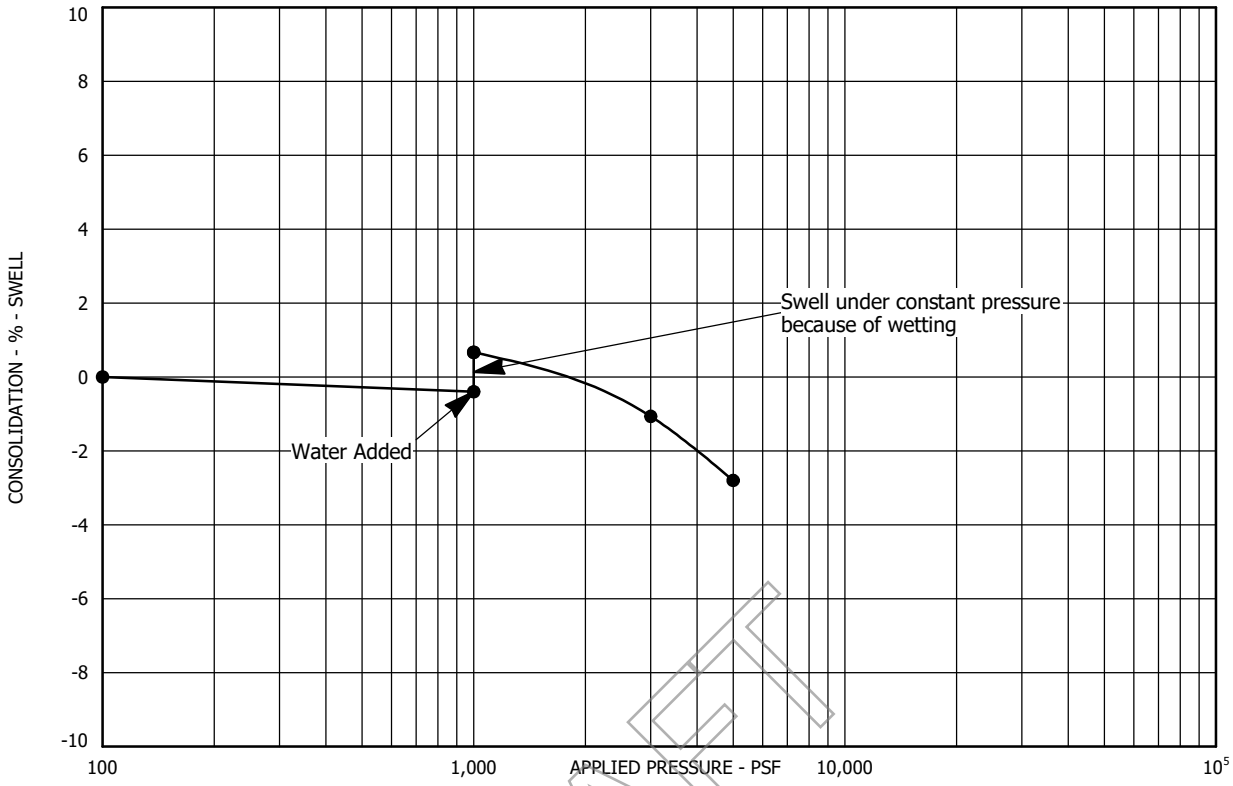
Sample Location: Test Boring No. 9 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 118
Moisture Content (%): 12



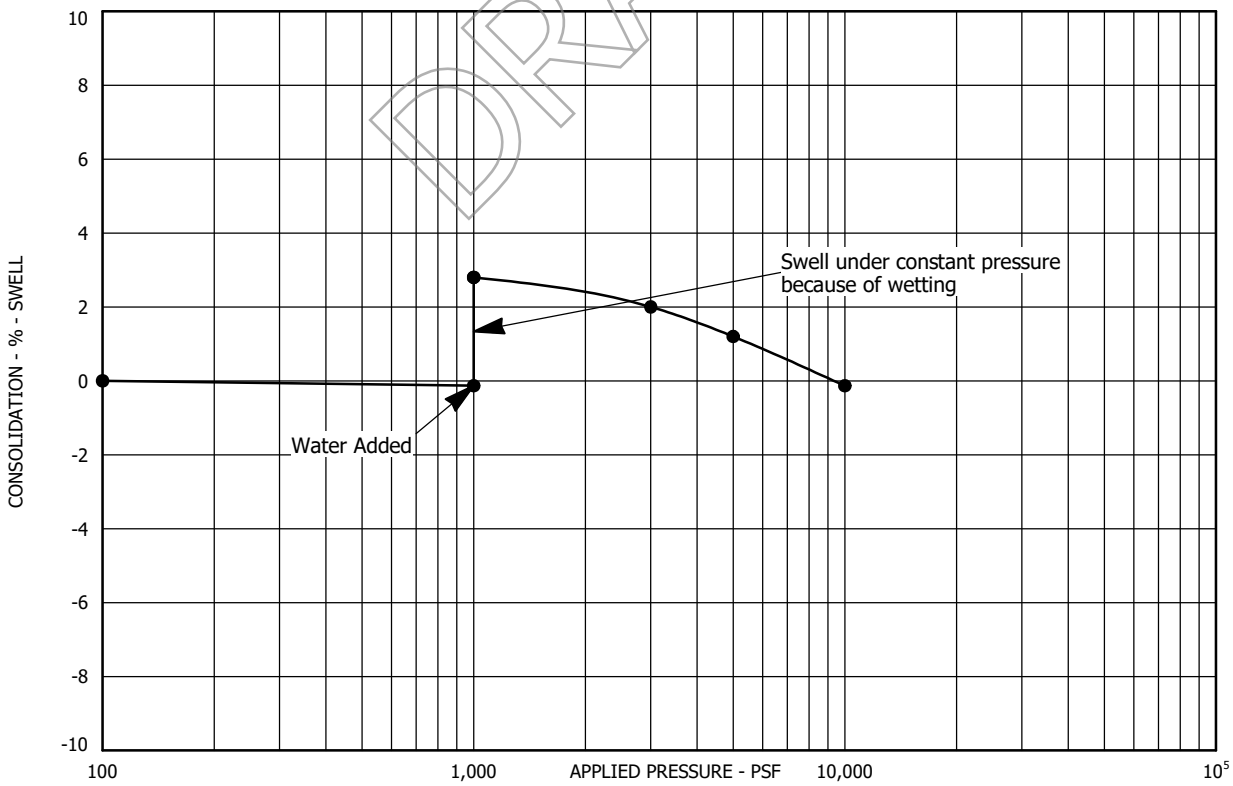
Sample Location: Test Boring No. 9 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-10
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 10 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 8



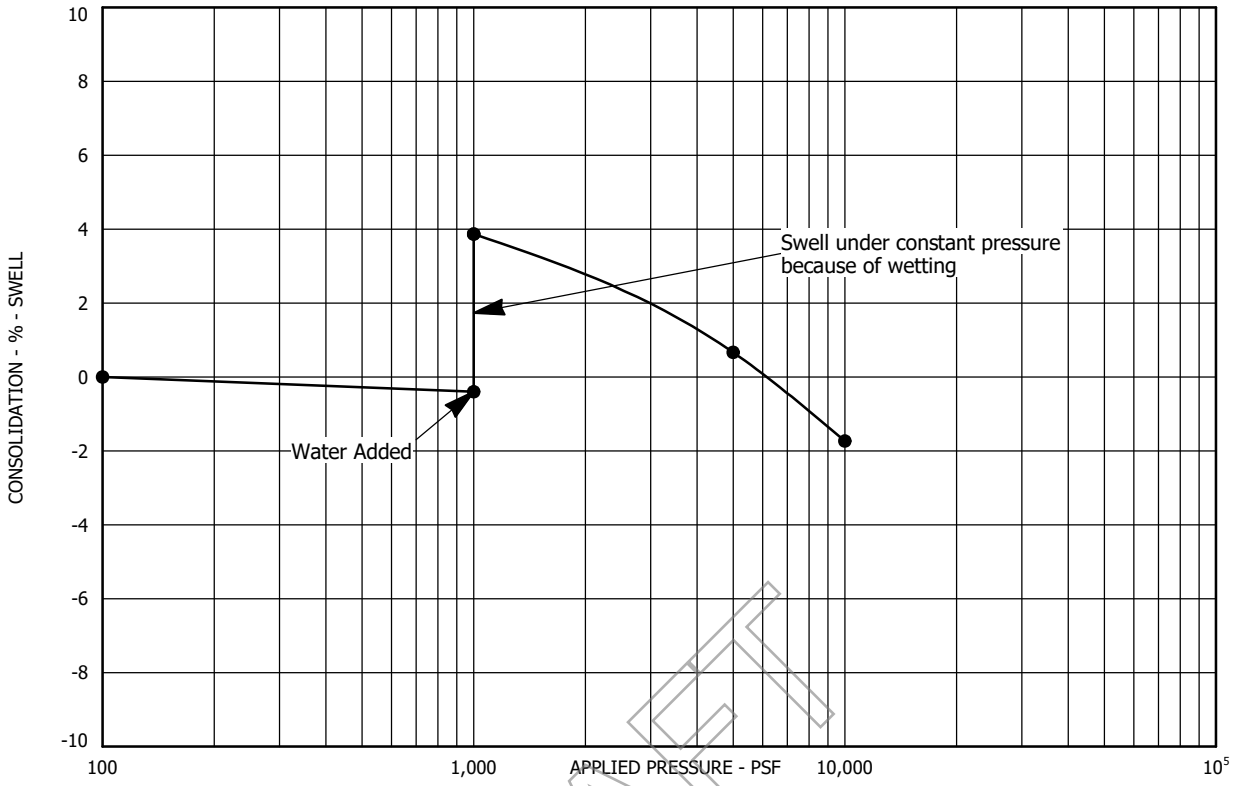
Sample Location: Test Boring No. 10 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 112
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS

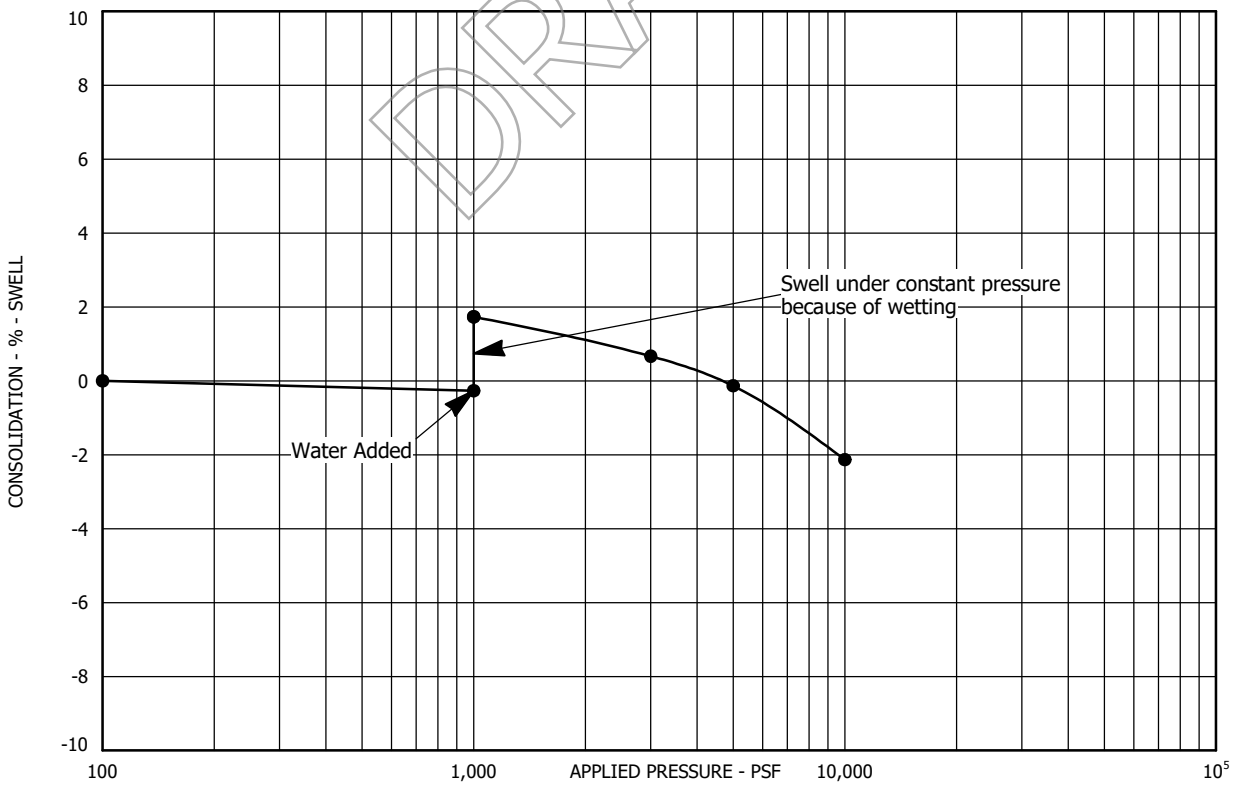
FIGURE A-11

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.

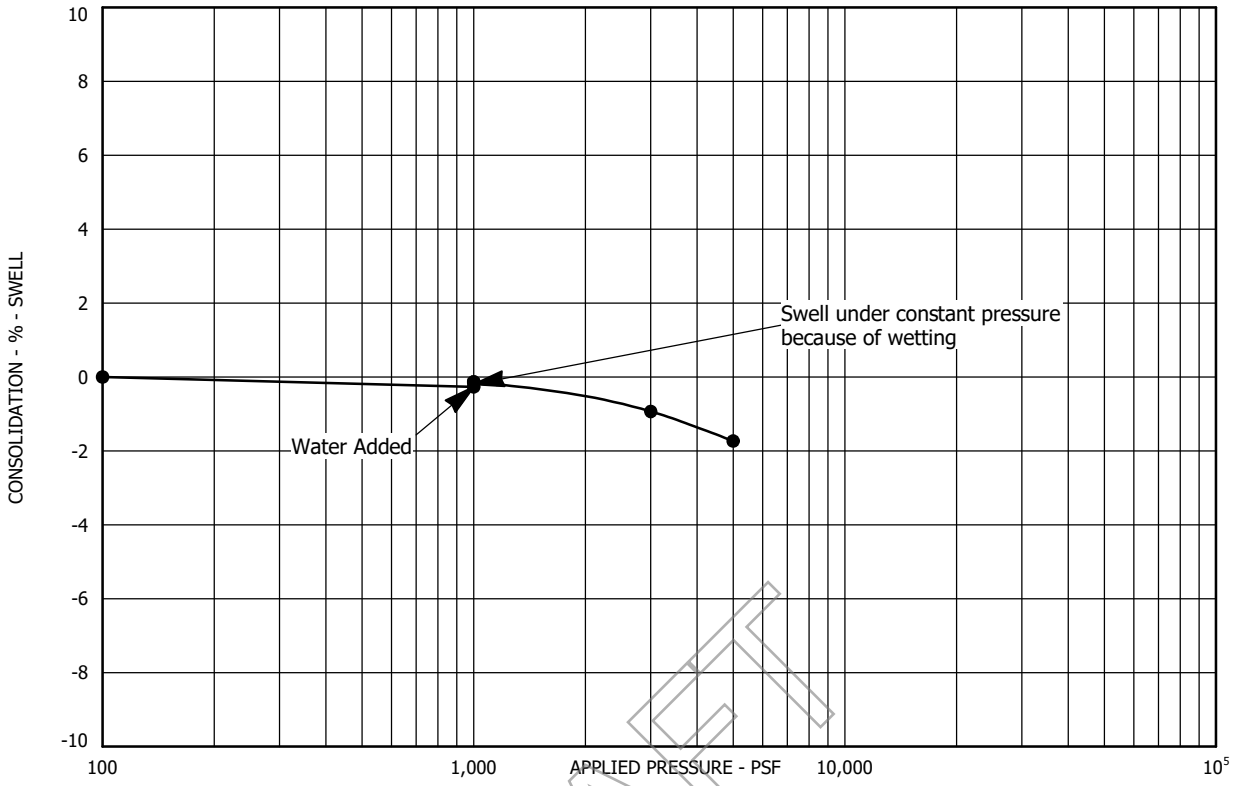


Sample Location: Test Boring No. 10 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 105
Moisture Content (%): 20

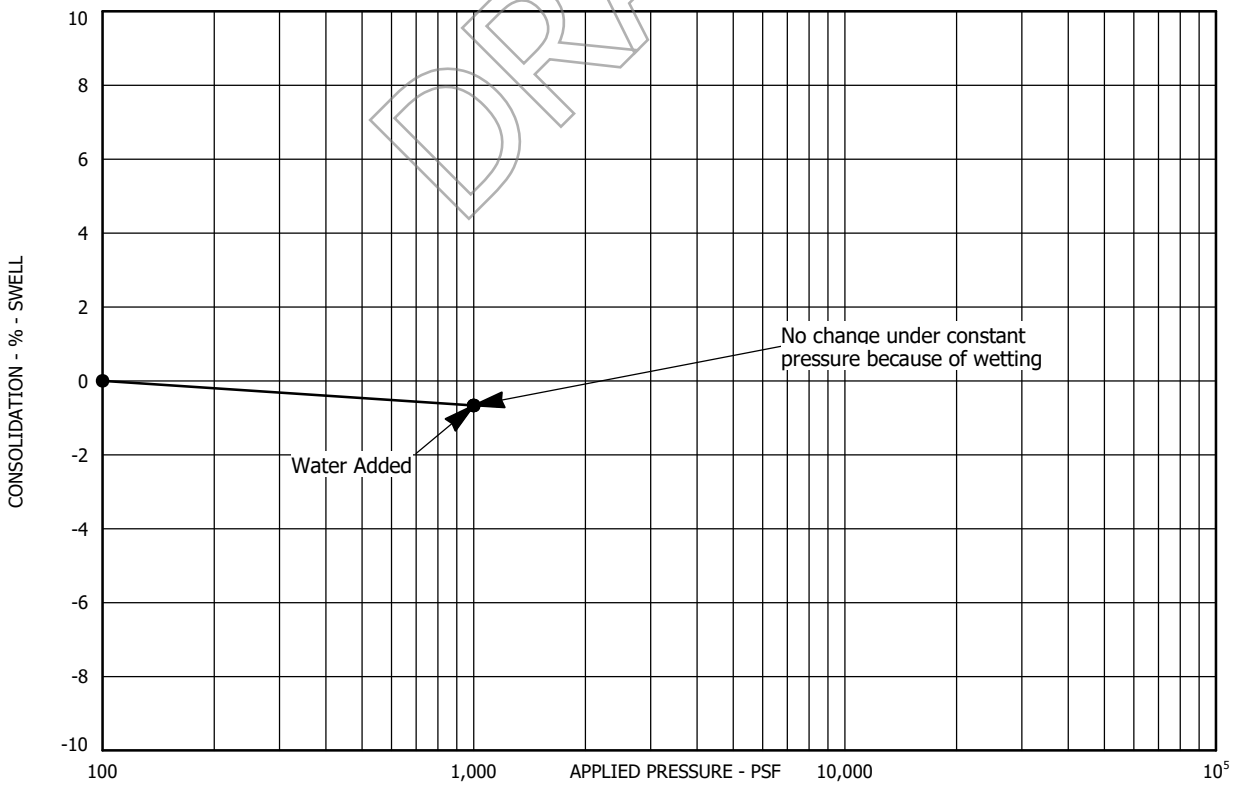


Sample Location: Test Boring No. 11 at a depth of 2 feet
Sample Description: Sand, very clayey (lens)
Dry Unit Weight (pcf): 117
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-12
PROJECT NO. 213216



Sample Location: Test Boring No. 11 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 11



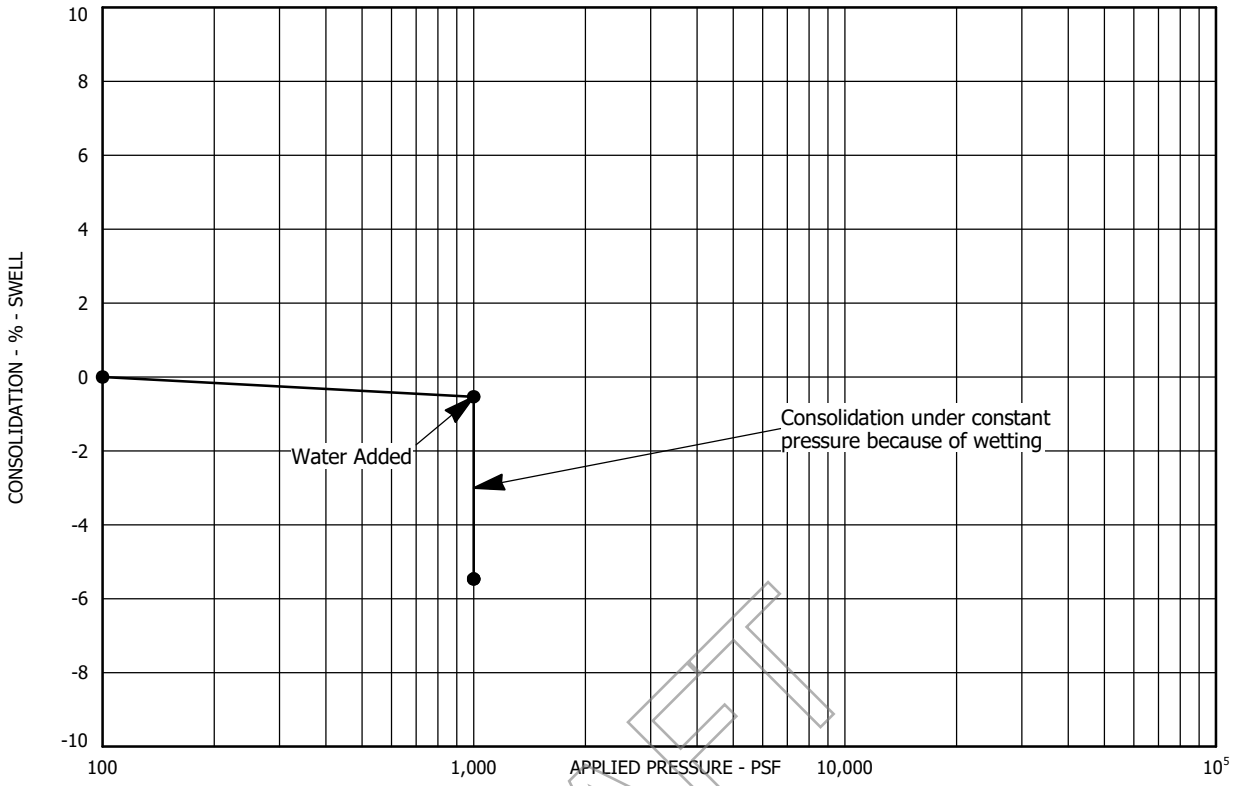
Sample Location: Test Boring No. 11 at a depth of 14 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 90
Moisture Content (%): 18

SWELL - CONSOLIDATION TEST RESULTS

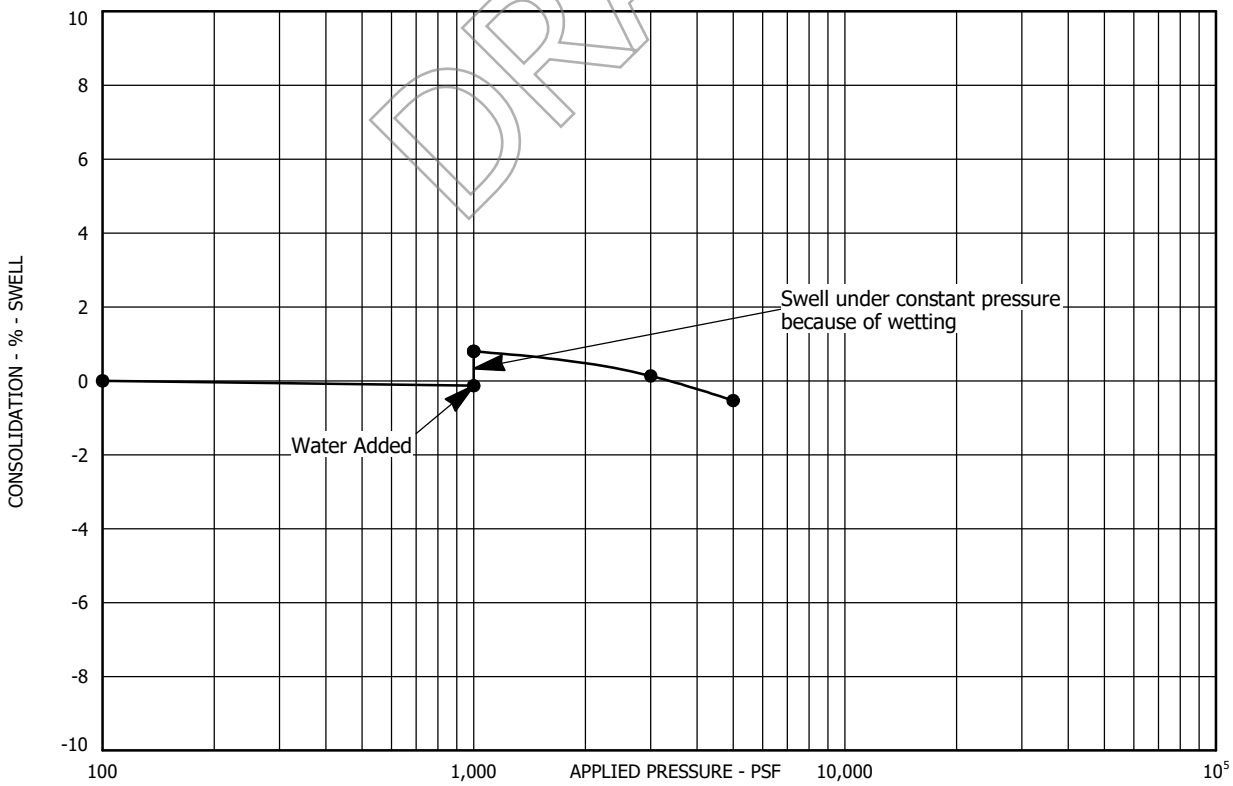
FIGURE A-13

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 12 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 91
Moisture Content (%): 6

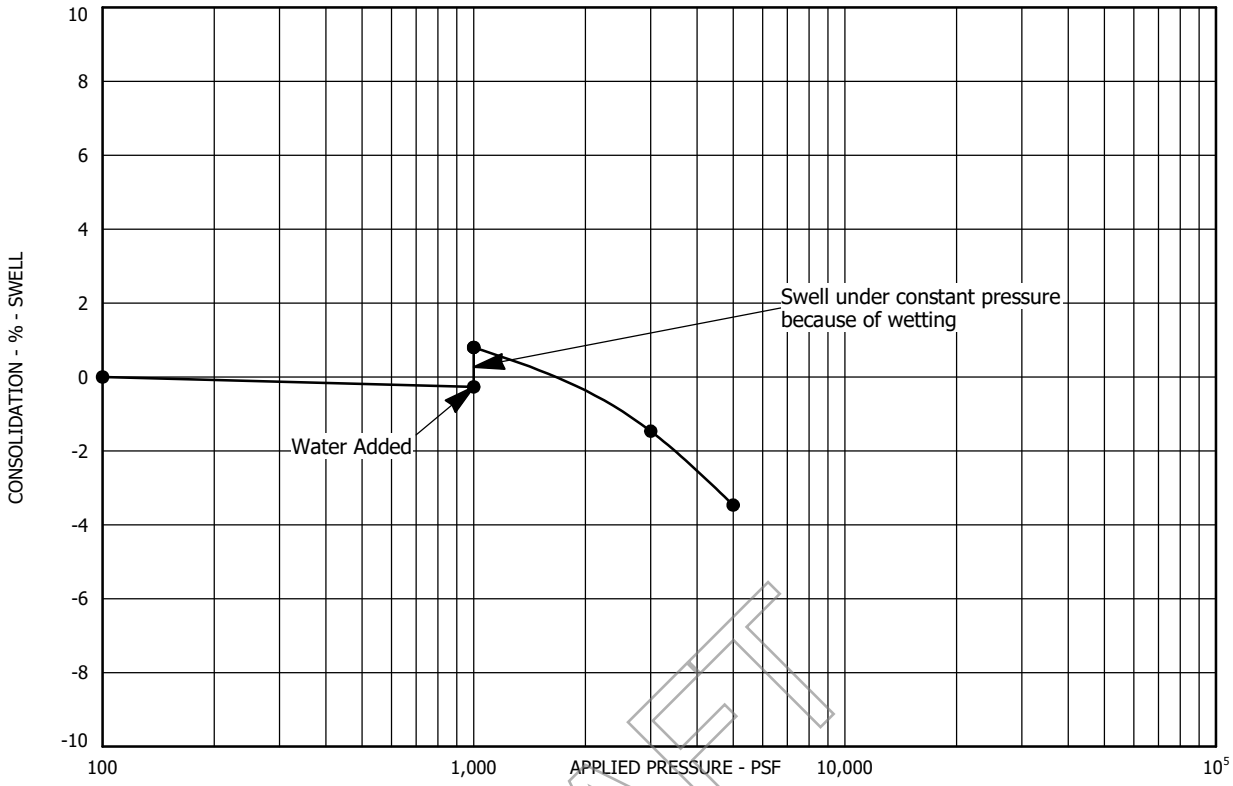


Sample Location: Test Boring No. 13 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 105
Moisture Content (%): 11

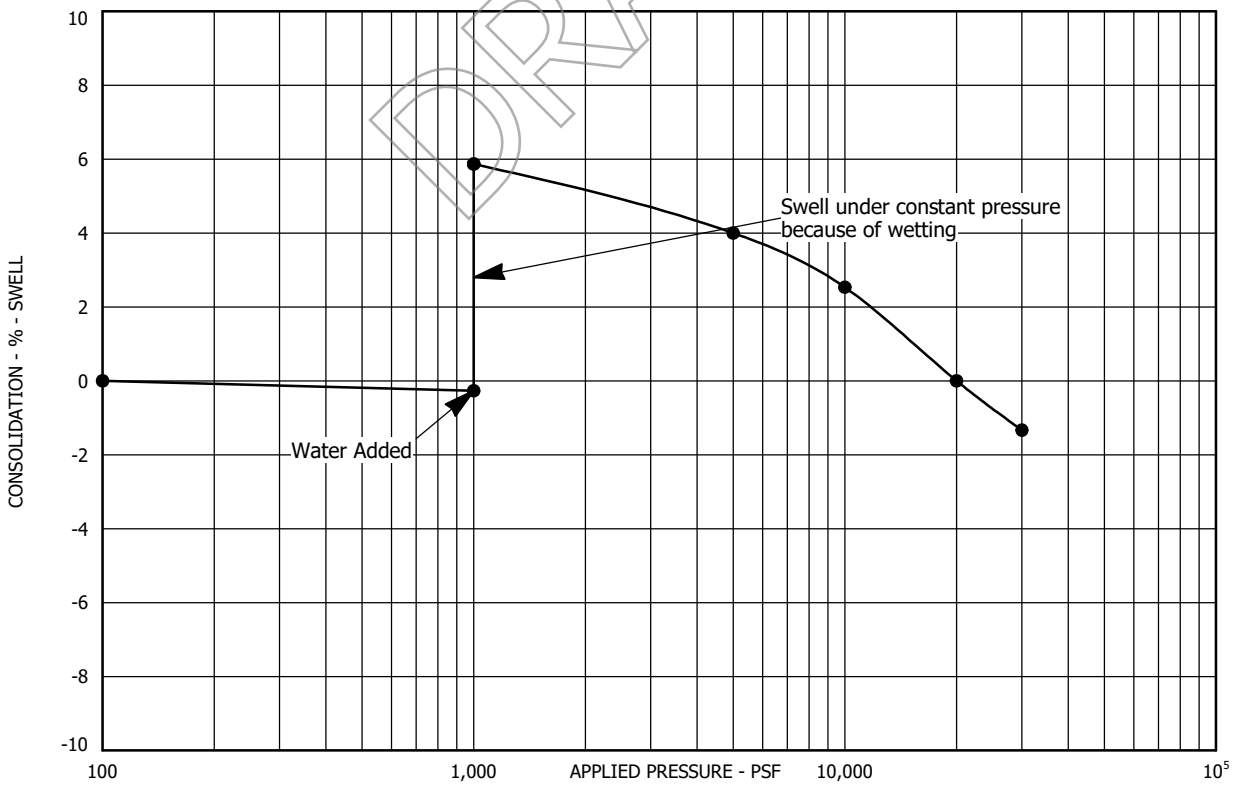
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-14

PROJECT NO. 213216



Sample Location: Test Boring No. 14 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 100
Moisture Content (%): 8



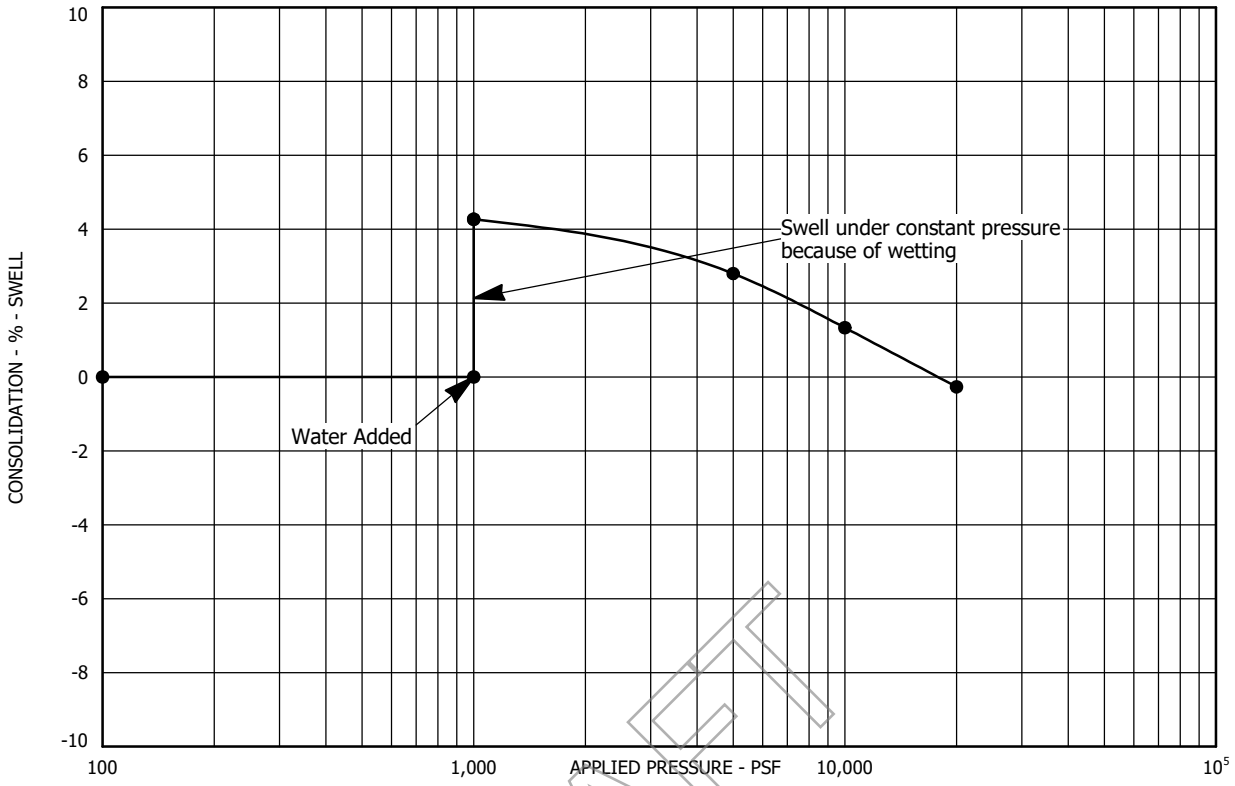
Sample Location: Test Boring No. 15 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 122
Moisture Content (%): 10

SWELL - CONSOLIDATION TEST RESULTS

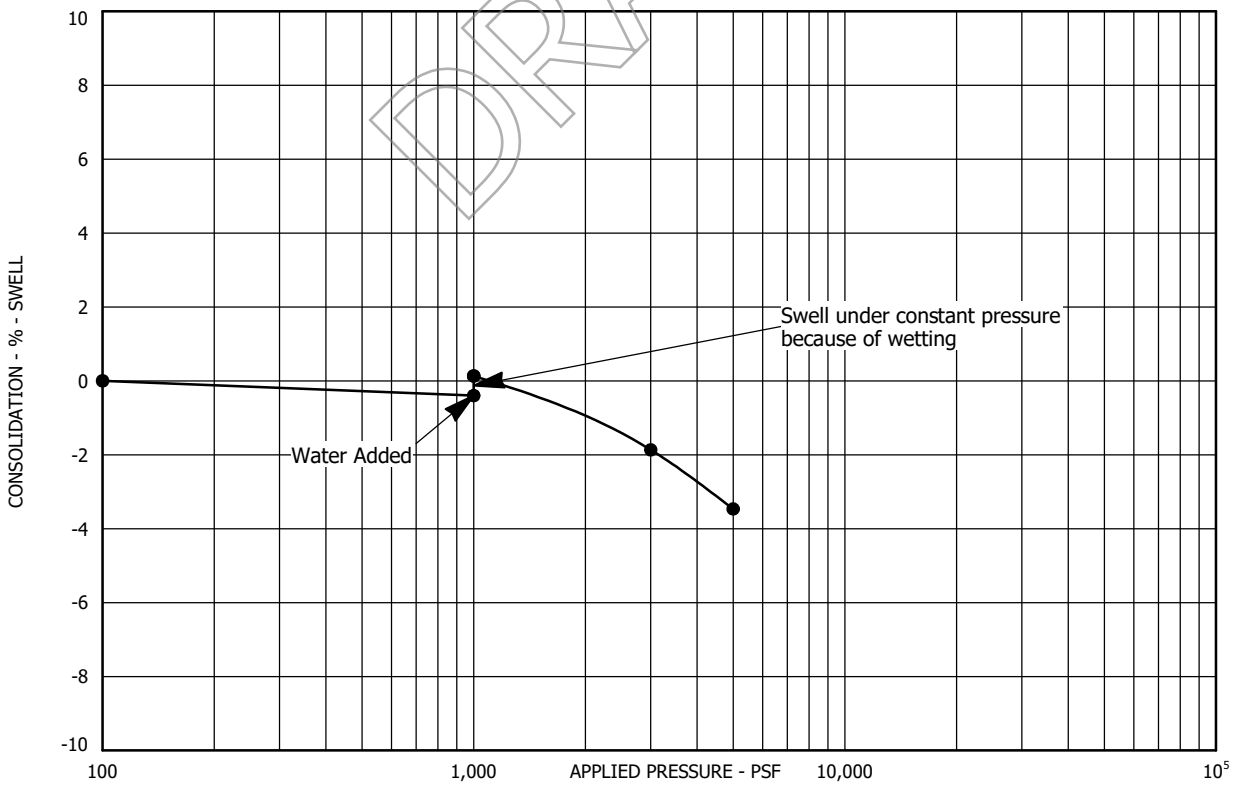
FIGURE A-15

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 15 at a depth of 14 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 16



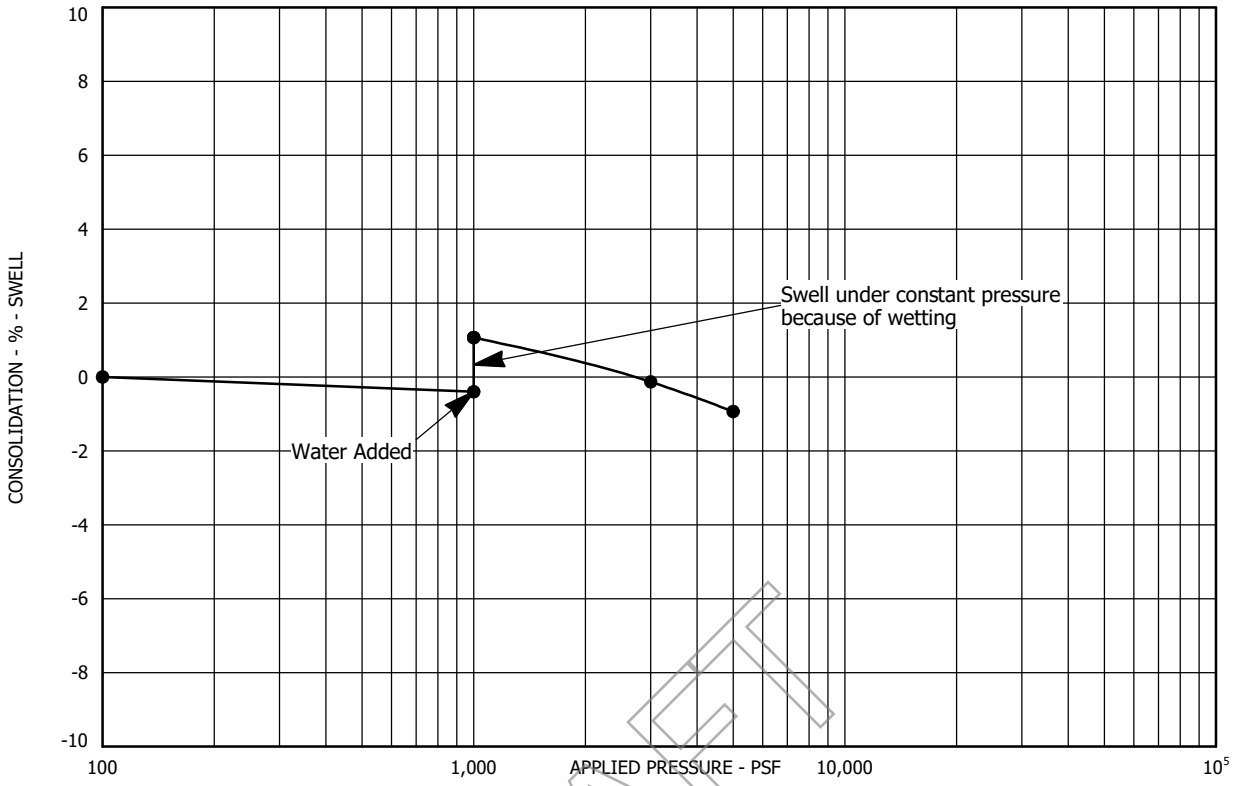
Sample Location: Test Boring No. 16 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 113
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

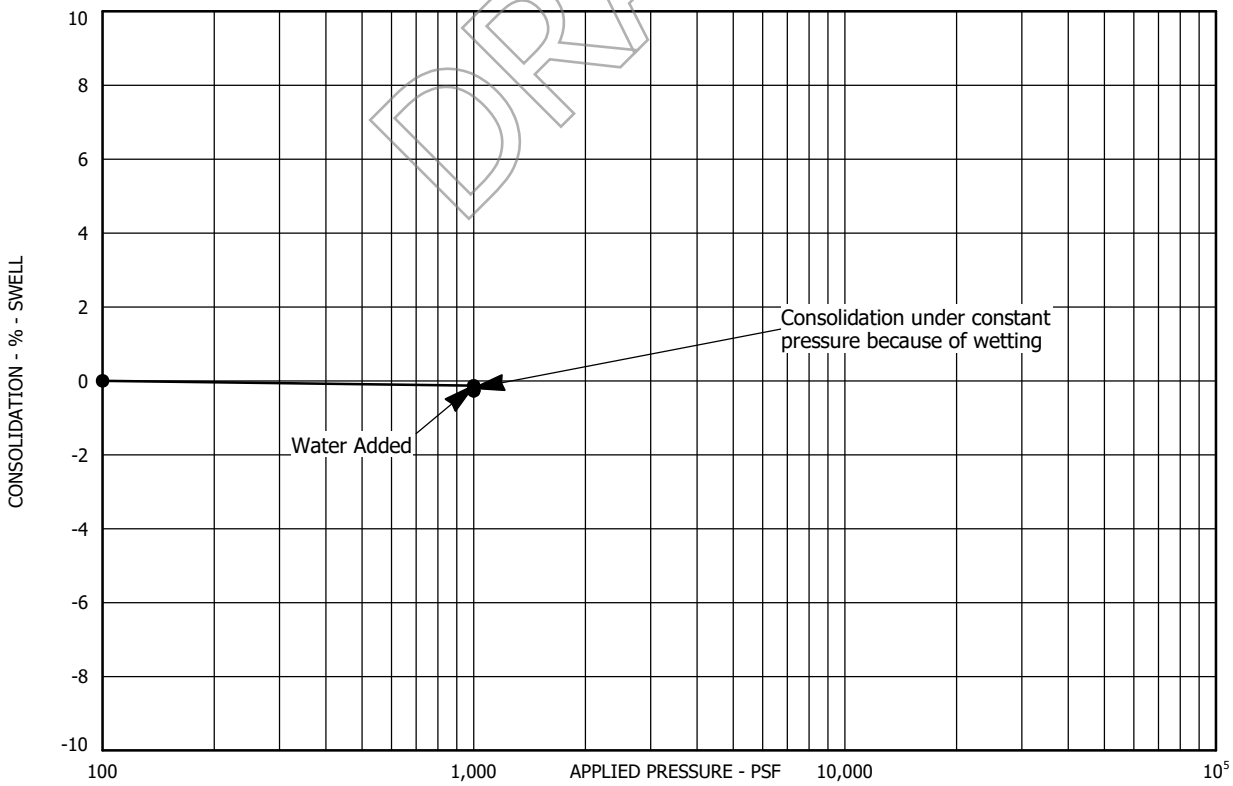
FIGURE A-16

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 16 at a depth of 19 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 11

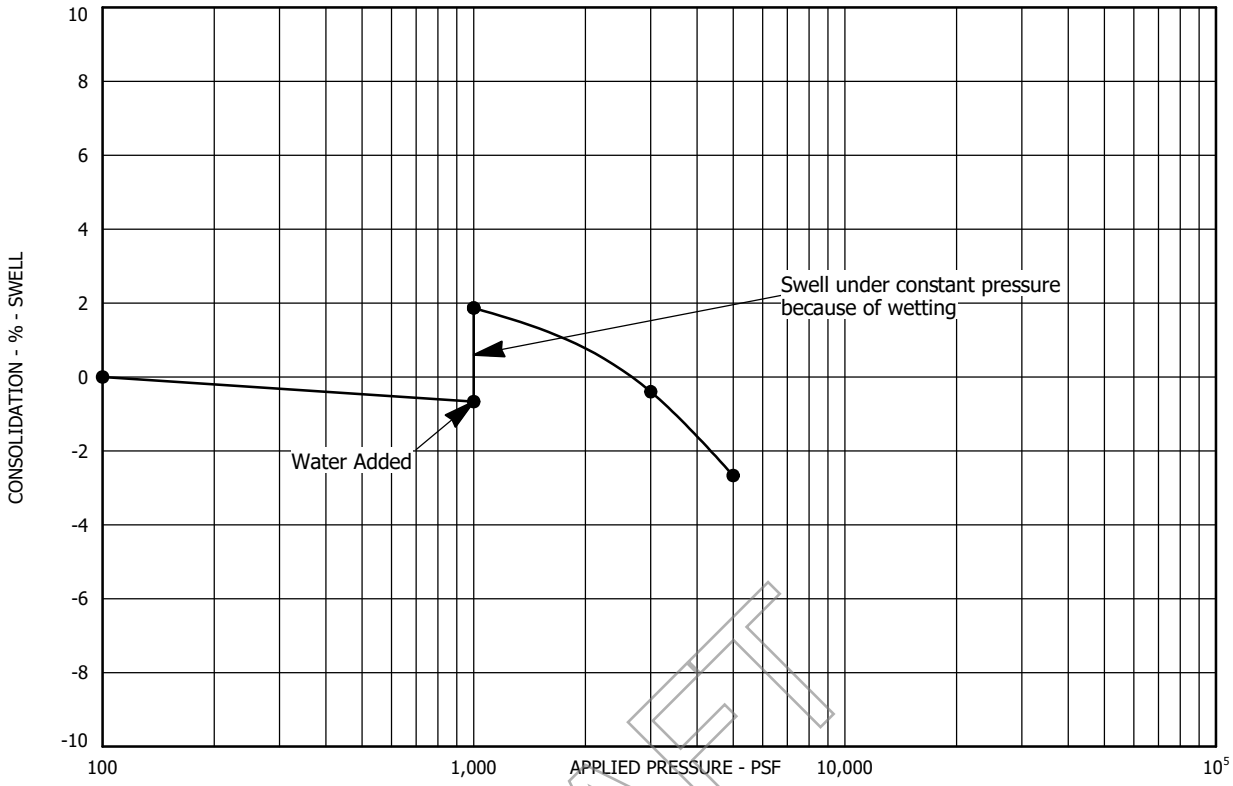


Sample Location: Test Boring No. 17 at a depth of 7 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 116
Moisture Content (%): 12

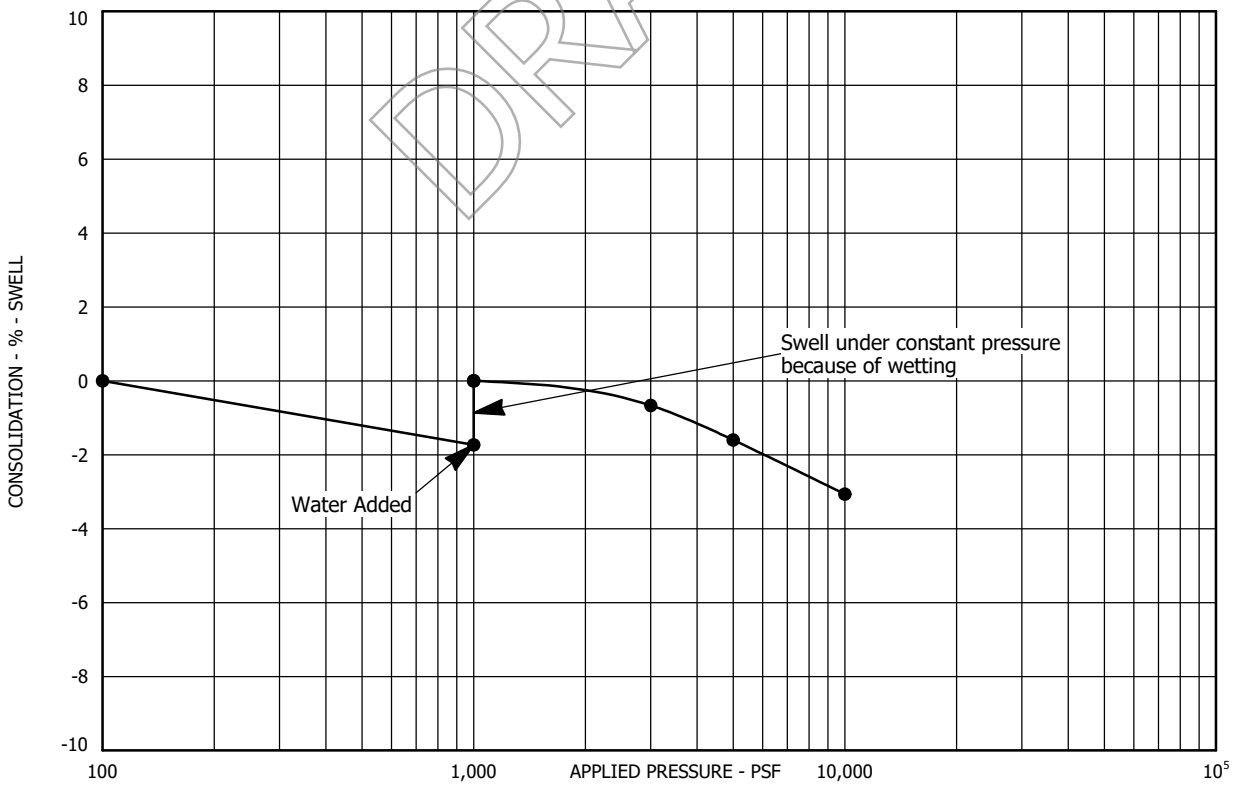
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-17

PROJECT NO. 213216



Sample Location: Test Boring No. 17 at a depth of 34 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 71
Moisture Content (%): 50



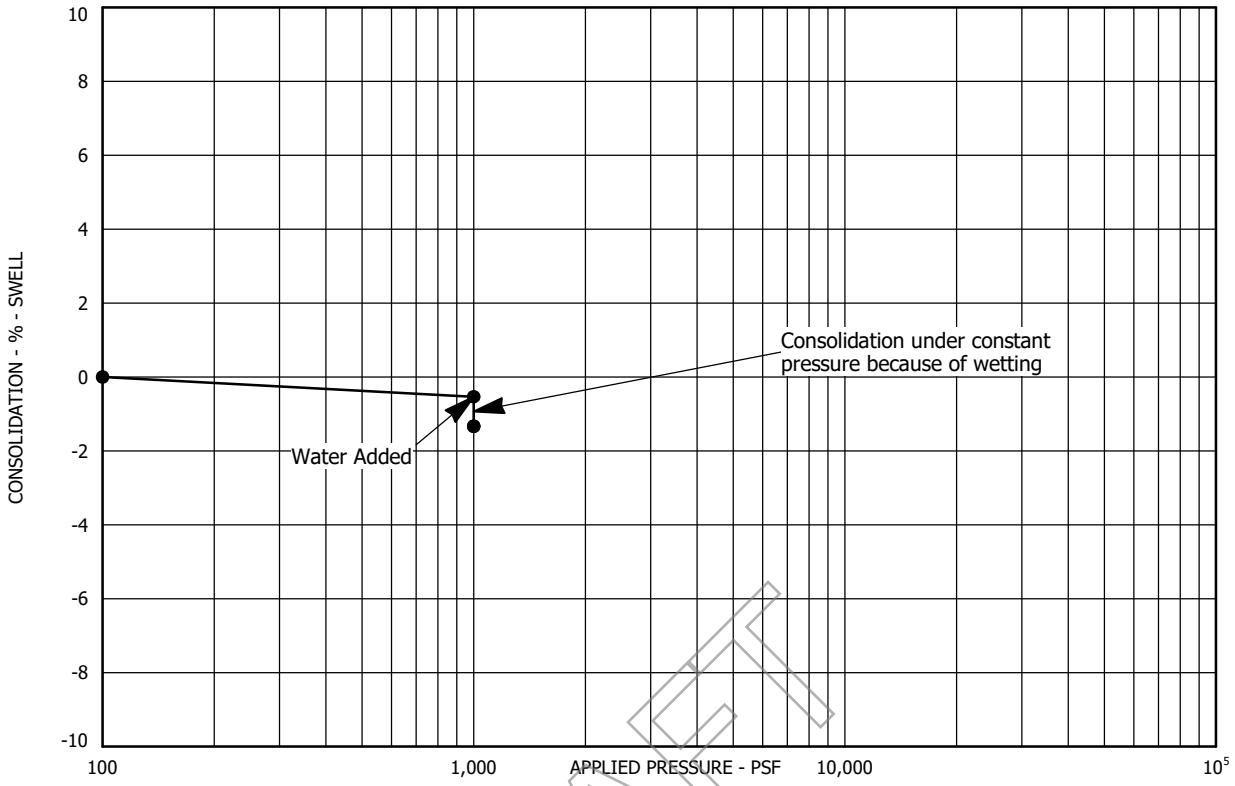
Sample Location: Test Boring No. 18 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 6

SWELL - CONSOLIDATION TEST RESULTS

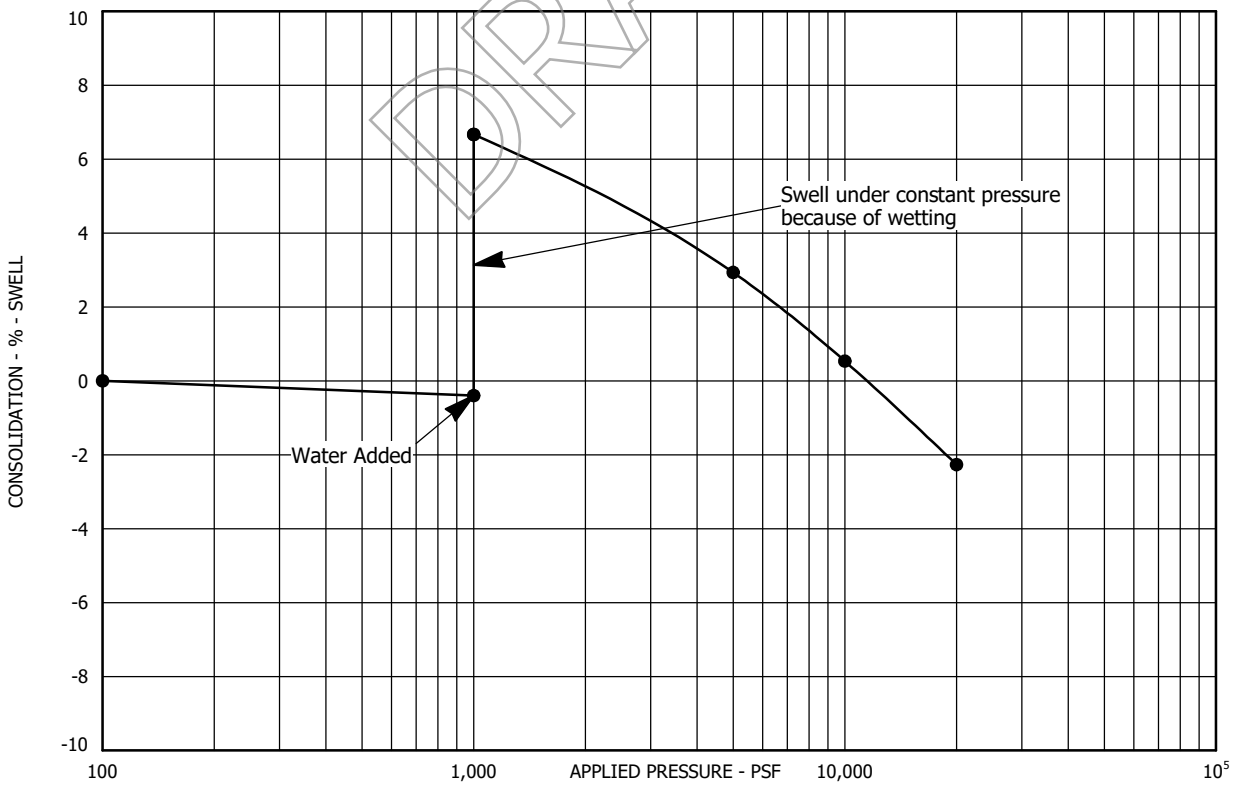
FIGURE A-18

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 18 at a depth of 14 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 12



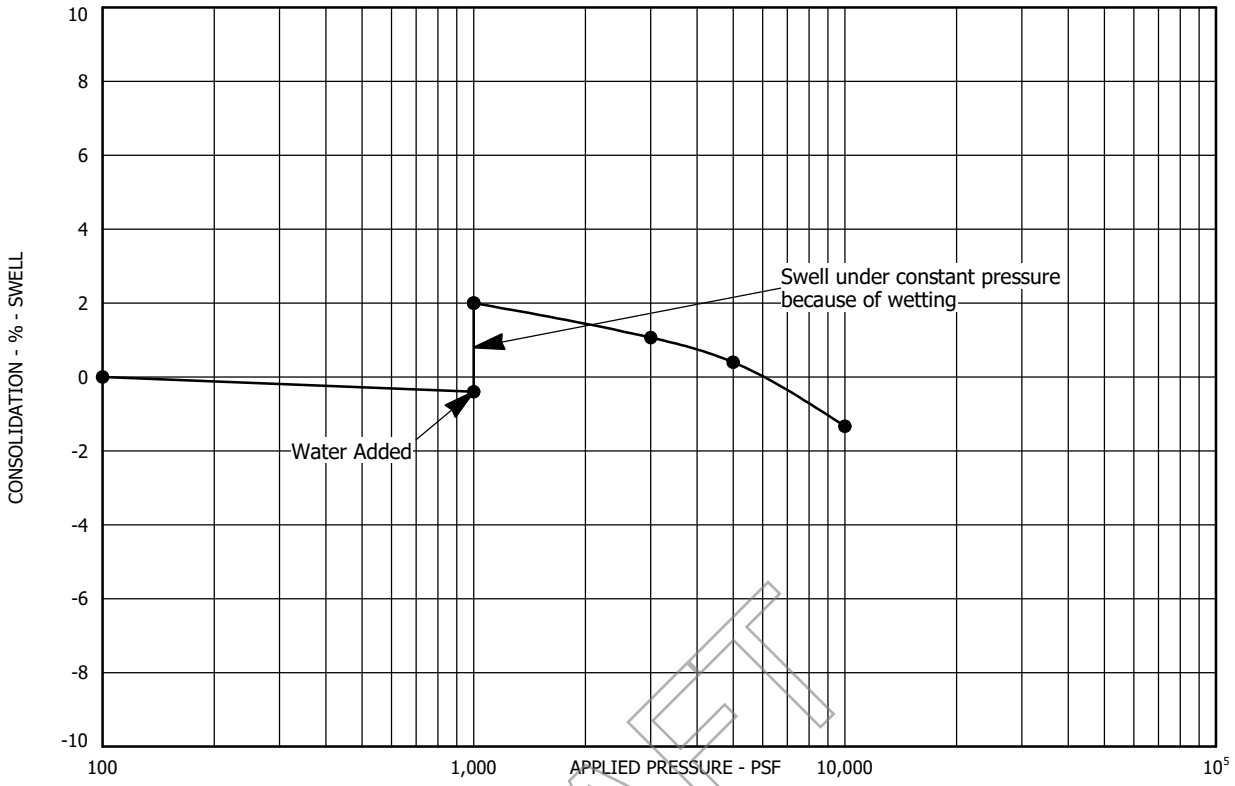
Sample Location: Test Boring No. 18 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 17

SWELL - CONSOLIDATION TEST RESULTS

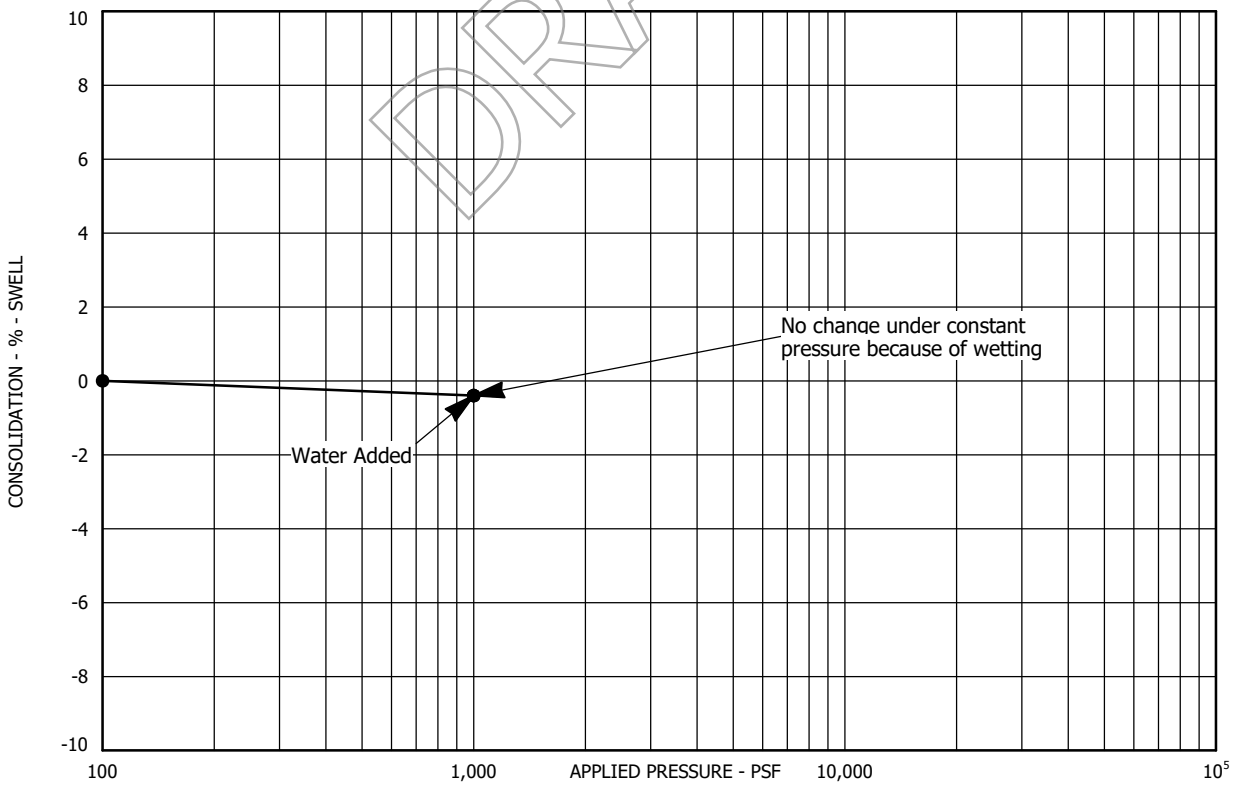
FIGURE A-19

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 19 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 110
Moisture Content (%): 10



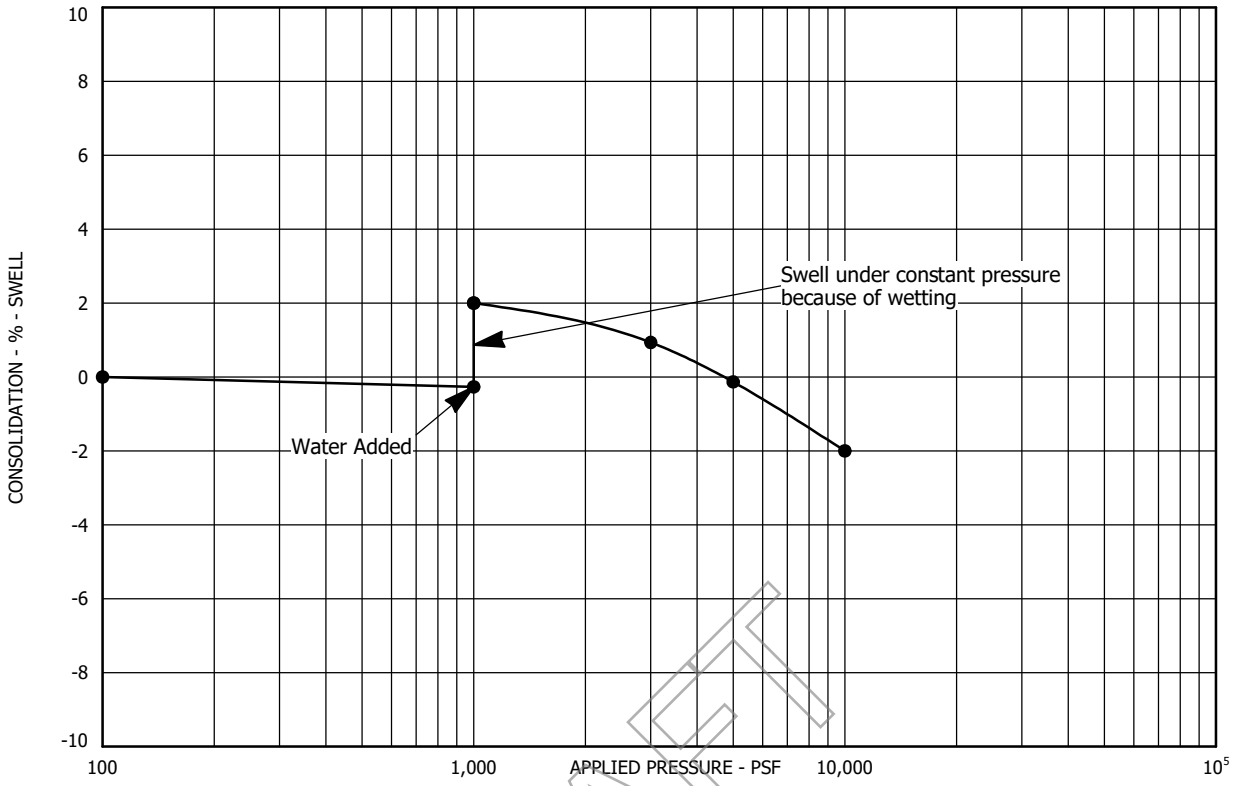
Sample Location: Test Boring No. 19 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 105
Moisture Content (%): 10

SWELL - CONSOLIDATION TEST RESULTS

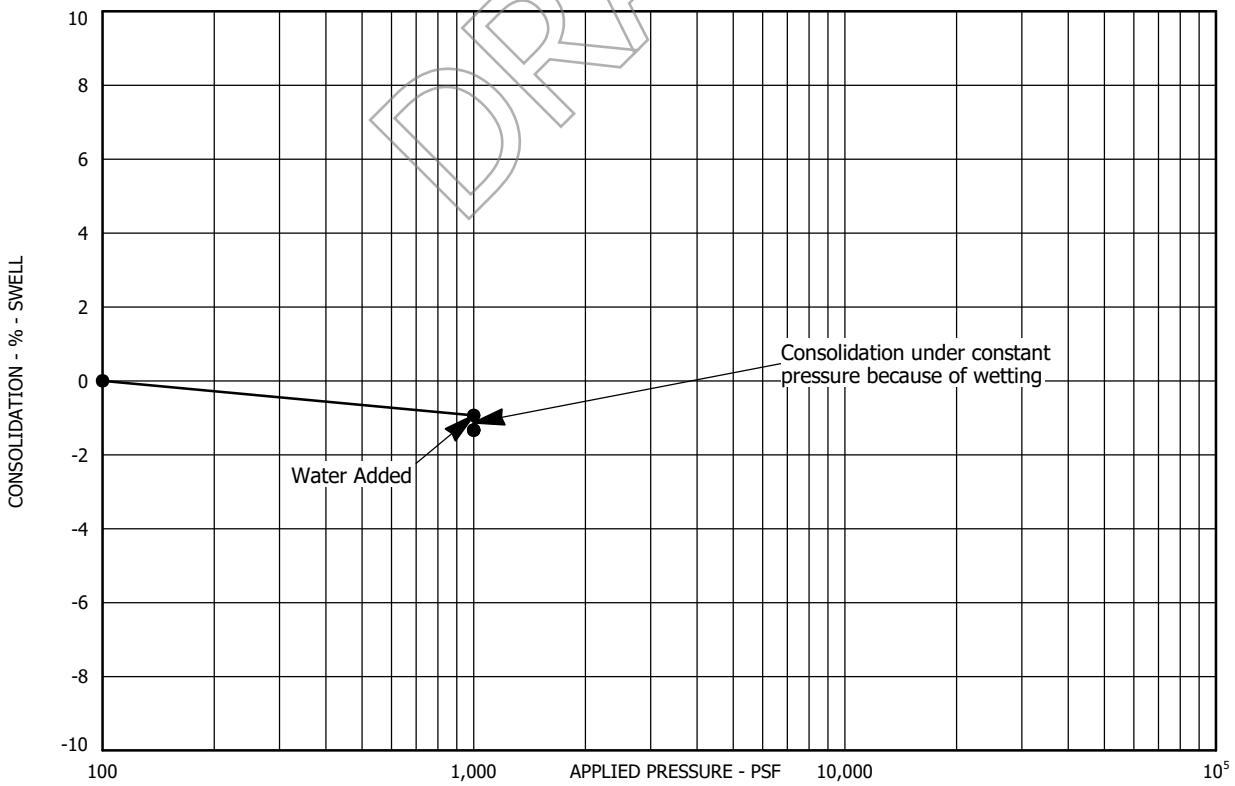
FIGURE A-20

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 20 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 13

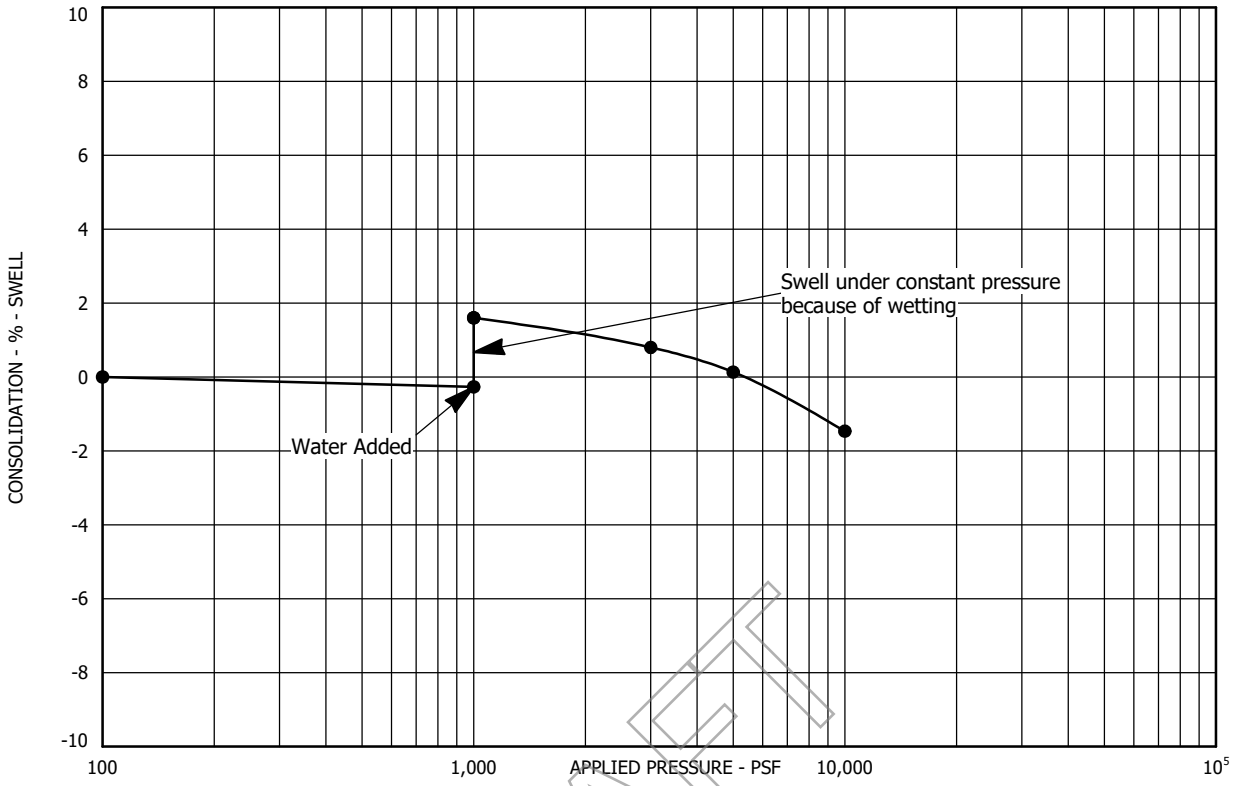


Sample Location: Test Boring No. 20 at a depth of 14 feet
Sample Description: Sand, clayey
Dry Unit Weight (pcf): 100
Moisture Content (%): 15

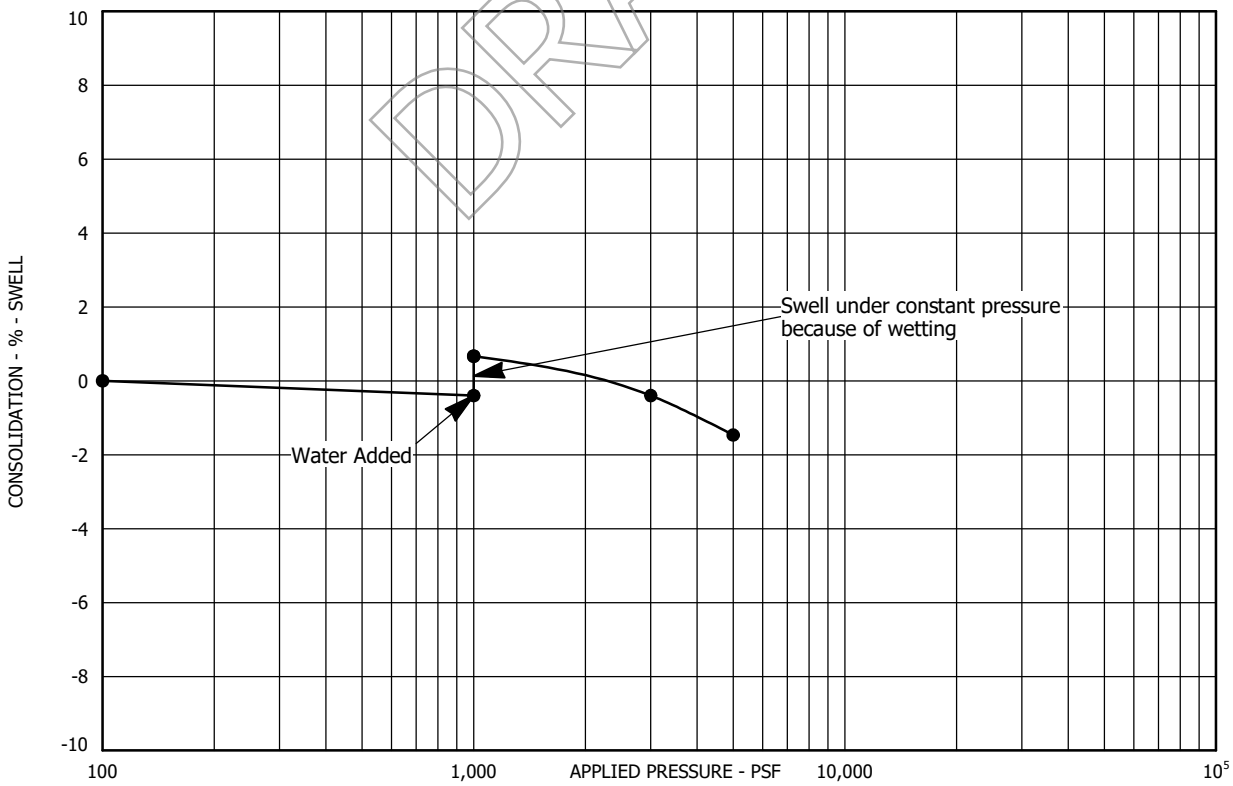
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-21

PROJECT NO. 213216



Sample Location: Test Boring No. 21 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 7



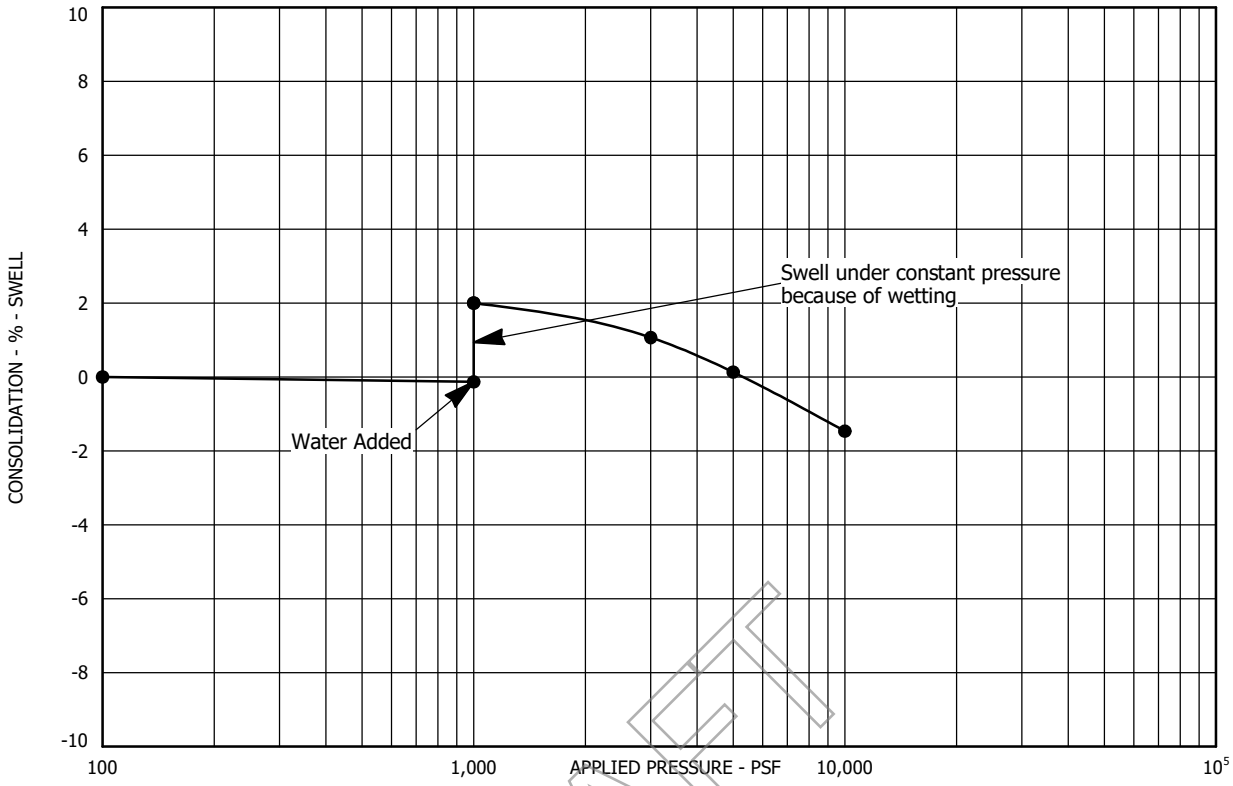
Sample Location: Test Boring No. 21 at a depth of 14 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 103
Moisture Content (%): 21

SWELL - CONSOLIDATION TEST RESULTS

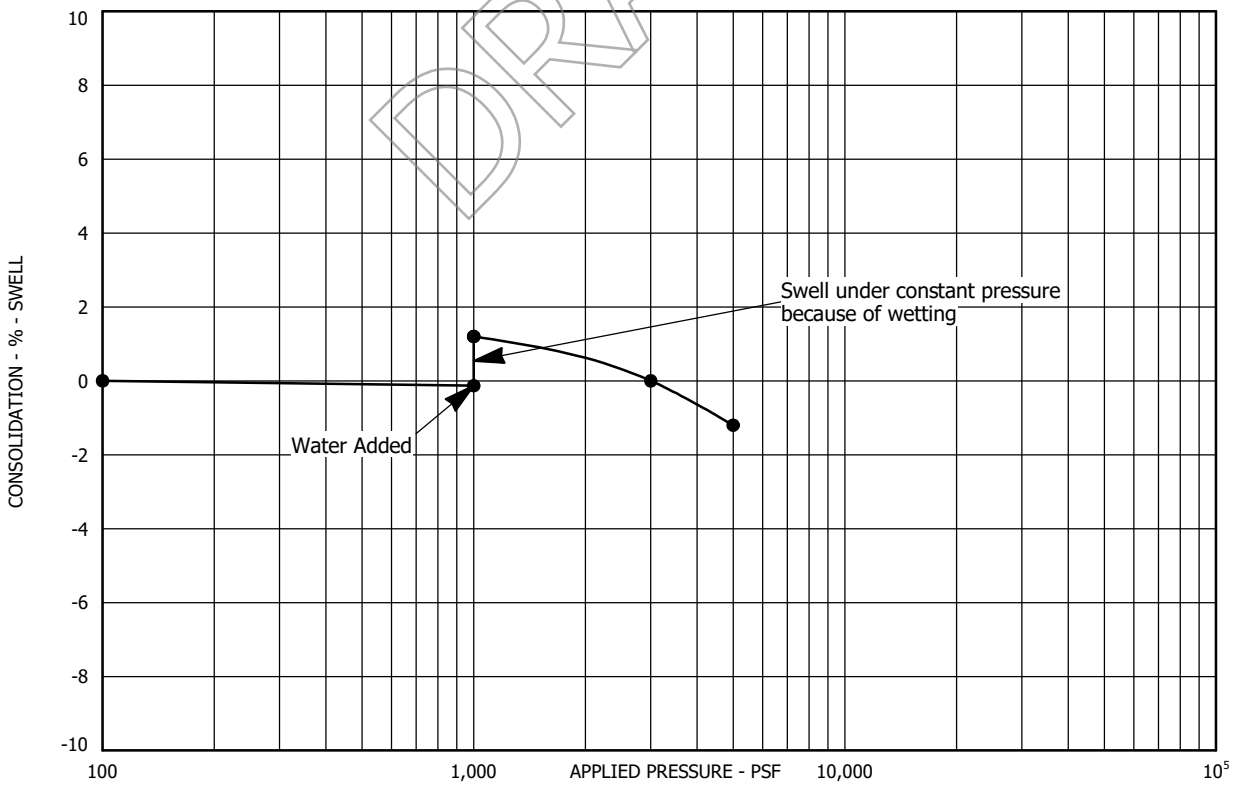
FIGURE A-22

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.

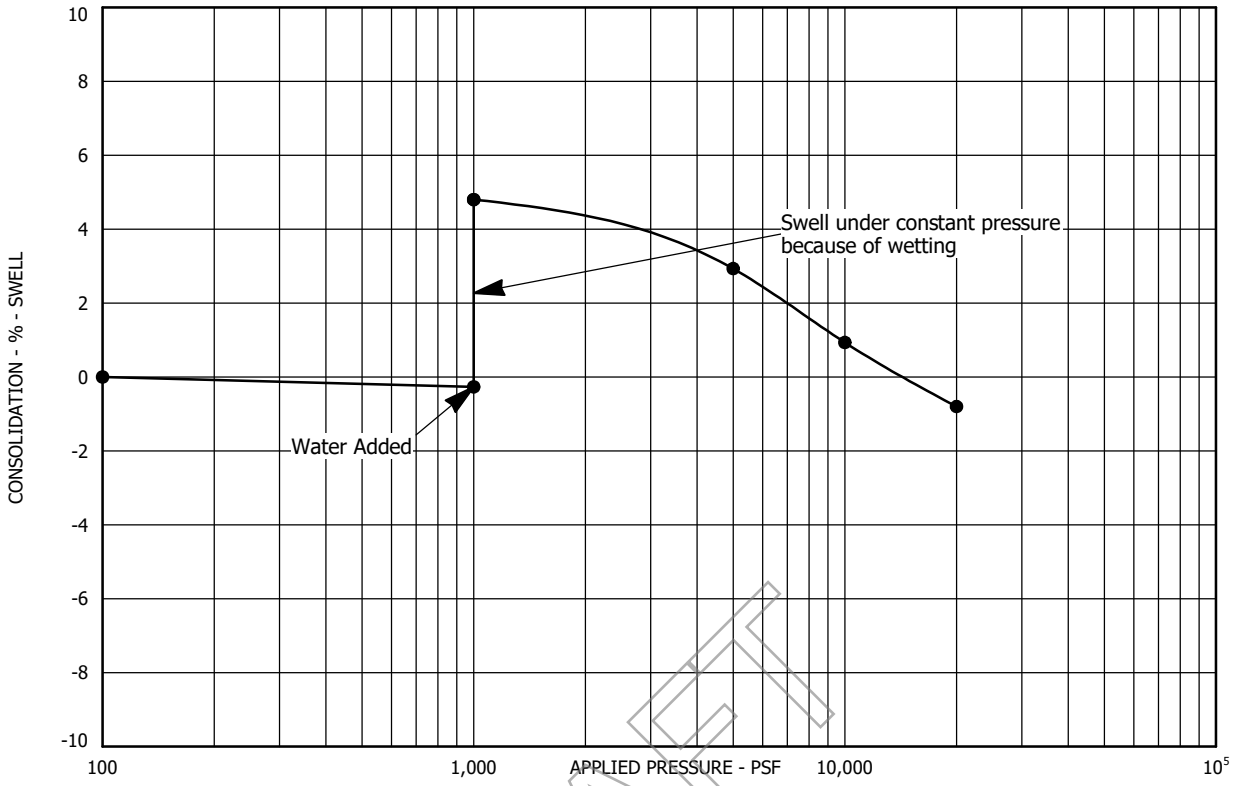


Sample Location: Test Boring No. 22 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 12

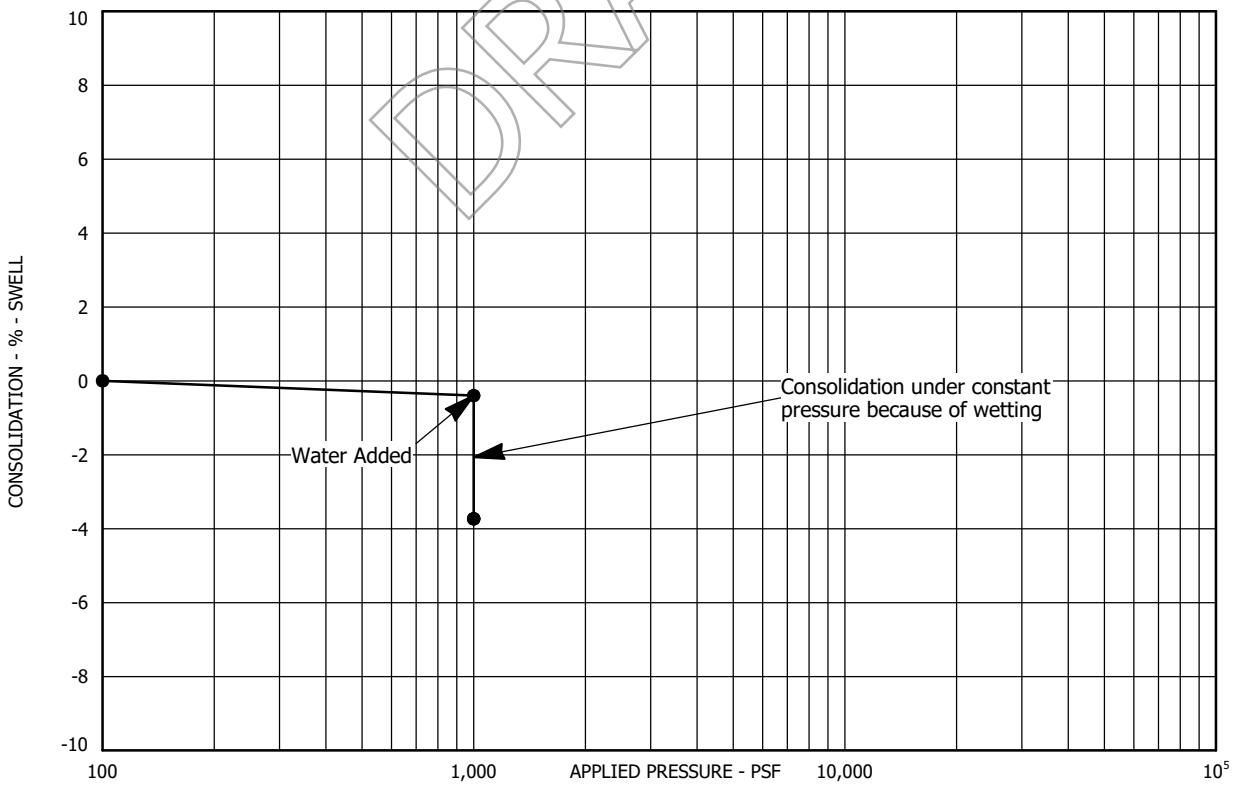


Sample Location: Test Boring No. 22 at a depth of 7 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 107
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-23
PROJECT NO. 213216



Sample Location: Test Boring No. 22 at a depth of 14 feet
Sample Description: Clay, slightly sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 11



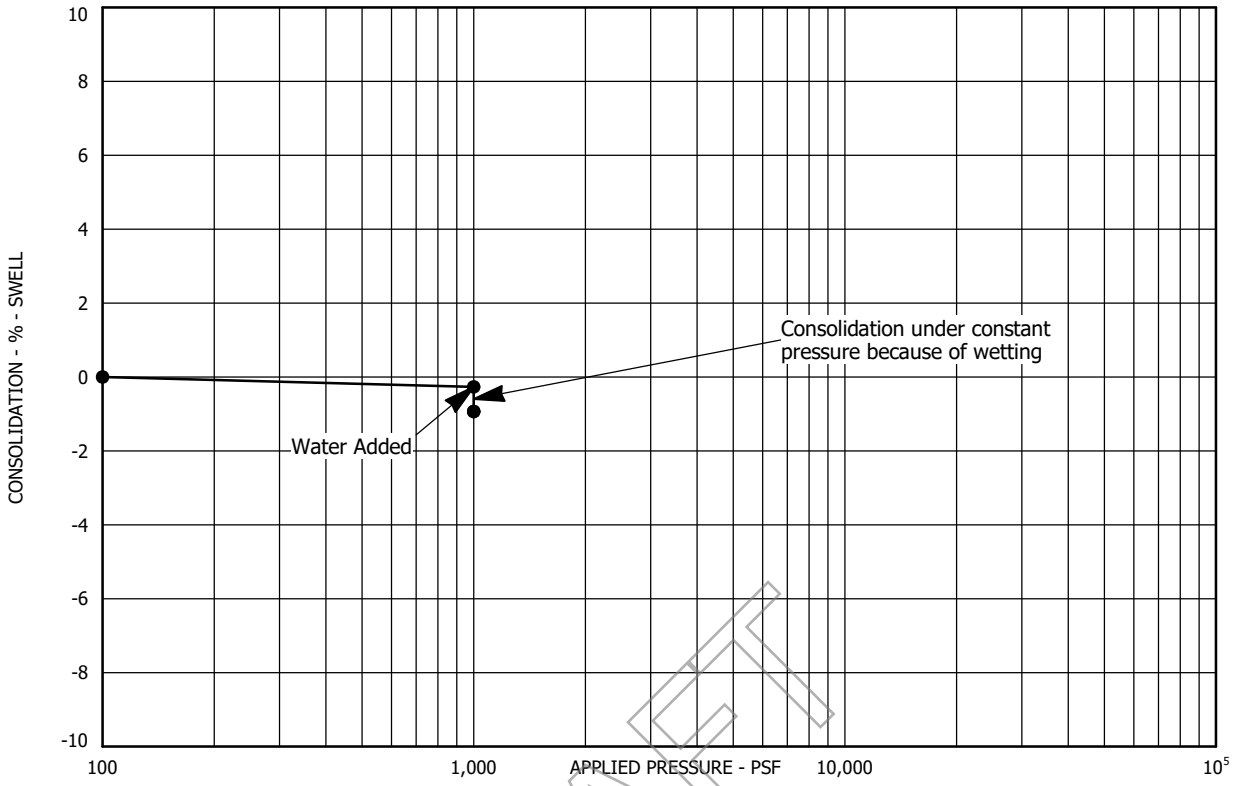
Sample Location: Test Boring No. 23 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 6

SWELL - CONSOLIDATION TEST RESULTS

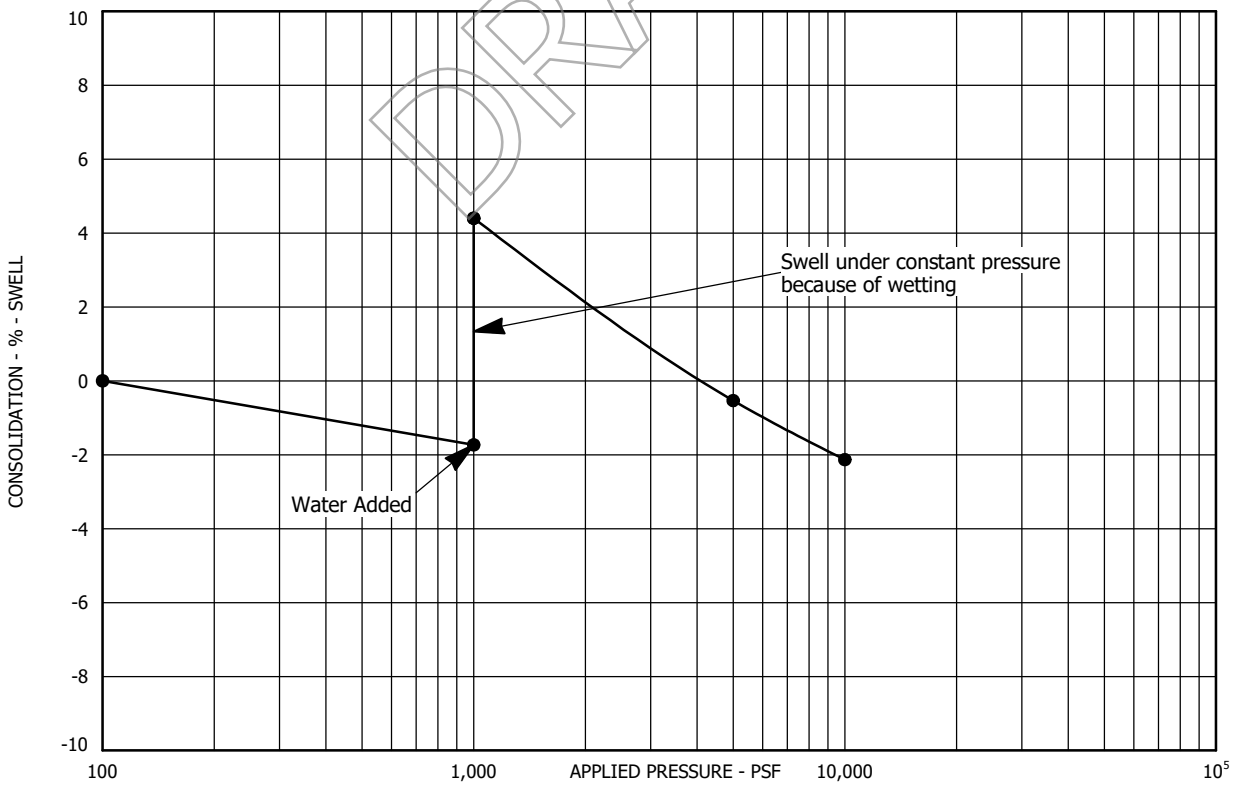
FIGURE A-24

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 23 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 2



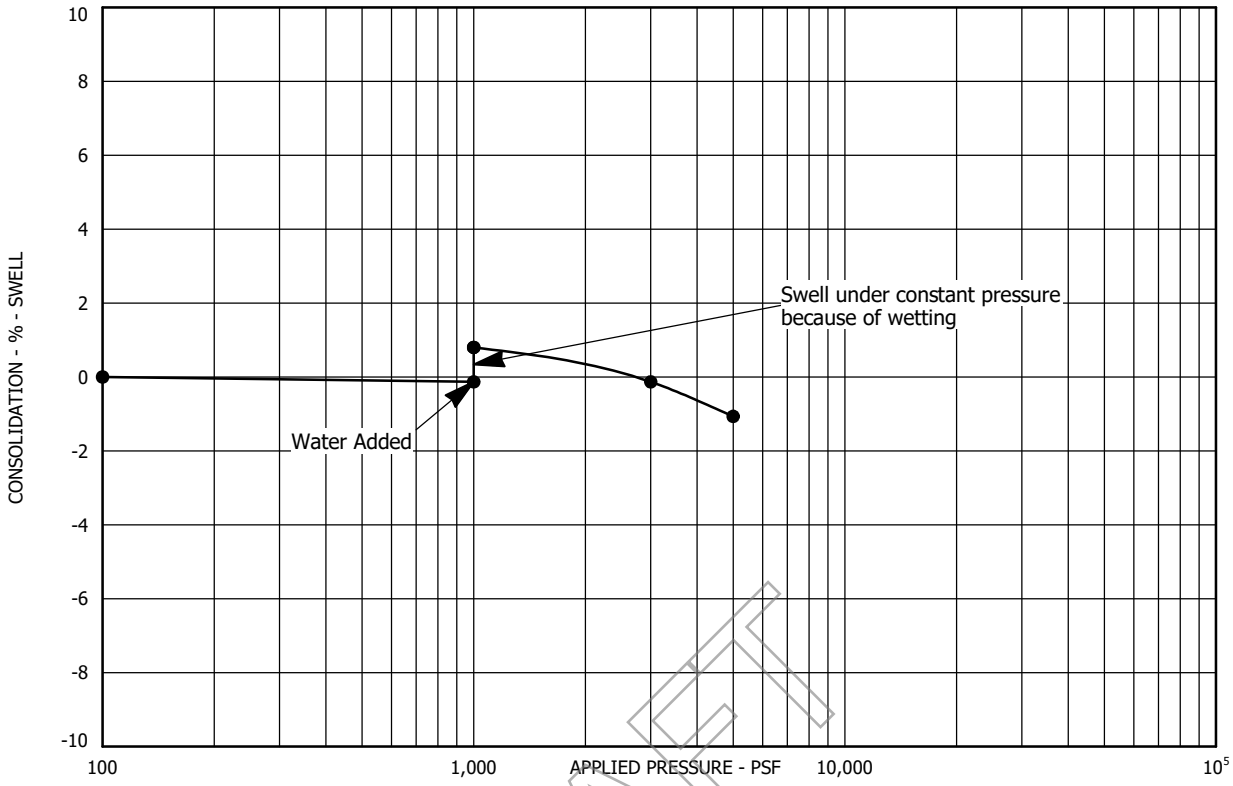
Sample Location: Test Boring No. 23 at a depth of 34 feet
Sample Description: Claystone, trace sand
Dry Unit Weight (pcf): 96
Moisture Content (%): 23

SWELL - CONSOLIDATION TEST RESULTS

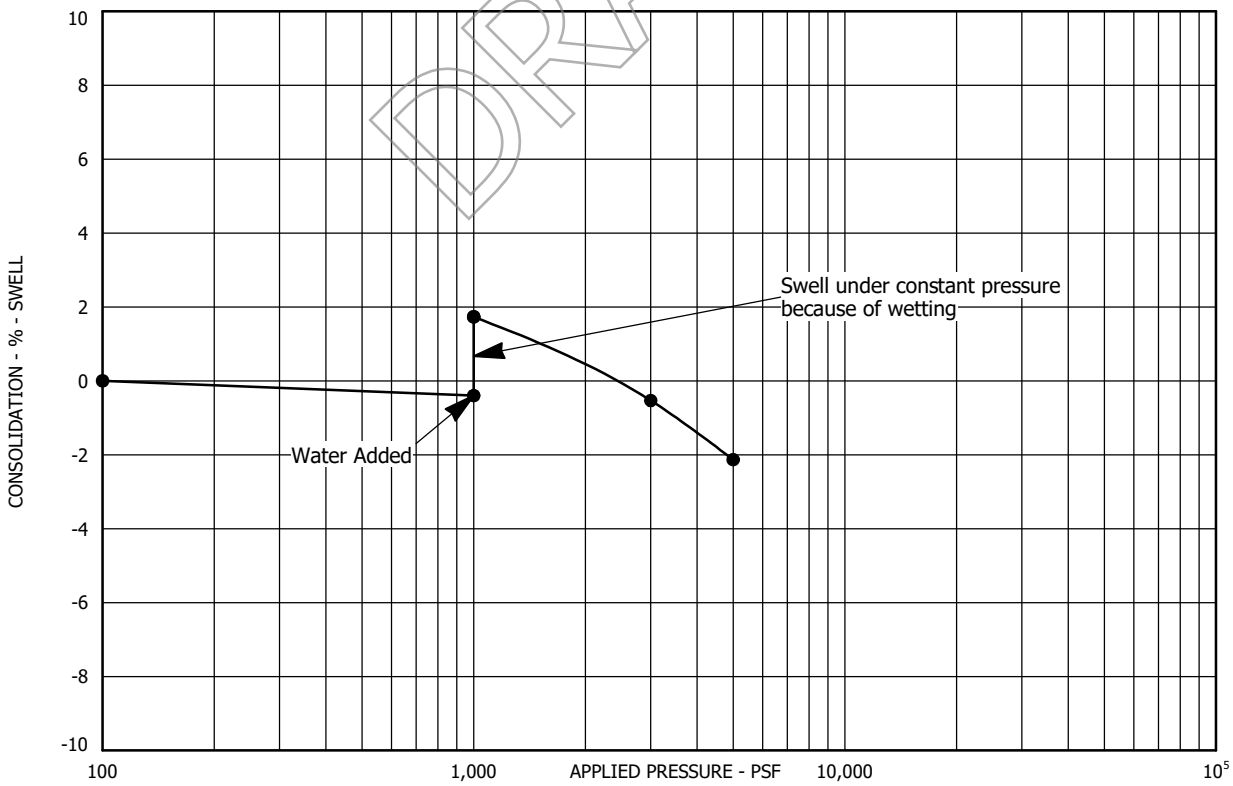
FIGURE A-25

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 24 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 6

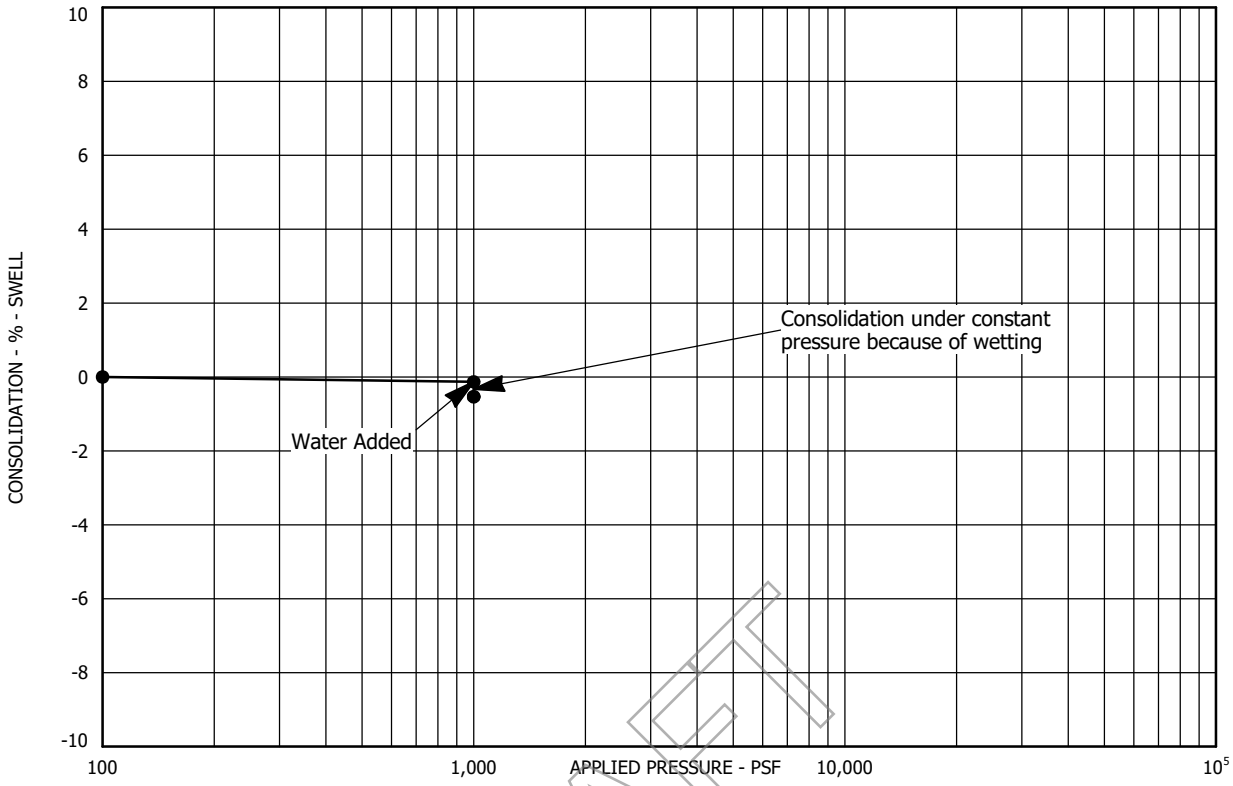


Sample Location: Test Boring No. 24 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 9

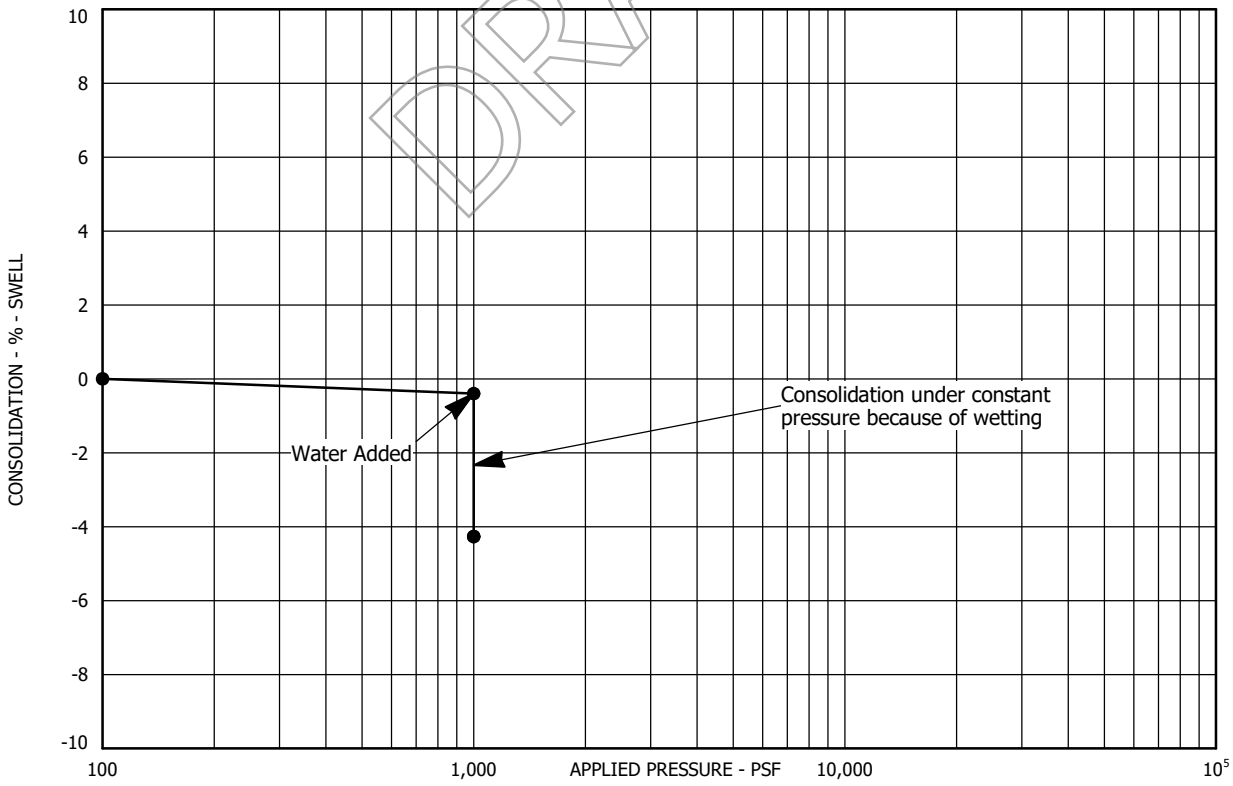
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-26

PROJECT NO. 213216



Sample Location: Test Boring No. 25 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 102
Moisture Content (%): 6



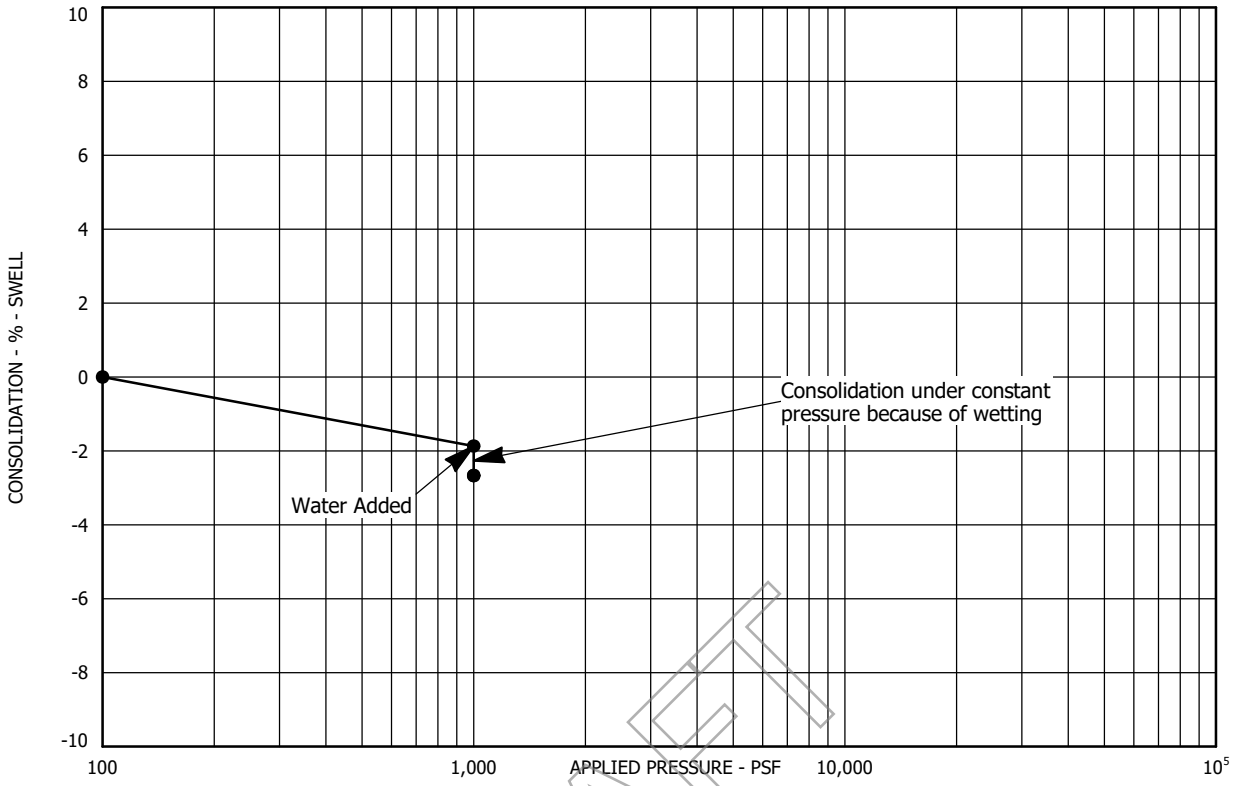
Sample Location: Test Boring No. 26 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 96
Moisture Content (%): 7

SWELL - CONSOLIDATION TEST RESULTS

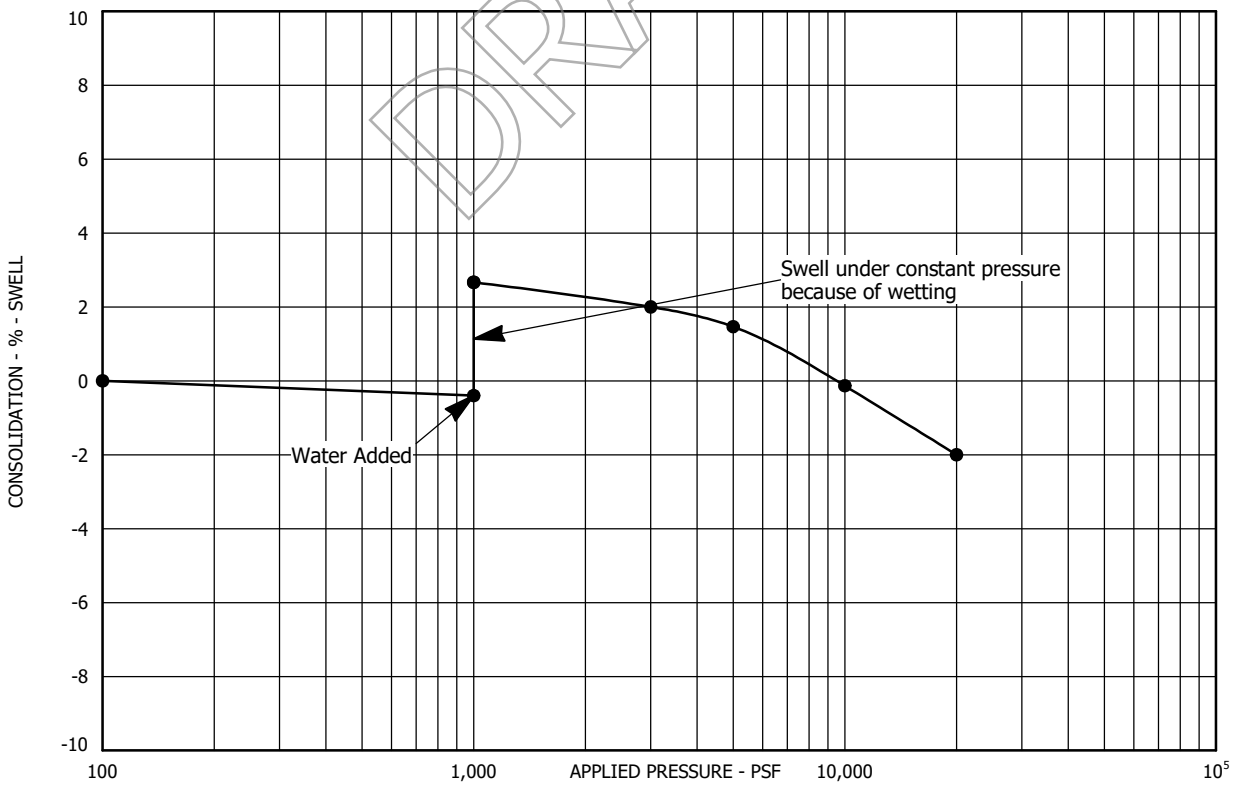
FIGURE A-27

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 26 at a depth of 19 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 18



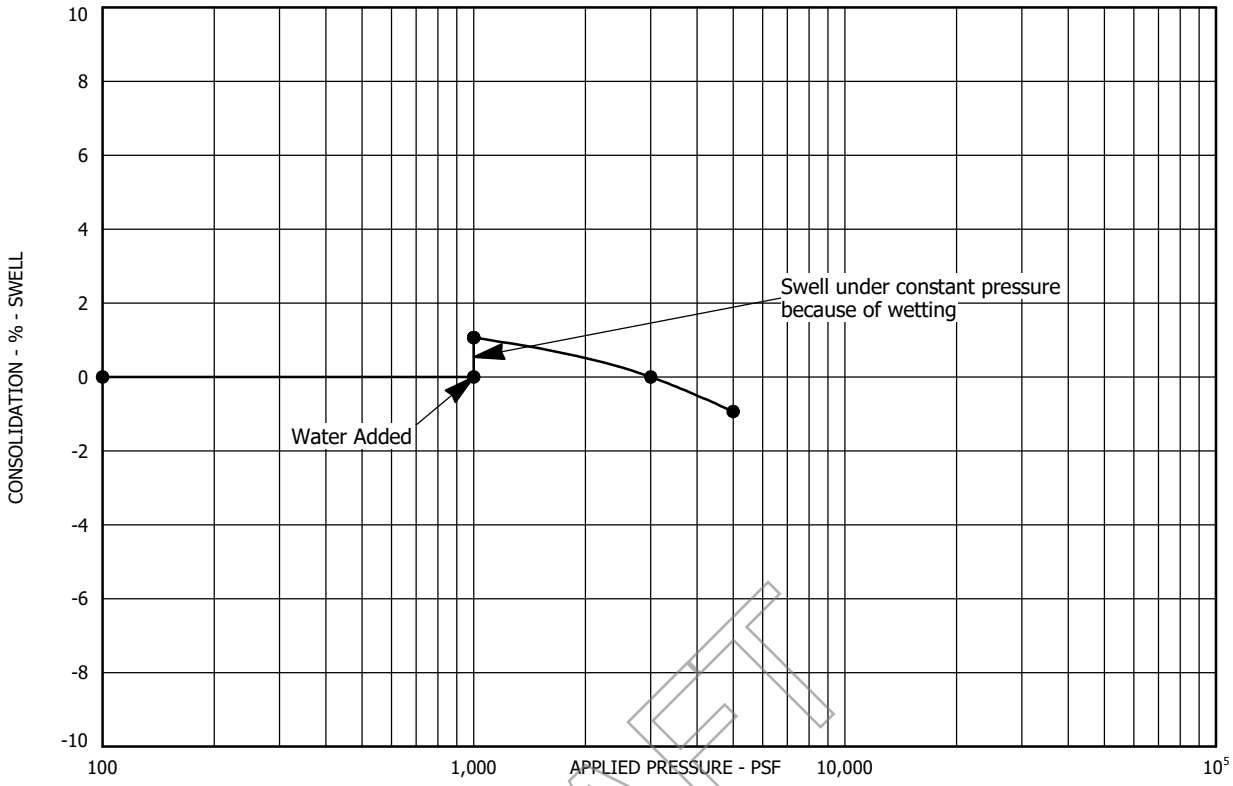
Sample Location: Test Boring No. 27 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 14

SWELL - CONSOLIDATION TEST RESULTS

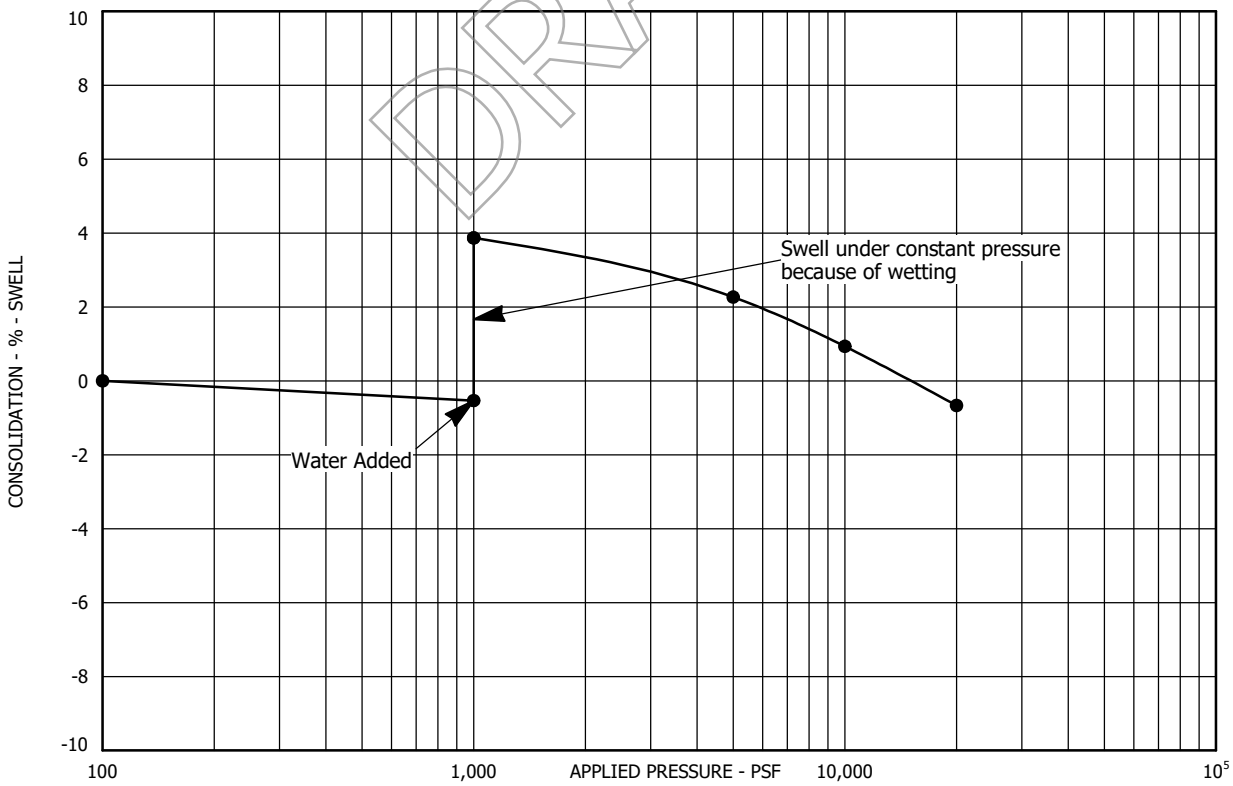
FIGURE A-28

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 29 at a depth of 4 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 110
Moisture Content (%): 7



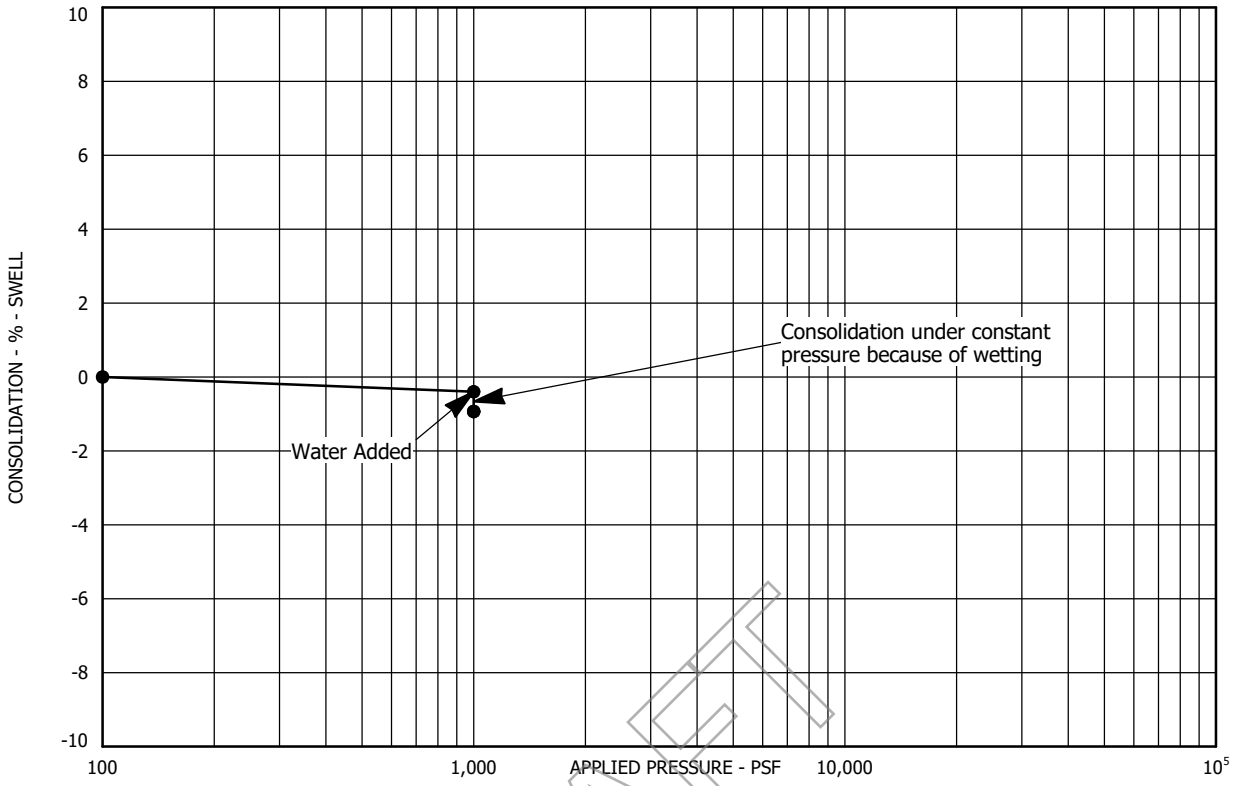
Sample Location: Test Boring No. 29 at a depth of 14 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 127
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

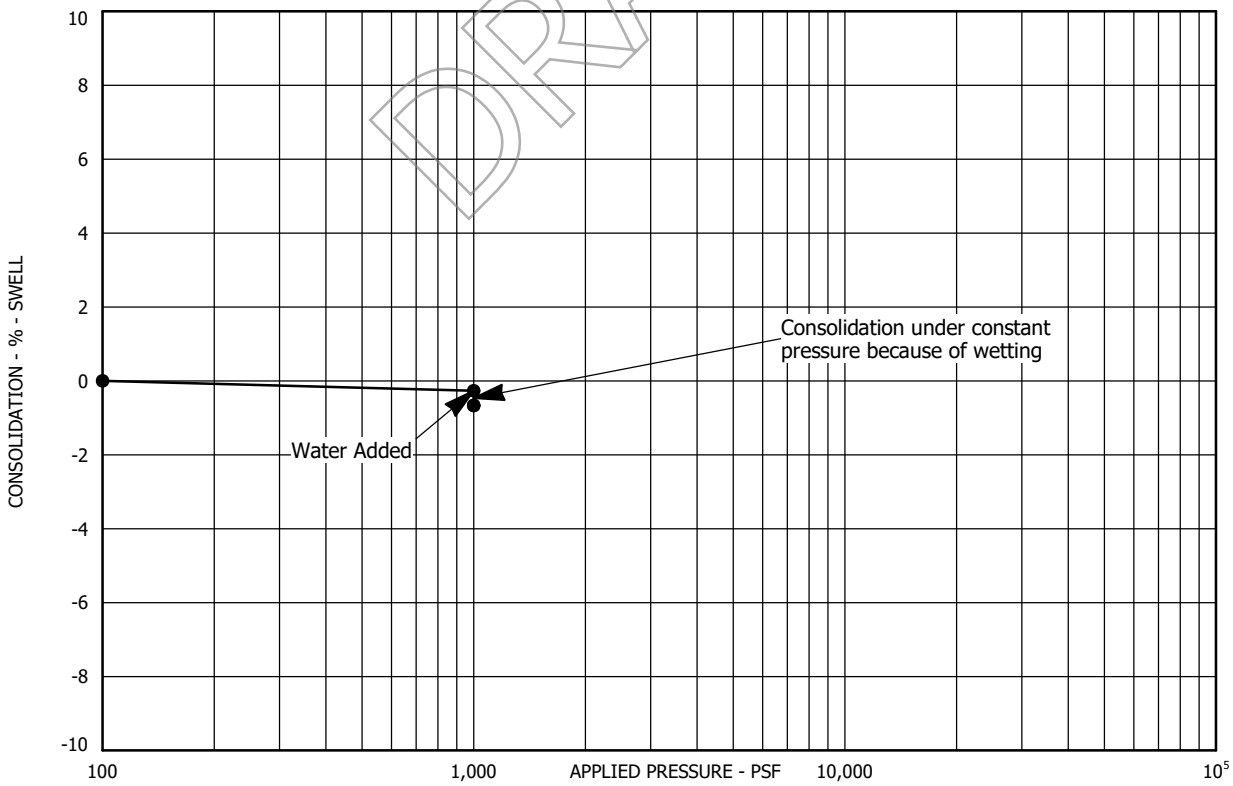
FIGURE A-29

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 29 at a depth of 19 feet
Sample Description: Sand, clayey
Dry Unit Weight (pcf): 111
Moisture Content (%): 13



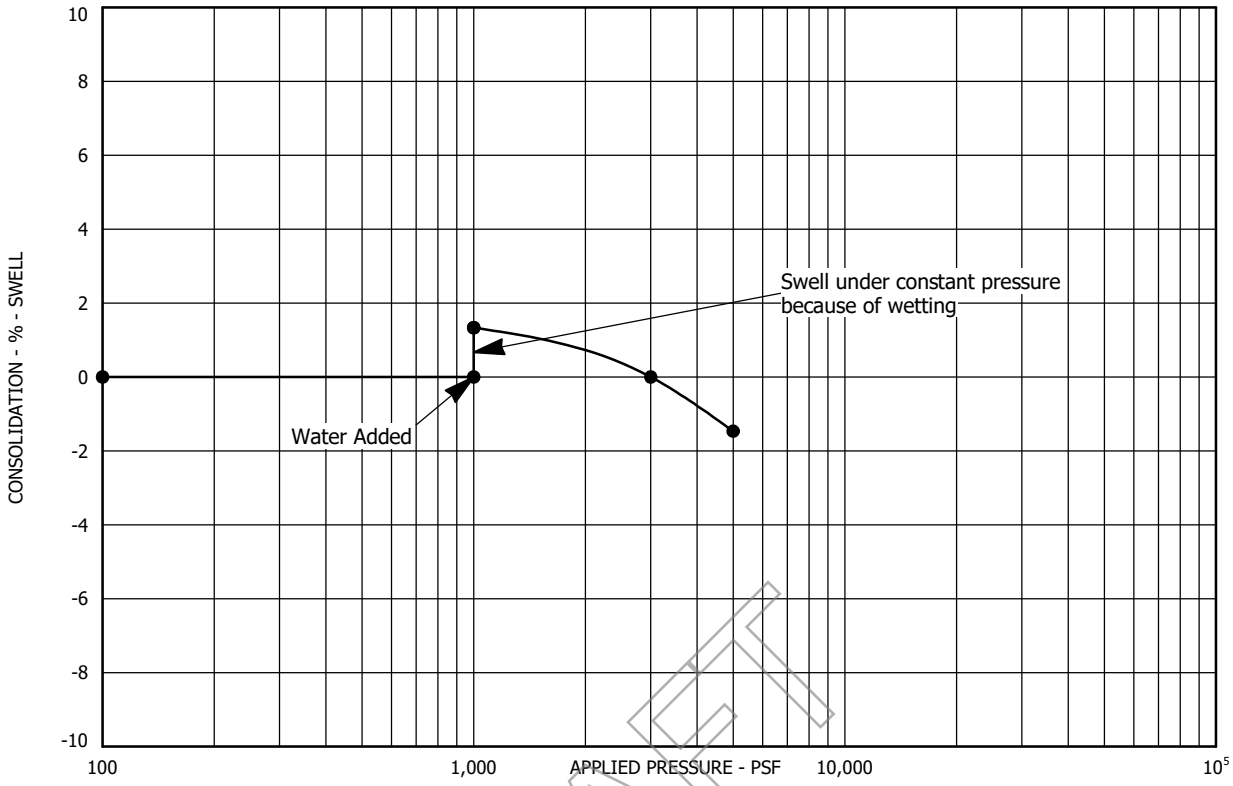
Sample Location: Test Boring No. 30 at a depth of 9 feet
Sample Description: Sand, clayey
Dry Unit Weight (pcf): 102
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

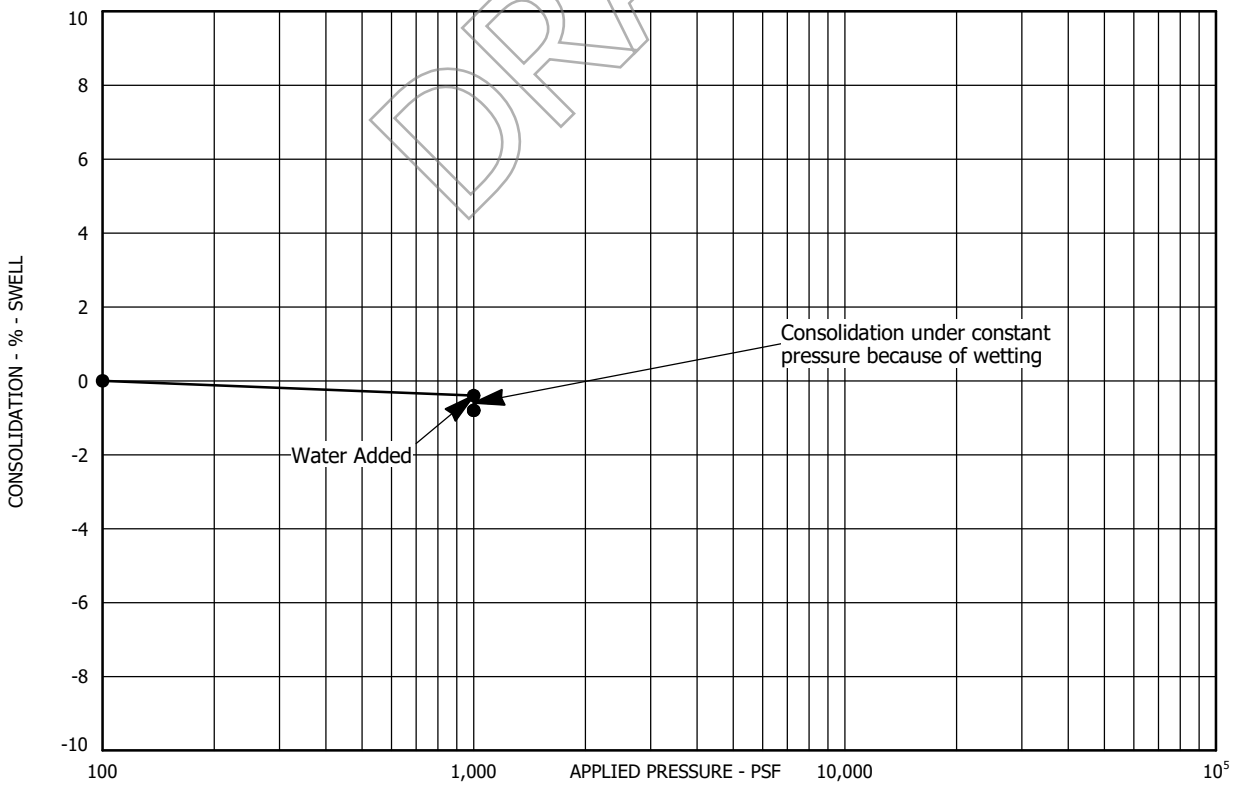
FIGURE A-30

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 30 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 113
Moisture Content (%): 9



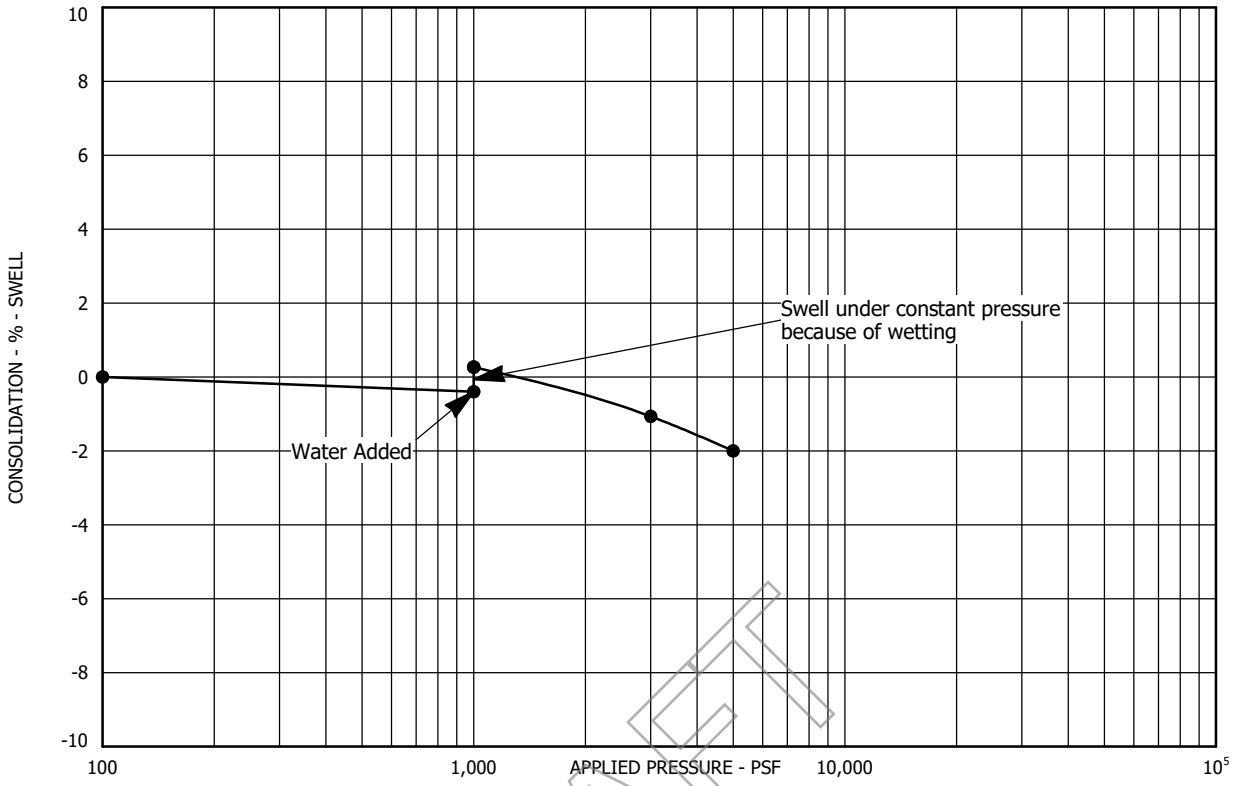
Sample Location: Test Boring No. 31 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 99
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS

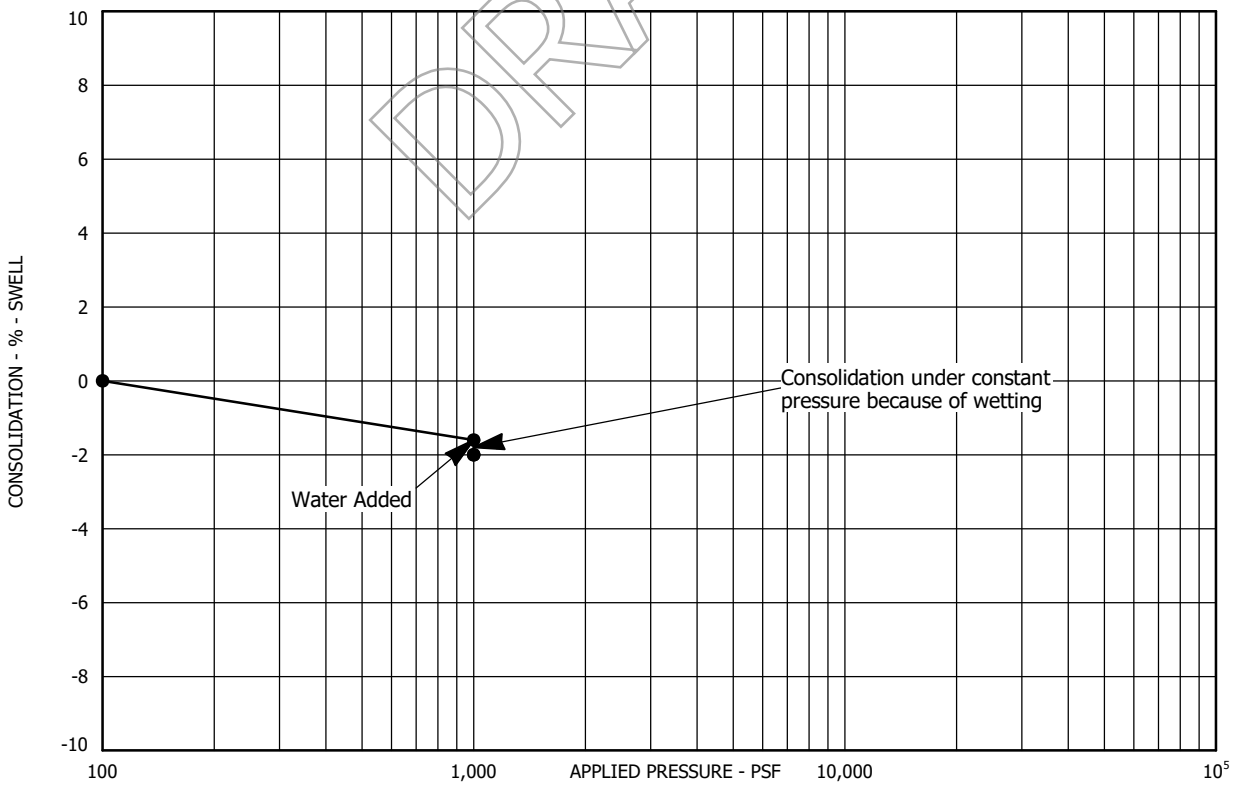
FIGURE A-31

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 32 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 119
Moisture Content (%): 11



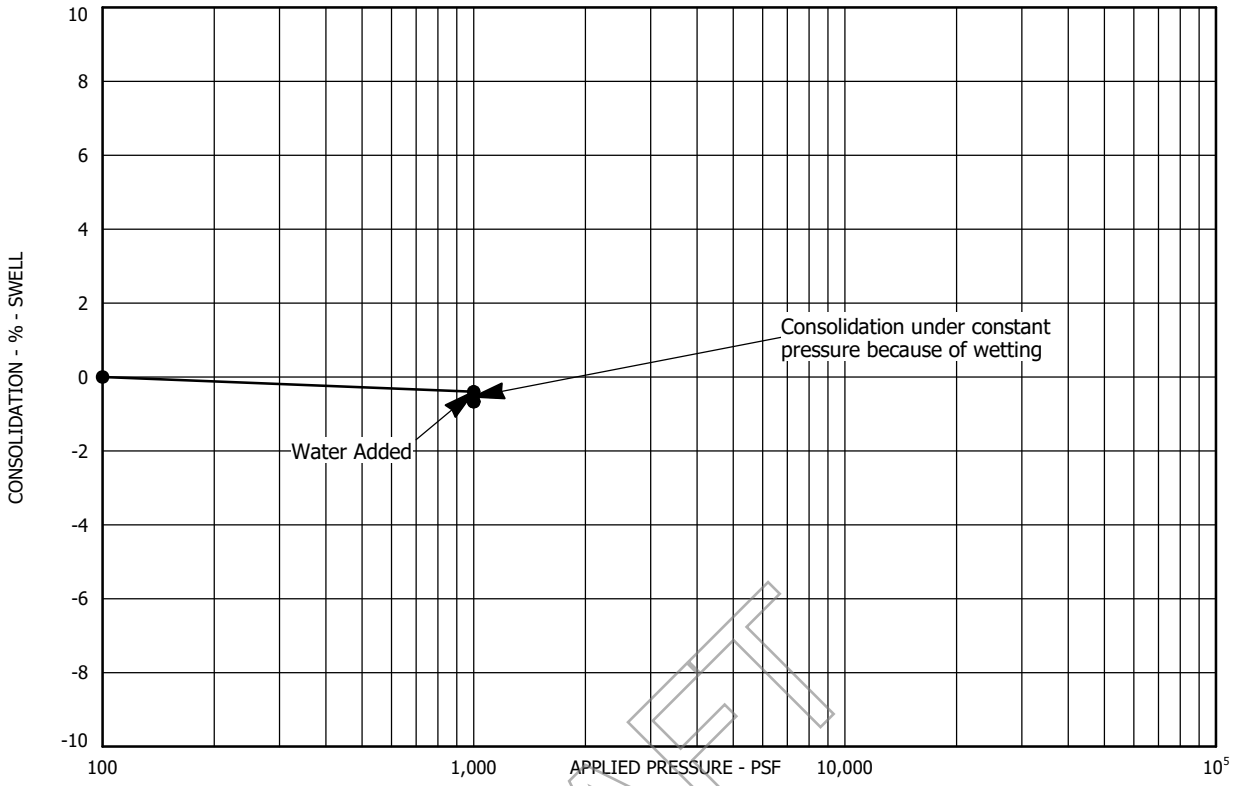
Sample Location: Test Boring No. 32 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 19

SWELL - CONSOLIDATION TEST RESULTS

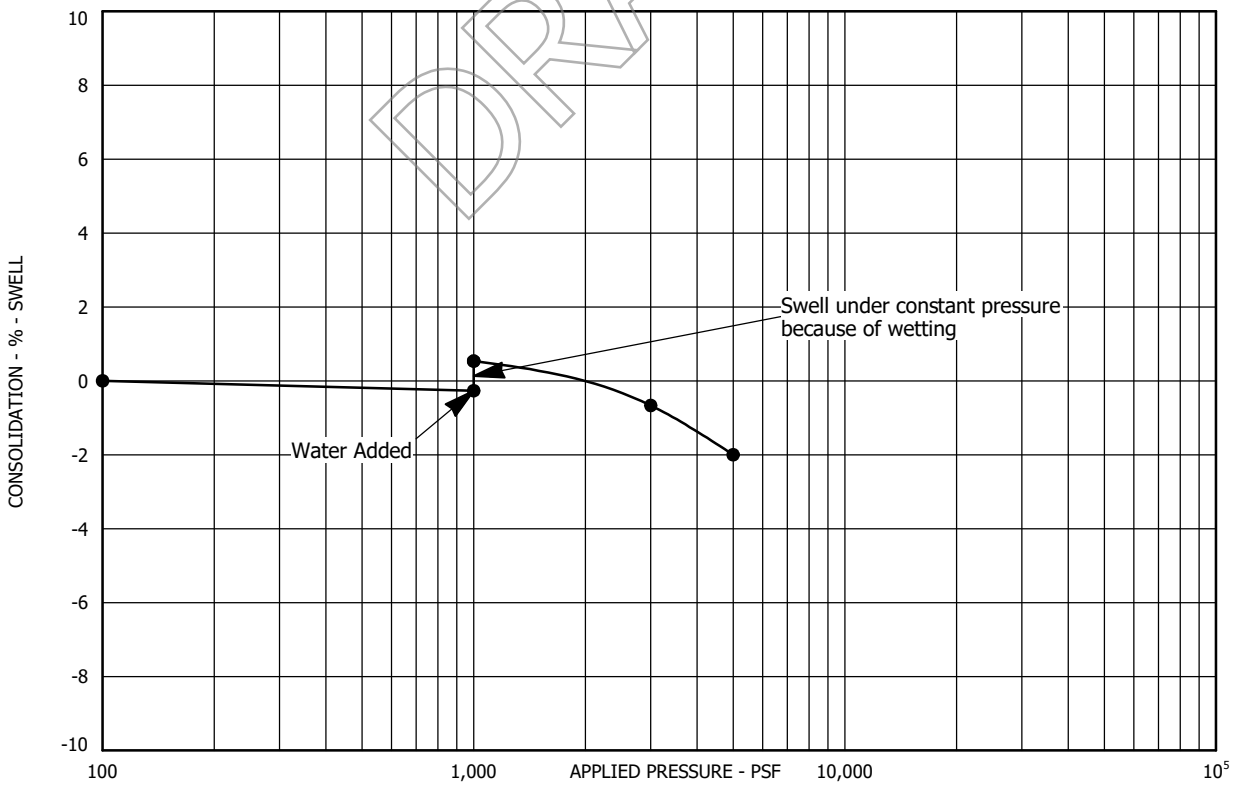
FIGURE A-32

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



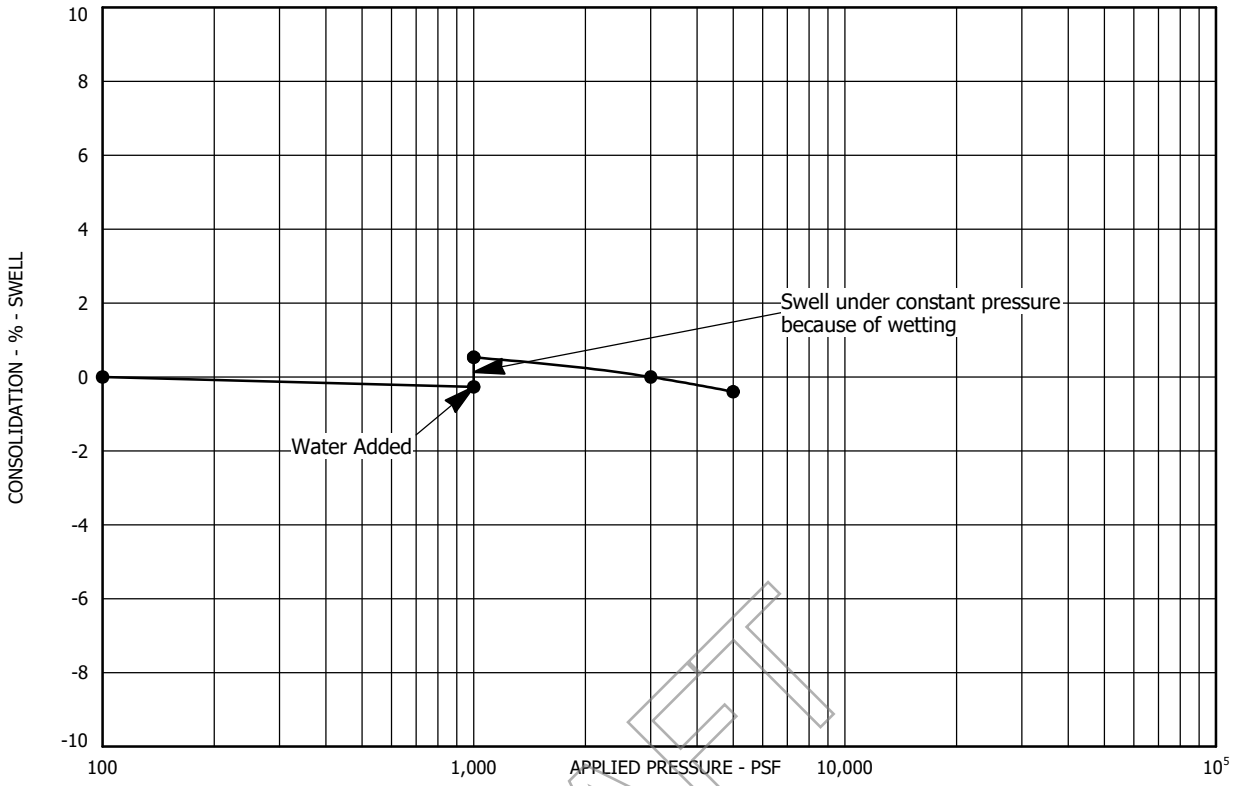
Sample Location: Test Boring No. 33 at a depth of 4 feet
Sample Description: Sand, very silty
Dry Unit Weight (pcf): 100
Moisture Content (%): 18



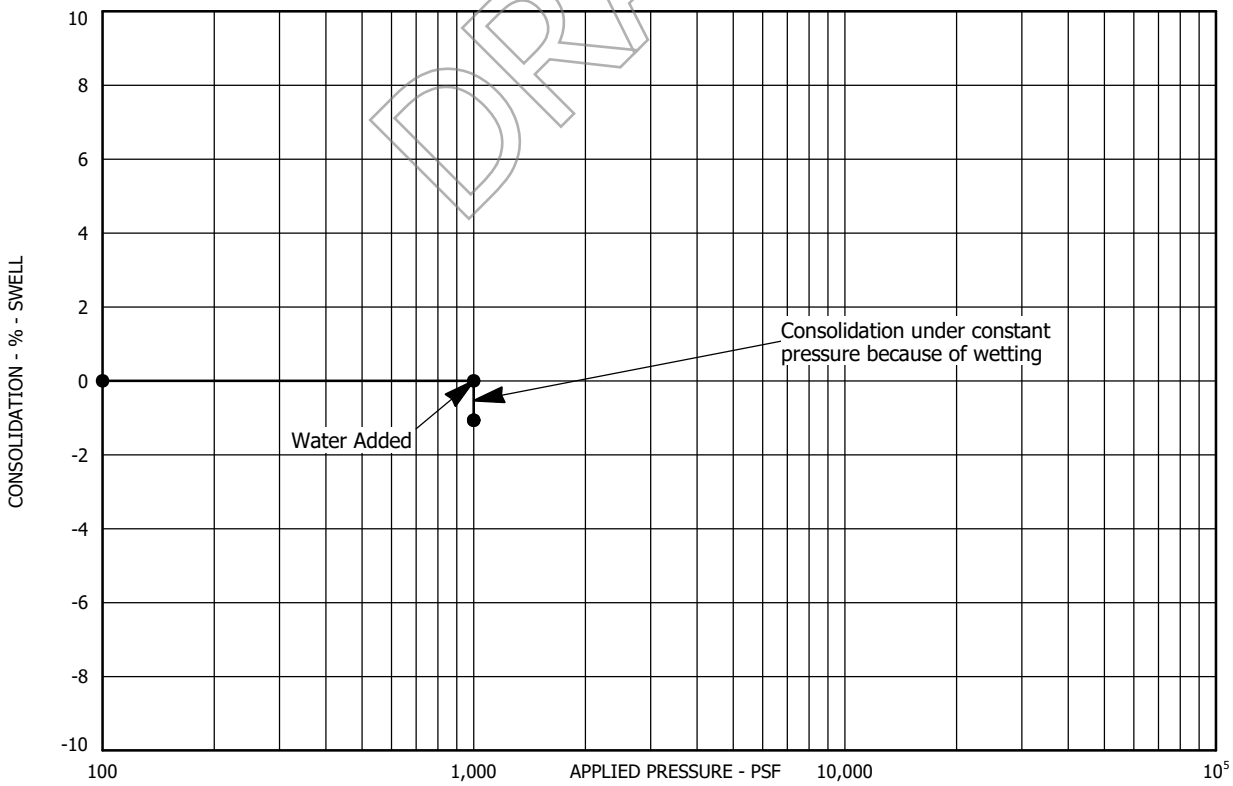
Sample Location: Test Boring No. 34 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 109
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-33
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 34 at a depth of 24 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 126
Moisture Content (%): 16

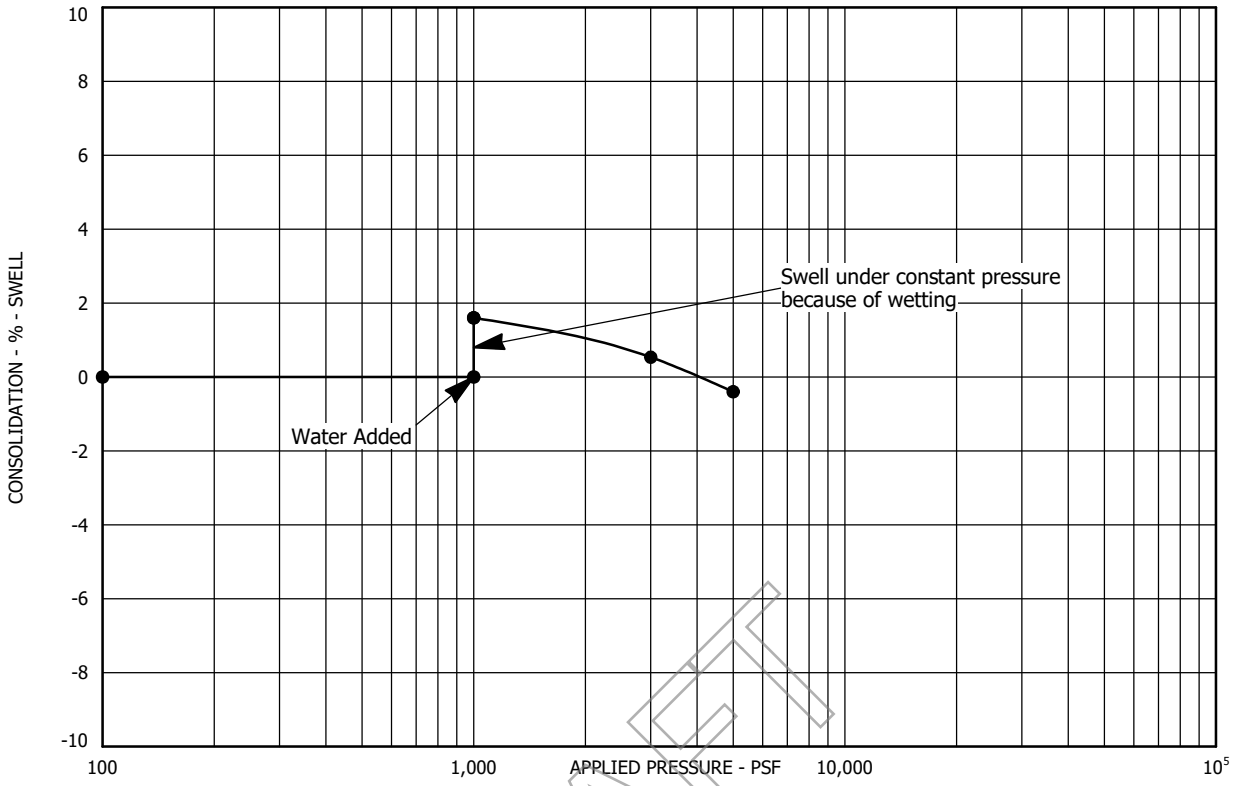


Sample Location: Test Boring No. 35 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 92
Moisture Content (%): 7

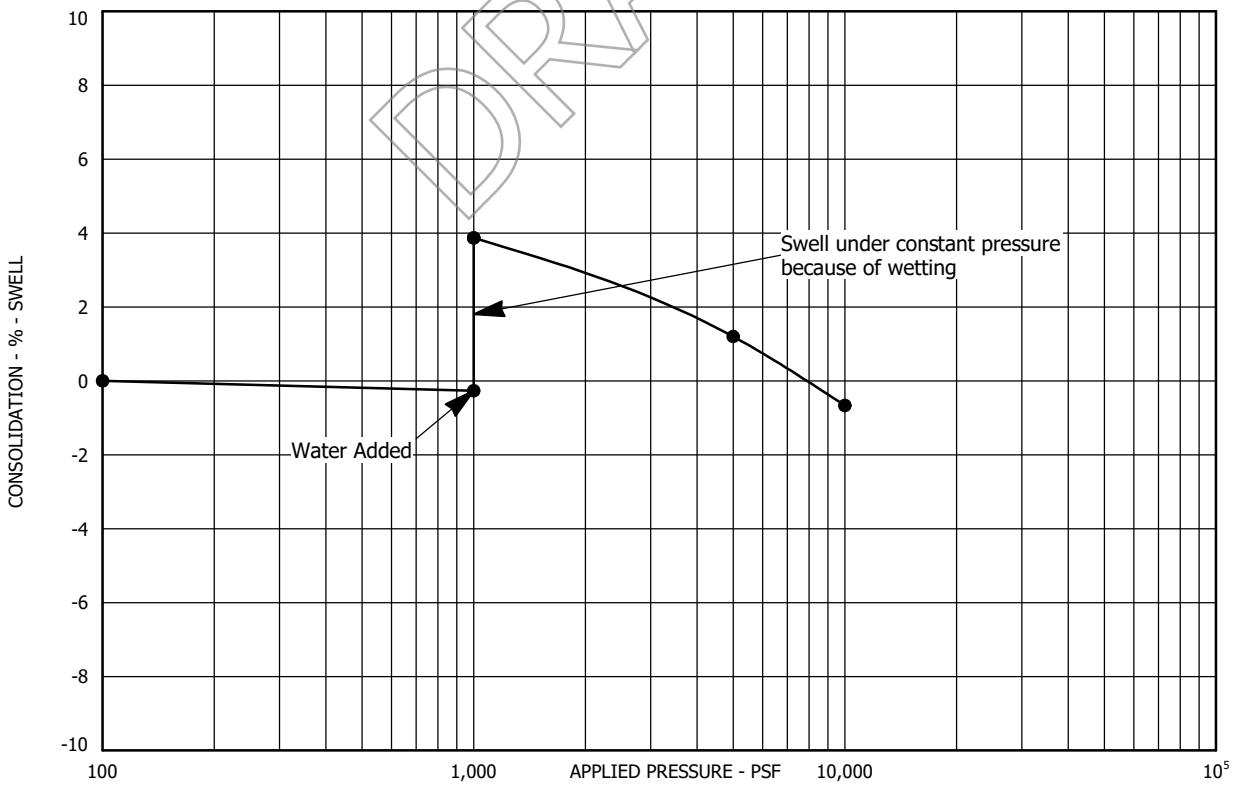
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-34

PROJECT NO. 213216



Sample Location: Test Boring No. 35 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 122
Moisture Content (%): 7

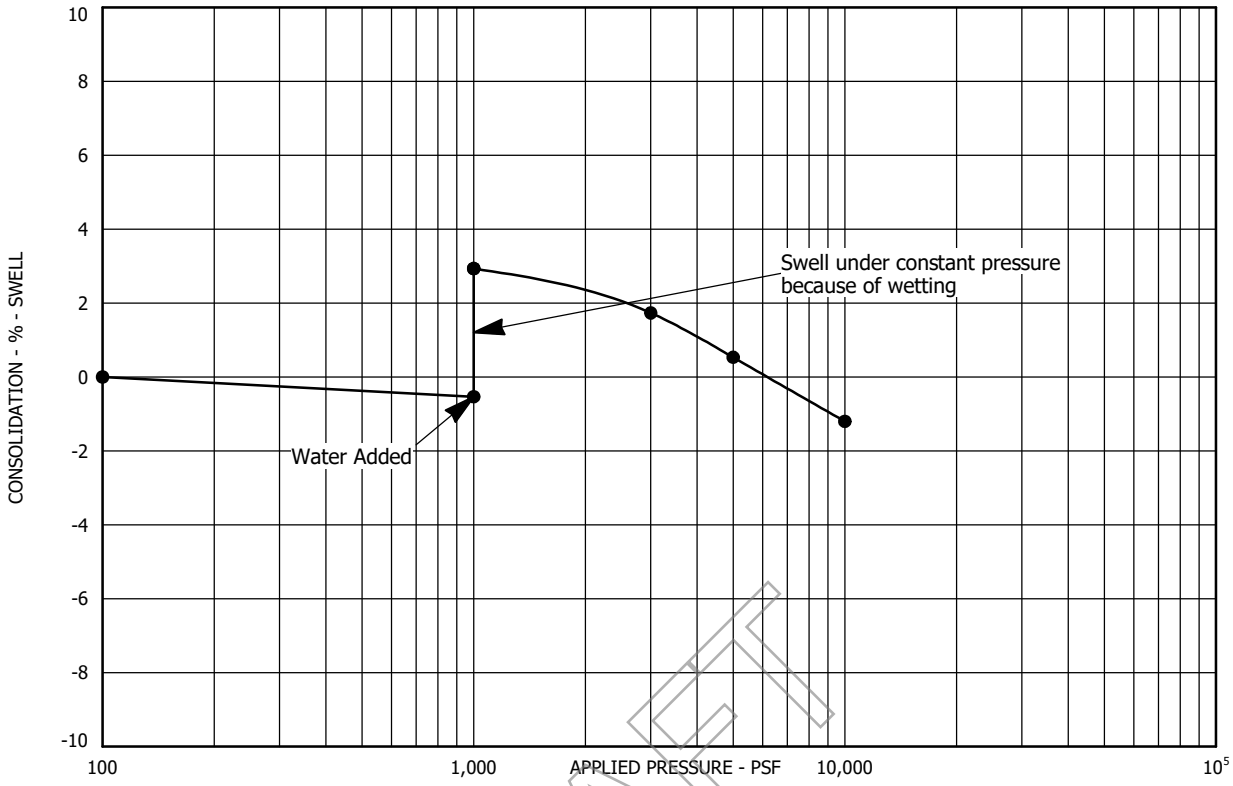


Sample Location: Test Boring No. 37 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 120
Moisture Content (%): 8

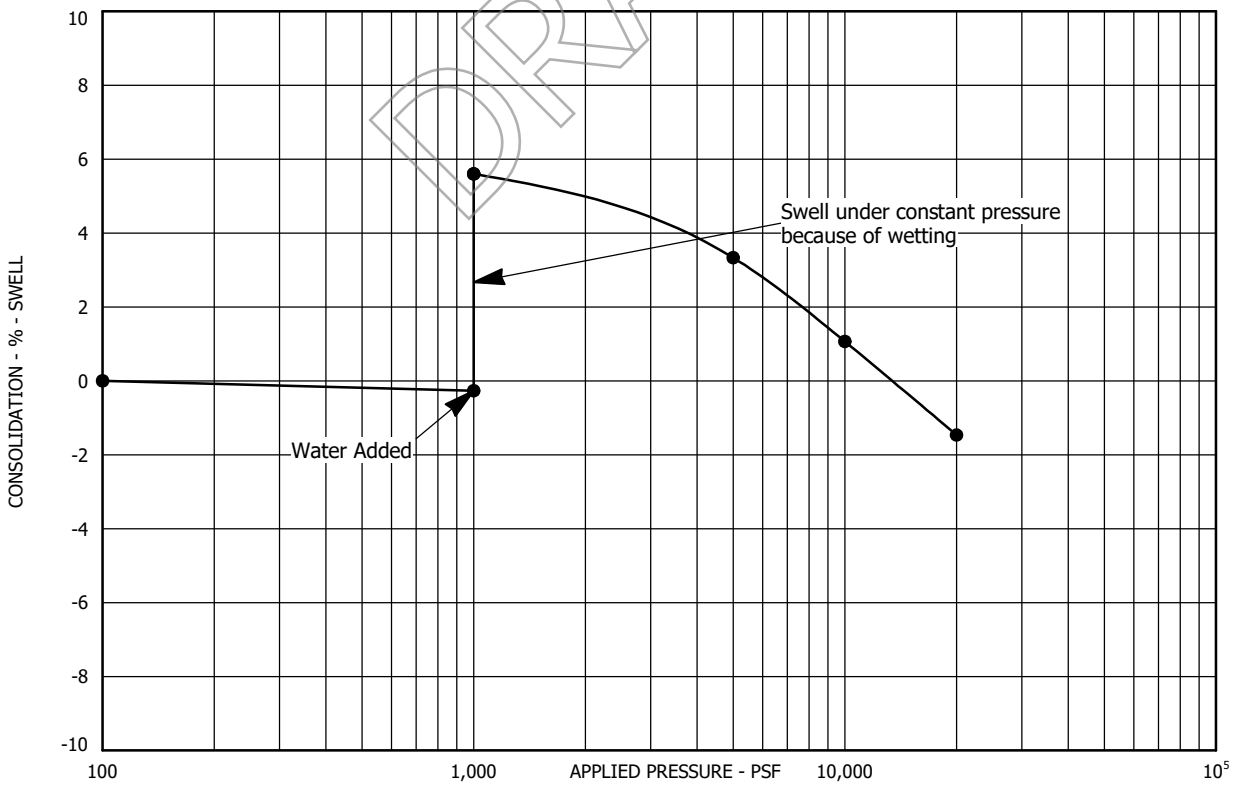
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-35

PROJECT NO. 213216



Sample Location: Test Boring No. 37 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 14



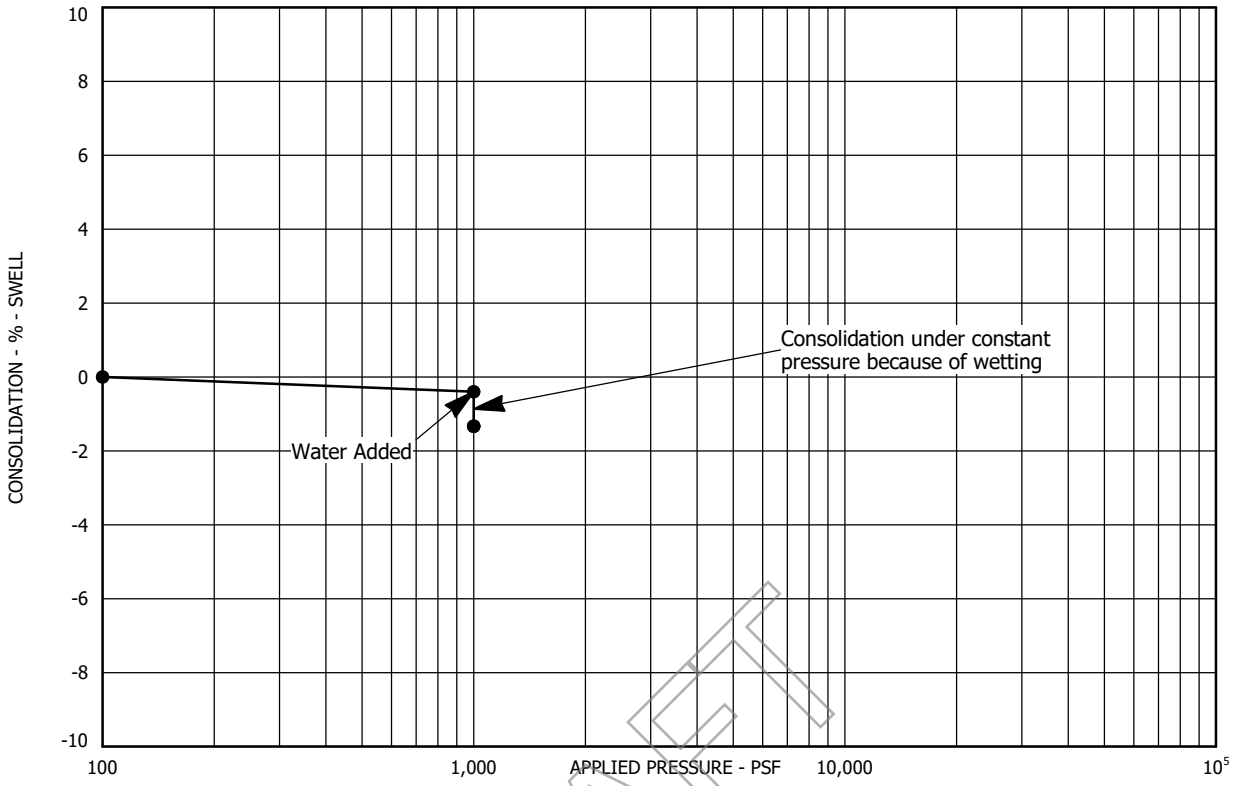
Sample Location: Test Boring No. 38 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 109
Moisture Content (%): 19

SWELL - CONSOLIDATION TEST RESULTS

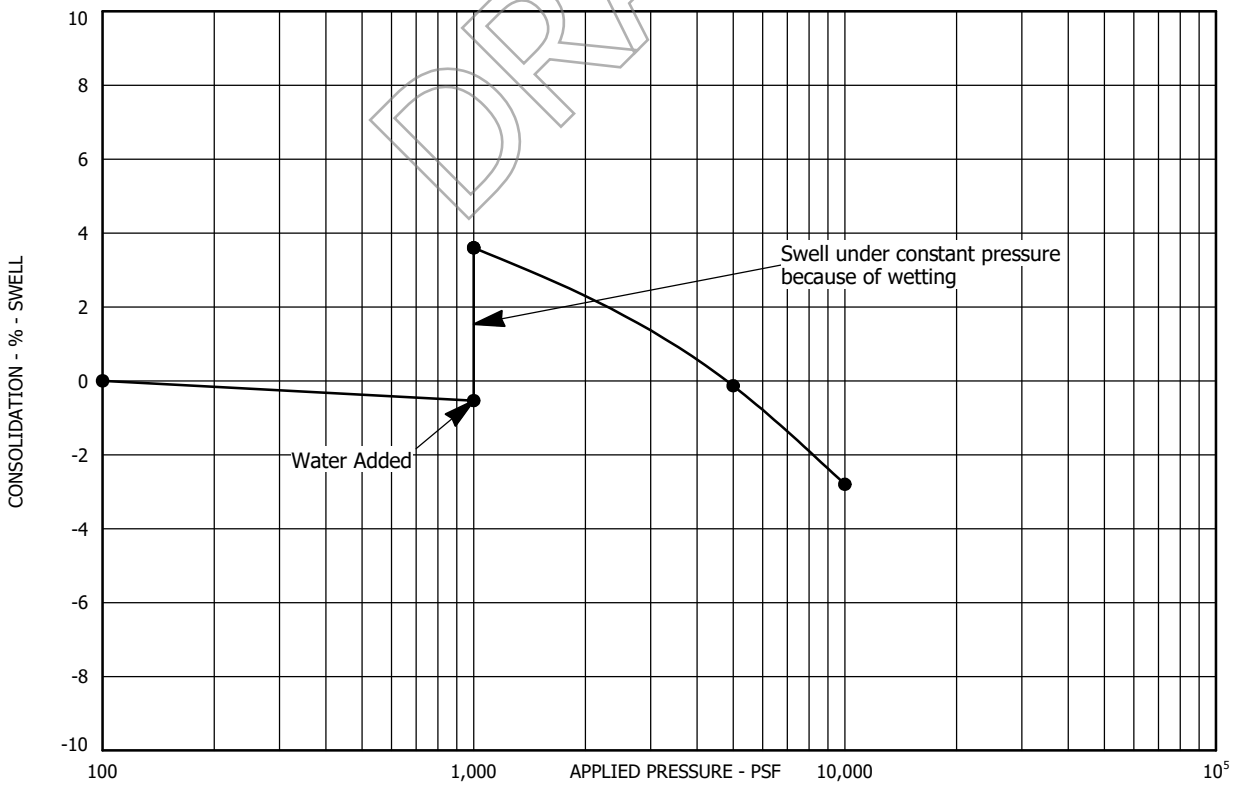
FIGURE A-36

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 39 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 8

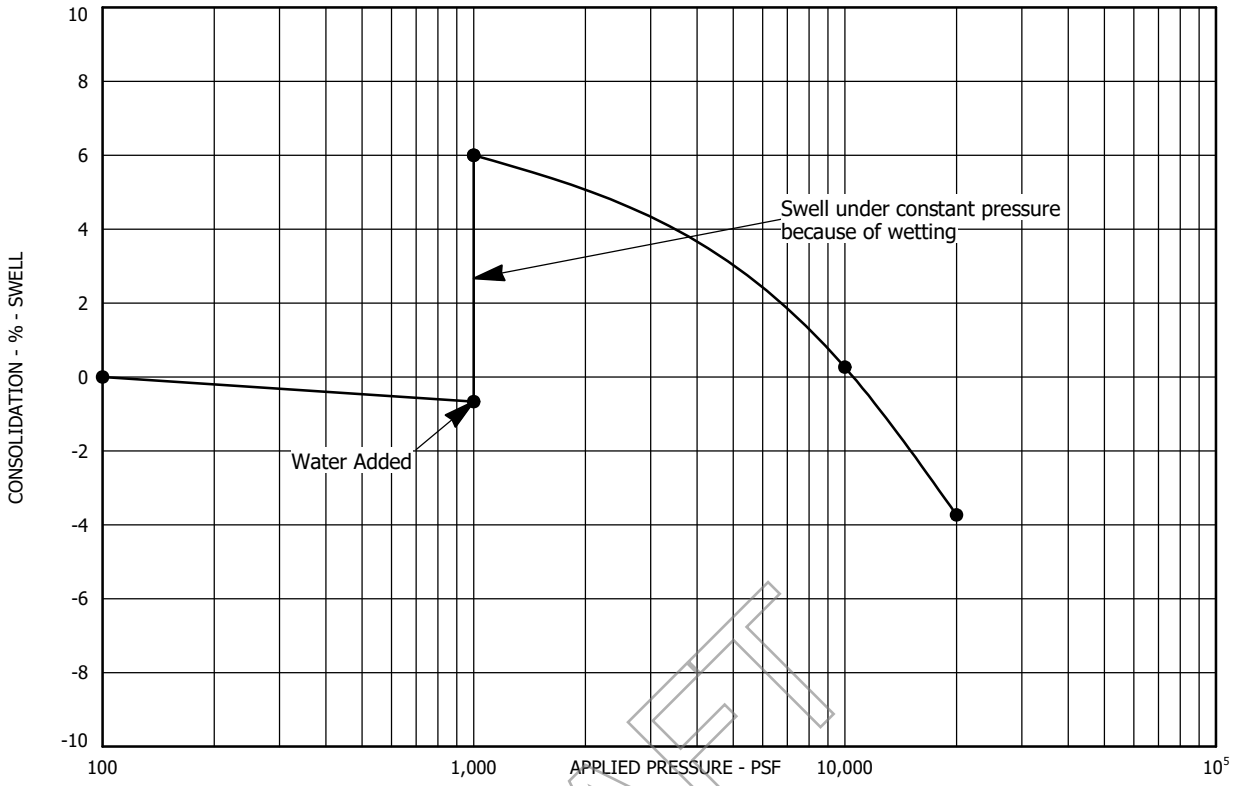


Sample Location: Test Boring No. 39 at a depth of 24 feet
Sample Description: Clay (Weathered Claystone), slightly sandy
Dry Unit Weight (pcf): 102
Moisture Content (%): 19

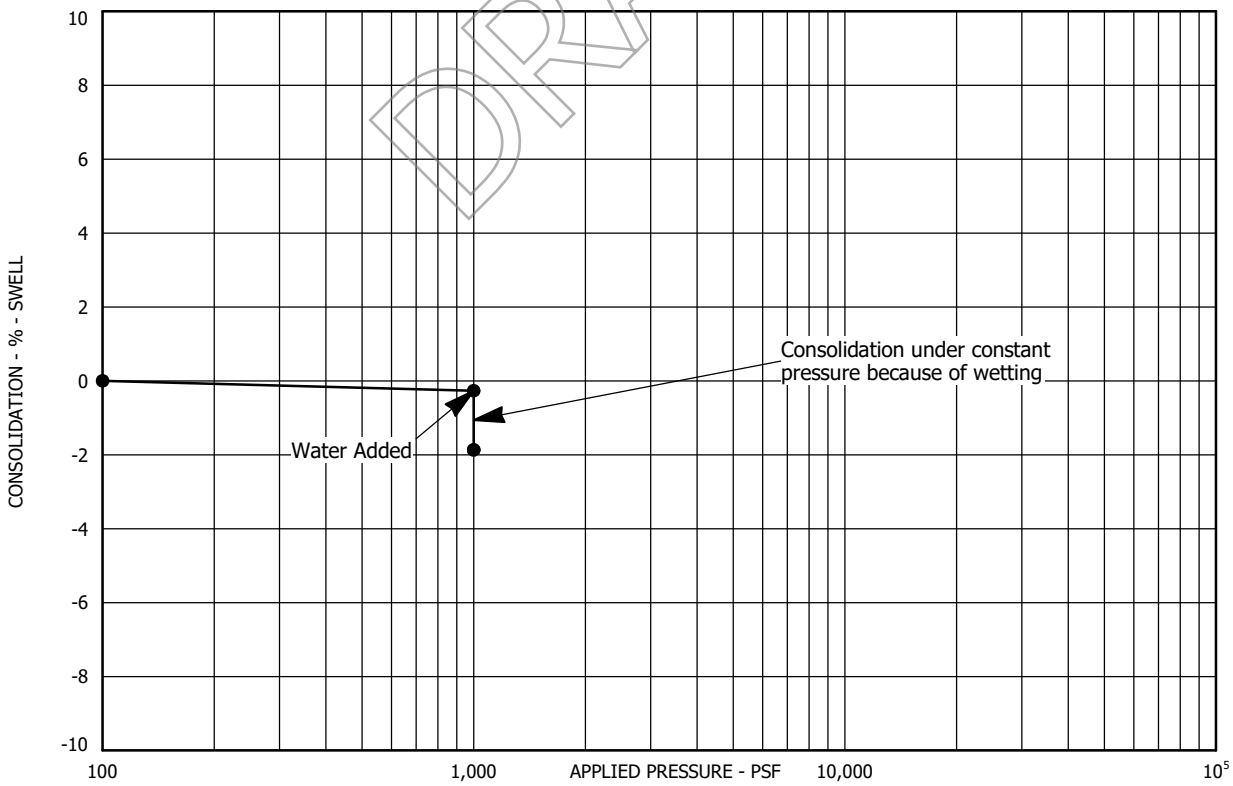
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-37

PROJECT NO. 213216



Sample Location: Test Boring No. 39 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 18

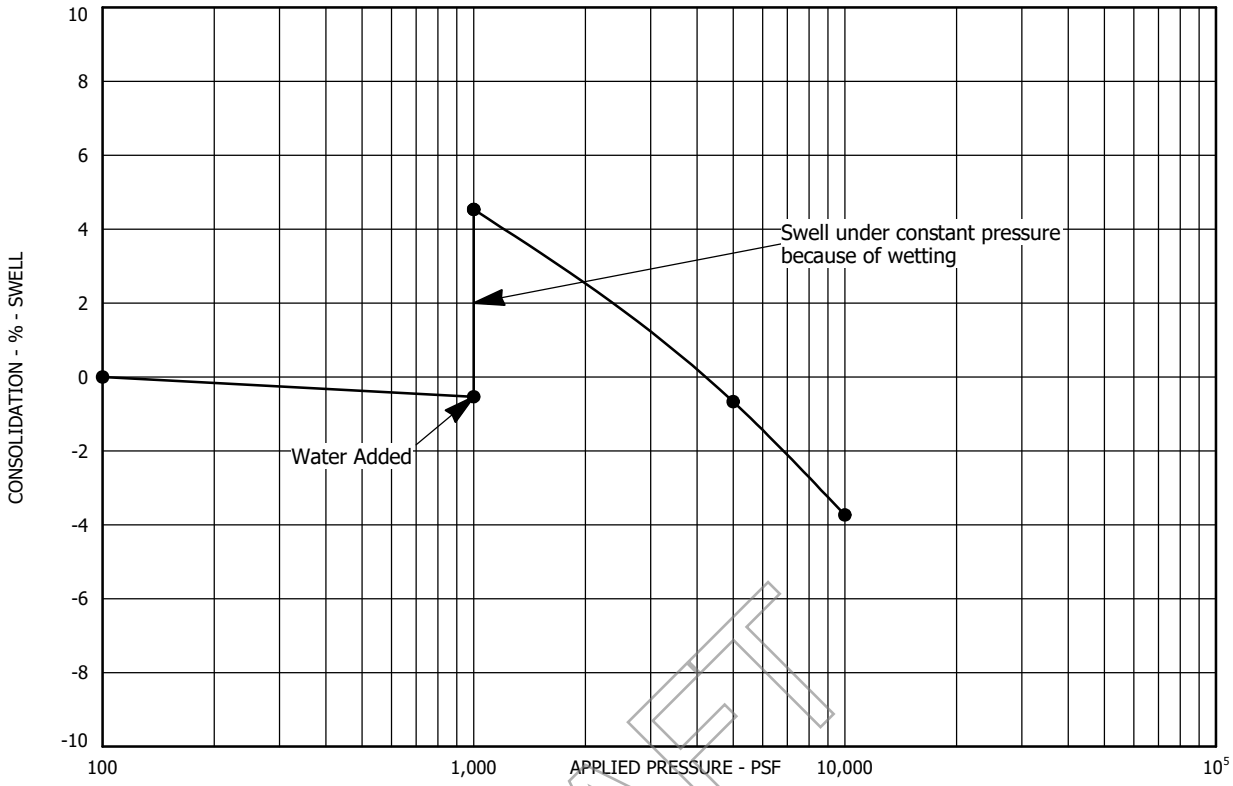


Sample Location: Test Boring No. 40 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 7

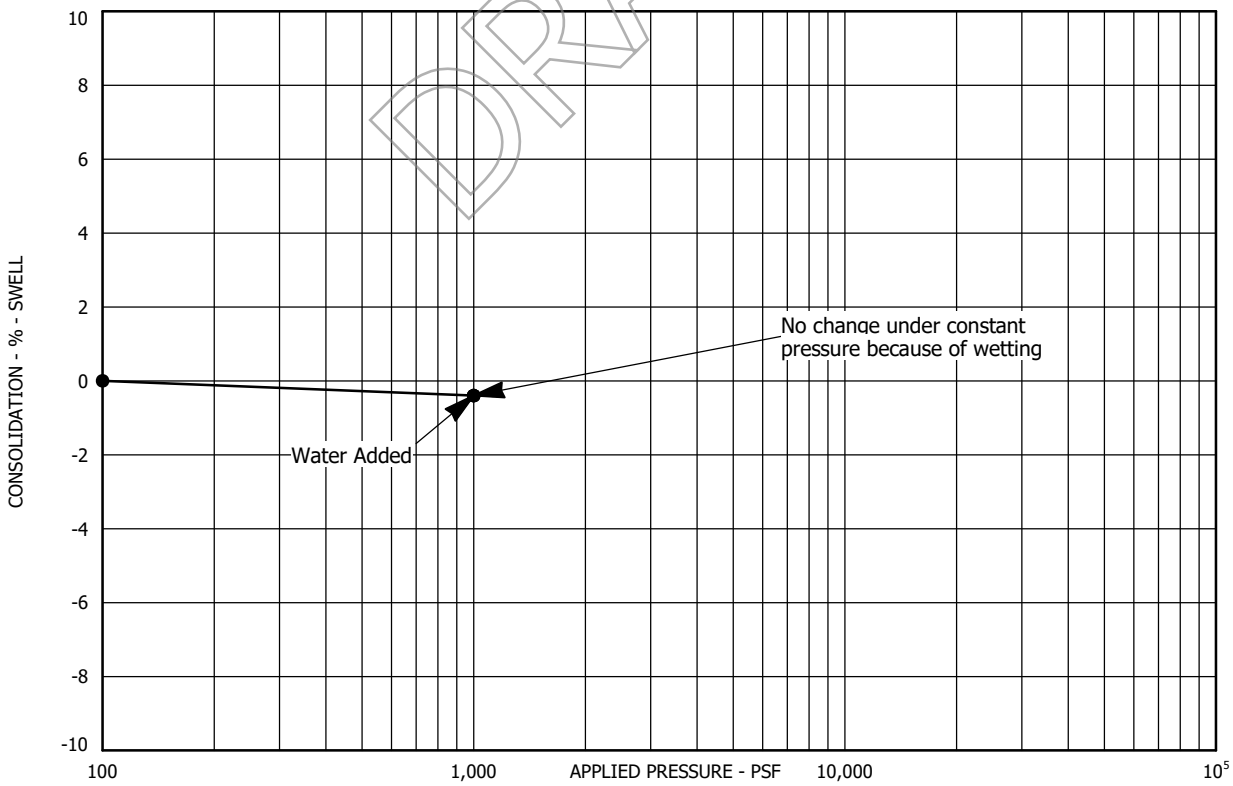
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-38

PROJECT NO. 213216



Sample Location: Test Boring No. 40 at a depth of 19 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 101
Moisture Content (%): 19

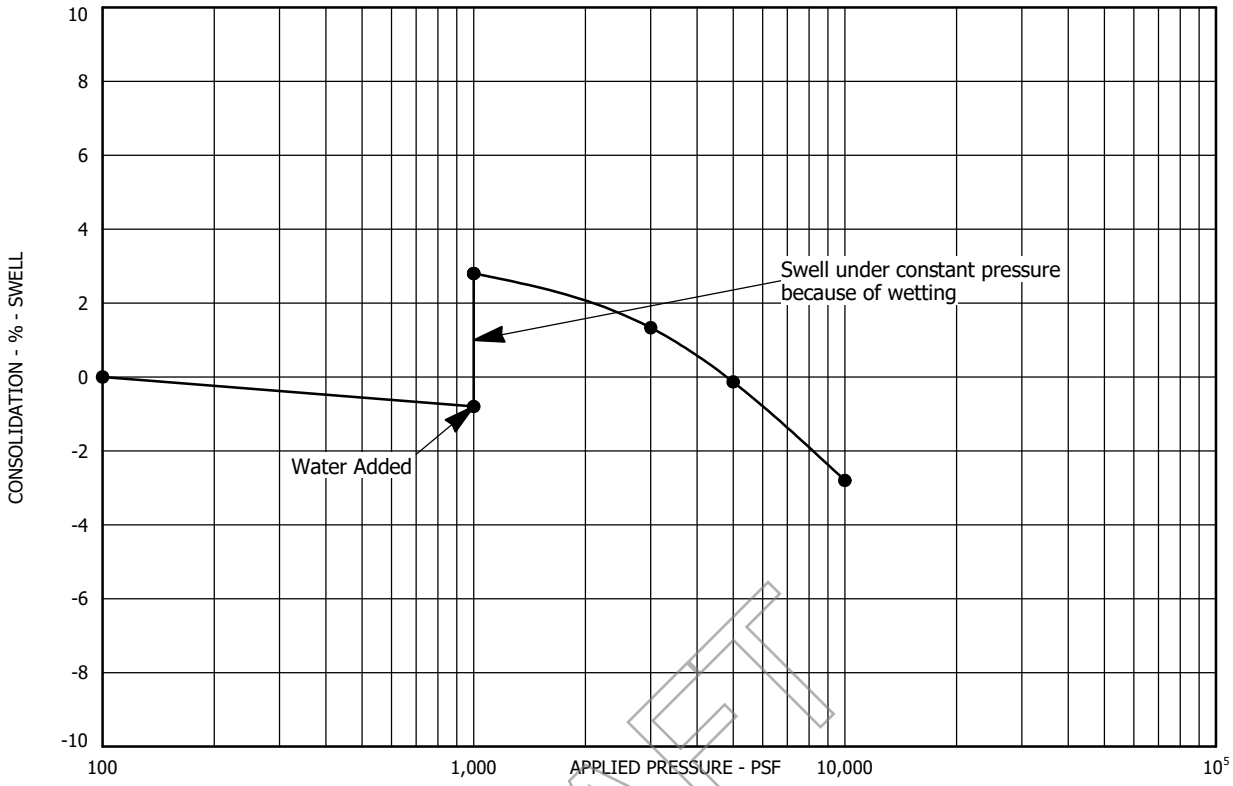


Sample Location: Test Boring No. 41 at a depth of 7 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 106
Moisture Content (%): 18

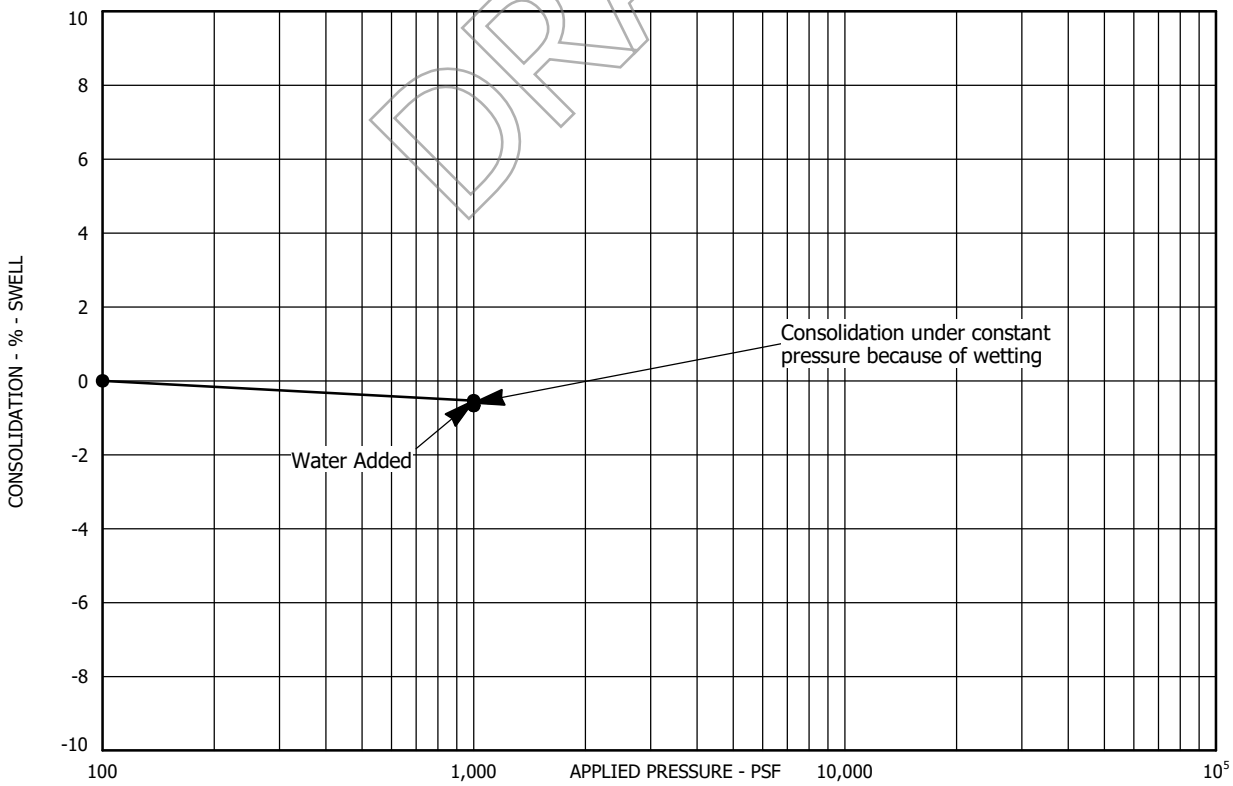
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-39

PROJECT NO. 213216



Sample Location: Test Boring No. 41 at a depth of 14 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 107
Moisture Content (%): 16



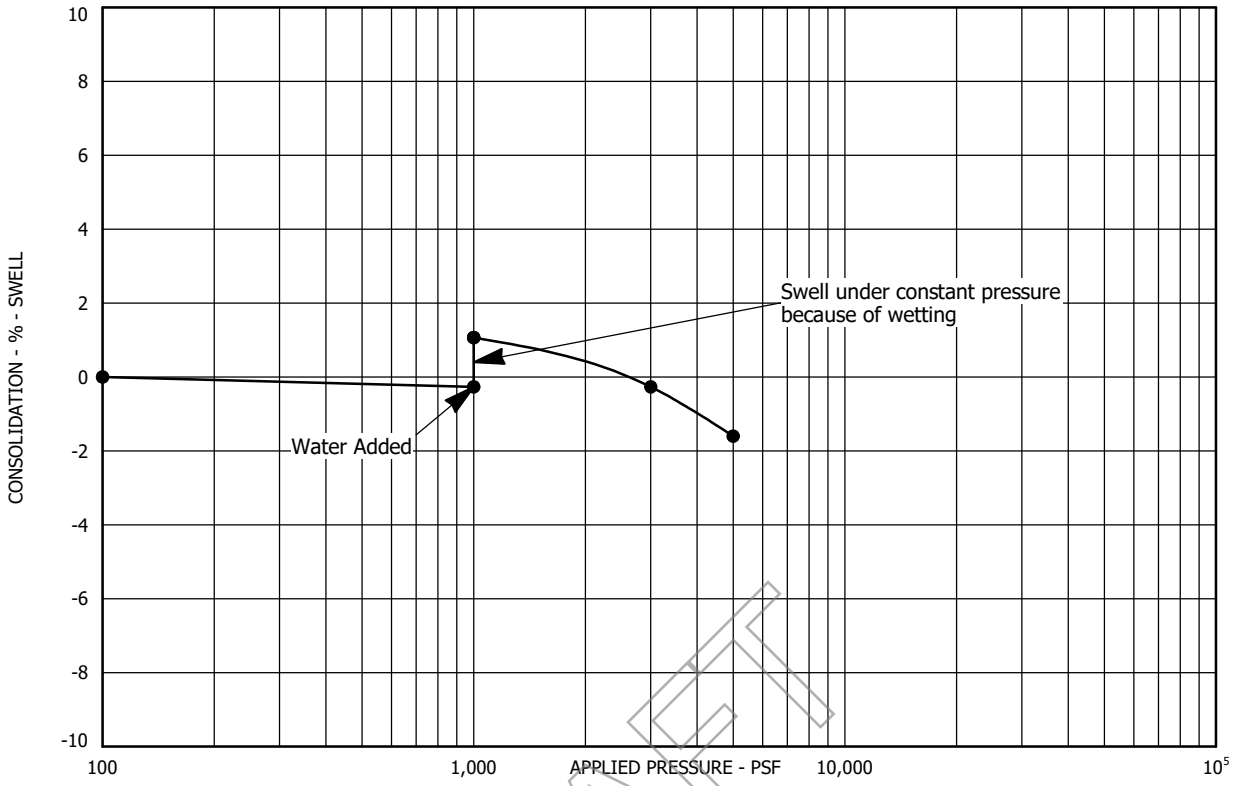
Sample Location: Test Boring No. 41 at a depth of 24 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 12

SWELL - CONSOLIDATION TEST RESULTS

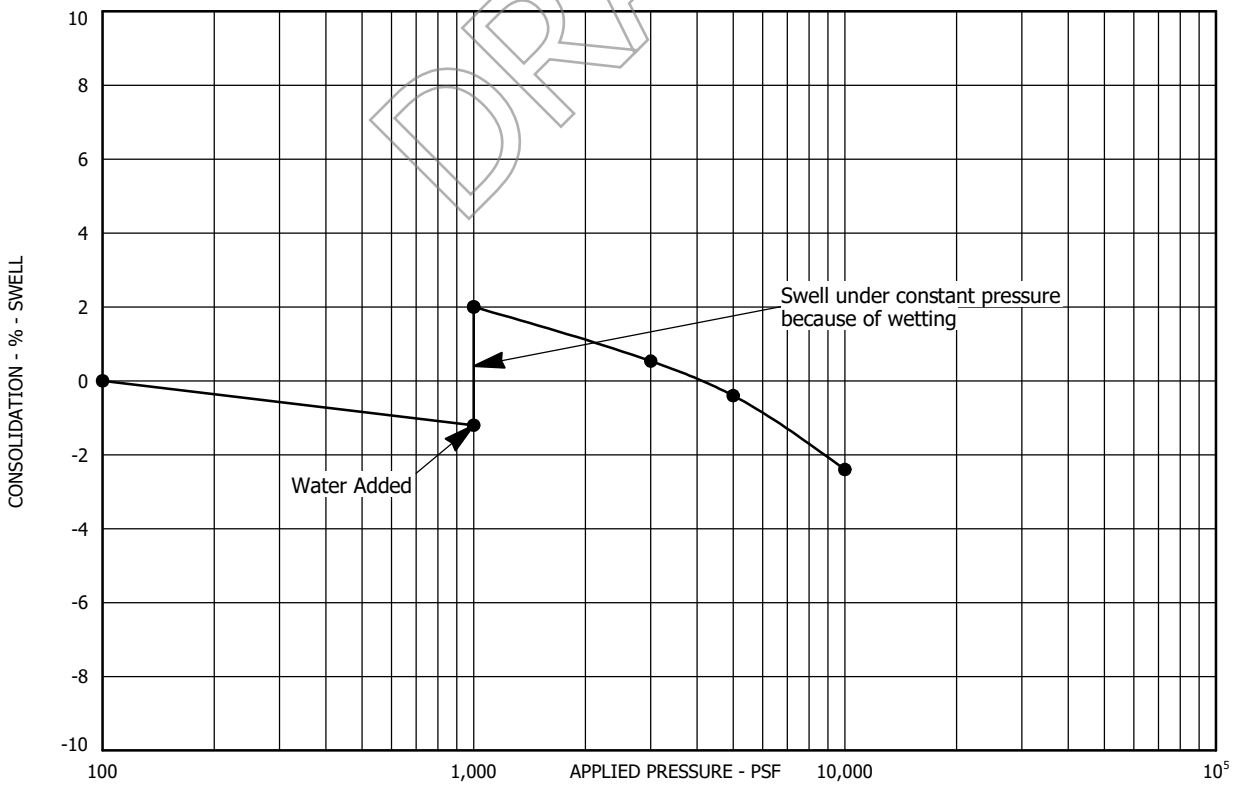
FIGURE A-40

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 42 at a depth of 4 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 104
Moisture Content (%): 8



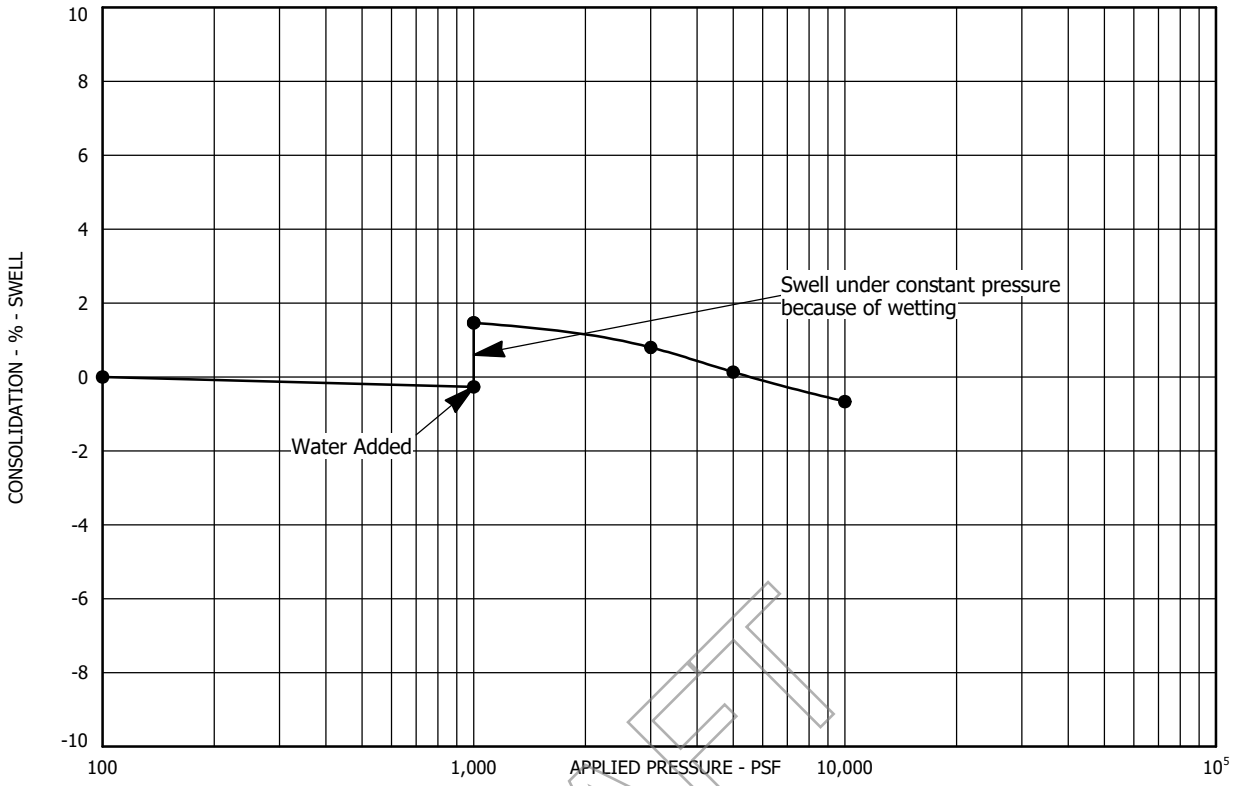
Sample Location: Test Boring No. 42 at a depth of 9 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 15

SWELL - CONSOLIDATION TEST RESULTS

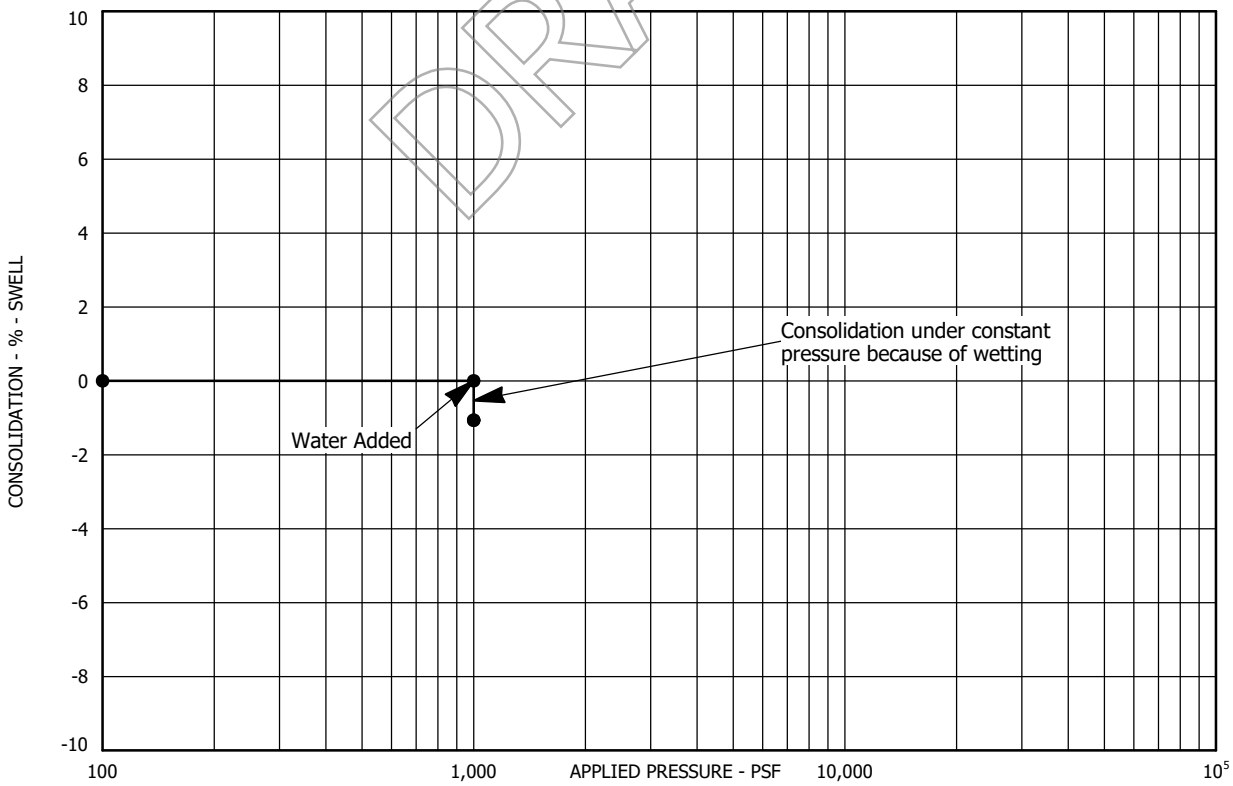
FIGURE A-41

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.

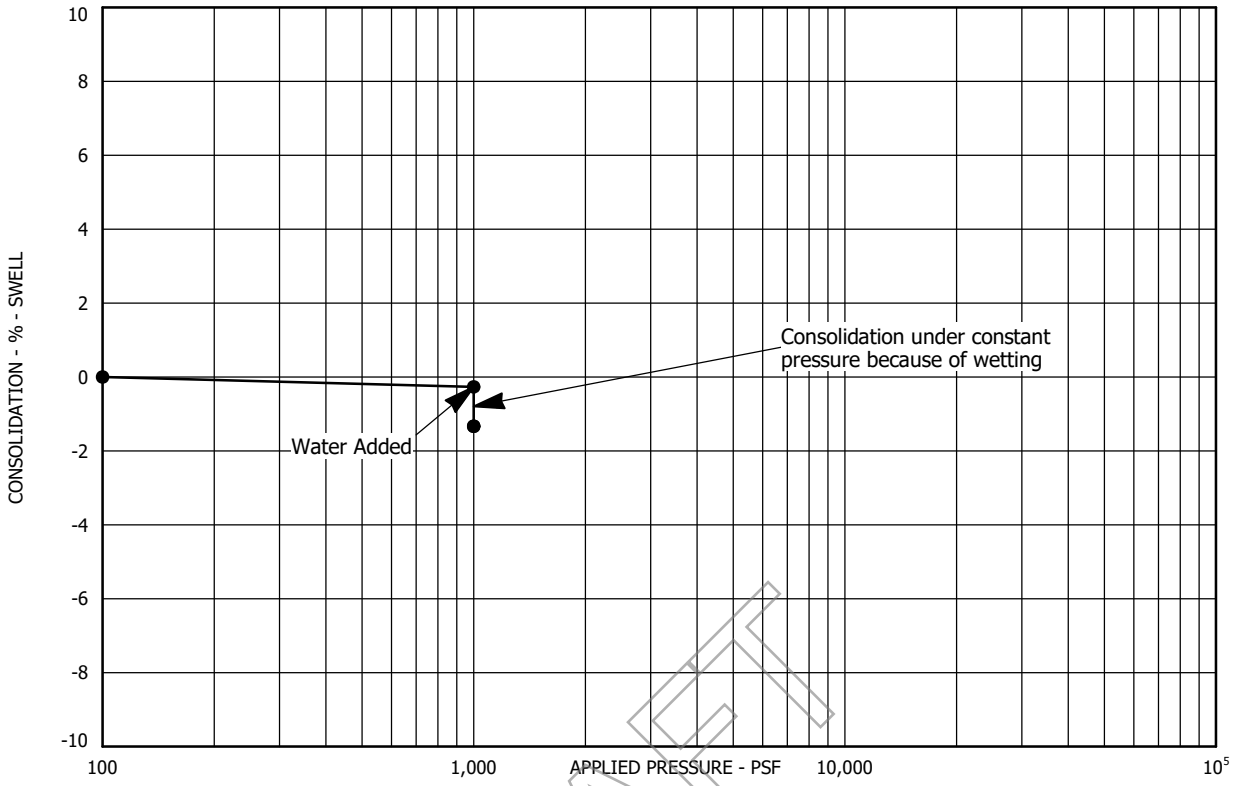


Sample Location: Test Boring No. 42 at a depth of 14 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 130
Moisture Content (%): 10

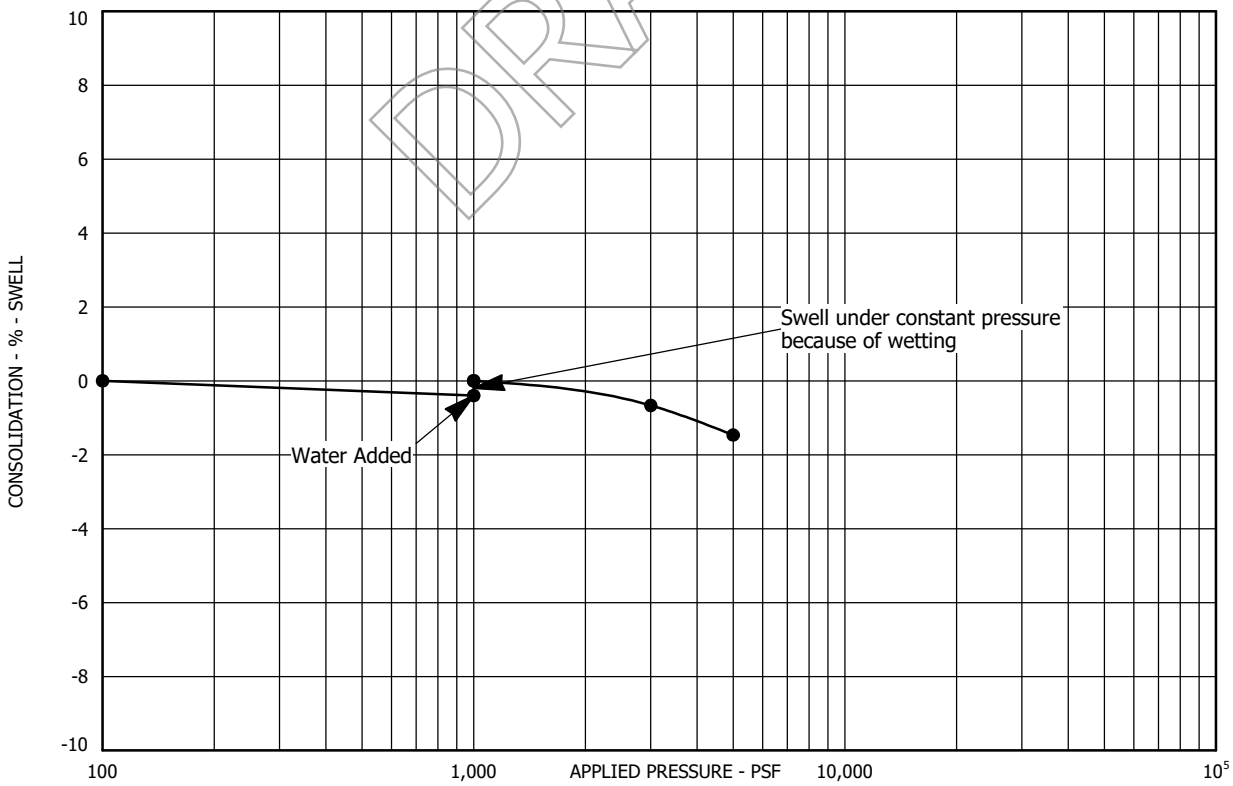


Sample Location: Test Boring No. 44 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 94
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-42
PROJECT NO. 213216



Sample Location: Test Boring No. 44 at a depth of 29 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 103
Moisture Content (%): 13



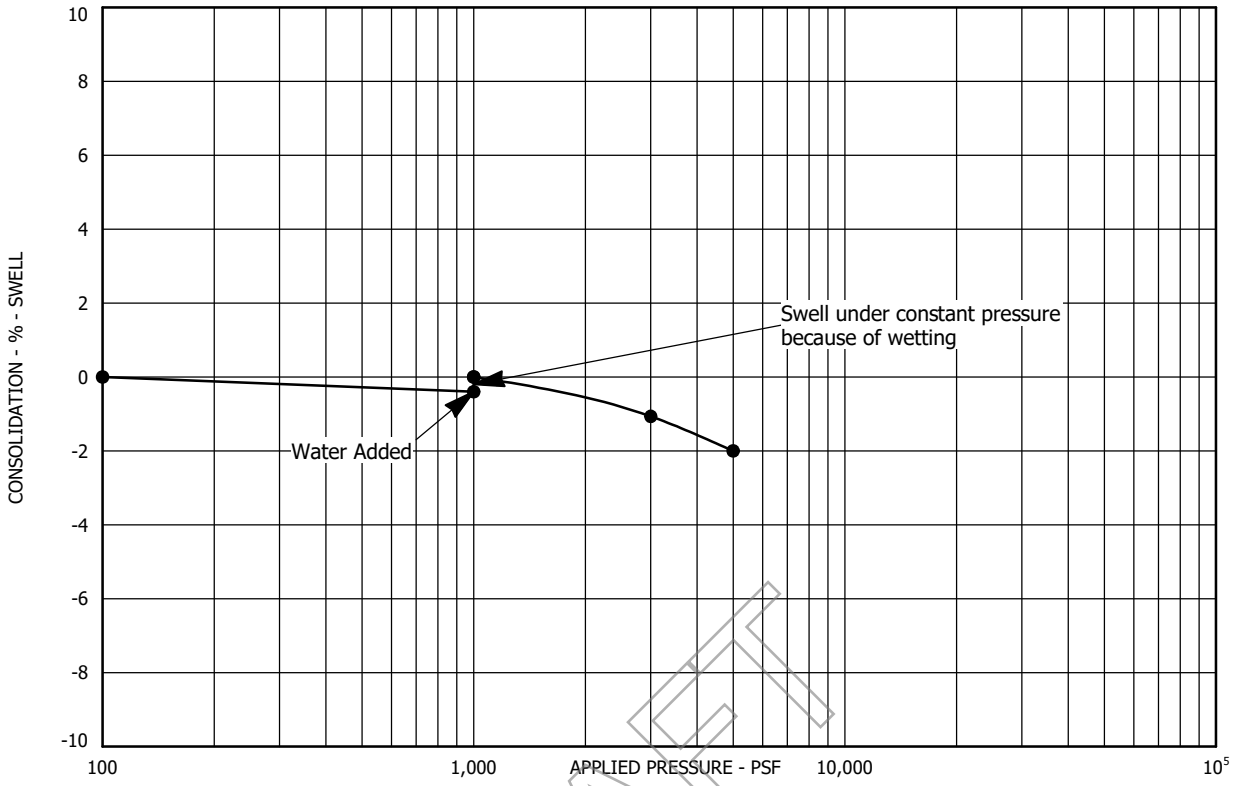
Sample Location: Test Boring No. 45 at a depth of 19 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 13

SWELL - CONSOLIDATION TEST RESULTS

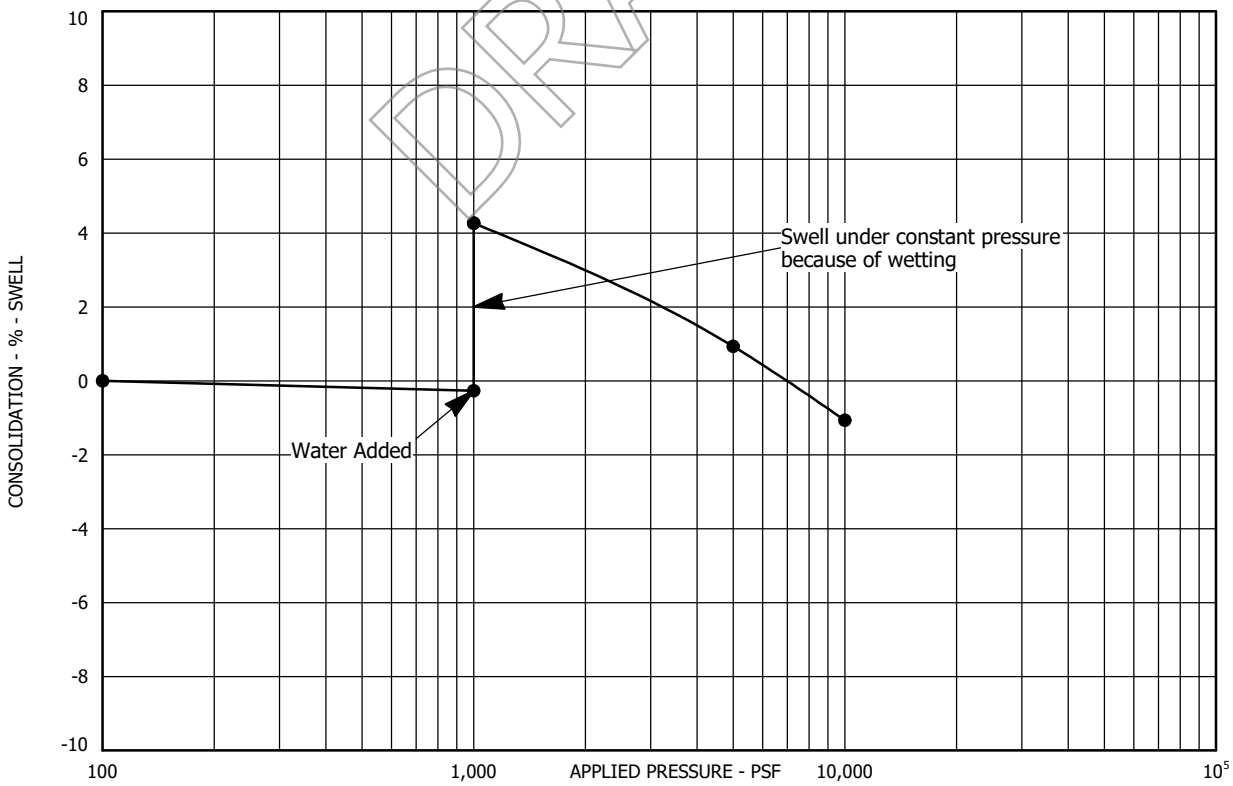
FIGURE A-43

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 46 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 102
Moisture Content (%): 10



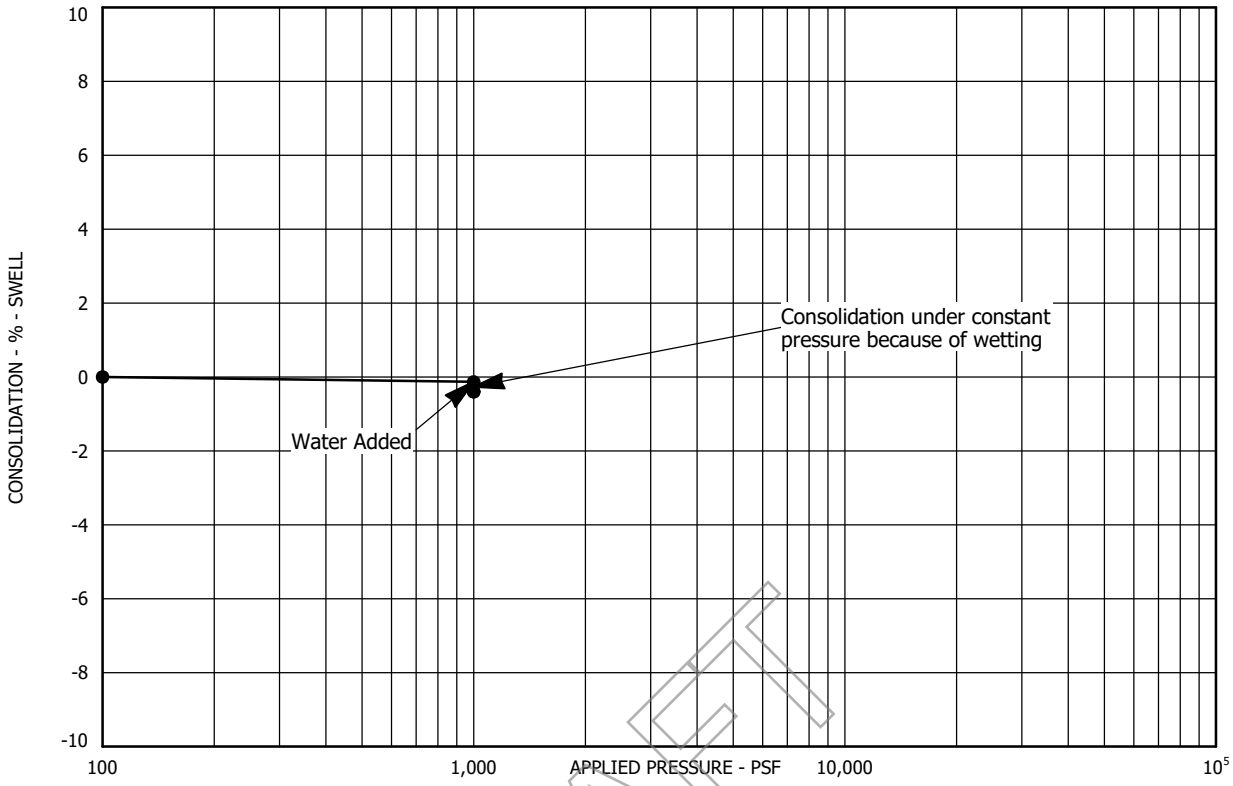
Sample Location: Test Boring No. 46 at a depth of 24 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 18

SWELL - CONSOLIDATION TEST RESULTS

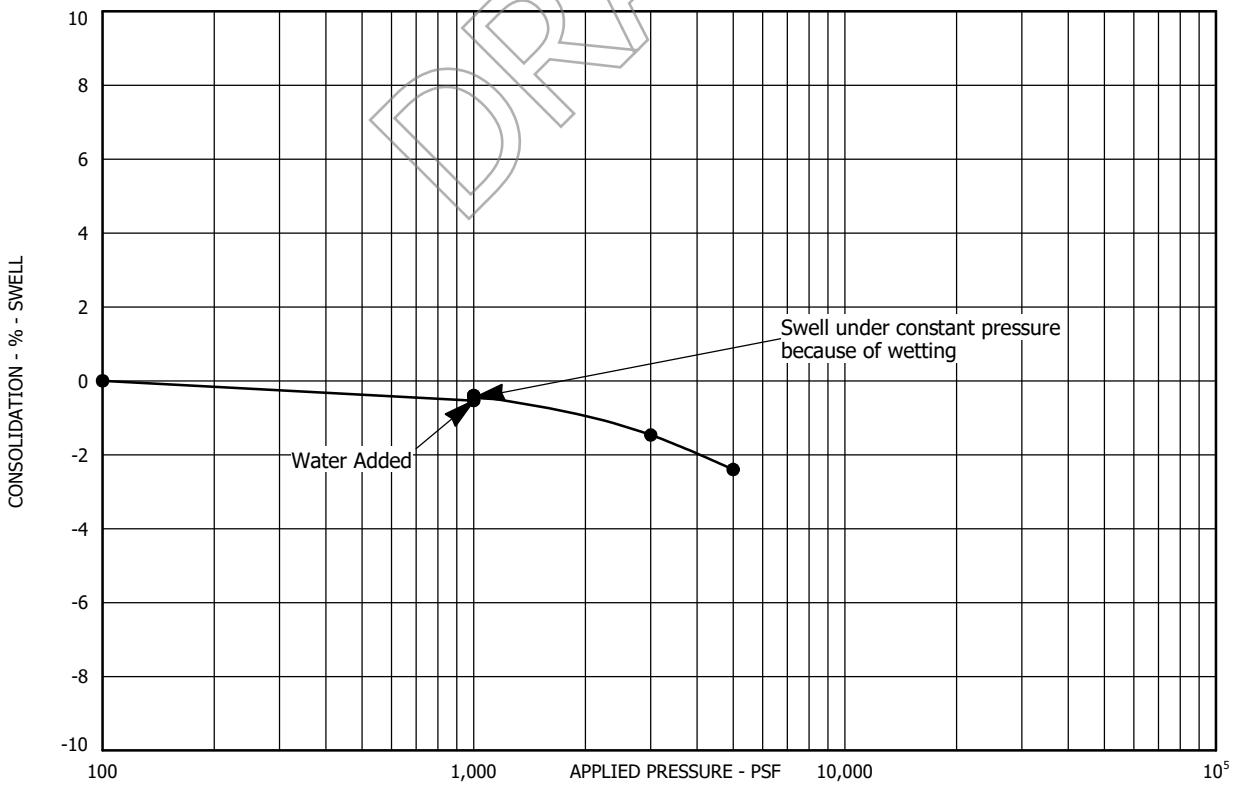
FIGURE A-44

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.

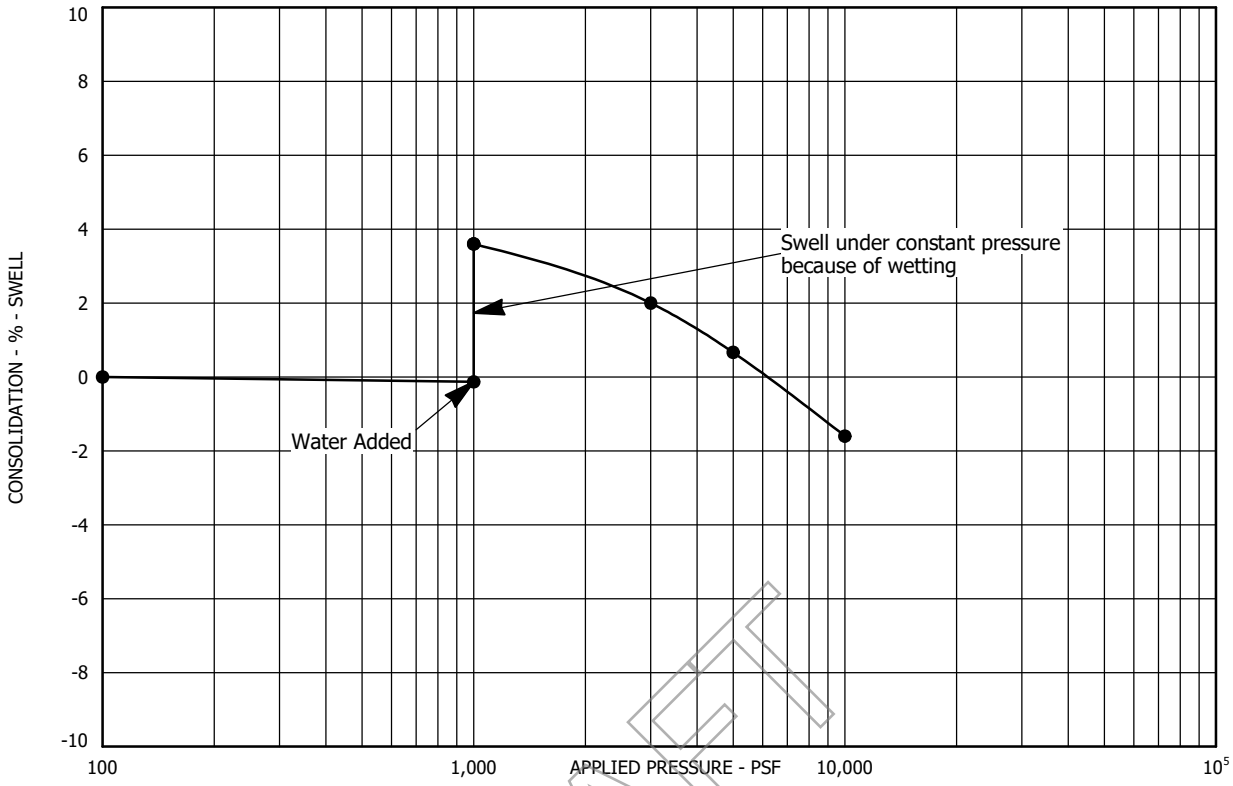


Sample Location: Test Boring No. 47 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 101
Moisture Content (%): 14

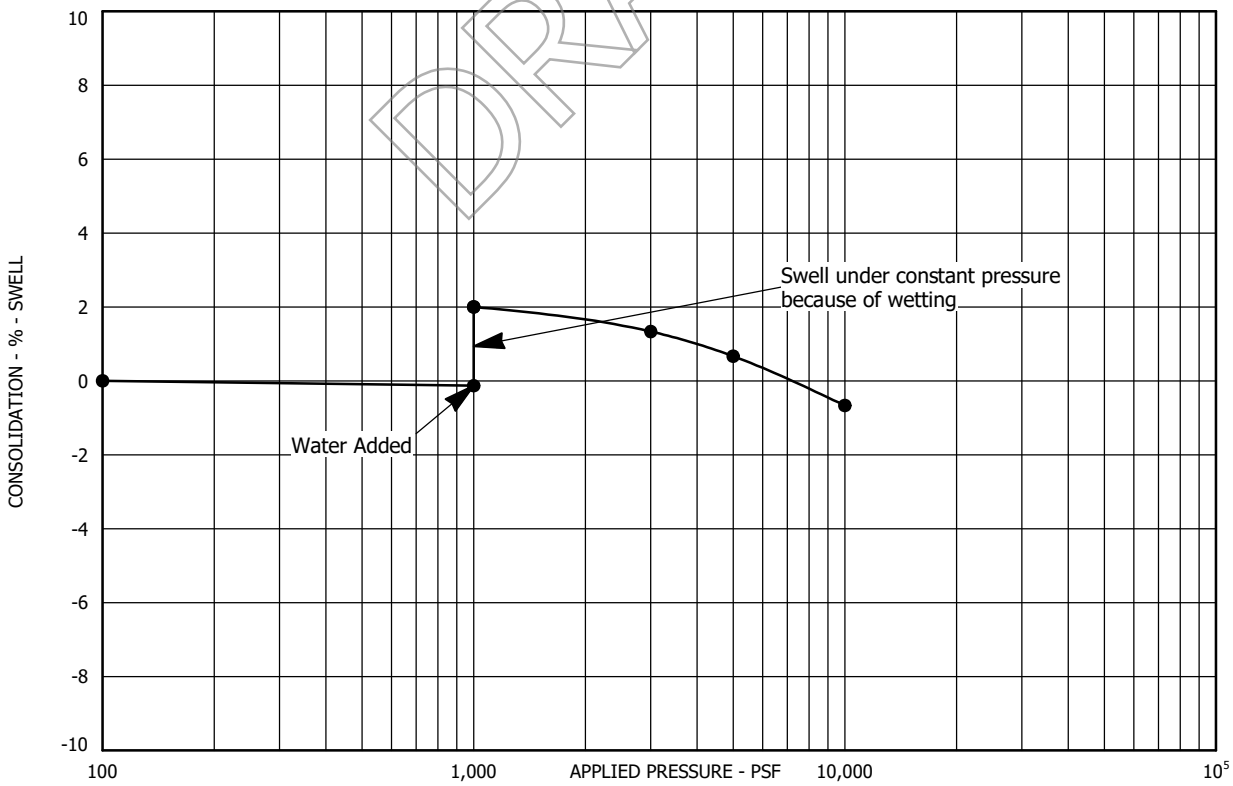


Sample Location: Test Boring No. 47 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 113
Moisture Content (%): 11

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-45
PROJECT NO. 213216



Sample Location: Test Boring No. 47 at a depth of 19 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 15



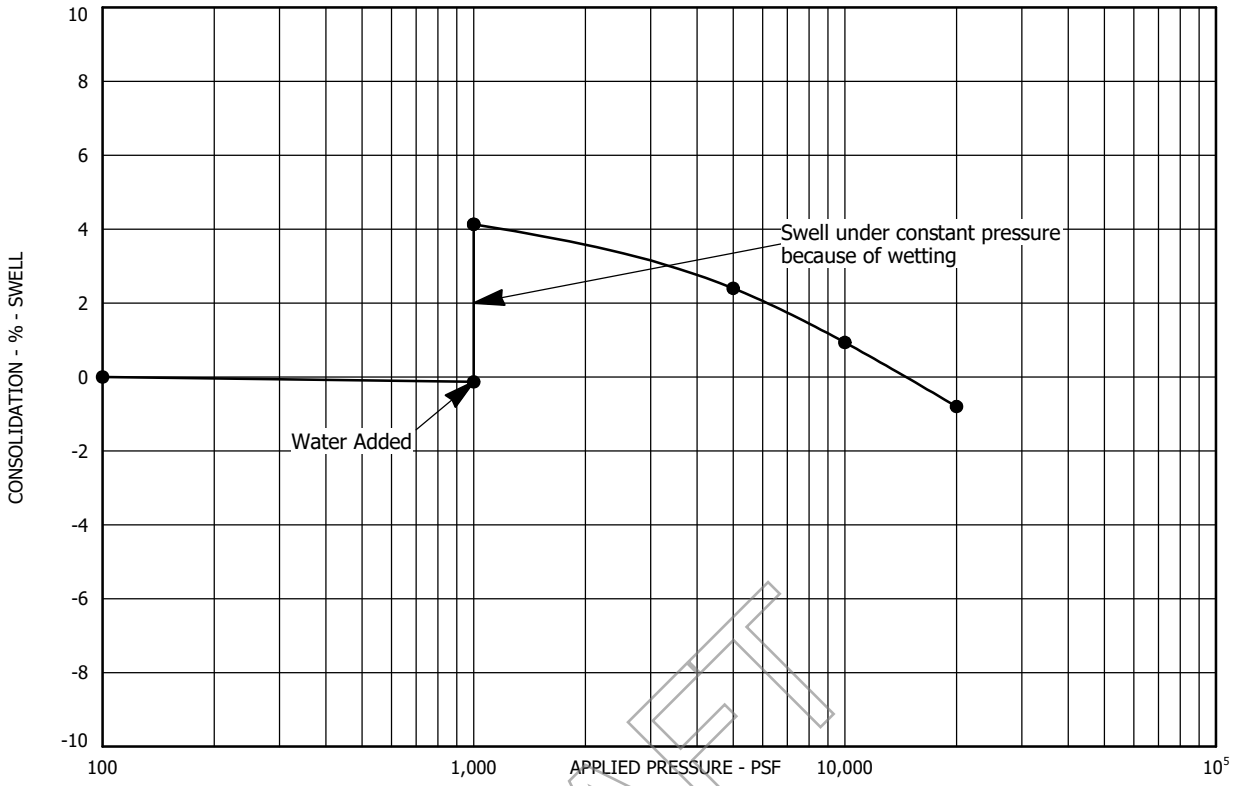
Sample Location: Test Boring No. 48 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS

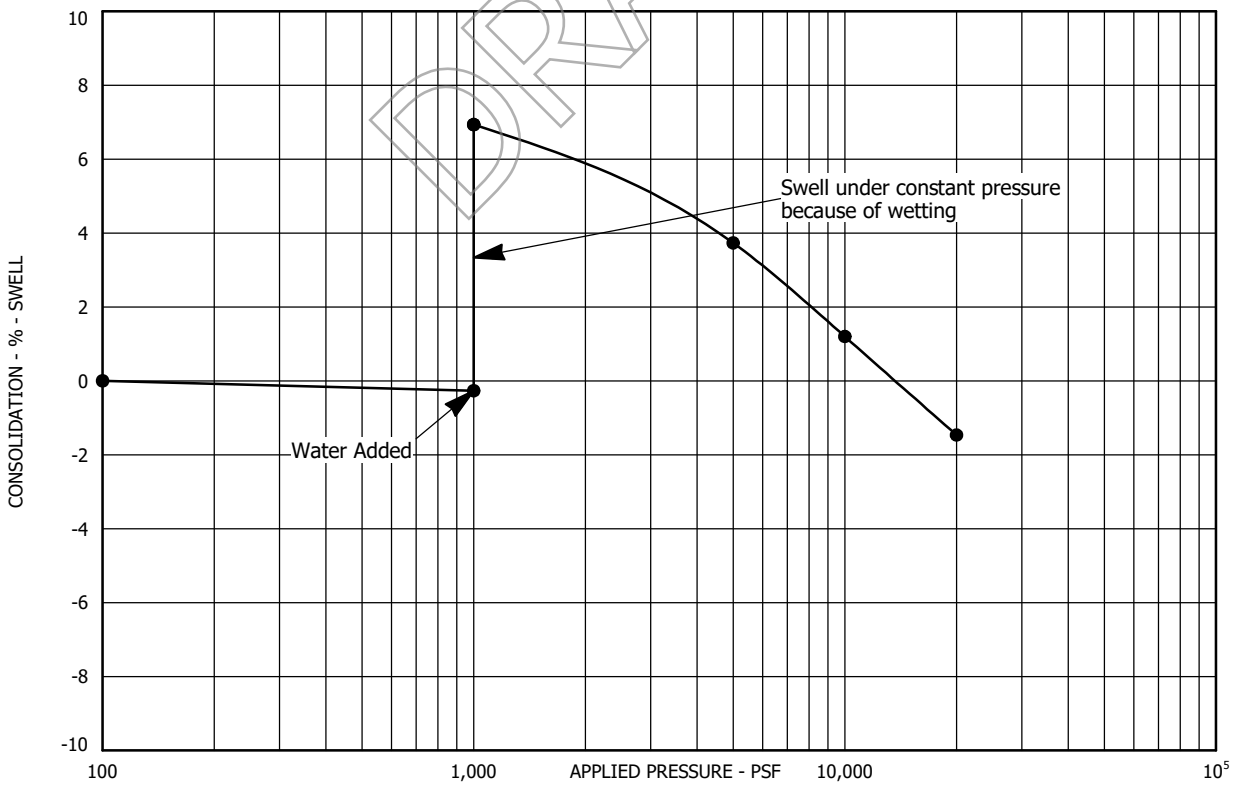
FIGURE A-46

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 48 at a depth of 14 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 130
Moisture Content (%): 11



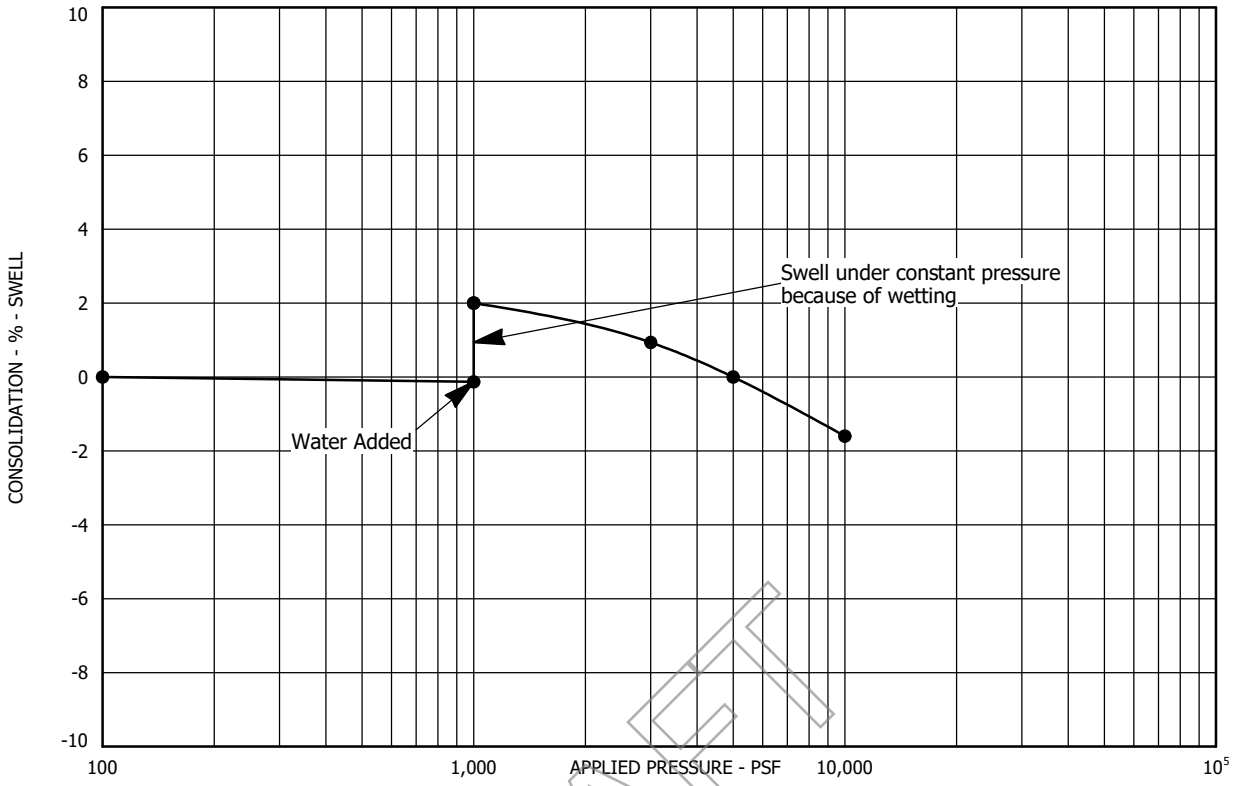
Sample Location: Test Boring No. 48 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 16

SWELL - CONSOLIDATION TEST RESULTS

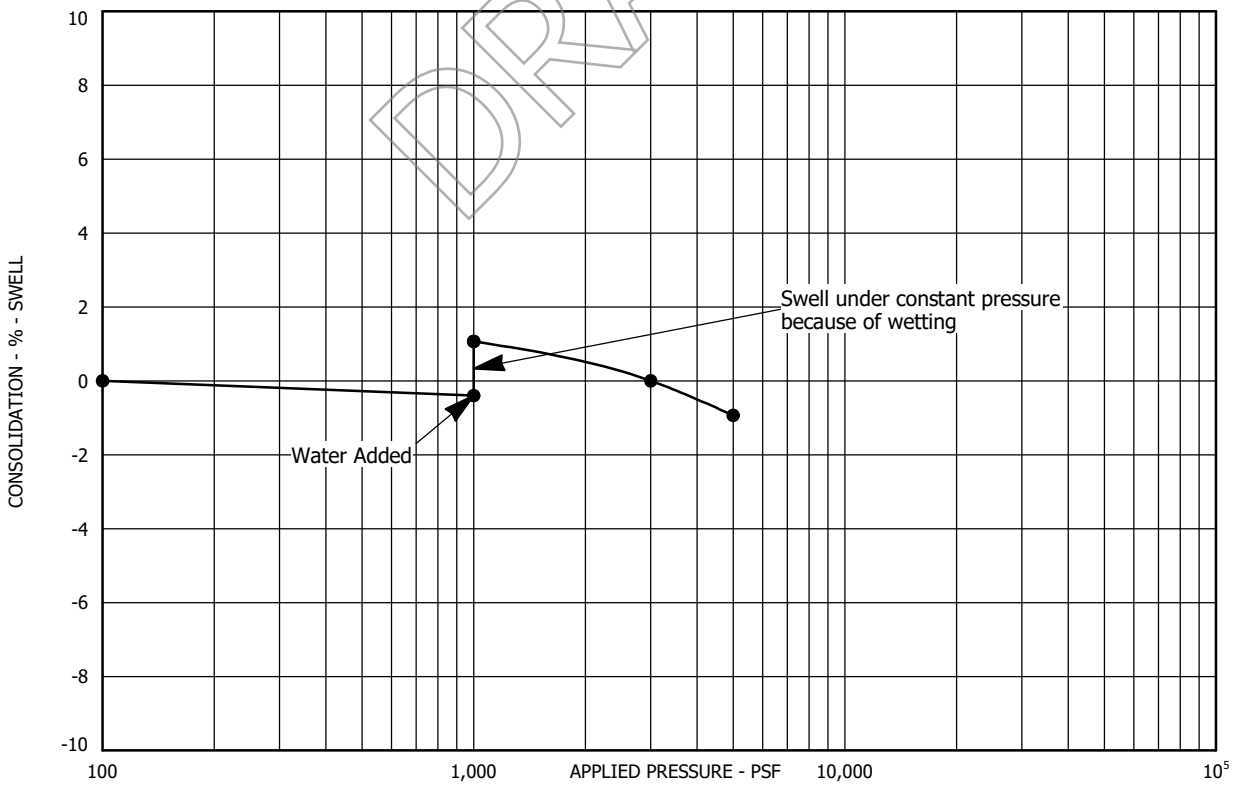
FIGURE A-47

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 49 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 8



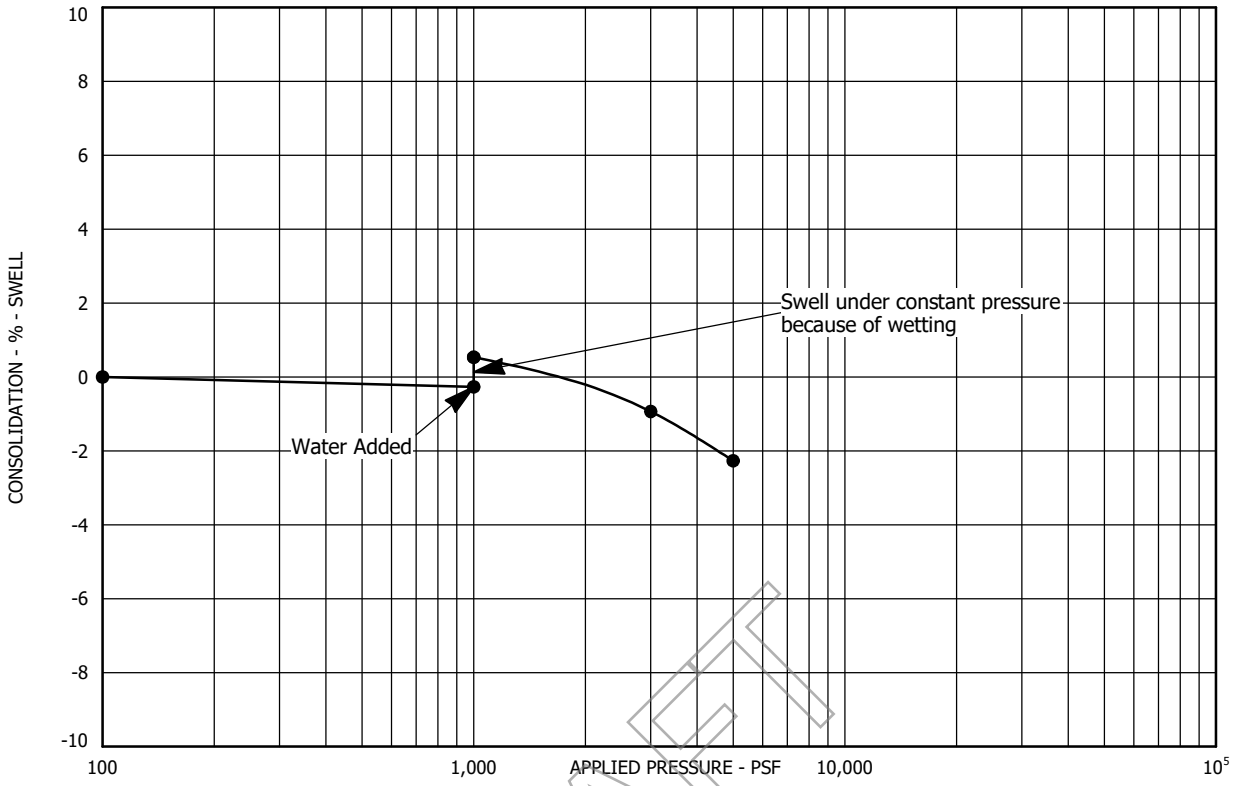
Sample Location: Test Boring No. 49 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 17

SWELL - CONSOLIDATION TEST RESULTS

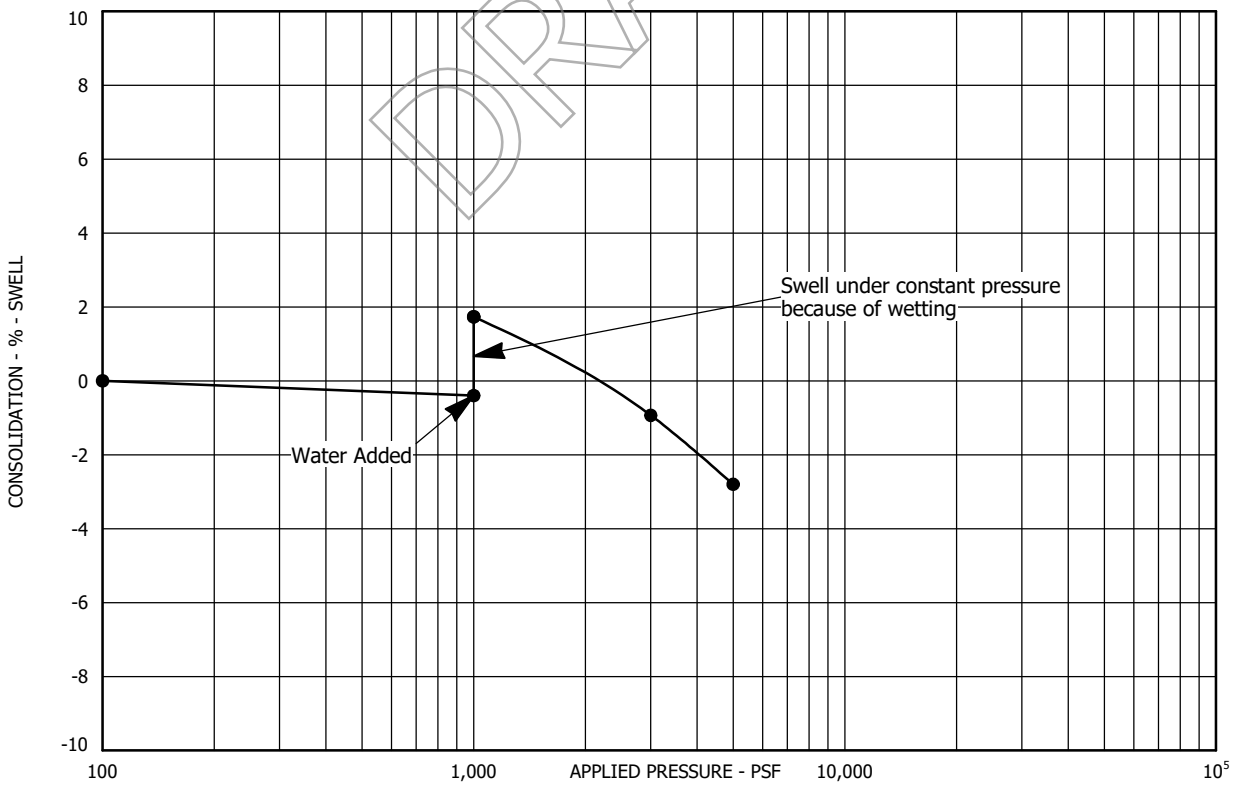
FIGURE A-48

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 50 at a depth of 9 feet
Sample Description: Sand, clayey
Dry Unit Weight (pcf): 107
Moisture Content (%): 10

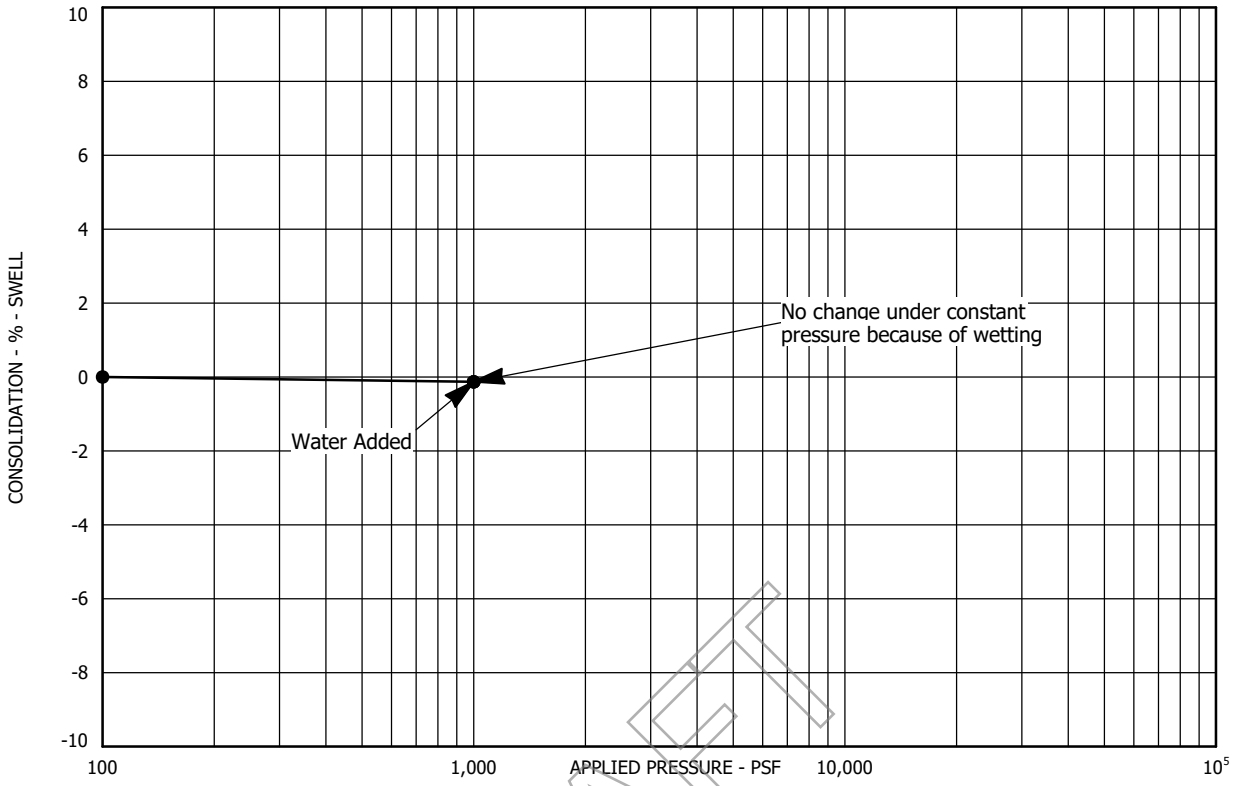


Sample Location: Test Boring No. 50 at a depth of 19 feet
Sample Description: Claystone, trace sand
Dry Unit Weight (pcf): 107
Moisture Content (%): 17

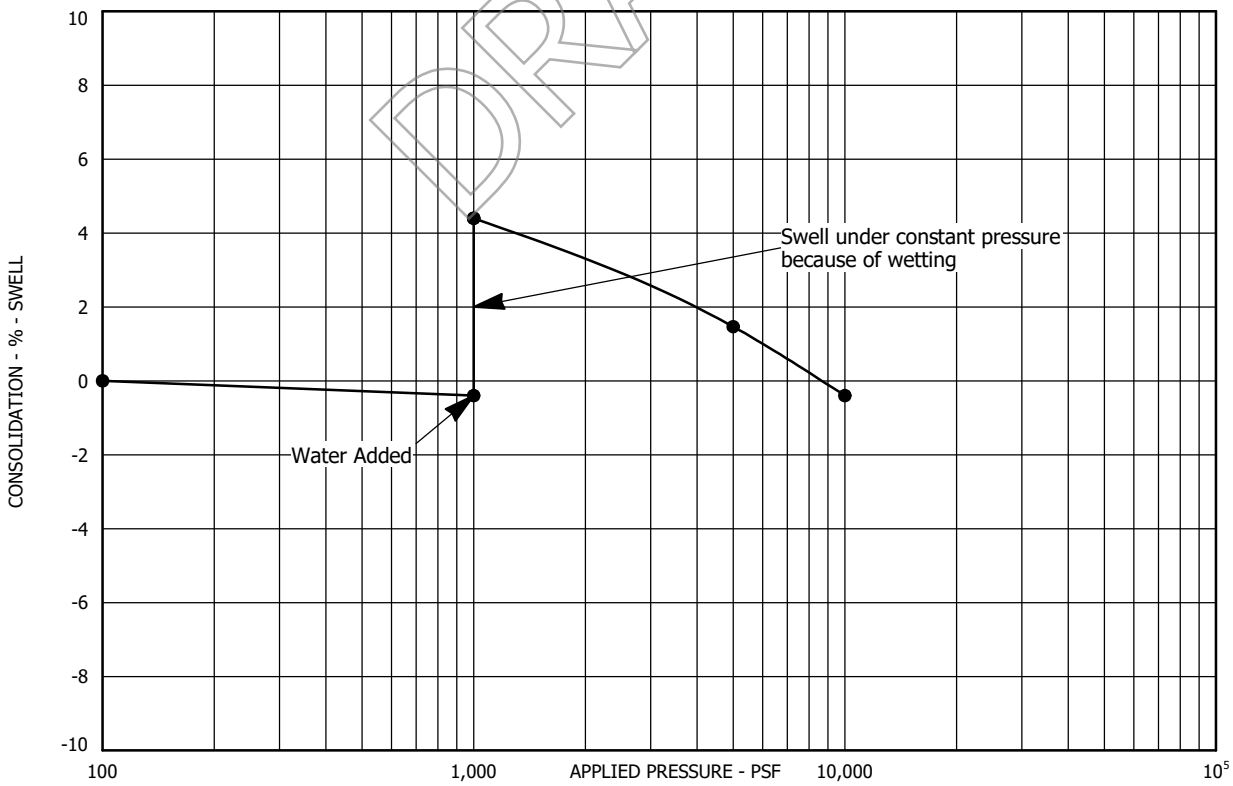
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-49

PROJECT NO. 213216



Sample Location: Test Boring No. 51 at a depth of 14 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 113
Moisture Content (%): 13



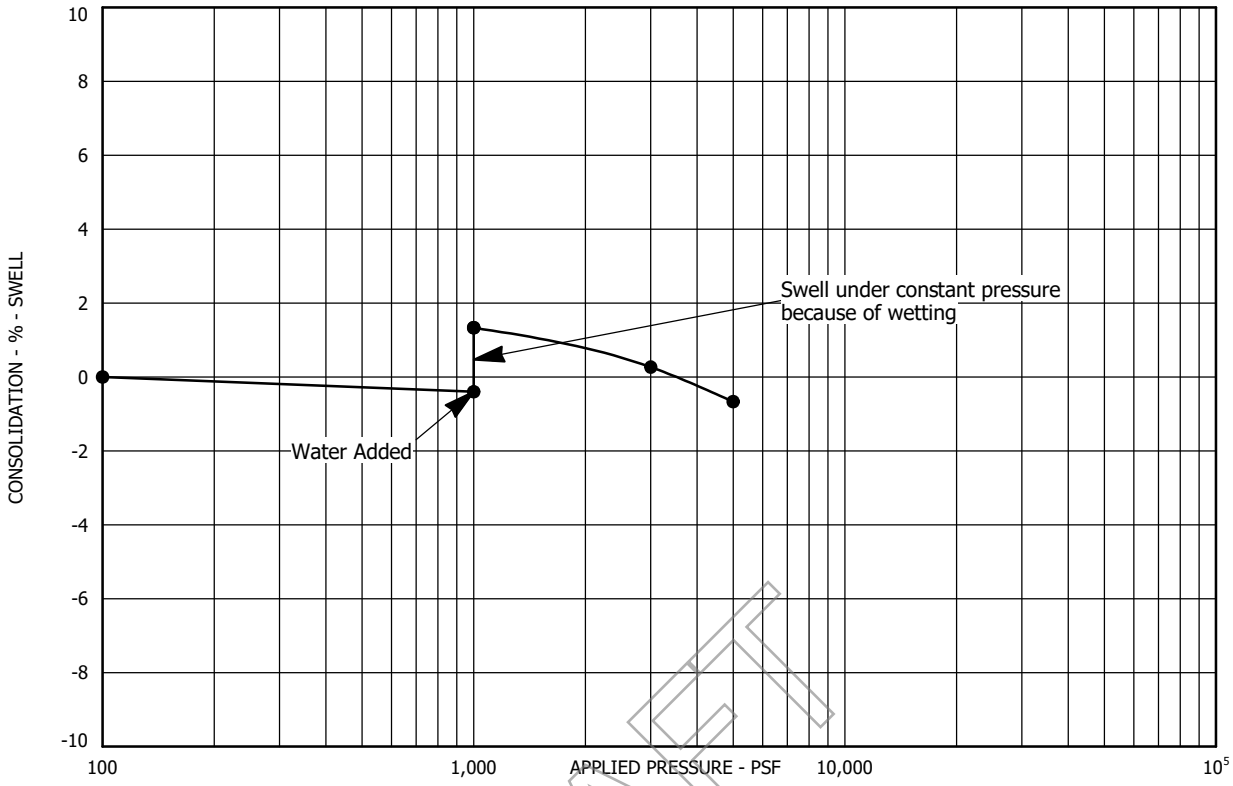
Sample Location: Test Boring No. 51 at a depth of 24 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 15

SWELL - CONSOLIDATION TEST RESULTS

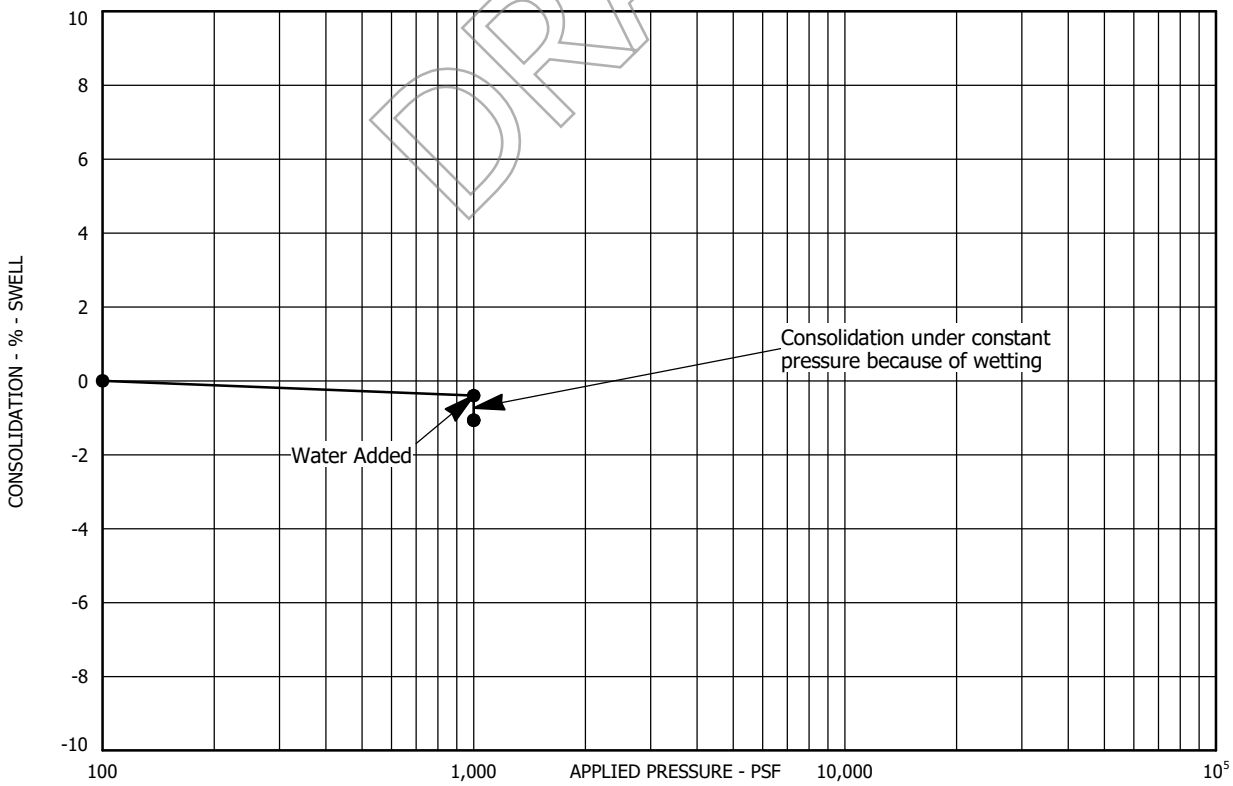
FIGURE A-50

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 52 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 10



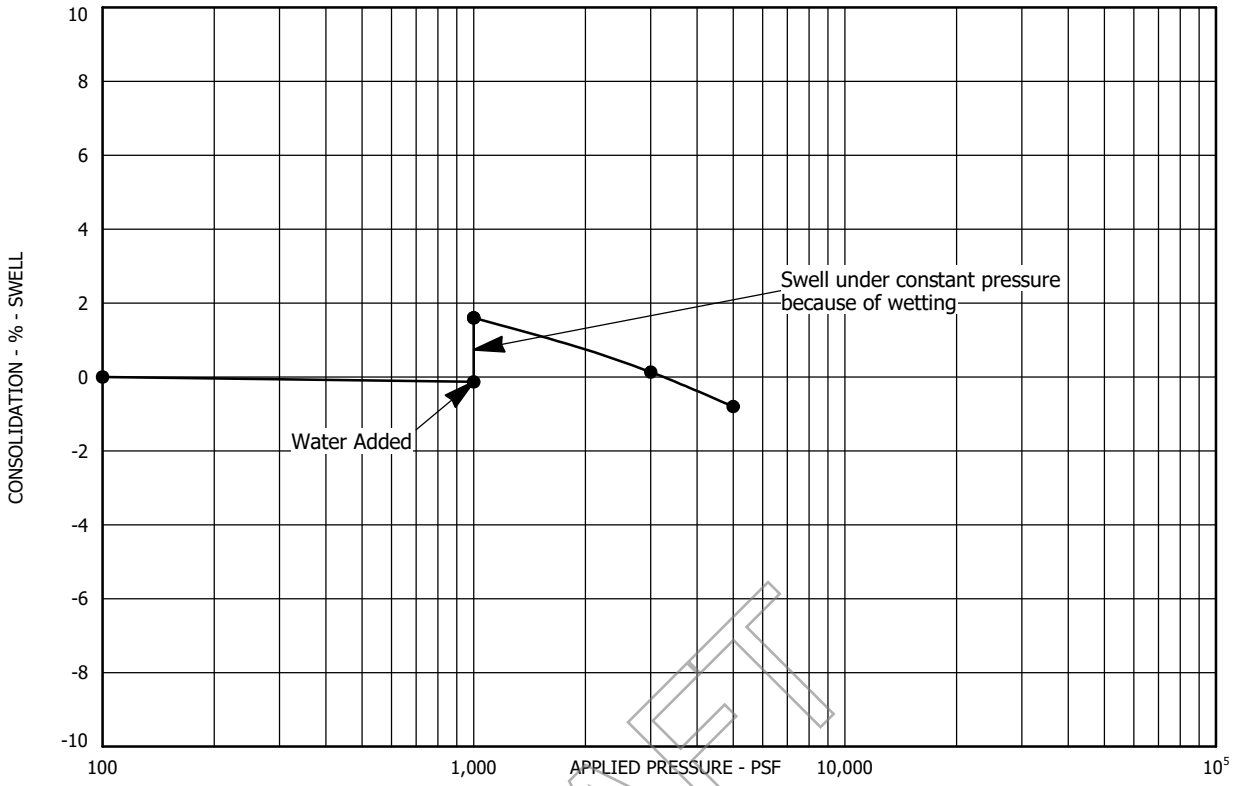
Sample Location: Test Boring No. 52 at a depth of 7 feet
Sample Description: Clay, very sandy, trace gravel
Dry Unit Weight (pcf): 103
Moisture Content (%): 13

SWELL - CONSOLIDATION TEST RESULTS

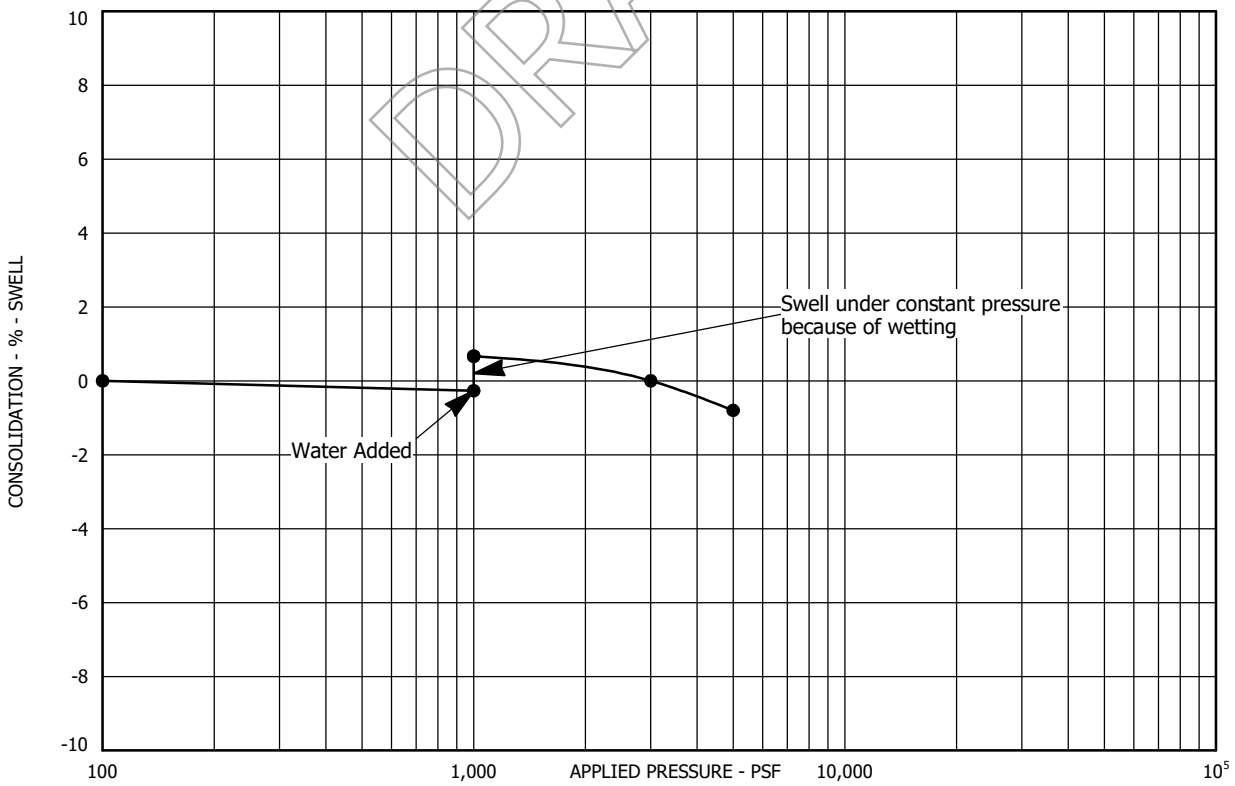
FIGURE A-51

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.

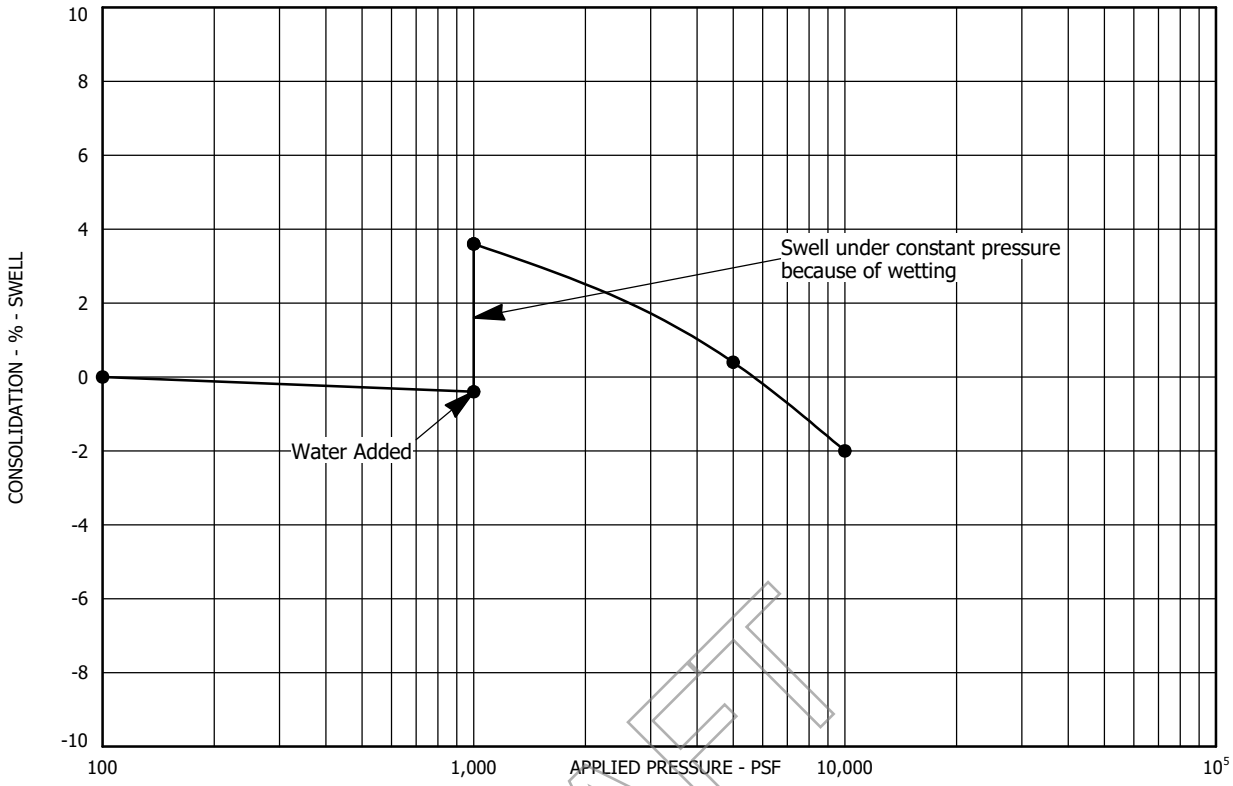


Sample Location: Test Boring No. 52 at a depth of 14 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 112
Moisture Content (%): 13

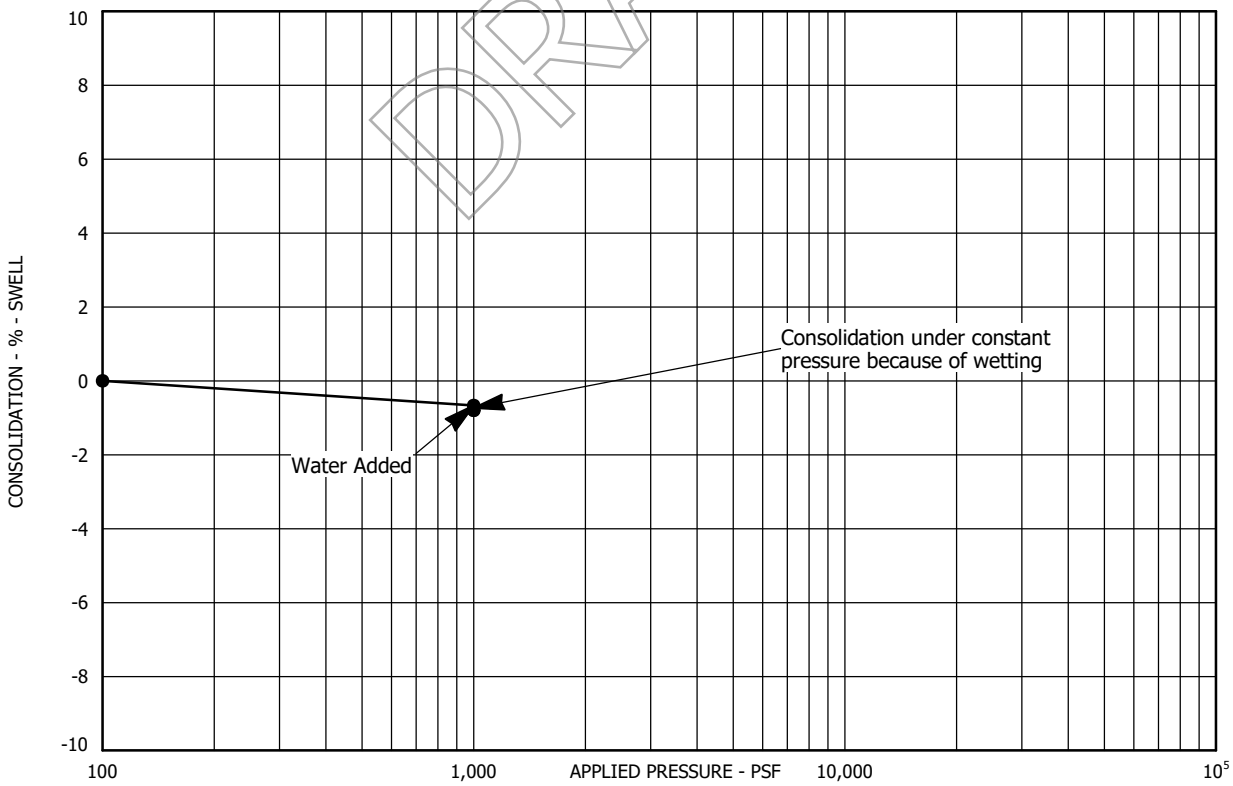


Sample Location: Test Boring No. 53 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-52
PROJECT NO. 213216



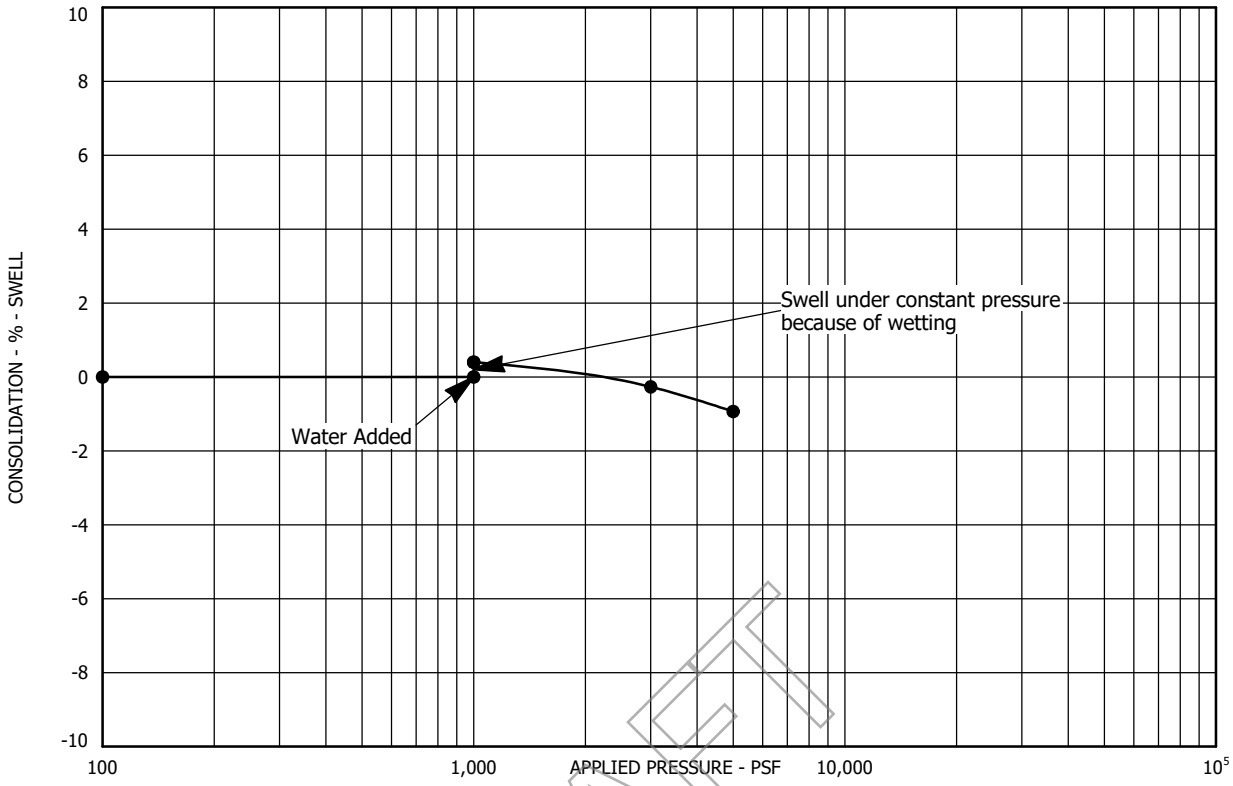
Sample Location: Test Boring No. 53 at a depth of 24 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 18



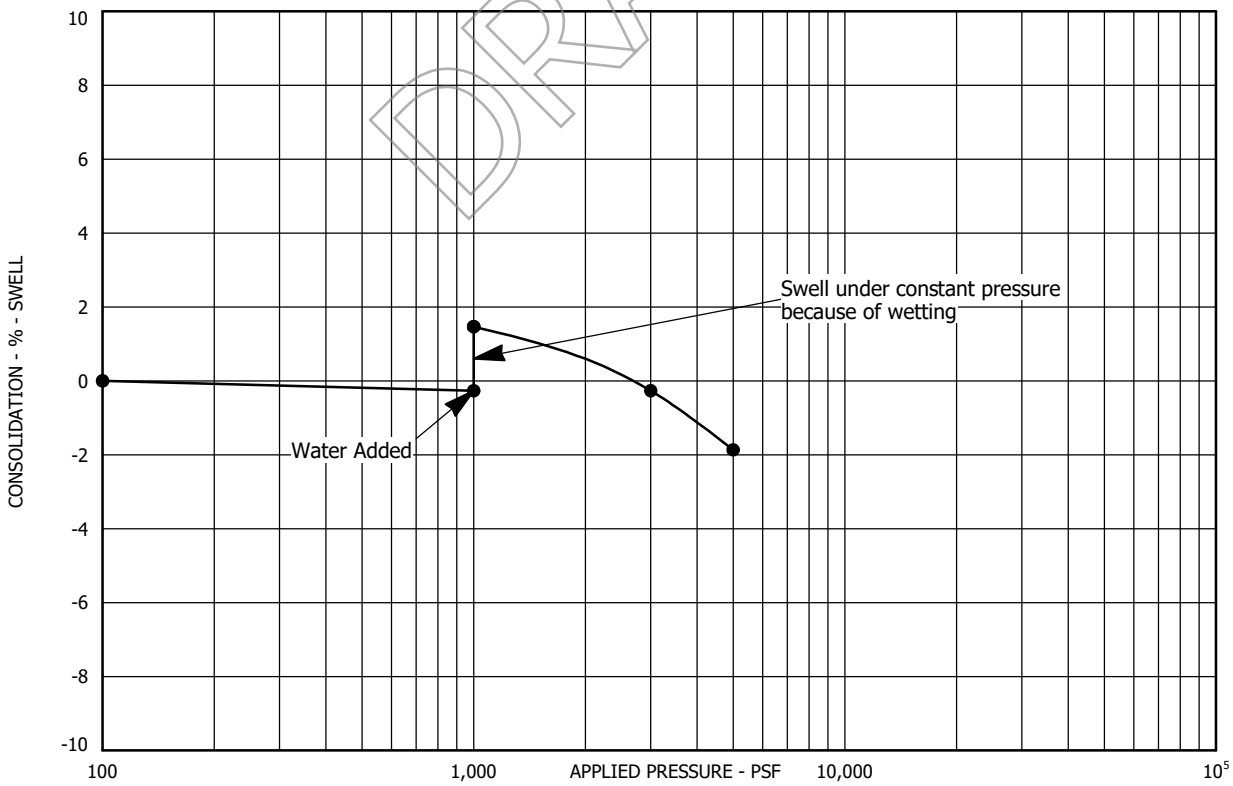
Sample Location: Test Boring No. 53 at a depth of 34 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 102
Moisture Content (%): 17

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-53
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 54 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 110
Moisture Content (%): 10



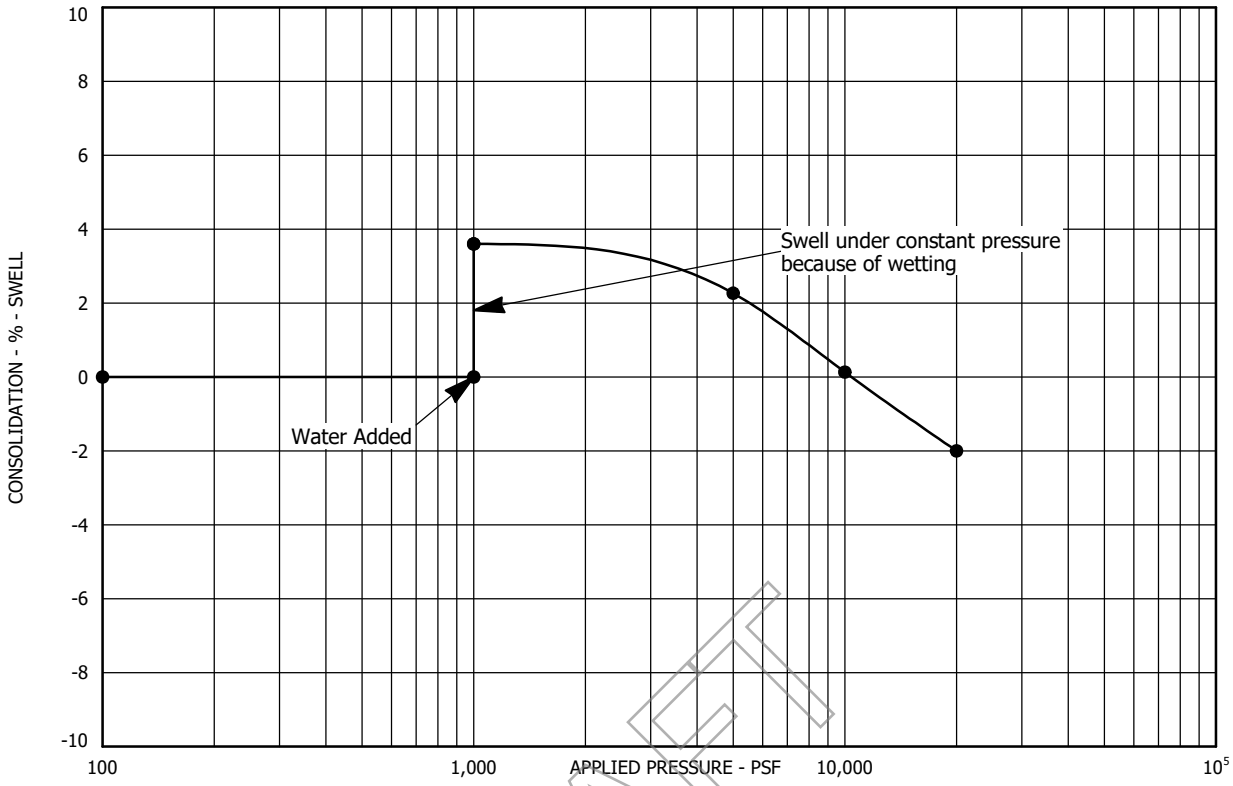
Sample Location: Test Boring No. 54 at a depth of 19 feet
Sample Description: Claystone, trace sand
Dry Unit Weight (pcf): 106
Moisture Content (%): 17

SWELL - CONSOLIDATION TEST RESULTS

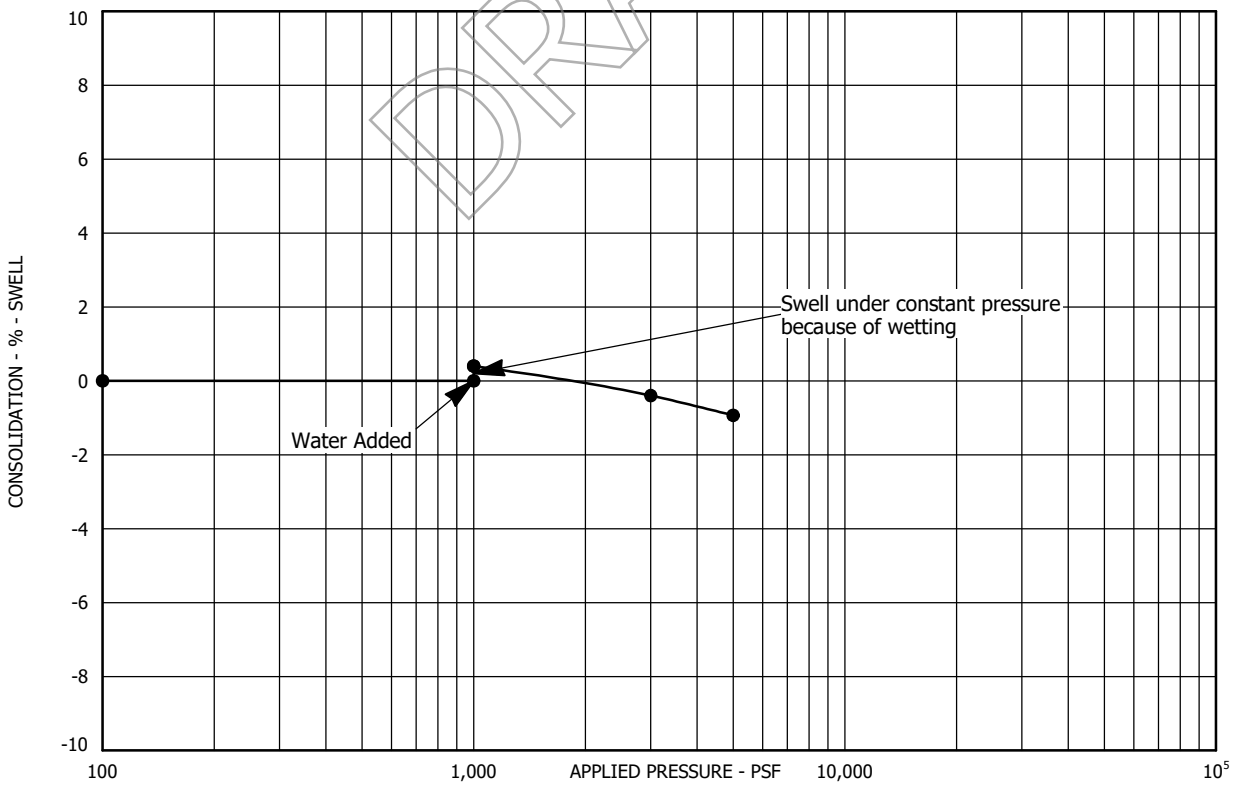
FIGURE A-54

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 55 at a depth of 2 feet
Sample Description: Fill, clay, sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 10



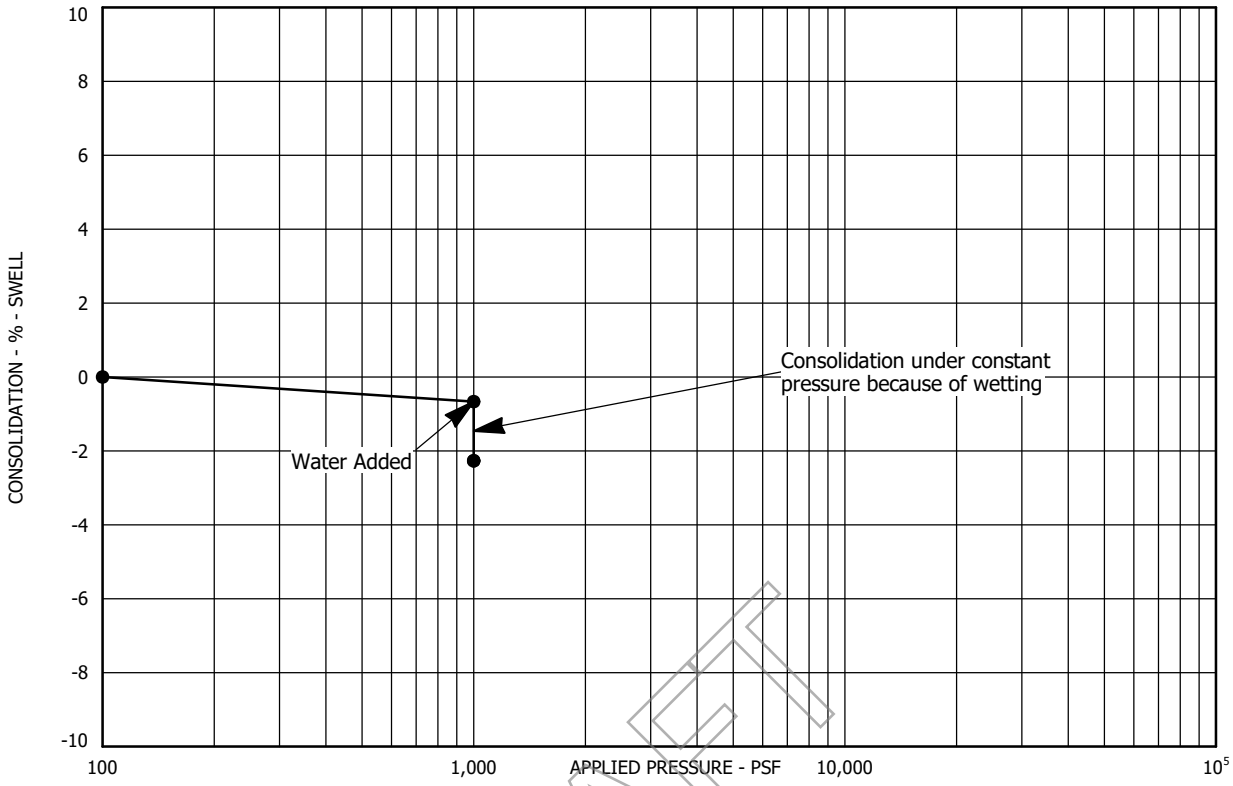
Sample Location: Test Boring No. 55 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 111
Moisture Content (%): 9

SWELL - CONSOLIDATION TEST RESULTS

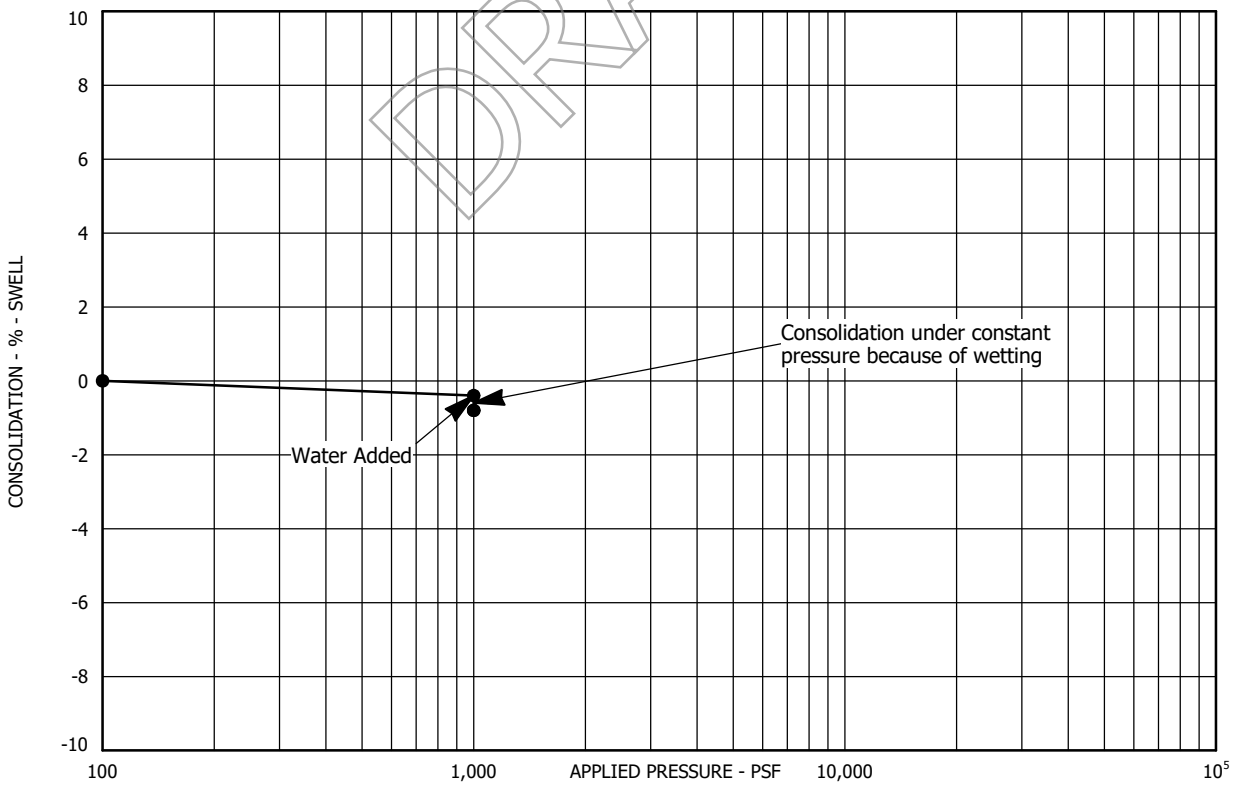
FIGURE A-55

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



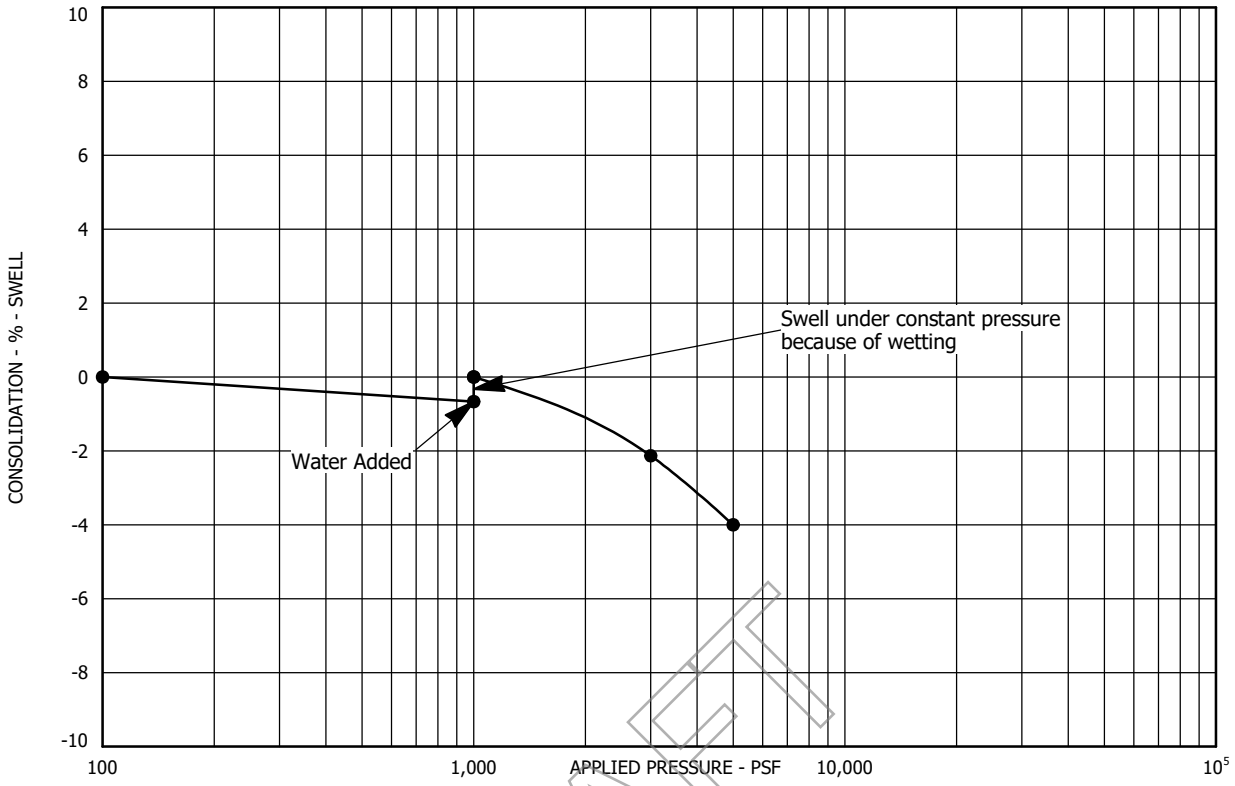
Sample Location: Test Boring No. 55 at a depth of 14 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 98
Moisture Content (%): 22



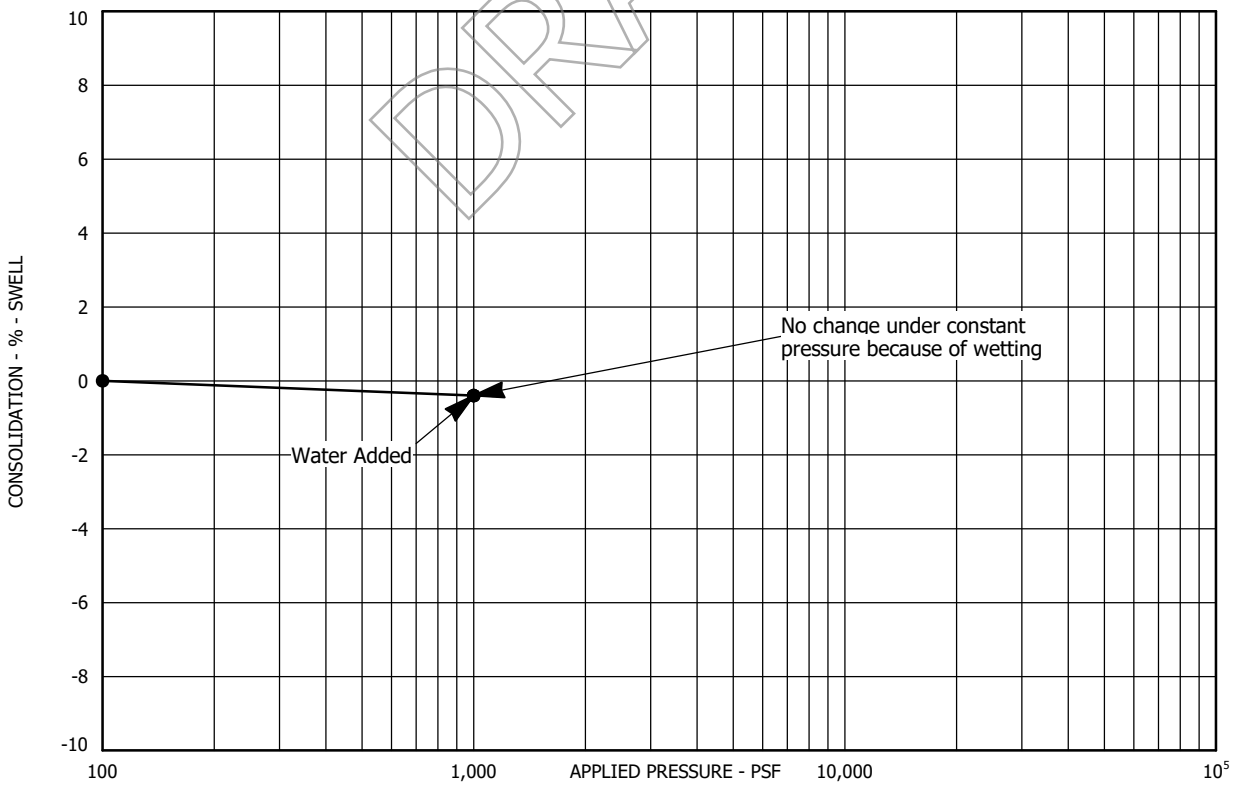
Sample Location: Test Boring No. 56 at a depth of 4 feet
Sample Description: Clay, very sandy, trace gravel
Dry Unit Weight (pcf): 117
Moisture Content (%): 11

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-56
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 56 at a depth of 29 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 85
Moisture Content (%): 36



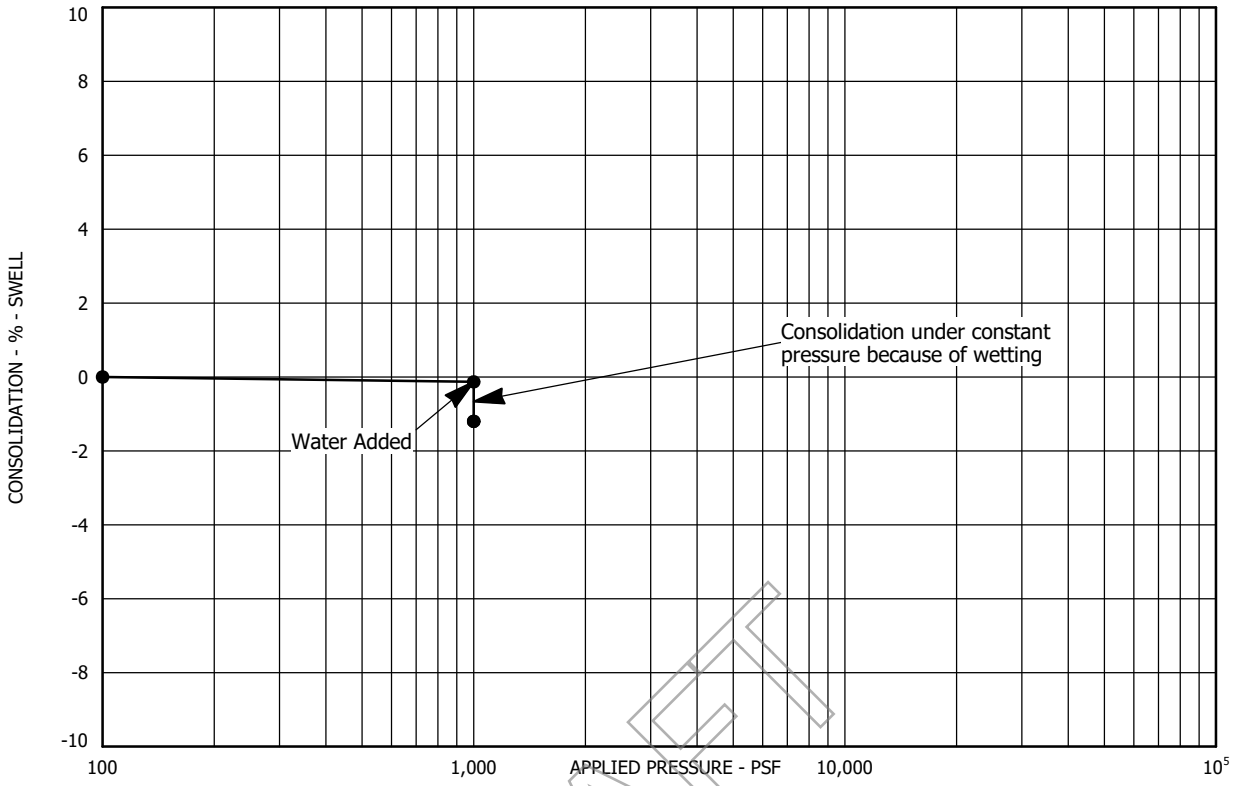
Sample Location: Test Boring No. 57 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 103
Moisture Content (%): 16

SWELL - CONSOLIDATION TEST RESULTS

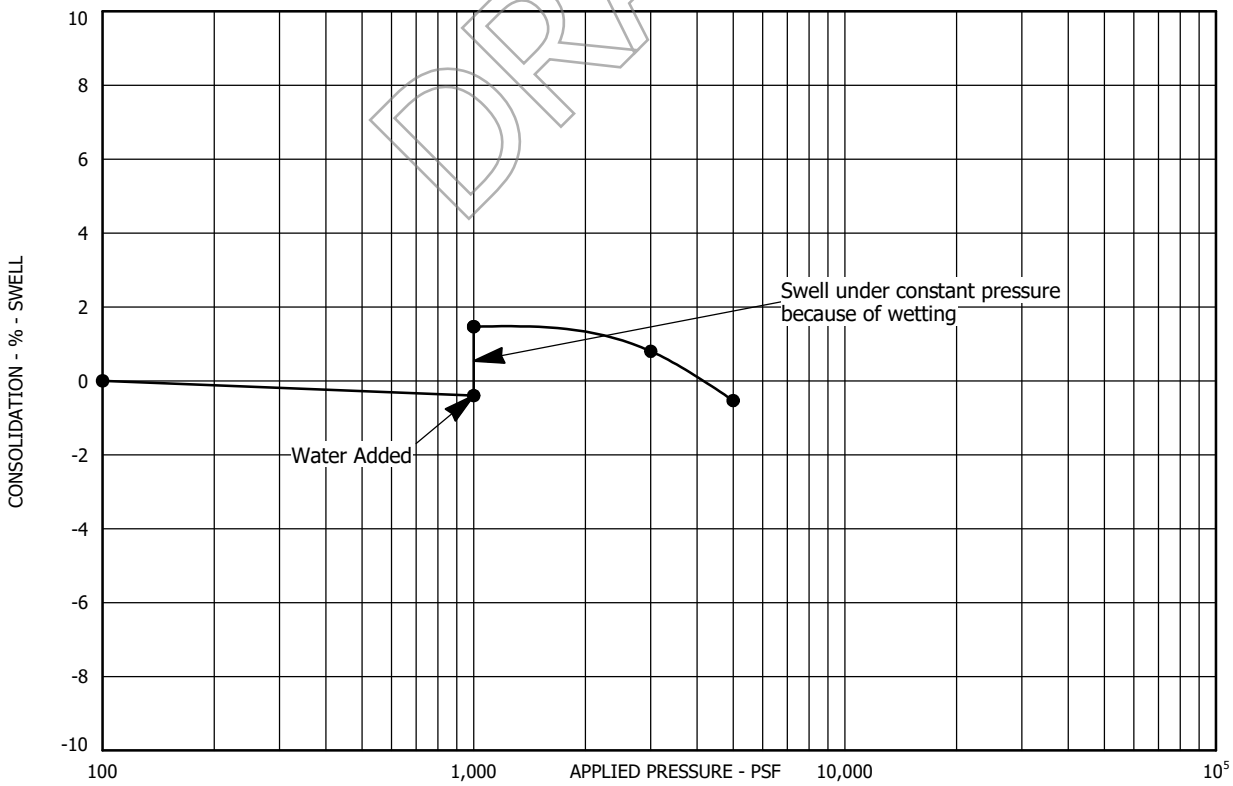
FIGURE A-57

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



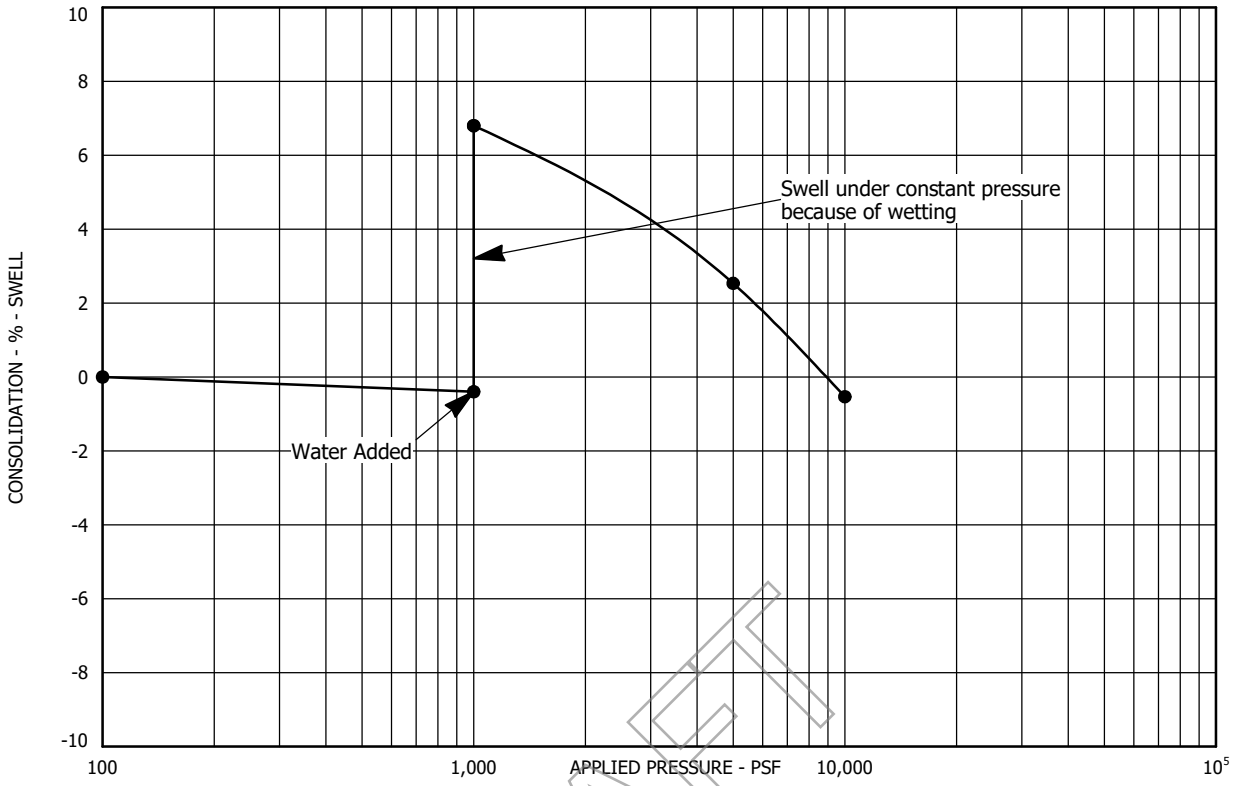
Sample Location: Test Boring No. 57 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 9



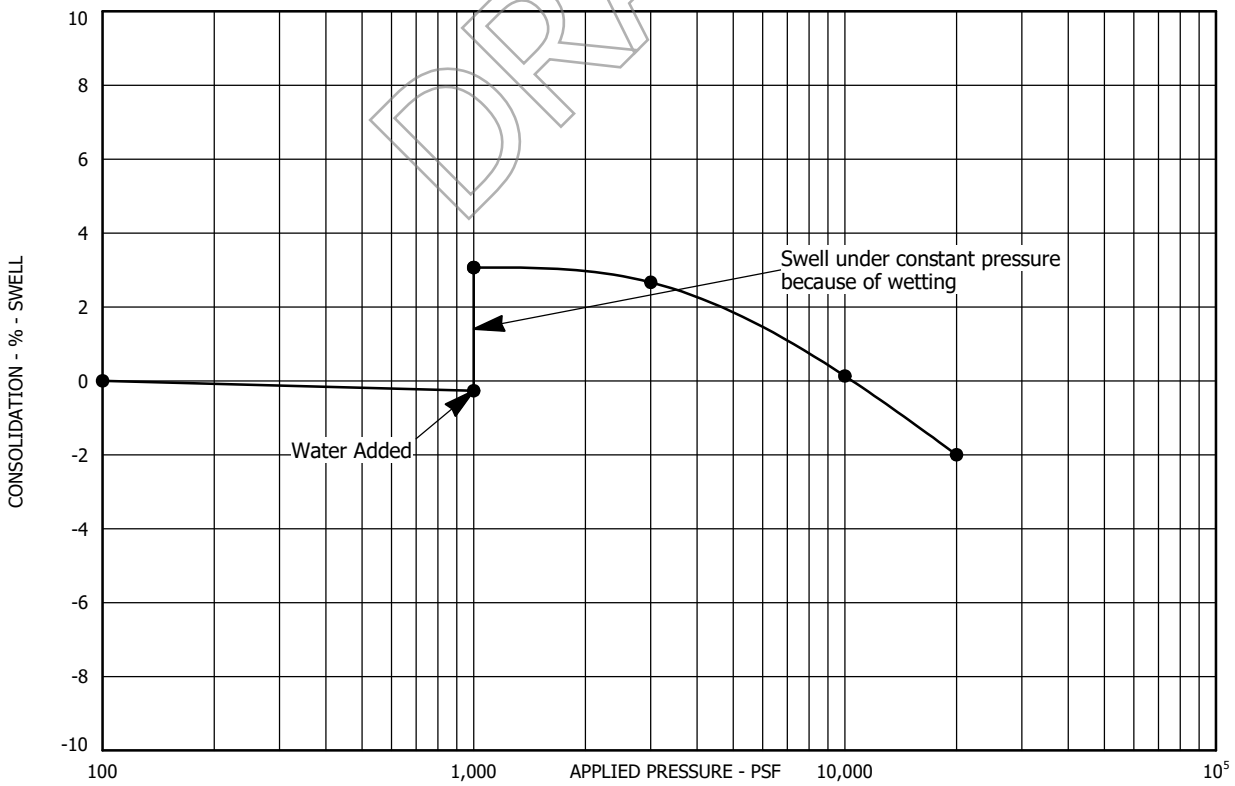
Sample Location: Test Boring No. 59 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 119
Moisture Content (%): 7

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-58
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 59 at a depth of 29 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 22



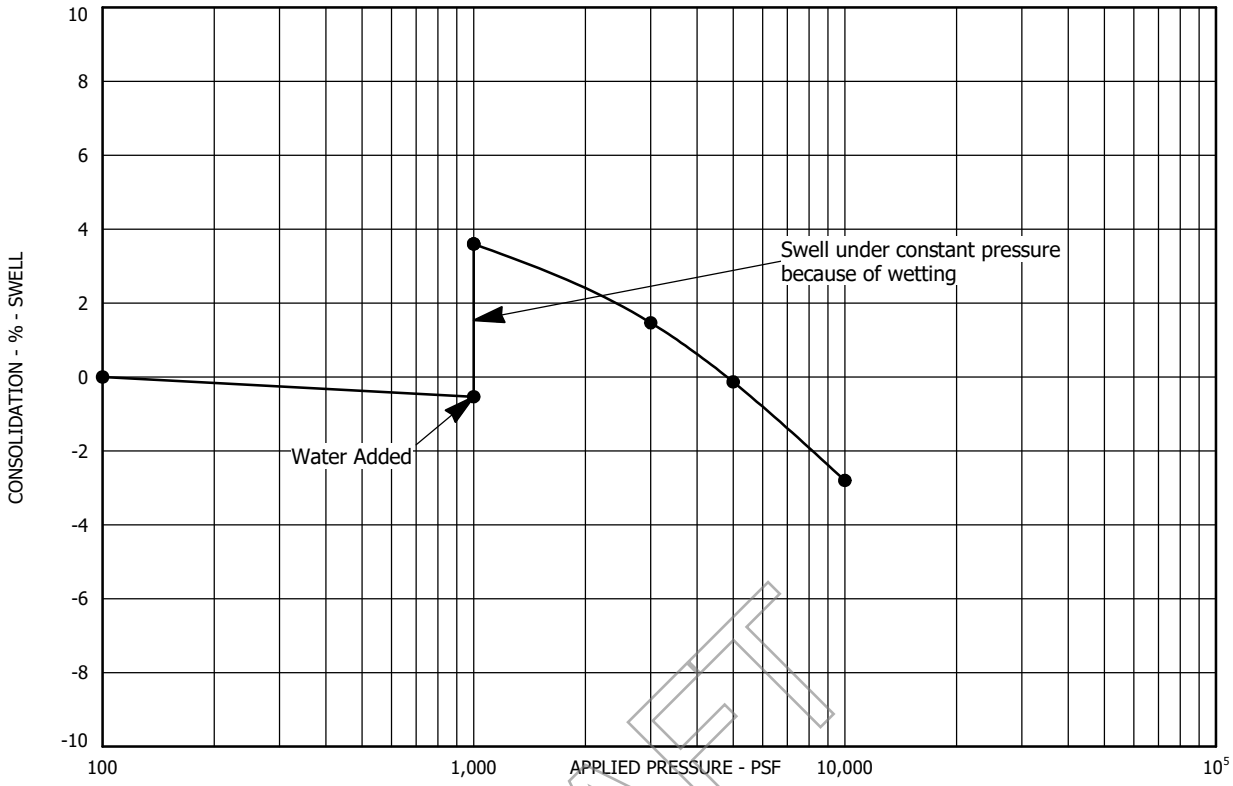
Sample Location: Test Boring No. 60 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 120
Moisture Content (%): 7

SWELL - CONSOLIDATION TEST RESULTS

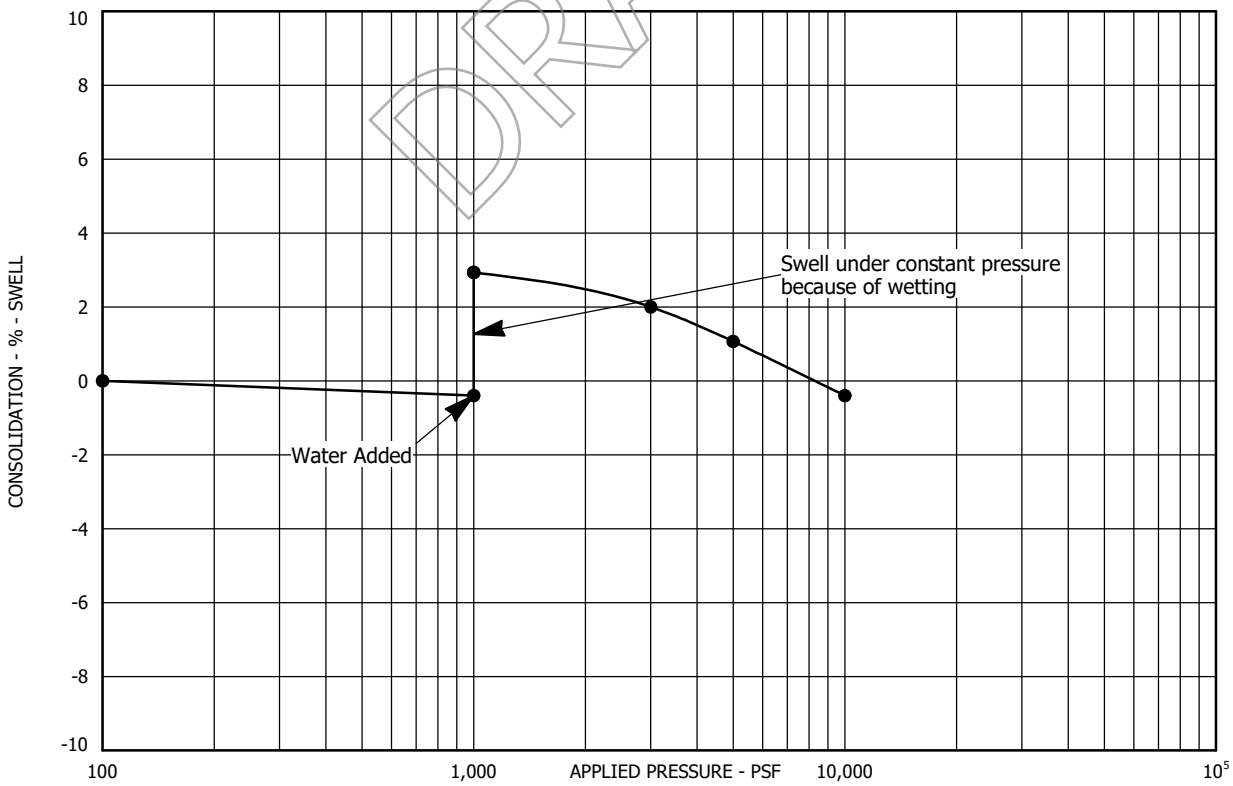
FIGURE A-59

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



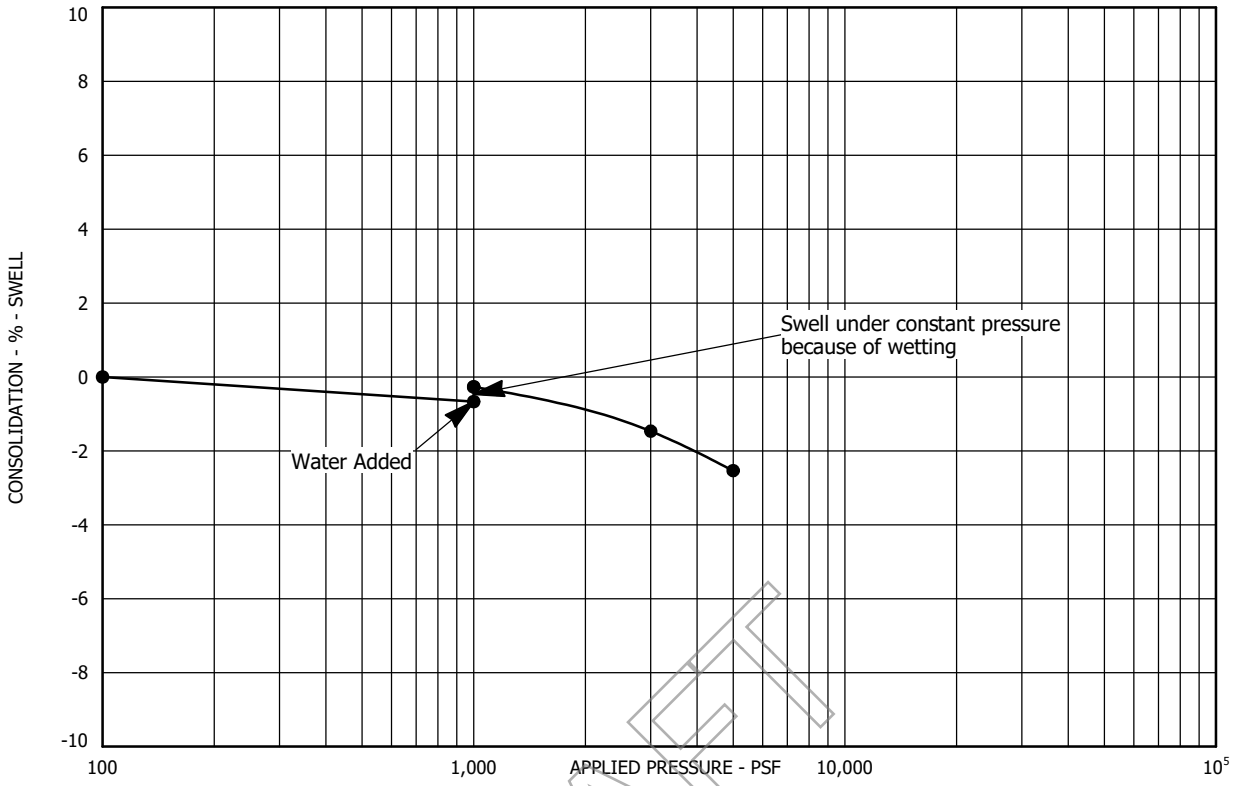
Sample Location: Test Boring No. 60 at a depth of 24 feet
Sample Description: Claystone, silty
Dry Unit Weight (pcf): 105
Moisture Content (%): 18



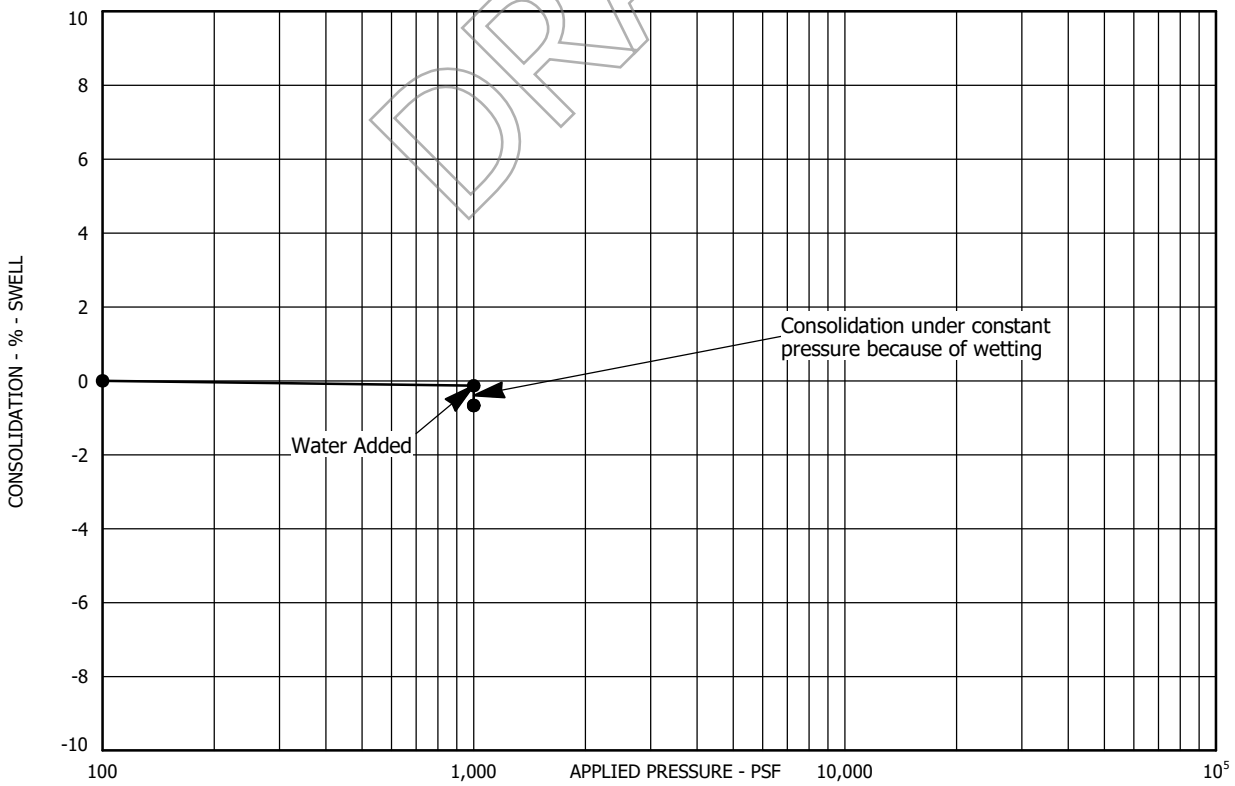
Sample Location: Test Boring No. 61 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 122
Moisture Content (%): 10

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-60
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 61 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 15

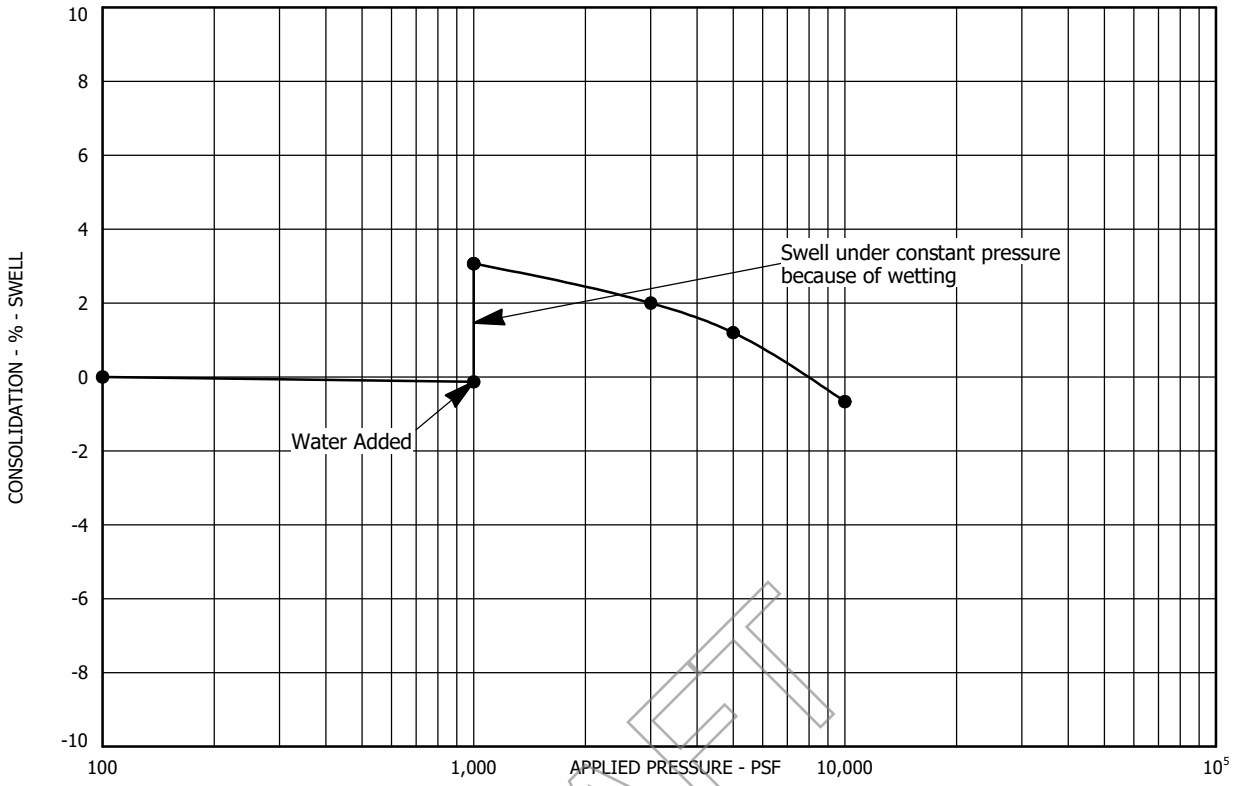


Sample Location: Test Boring No. 62 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 13

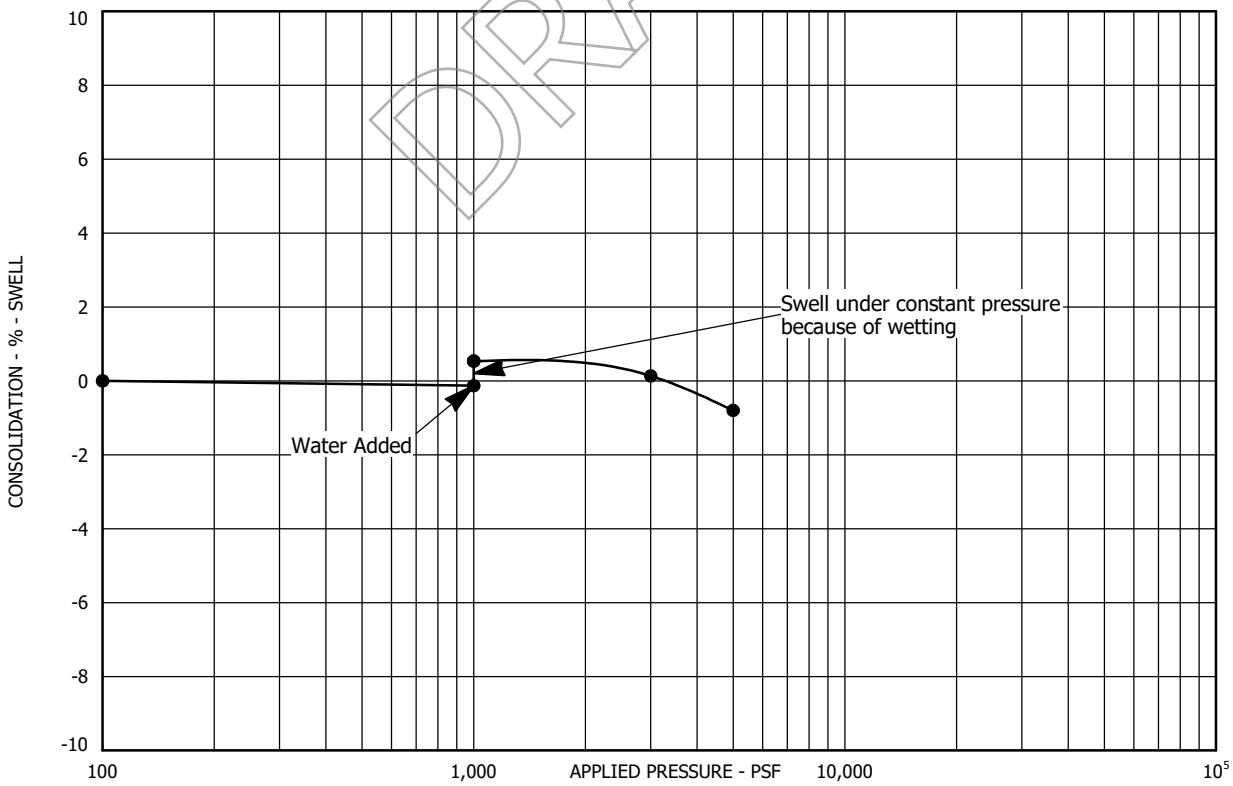
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-61

PROJECT NO. 213216



Sample Location: Test Boring No. 62 at a depth of 14 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 14



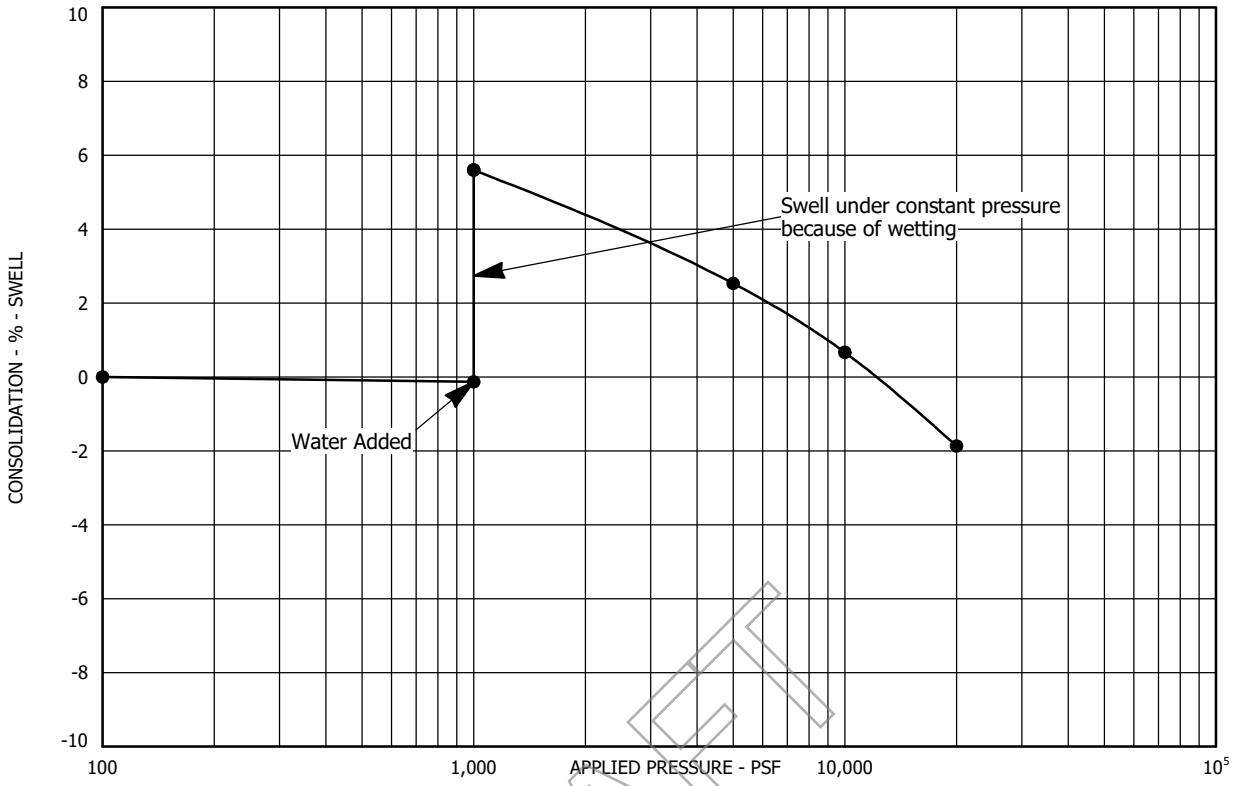
Sample Location: Test Boring No. 63 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 115
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

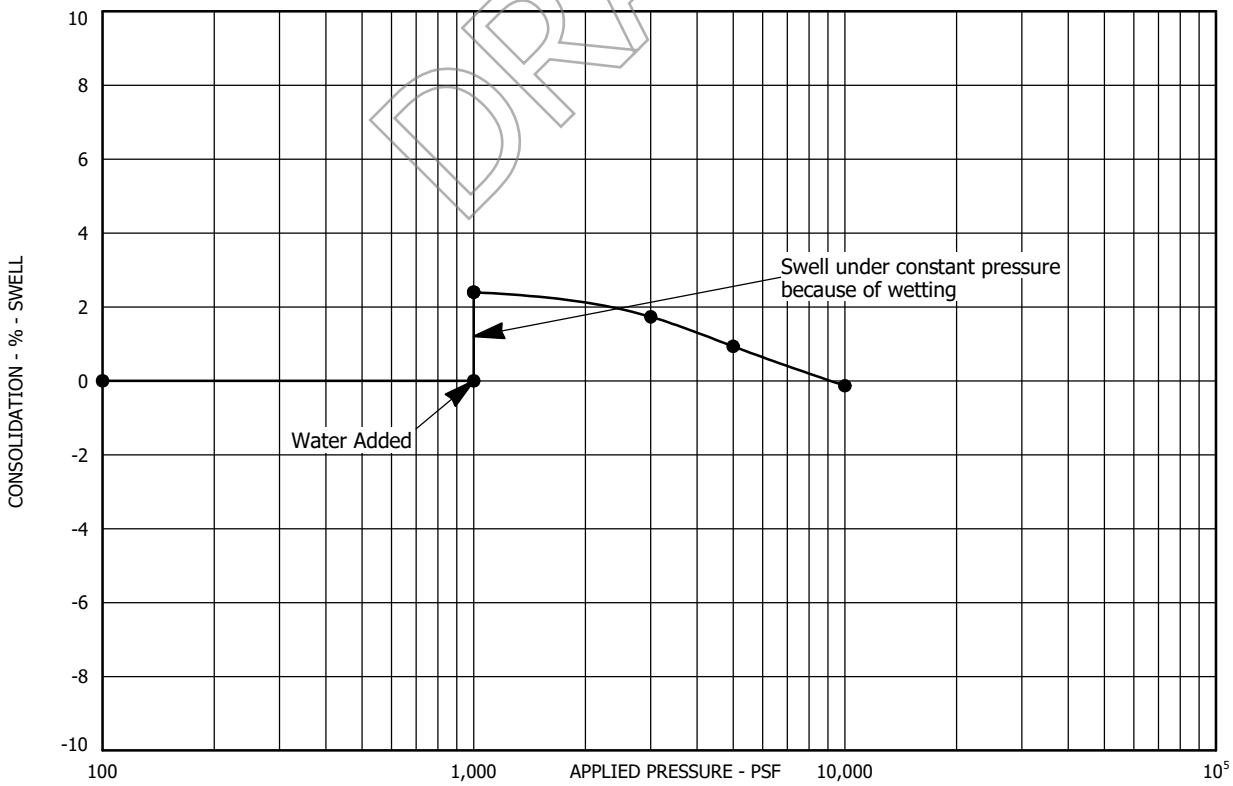
FIGURE A-62

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 63 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 118
Moisture Content (%): 15



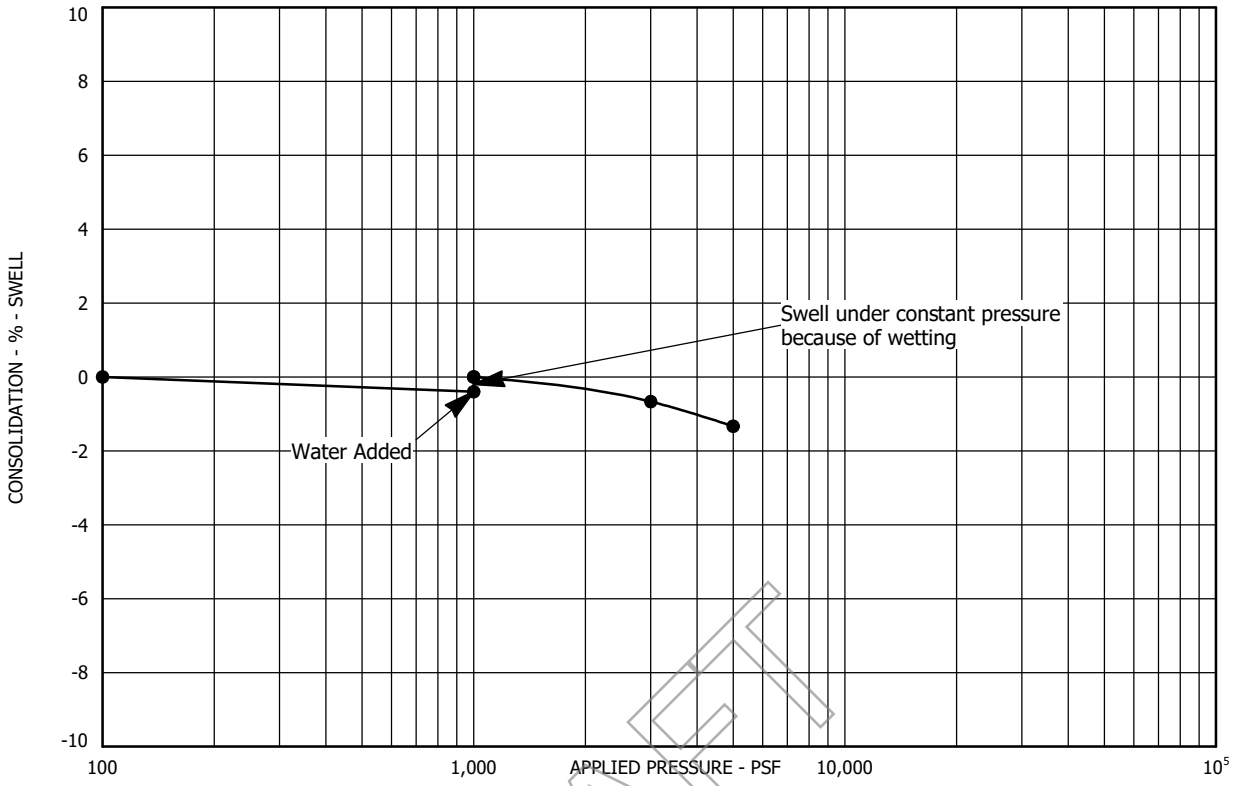
Sample Location: Test Boring No. 64 at a depth of 2 feet
Sample Description: Fill, clay, very sandy
Dry Unit Weight (pcf): 119
Moisture Content (%): 13

SWELL - CONSOLIDATION TEST RESULTS

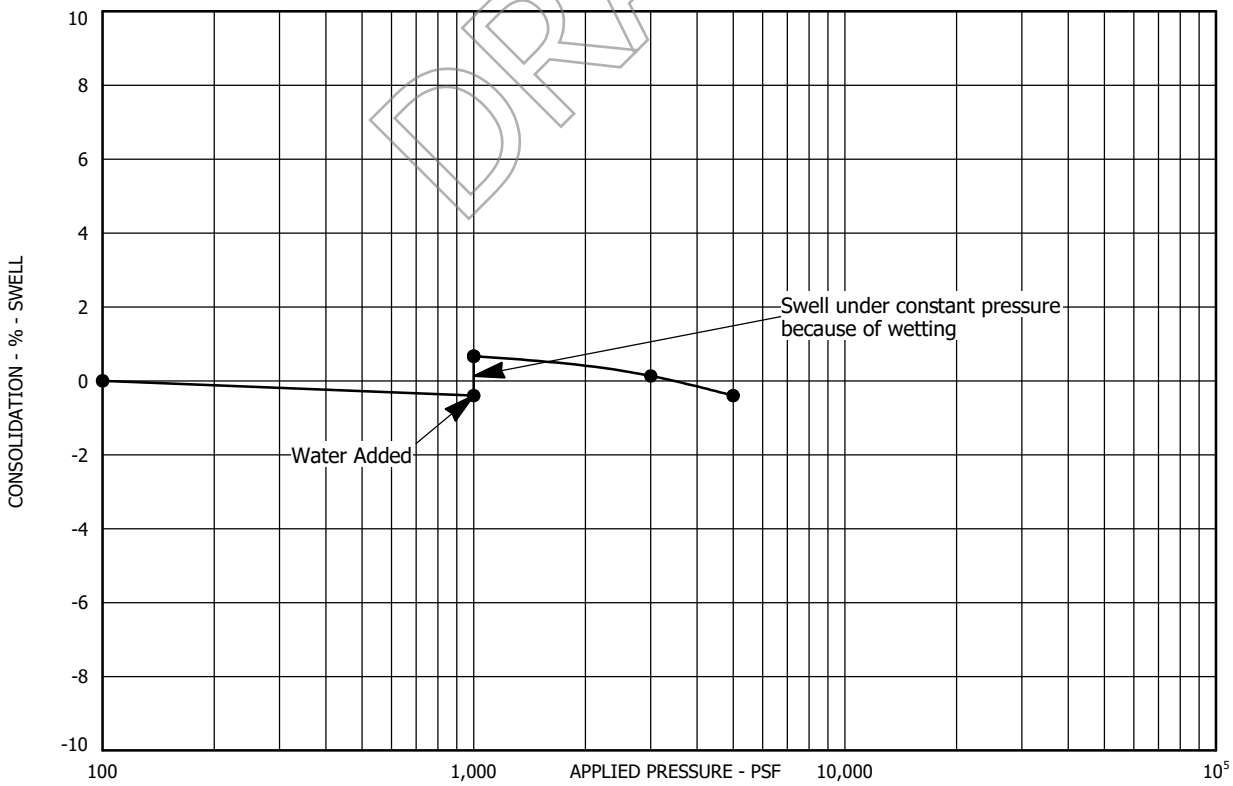
FIGURE A-63

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 64 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 12

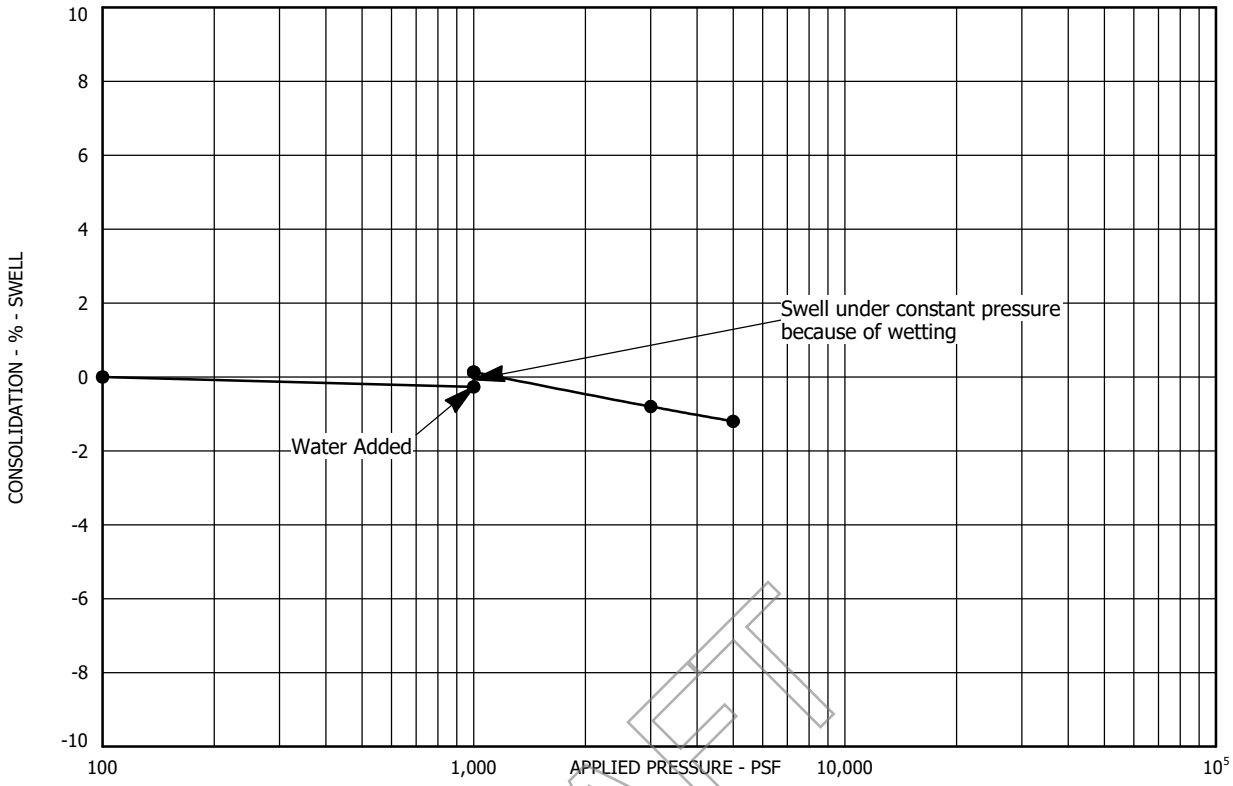


Sample Location: Test Boring No. 65 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 120
Moisture Content (%): 13

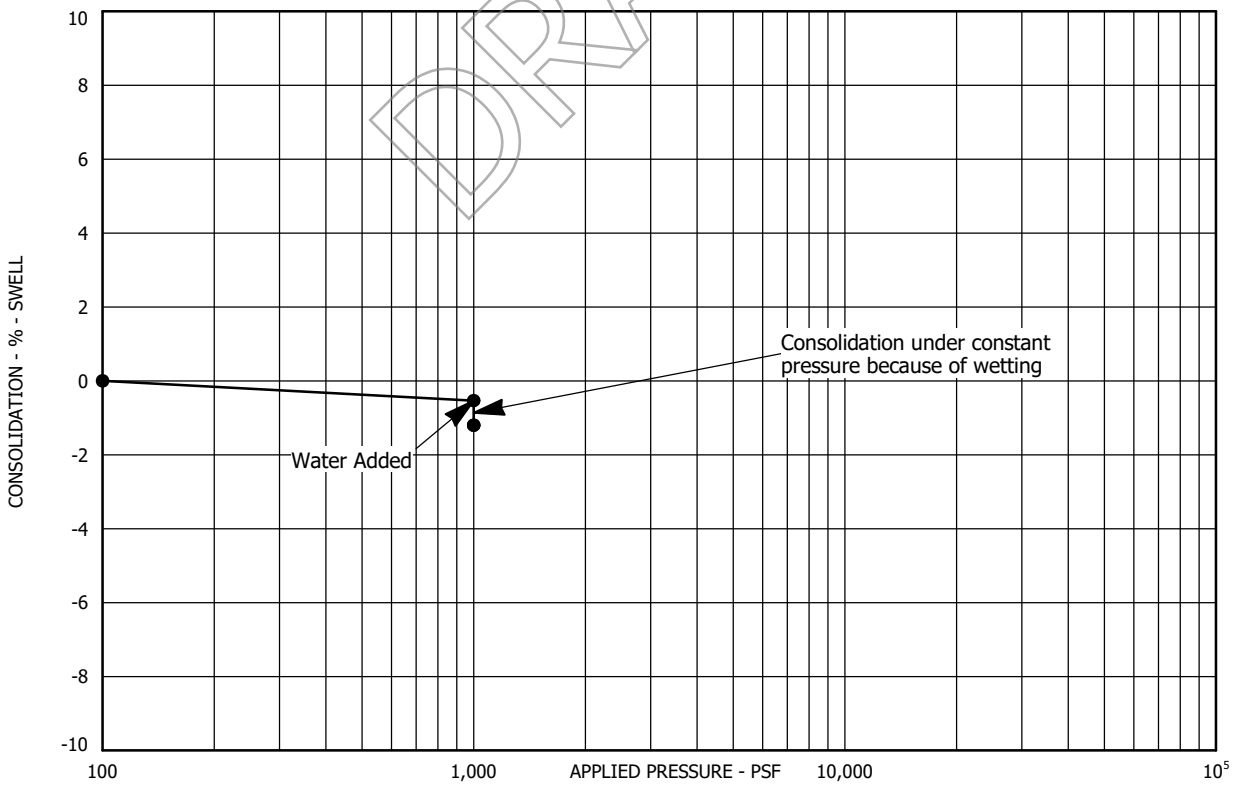
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-64

PROJECT NO. 213216



Sample Location: Test Boring No. 66 at a depth of 2 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 12



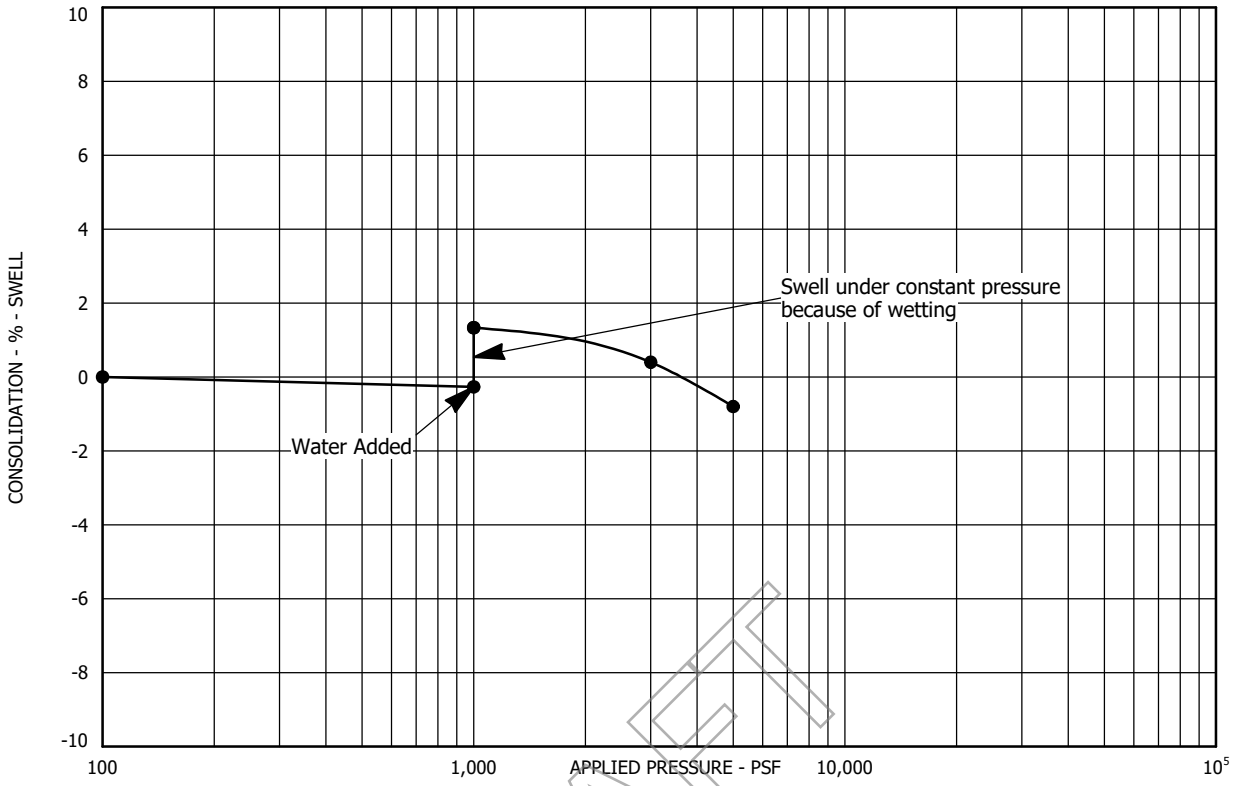
Sample Location: Test Boring No. 66 at a depth of 14 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 97
Moisture Content (%): 16

SWELL - CONSOLIDATION TEST RESULTS

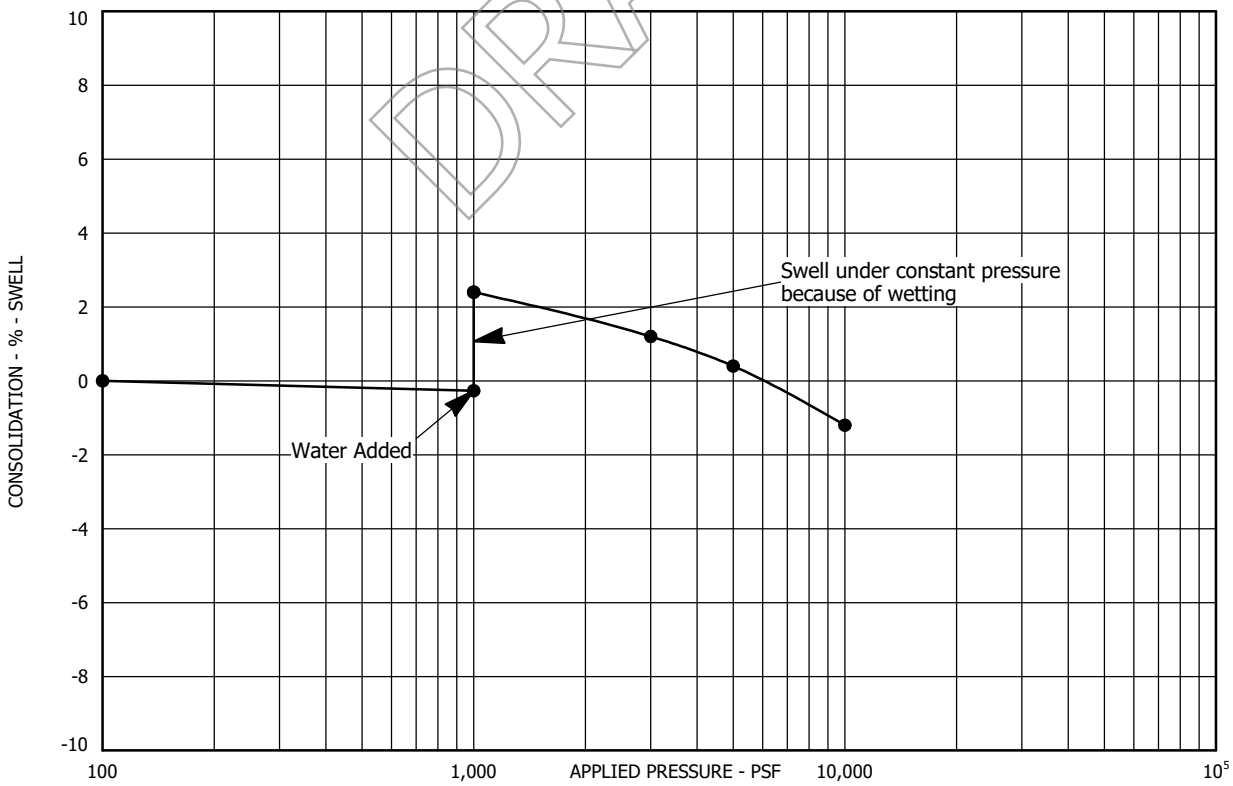
FIGURE A-65

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 67 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 107
Moisture Content (%): 11

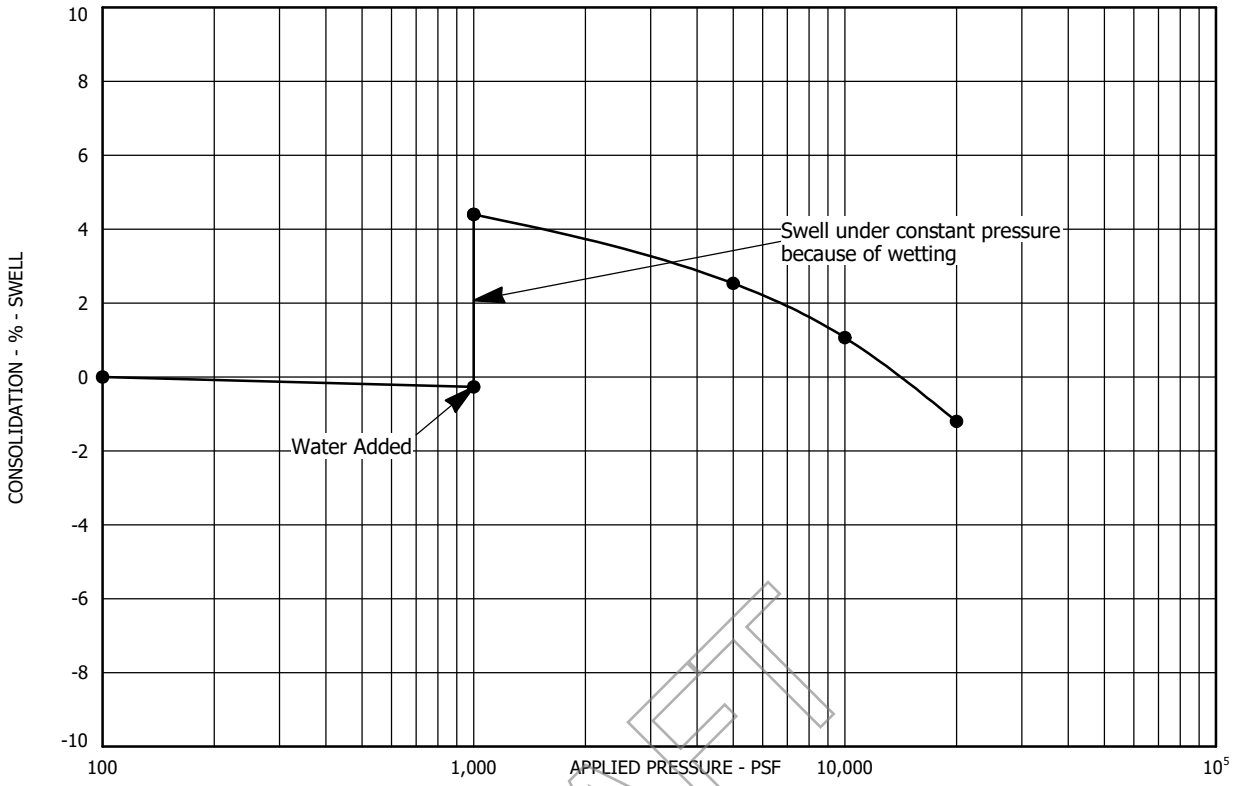


Sample Location: Test Boring No. 67 at a depth of 29 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 121
Moisture Content (%): 10

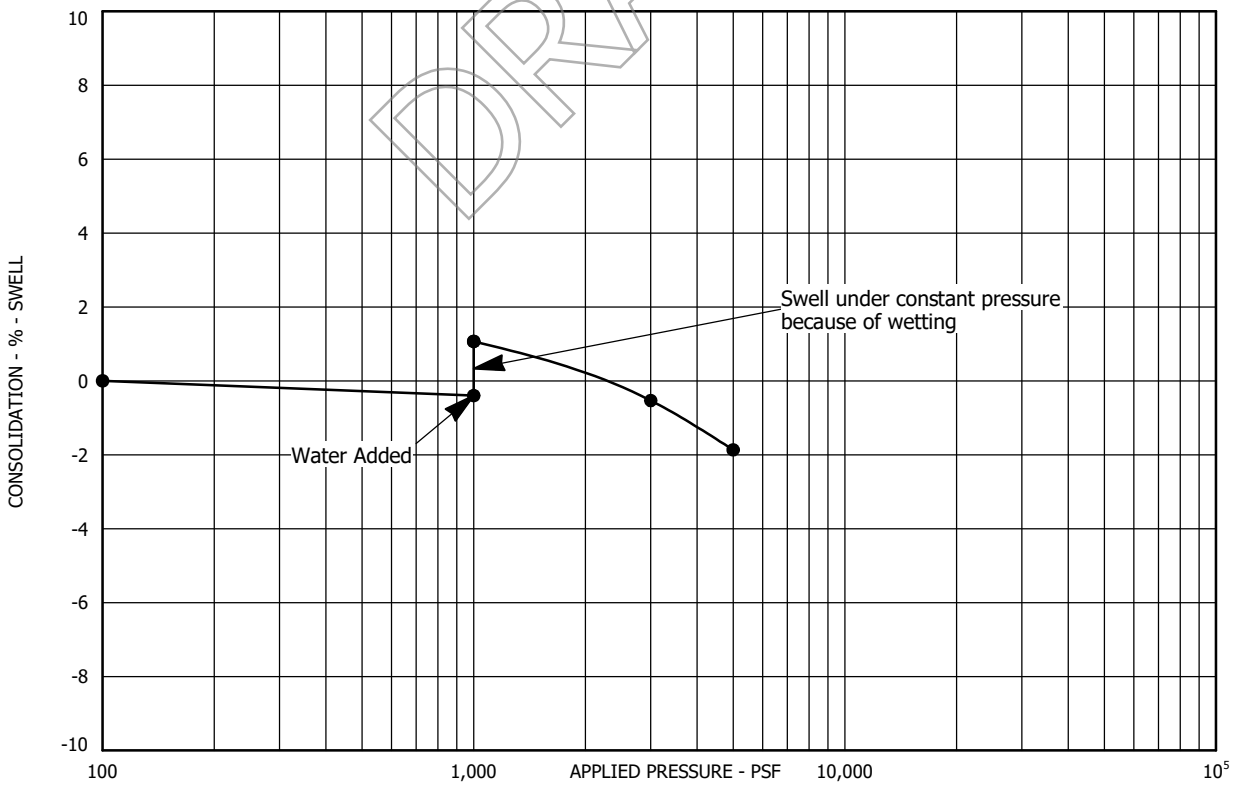
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-66

PROJECT NO. 213216



Sample Location: Test Boring No. 68 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 120
Moisture Content (%): 13

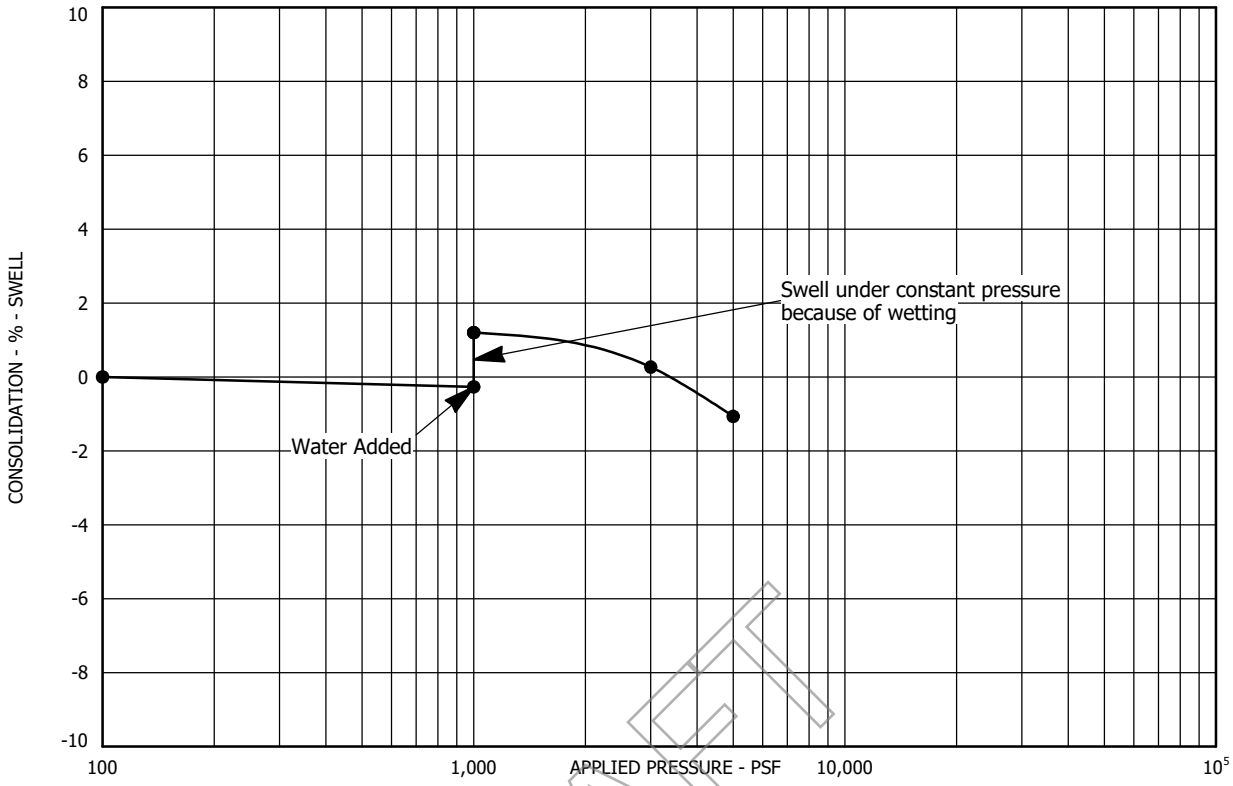


Sample Location: Test Boring No. 68 at a depth of 34 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 12

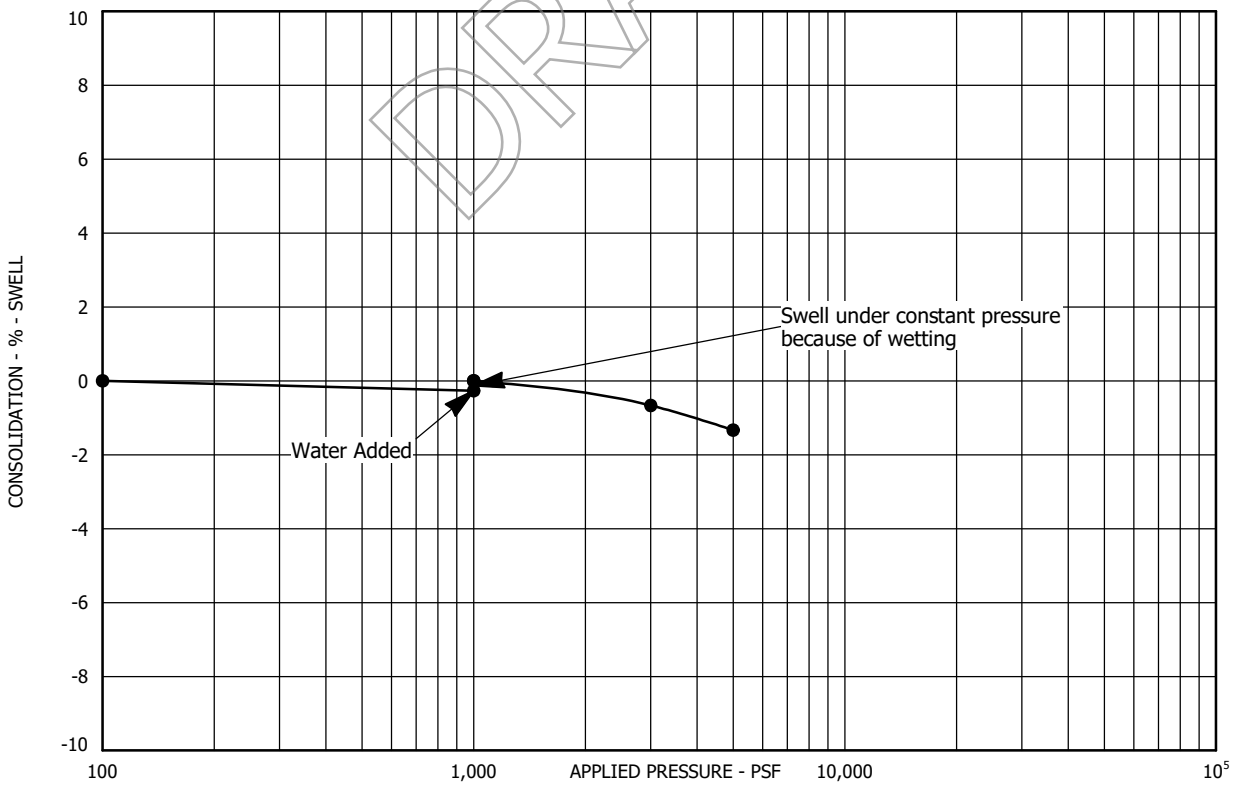
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-67

PROJECT NO. 213216



Sample Location: Test Boring No. 69 at a depth of 4 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 99
Moisture Content (%): 12



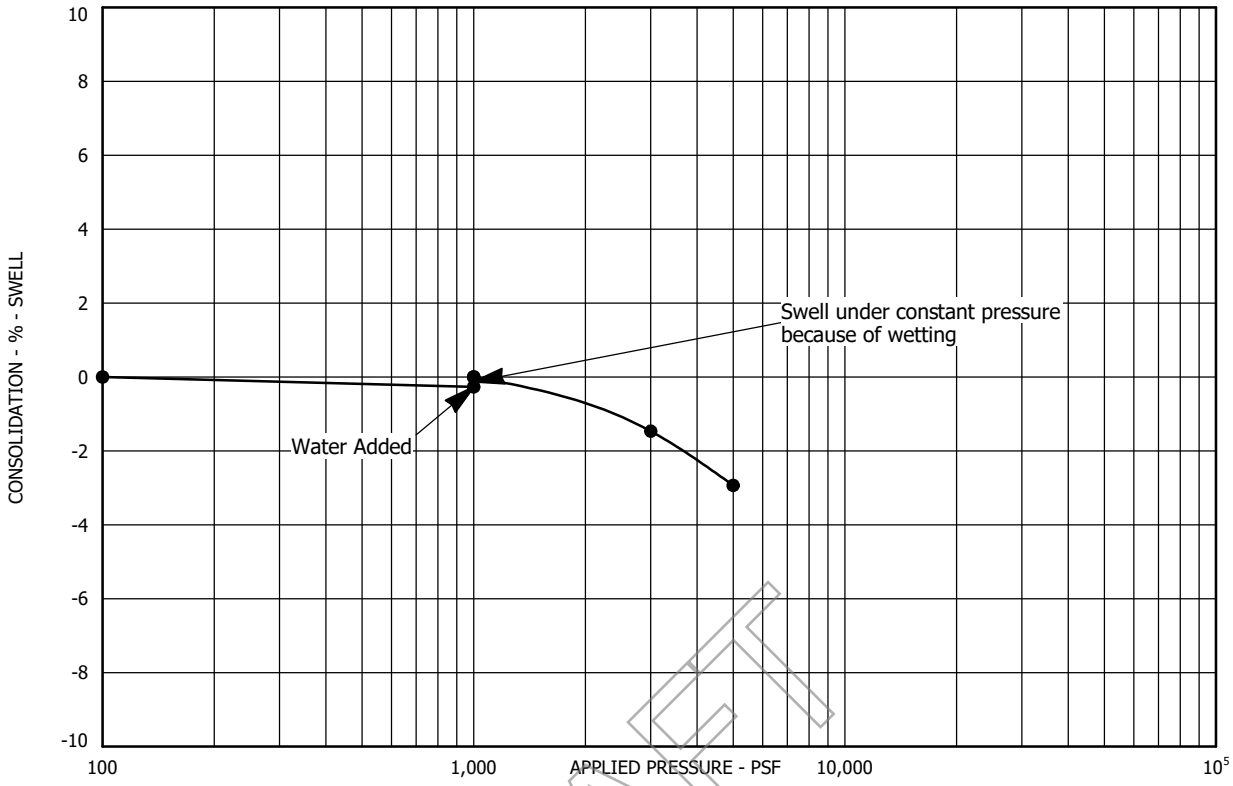
Sample Location: Test Boring No. 69 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 8

SWELL - CONSOLIDATION TEST RESULTS

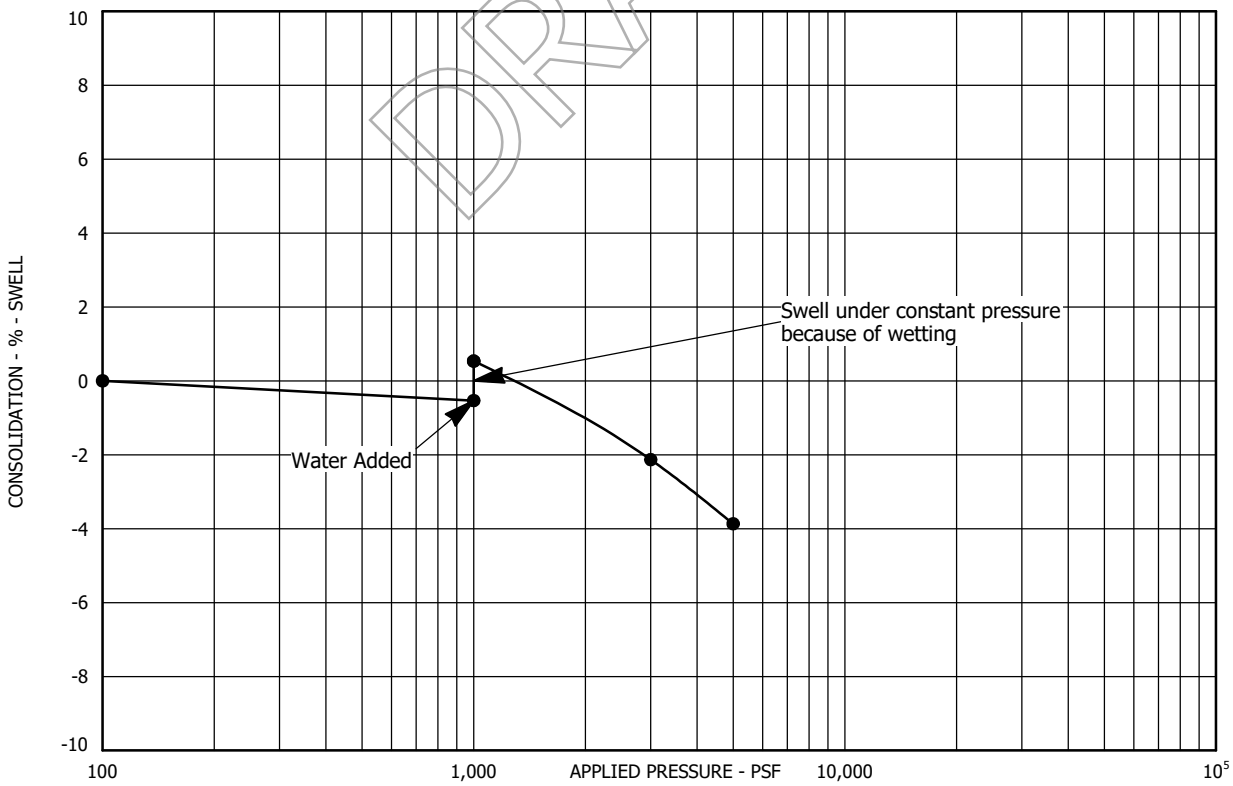
FIGURE A-68

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 70 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 101
Moisture Content (%): 15



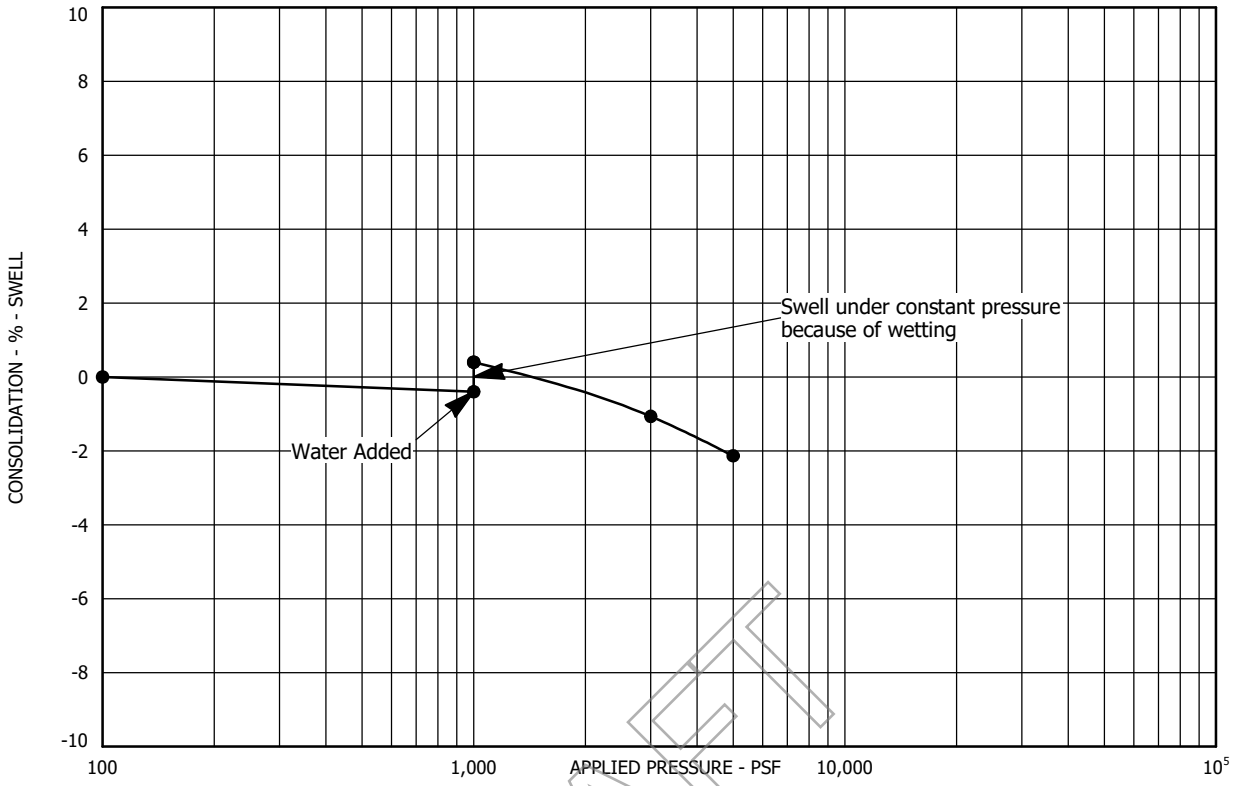
Sample Location: Test Boring No. 70 at a depth of 9 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 104
Moisture Content (%): 16

SWELL - CONSOLIDATION TEST RESULTS

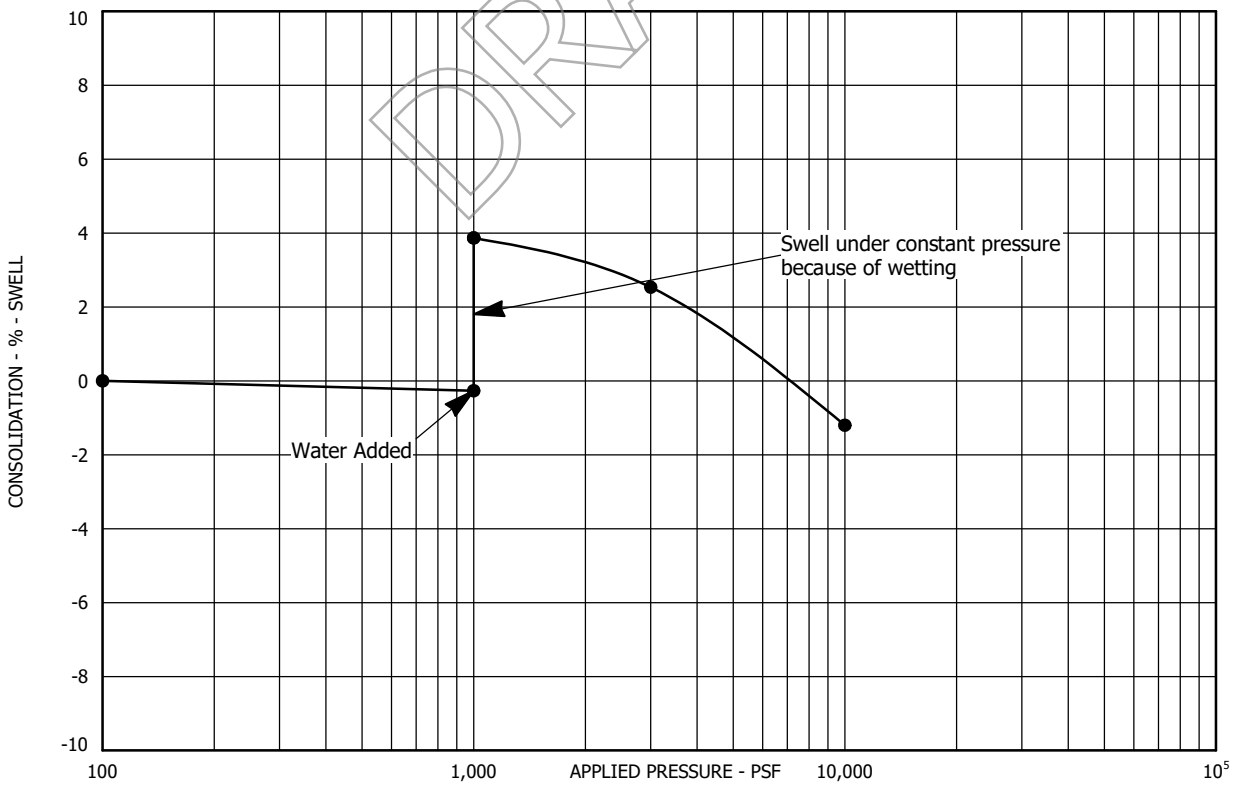
FIGURE A-69

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 70 at a depth of 24 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 113
Moisture Content (%): 15

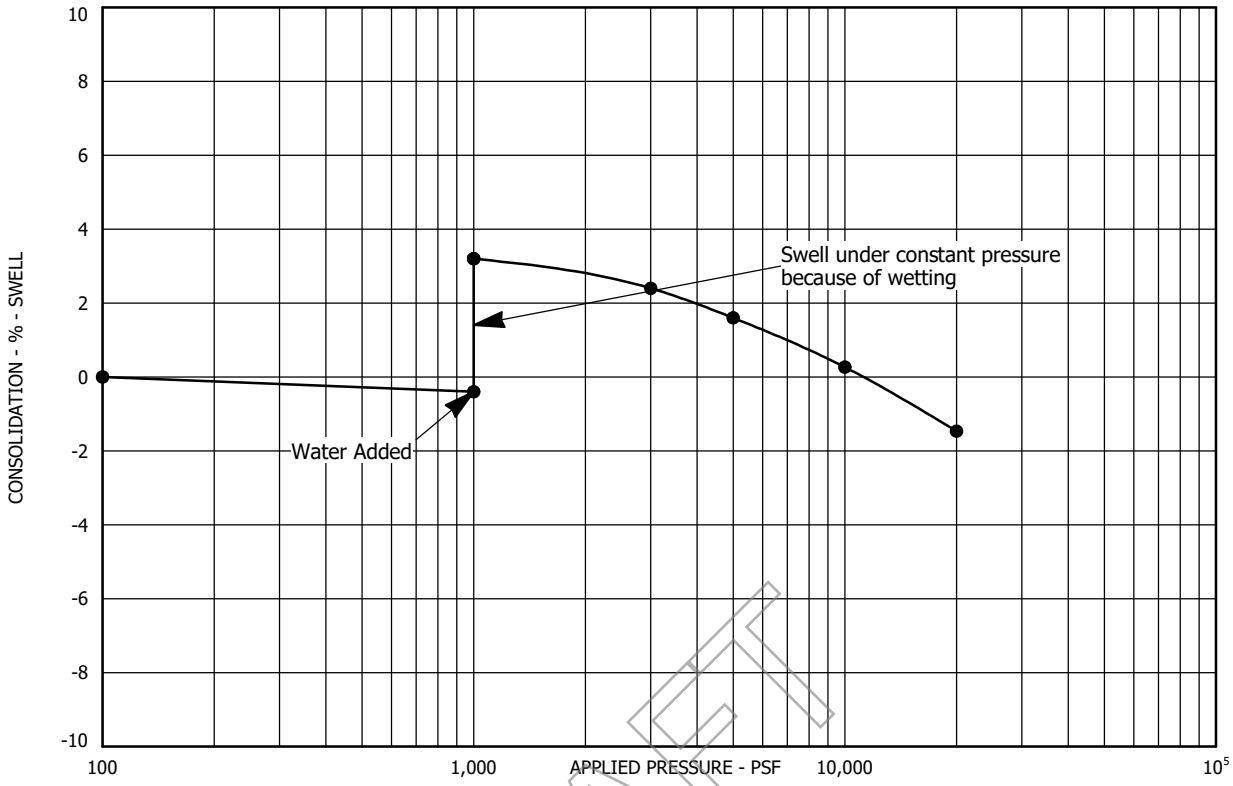


Sample Location: Test Boring No. 71 at a depth of 4 feet
Sample Description: Clay, slightly sandy
Dry Unit Weight (pcf): 119
Moisture Content (%): 9

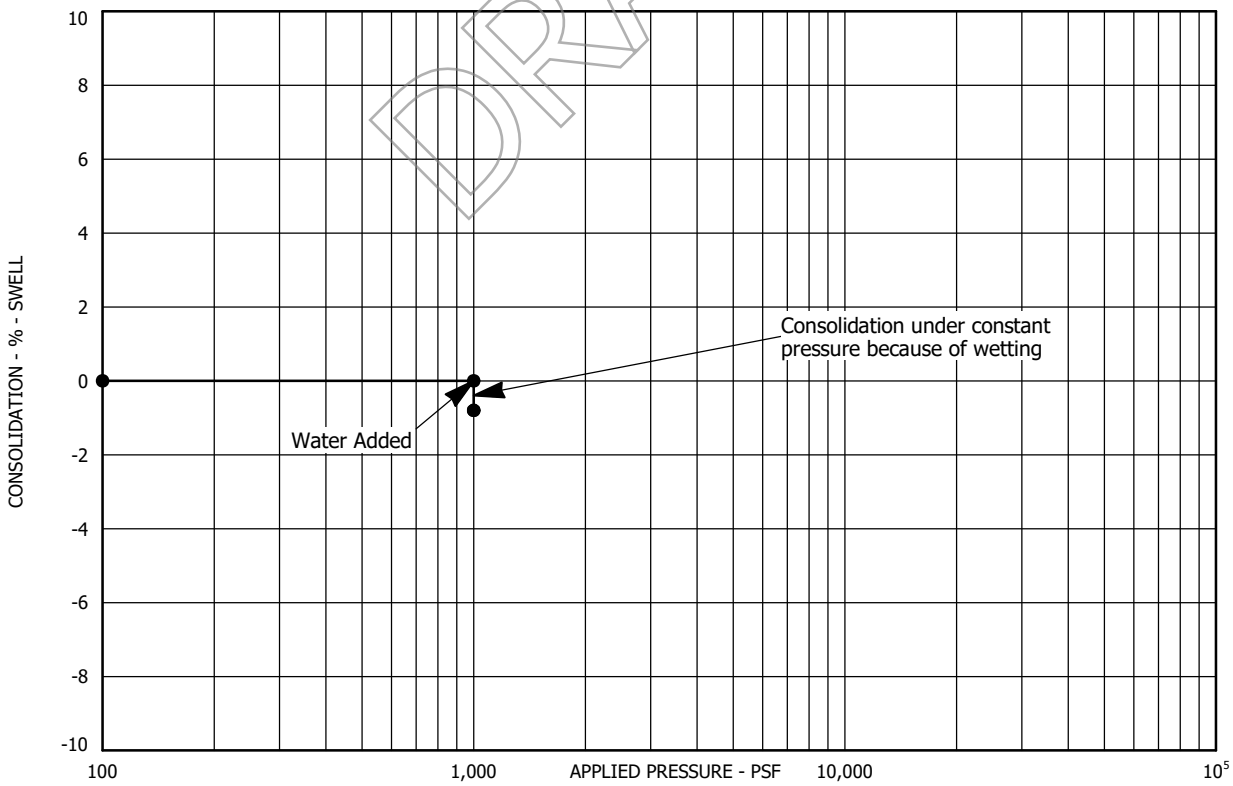
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-70

PROJECT NO. 213216



Sample Location: Test Boring No. 71 at a depth of 29 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 16

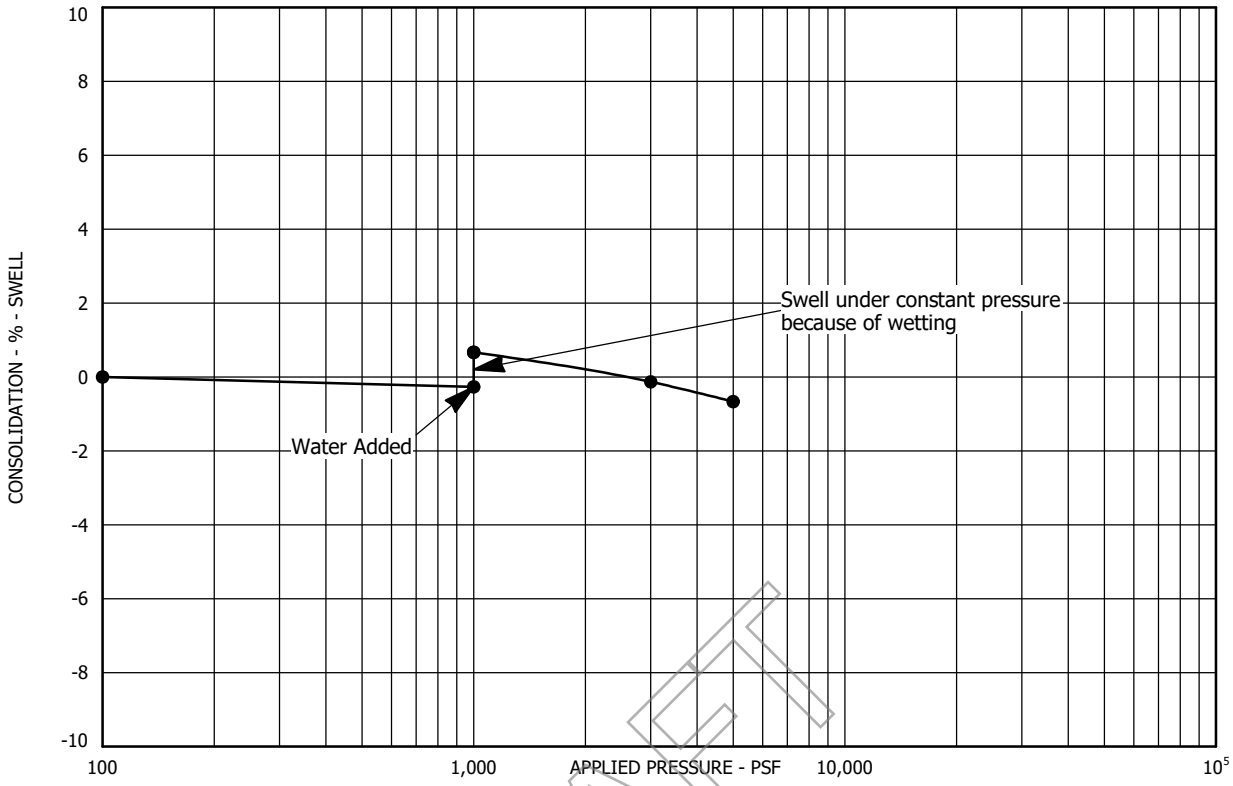


Sample Location: Test Boring No. 72 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 97
Moisture Content (%): 8

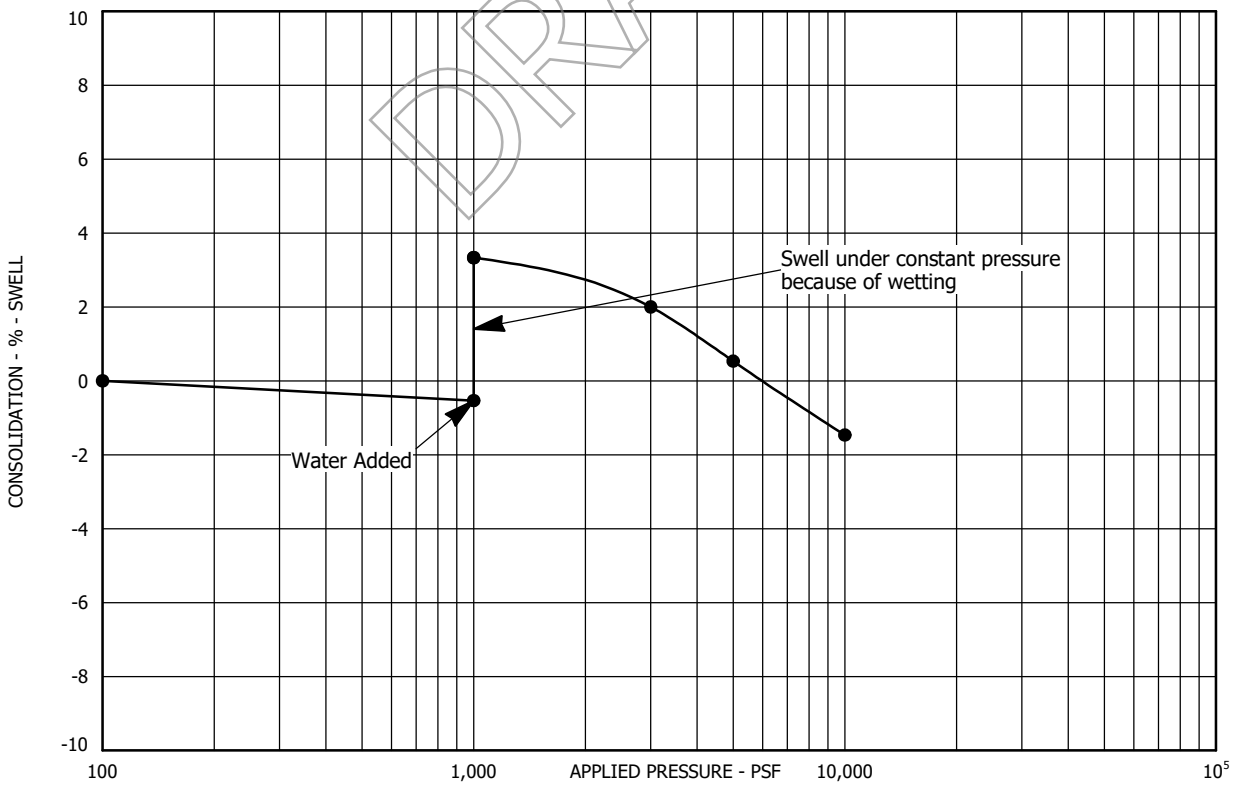
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-71

PROJECT NO. 213216



Sample Location: Test Boring No. 73 at a depth of 7 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 12



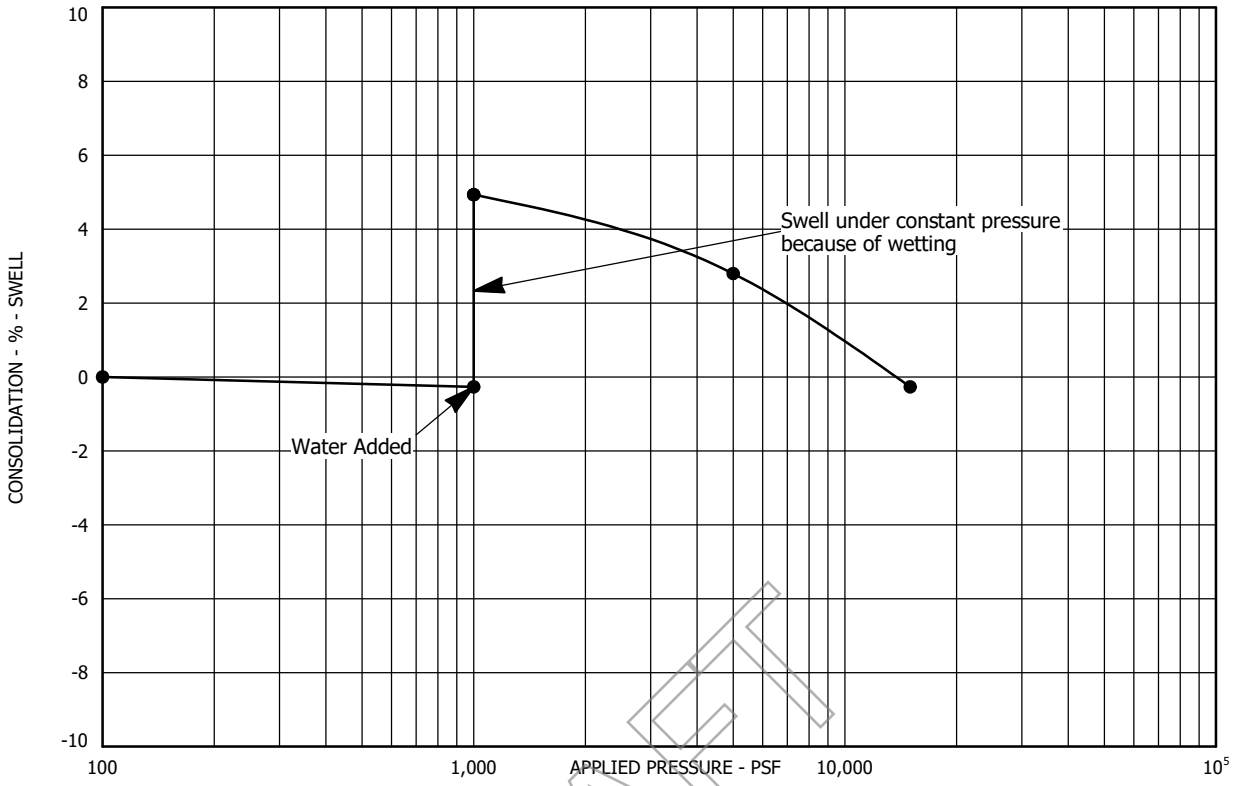
Sample Location: Test Boring No. 73 at a depth of 24 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 107
Moisture Content (%): 20

SWELL - CONSOLIDATION TEST RESULTS

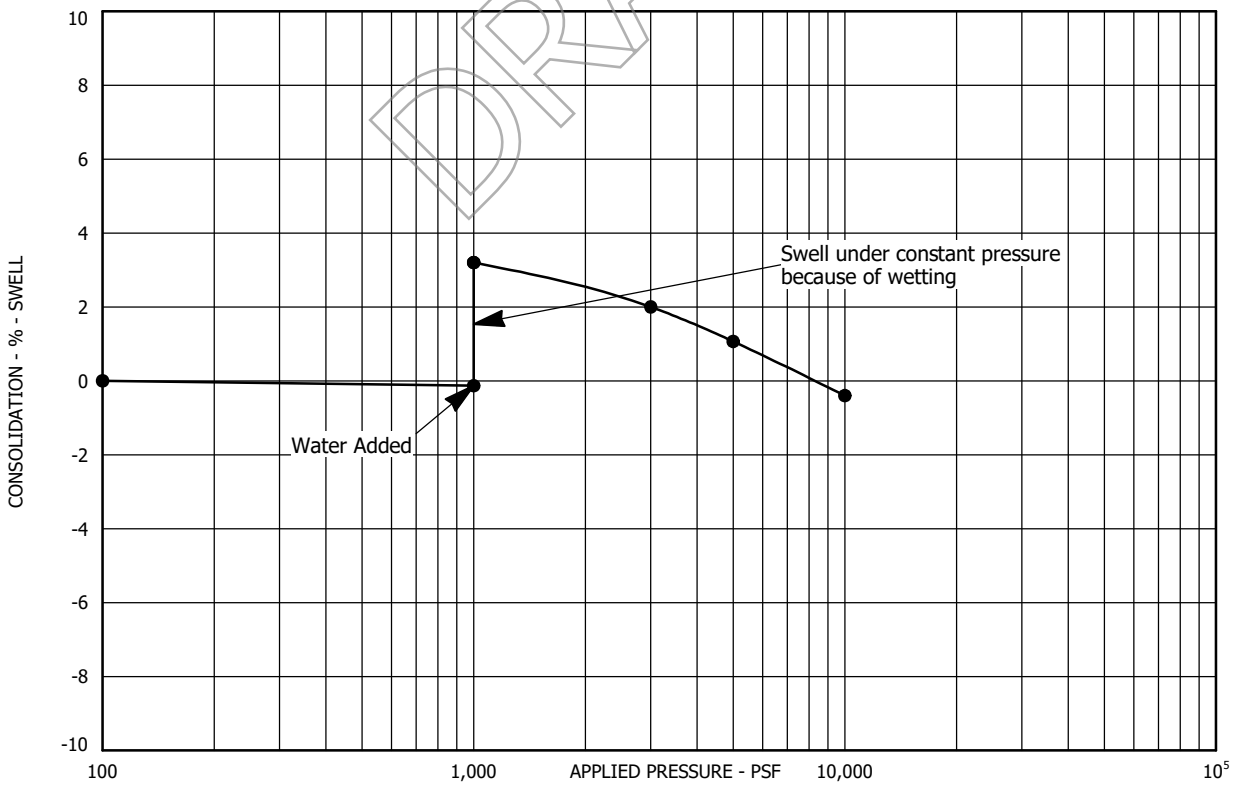
FIGURE A-72

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 73 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 116
Moisture Content (%): 17



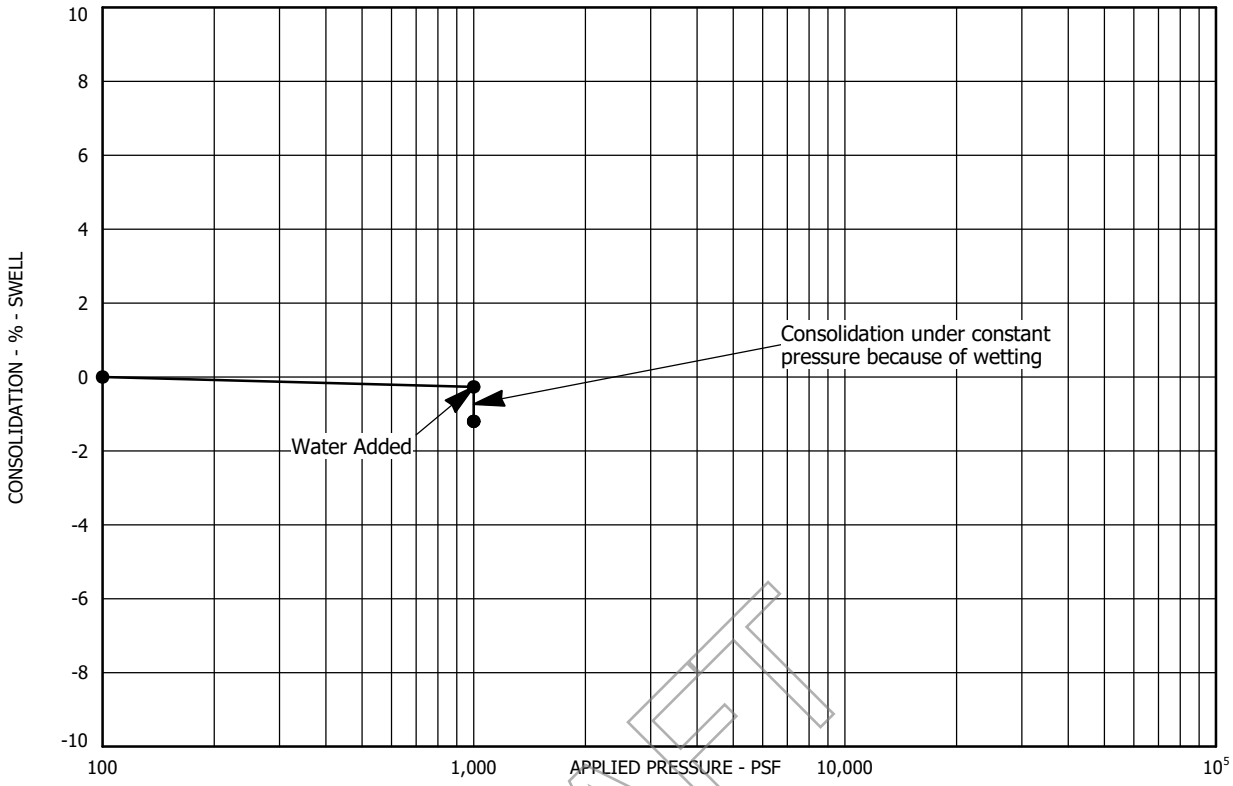
Sample Location: Test Boring No. 74 at a depth of 4 feet
Sample Description: Clay, trace sand
Dry Unit Weight (pcf): 116
Moisture Content (%): 12

SWELL - CONSOLIDATION TEST RESULTS

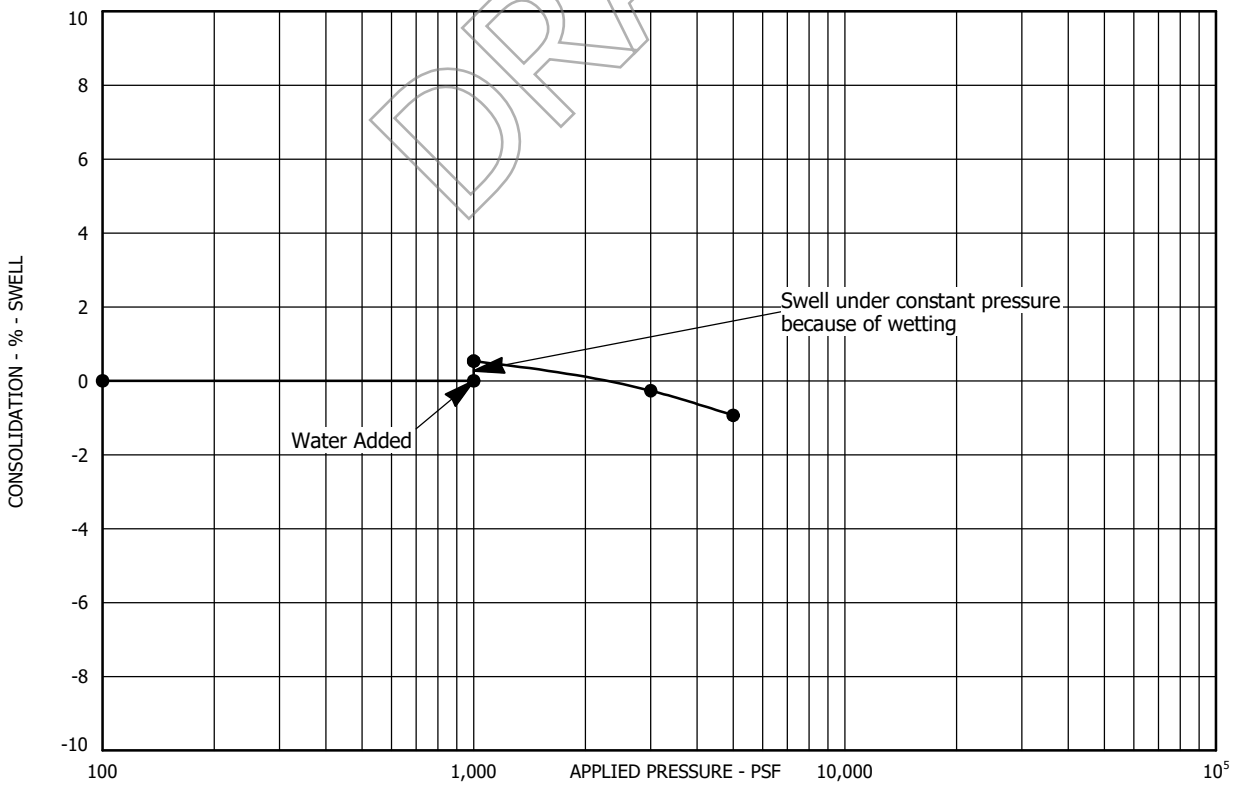
FIGURE A-73

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



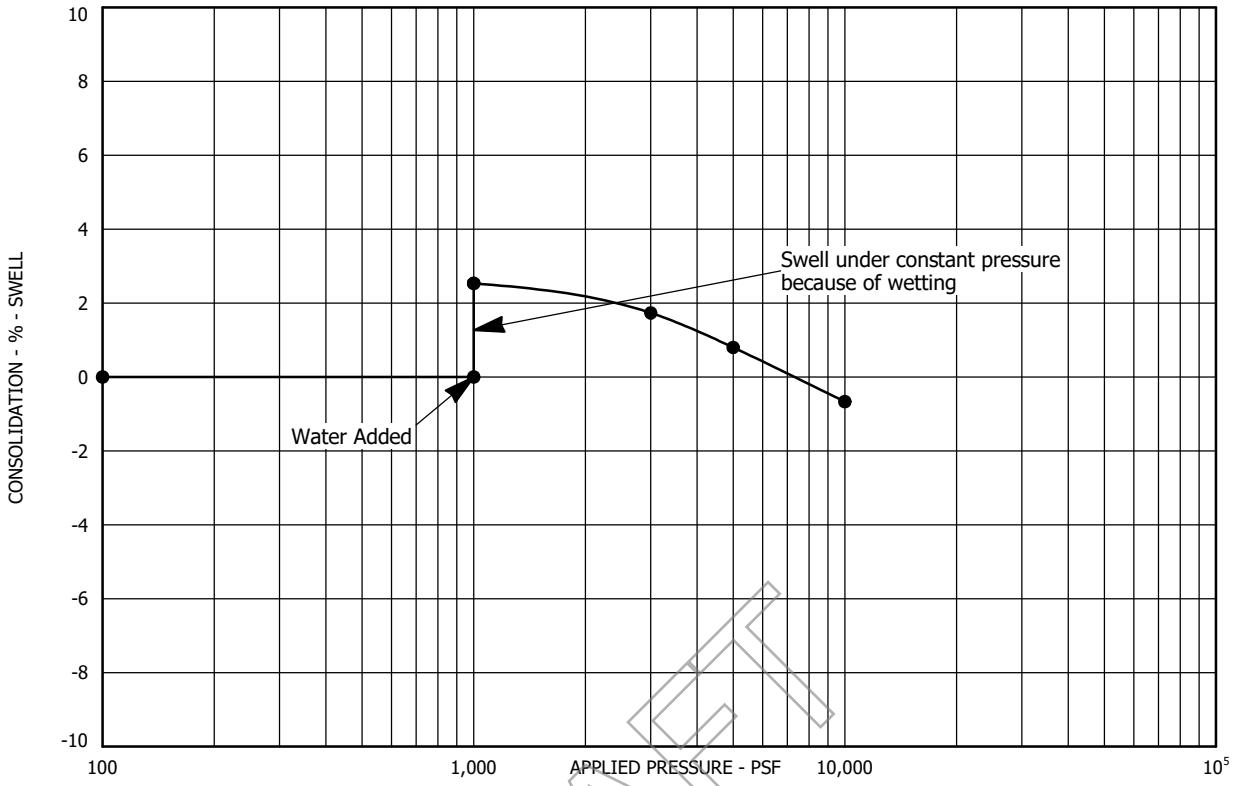
Sample Location: Test Boring No. 76 at a depth of 4 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 91
Moisture Content (%): 9



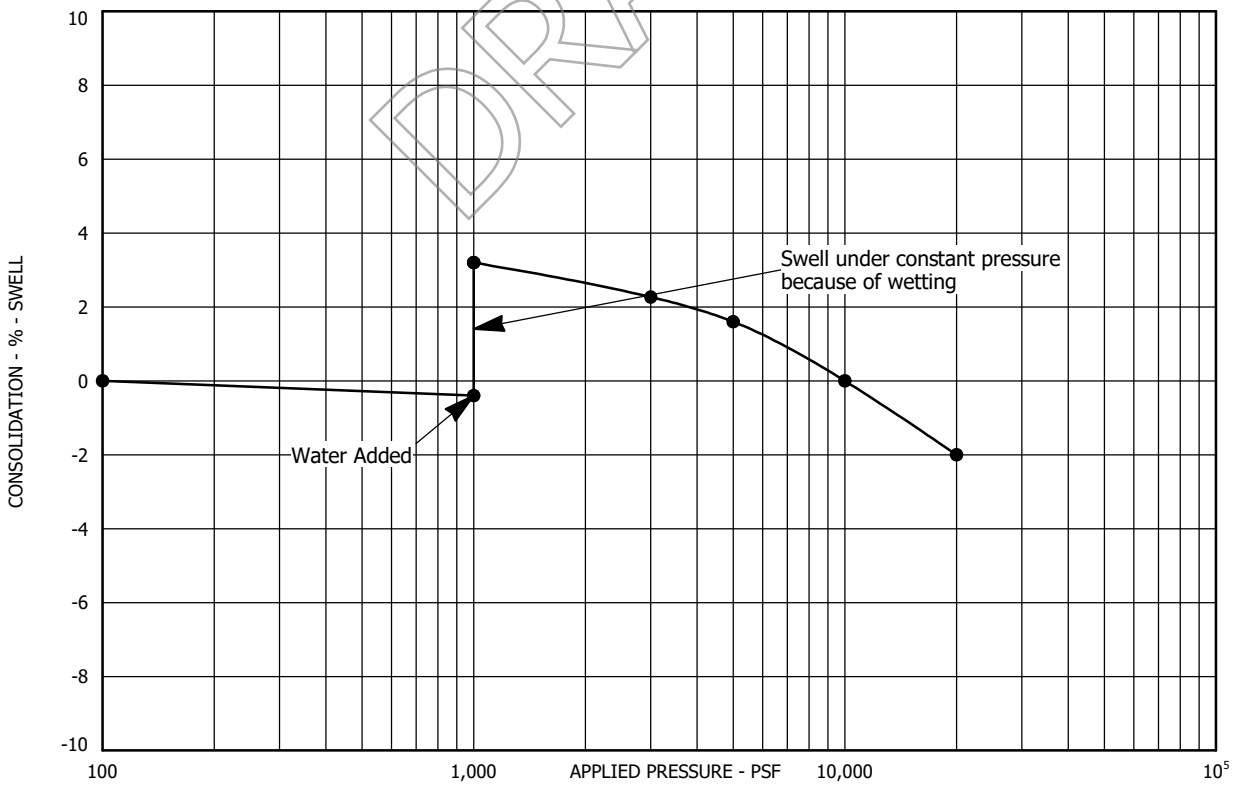
Sample Location: Test Boring No. 76 at a depth of 9 feet
Sample Description: Sand, very clayey
Dry Unit Weight (pcf): 121
Moisture Content (%): 6

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-74
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 78 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 119
Moisture Content (%): 9



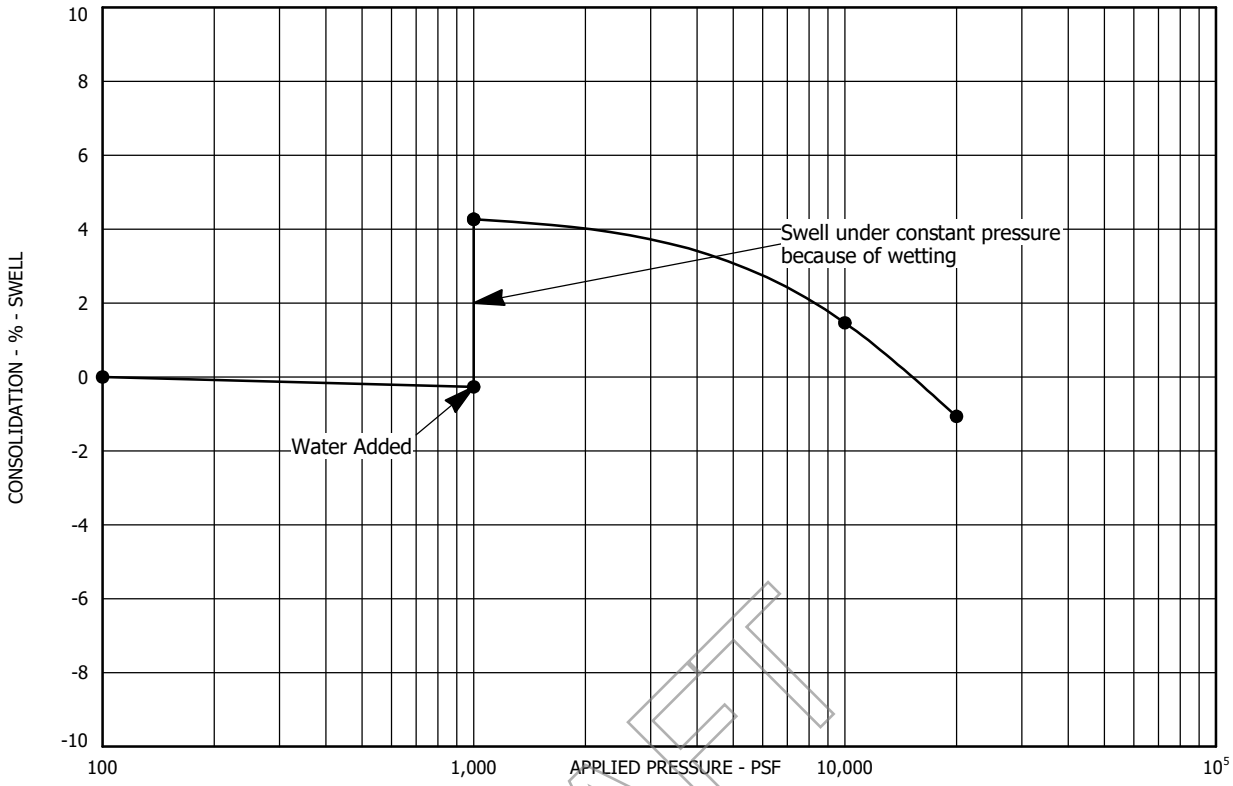
Sample Location: Test Boring No. 78 at a depth of 24 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 117
Moisture Content (%): 16

SWELL - CONSOLIDATION TEST RESULTS

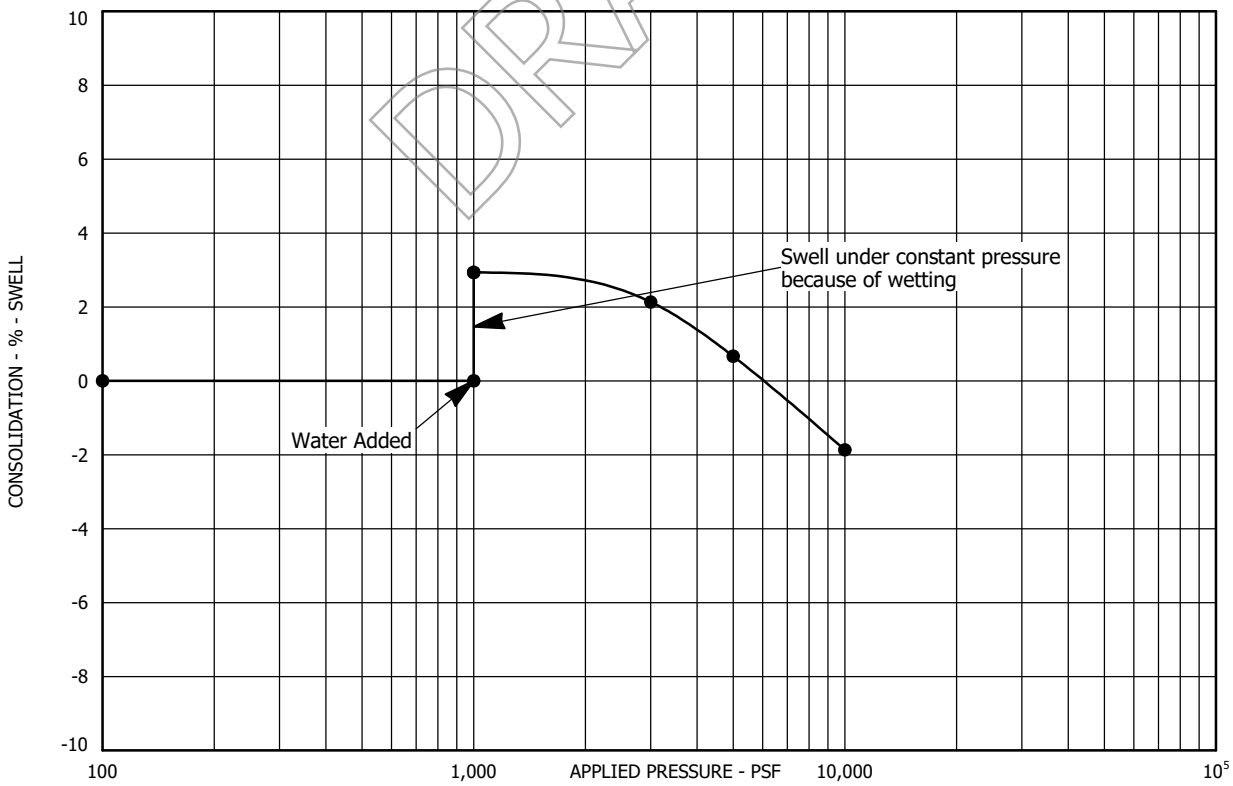
FIGURE A-75

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 78 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 16

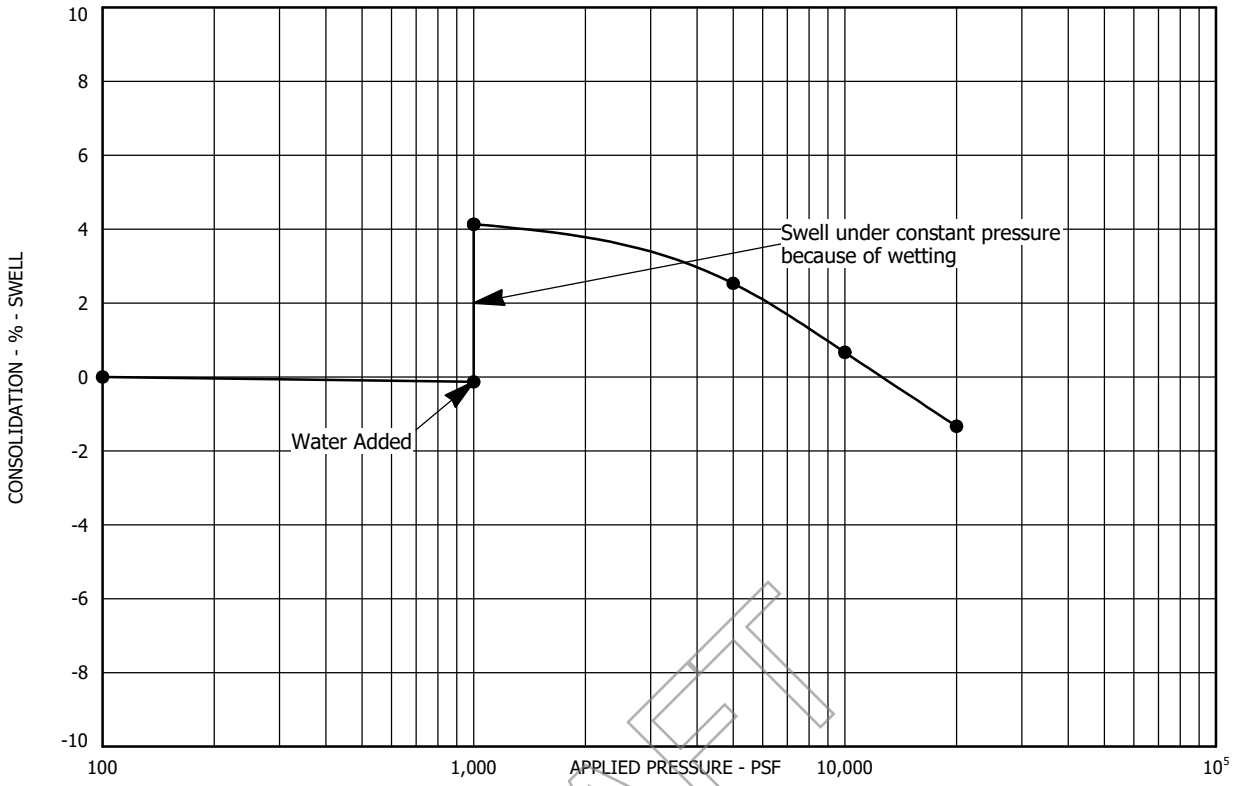


Sample Location: Test Boring No. 79 at a depth of 2 feet
Sample Description: Clay, sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 9

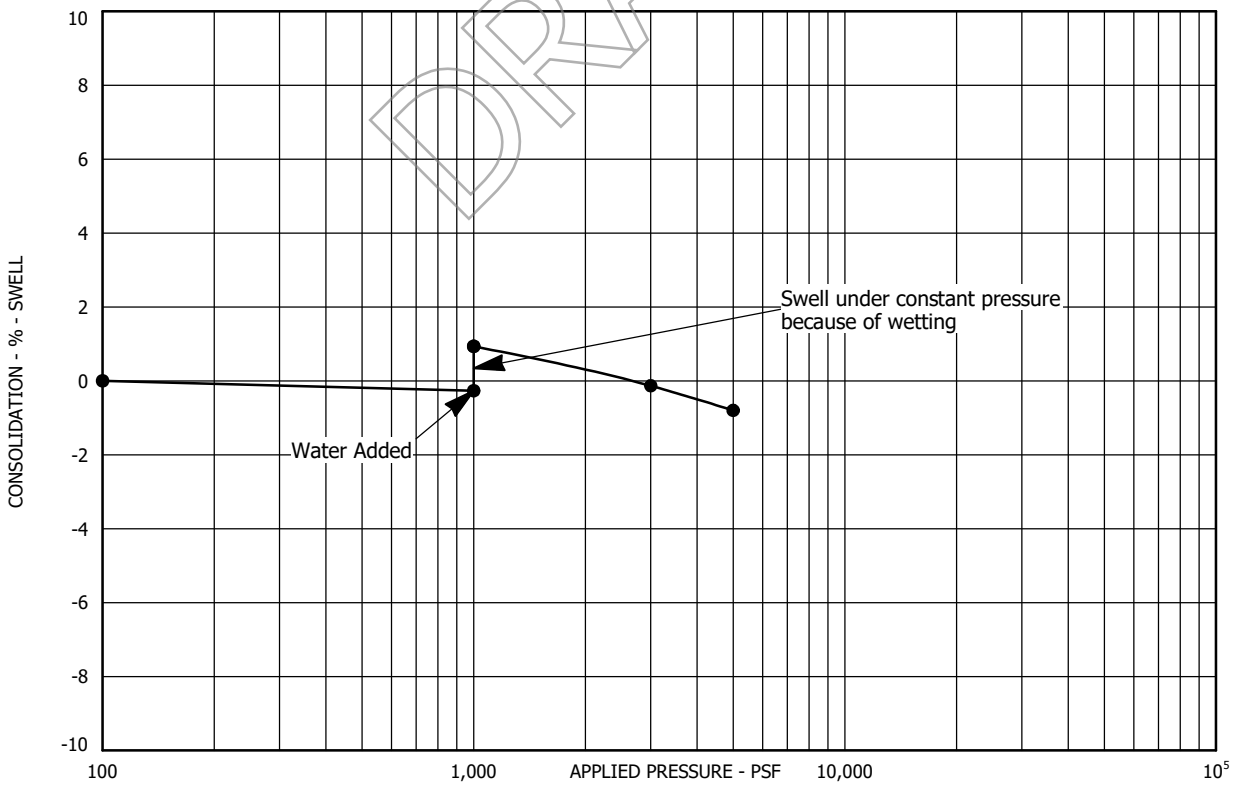
SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-76

PROJECT NO. 213216



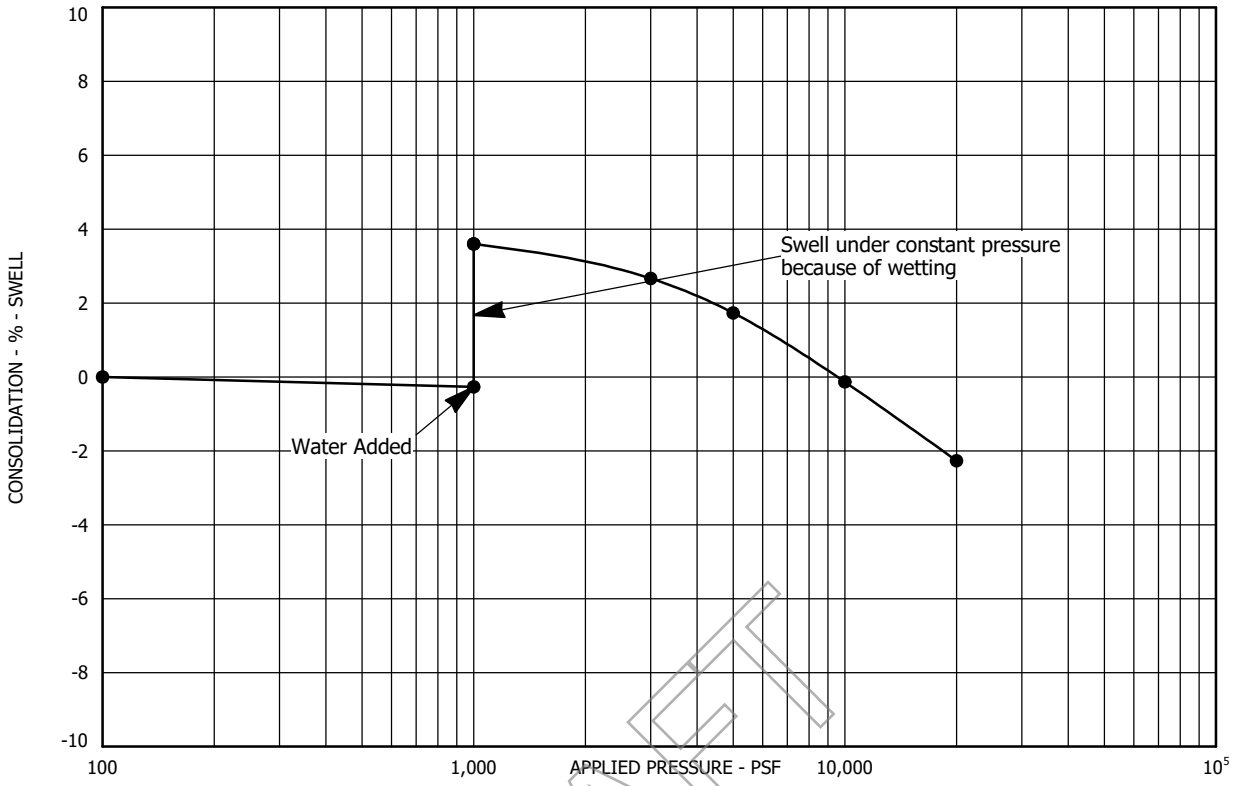
Sample Location: Test Boring No. 79 at a depth of 24 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 112
Moisture Content (%): 17



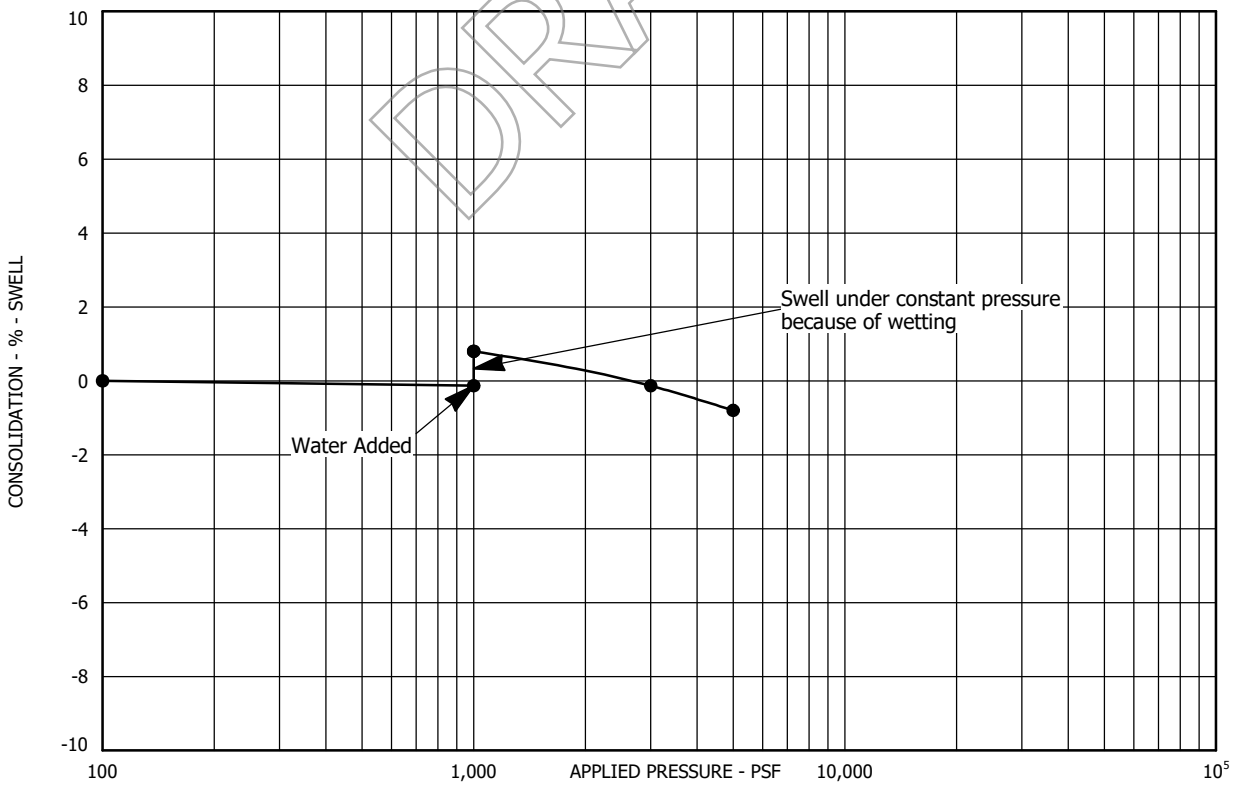
Sample Location: Test Boring No. 80 at a depth of 9 feet
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 112
Moisture Content (%): 7

SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-77
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 80 at a depth of 29 feet
Sample Description: Claystone, slightly sandy
Dry Unit Weight (pcf): 114
Moisture Content (%): 19



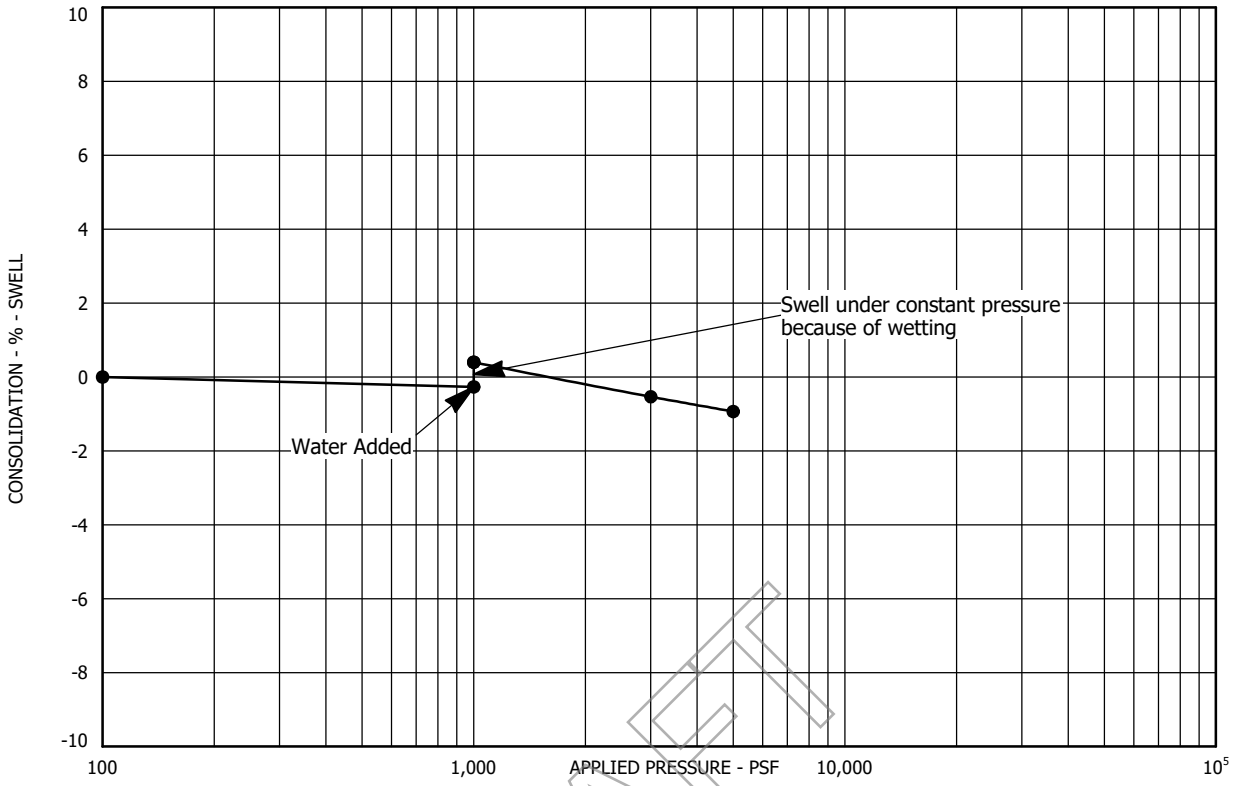
Sample Location: Test Boring No. 81 at a depth of 2 feet
Sample Description: Sand, very clayey, trace gravel (lens)
Dry Unit Weight (pcf): 110
Moisture Content (%): 5

SWELL - CONSOLIDATION TEST RESULTS

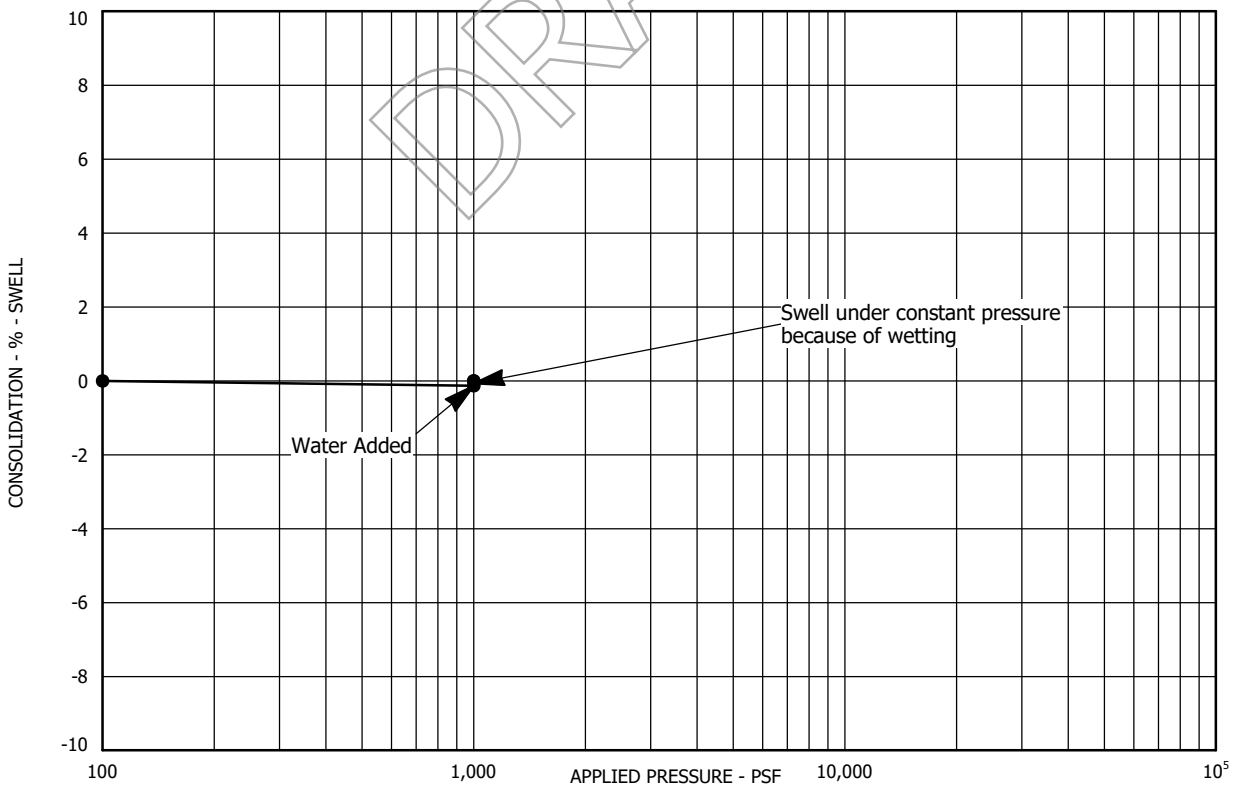
FIGURE A-78

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 81 at a depth of 34 feet
Sample Description: Claystone, sandy
Dry Unit Weight (pcf): 123
Moisture Content (%): 11

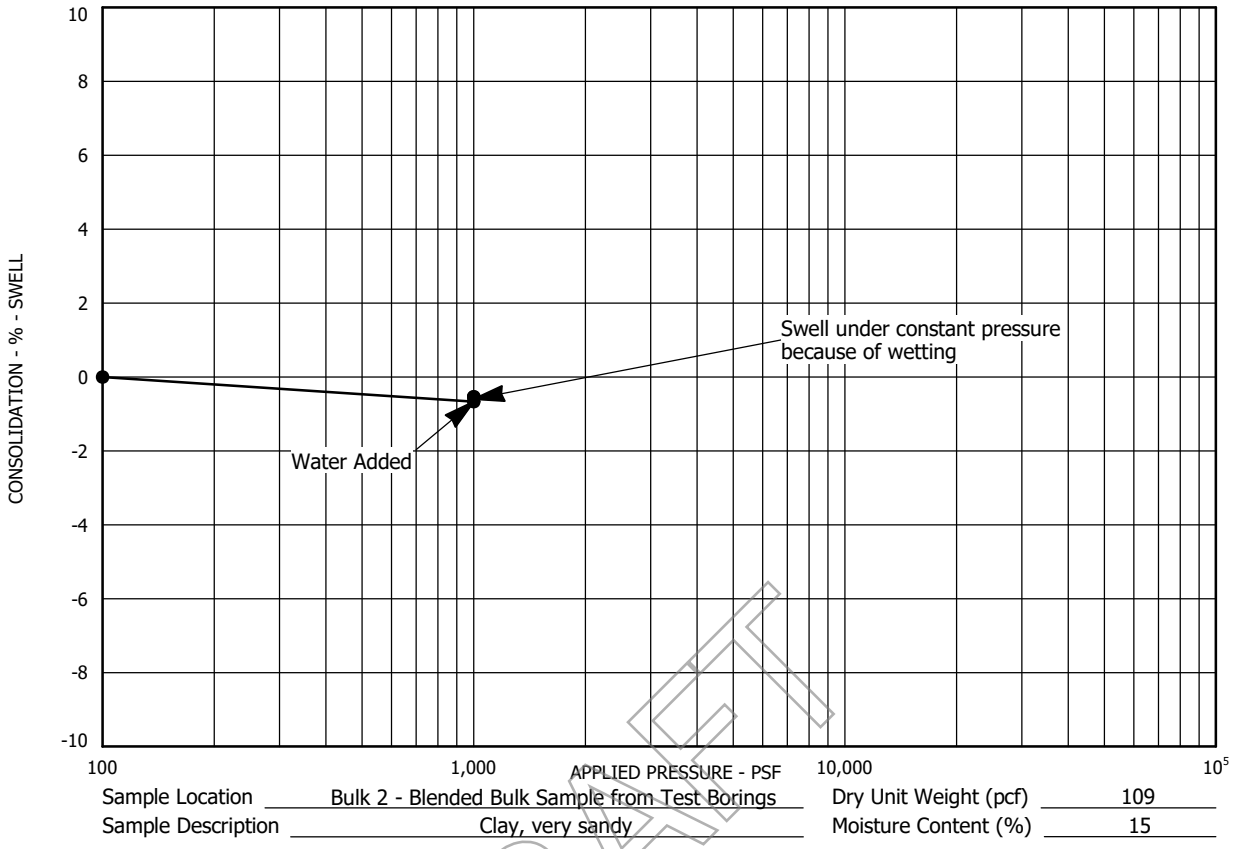


Sample Location: Bulk 1 - Blended Bulk Sample from Test Borings
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 108
Moisture Content (%): 14

SWELL - CONSOLIDATION TEST RESULTS

FIGURE A-79

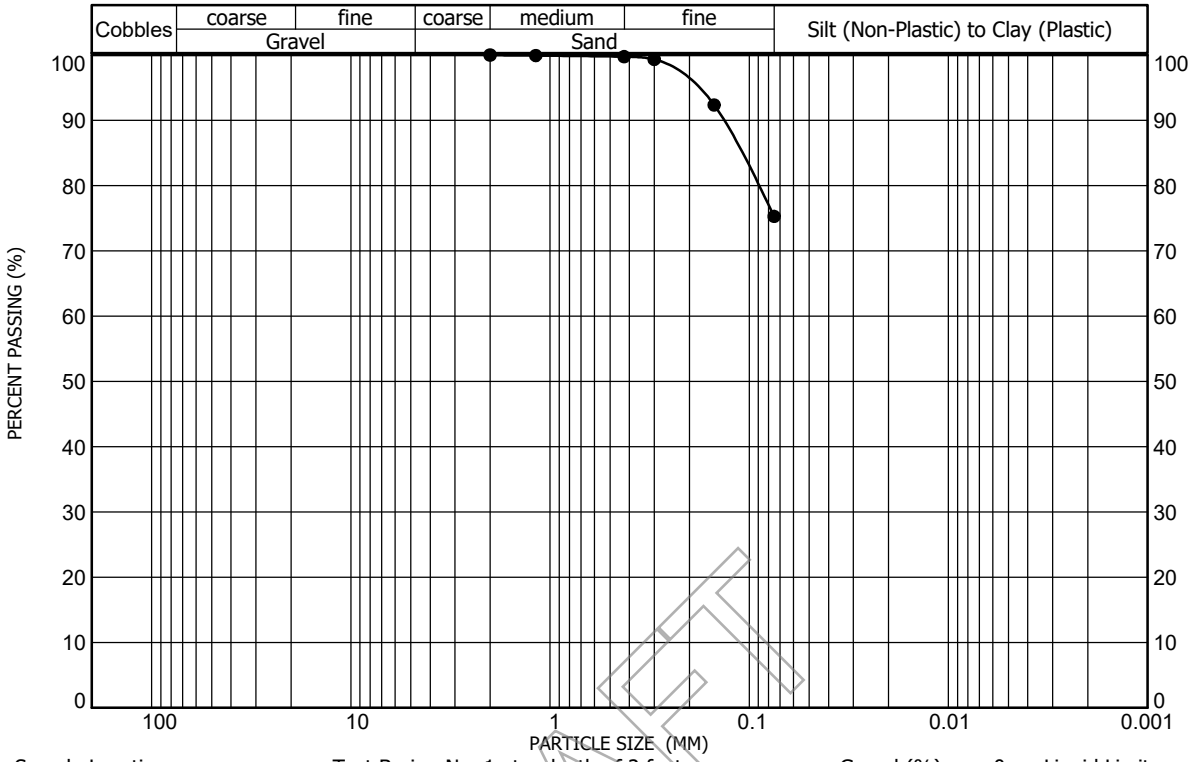
PROJECT NO. 213216



Sample Location: Bulk 2 - Blended Bulk Sample from Test Borings
Sample Description: Clay, very sandy
Dry Unit Weight (pcf): 109
Moisture Content (%): 15

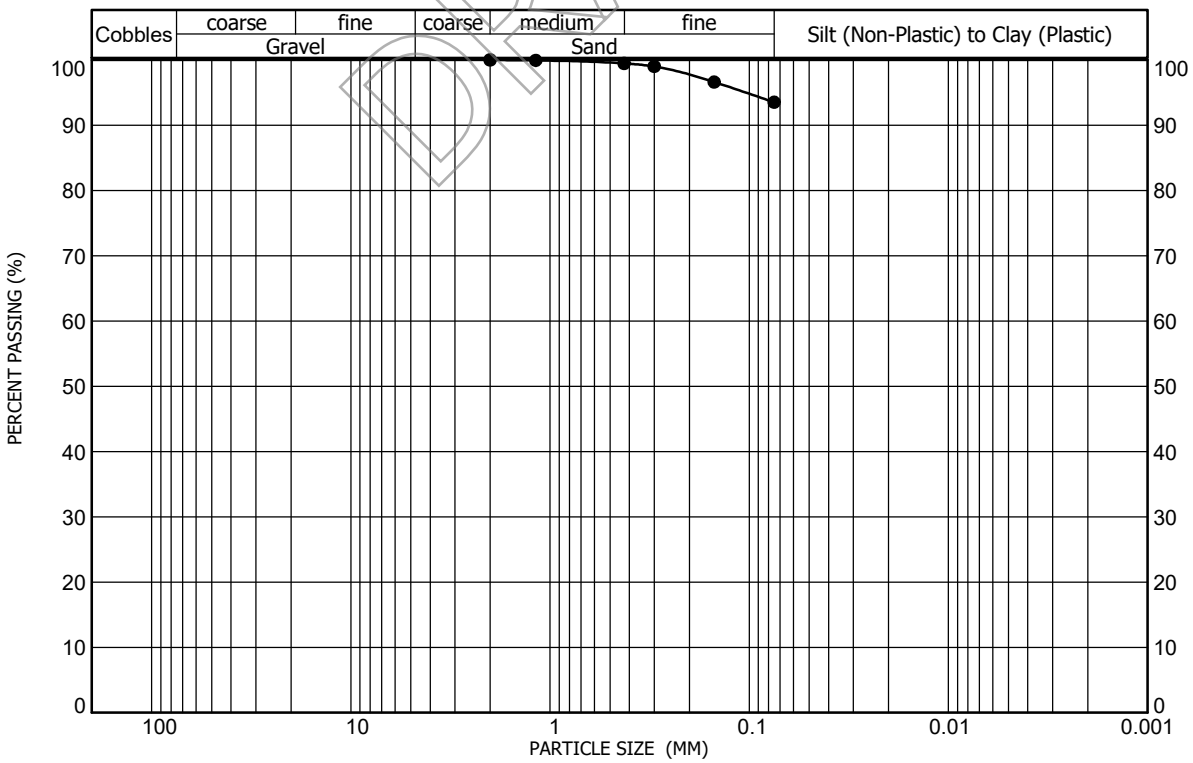
SWELL - CONSOLIDATION TEST RESULTS
FIGURE A-80
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 1 at a depth of 2 feet
Sample Description: Clay, very sandy
Classification: A-7-6(22), LEAN CLAY with SAND(CL)

Gravel (%): 0 Liquid Limit: 46
Sand (%): 25 Plasticity Index: 31
Clay/Silt (%): 75



Sample Location: Test Boring No. 1 at a depth of 34 feet
Sample Description: Claystone, slightly sandy
Classification: A-7-6(47), FAT CLAY(CH)

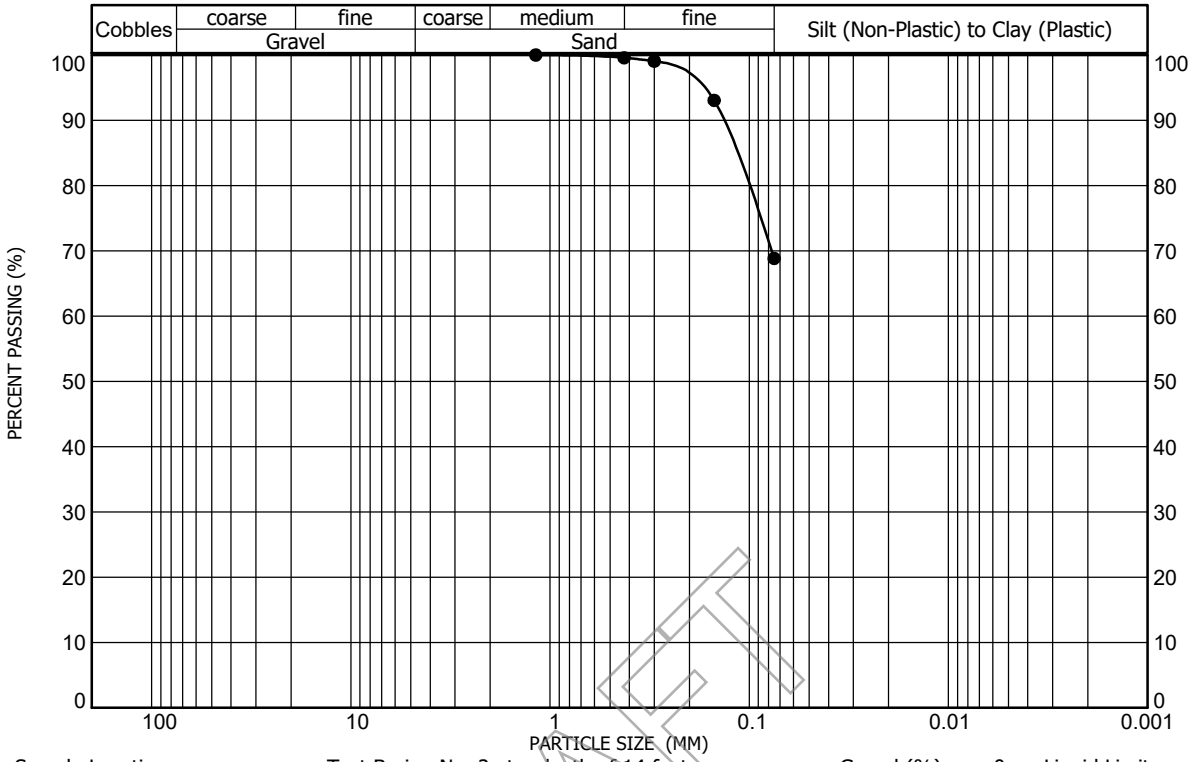
Gravel (%): 0 Liquid Limit: 67
Sand (%): 6 Plasticity Index: 44
Clay/Silt (%): 94

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-81

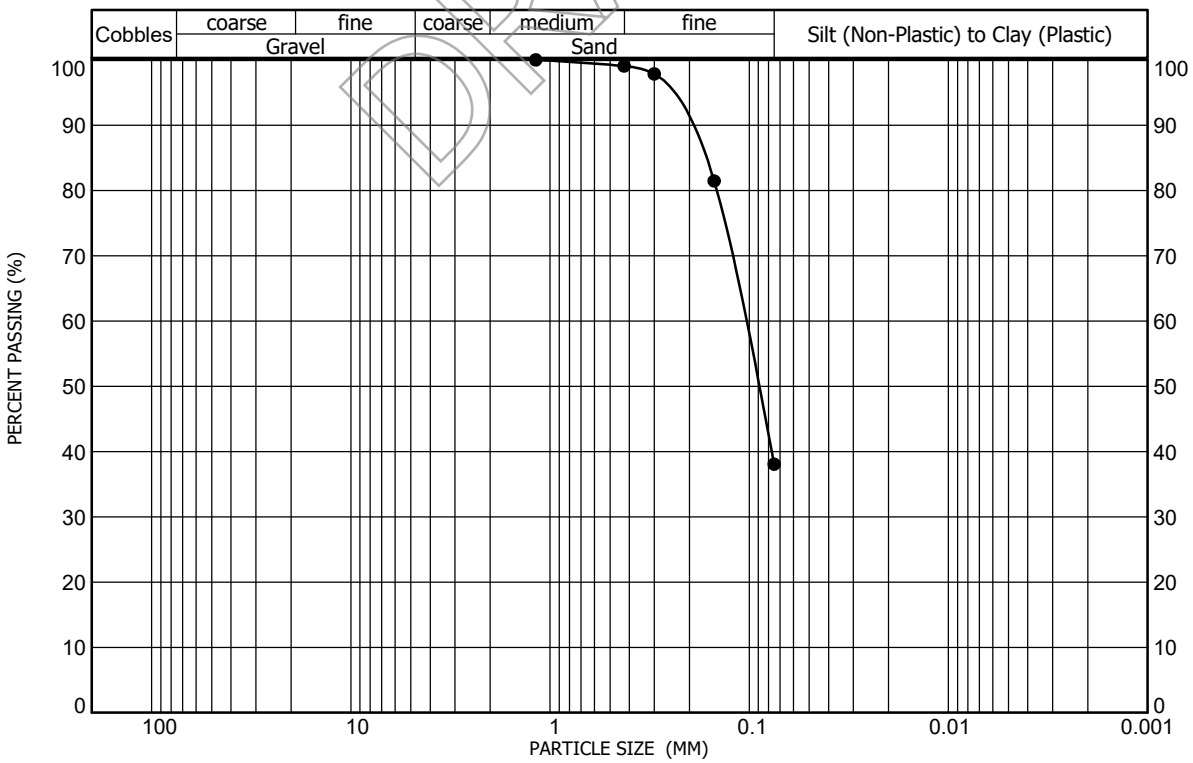
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 2 at a depth of 14 feet
Sample Description: Clay, very sandy
Classification: A-6(6), SANDY LEAN CLAY(CL)

Gravel (%): 0 Liquid Limit: 27
Sand (%): 31 Plasticity Index: 12
Clay/Silt (%): 69



Sample Location: Test Boring No. 3 at a depth of 4 feet
Sample Description: Sand, very clayey (lens)
Classification: A-4(0), CLAYEY SAND(SC)

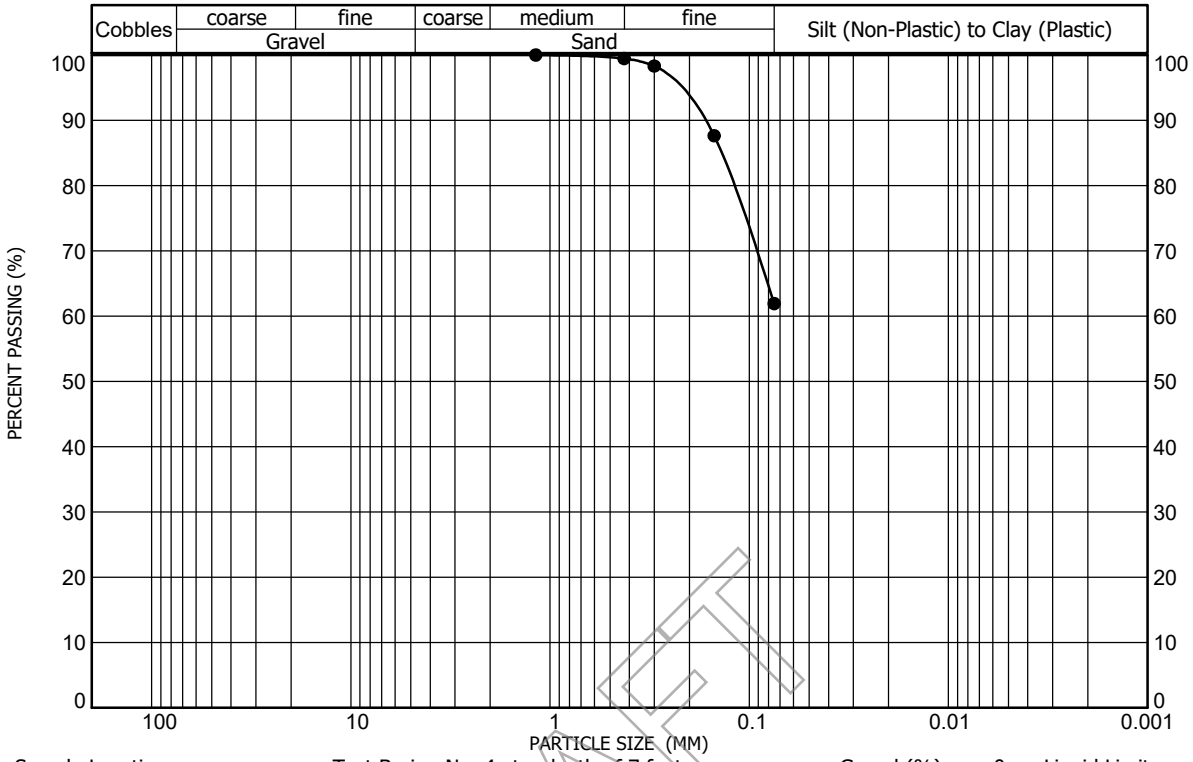
Gravel (%): 0 Liquid Limit: 24
Sand (%): 62 Plasticity Index: 10
Clay/Silt (%): 38

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-82

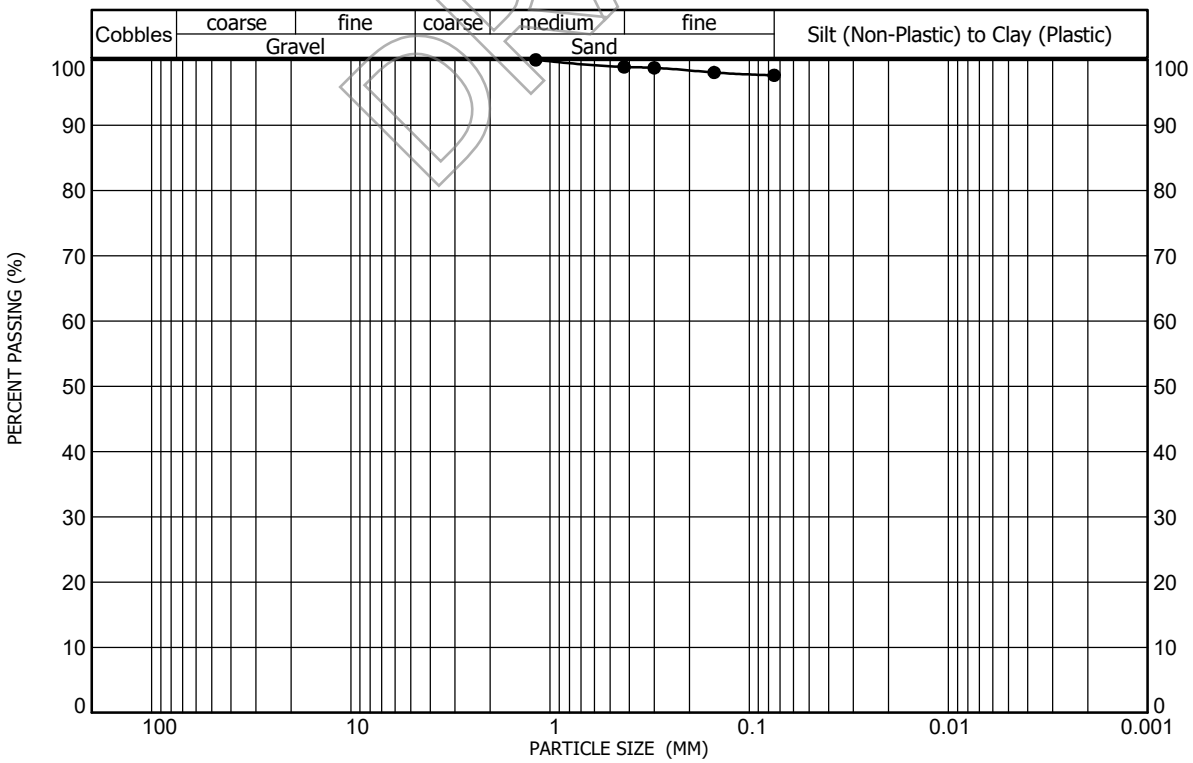
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 4 at a depth of 7 feet
Sample Description: Clay, very sandy
Classification: A-6(8), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 38
Clay/Silt (%): 62
Liquid Limit: 31
Plasticity Index: 18



Sample Location: Test Boring No. 5 at a depth of 29 feet
Sample Description: Claystone, trace sand
Classification: A-7-6(73), FAT CLAY(CH)

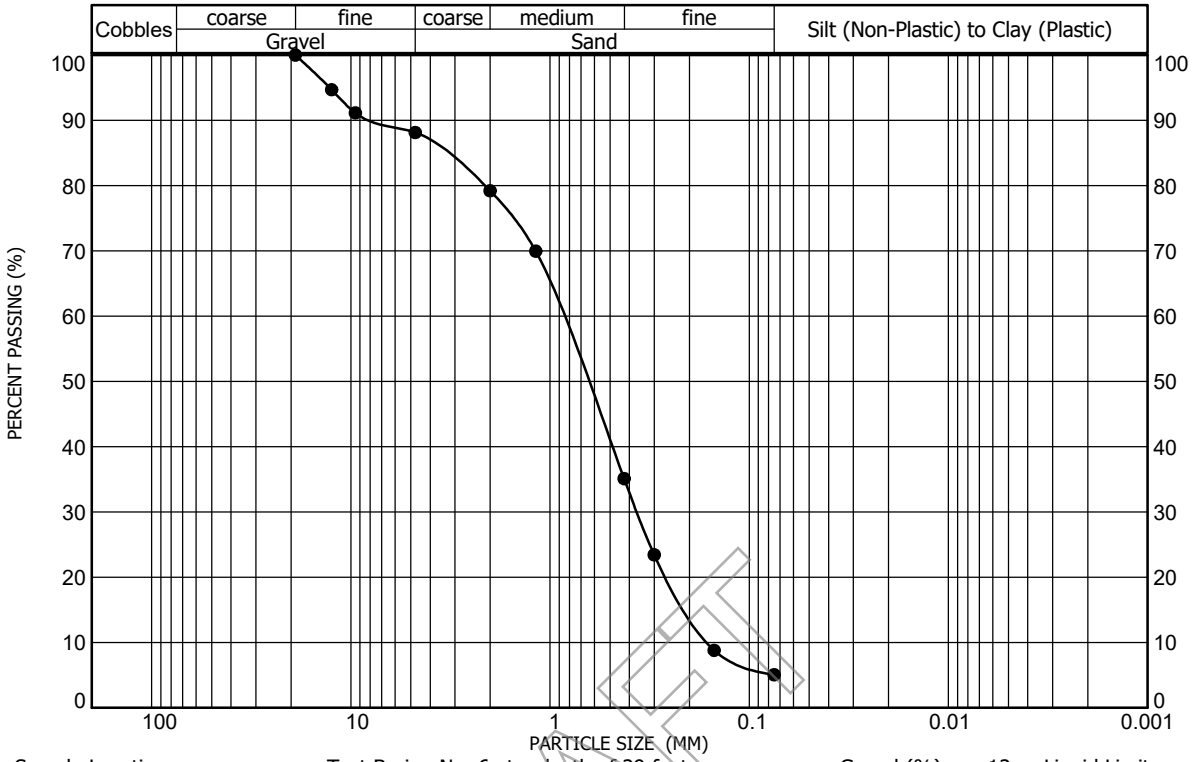
Gravel (%): 0
Sand (%): 2
Clay/Silt (%): 98
Liquid Limit: 85
Plasticity Index: 66

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-83

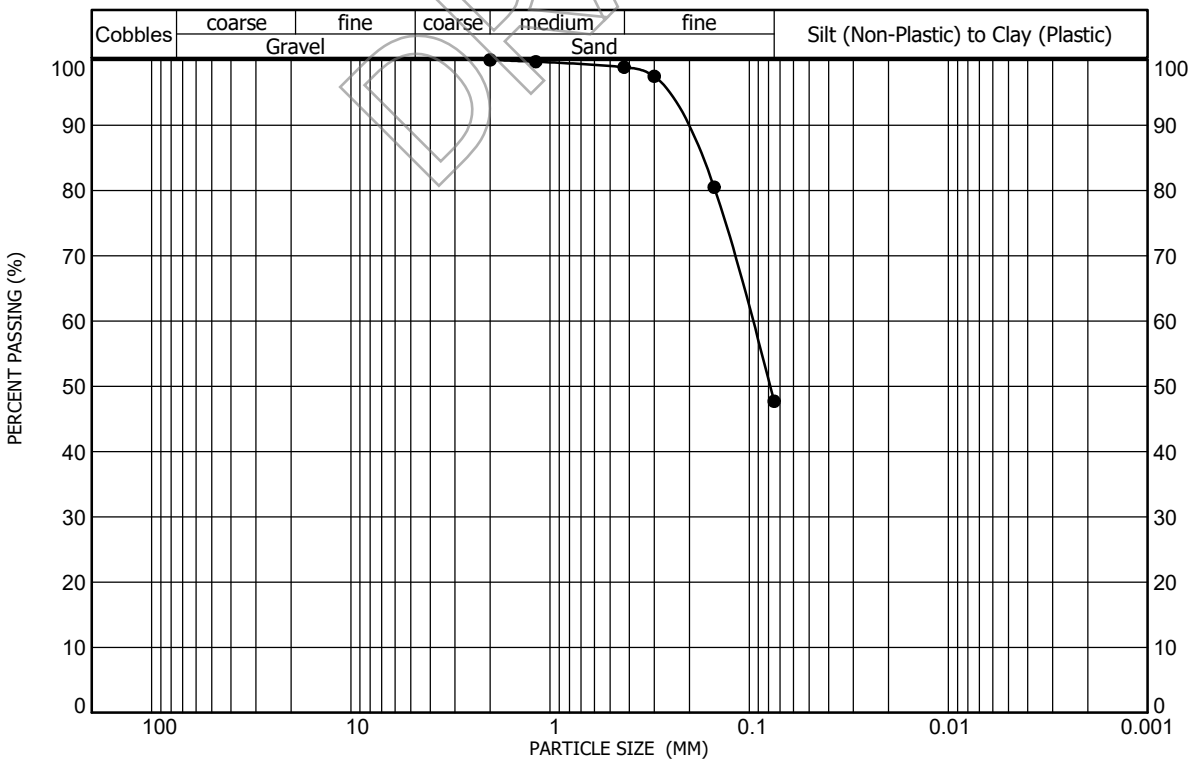
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 6 at a depth of 29 feet
Sample Description: Sand, slightly gravelly, slightly silty
Classification: A-1-b(0), POORLY GRADED SAND with SILT(SP-SM)

Gravel (%): 12 Liquid Limit: NV
Sand (%): 83 Plasticity Index: NP
Clay/Silt (%): 5



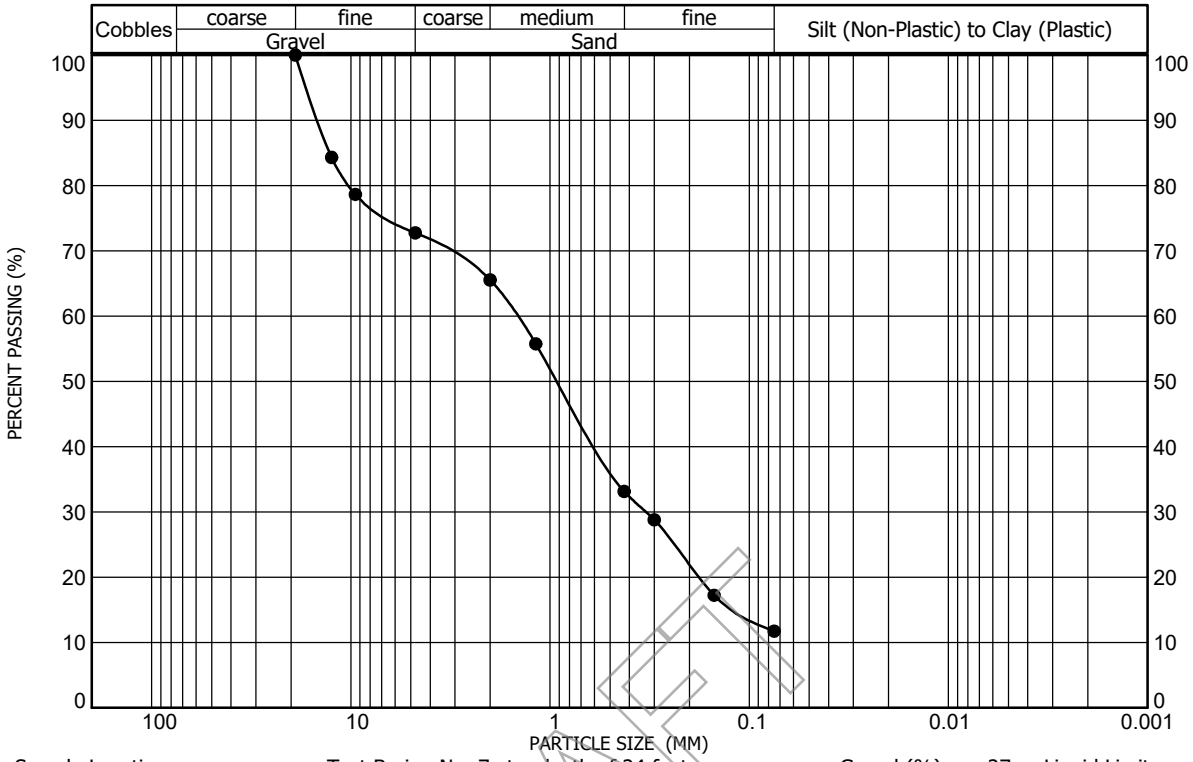
Sample Location: Test Boring No. 7 at a depth of 7 feet
Sample Description: Sand, very clayey (lens)
Classification: A-6(3), CLAYEY SAND(SC)

Gravel (%): 0 Liquid Limit: 27
Sand (%): 52 Plasticity Index: 15
Clay/Silt (%): 48

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-84

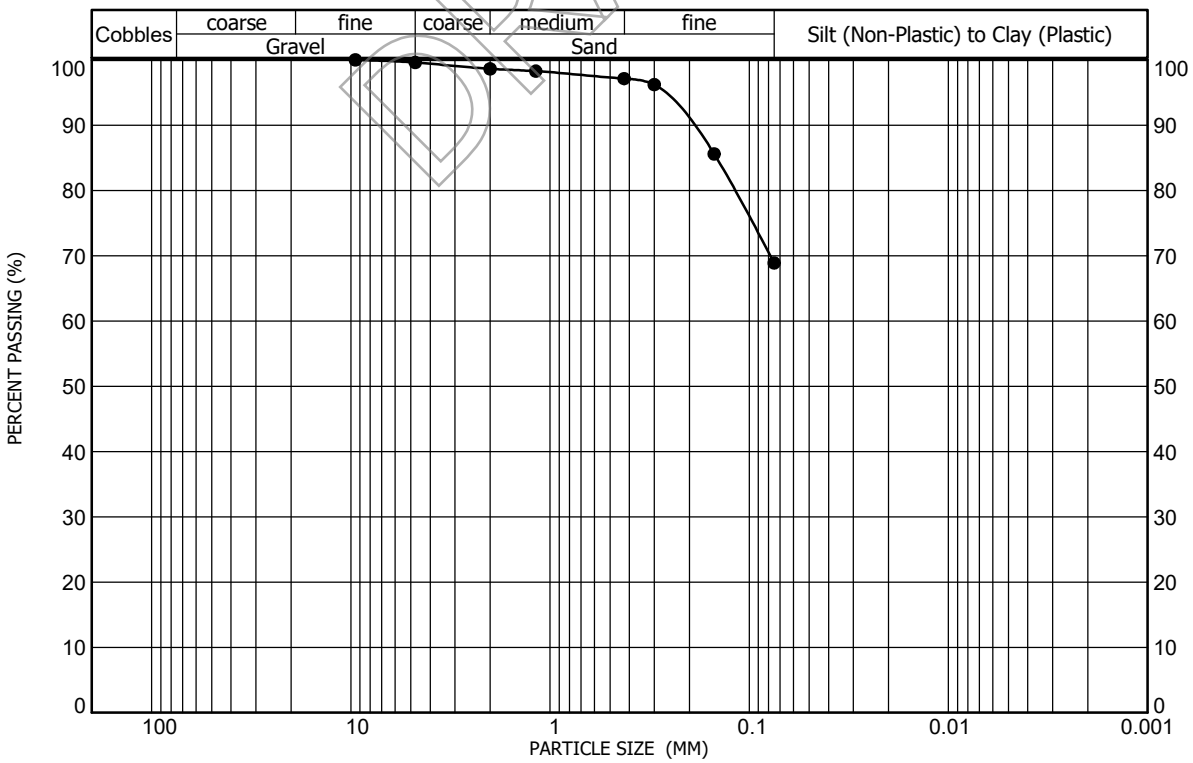
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 7 at a depth of 24 feet
Sample Description: Sand, gravelly, slightly silty
Classification: A-1-b(0), WELL-GRADED SAND with SILT and GRAVEL(SW-SM)

Gravel (%): 27
Sand (%): 61
Clay/Silt (%): 12
Liquid Limit: NV
Plasticity Index: NP



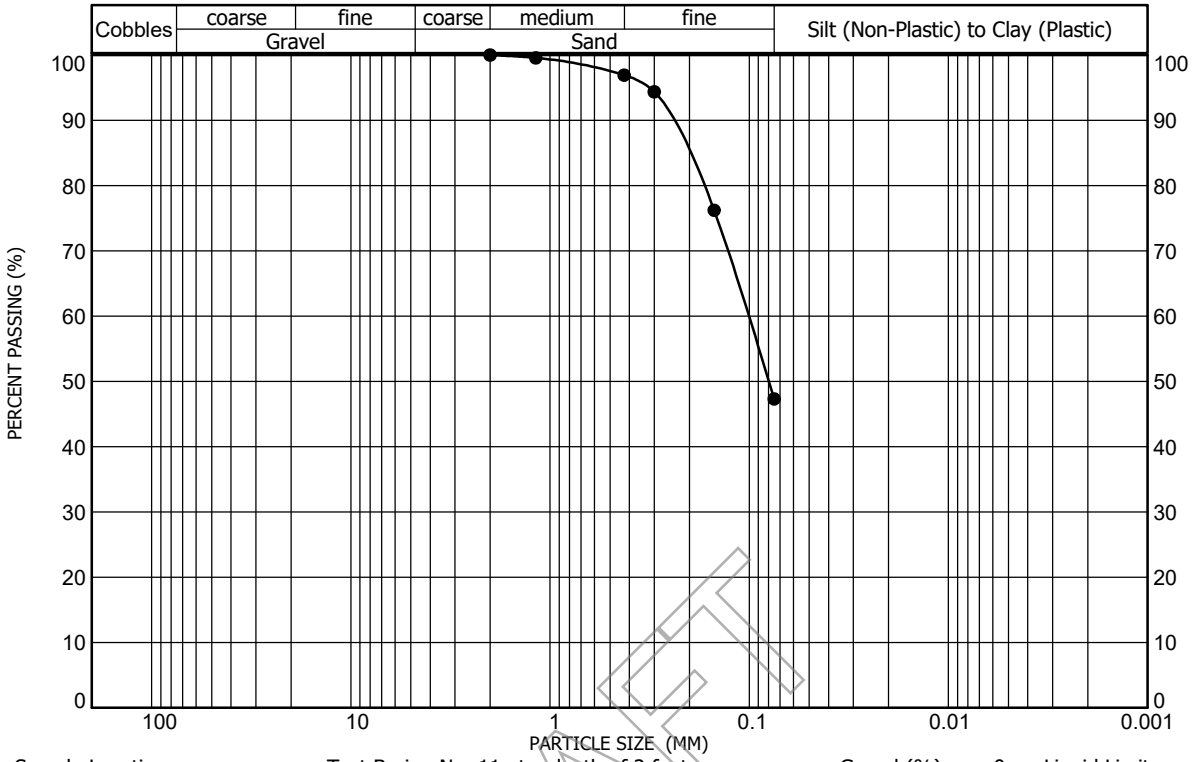
Sample Location: Test Boring No. 8 at a depth of 14 feet
Sample Description: Clay, very sandy (lens)
Classification: A-6(9), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 31
Clay/Silt (%): 69
Liquid Limit: 30
Plasticity Index: 18

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-85

PROJECT NO. 213216

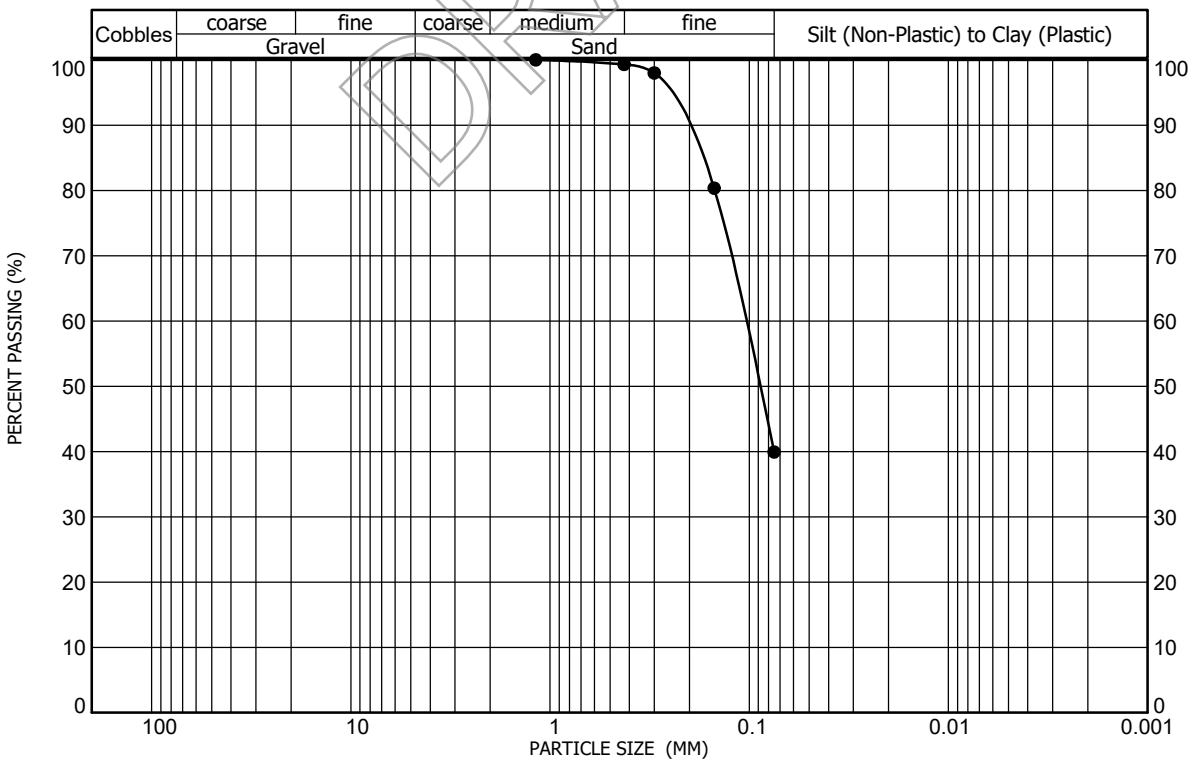
AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 11 at a depth of 2 feet
Sample Description: Sand, very clayey (lens)
Classification: A-6(3), CLAYEY SAND(SC)

Gravel (%): 0
Sand (%): 53
Clay/Silt (%): 47

Liquid Limit: 31
Plasticity Index: 15



Sample Location: Test Boring No. 12 at a depth of 9 feet
Sample Description: Sand, very silty, very clayey
Classification: A-4(0), SILTY, CLAYEY SAND(SC-SM)

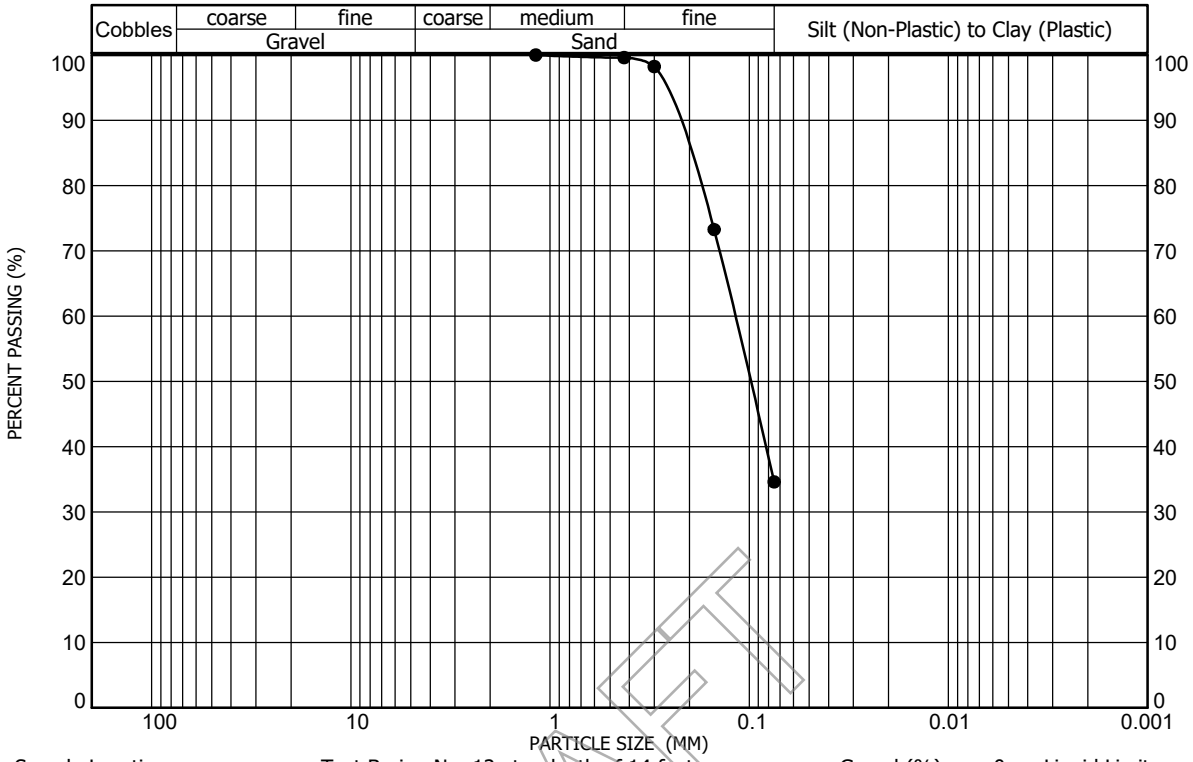
Gravel (%): 0
Sand (%): 60
Clay/Silt (%): 40

Liquid Limit: 25
Plasticity Index: 7

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-86

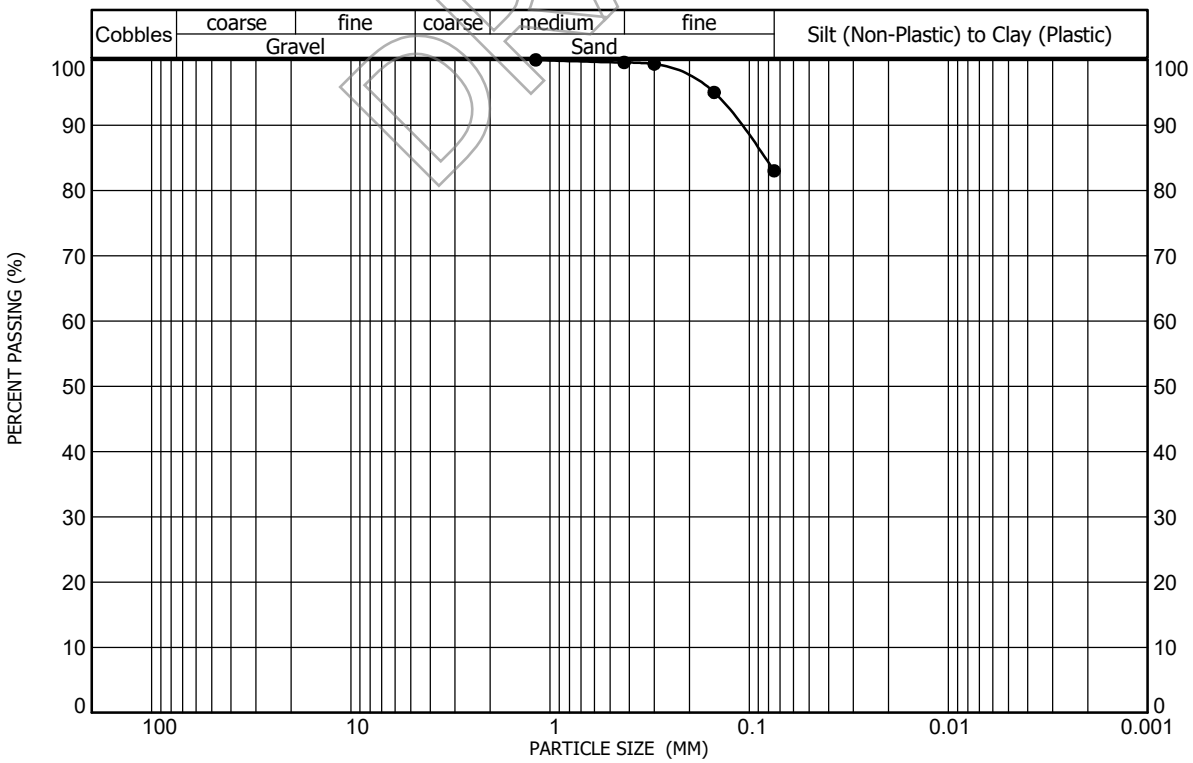
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 12 at a depth of 14 feet
Sample Description: Sand, very silty
Classification: A-2-4(0), SILTY SAND(SM)

Gravel (%): 0 Liquid Limit: NV
Sand (%): 65 Plasticity Index: NP
Clay/Silt (%): 35

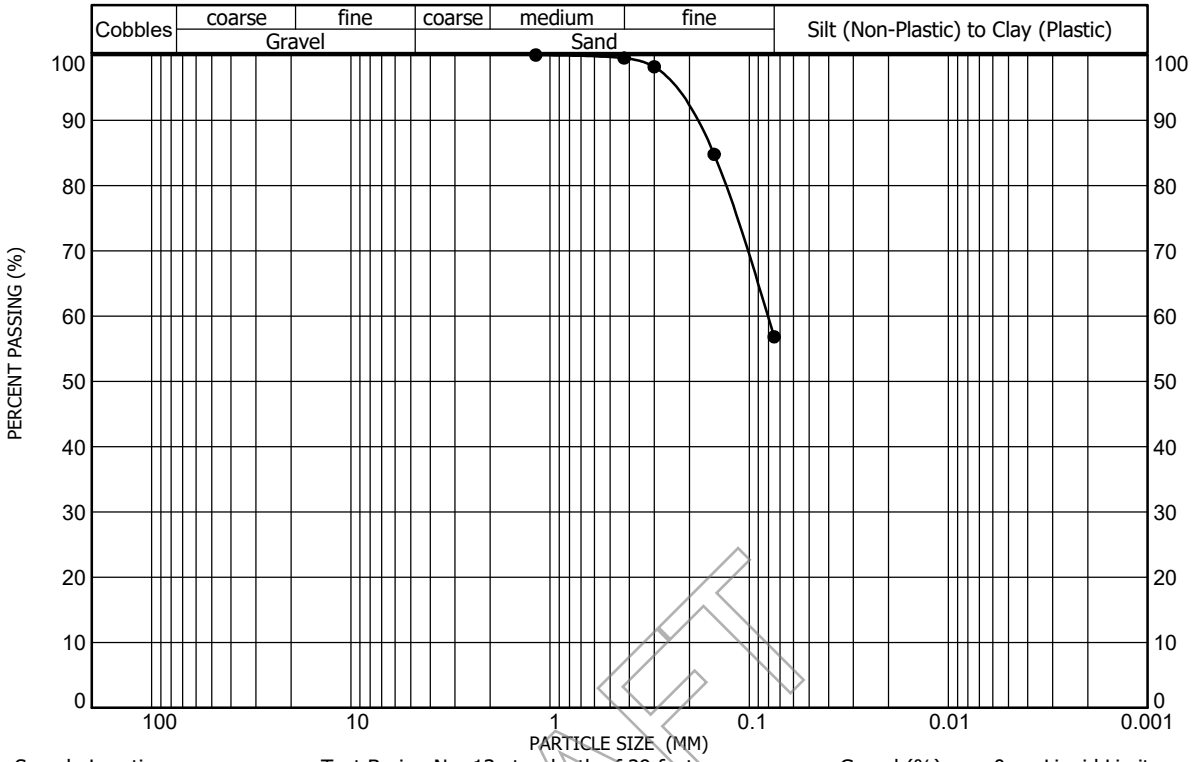


Sample Location: Test Boring No. 13 at a depth of 4 feet
Sample Description: Clay, sandy
Classification: A-6(10), LEAN CLAY with SAND(CL)

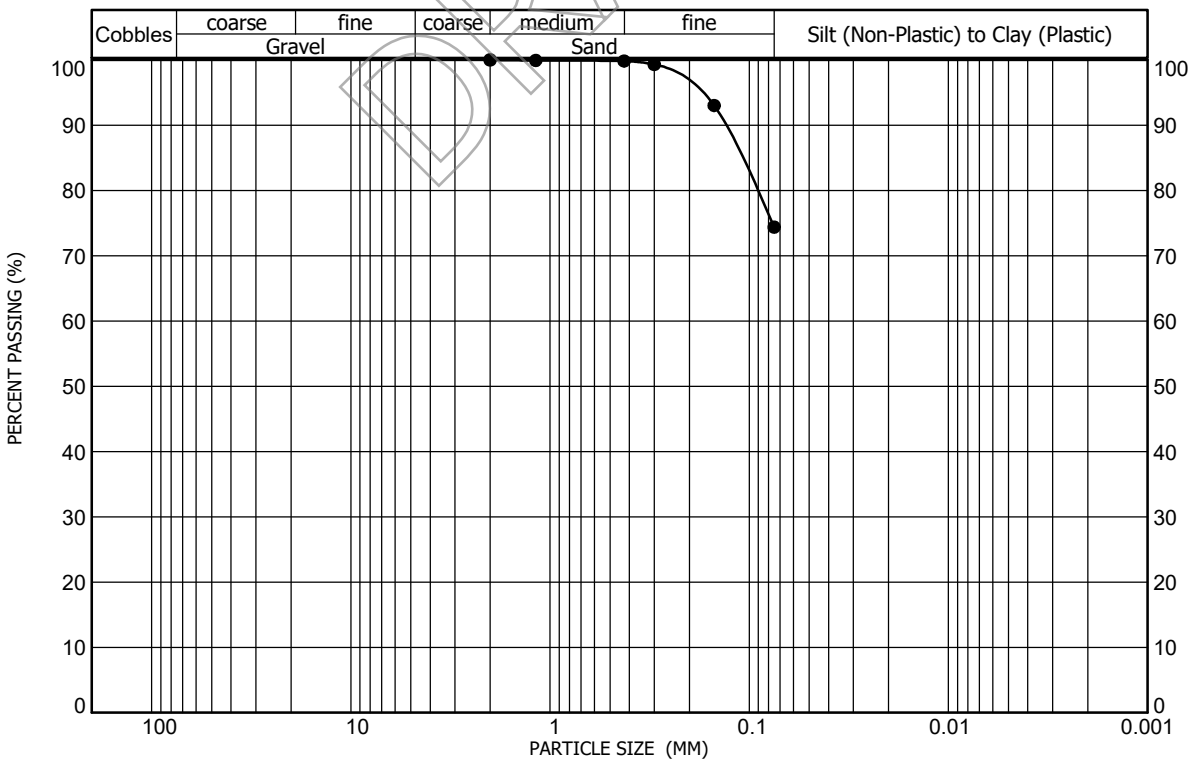
Gravel (%): 0 Liquid Limit: 32
Sand (%): 17 Plasticity Index: 14
Clay/Silt (%): 83

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-87

PROJECT NO. 213216



Sample Location: Test Boring No. 13 at a depth of 29 feet | Gravel (%): 0 | Liquid Limit: 25
Sample Description: Claystone, very silty, very sandy | Sand (%): 43 | Plasticity Index: 6
Classification: A-4(1), SANDY SILTY CLAY(CL-ML) | Clay/Silt (%): 57



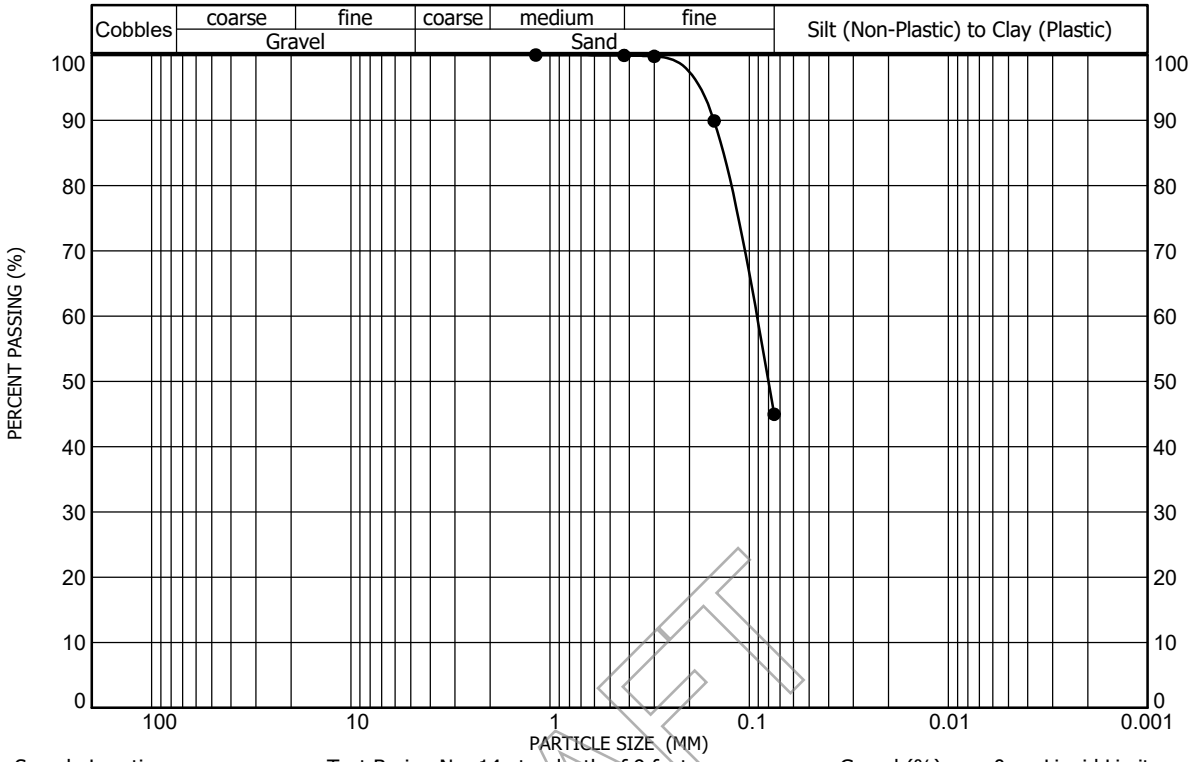
Sample Location: Test Boring No. 14 at a depth of 4 feet | Gravel (%): 0 | Liquid Limit: 32
Sample Description: Clay, sandy | Sand (%): 26 | Plasticity Index: 18
Classification: A-6(11), LEAN CLAY with SAND(CL) | Clay/Silt (%): 74

GRADATION AND ATTERBERG TEST RESULTS

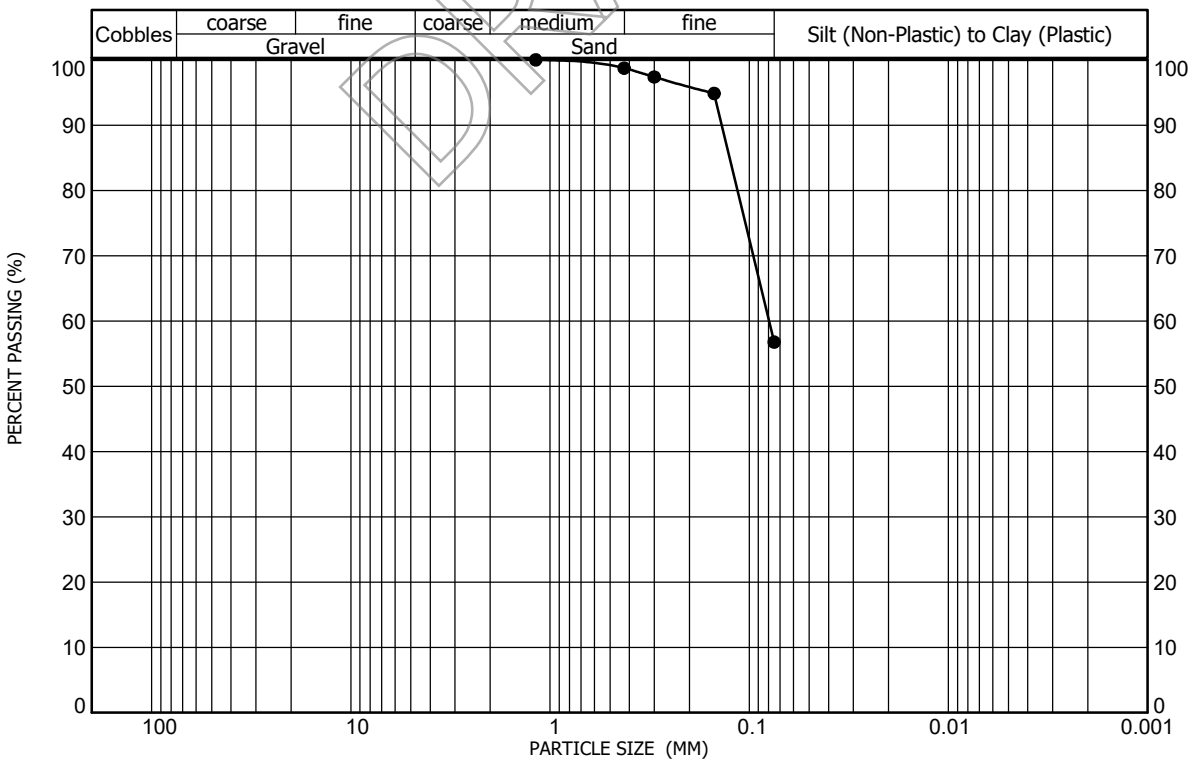
FIGURE A-88

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 14 at a depth of 9 feet — Gravel (%) 0 — Liquid Limit 29
Sample Description Sand, very clayey — Sand (%) 55 — Plasticity Index 14
Classification A-6(3), CLAYEY SAND(SC) — Clay/Silt (%) 45

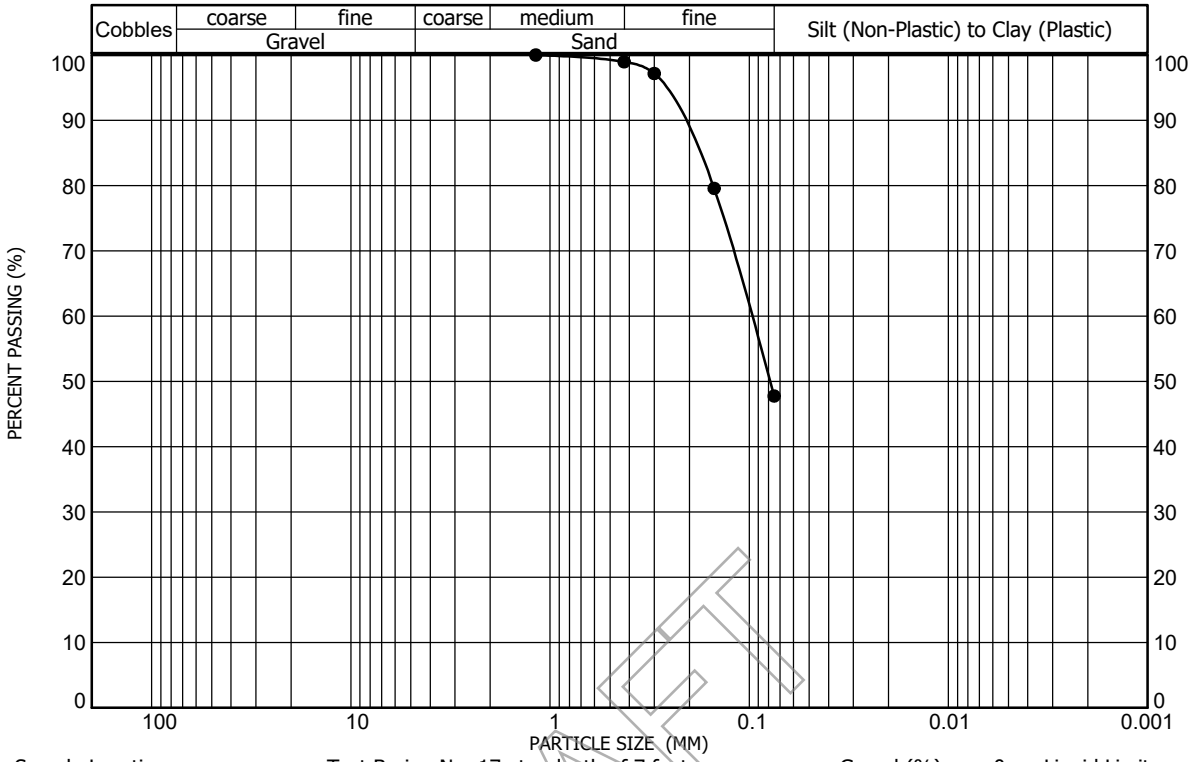


Sample Location Test Boring No. 16 at a depth of 4 feet — Gravel (%) 0 — Liquid Limit 30
Sample Description Clay, very sandy — Sand (%) 43 — Plasticity Index 14
Classification A-6(5), SANDY LEAN CLAY(CL) — Clay/Silt (%) 57

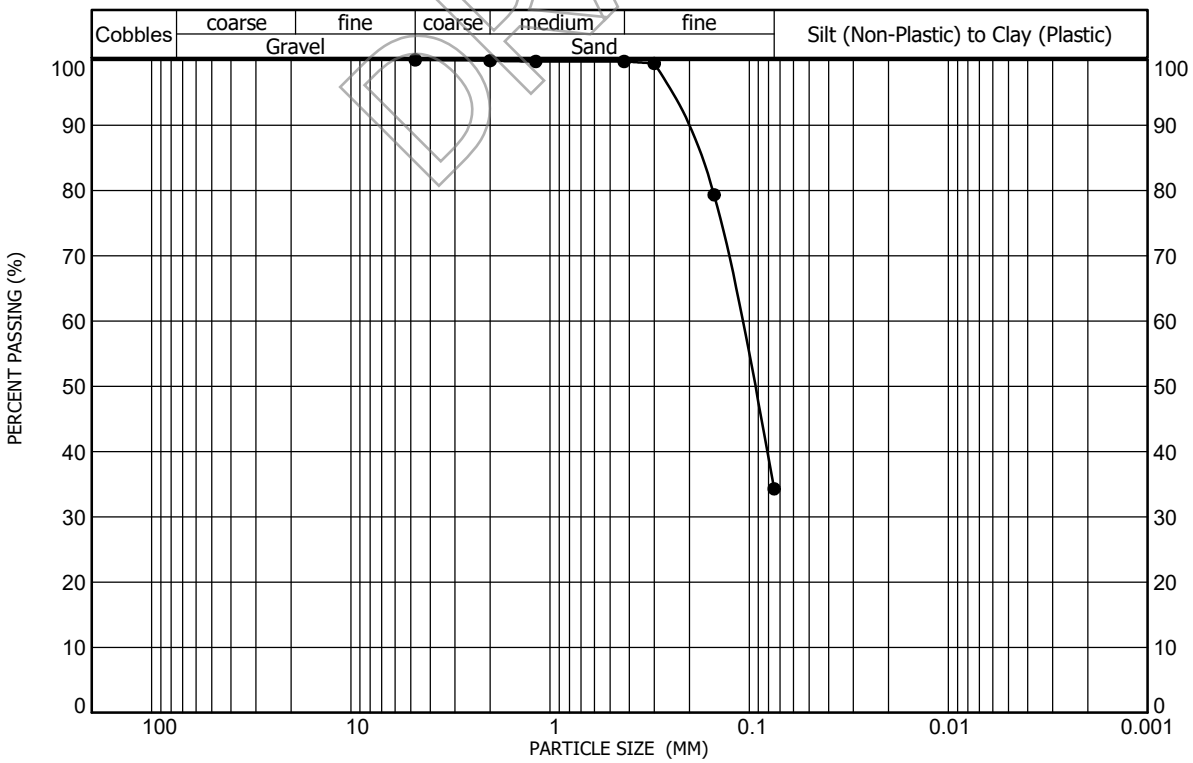
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-89

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



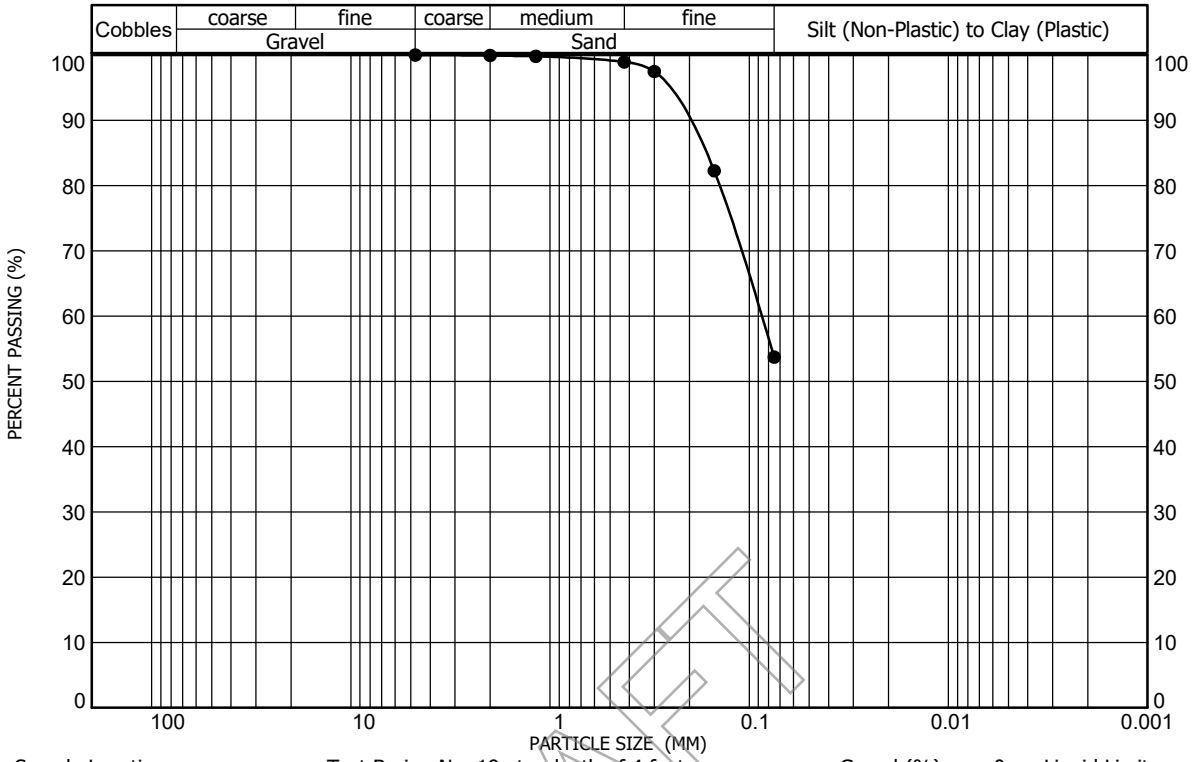
Sample Location Test Boring No. 17 at a depth of 7 feet — Gravel (%) 0 — Liquid Limit 31
Sample Description Sand, very clayey — Sand (%) 52 — Plasticity Index 11
Classification A-6(2), CLAYEY SAND(SC) — Clay/Silt (%) 48



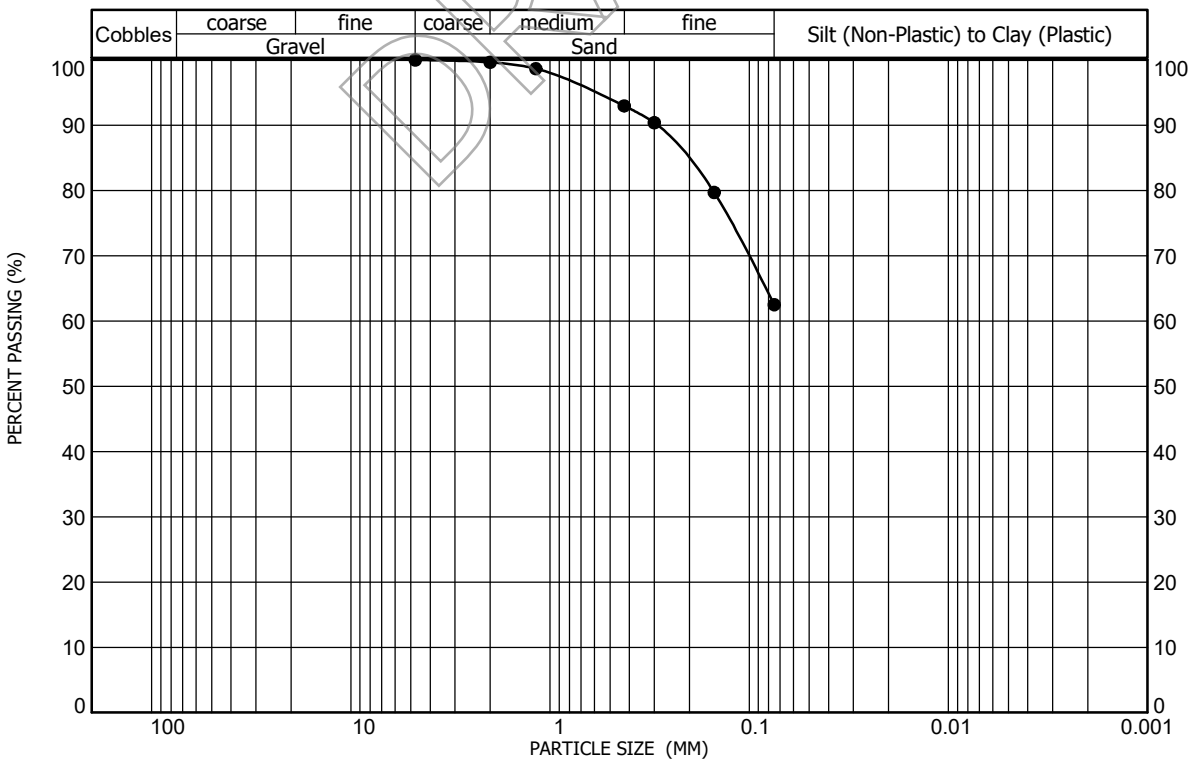
Sample Location Test Boring No. 17 at a depth of 14 feet — Gravel (%) 0 — Liquid Limit NV
Sample Description Sand, very silty — Sand (%) 66 — Plasticity Index NP
Classification A-2-4(0), SILTY SAND(SM) — Clay/Silt (%) 34

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-90
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 19 at a depth of 4 feet — Gravel (%) 0 — Liquid Limit 33
Sample Description Clay, very sandy — Sand (%) 46 — Plasticity Index 22
Classification A-6(8), SANDY LEAN CLAY(CL) — Clay/Silt (%) 54



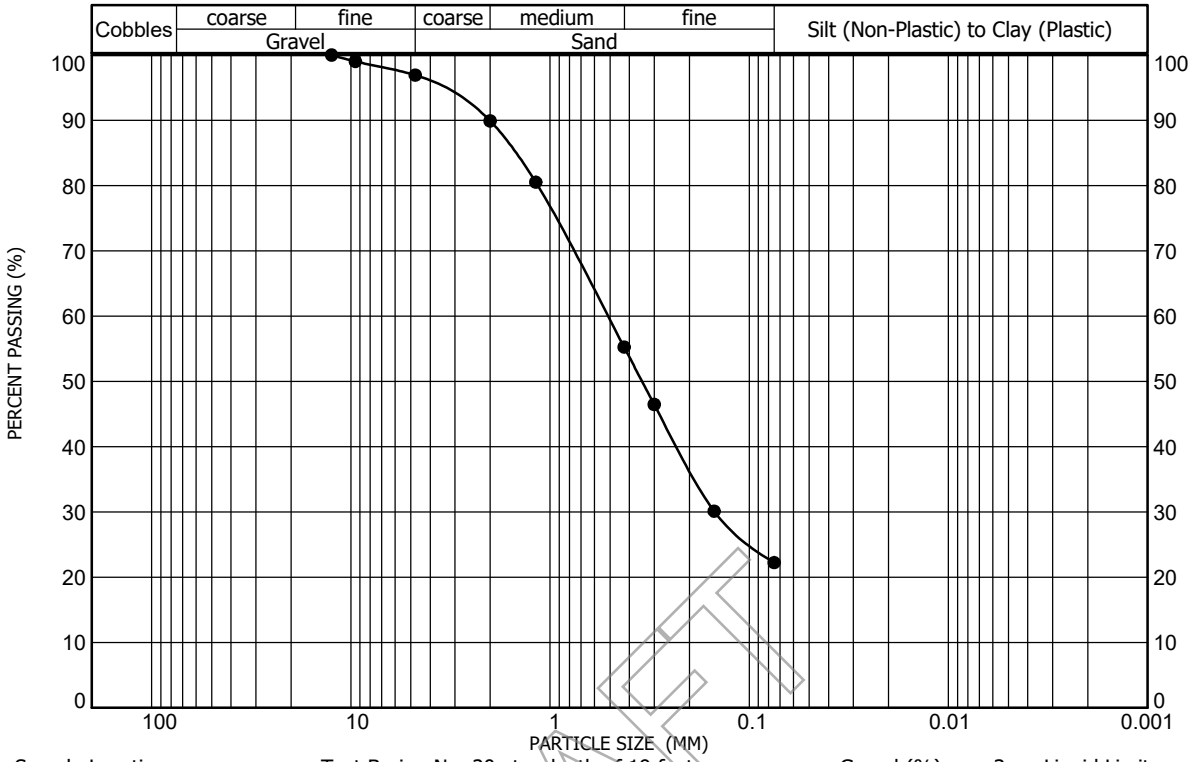
Sample Location Test Boring No. 20 at a depth of 9 feet — Gravel (%) 0 — Liquid Limit -
Sample Description Clay, very sandy — Sand (%) 37 — Plasticity Index -
Classification - — Clay/Silt (%) 63

GRADATION AND ATTERBERG TEST RESULTS

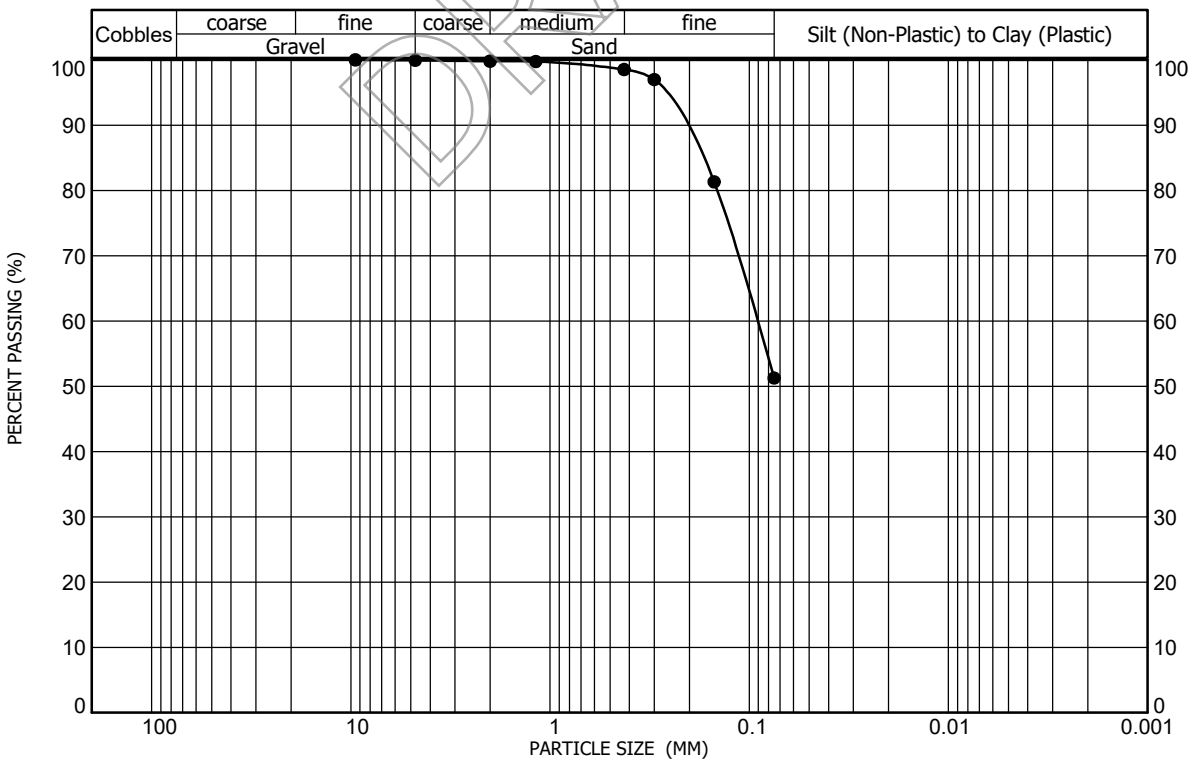
FIGURE A-91

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



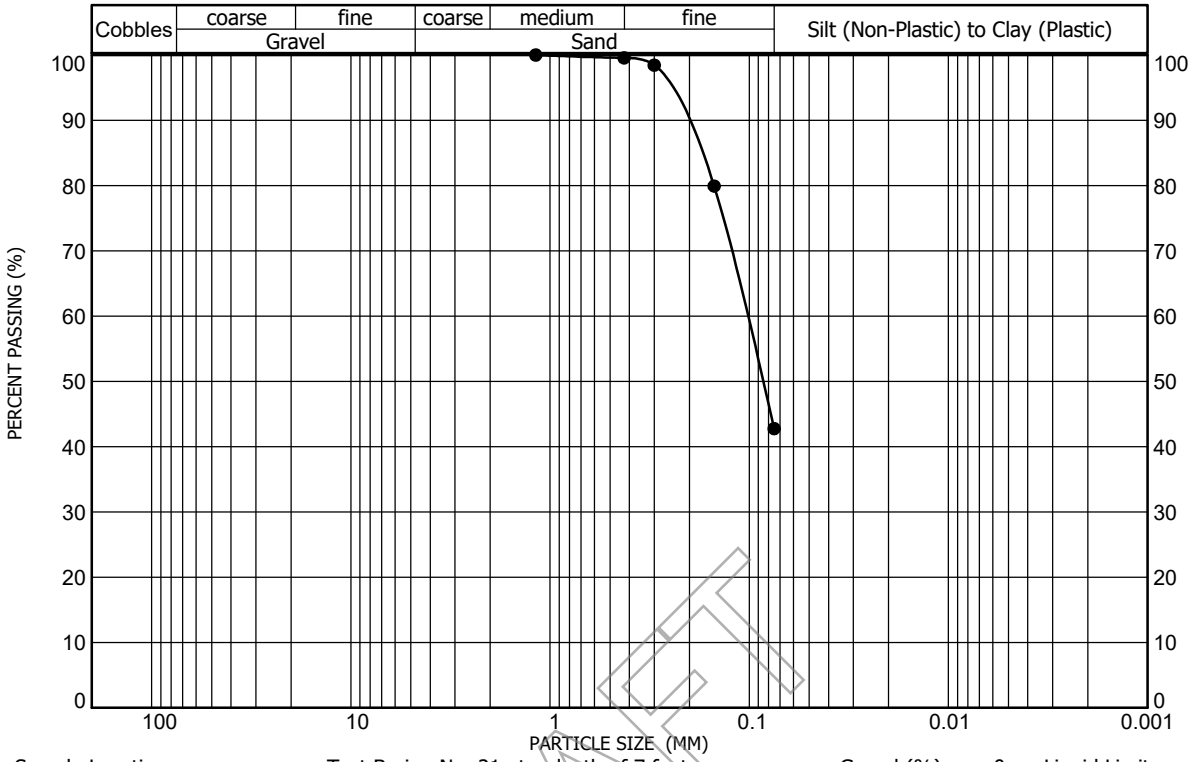
Sample Location: Test Boring No. 20 at a depth of 19 feet — Gravel (%): 3 — Liquid Limit: 28
Sample Description: Sand, clayey, trace gravel — Sand (%): 75 — Plasticity Index: 16
Classification: A-2-6(0), CLAYEY SAND(SC) — Clay/Silt (%): 22



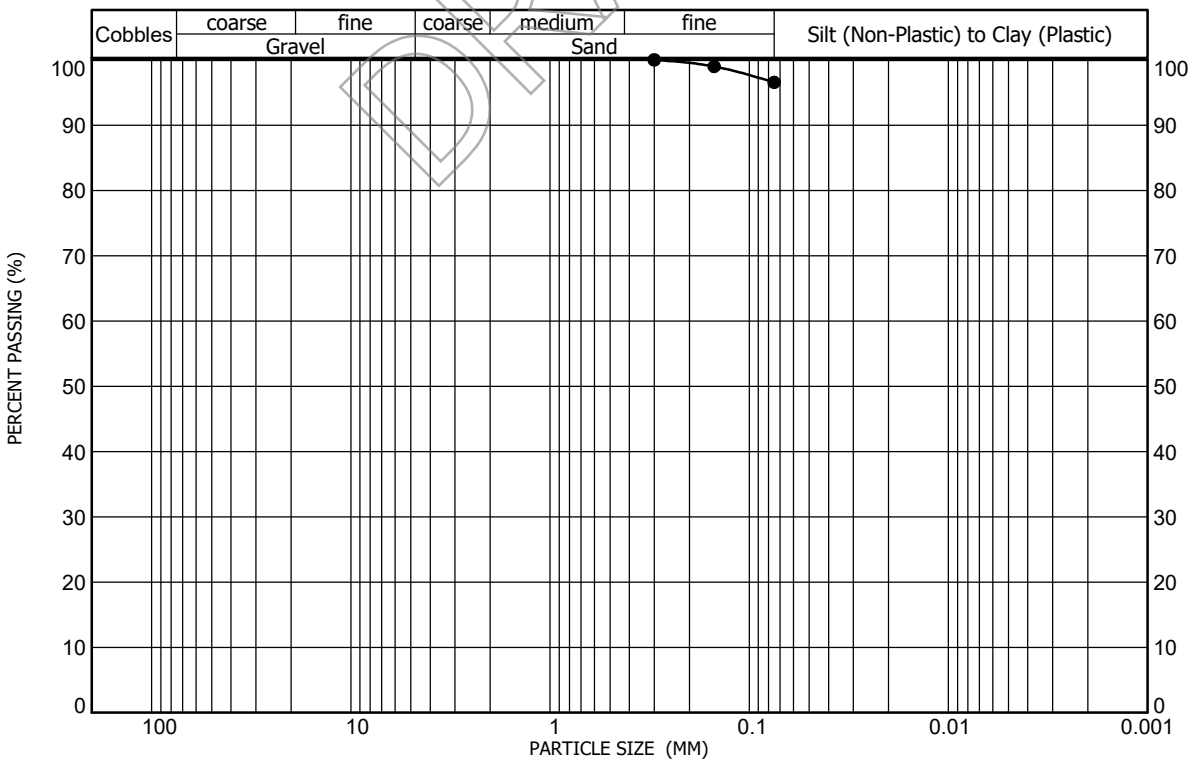
Sample Location: Test Boring No. 21 at a depth of 2 feet — Gravel (%): 0 — Liquid Limit: 31
Sample Description: Clay, very sandy — Sand (%): 49 — Plasticity Index: 20
Classification: A-6(6), SANDY LEAN CLAY(CL) — Clay/Silt (%): 51

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-92
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 21 at a depth of 7 feet
Sample Description: Sand, very clayey
Classification: A-6(1), CLAYEY SAND(SC)
Gravel (%): 0
Sand (%): 57
Clay/Silt (%): 43
Liquid Limit: 24
Plasticity Index: 11



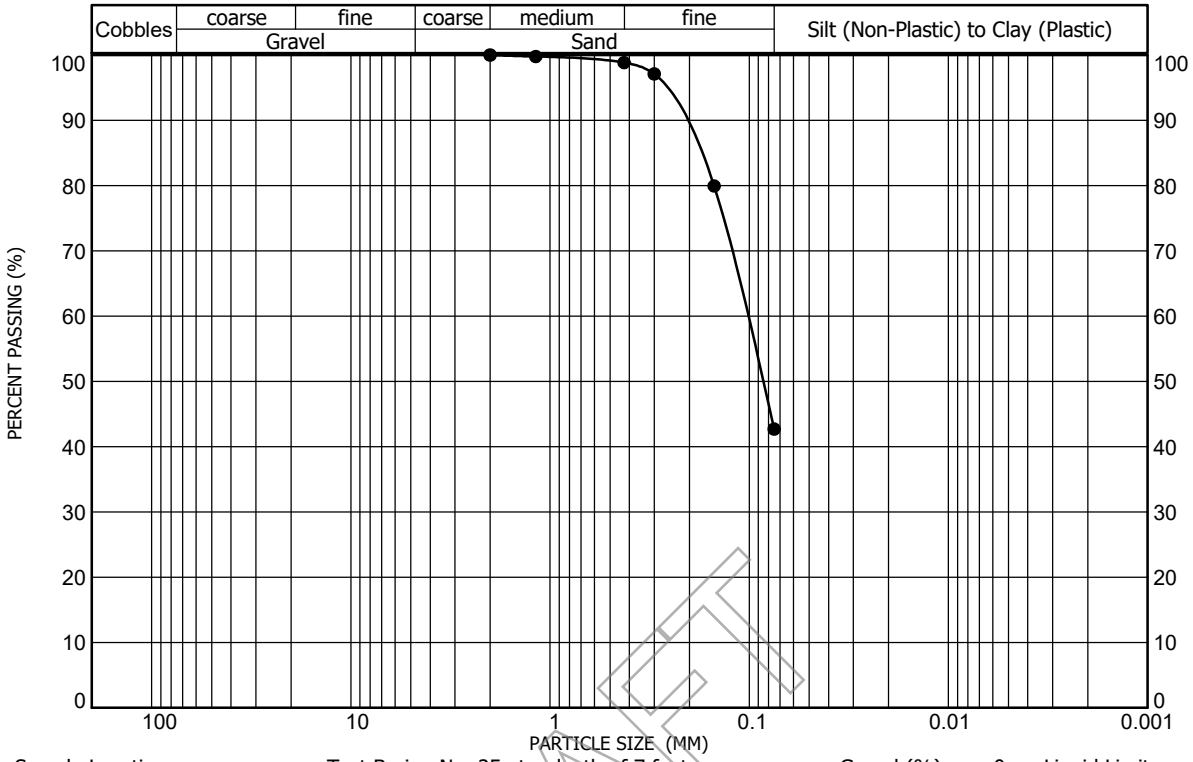
Sample Location: Test Boring No. 23 at a depth of 34 feet
Sample Description: Claystone, trace sand
Classification: A-7-5(52), FAT CLAY(CH)
Gravel (%): 0
Sand (%): 3
Clay/Silt (%): 97
Liquid Limit: 75
Plasticity Index: 45

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-93

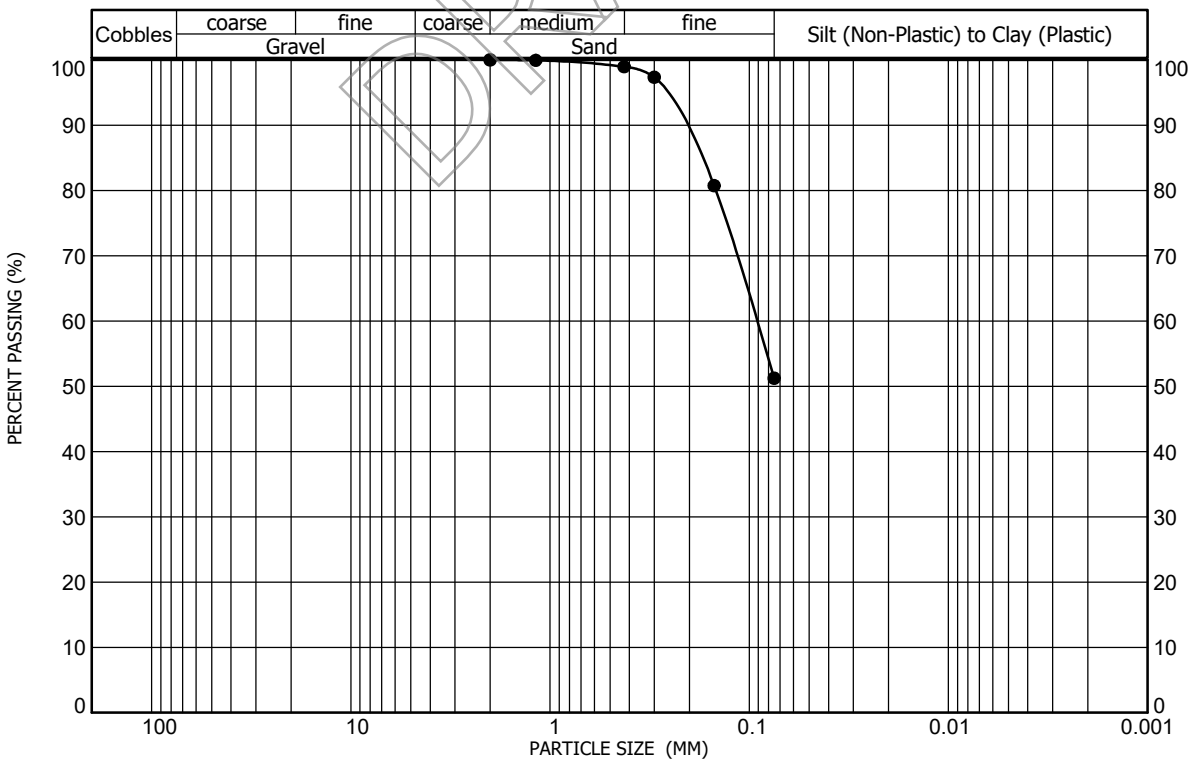
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 25 at a depth of 7 feet
Sample Description Sand, very clayey
Classification A-6(2), CLAYEY SAND(SC)

Gravel (%) 0 Liquid Limit 29
Sand (%) 57 Plasticity Index 13
Clay/Silt (%) 43



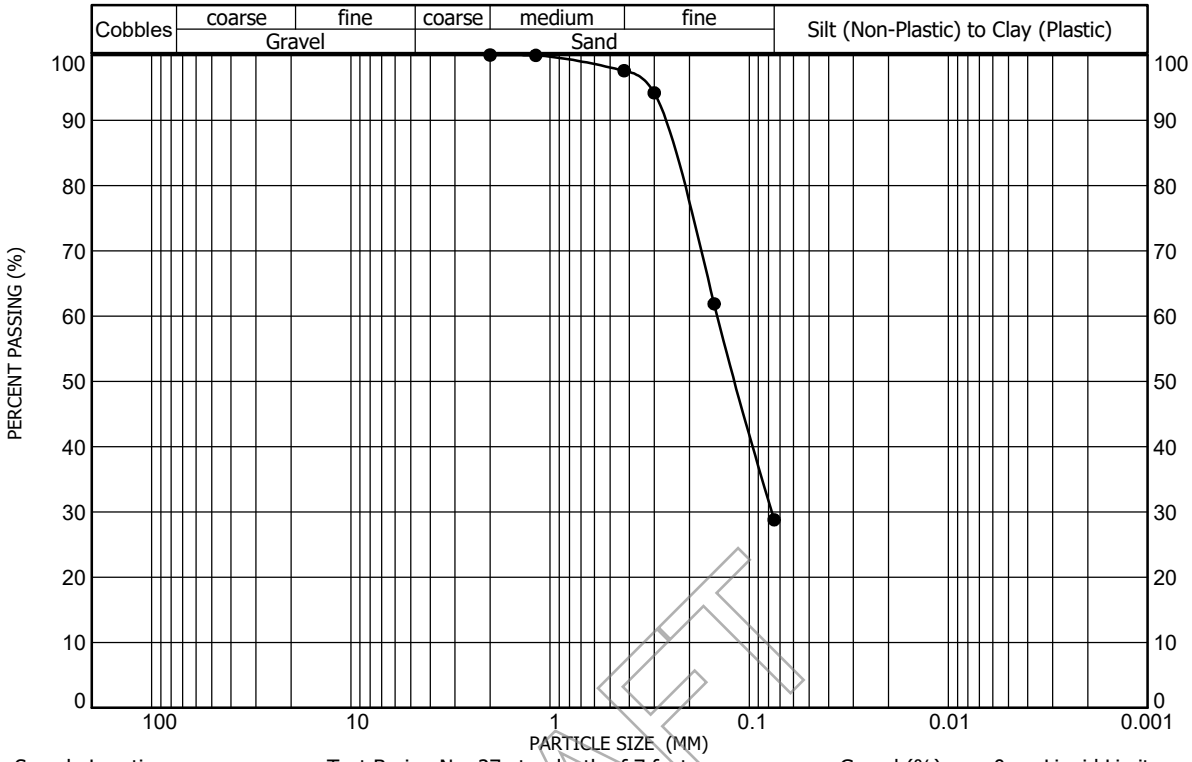
Sample Location Test Boring No. 26 at a depth of 4 feet
Sample Description Clay, very sandy
Classification A-6(3), SANDY LEAN CLAY(CL)

Gravel (%) 0 Liquid Limit 29
Sand (%) 49 Plasticity Index 11
Clay/Silt (%) 51

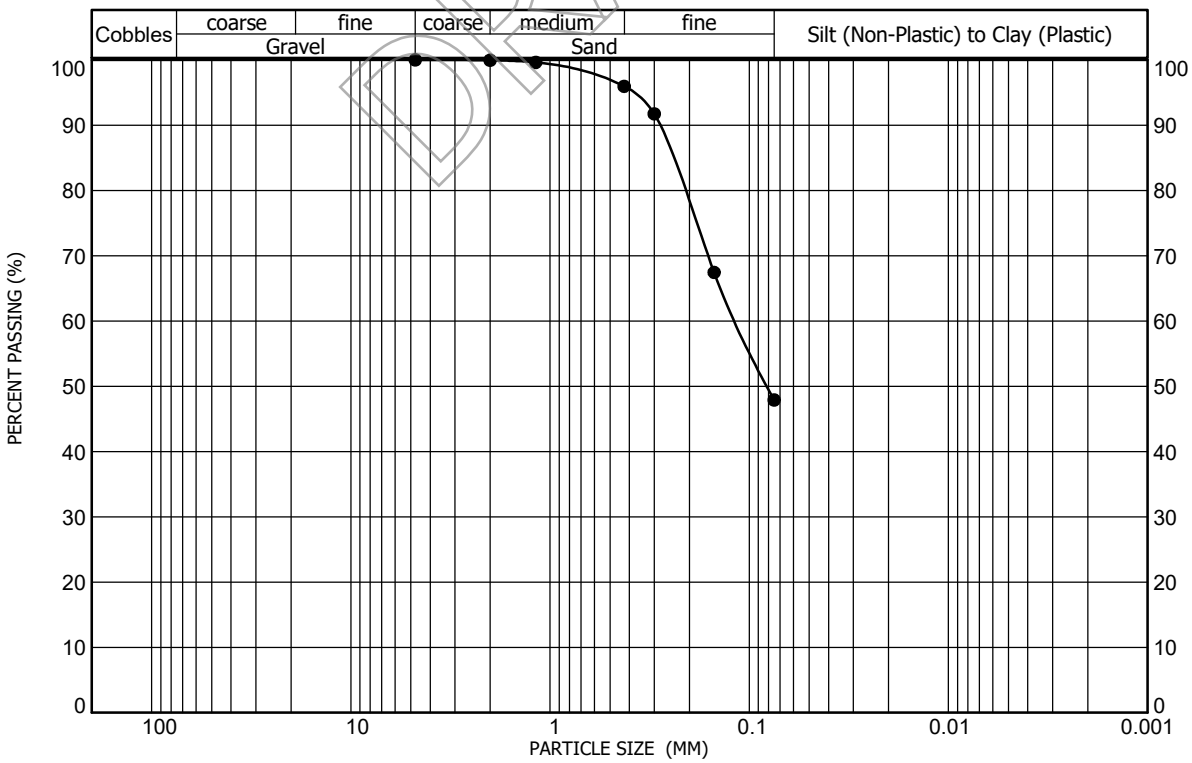
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-94

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



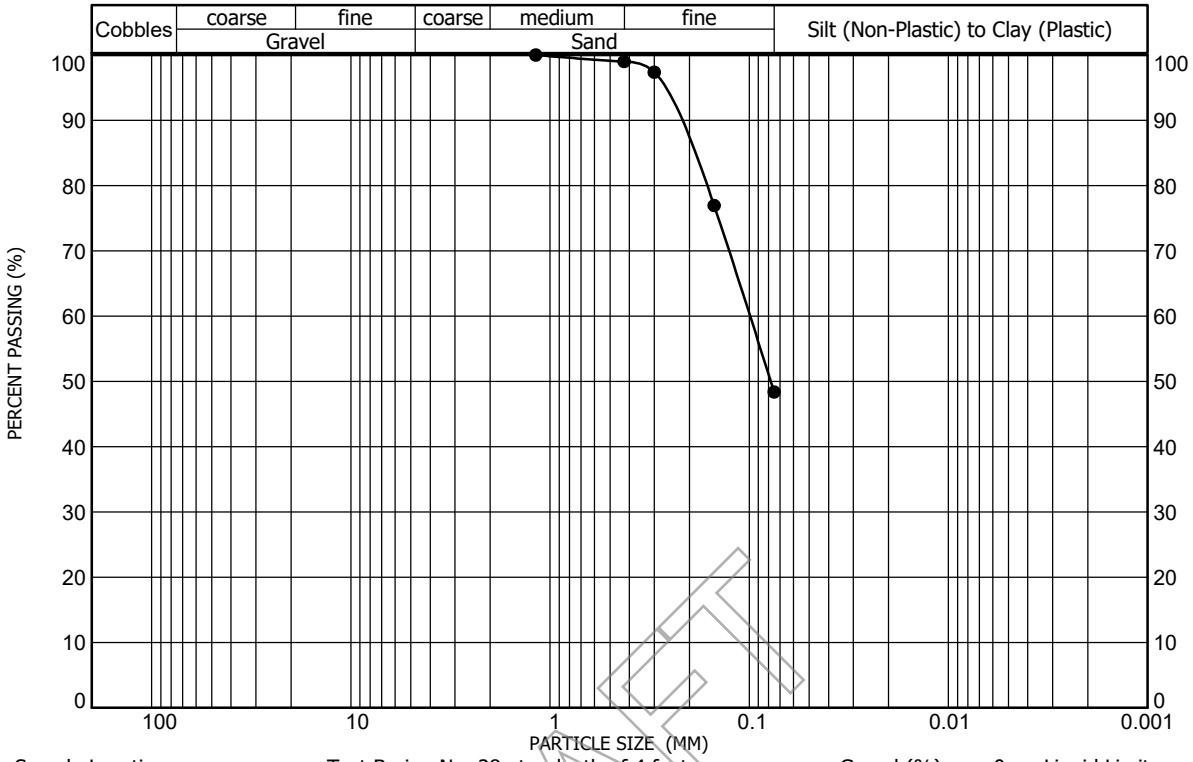
Sample Location: Test Boring No. 27 at a depth of 7 feet — Gravel (%): 0 — Liquid Limit: NV
Sample Description: Sand, silty — Sand (%): 71 — Plasticity Index: NP
Classification: A-2-4(0), SILTY SAND(SM) — Clay/Silt (%): 29



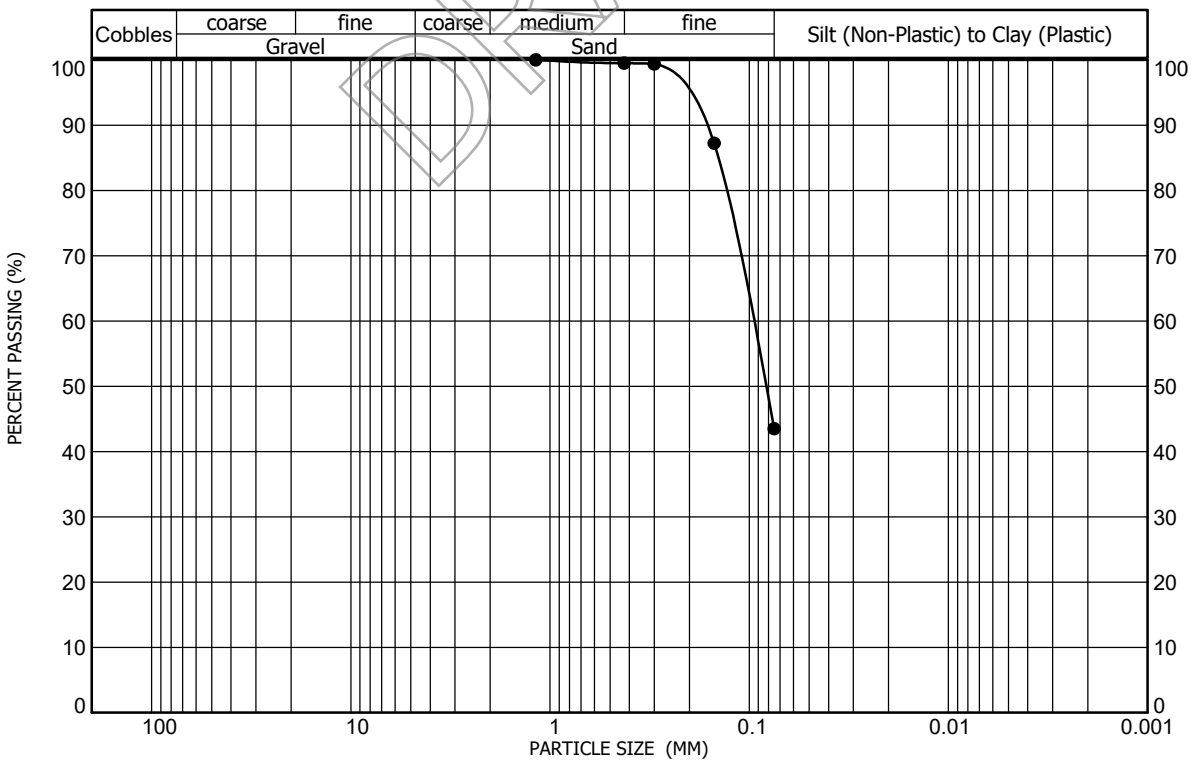
Sample Location: Test Boring No. 27 at a depth of 24 feet — Gravel (%): 0 — Liquid Limit: NV
Sample Description: Sand, very silty — Sand (%): 52 — Plasticity Index: NP
Classification: A-4(0), SILTY SAND(SM) — Clay/Silt (%): 48

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-95
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



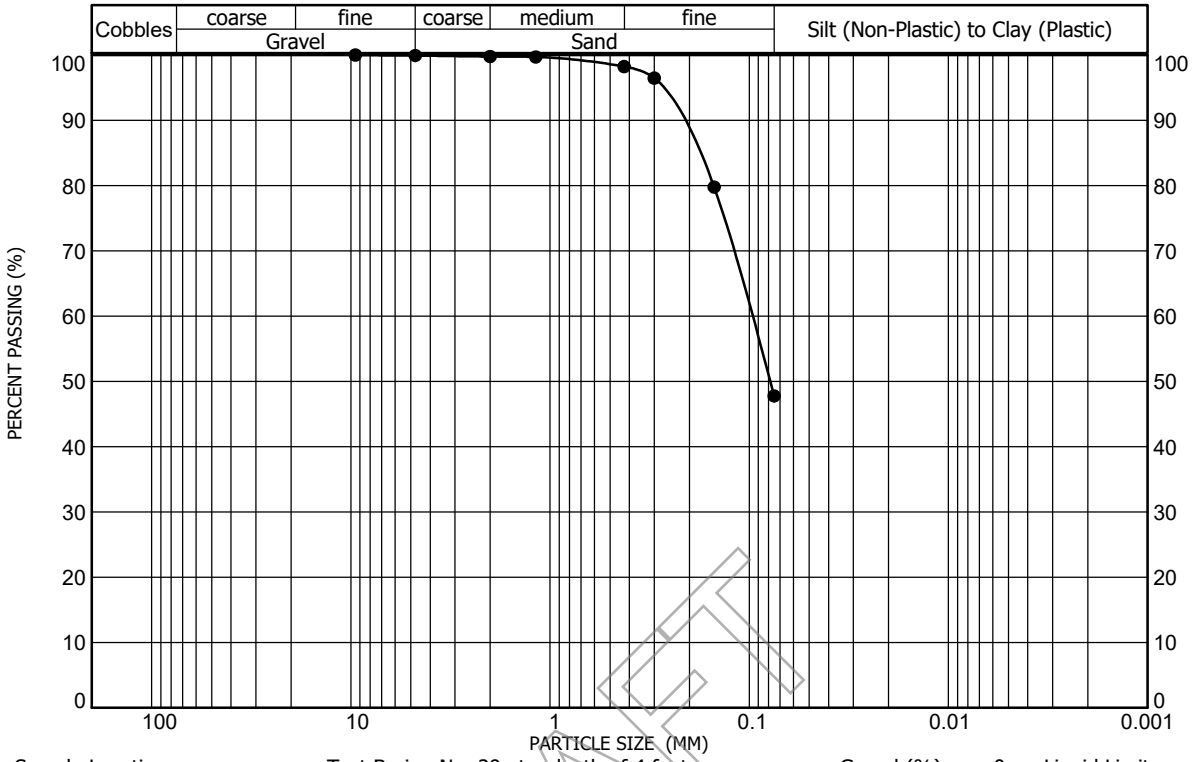
Sample Location: Test Boring No. 28 at a depth of 4 feet | Gravel (%): 0 | Liquid Limit: 32
Sample Description: Sand, very clayey | Sand (%): 52 | Plasticity Index: 20
Classification: A-6(5), CLAYEY SAND(SC) | Clay/Silt (%): 48



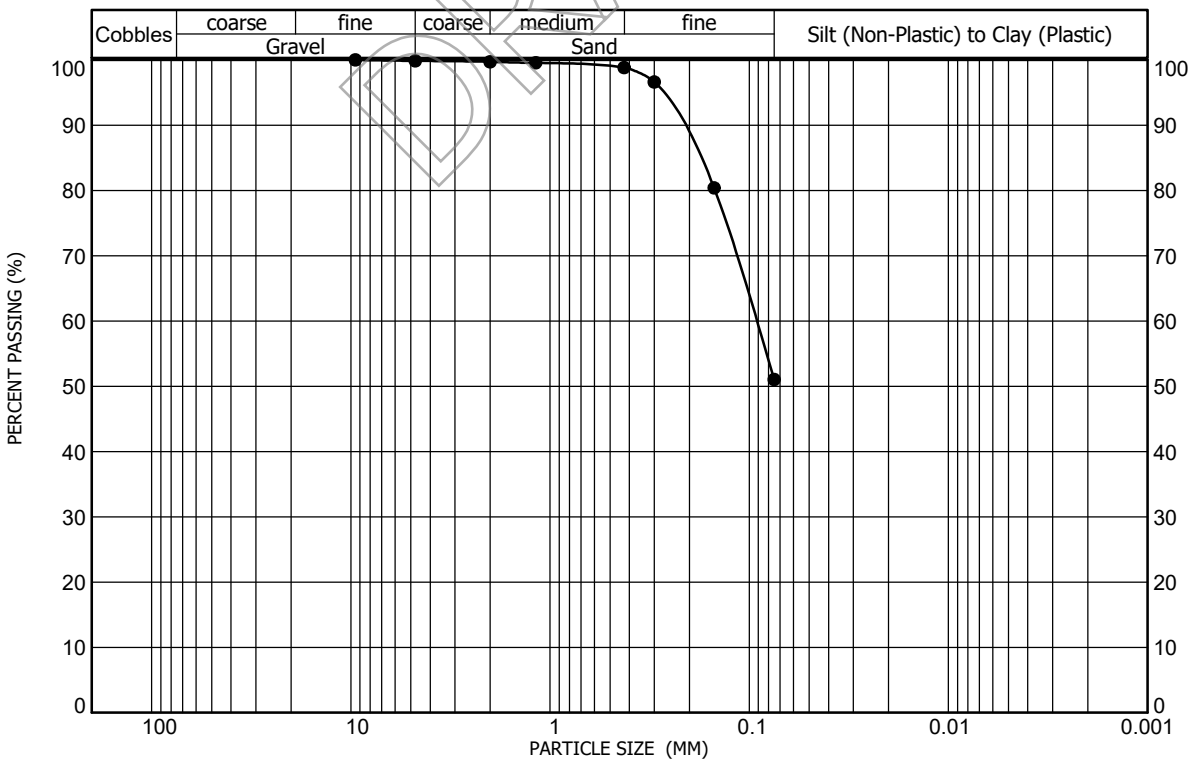
Sample Location: Test Boring No. 28 at a depth of 14 feet | Gravel (%): 0 | Liquid Limit: 28
Sample Description: Sand, very clayey | Sand (%): 57 | Plasticity Index: 15
Classification: A-6(3), CLAYEY SAND(SC) | Clay/Silt (%): 43

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-96
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 29 at a depth of 4 feet — Gravel (%) 0 — Liquid Limit 28
Sample Description Sand, very clayey — Sand (%) 52 — Plasticity Index 9
Classification A-4(1), CLAYEY SAND(SC) — Clay/Silt (%) 48

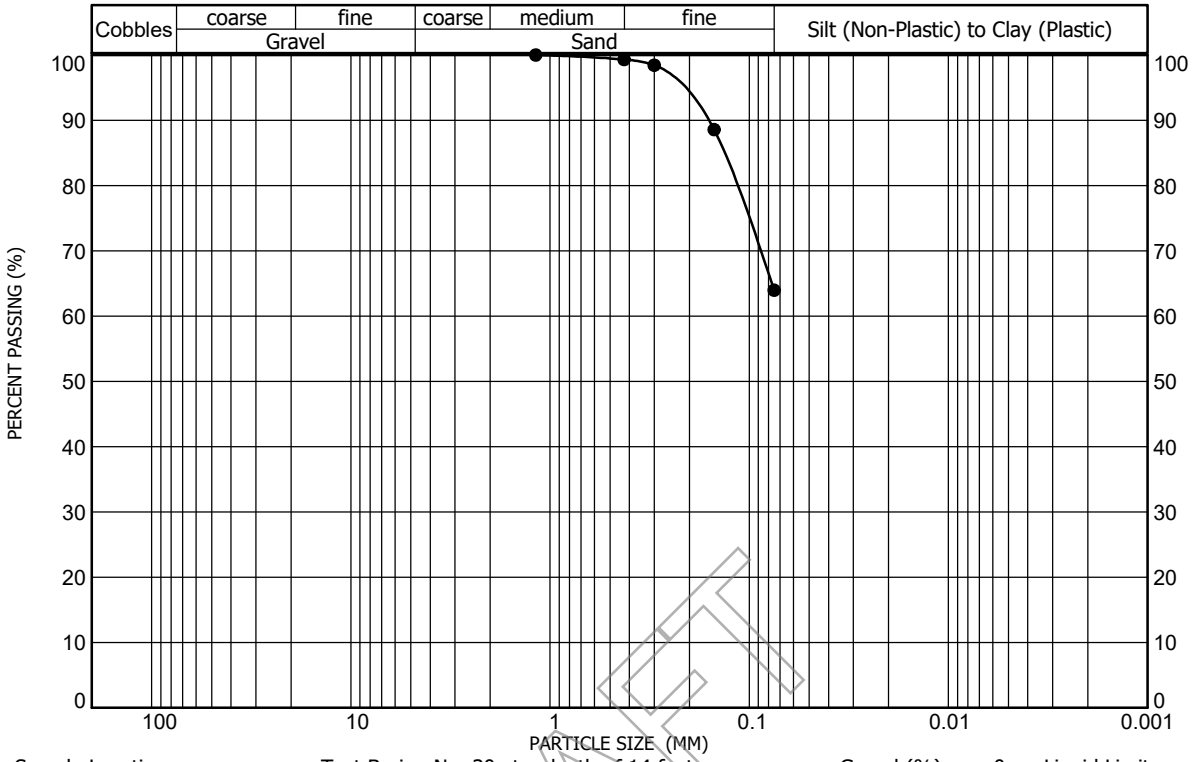


Sample Location Test Boring No. 30 at a depth of 4 feet — Gravel (%) 0 — Liquid Limit 27
Sample Description Clay, very sandy — Sand (%) 49 — Plasticity Index 11
Classification A-6(3), SANDY LEAN CLAY(CL) — Clay/Silt (%) 51

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-97

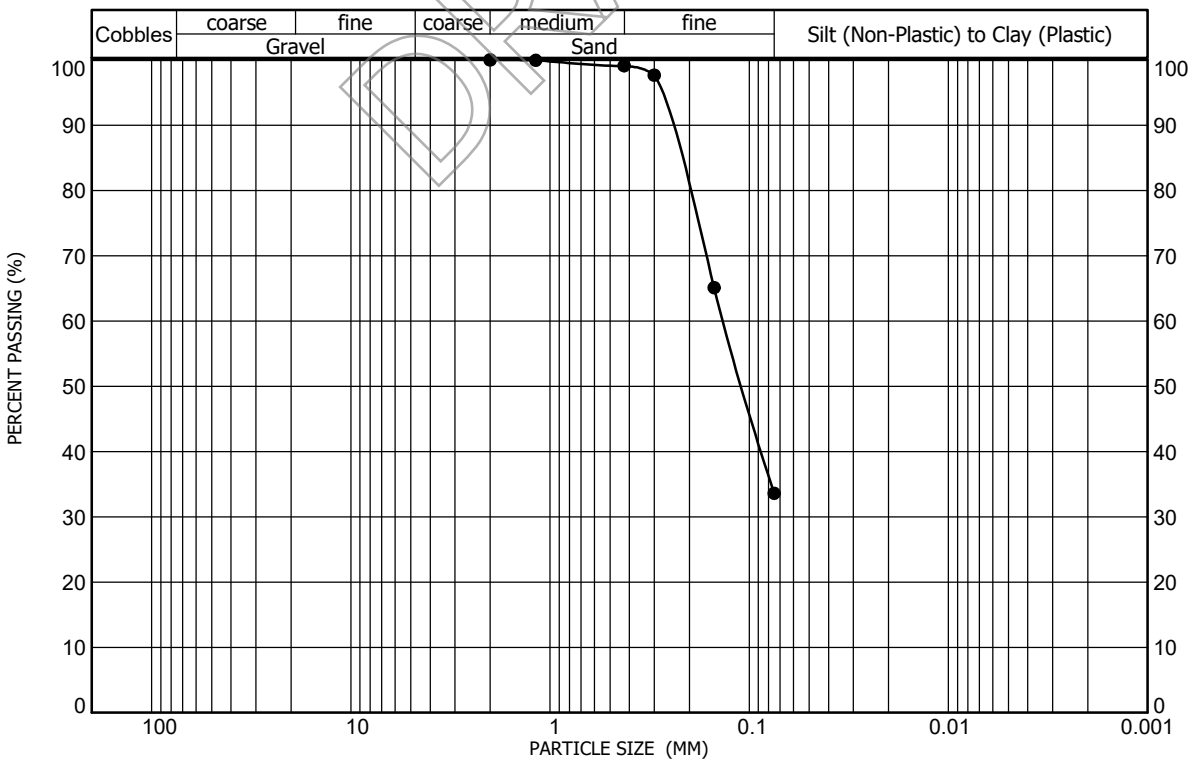
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 30 at a depth of 14 feet
Sample Description: Clay, very sandy
Classification: A-6(7), SANDY LEAN CLAY(CL)

Gravel (%): 0 | Sand (%): 36 | Clay/Silt (%): 64
Liquid Limit: 33 | Plasticity Index: 15



Sample Location: Test Boring No. 31 at a depth of 9 feet
Sample Description: Sand, very silty
Classification: A-2-4(0), SILTY SAND(SM)

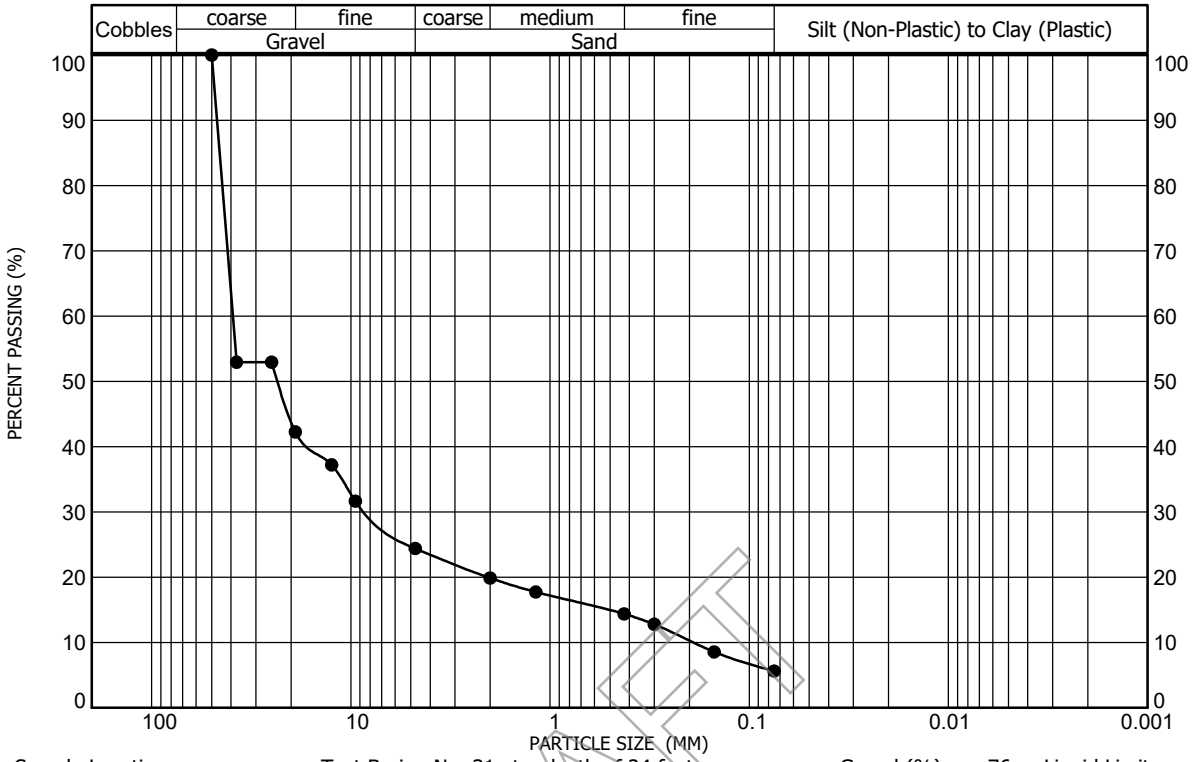
Gravel (%): 0 | Sand (%): 66 | Clay/Silt (%): 34
Liquid Limit: NV | Plasticity Index: NP

GRADATION AND ATTERBERG TEST RESULTS

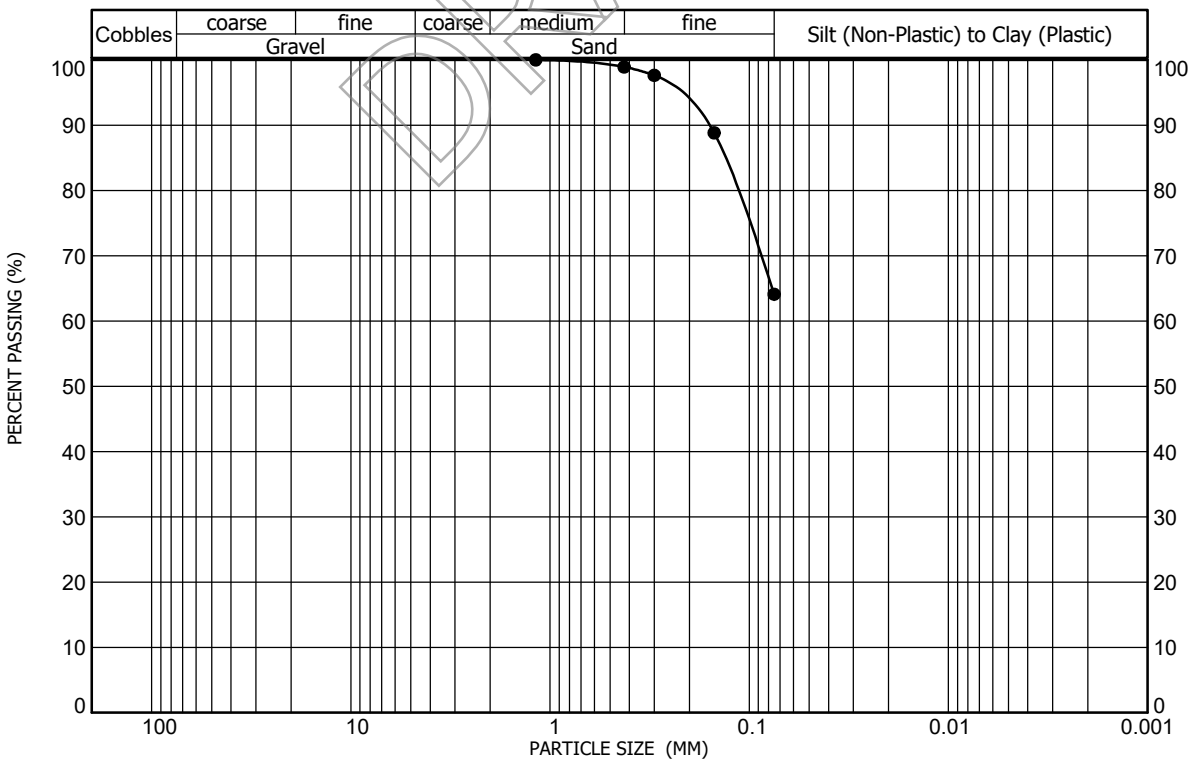
FIGURE A-98

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 31 at a depth of 24 feet — Gravel (%) 76 — Liquid Limit NV
Sample Description Gravel, sandy, slightly silty — Sand (%) 19 — Plasticity Index NP
Classification A-1-a(0), POORLY GRADED GRAVEL with SILT and SAND(GP-GM) — Clay/Silt (%) 6

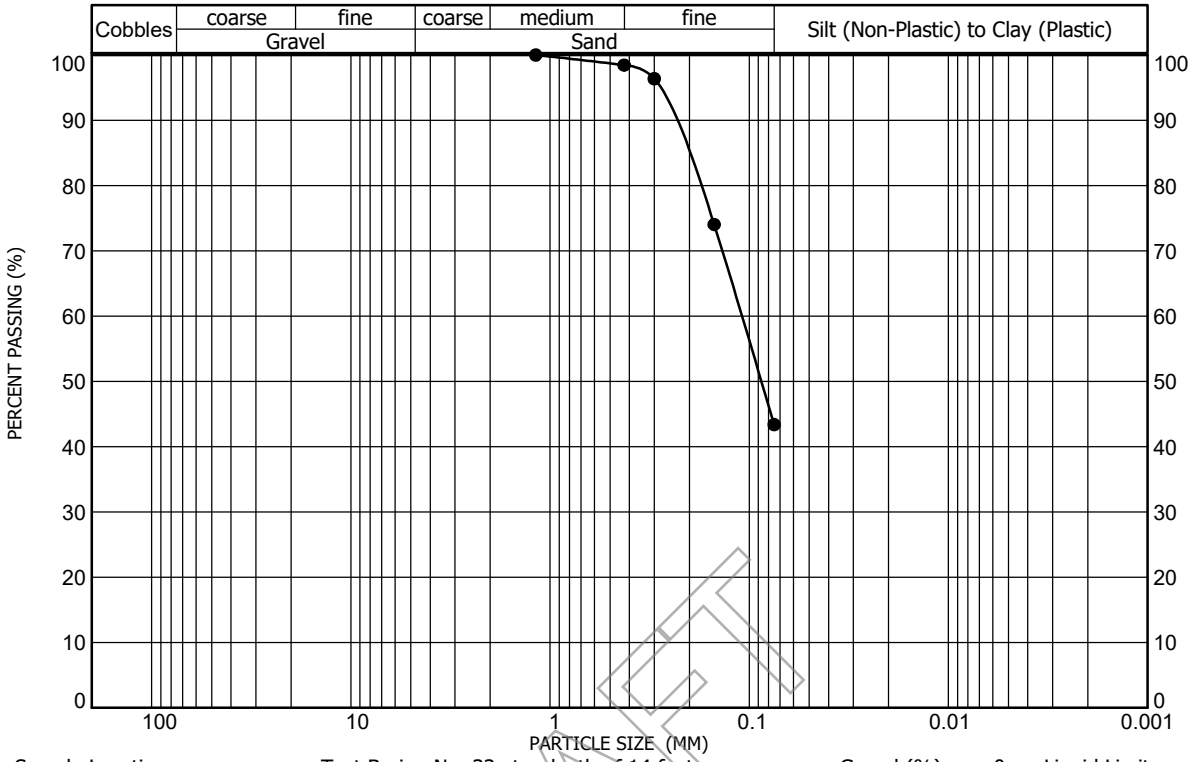


Sample Location Test Boring No. 32 at a depth of 9 feet — Gravel (%) 0 — Liquid Limit 29
Sample Description Clay, very sandy — Sand (%) 36 — Plasticity Index 13
Classification A-6(6), SANDY LEAN CLAY(CL) — Clay/Silt (%) 64

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-99

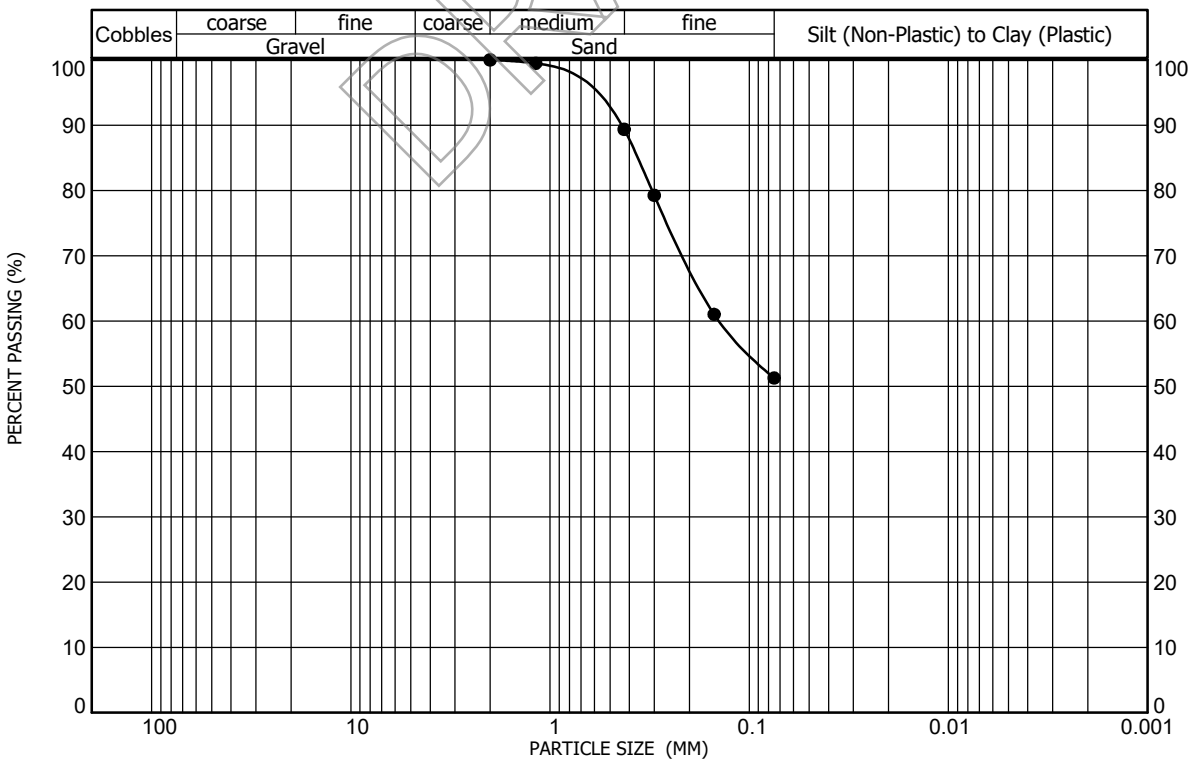
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 33 at a depth of 14 feet
Sample Description: Sand, very silty
Classification: A-4(0), SILTY SAND(SM)

Gravel (%): 0 Liquid Limit: NV
Sand (%): 57 Plasticity Index: NP
Clay/Silt (%): 43



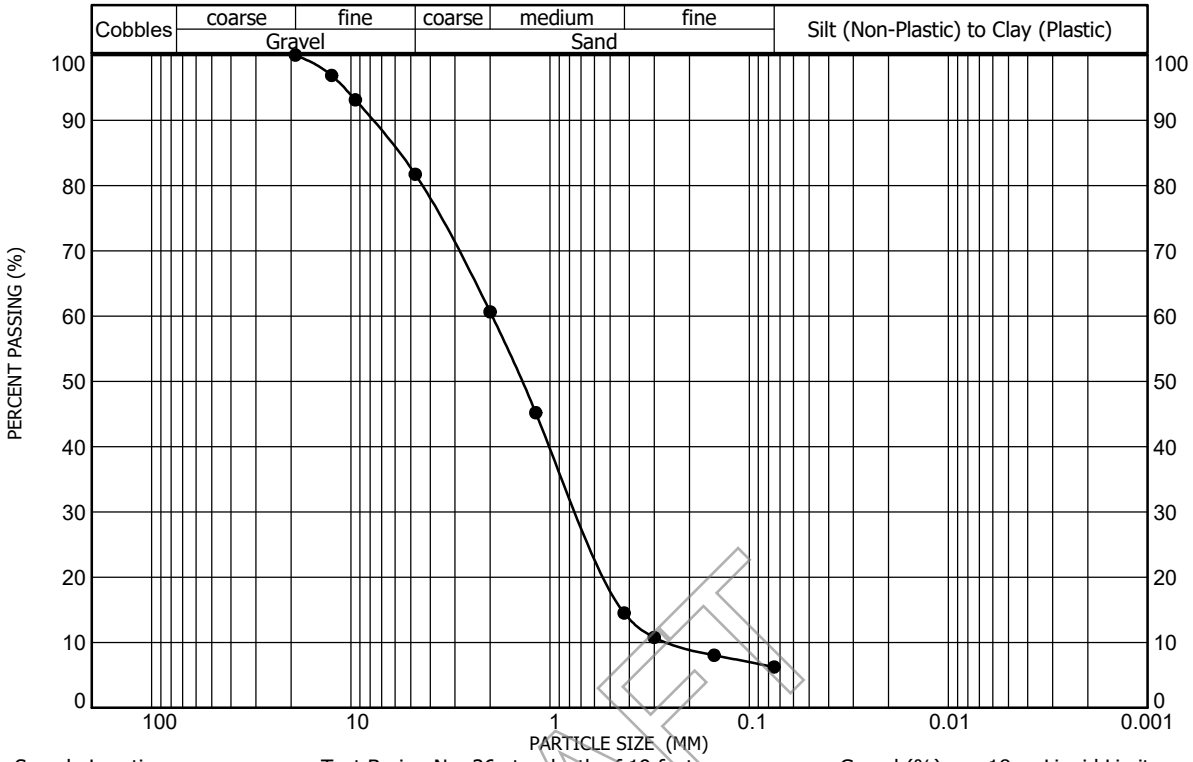
Sample Location: Test Boring No. 36 at a depth of 9 feet
Sample Description: Clay, very silty, very sandy
Classification: A-4(1), SANDY SILTY CLAY(CL-ML)

Gravel (%): 0 Liquid Limit: 24
Sand (%): 49 Plasticity Index: 7
Clay/Silt (%): 51

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-100

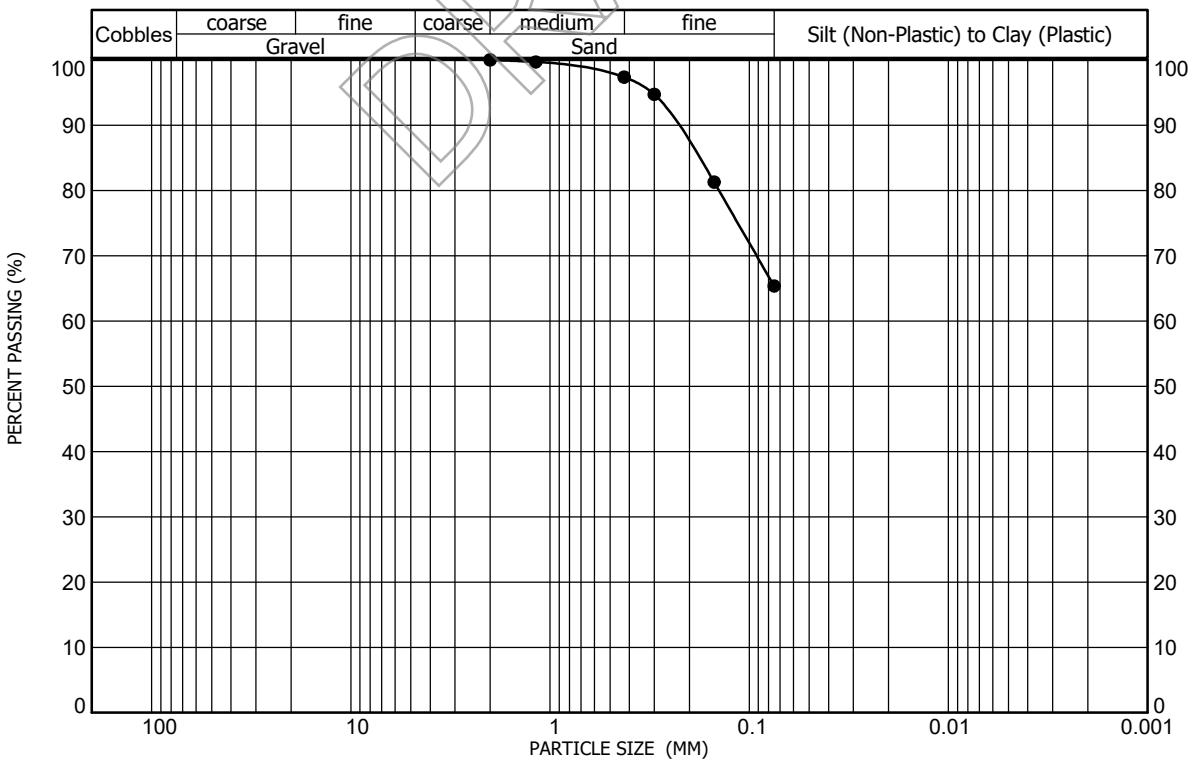
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 36 at a depth of 19 feet
Sample Description Sand, gravelly, slightly silty
Classification A-1-b(0), WELL-GRADED SAND with SILT and GRAVEL(SW-SM)

Gravel (%) 18 Liquid Limit NV
Sand (%) 75 Plasticity Index NP
Clay/Silt (%) 6



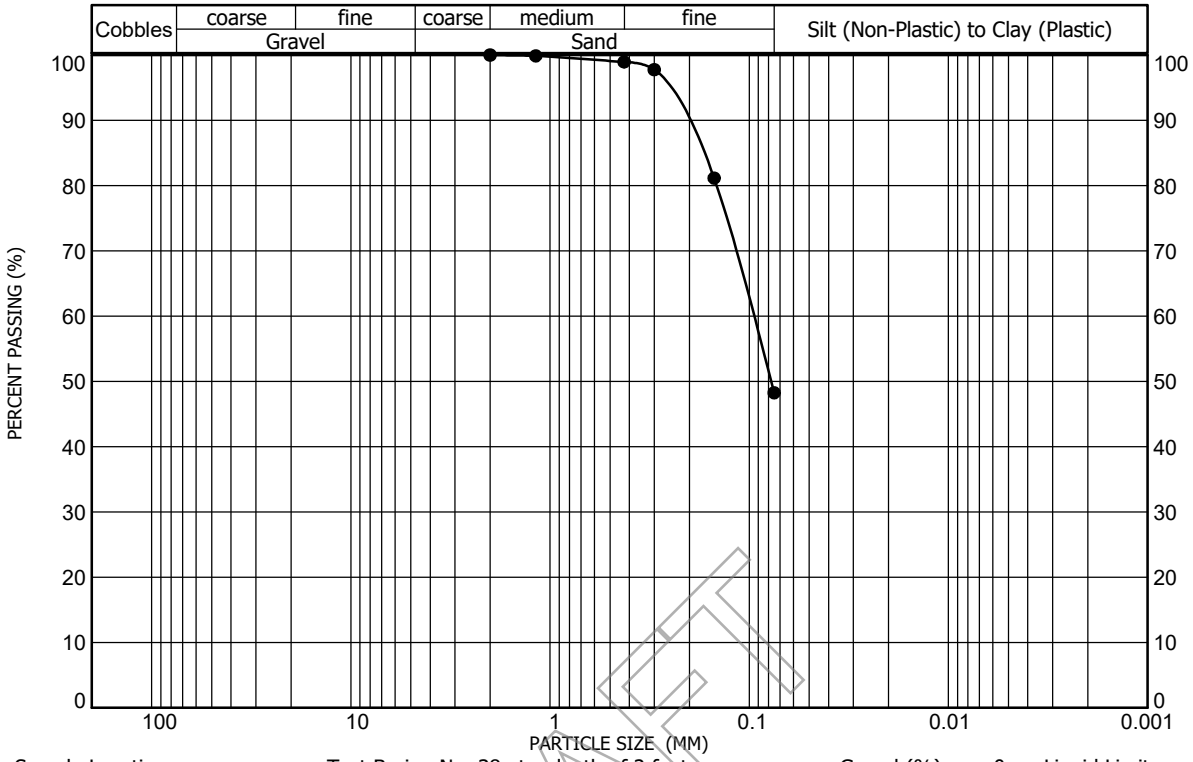
Sample Location Test Boring No. 37 at a depth of 4 feet
Sample Description Clay, very sandy
Classification A-6(8), SANDY LEAN CLAY(CL)

Gravel (%) 0 Liquid Limit 37
Sand (%) 35 Plasticity Index 15
Clay/Silt (%) 65

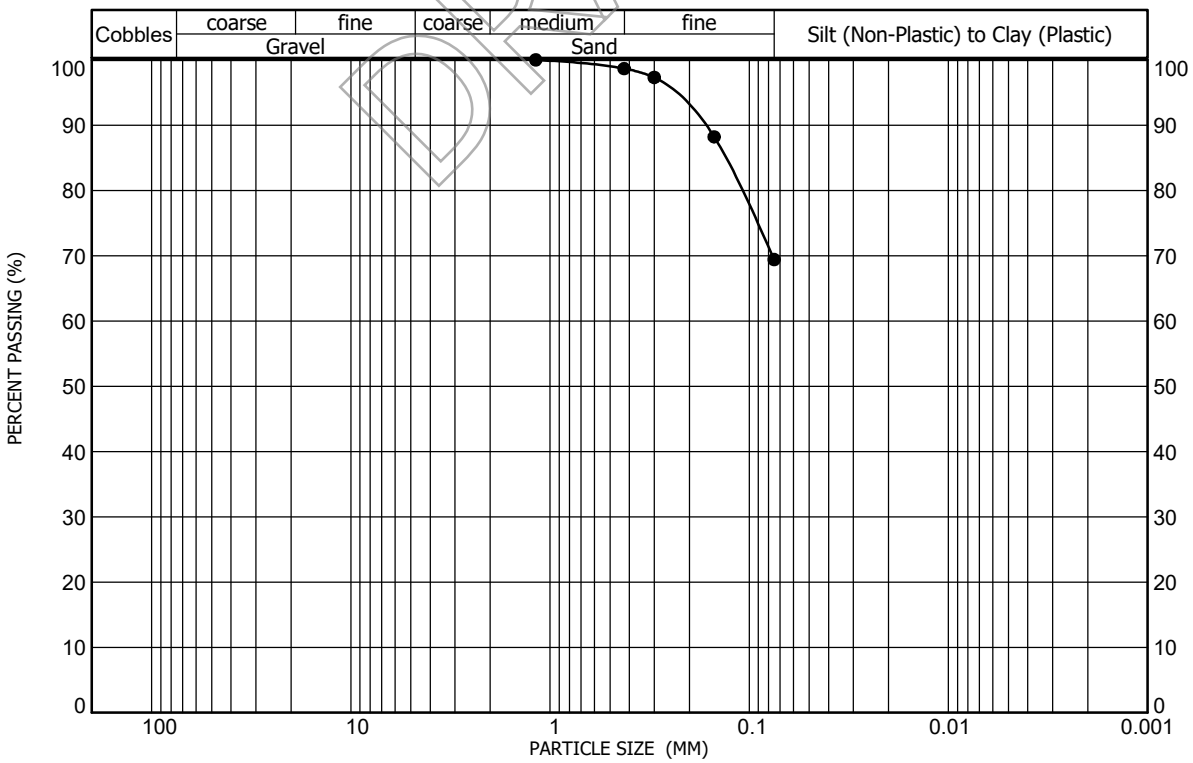
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-101

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 38 at a depth of 2 feet — Gravel (%) 0 — Liquid Limit 27
Sample Description Sand, very clayey — Sand (%) 52 — Plasticity Index 9
Classification A-4(1), CLAYEY SAND(SC) — Clay/Silt (%) 48

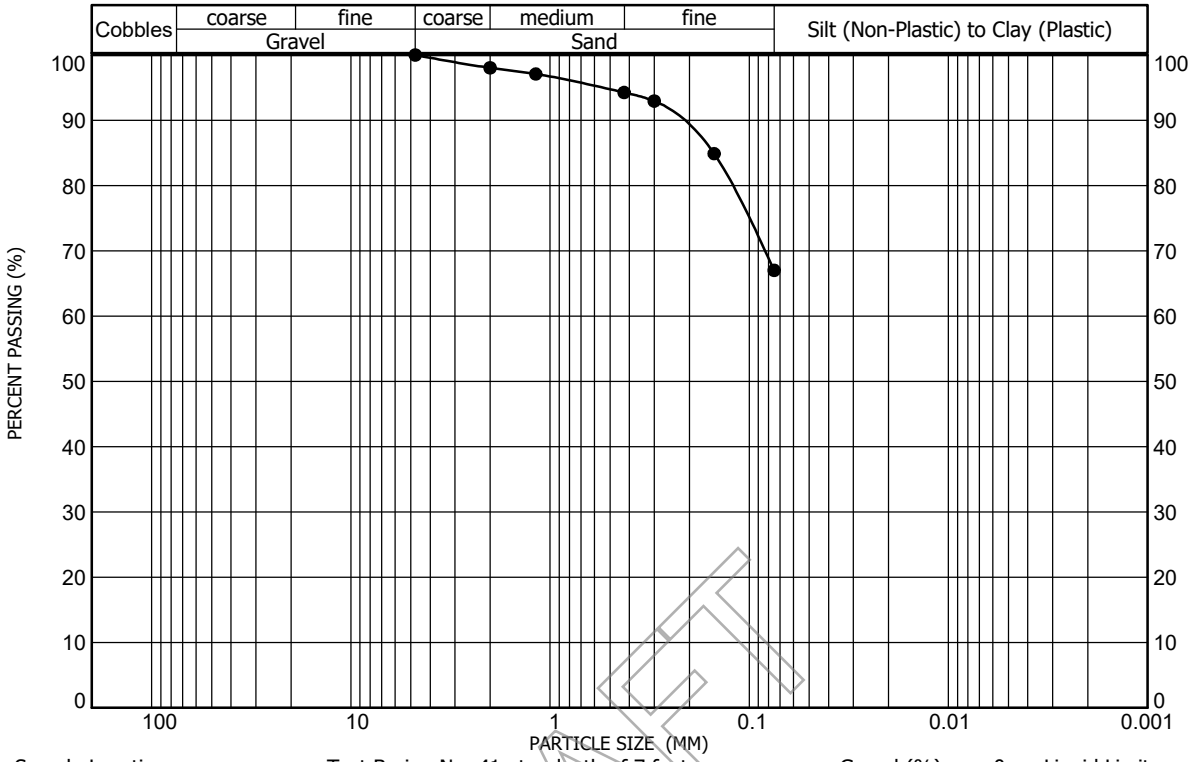


Sample Location Test Boring No. 38 at a depth of 14 feet — Gravel (%) 0 — Liquid Limit 27
Sample Description Clay, very sandy — Sand (%) 31 — Plasticity Index 10
Classification A-4(5), SANDY LEAN CLAY(CL) — Clay/Silt (%) 69

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-102

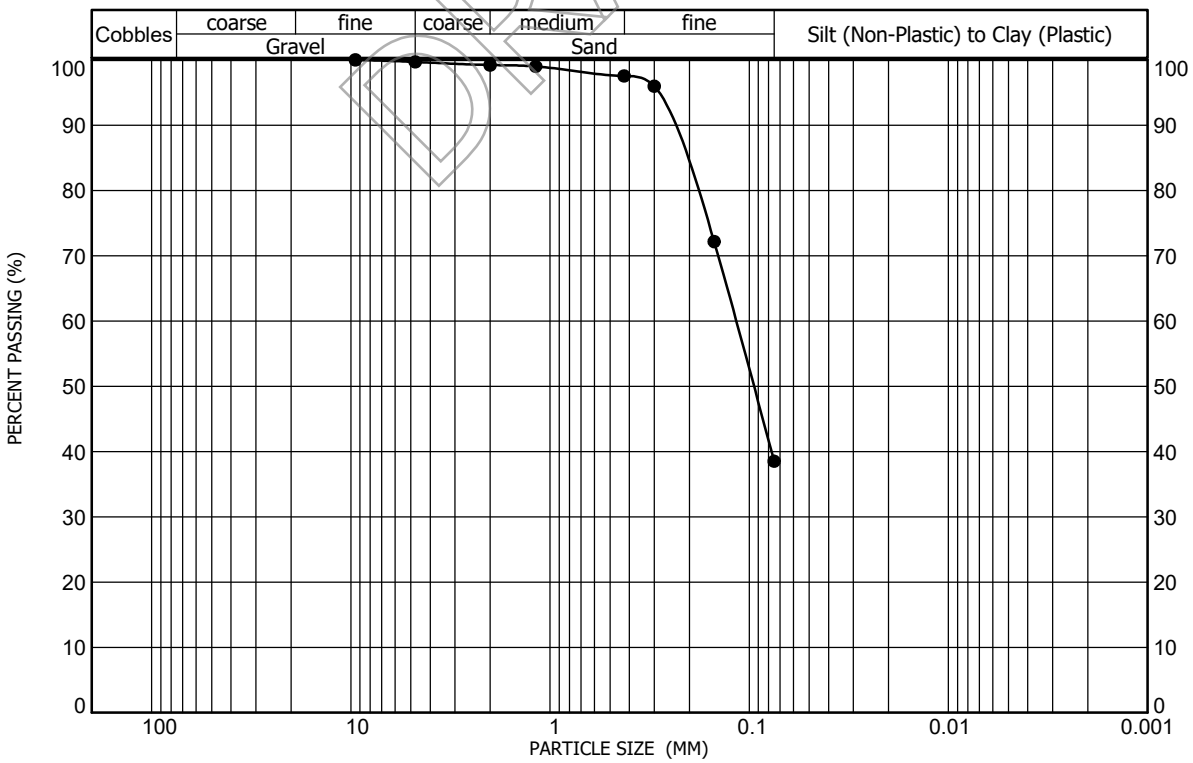
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 41 at a depth of 7 feet
Sample Description: Clay, very sandy
Classification: A-6(7), SANDY LEAN CLAY(CL)

Gravel (%): 0 | Sand (%): 33 | Clay/Silt (%): 67
Liquid Limit: 31 | Plasticity Index: 13



Sample Location: Test Boring No. 43 at a depth of 9 feet
Sample Description: Sand, very clayey
Classification: A-6(2), CLAYEY SAND(SC)

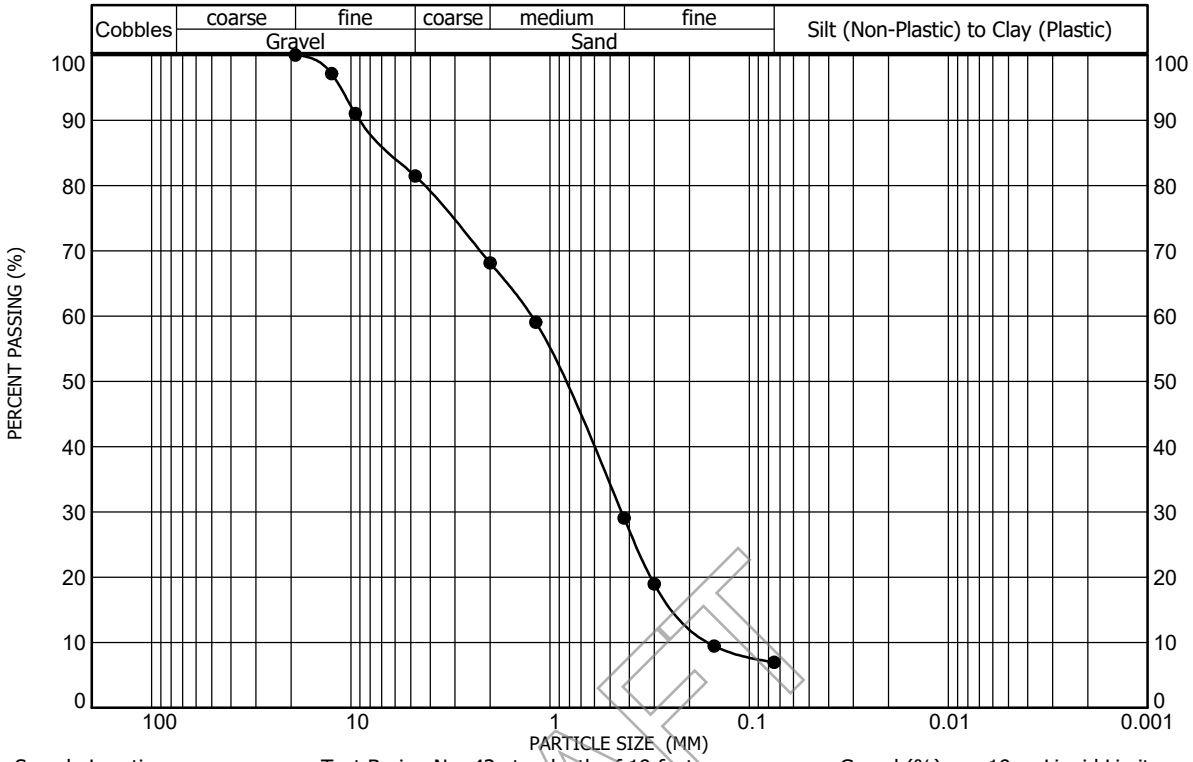
Gravel (%): 0 | Sand (%): 61 | Clay/Silt (%): 39
Liquid Limit: 32 | Plasticity Index: 15

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-103

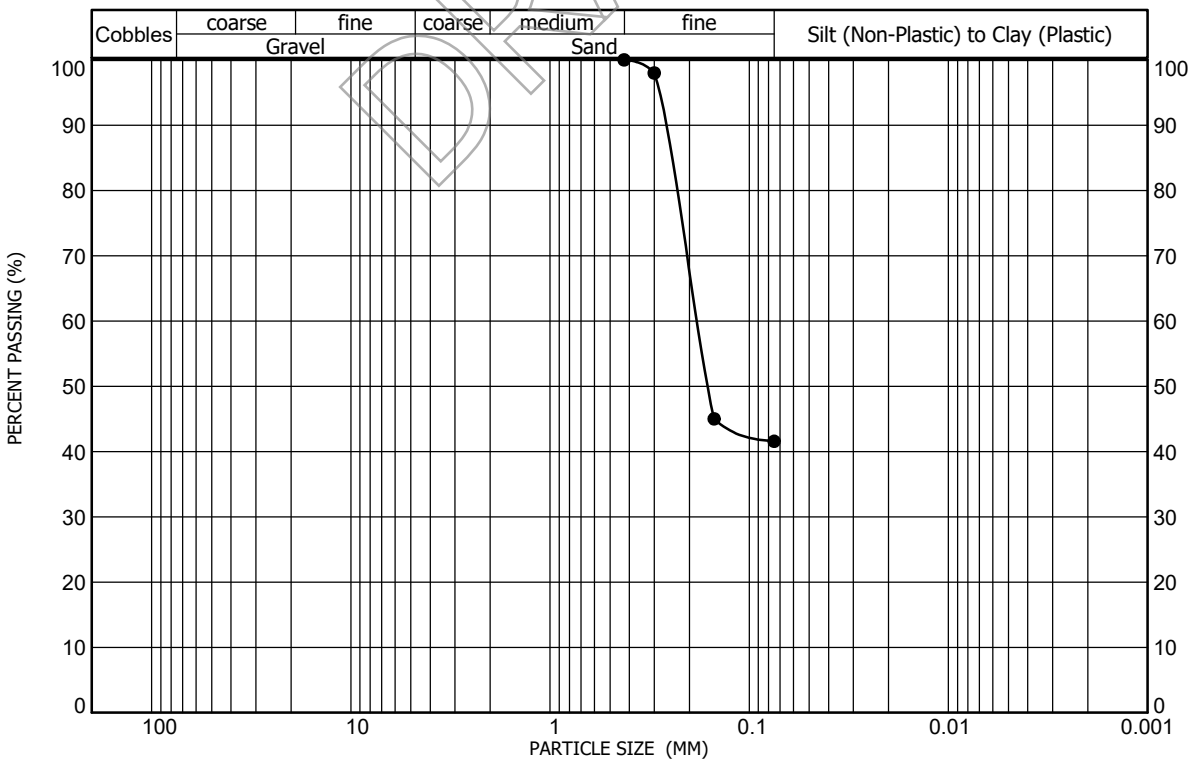
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 43 at a depth of 19 feet
Sample Description Sand, gravelly, slightly silty
Classification A-1-b(0), POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

Gravel (%) 19 Liquid Limit NV
Sand (%) 75 Plasticity Index NP
Clay/Silt (%) 7



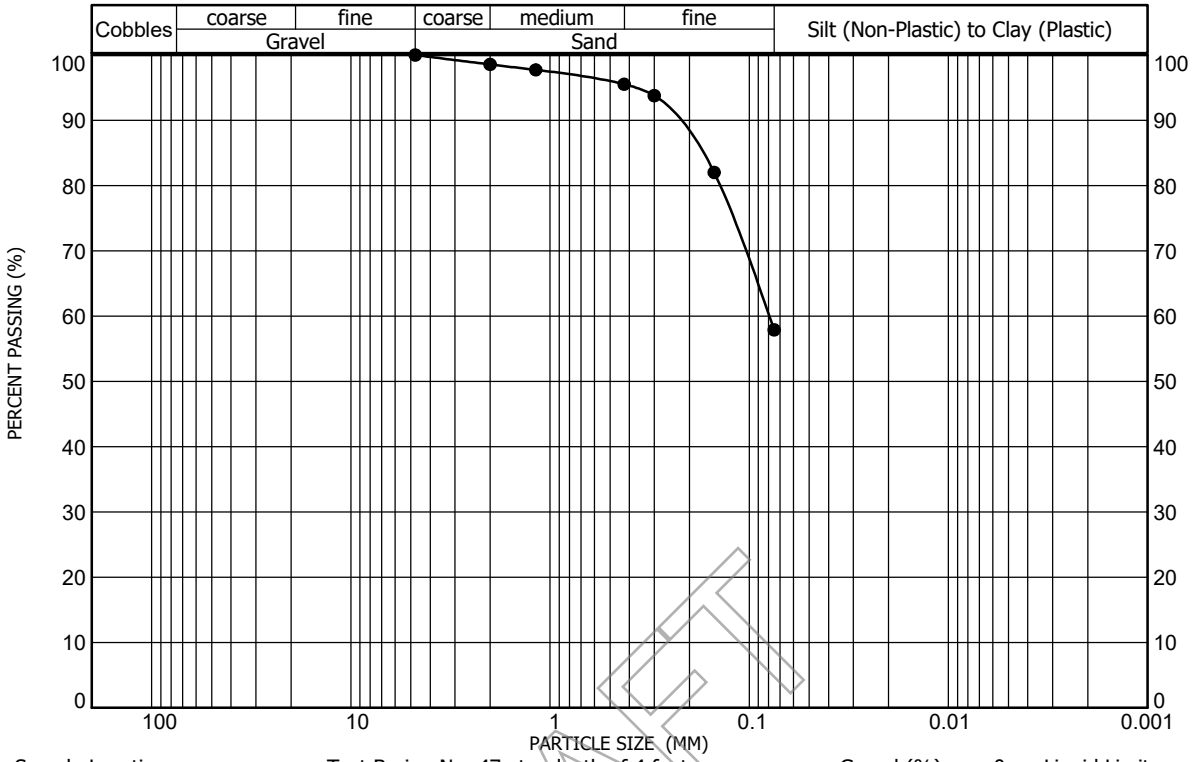
Sample Location Test Boring No. 45 at a depth of 9 feet
Sample Description Sand, very silty, very clayey
Classification A-4(0), SILTY, CLAYEY SAND(SC-SM)

Gravel (%) 0 Liquid Limit 23
Sand (%) 58 Plasticity Index 5
Clay/Silt (%) 42

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-104

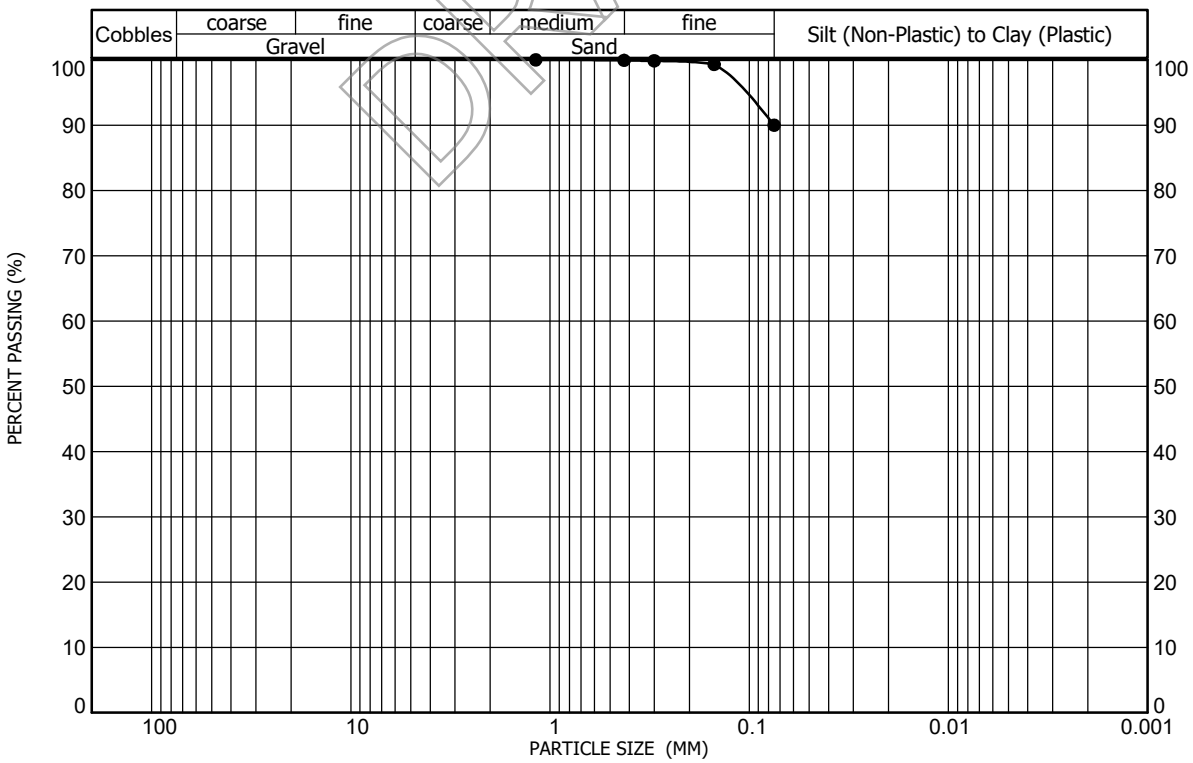
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 47 at a depth of 4 feet
Sample Description: Clay, very sandy
Classification: A-6(7), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 42
Clay/Silt (%): 58
Liquid Limit: 35
Plasticity Index: 18



Sample Location: Test Boring No. 48 at a depth of 14 feet
Sample Description: Claystone, slightly sandy
Classification: A-6(20), LEAN CLAY(CL)

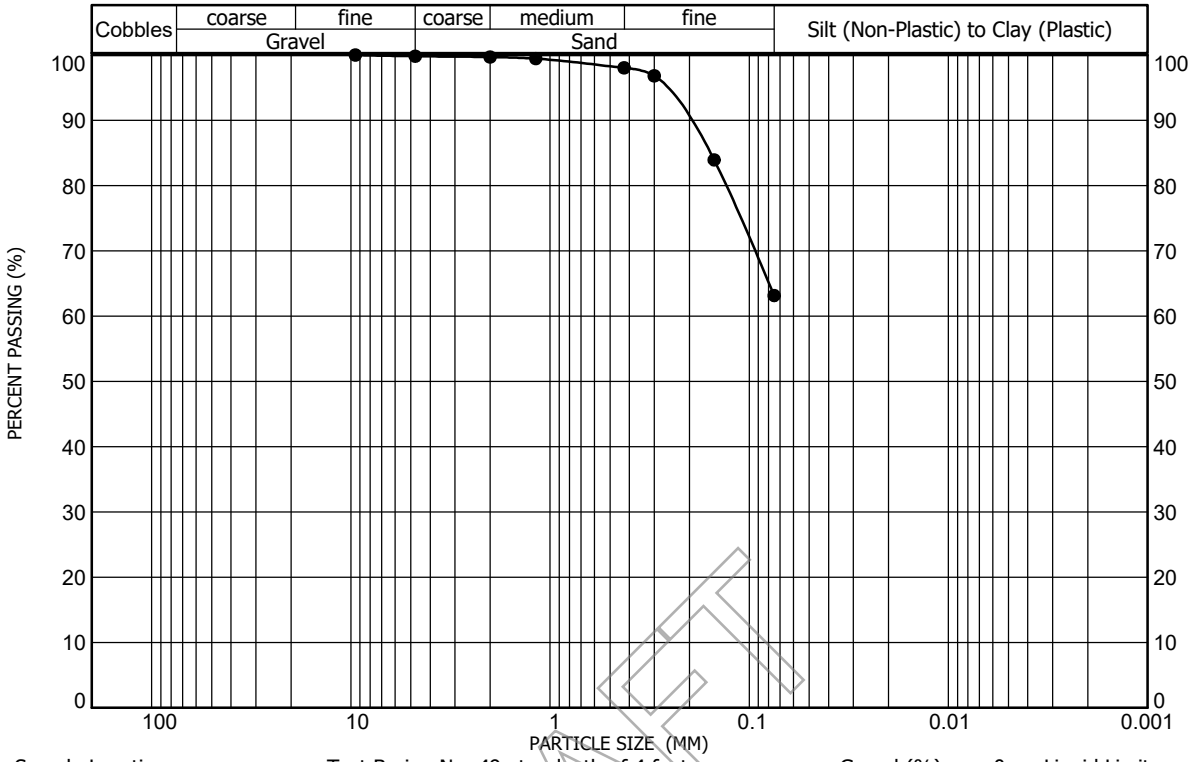
Gravel (%): 0
Sand (%): 10
Clay/Silt (%): 90
Liquid Limit: 40
Plasticity Index: 22

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-105

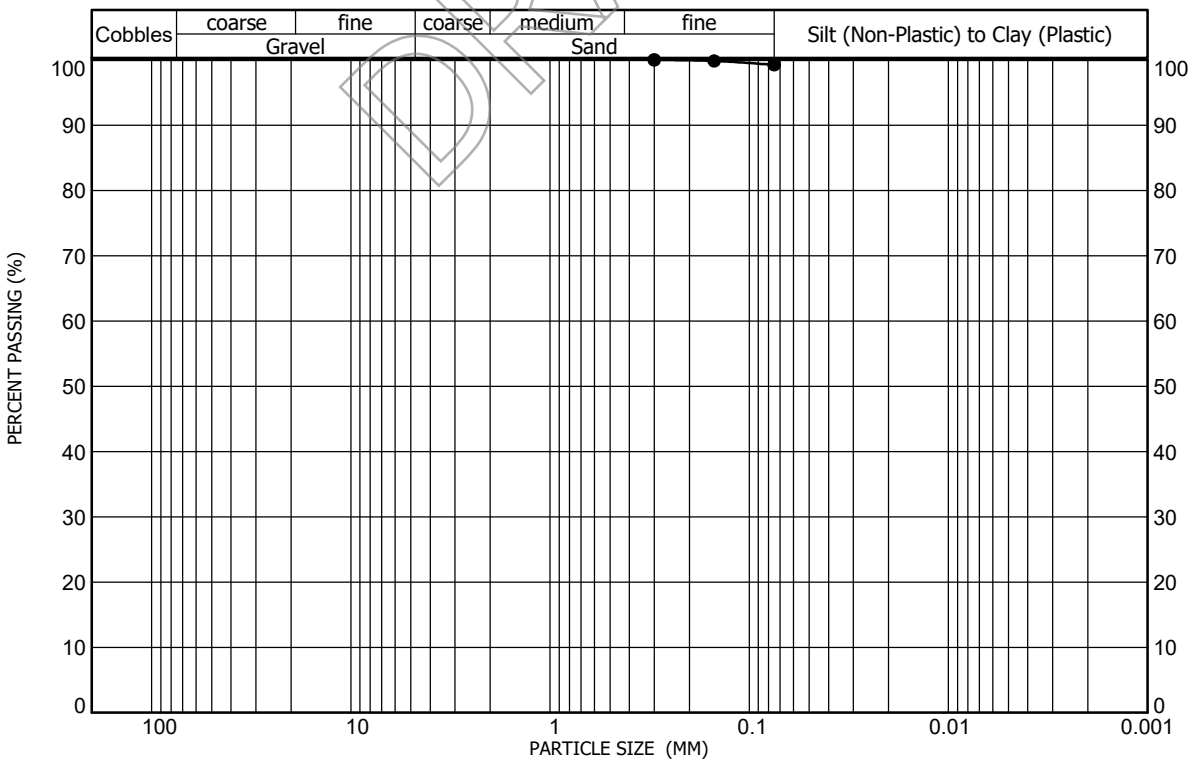
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 49 at a depth of 4 feet
Sample Description: Clay, very sandy
Classification: A-6(6), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 37
Clay/Silt (%): 63
Liquid Limit: 31
Plasticity Index: 13



Sample Location: Test Boring No. 50 at a depth of 19 feet
Sample Description: Claystone, trace sand
Classification: A-7-6(48), FAT CLAY(CH)

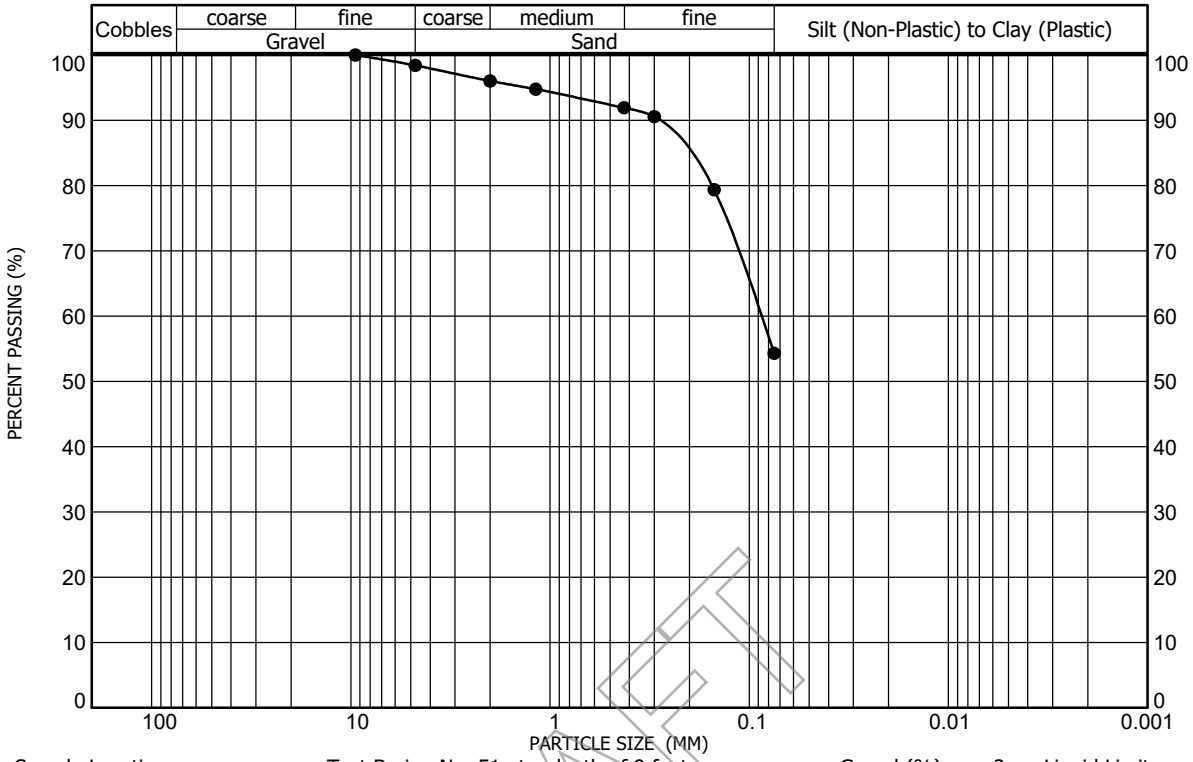
Gravel (%): 0
Sand (%): 1
Clay/Silt (%): 99
Liquid Limit: 67
Plasticity Index: 42

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-106

PROJECT NO. 213216

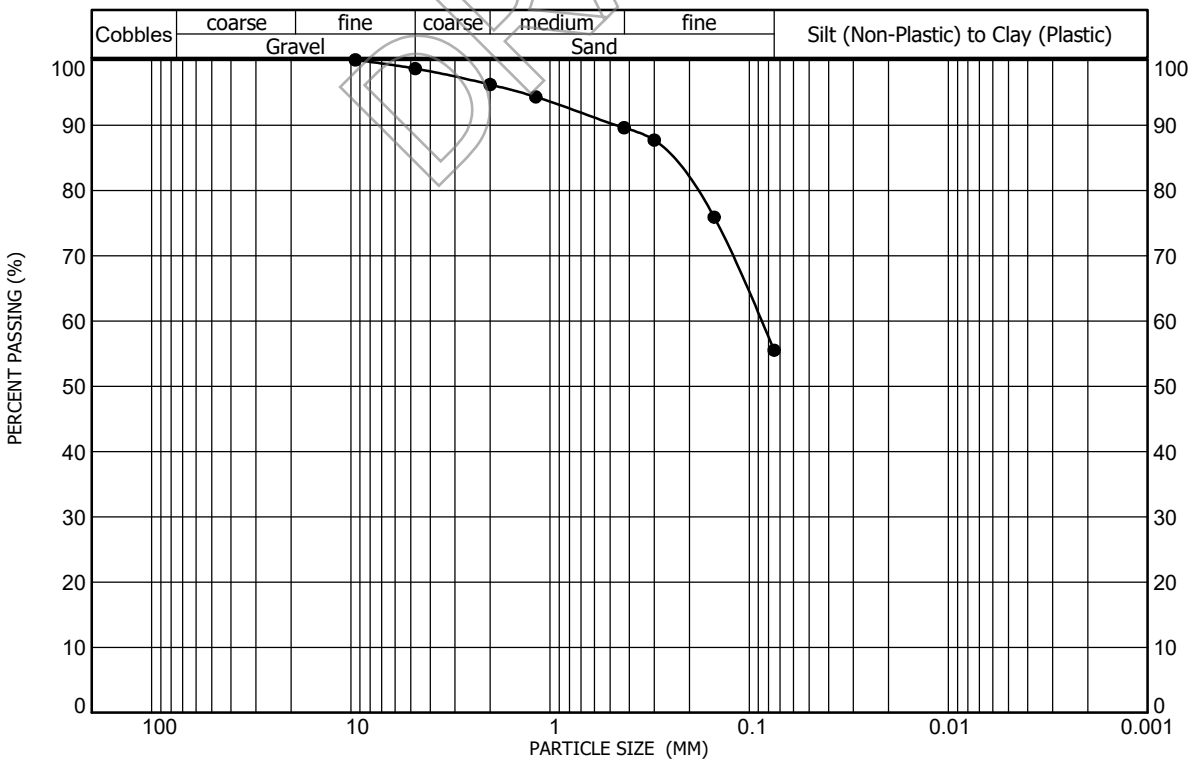
AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 51 at a depth of 9 feet
Sample Description: Clay, very sandy, trace gravel (lens)
Classification: A-6(5), SANDY LEAN CLAY(CL)

Gravel (%): 2
Sand (%): 44
Clay/Silt (%): 54

Liquid Limit: 30
Plasticity Index: 16



Sample Location: Test Boring No. 52 at a depth of 7 feet
Sample Description: Clay, very sandy, trace gravel
Classification: A-6(6), SANDY LEAN CLAY(CL)

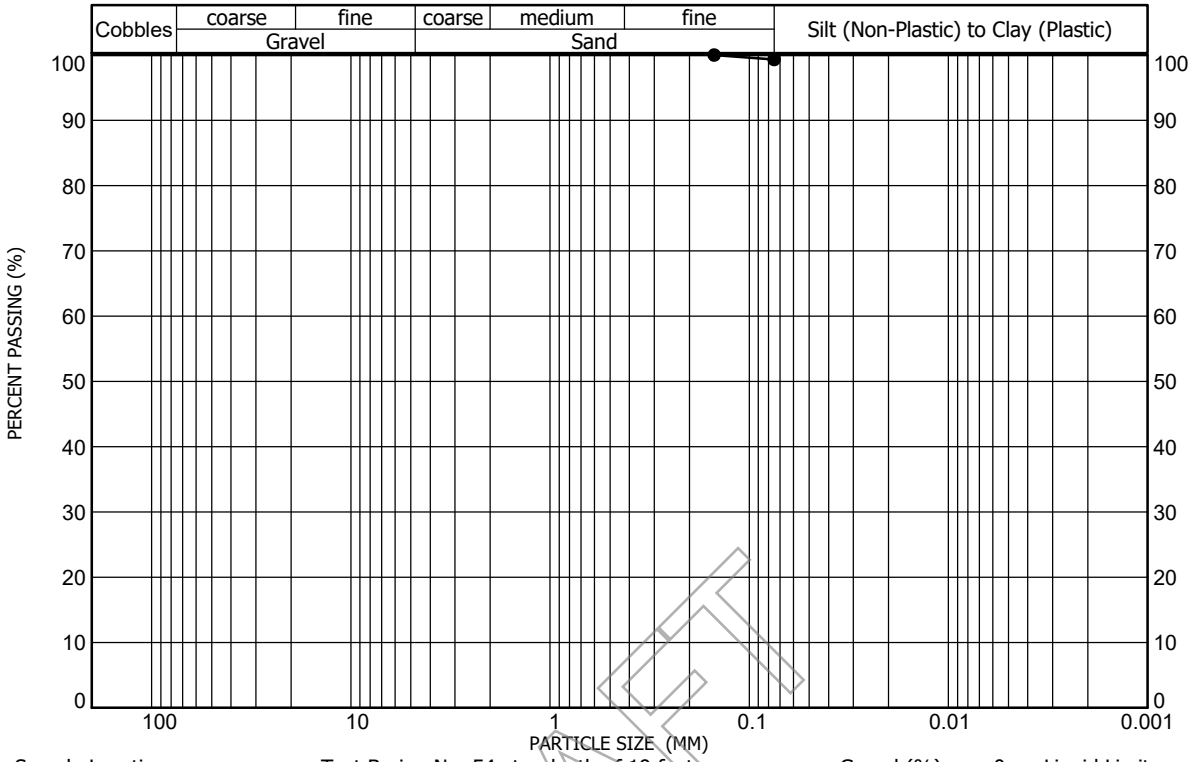
Gravel (%): 1
Sand (%): 43
Clay/Silt (%): 56

Liquid Limit: 31
Plasticity Index: 16

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-107

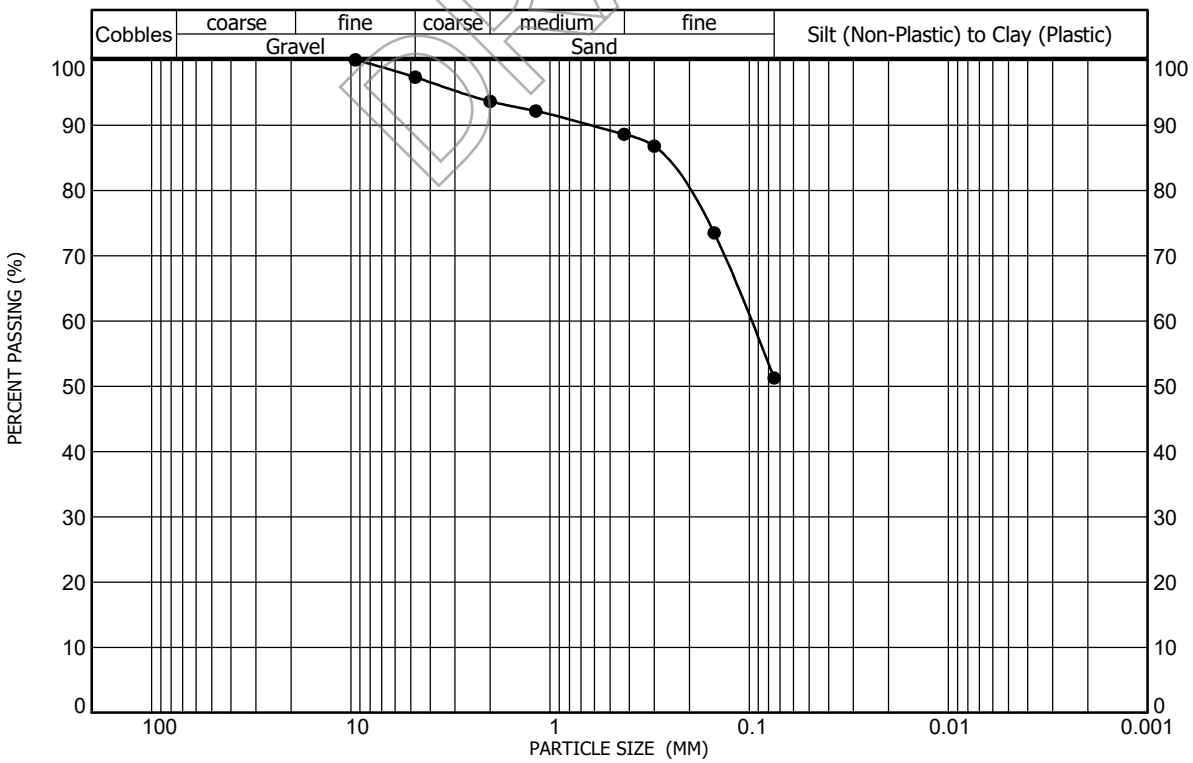
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 54 at a depth of 19 feet
Sample Description: Claystone, trace sand
Classification: A-7-6(46), FAT CLAY(CH)

Gravel (%): 0 | Sand (%): 1 | Clay/Silt (%): 99
Liquid Limit: 62 | Plasticity Index: 41



Sample Location: Test Boring No. 56 at a depth of 4 feet
Sample Description: Clay, very sandy, trace gravel
Classification: A-6(4), SANDY LEAN CLAY(CL)

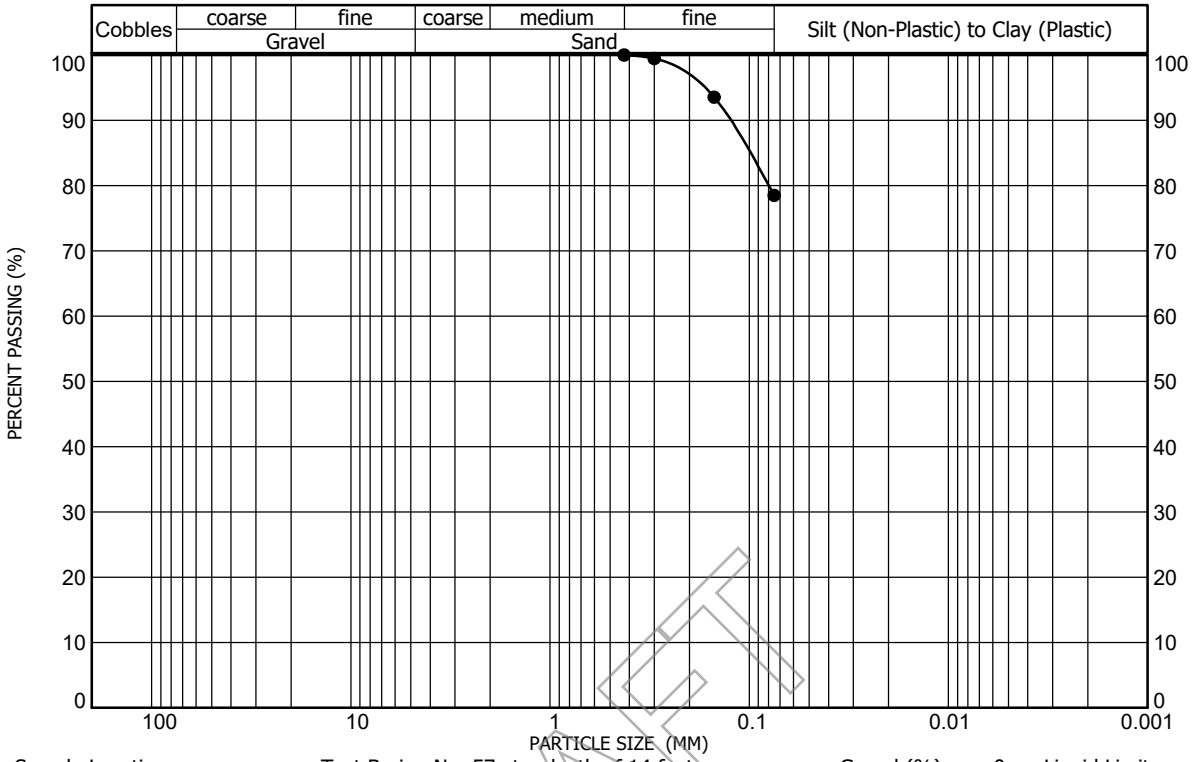
Gravel (%): 3 | Sand (%): 46 | Clay/Silt (%): 51
Liquid Limit: 29 | Plasticity Index: 14

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-108

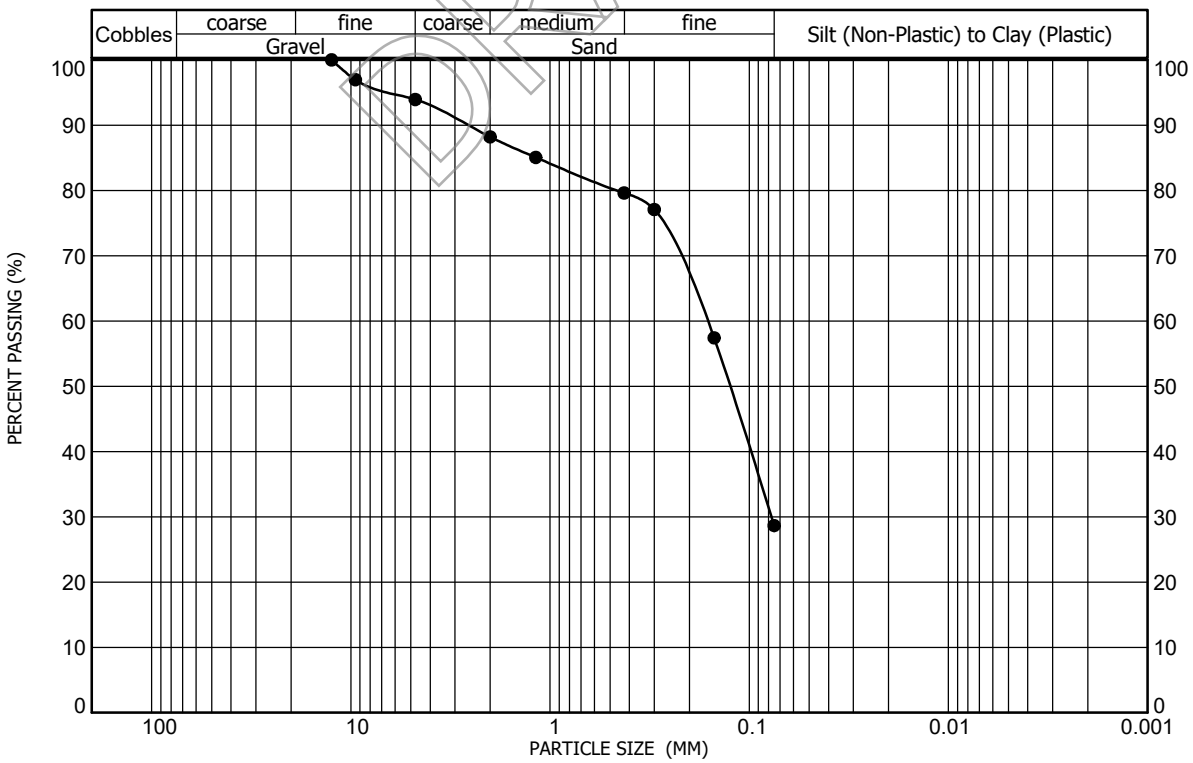
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 57 at a depth of 14 feet
Sample Description: Clay, sandy (lens)
Classification: A-6(10), LEAN CLAY with SAND(CL)

Gravel (%): 0 Liquid Limit: 30
Sand (%): 22 Plasticity Index: 15
Clay/Silt (%): 78



Sample Location: Test Boring No. 58 at a depth of 9 feet
Sample Description: Sand, clayey, slightly gravelly
Classification: A-2-6(0), CLAYEY SAND(SC)

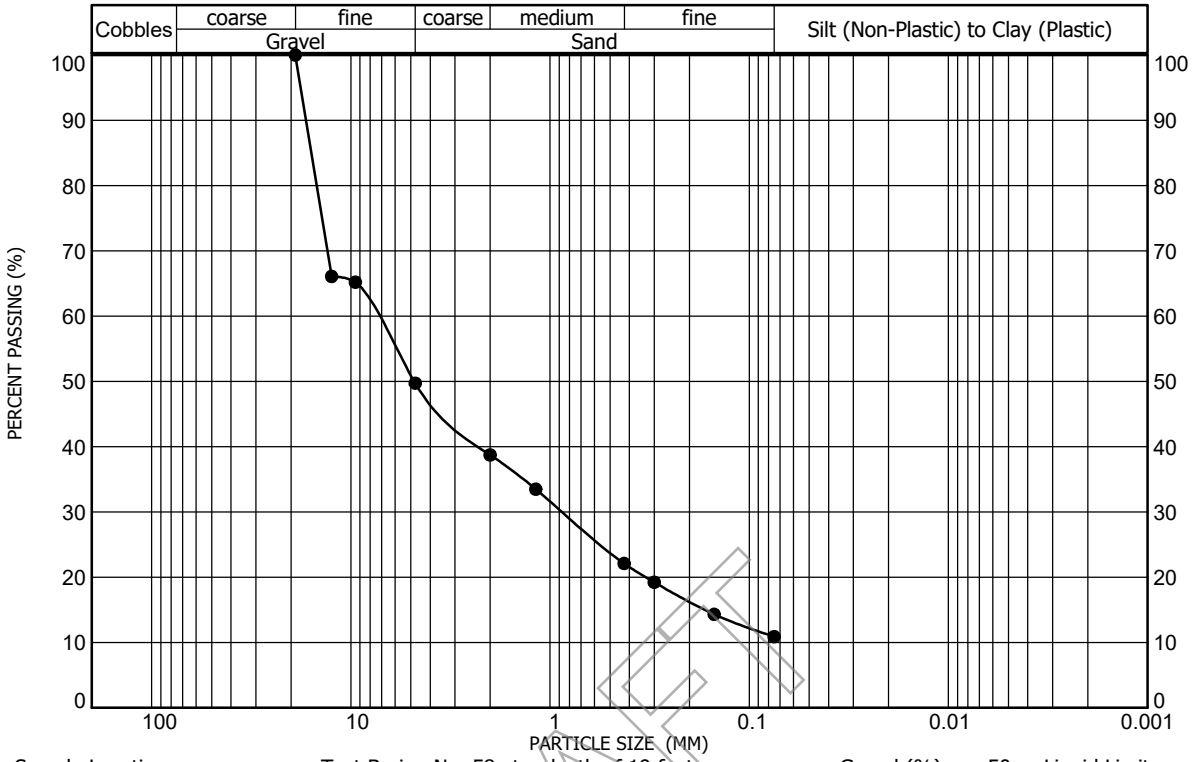
Gravel (%): 6 Liquid Limit: 24
Sand (%): 65 Plasticity Index: 11
Clay/Silt (%): 29

GRADATION AND ATTERBERG TEST RESULTS

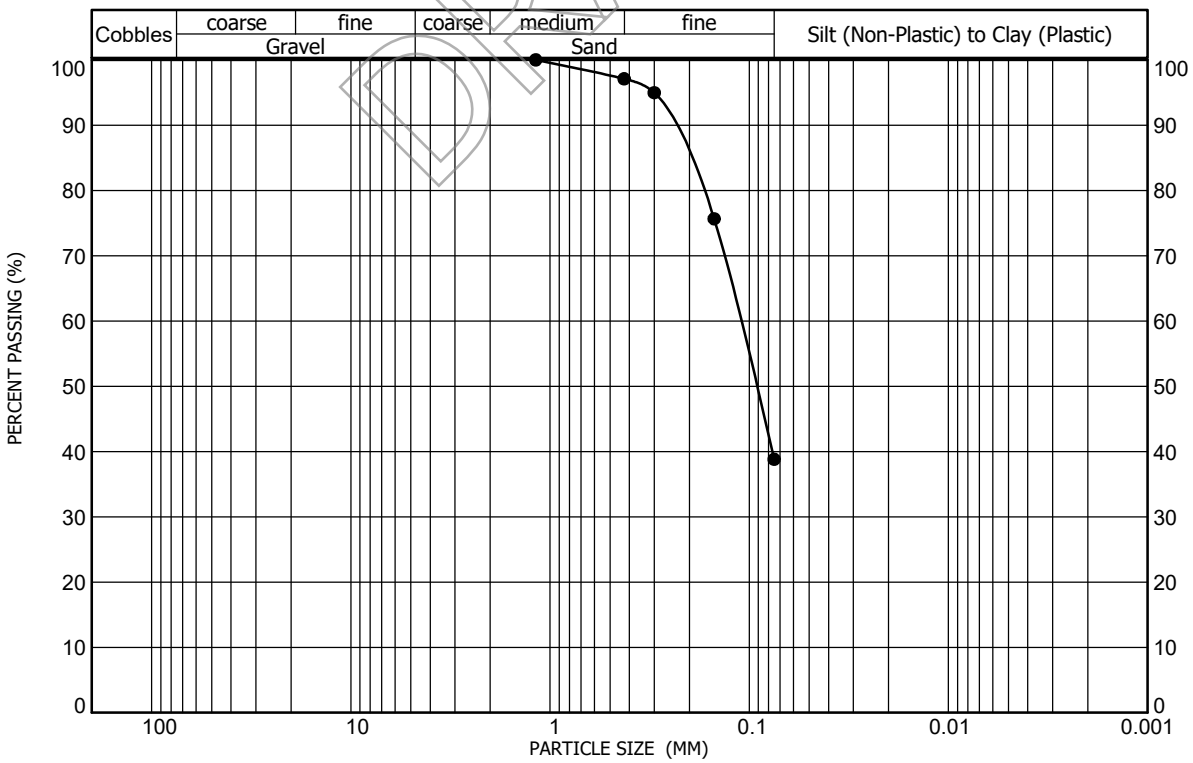
FIGURE A-109

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 58 at a depth of 19 feet — Gravel (%) 50 — Liquid Limit 21
Sample Description Gravel, very sandy, slightly silty, slightly clayey — Sand (%) 39 — Plasticity Index 4
Classification A-1-a(0), WELL-GRADED GRAVEL with SILTY CLAY and SAND(GW-GC) — Clay/Silt (%) 11

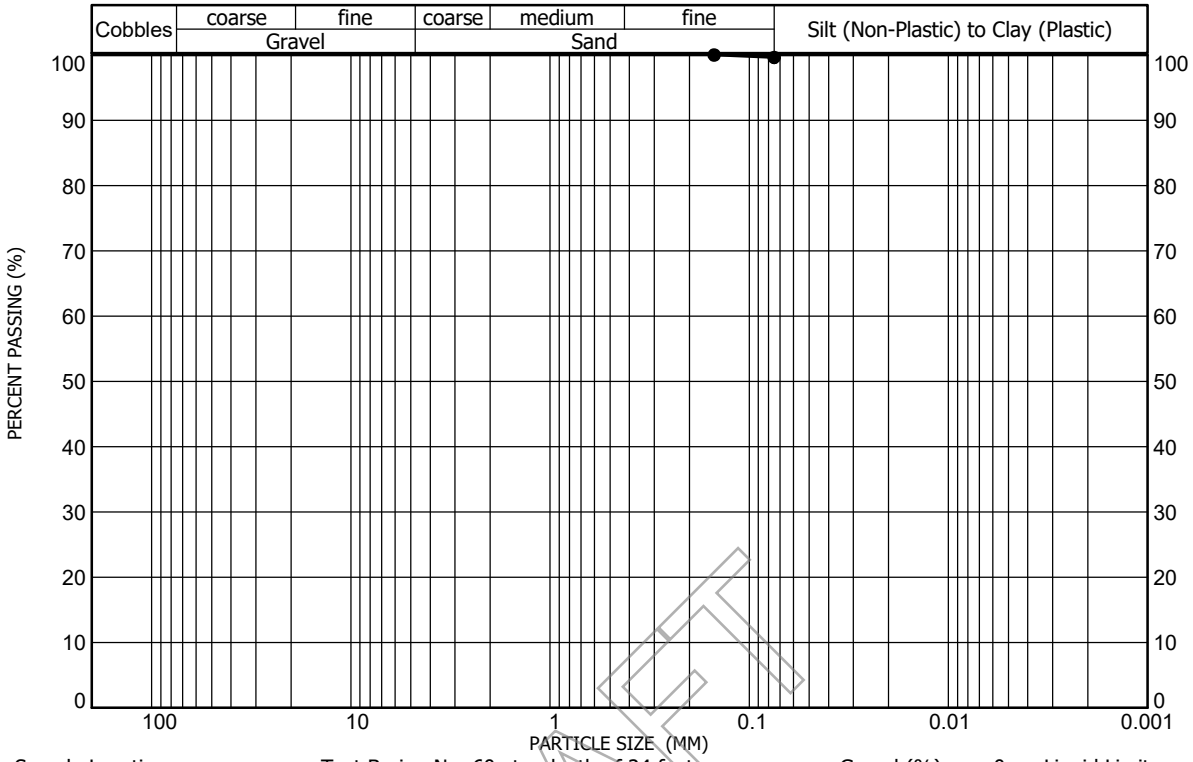


Sample Location Test Boring No. 59 at a depth of 9 feet — Gravel (%) 0 — Liquid Limit 26
Sample Description Sand, very clayey — Sand (%) 61 — Plasticity Index 9
Classification A-4(0), CLAYEY SAND(SC) — Clay/Silt (%) 39

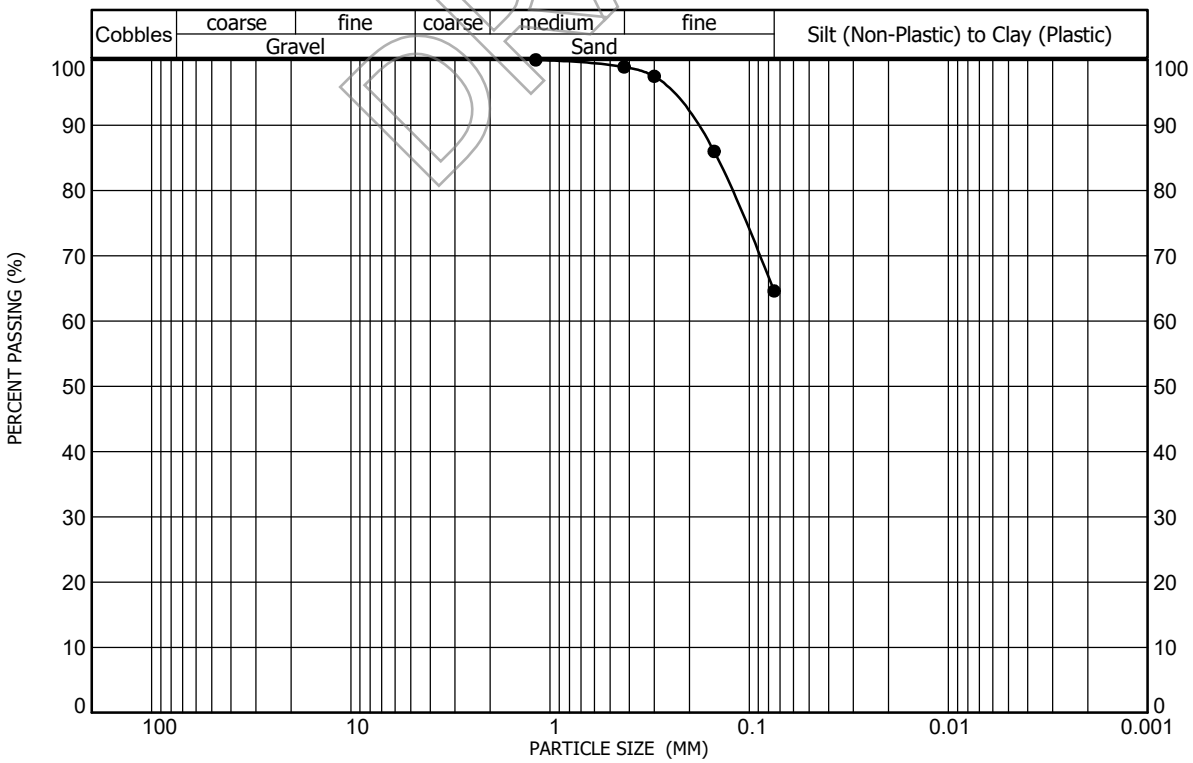
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-110

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 60 at a depth of 24 feet
Sample Description: Claystone, silty
Classification: A-7-6(48), FAT CLAY(CH)
Gravel (%): 0
Sand (%): 0
Clay/Silt (%): 100
Liquid Limit: 64
Plasticity Index: 42

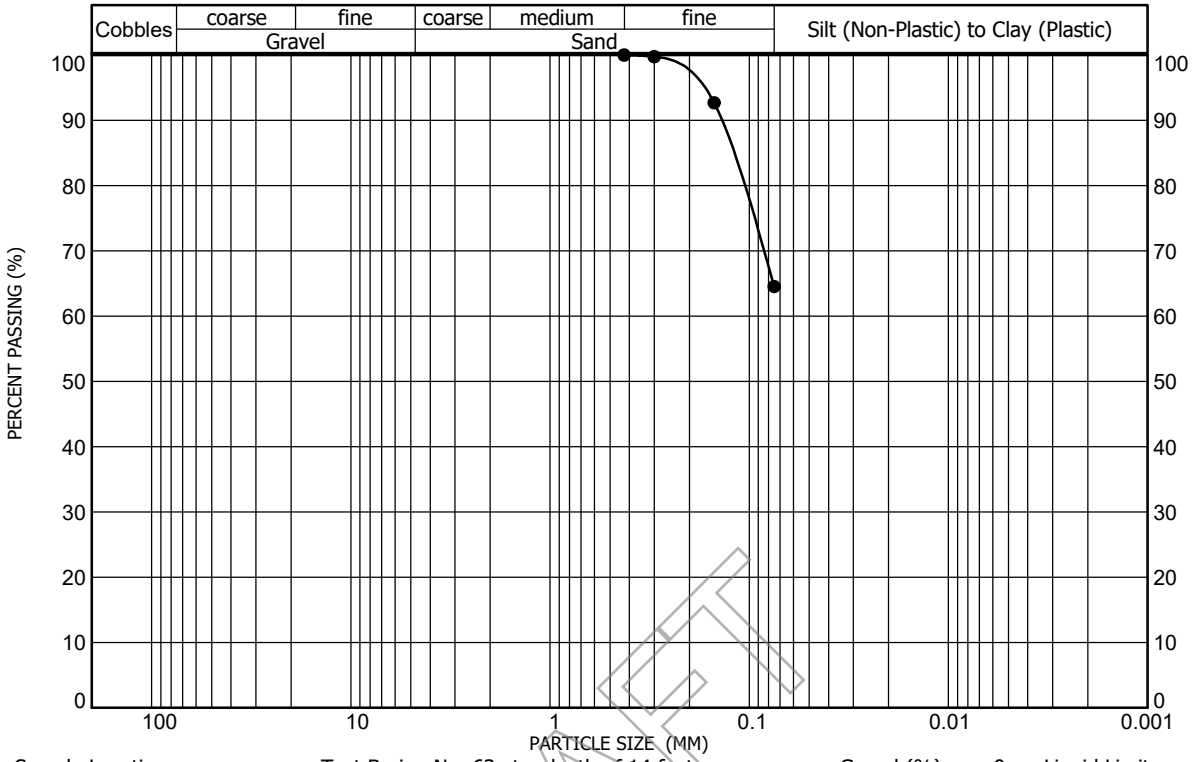


Sample Location: Test Boring No. 61 at a depth of 4 feet
Sample Description: Clay, very sandy
Classification: A-6(7), SANDY LEAN CLAY(CL)
Gravel (%): 0
Sand (%): 35
Clay/Silt (%): 65
Liquid Limit: 32
Plasticity Index: 15

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-111

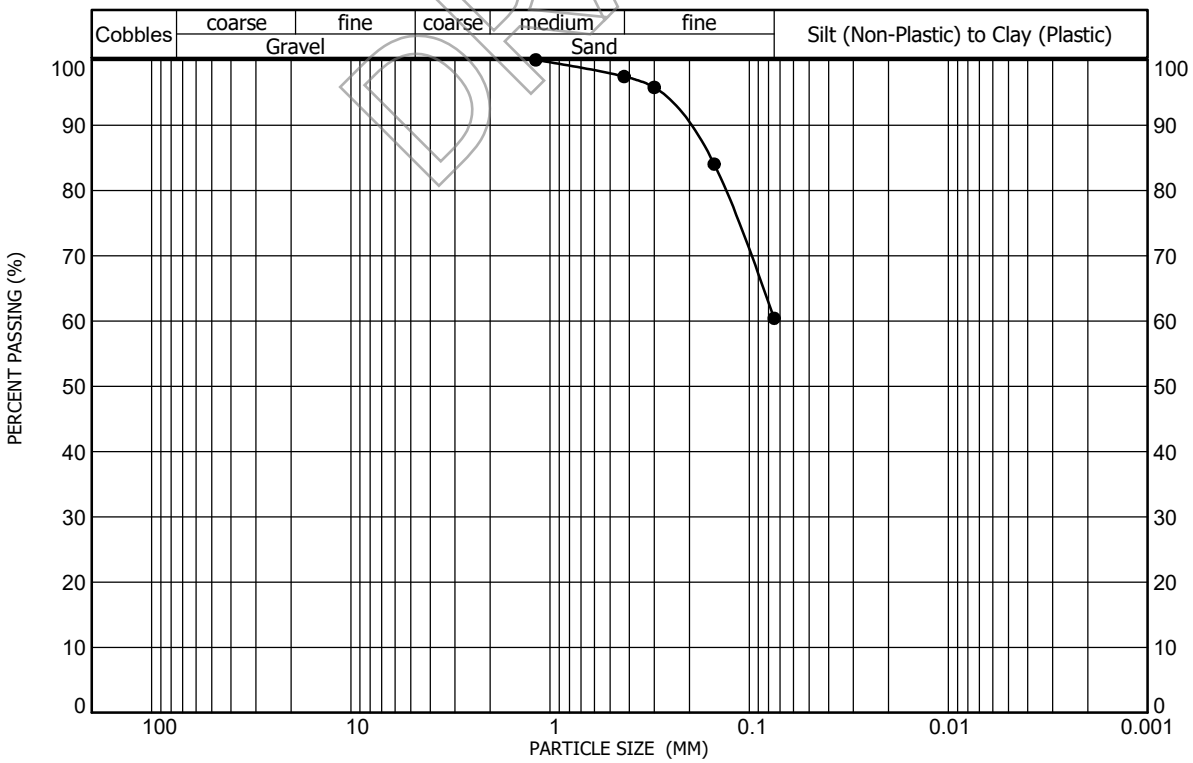
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 63 at a depth of 14 feet
Sample Description: Claystone, very sandy
Classification: A-6(5), SANDY LEAN CLAY(CL)

Gravel (%): 0 Sand (%): 35 Clay/Silt (%): 65
Liquid Limit: 28 Plasticity Index: 11



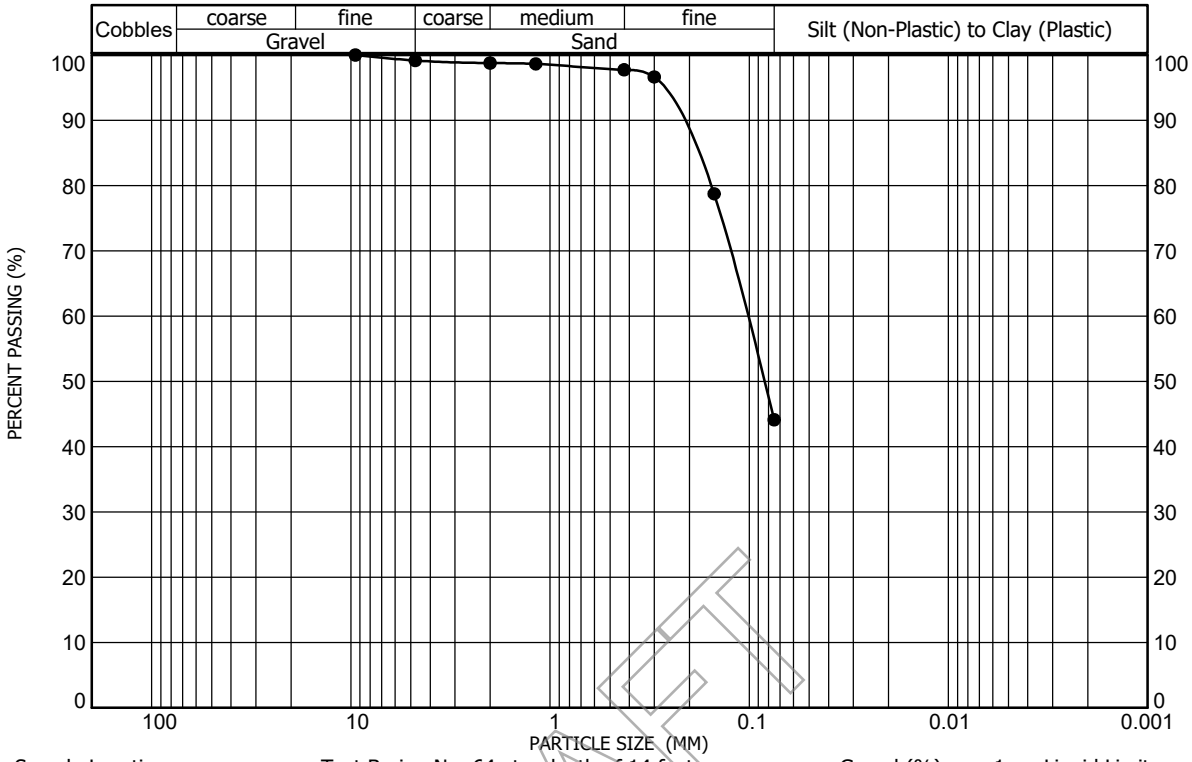
Sample Location: Test Boring No. 64 at a depth of 2 feet
Sample Description: Fill, clay, very sandy
Classification: A-6(8), SANDY LEAN CLAY(CL)

Gravel (%): 0 Sand (%): 40 Clay/Silt (%): 60
Liquid Limit: 37 Plasticity Index: 17

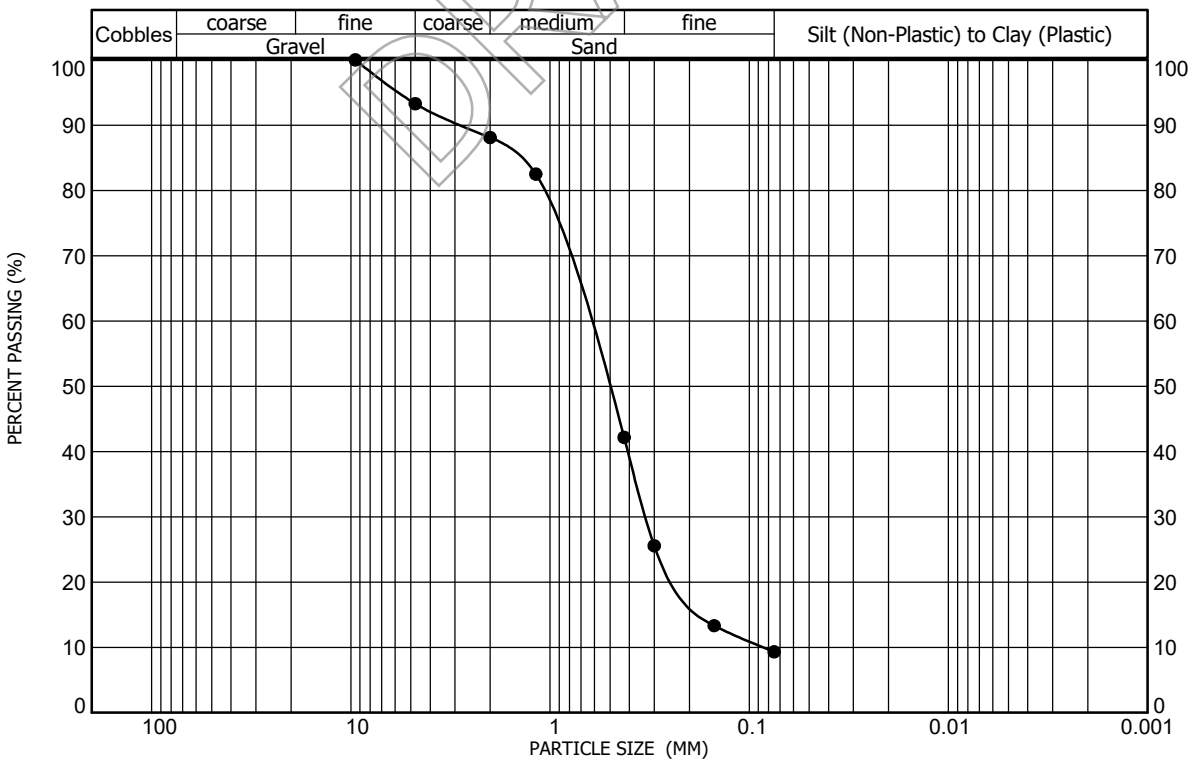
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-112

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 64 at a depth of 14 feet — Gravel (%) 1 — Liquid Limit NV
Sample Description Sand, very silty, trace gravel — Sand (%) 55 — Plasticity Index NP
Classification A-4(0), SILTY SAND(SM) — Clay/Silt (%) 44

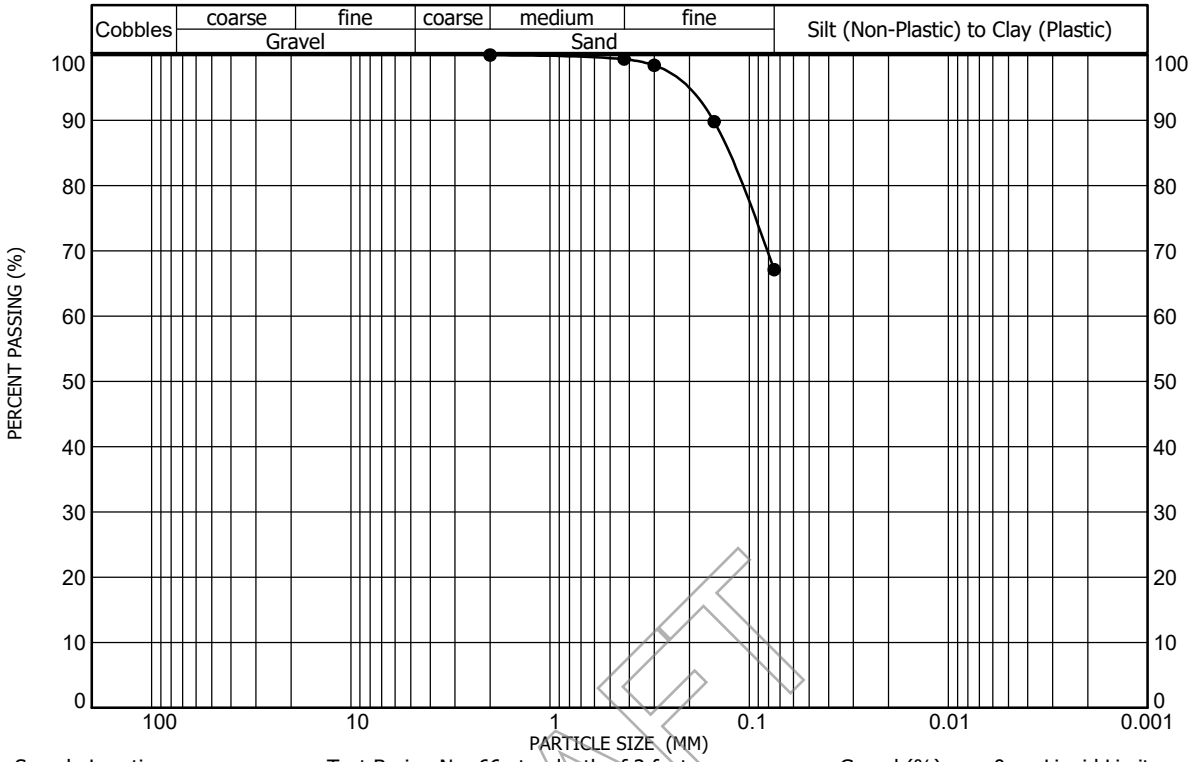


Sample Location Test Boring No. 65 at a depth of 14 feet — Gravel (%) 7 — Liquid Limit NV
Sample Description Sand, slightly silty, slightly gravellly — Sand (%) 84 — Plasticity Index NP
Classification A-1-b(0), WELL-GRADED SAND with SILT(SW-SM) — Clay/Silt (%) 9

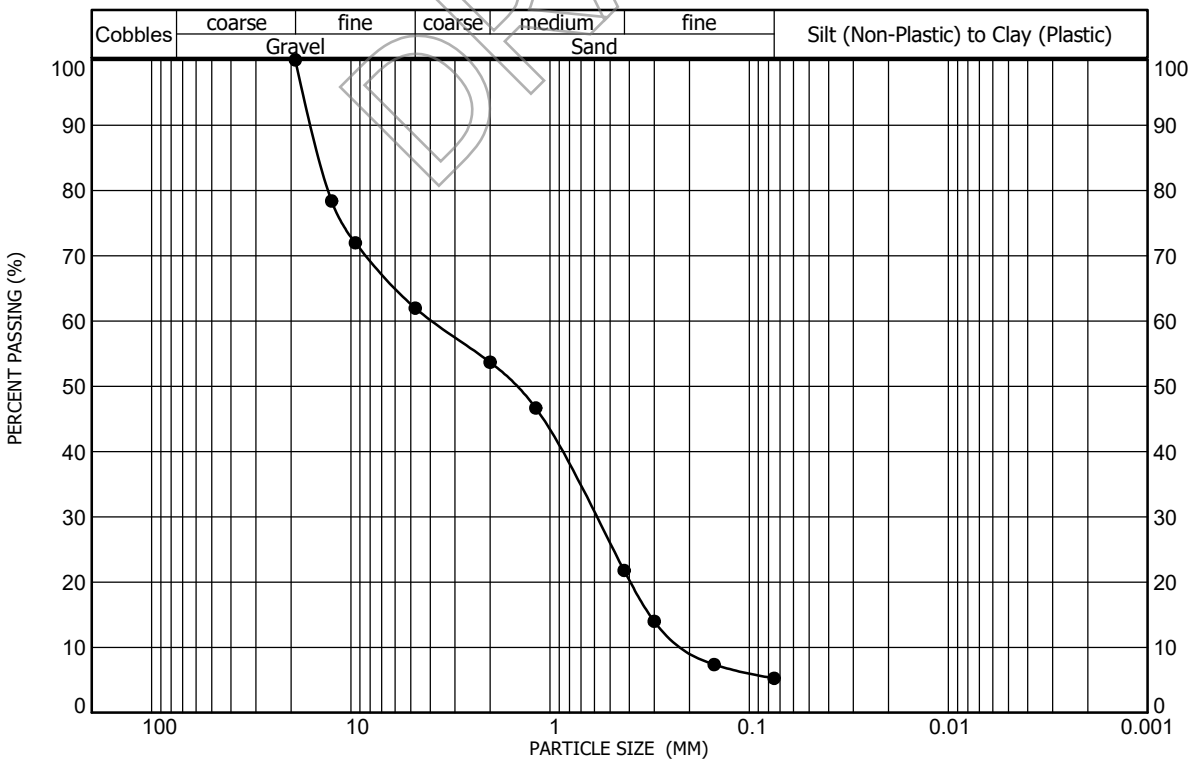
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-113

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 66 at a depth of 2 feet — Gravel (%) 0 — Liquid Limit 27
Sample Description Clay, very sandy — Sand (%) 33 — Plasticity Index 14
Classification A-6(6), SANDY LEAN CLAY(CL) — Clay/Silt (%) 67

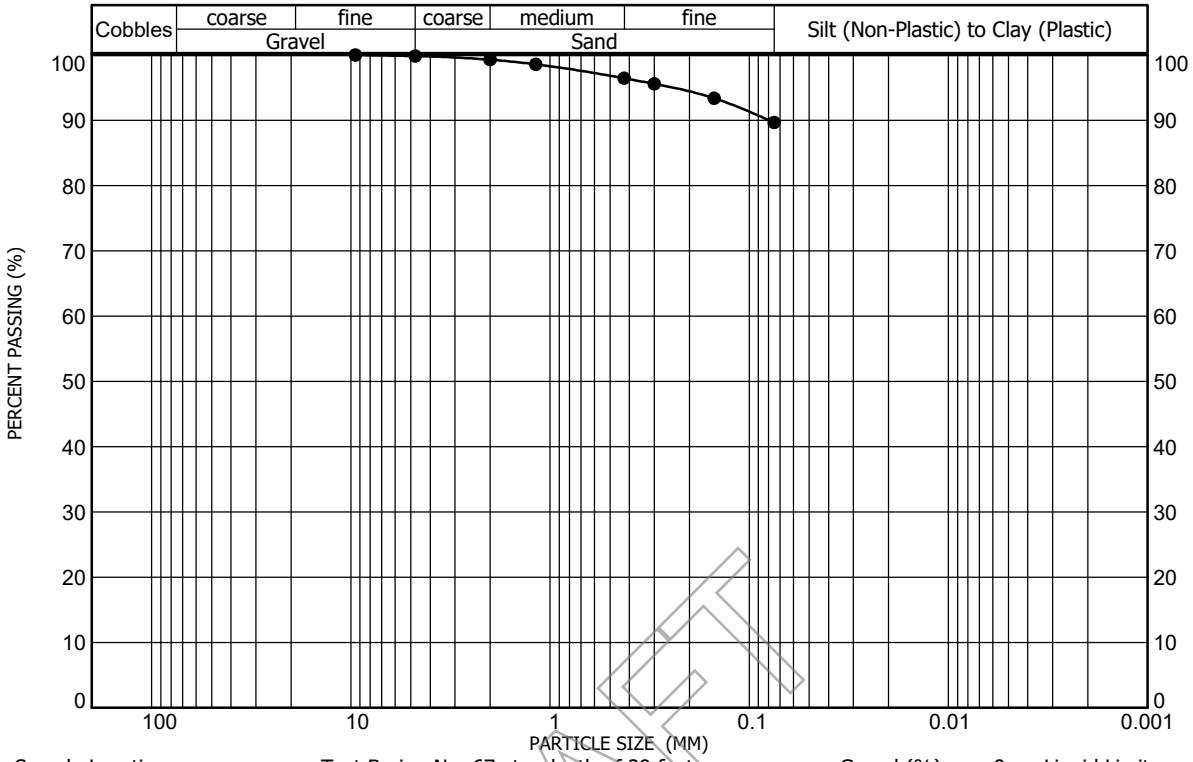


Sample Location Test Boring No. 66 at a depth of 24 feet — Gravel (%) 38 — Liquid Limit NV
Sample Description Sand, very gravelly, slightly silty — Sand (%) 57 — Plasticity Index NP
Classification A-1-b(0), POORLY GRADED SAND with SILT and GRAVEL(SP-SM) — Clay/Silt (%) 5

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-114

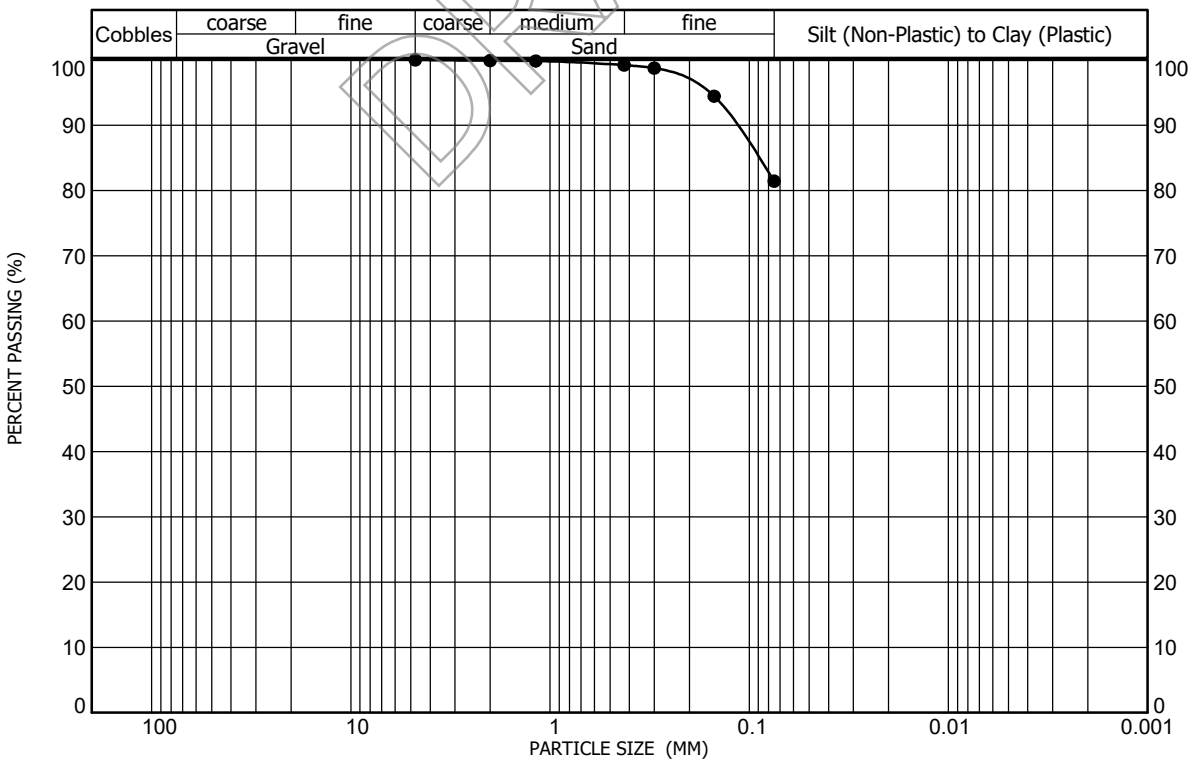
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 67 at a depth of 29 feet
Sample Description: Claystone, slightly sandy
Classification: A-7-6(29), LEAN CLAY(CL)

Gravel (%): 0 Liquid Limit: 48
Sand (%): 10 Plasticity Index: 31
Clay/Silt (%): 90



Sample Location: Test Boring No. 68 at a depth of 2 feet
Sample Description: Clay, sandy
Classification: A-7-6(18), LEAN CLAY with SAND(CL)

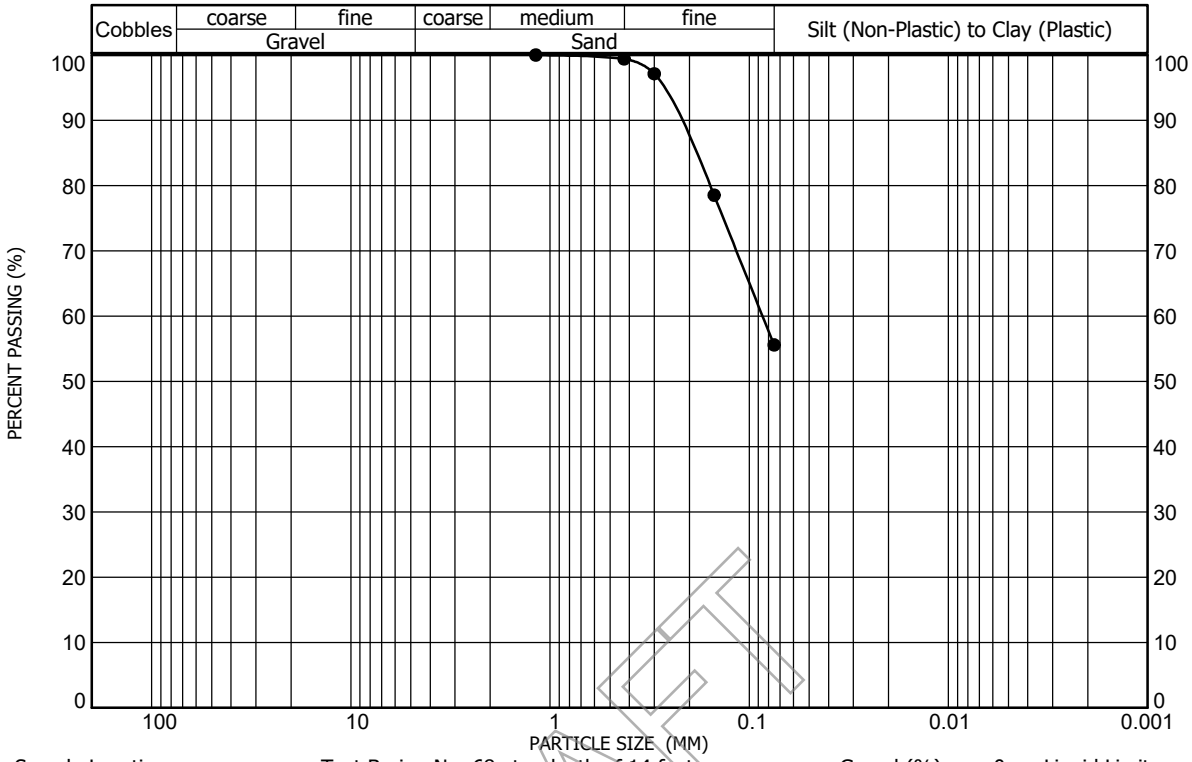
Gravel (%): 0 Liquid Limit: 41
Sand (%): 19 Plasticity Index: 23
Clay/Silt (%): 81

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-115

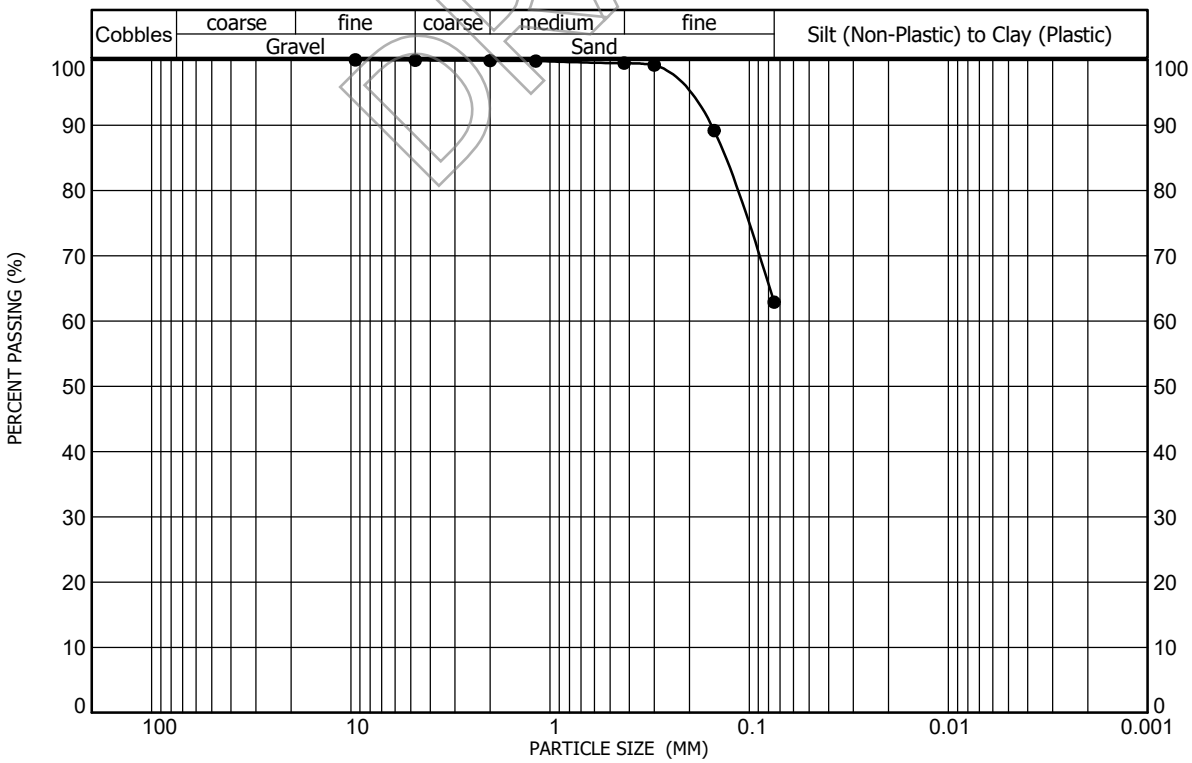
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 68 at a depth of 14 feet
Sample Description: Silt, very sandy (lens)
Classification: A-4(0), SANDY SILT(ML)

Gravel (%): 0 | Sand (%): 44 | Clay/Silt (%): 56
Liquid Limit: NV | Plasticity Index: NP



Sample Location: Test Boring No. 69 at a depth of 9 feet
Sample Description: Clay, very sandy
Classification: A-6(6), SANDY LEAN CLAY(CL)

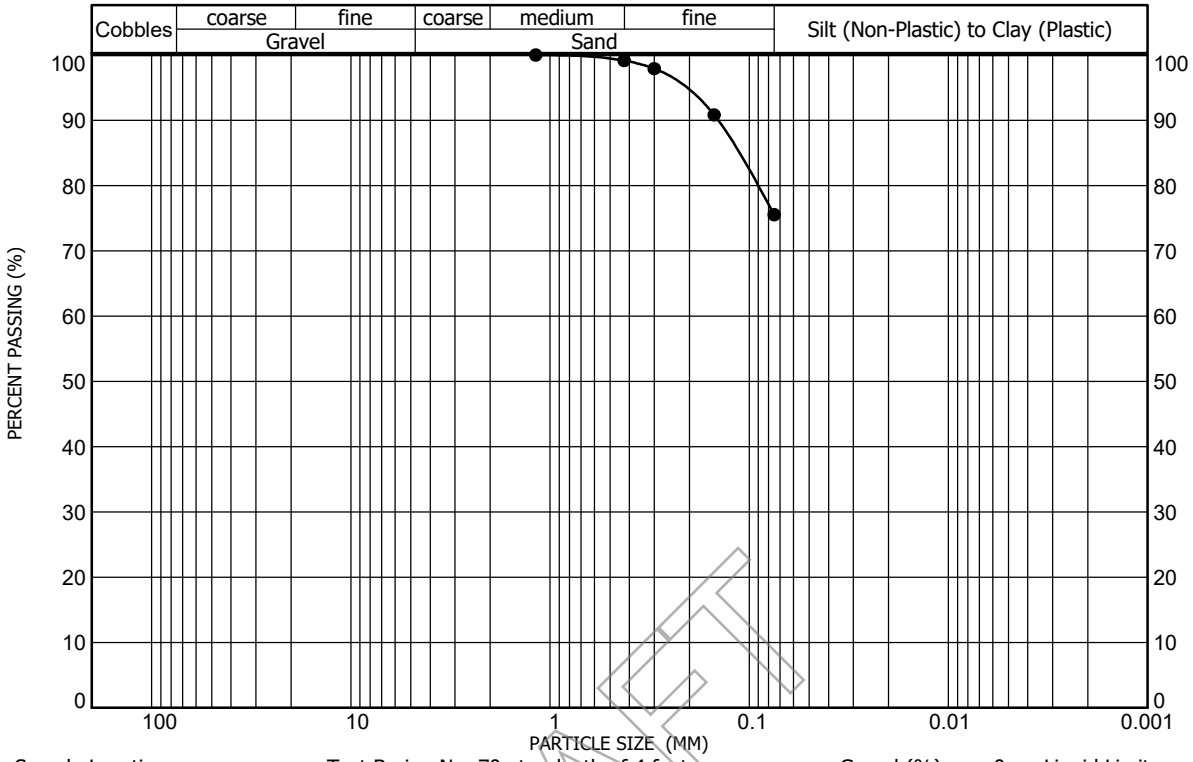
Gravel (%): 0 | Sand (%): 37 | Clay/Silt (%): 63
Liquid Limit: 28 | Plasticity Index: 15

GRADATION AND ATTERBERG TEST RESULTS

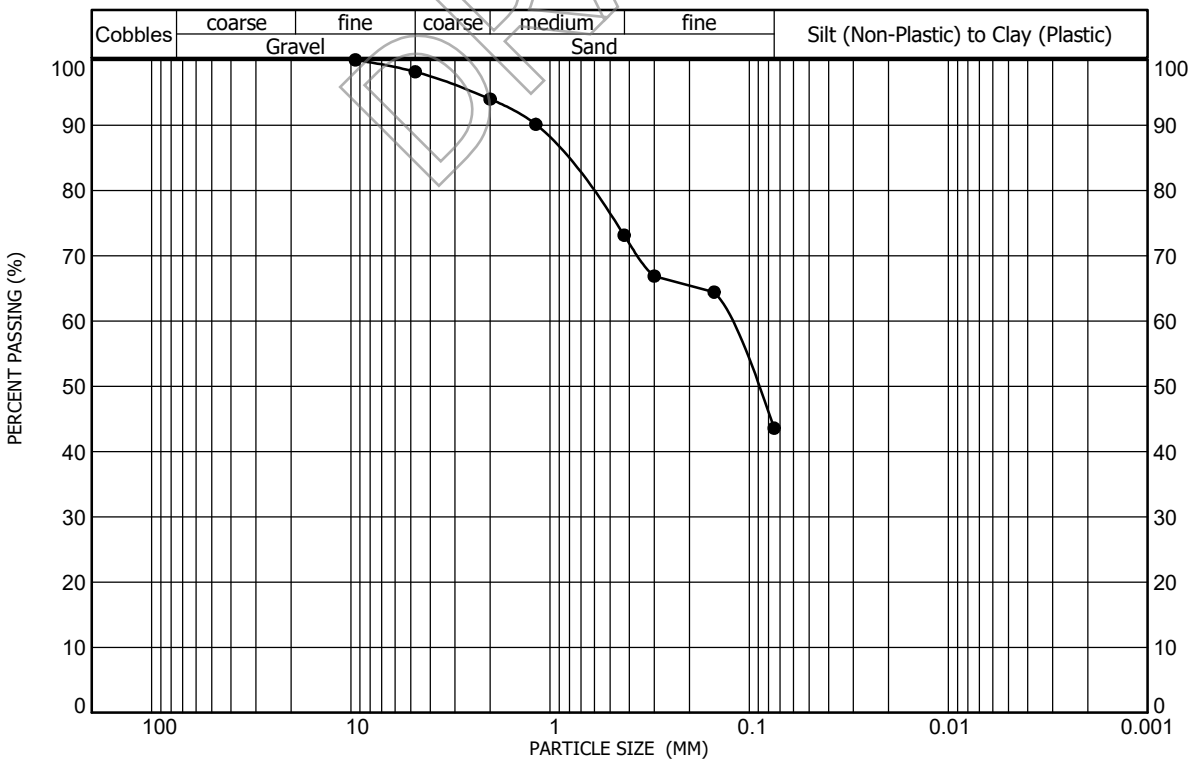
FIGURE A-116

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 70 at a depth of 4 feet — Gravel (%) 0 — Liquid Limit 42
Sample Description Clay, sandy — Sand (%) 24 — Plasticity Index 27
Classification A-7-6(19), LEAN CLAY with SAND(CL) — Clay/Silt (%) 76

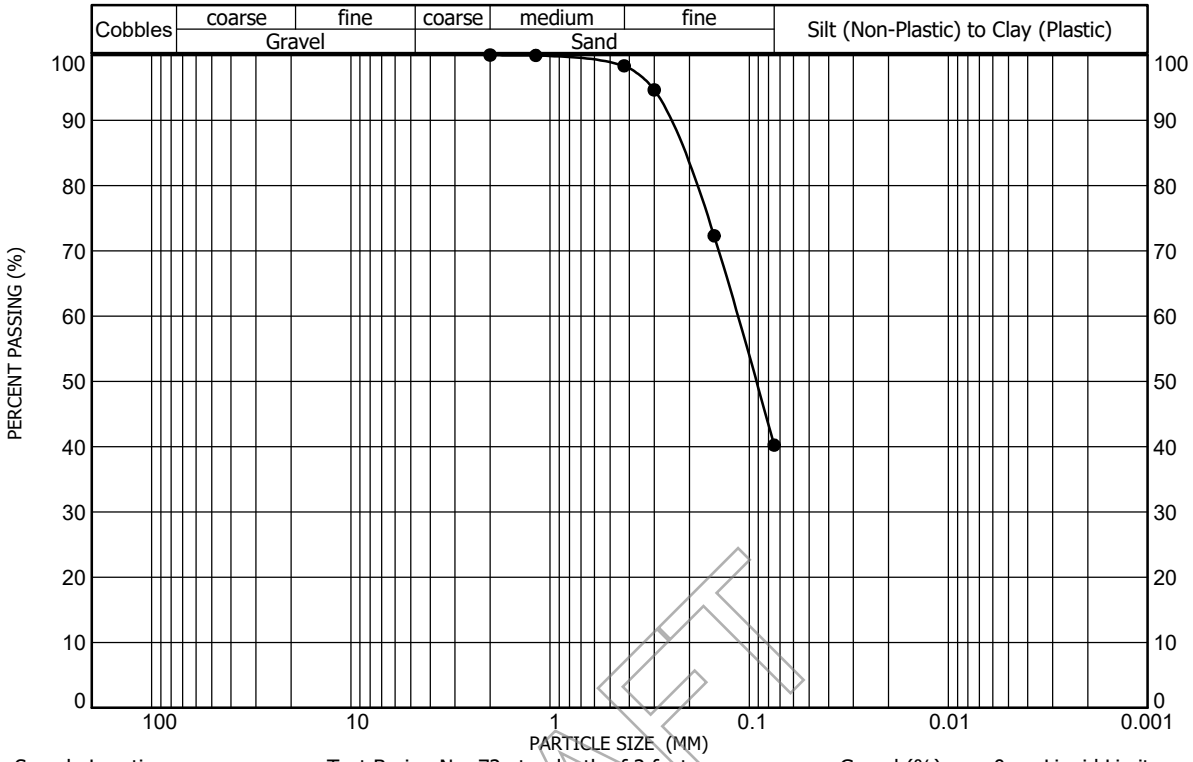


Sample Location Test Boring No. 71 at a depth of 9 feet — Gravel (%) 2 — Liquid Limit 26
Sample Description Sand, very clayey, trace gravel — Sand (%) 55 — Plasticity Index 10
Classification A-4(1), CLAYEY SAND(SC) — Clay/Silt (%) 44

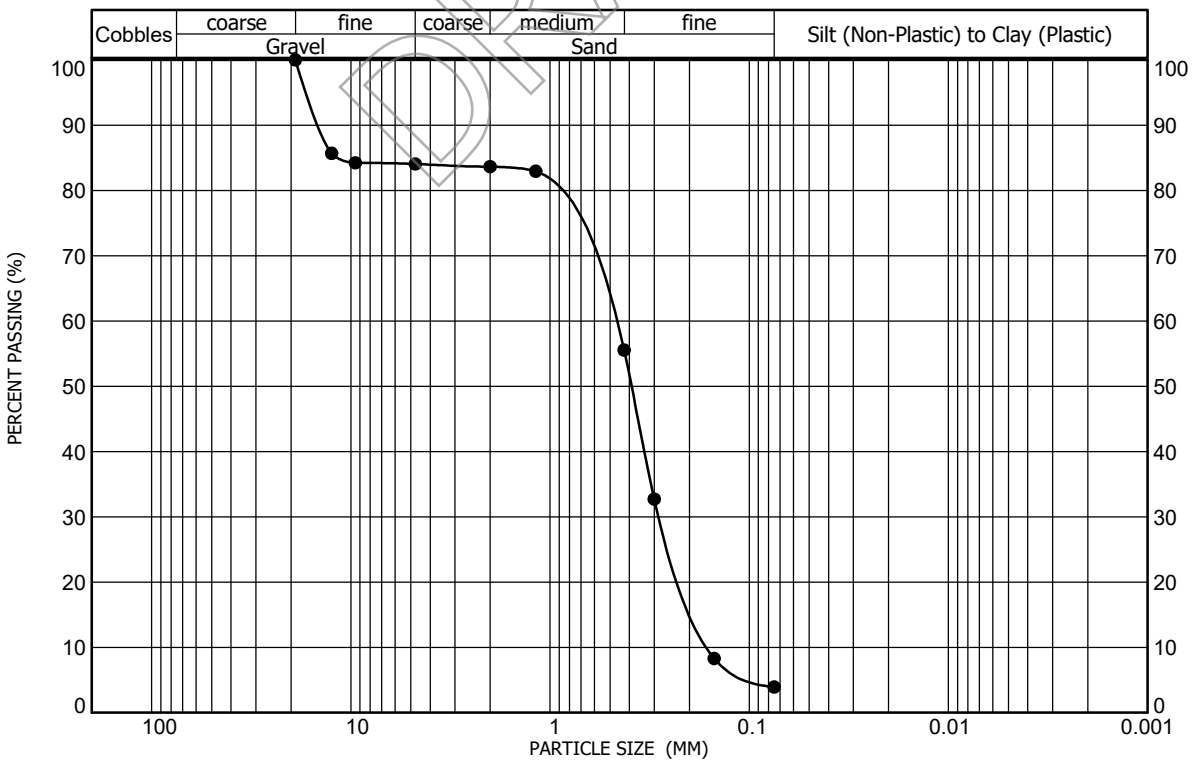
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-117

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 72 at a depth of 2 feet — Gravel (%) 0 — Liquid Limit 25
Sample Description Sand, very clayey — Sand (%) 60 — Plasticity Index 16
Classification A-6(2), CLAYEY SAND(SC) — Clay/Silt (%) 40

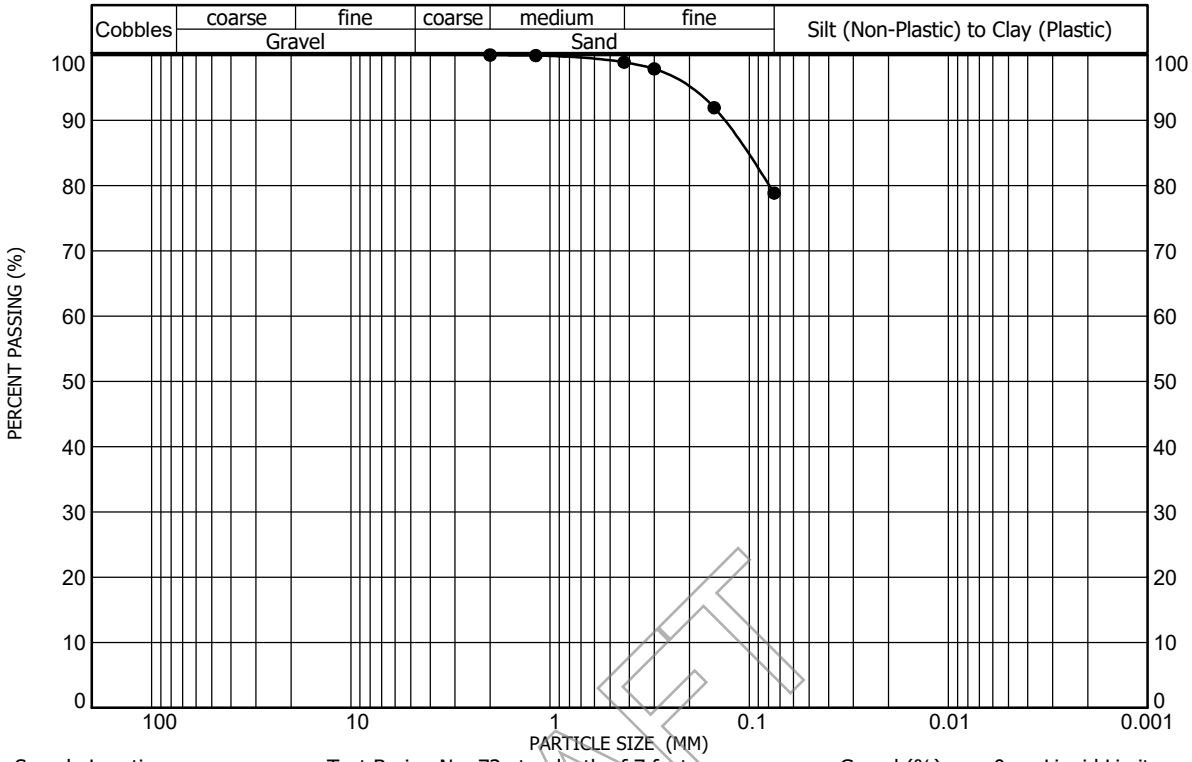


Sample Location Test Boring No. 72 at a depth of 24 feet — Gravel (%) 16 — Liquid Limit NV
Sample Description Sand, gravelly, trace silt — Sand (%) 80 — Plasticity Index NP
Classification A-3(0), POORLY GRADED SAND with GRAVEL(SP) — Clay/Silt (%) 4

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-118

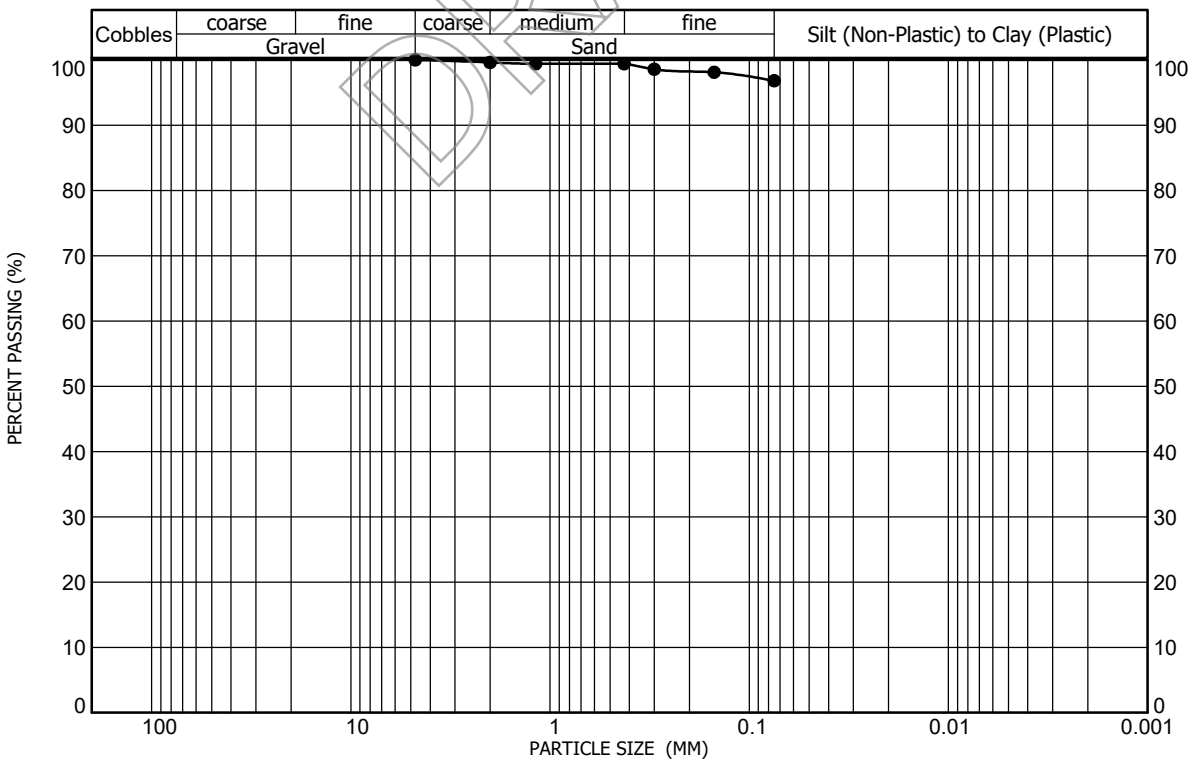
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 73 at a depth of 7 feet
Sample Description Clay, sandy
Classification A-6(14), LEAN CLAY with SAND(CL)

Gravel (%) 0 Liquid Limit 38
Sand (%) 21 Plasticity Index 19
Clay/Silt (%) 79



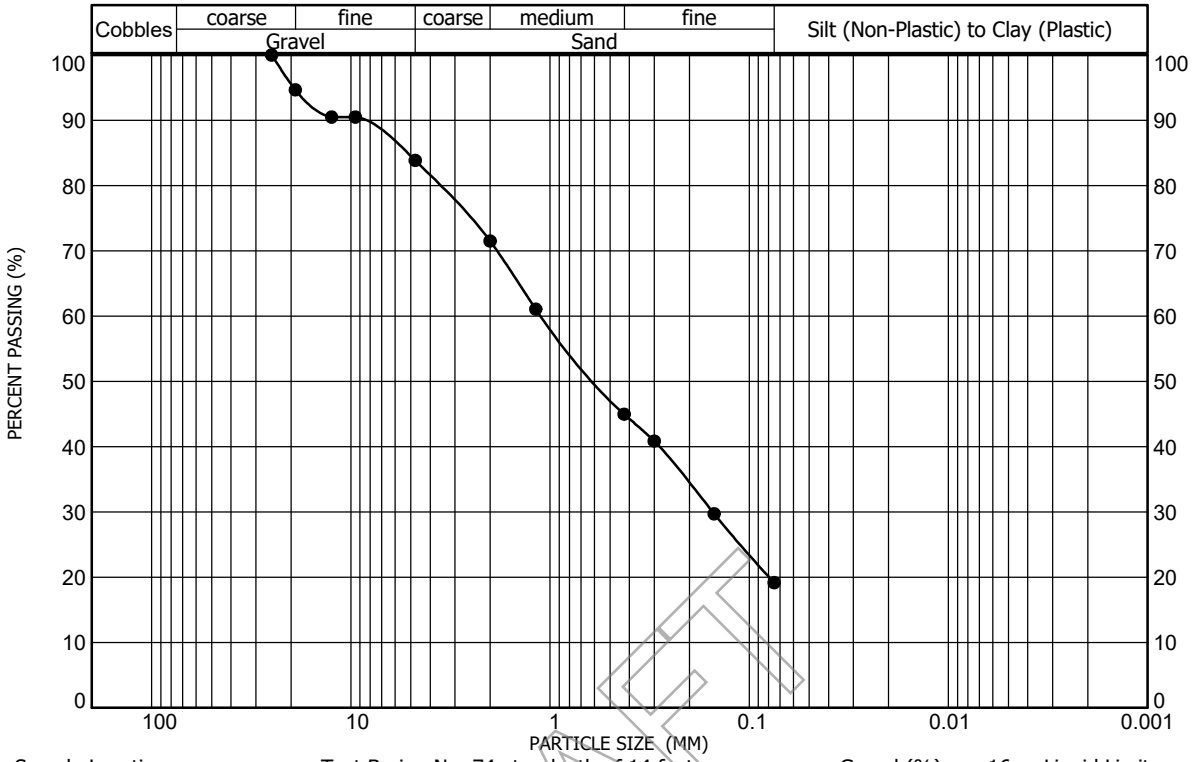
Sample Location Test Boring No. 74 at a depth of 4 feet
Sample Description Clay, trace sand
Classification A-7-6(26), LEAN CLAY(CL)

Gravel (%) 0 Liquid Limit 46
Sand (%) 3 Plasticity Index 24
Clay/Silt (%) 97

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-119

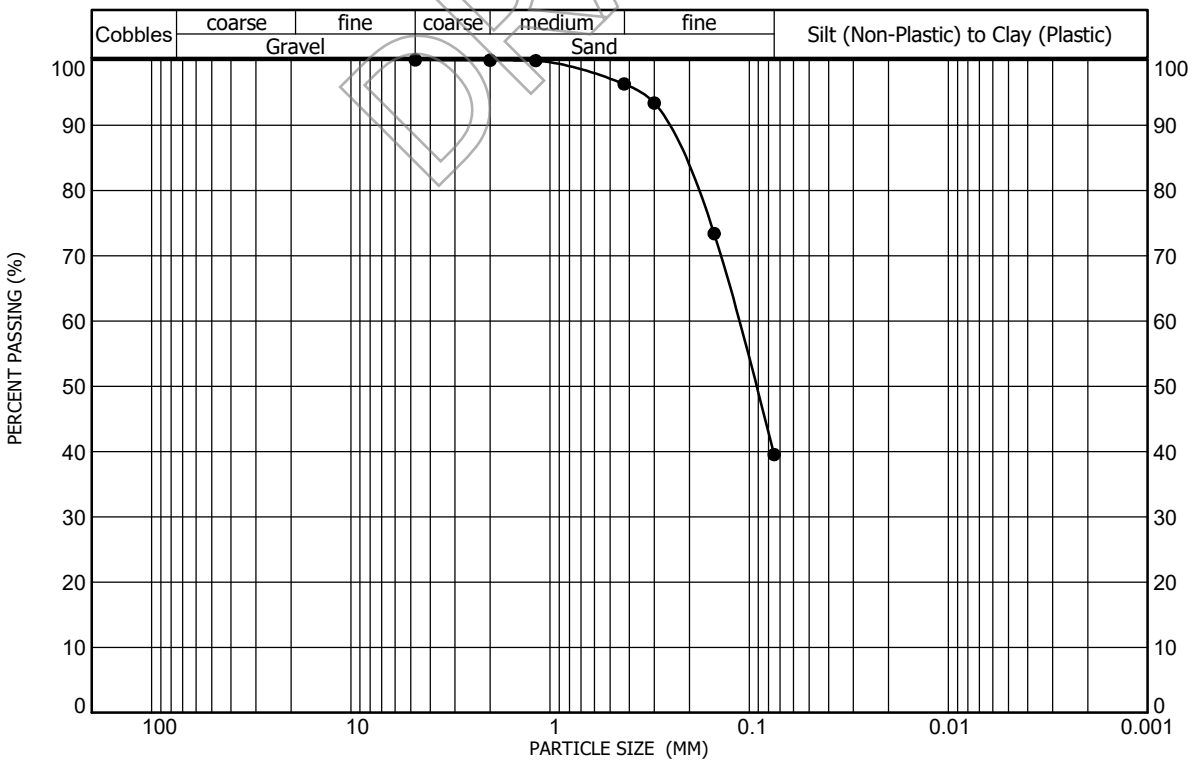
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 74 at a depth of 14 feet
Sample Description: Sand, gravelly, silty, clayey
Classification: A-1-b(0), SILTY, CLAYEY SAND with GRAVEL(SC-SM)

Gravel (%): 16 Liquid Limit: 22
Sand (%): 65 Plasticity Index: 5
Clay/Silt (%): 19



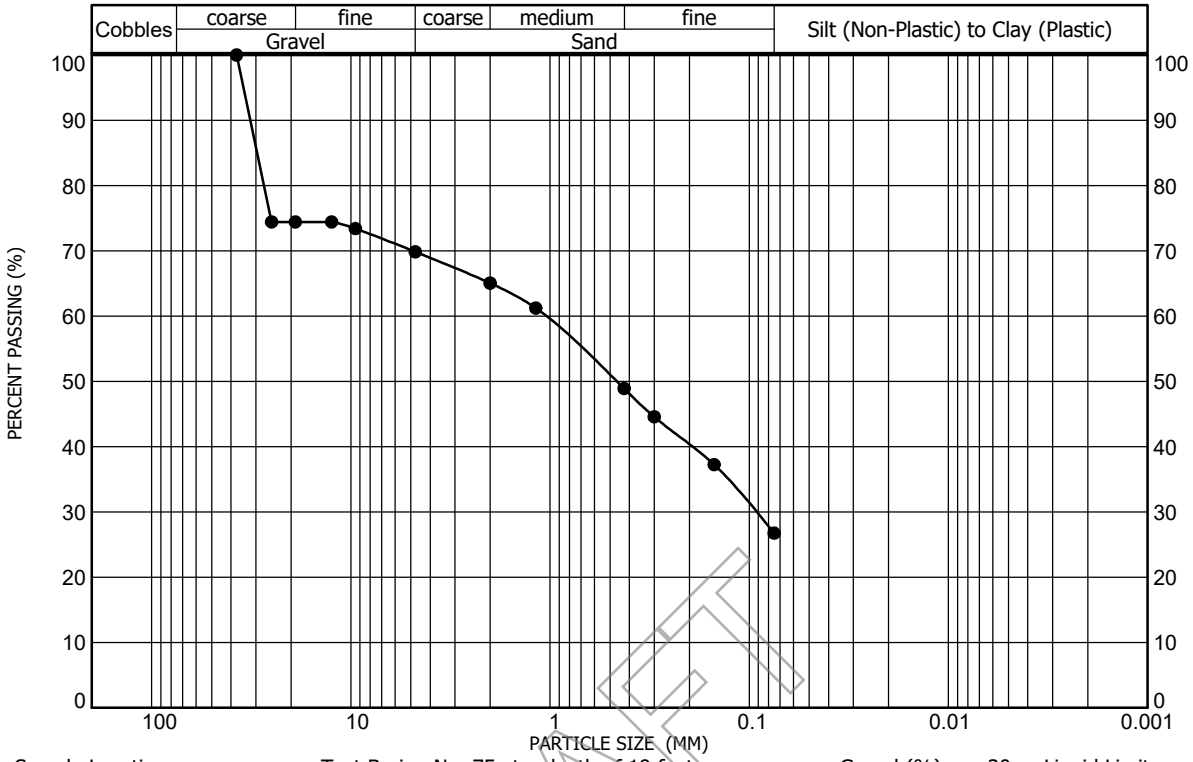
Sample Location: Test Boring No. 75 at a depth of 4 feet
Sample Description: Sand, very clayey
Classification: A-7-6(8), CLAYEY SAND(SC)

Gravel (%): 0 Liquid Limit: 49
Sand (%): 60 Plasticity Index: 36
Clay/Silt (%): 40

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-120

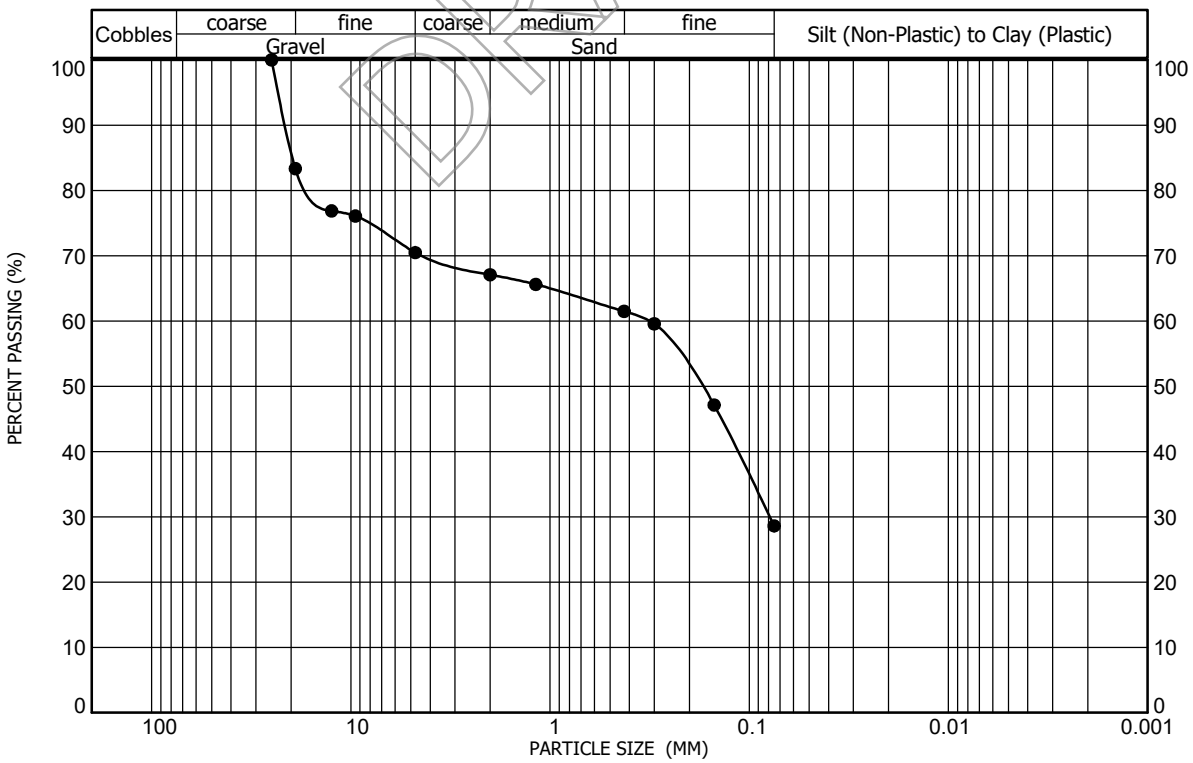
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location Test Boring No. 75 at a depth of 19 feet
Sample Description Sand, gravelly, silty
Classification A-2-4(0), SILTY SAND with GRAVEL(SM)

Gravel (%) 30 Liquid Limit NV
Sand (%) 43 Plasticity Index NP
Clay/Silt (%) 27



Sample Location Test Boring No. 77 at a depth of 4 feet
Sample Description Sand, gravelly, clayey
Classification A-2-6(1), CLAYEY SAND with GRAVEL(SC)

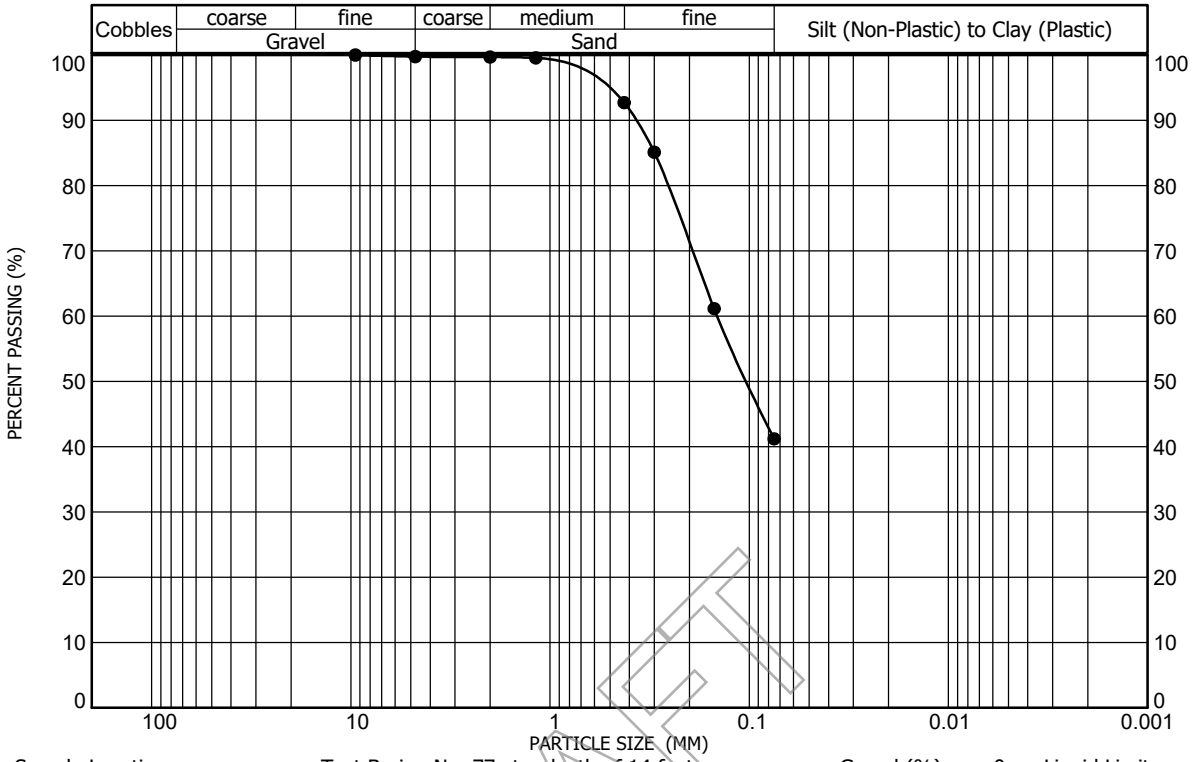
Gravel (%) 30 Liquid Limit 28
Sand (%) 42 Plasticity Index 16
Clay/Silt (%) 29

GRADATION AND ATTERBERG TEST RESULTS

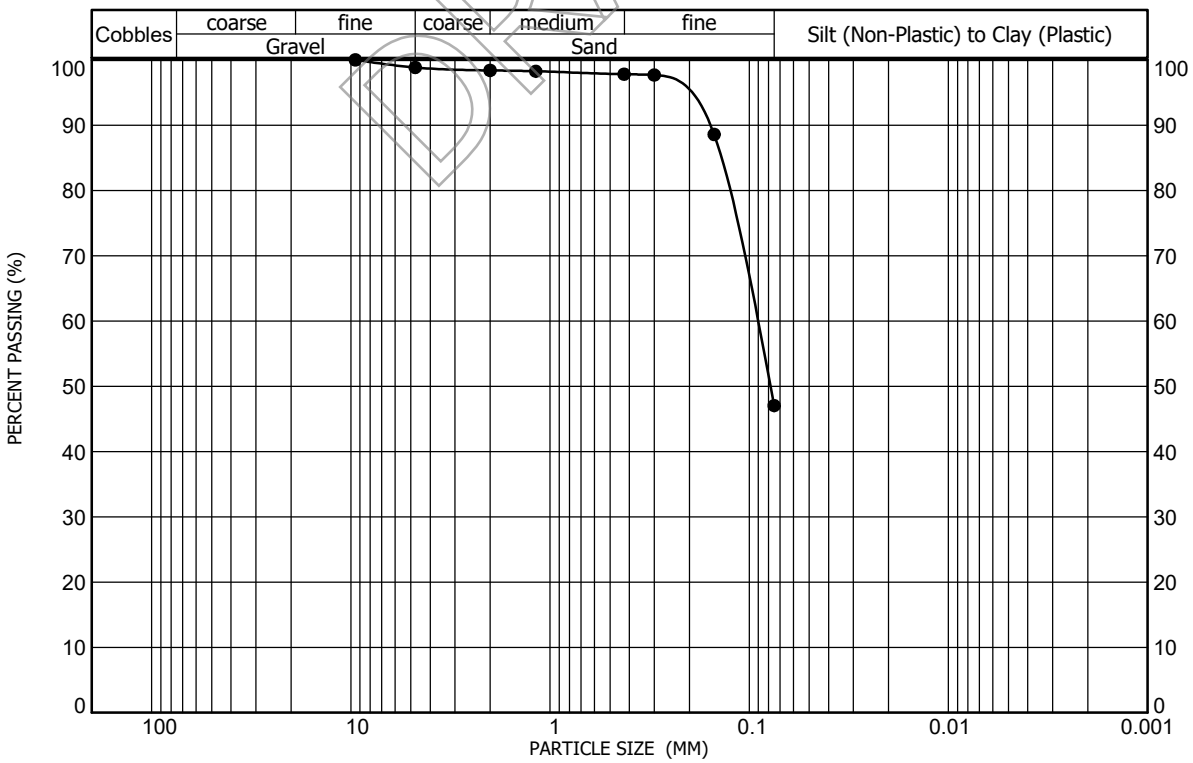
FIGURE A-121

PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



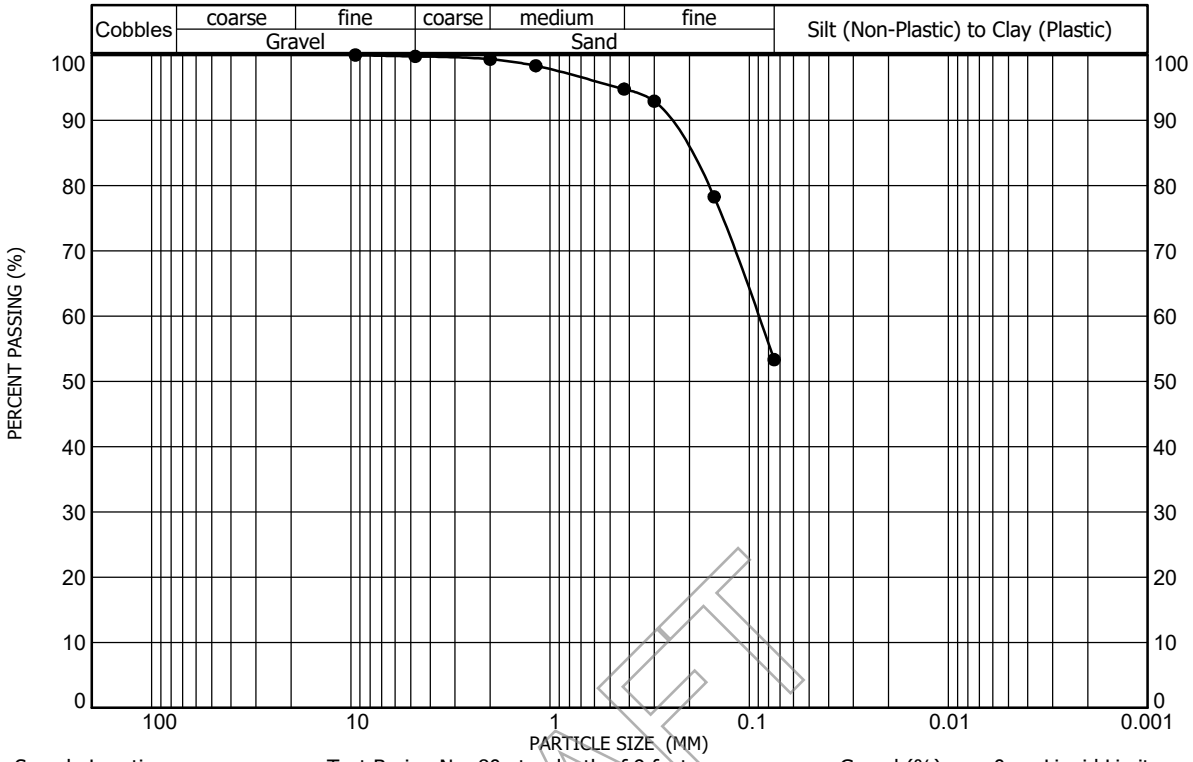
Sample Location: Test Boring No. 77 at a depth of 14 feet
Sample Description: Sand, very silty
Classification: A-4(0), SILTY SAND(SM)
Gravel (%): 0
Sand (%): 59
Clay/Silt (%): 41
Liquid Limit: NV
Plasticity Index: NP



Sample Location: Test Boring No. 79 at a depth of 7 feet
Sample Description: Sand, very clayey, trace gravel
Classification: A-6(3), CLAYEY SAND(SC)
Gravel (%): 1
Sand (%): 52
Clay/Silt (%): 47
Liquid Limit: 27
Plasticity Index: 15

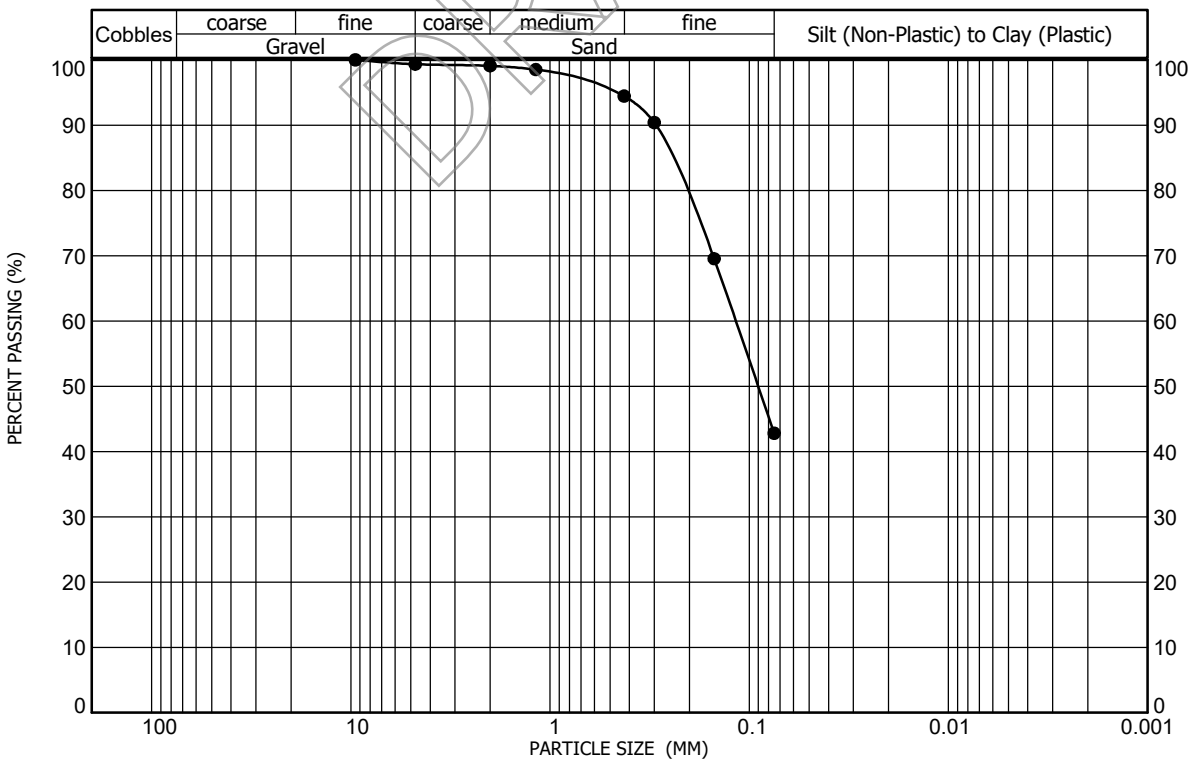
GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-122
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 80 at a depth of 9 feet
Sample Description: Clay, very sandy
Classification: A-4(2), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 46
Clay/Silt (%): 53
Liquid Limit: 27
Plasticity Index: 10



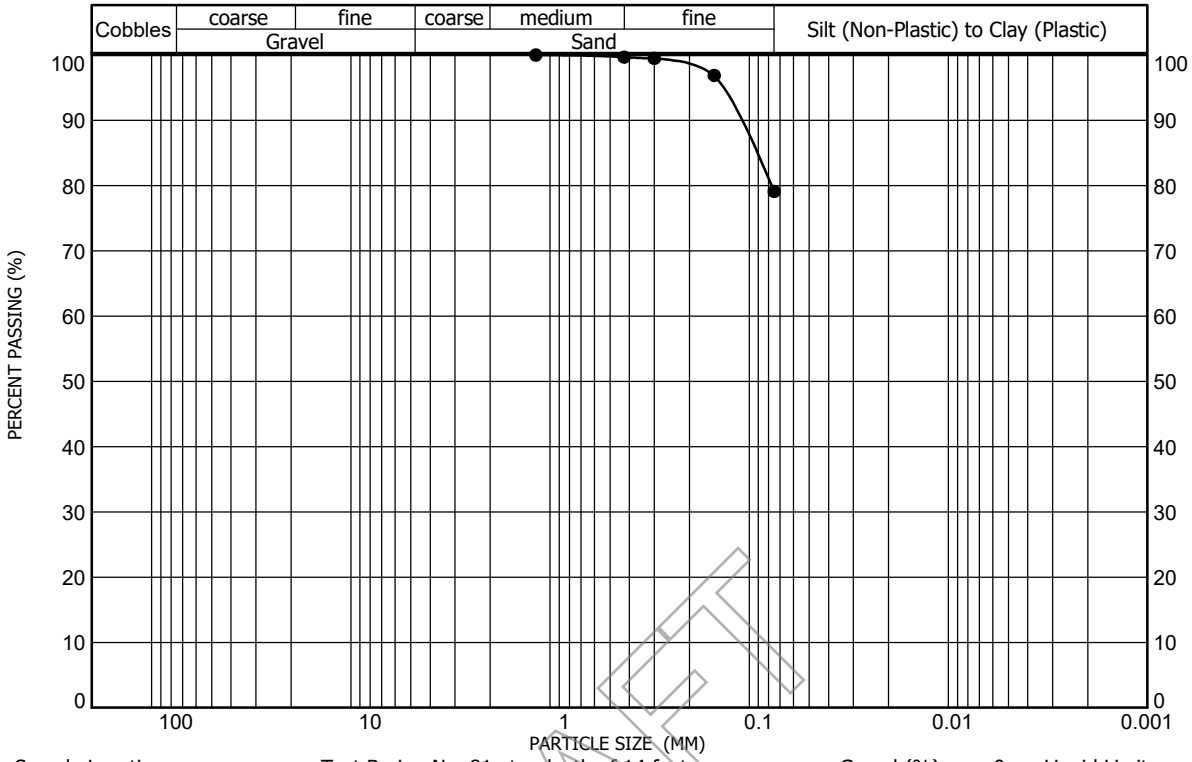
Sample Location: Test Boring No. 81 at a depth of 2 feet
Sample Description: Sand, very clayey, trace gravel (lens)
Classification: A-6(2), CLAYEY SAND(SC)

Gravel (%): 1
Sand (%): 57
Clay/Silt (%): 43
Liquid Limit: 26
Plasticity Index: 13

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-123

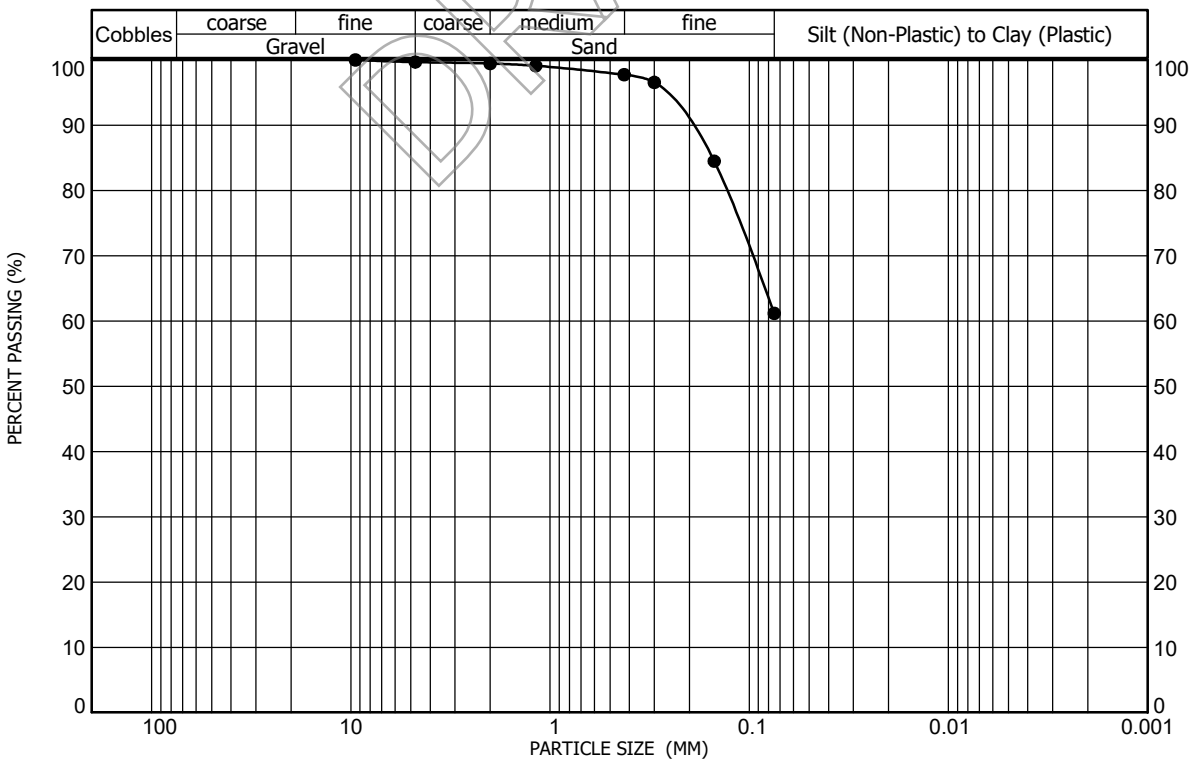
PROJECT NO. 213216

AGW
A.G. WASSENAAR, INC.



Sample Location: Test Boring No. 81 at a depth of 14 feet
Sample Description: Silt, sandy (lens)
Classification: A-4(0), SILT with SAND(ML)

Gravel (%): 0 | Liquid Limit: NV
Sand (%): 21 | Plasticity Index: NP
Clay/Silt (%): 79



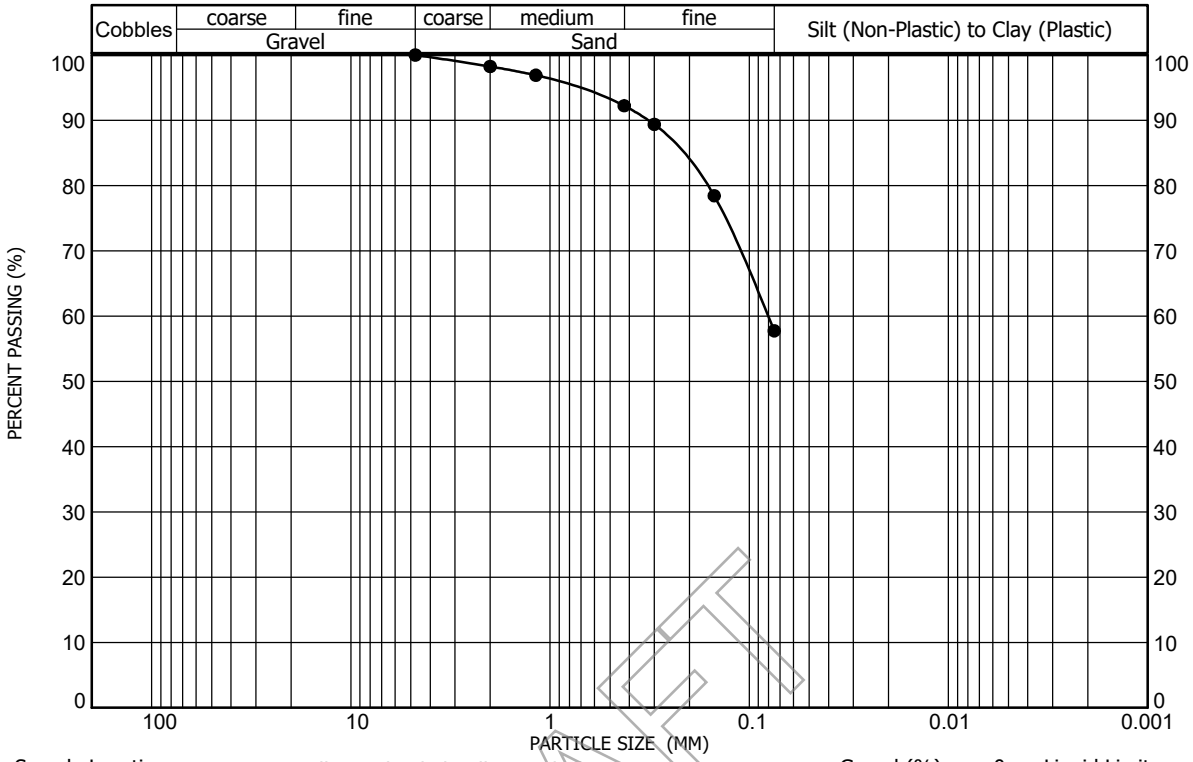
Sample Location: Bulk 1 - Blended Bulk Sample from Test Borings
Sample Description: Clay, very sandy
Classification: A-4(4), SANDY LEAN CLAY(CL)

Gravel (%): 0 | Liquid Limit: 27
Sand (%): 39 | Plasticity Index: 10
Clay/Silt (%): 61

GRADATION AND ATTERBERG TEST RESULTS

FIGURE A-124

PROJECT NO. 213216



Sample Location: Bulk 2 - Blended Bulk Sample from Test Borings
Sample Description: Clay, very sandy
Classification: A-4(3), SANDY LEAN CLAY(CL)

Gravel (%): 0
Sand (%): 42
Clay/Silt (%): 58

Liquid Limit: 26
Plasticity Index: 9

GRADATION AND ATTERBERG TEST RESULTS
FIGURE A-125

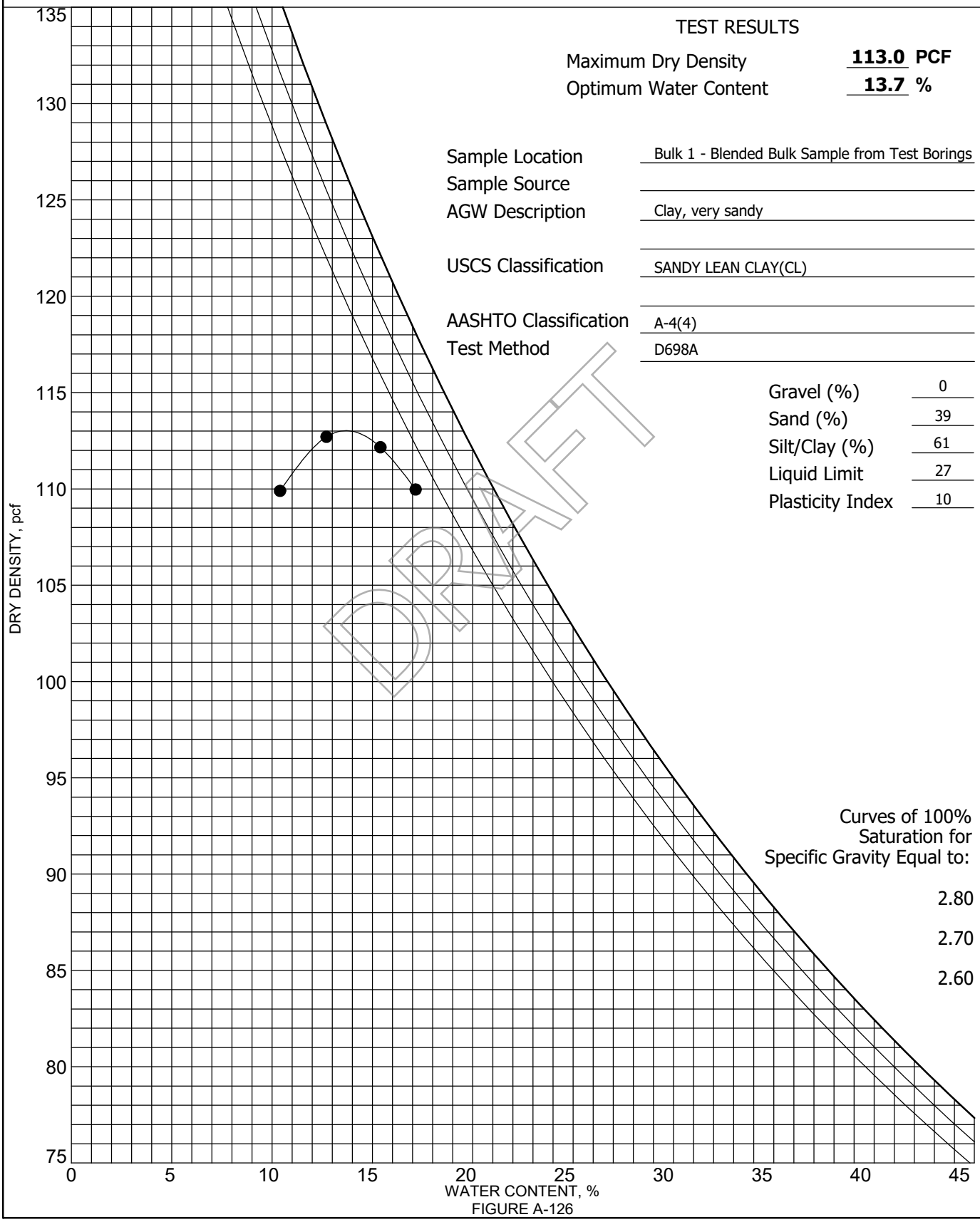
PROJECT NO. 213216

MOISTURE-DENSITY RELATIONSHIP

A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



TEST RESULTS

Maximum Dry Density	**113.0** PCF
Optimum Water Content	**13.7** %

Sample Location	Bulk 1 - Blended Bulk Sample from Test Borings
Sample Source	
AGW Description	Clay, very sandy
USCS Classification	SANDY LEAN CLAY(CL)
AASHTO Classification	A-4(4)
Test Method	D698A

Gravel (%)	0
Sand (%)	39
Silt/Clay (%)	61
Liquid Limit	27
Plasticity Index	10

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

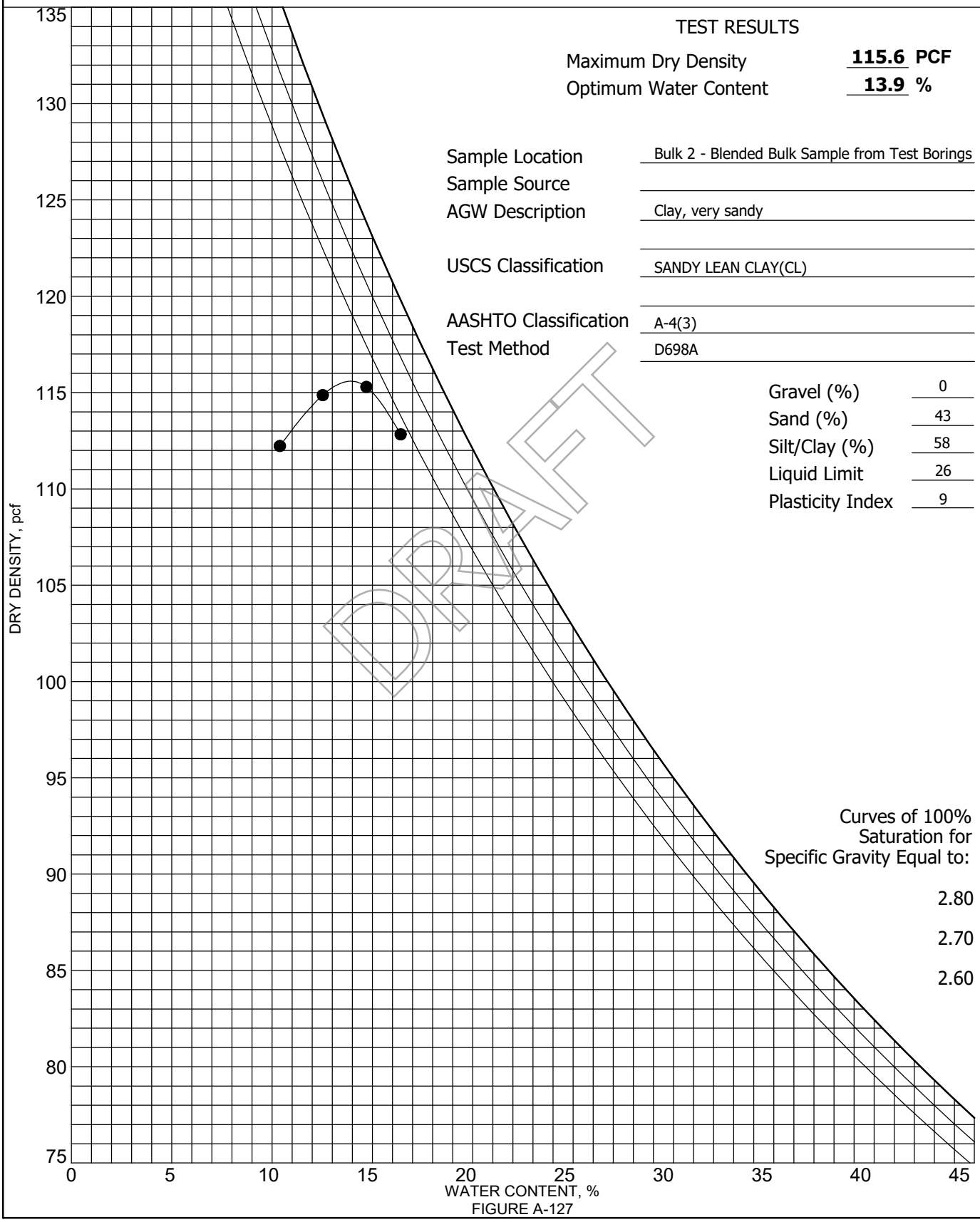
FIGURE A-126

MOISTURE-DENSITY RELATIONSHIP

A.G. WASSENAAR, INC.

CLIENT Richmond American Homes of Colorado, Inc. **PROJECT NAME** Parkdale, Filing 6

PROJECT NUMBER 213216 **PROJECT LOCATION** Erie, Colorado



TEST RESULTS

Maximum Dry Density	**115.6** PCF
Optimum Water Content	**13.9** %

Sample Location	Bulk 2 - Blended Bulk Sample from Test Borings
Sample Source	
AGW Description	Clay, very sandy
USCS Classification	SANDY LEAN CLAY(CL)
AASHTO Classification	A-4(3)
Test Method	D698A

Gravel (%)	0
Sand (%)	43
Silt/Clay (%)	58
Liquid Limit	26
Plasticity Index	9

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

FIGURE A-127

APPENDIX B
SPECIFICATIONS FOR PLACEMENT OF FILL

APPENDIX B
SPECIFICATIONS FOR PLACEMENT OF FILL

General
AGW, as the Client's representative, should observe fill placement and conduct tests to determine if the materials placed, methods of placement, and compaction are in reasonable conformance with these specifications. Specifications presented in this Appendix are general in nature. They should be used for construction except where specifically superseded by those presented in the attendant geotechnical study.

For the purpose of this specification, structural areas include those areas that will support constructed appurtenances (e.g., foundations, slabs, flatwork, pavements, etc.) and fill embankments or slopes that support significant fills or constructed appurtenances. Structural areas will be as defined by AGW.

Fill Material
Fill material should consist of on or off-site soils which are relatively free of vegetable matter and rubble. Off-site materials should be evaluated by AGW prior to importation. No organic, frozen, perishable, rock greater than 6 inches, or other unsuitable material should be placed in the fill. For the purpose of this specification, cohesive soil is defined as a mixture of clay, sand, and silt with more than 35% passing a U. S. Standard #200 sieve and a Plasticity Index of at least 11. These materials will classify as an A-6 or A-7 by the AASHTO Classification system. Granular soils are all materials which do not classify as cohesive.

Preparation of Fill Subgrade
Vegetation, organic topsoil, any existing fill, and any other deleterious materials should be removed from the fill area. The area to be filled should then be scarified, moistened or dried as necessary, and compacted to the moisture content and compaction level specified below prior to placement of subsequent layers of fill.

Placement of Fill Material
The materials should be delivered to the fill in a manner which will permit a well and uniformly compacted fill. Before compacting, the fill material should be properly broken down, mixed, and spread in approximately horizontal layers not greater than 8 inches in loose thickness.

Moisture Control
The material must contain uniformly distributed moisture for proper compaction. The Contractor will be required to add moisture to the materials if, in the opinion of AGW, sufficient and uniform moisture is not present in the fill. If the fill materials are too wet for proper compaction, aerating and/or mixing with drier materials will be required.

Moisture content should be controlled as a percentage deviation from optimum. Optimum moisture content is defined as the moisture content corresponding to the maximum density of a laboratory compacted sample performed according to ASTM D698 for cohesive soils or ASTM D1557 for granular soils. The moisture content specifications for the various areas are as follows:

		Cohesive Soils	Granular Soils
1.	Beneath Structural Areas:	0 to +4%	−2 to +2%
2.	Beneath Non-Structural Areas:	−3 to +3%	−3 to +3%
3.	Moisture Treated Fill:	0 to +4%	−2 to +2%

Compaction

When the moisture content and conditions of each layer spread are satisfactory, the fill should be compacted. Laboratory moisture-density tests should be performed on typical fill materials to determine the maximum density. Field density tests must then be made to determine fill compaction. The compaction standard to be utilized in determining the maximum density is ASTM D698 for cohesive soils or ASTM D1557 for granular soils. The following compaction specifications should be followed for each area:

1.	Beneath Structural Areas:	95% of Maximum Dry Density
2.	Beneath Non-Structural Areas:	90% of Maximum Dry Density
3.	Moisture Treated Fill:	95% of Maximum Dry Density

If the fill contains less than 10% passing the No. 200 sieve, it may be necessary to control compaction based on relative density (ASTM D2049). If this is the case, then compaction around the structures and beneath walkway or other slabs should be to at least 70% relative density, and compaction beneath foundations and vehicle supporting should be to at least 80% relative density.

Deep Fills

In areas where fill depths exceed 20 feet beneath structural areas, additional compaction considerations will be required to reduce fill settlement. Fill placed within 20 feet of final overlot grade should be compacted as required above. Deeper fills should be compacted to 100% of maximum dry density at a moisture content of ±2% of optimum moisture content. Relative density of at least 85% will be required when necessary.

Responsibility

Any mention of essentially full-time testing and observation does not mean AGW will accept responsibility for future fill performance. AGW shall not be responsible for constant or exhaustive inspection of the work, the means and methods of construction or the safety procedures employed by Client's contractor. Performance of construction observation services does not constitute a warranty or guarantee of any type, since even with diligent observation, some construction defects, deficiencies or omissions in the Contractor's work may occur undetected. Client shall hold its contractor solely responsible for the quality and completion of the project, including construction in accordance with the construction documents. Any duty hereunder is for the sole benefit of the Client and not for any third party, including the contractor or any subcontractor.

MINE SUBSIDENCE ASSESSMENT

Erie Assemblage, 225.3418 Acres
Section 36 Township 1 North, Range 69 West,
Erie, Colorado

Prepared For:
E5X Management
7353 South Alton Way, Suite A-100
Englewood, Colorado 80112

WESTERN ENVIRONMENT AND ECOLOGY, INC.

2217 West Powers Avenue
Littleton, Colorado 80210
phone (303) 730-3452
fax (303) 730-3461
www.westernenvironment.com

MINE SUBSIDENCE ASSESSMENT

Erie Assemblage, 225.3418 Acres
Section 36 Township 1 North, Range 69 West,
Erie, Colorado

Prepared For:
E5X Management
7353 South Alton Way, Suite A-100
Englewood, Colorado 80112

Project Number 701-001-01

January 18, 2016
(Revised April 18, 2016)
(Revised June 12, 2017)
(Revised September 24, 2019)

Prepared By:

Greg D. Sherman, P.G.
President

WESTERN ENVIRONMENT AND ECOLOGY, INC.
2217 West Powers Avenue
Littleton, Colorado 80120
phone (303) 730-3452
fax (303) 730-3461
www.westernenvironment.com

TABLE OF CONTENTS

FIGURES:

1.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of the following mine subsidence assessment of 225.3418 acres in Section 36, Township 1 North, Range 69 West, and referenced in this report as the Erie Assemblage, Western Environment and Ecology, Inc. (Western Environment) presents the following:

- There is no record of any mining occurring beneath the Erie Assemblage Property.

Based upon these conclusions, **No Mine Subsidence Related Development Restrictions** are required. However, Western Environment would recommend, without additional investigations, no structures with maximum foundation lengths greater than 60 feet occur within 116 feet of the limit of the Mitchell and Simpson Mines, as shown on Figure 2. Additionally, we recommend no construction within 175 feet of the limit of the Irvington Mine (Figure 2) without additional investigations. No mine subsidence related development restrictions are required outside of the 0% strain line which is 226 feet from the limit of the Mitchell and Simpson Mines.

2.0 INTRODUCTION

Western Environment & Ecology, Inc. (Western Environment) was retained by Mr. Corey Elliot of E5X Management, to conduct a mine subsidence assessment of approximately 225.3418 acres in Section 36, Township 1 North, Range 69 West, Erie, Colorado. This site is referred to as the Erie Assemblage.

The purpose of this assessment is to evaluate the subsidence potential of the property and if the proposed PUD development is appropriate. No drilling was performed for this assessment. However, the results of several adjacent mine subsidence investigations performed by Western Environment personnel, were used in this evaluation.

Western Environment has completed subsidence investigations on several properties adjacent to the proposed Erie Assemblage Project. These investigations were presented in reports entitled: *Subsidence Potential Lafayette Park Subdivision,* dated January 1984: *Summary Report, Mine Subsidence Investigation Erie Commons Subdivision,* dated September 16, 2004*: Preliminary Mine Subsidence Investigation, Pratt Property,* dated September 19, 2014: and *Mine Subsidence Investigation, Vista Ridge Development,* dated March 1, 2001. Data acquired from these studies were utilized to evaluate the subsidence potential of the proposed Project. The results of the referenced assessments have been submitted to the Colorado Geological Survey (CGS) for review, and as such, are public information.

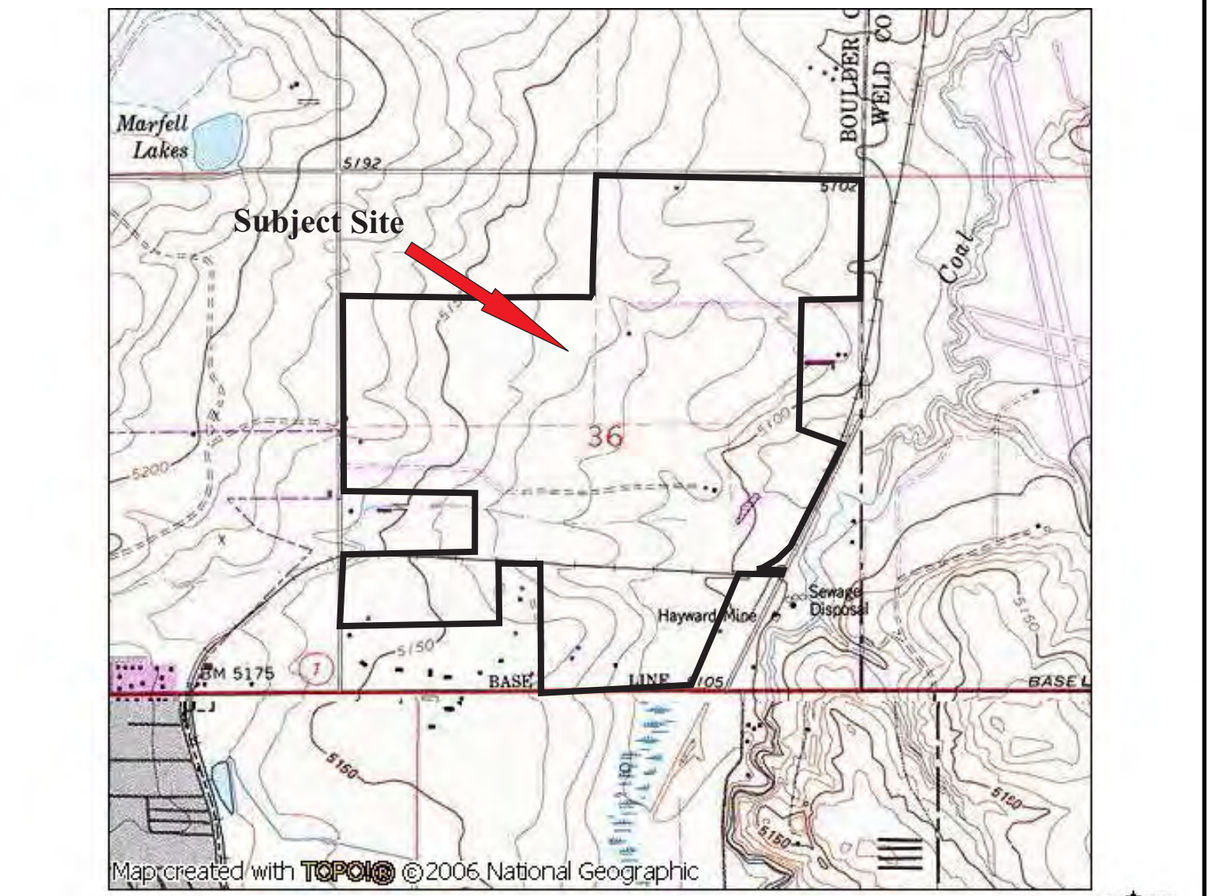
The conclusions and recommendations contained within this report are intended for use as an aid in planning and design. The information herein must be made available to the project geotechnical and structural engineers. Additionally, this report should accompany the site development plan when submitted to the Town of Erie. The Town will request that the Colorado Geological Survey review and comment on this subsidence investigation. Following these procedures will aid in assuring a more predictable and thus economic development process.

3.0 SITE CHARACTERISTICS

This mine subsidence investigation was conducted for 225.3418 acres in Section 36, Township 1 North, Range 69 West, Erie, Colorado (Figure 1). At the time of the assessment, the site was vacant agricultural property. Three farmsteads are located in the southwest portion of the project and three petroleum production facilities occur on the project. The property is located west of the Erie Air Park which is a combined general aviation airport, commercial and single family estate residential development. Agricultural property surround the site to the north and west. Residential estates are located to the south. The Lafayette sewage treatment plant and a mini storage facility occur to the southeast and northeast respectively of the project. The Erie Assemblage Project in located northwest of the intersection of Colorado State Highway 7 and County Line Road (Figure 2). The site is relative flat with an elevation of 5,125 (USGS Erie 7.5 Minute Quadrangle, 1979).

The abandoned coal mines that are located near the project are referenced in the files of the Colorado Geological Survey as the Mitchell, Simpson and Irvington. Additionally, the Excelsior and Gladstone shafts have production records on file with the CGS. However, research by Western Environment has determine that these shafts have been incorporated into the Simpson Mine. A detailed description of the mine is presented in Section 4.0.

View to west toward the Mitchell Mine, 119th Street in the foreground

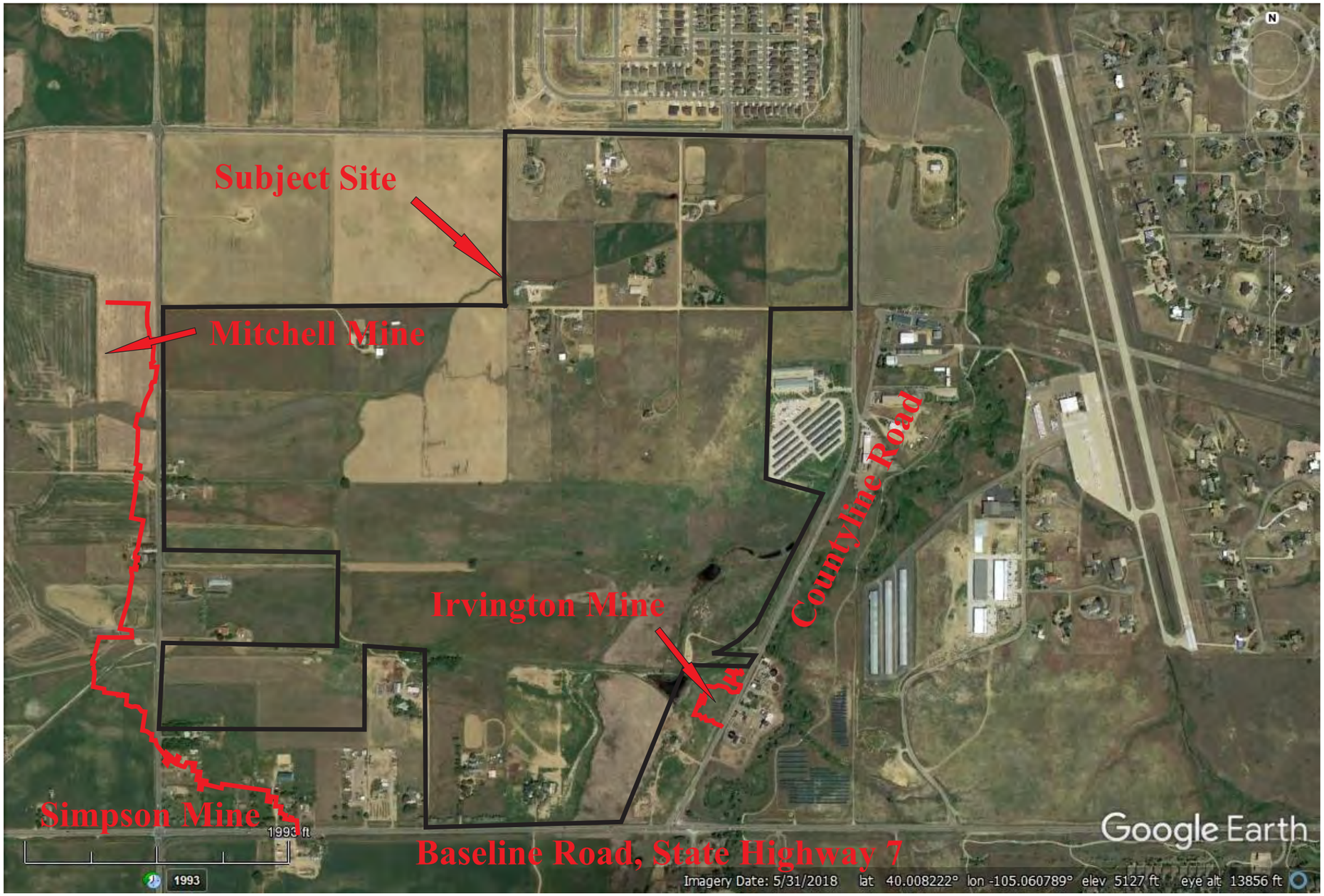


NATIONAL GEOGRAPHIC

0.0 0.5 1.0 miles
0.0 0.5 1.0 1.5 km

TN MN
8½°
01/14/16

WESTERN ENVIRONMENT AND ECOLOGY, INC. 2217 West Powers Avenue Littleton, Colorado 80120	Figure 1 - Project Location Map Erie Assemblage Project Section 36, Township 1 North, Range 69 West Erie, Colorado



Approximate Scale in feet

0 2000

WESTERN ENVIRONMENT
AND ECOLOGY, INC.
2217 West Powers Avenue
Littleton, Colorado 80120

Figure 2 - Mine Location Map
Erie Assemblage Project
Section 36, Township 1 North, Range 69 West
Erie, Colorado

4.0 COAL MINE DESCRIPTION

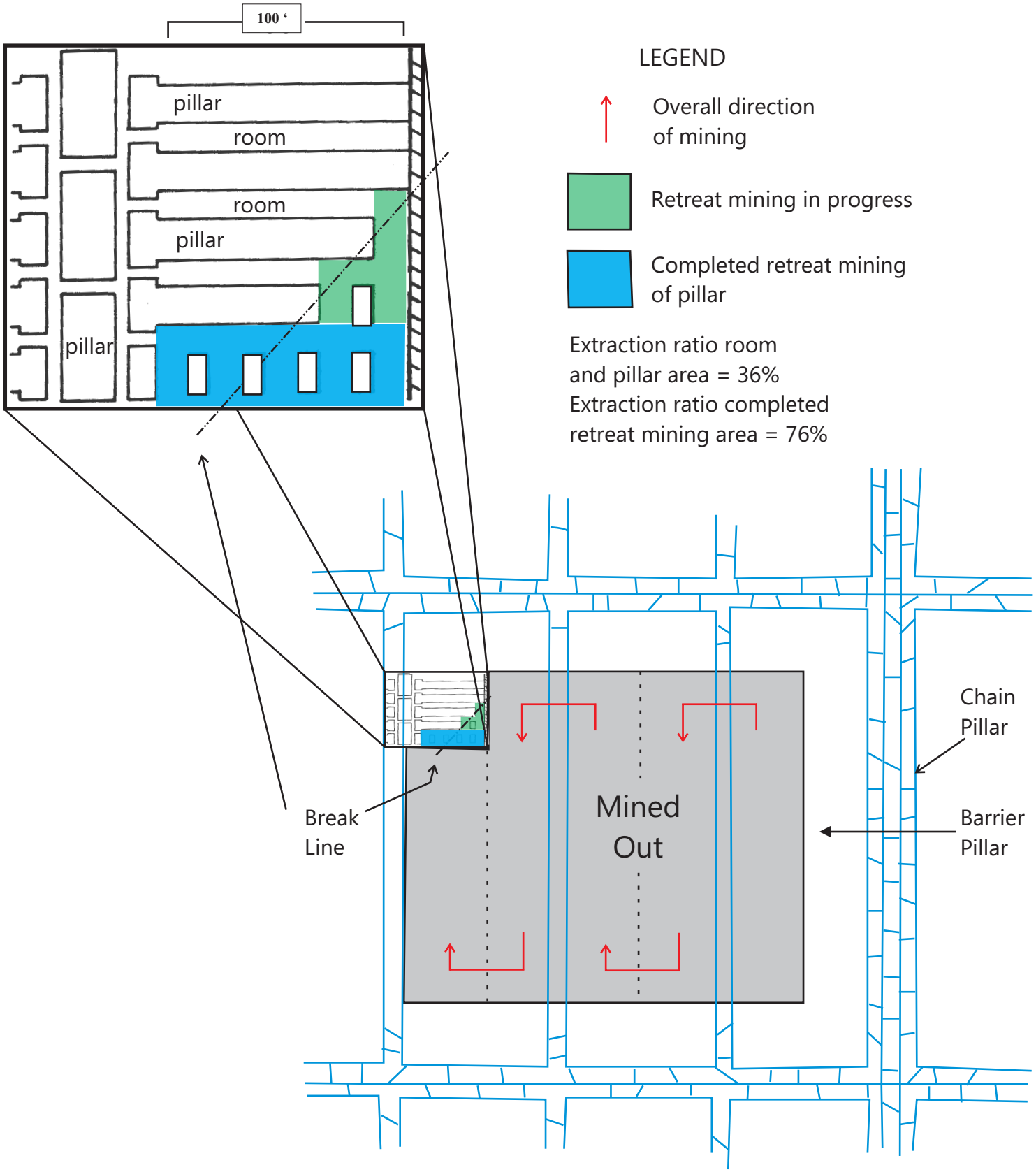
Several mines operated near the Erie Assemblage Project. Records maintained by the Colorado Division of Mines and the Colorado Geologic Survey show the Mitchell Mine began operation in 1893 and continued until 1920. Total production from the operation was placed at 1,295,229 tons. Entry to the mine was gained via a two compartment vertical shaft 222 feet deep, located approximately 1,200 feet southwest of the property. A single air shaft is located 250 feet north northwest of the "main" shaft. The Rocky Mountain Fuel Company was the last operator of record.

The Simpson Mine produced from 1889 to 1927. The total production was 4,125,693 tons making this operation one of the largest in the Boulder/Weld Coal Field. The main and air shafts, which are 240 feet in depth, are located approximately 4,500 feet southwest of the Erie Assemblage Project. This mine was also last operated by the Rocky Mountain Fuel Company.

Located to the southeast of the subject site is the Irvington Mine. It is also referenced as the Baker and Haywood Mine. Total production of 10,626 tons occurred between 1888 and 1909. No record of the depth of the main shaft is available. However, review of the adjacent Parkdale Mine map indicate that the depth to the mine varied from 250 feet in southern portions of Section 31 to 168 feet beneath Section 36. The Irvington Mine main shaft is located 750 southeast of the subject property.

All of these mines are classified as a modified room and pillar operation mine. The "pillar retreat" method was utilized during the operation. Haulage ways were ten feet wide and were separated by 30 foot wide "chain pillars". Rooms had approximate widths of fifteen feet and lengths of 100 to 150 feet. Western Environment has determined that coal extraction rates were approximately 70%.

Western Environment has researched the mining methods utilized in the Boulder/Weld mines. In the report entitled "A Study of Falls of Roof and Coal in Northern Colorado" Tomlinson (1933) describes the mining method used in five operating mines "*The room and pillar and panel methods of mining are employed. Pairs of room entries are advanced to a predetermined point, and rooms in sets of two to four are turned from one room entry or in some places from both entries. Room pillars are recovered immediately after the rooms have been advanced for the required distance, and a uniform break line maintained with each group of retreating pillars.*" This method of retreat mining is illustrated on Figure 3.



Literature Cited: Gray, Richard E. and Robert W. Bruhm, Coal Mine Subsidence - Eastern United States. Geological Society of America, Volume VI, 1984. And Tomlinson, H., "A Study of Falls of Roof and Coal In Northern Colorado", Dept. of Commerce, U.S. Bureau of Mines, Report of Investigations 3199, Jan., 1933.

Western environment and ecology, inc.
2217 West Powers Avenue
Littleton, Colorado 80120

Figure 3 - Pillar Retreat Method for Coal Mining
Section 36, T1N, R69W
Erie, Colorado

5.0 REGIONAL GEOLOGY

5.1 Outcropping Units

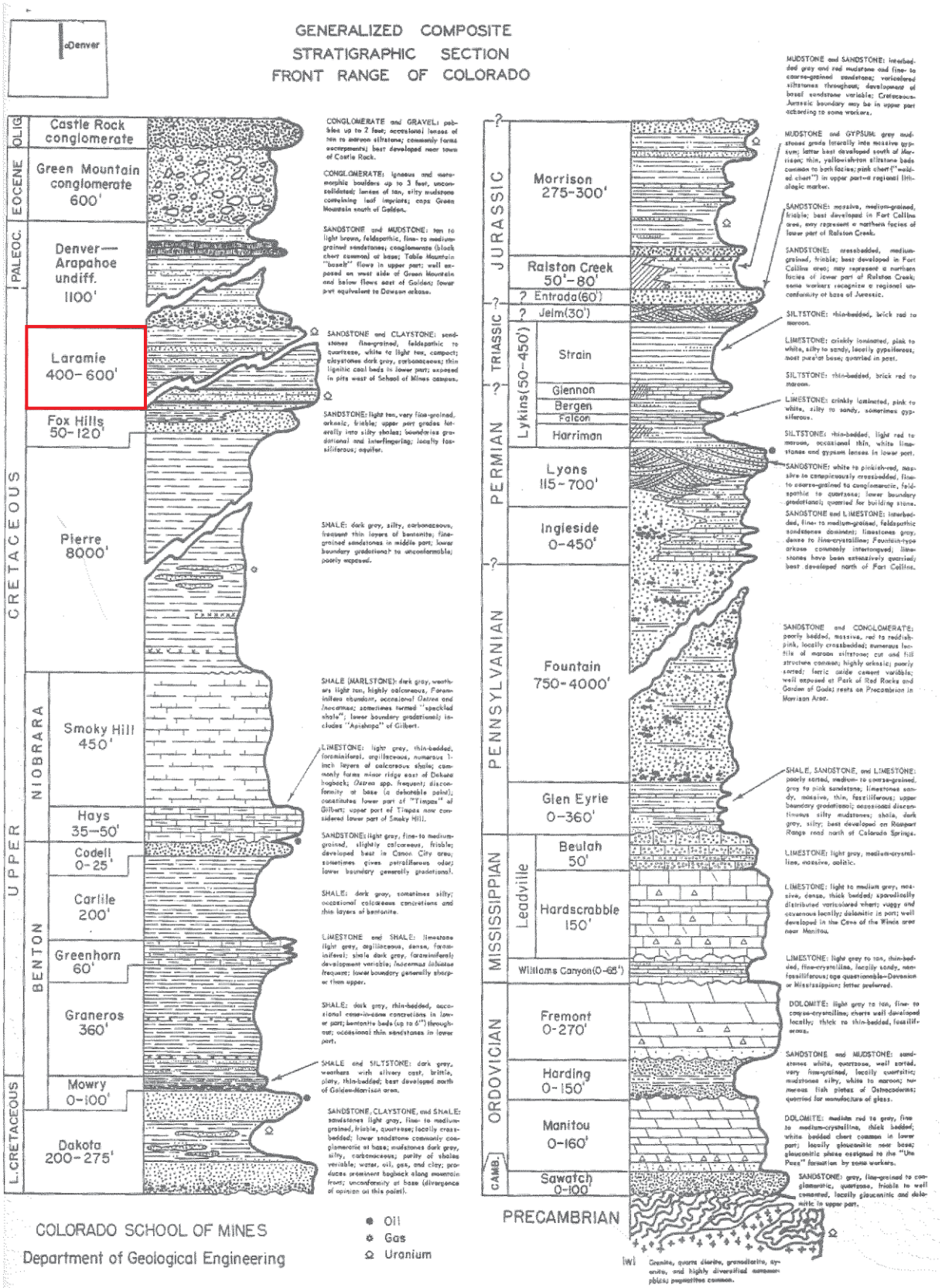
Outcropping units within and surrounding the Erie area are the Pierre Shale, the Fox Hills Sandstone, the Laramie Formation and Quaternary gravels and soils (Figure 4).

The Pierre Shale is a lead gray to brown and black shale of marine origin. Total thickness in the area is greater than 7,000 feet (Blair 1951), with the majority of the formation made up of shale. Near the top of the Pierre Shale it becomes increasingly sandy and contains beds of fine sandstones and siltstones as it grades into the Fox Hills Sandstone. This unit does not outcrop on the site but can be seen northeast of the project on the east side of the Town of Erie. The Fox Hills Sandstone is a massive to crossbedded sandstone. It was deposited in a beach and/or delta-front environment and comfortably overlies the Pierre Shale. The lower two-thirds of the formation is a fine to coarse grained, bluff colored sandstone which weathers to a light tan to tan color. The Fox Hills Sandstone contains numerous iron colored calcareous concretions, ranging in size from fractions of an inch to several feet. The upper one-third of the Fox Hills Sandstone is a fine to medium grained, light gray to pale yellow in color, crossbedded sandstone. The total thickness of the formation near this location is about 140 feet as measured in the NW 1/4 of Section 28, T1S, R70W. Thickness varies from 60 feet near Ralston Creek (Van Horn, 1957) to 250 feet near Baseline Reservoir.

The Laramie Formation, which directly underlies the site, is predominantly a fresh water deltaic sequence, consisting of clays, sands, silts and coals (Figure 4). The lower portion is approximately 100 feet thick and is composed of sandstones, sandy shales, claystones, and coal beds. These coals have been economically mined in the past. The upper unit has a thickness of approximately 600 feet and is made up of mostly clay shales, very fine sandy shales, and lenticular beds of sandstone. The shales are largely carbonaceous and in places becomes lignitic. The Laramie Formation lies comfortably on the Fox Hills Sandstone.

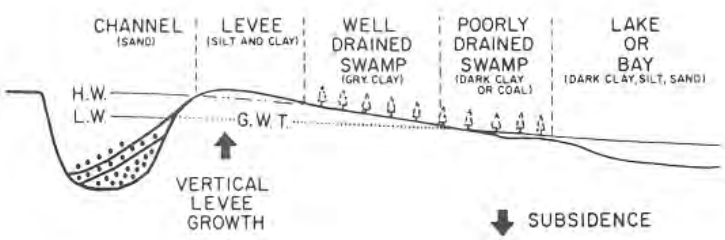
5.2 Structure

The subject property lies on the western edge of the Denver-Julesberg Basin against the Front Range Uplift. This basin contains up to 13,000 feet of sediments derived from the ancestral Rockies which laid to the west. Two kinds of faulting occur in this portion of the basin. A basement-controlled late Cretaceous Laramide faulting is the most prevalent and is the result of deformation

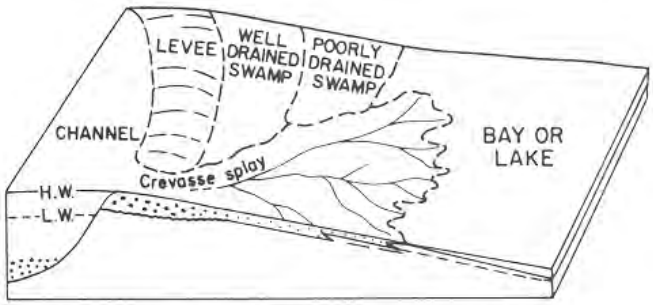


Western environment and ecology, inc.
2217 West Powers Avenue
Littleton, Colorado 80120

Figure 4- Generalized Stratigraphic Section,
Section 36, T1N, R69W
Erie, Colorado

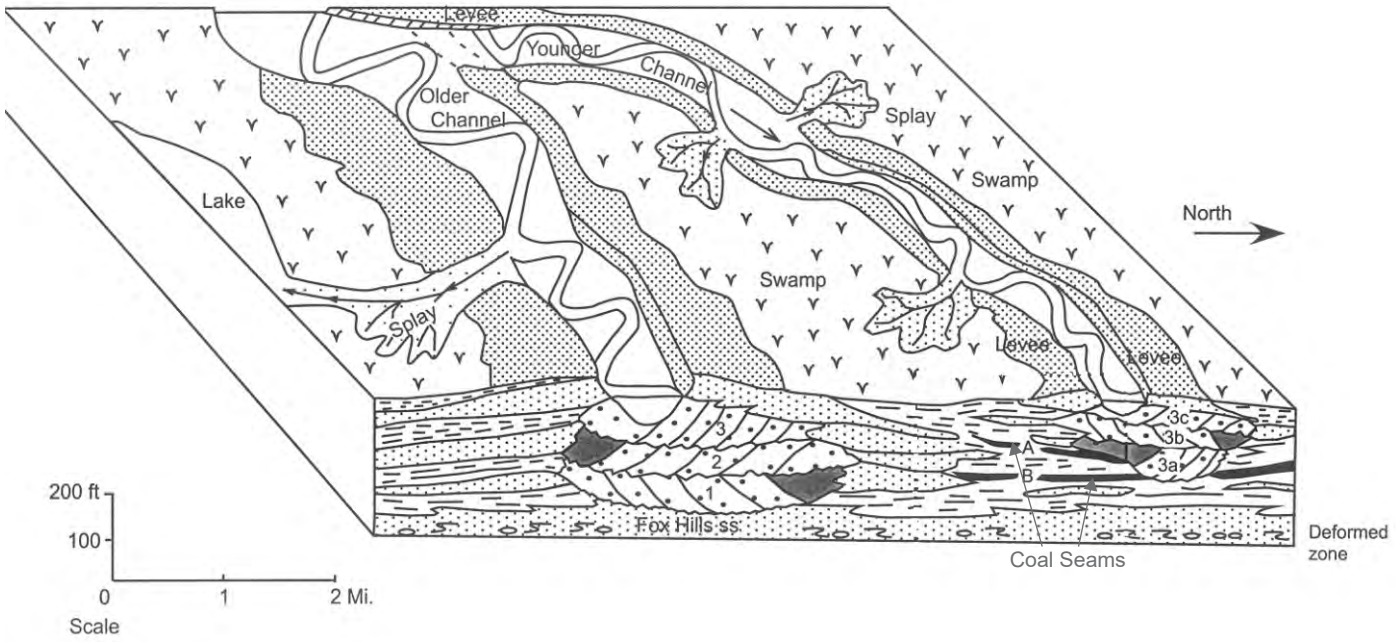


Channel and channel margin environments for lithologies in Laramie Formation.



LARAMIE ENVIRONMENTS OF DEPOSITION

Relationship of channel margin environments to crevasse splay deltas.



Figures from: A Guide to the uppermost Cretaceous stratigraphy, central Front Range Colorado, deltaic sedimentation, growth faulting and early Larimde vertical Movement
Weimer, R.J. 1973

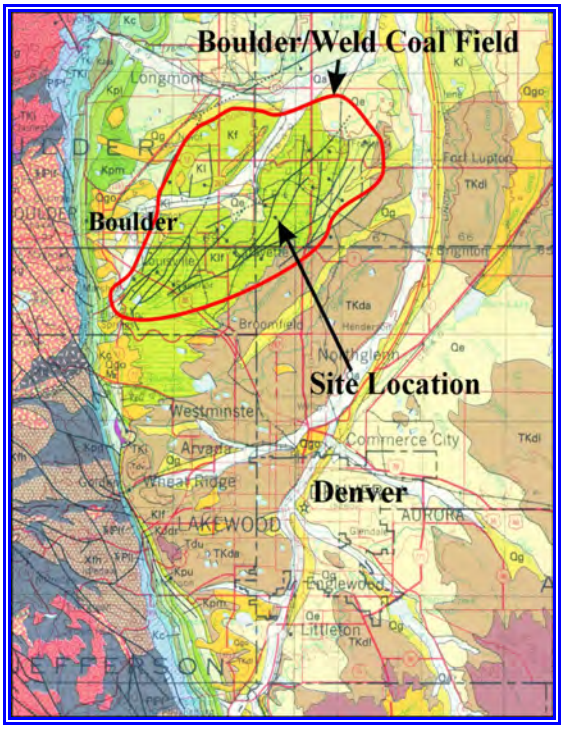
Western environment and ecology, inc.
2217 West Powers Avenue
Littleton, Colorado 80120

Figure 5 - Generalized Stratigraphic Models of the Laramie Formation, Section 36, T1N, R69W Erie, Colorado

associated with uplift. The second basin has been described by Davis and Weimer (1976) as growth-faulting as a result of differential loading of the deltaic sequence at the time of deposition.

Growth faulting is the major structural feature seen in the area. A zone is present with dominant faults trending in a northeasterly direction. This system is ten miles wide and thirty miles long. These faults are high-angle, normal structures near the surface, but seismic work has shown that they tend to flatten and die out at depth. Work by Davis and Weimer (1976) shows that these listric normal faults do not continue below the Hygiene Member of the Pierre Shale. Antithetic faults resulting from tension then form horsts and grabens. This effect had resulted in the increased thickness of sediments in the graben areas. The Fox Hills Sandstone has been reported to have a thickness near a growth fault of 484 feet (Spencer, 1961). The Laramie Formation also has increased thickness in these zones and this is believed to be the reason for the increased thickness of the coal seams in the Boulder-Weld coal field.

However, recently investigators have recognized low angle reverse faults in the Boulder-Weld area. Kittleson (The Origin of the Boulder-Weld Fault Zone, East of Boulder, Colorado: The Mountain Geologist, January 2009 Volume 46 Number1) describes the Longmont Detachment and identifies the Romero Fault as the footwall to the Detachment. These detachments are analogous to landslides, on a vastly larger scale, and occur in rocks exhibiting incomplete lithification.



Front Range geology, from Tweto, 1979

6.0 SITE GEOLOGY

Five distinct geologic units were encountered during drilling on adjacent projects, no drilling has been performed on the Erie Assemblage Project and variations to the following description are likely. The first and uppermost unit is a sandy clay soil approximately 5 feet thick. The next lower unit which has a gradational contact with the surficial soils, consists of light brown, medium to fine-grained sands and silts, possibly of aeolian origin. These sands and silts occur between 5 and 10 feet in depth and average approximately 5 to 8 feet thick. Their composition, like the surficial soils, are highly variable. Beneath the aeolian deposits, are water saturated clays, sands and gravels ranging from 10 to 20 feet in thickness.

The next unit likely to be encountered are the clays, silts, fine-grained sands and coals of the Cretaceous-age Laramie Formation. The contact between the Laramie Formation and the recent deposits occurred between 15 and 40 feet in depth. The first coal encountered was between 70 to 100 feet beneath the surface and averaged approximately 5 feet thick. The lower seam, which is likely correlative to the main seam for the Mitchell, Simpson and Irvington Mines, was penetrated between 170 to 220 feet on the adjacent Lafayette Park Subdivision property. This seam averaged approximately 5.5 feet thick beneath Lafayette Park.

The lowest stratigraphically significant unit identified is the Laramie/ Fox Hills Formation. It's depth, in those holes which intersected the contact, ranged between 200 to 240 feet. This would indicated the Laramie/Fox Hill contact would be at approximately 240 feet beneath the Erie Assemblage Project.. The upper Fox Hills Formation is characterized by light gray fine to very fine-grained quartzose sandstone.

7.0 THEORETICAL SURFACE STRAINS

Western Environment has concluded that **no undermining is present beneath the Erie Assemblage Project**, as shown on Figure 2. However, damage from mine subsidence can occur outside of the limits of the mine (Brauner, G., 1973). To provide a conservative assessment of potential subsidence, we choose to assume that collapse of the Mitchell and Simpson Mines would approximate what would occur immediately after mining.

By incorporating the geologic conditions identified during investigations performed on the Lafayette Park projects; which included average seam thickness of **5.0 feet**, working width (room length) **150 feet** and a depth to the top of the mine of **215 feet**, with the British National Coal Board (NCB) Graphical Strain Profiling System, the maximum surface subsidence is 2.4 feet. This amount of subsidence would cause significant surface strains resulting in severe structural damage. However, all surface strain would be confined to within 226 feet (0% Strain line) of the limit of the mine shown on Figure 2.

However, by evaluating the strain profile calculated using the NCB System(attached) surface strains would not be sufficient to cause “appreciable” damage to structures with foundation lengths 60 feet or less at a distance of 116 feet from the limit of mining shown on Figure 2. It is our understanding that the maximum foundation length proposed for the Erie Assemblage Project is 60 feet (email May 25, 2017, from Matt Janke, E5X Management to Greg D. Sherman, Western Environment).

.

8.0 CLOSURE

The recommendations provided herein were developed from the information obtained from field exploration which reflect subsurface conditions only at the specific locations, at the particular times designated. Subsurface conditions at other locations and times may differ from conditions occurring at these locations. The nature and extent of any variations between the drill holes may not become evident until or during the course of construction. If variations then appear, it may be necessary to re-evaluate the recommendations of this report after performing on-site observations during the excavation period and noting the characteristics of any variations.

This report was prepared by a Professional Engineering Geologist, not a Geotechnical Engineer, and should not be construed as, or substituted for, engineering. This report is intended to inform geotechnical and structural engineers working on building design of the potential earth forces that could develop at the site, and to assist the client in determining whether to acquire and develop the site in question.

Our professional services have been performed, our findings, and our recommendations prepared in, accordance with generally accepted geological principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

8.0 SELECTED REFERENCES

Ackenheil, A. C. and Dougherty, M. T., Recent Developments in Grouting for Deep Mines: J. Soil Mechs. and Found. Div., ASCE, 96 No. SM1, 1970 pg. 251-261.

Amuedo and Ivey, 1975, Coal Mine Subsidence and Land Use in the Boulder-Weld Coalfield, Boulder and Weld Counties, Colorado: Colorado Geological Survey EG-9

Averitt, P., and Lopez, L., 1972, Bibliography and index of U.S. Geological Survey Publications relating to coal 1882-1970: U.S. Gel. Survey Bull. 1377, 173 p.

Babcock, S.D., 1973, Undermining as an element in land use planning (M.S. Thesis): Edwardsville, Southern Illinois Univ., 84 p.

Bell, F.G., 1975, Site Investigations in Areas of Mining Subsidence

Bieniawski, Z.T. 1968 "The Effect of Specimen Size on the Compressive Strength of Coal" International Journal or Rock Mechanic Science 5:325-335,.

Blair, R.W., 1951, Subsurface geological cross sections of Mesozoic rocks in northeastern Colorado: U.S. Gel. Survey Oil & Gas Inv. Chart OC-42.

Brauner, G., 1973, Subsidence due to underground mining (in 2 parts) 1. Theory and Practices in predicting surface deformation: U.S. Bur. of Mines Inf. Circ. 8751, 56 p.

____,1973, Subsidence due to underground mining (in 2 parts) 2. Ground movements and mining damage: U.S. Bur. of Mines Inf. Circ. 8572, 53 p.

Candeub, Fleissig and Associates, 1971, Demonstration of a technique for Limiting the subsidence of land over abandoned mines, NTIS Tech. Rept. P.B. 212708, 57 p.

_____,1973, Demonstration of a technique for limiting the subsidence of land over abandoned mines, final report: City of Rock Springs, WY. 28 p.

Chen and Associates, Inc., 1979, Preliminary Coal Mine Subsidence Evaluation Three Reservoir Sites, Boulder and Weld Counties, Co., 10 p.

Colorado Division of Mines, 1973, Coal 1973: Co. Div. Mines Inspection Div., 28 p.

Colorado Springs Planning Dept., 1967, Mining Report, Colorado Springs coalfield, a guide for future land use: Colorado Springs Planning Dept., Gel. Sec., IO p.

Colorado State 1963 Coal Mining Laws: State of Colorado, revised statutes, chap. 92, pt. 1, arts. p I-12, sec. 1, 124 p.

Colton, R.B., and Lowrie, R.L., 1973, Map showing mined areas of the Boulder-Weld coalfield, Co.: U.S. Goel. Sur. Misc. Field Studies Map, MF-513.

Davis, T., and Weimer, R-J., 1976, Late Cretaceous Growth faulting, Denver Basin, Co.: Prof Contributions of Colorado School of Mines, 21 p.

Dunrud, C.R., and Barnes, B.K, 1972, Engineering Geologic map of the Geneva Mine Area, Carbon & Emery Counties, Ut.: U.S. Geol. Sur. Misc. Geol. Inv. Map 1-704.

Flaschentrager, H, 1958, Consideration on ground movement phenomena: Colliery Eng., v. 35, no. 8, p. 342-350 and no. 391-398.

Galvin, J.M.1995, “Roadway and Pillar Mechanics Workshop” 1995 University of New South Wales, Australia.

Gillen, G., 1974, When Coal Was King: Focus Magazine in Boulder Daily Camera, March 24, 1974, p.3-6.

Grosvenor, N.E., 1964, Coal Mines of Colorado, Adams County (map): Colorado School of Mines Found., Golden, Co.

_____,1964, Coal Mines of Colorado, Weld County (2 maps): Colorado School of Mines Found., Golden, Co.

_____,1964, Coal Mines of Colorado, Boulder County (map): Colorado School of Mines Found., Golden, Co.

Hart, Steven S., 1985, History and Evolution of Mining and Mining Methods, in in Proceedings of the 1985 Conference on Coal Mine Subsidence in the Rocky Mountain Region, Colorado Geological Survey Special Publication 31.

Herbert, C.A., and Rutledge, J.J., 1927, Subsidence due to coal mining in Illinois: U.S. Bur. Mines Bull. 238, 59 p.

Holt, R.D., 1972, Bibliography, Coal Resources in Colorado, Geol. Sur. Bull. 34-1, 32 p.

Hornbaker, A.L., and Holt, R.D., 1973, Coal Resources of Colorado, 1972 summary of: Colo. Geol. Sur. Spec. Pub. No. 3, 15 p.

Hutton, T., 1956, Deep hole closes Lafayette street as old mine caves in: Denver Post, May 27, 1956.

King, H.J.., and Whetton, J.T., 1958, Mechanics of Mining Subsidence: Colliery Eng., v. 35, no. 6, p. 247-252 and no. 7, p. 285-388.

Landis, E.R., 1959, Coal Resources of Colorado, U.S. Geol. Sur. Buff. 1072-C, p. 131-232.

Litwiniszyn, J., 1958, The theories and model research of movements of ground masses: Colliery Eng., v. 35, no. 10, p. 438-444.

Lowrie, R.L., 1966, Analysis of the coal industry in Boulder-Weld coalfield Colorado: U.S. Bur. Mines Rept. Inv. 6726, 79 p.

Malde, H.E., 1955, Surficial geology of the Louisville Quad., Colorado: U. S. Geol. Sur. Bull. 996-E, p. 217-257.

Matheson, Gordon M. 1985, Observations on the Location of Chimney Subsidence Sinkhole Development Along the Colorado Front Range, in Proceedings of the 1985 Conference on Coal Mine Subsidence in the Rocky Mountain Region, Colorado Geological Survey Special Publication 31.

Mark, Christopher and Barton, Timothy, 1997, “Pillar Design and Coal Strength” New Technology for Ground Control n Retreat Mining, U.S. Department of Health and Human Services Information Circular 9446,.

Mark, C.1990, “Pillar Design Methods for Longwall Mining” U.S. Bureau of Mines Information Circular 9247

Martin, S.C., 1910, Coal of the Denver Basin, Colorado: U.S.Geol. Sur. Bull. 381-C, p. 297-306.

Mohr, H.F., 1956, Influence of mining on strata: Mine and Quarry Eng., v. 22, no. 4, p. 140-152.

National Coal Board, 1966, Subsidence Engineer's Handbook: Nat. Coal Board Production Dept., London, 118 p.

Oravecz, Kalman I, 1977, Measurements of Surface Displacement Caused by Extraction of Coal Pillars in Large Ground Movements and Structures, J.D. Geddes ed., Wiley and Sons N.Y.

Panek, L.A., 1973, Program for control of surface subsidence: U.S. Bur. Mines Prog. Rept. No. 100 II, 23p.

Perez, W., 195 8, Subsidence observations in Austria: Colliery Eng., v. 3 5, no. I 1, p. 479-482 and no. 12, p. 533-535.

Piggott John, et al., 1977, Ground Movements Arising from the Presence of Shallow Abandoned Mine Workings in Large Ground Movements and Structures, J.D. Geddes ed., Wiley and Sons N.Y.

Robinson, Charles S. & Associates, 1979, Engineering Geology, Centennial Valley, Boulder County, Colo., 42 p. and Appendix A.

Salamon, M.D.G 1991, "Behavior and Design of Coal Pillars" Australian Coal Journal, 32:11-22, 1991.

Scott, G.R., 1962, Geology of the Littleton Quad., Jefferson, Douglas, and Arapahoe Counties, Co., U.S. Geol. Sur. Bull. 1121-L, 53 p.

Sherman, Greg D. 1985, Assessment of Subsidence Related Damage to Structures in Louisville, Lafayette, Colorado, in Proceedings of the 1985 Conference on Coal Mine Subsidence in the Rocky Mountain Region, Colorado Geological Survey Special Publication 31.

Smith, R.O., Schneider, P.A., Jr., and Petri L.R., 1964, Ground water resources of the South Platte River Basin in western Adams and southwestern Weld Counties, Co.: U. S. Geol. Sur. Water supply Paper 1658, 132 p.

Soister, P.E., 1965, Geologic map of the Fort Lupton Quad., Weld and Adams Counties, Co.: U. S. Geol. Sur. Geol. Quad map GQ-397.

_____, 1965, Geologic map of the Hudson Quad., Weld and Adams Counties, Co.: U. S. Geol. Sur. Geol. Quad map GQ-398.

_____,1965, Geologic map of the Platteville Quad., Weld County, Co.: U. S. Geol. Sur. Geol. Quad map GQ-399.

Spencer, F.D., 1961, Geologic map of the bedrock geology of the Louisville Quad., Co.: U.S. Geol. Sur. Geol. Quad map GQ 15 1.

Stefanko, R., 1973, Subsidence and ground movement, in SME Handbook: Soc. Mining Eng., AM. Inst. Mining, Met. & Petr. Eng., Inc. NY, p. 13-2, 13-9.

Terzaghi, K. And Peck, R.B. 1948, Soil Mechanics in Engineering Practice, John Wiley and Sons, N. Y.

Tierra Consultants, Inc., 1982, Geologic Study, Harper Lake Expansion, prepared for Rocky Mountain Consultants, 14 p.

Tomlinson, H., 1933, A Study of Falls of Roof and Coal in Northern Colorado USBM Report of Investigations 3199.

Turbull D., and Potts, E.L.J., 1958, Surface and underground subsidence correlation: Colliery Eng. v. 35, no. 2, p. 65-72.

Van der Merwe, "The Role of Overburden Integrity in Pillar Failure" NIOSH Publication 99-114,1998.

Vesic, A.S. 1970, Foundation Engineering Handbook, Winterkorm and Fang, Van Norstrand Reinhold Company, 1975.

Van Horn, R-, 195 7, Geologic map of the bedrock geology of the Golden Quad., Co.: U.S. Geol. Sur. Geol. Quad map GQ- 103.

Weimer, R.J., 1973, A guide to uppermost Cretaceous stratigraphy, central Front Range, Co.: Mountain Geologist, v. 10, no. 3, p. 53-97.

Wells, J.D., 1967, Geology of Eldorado Springs Quad., Boulder and Jefferson Counties, Co.: U.S. Geol. Sur. Bull. 1221-D, 85 p.

Western Environment and Ecology, Inc. 2004, Summery Mine Subsidence Investigation Erie

Commons, Erie, Colorado.

Western Environment and Ecology, Inc. "Mine Subsidence Investigation, East Winds Village Subdivision", Section 19, Township 2 North, Range 67 West, Firestone, Colorado. Project Number 142-001-01. March 7, 1999.

Western Environment and Ecology, Inc. "Mine Subsidence Investigation, Hemco Property, Section 19, Township 2 North, Range 67 West, Firestone, Colorado. Project Number 151-001-01. May 11, 1999.

Woodhuff, S.D., 1966, Methods of working coal and metal mines, vol. 2, Ground support methods: New York, Pergamon Press, 429 p.

Yinst, P.O., 1960 Coal resources of Colorado: Colorado School of Mines Ind.Bull.,v.3, no.5, 8 p.

Young, C.M., 1917, Percentage extraction of bituminous coal with special reference to Illinios conditions: Univ. of Illinois Eng. Experiment Station Bull. 100, 175 p.

_____,and Stoek, H.H., 1916, Subsidence resulting from mining: Univ. Illinios Eng. Experiment Station Bull. 91, 205 p.

Zwartendyk, J., 197 1, Economic aspects of surface subsidence resulting from underground mineral exploitation (Ph.D. Thesis): University Park, Pennsylvania State Univ., Univ. Microfilms, Ann Arbor, 411 p.

Enter the depth of the mine workings: 215

Enter the width of the mine workings: 150

Enter the total open thickness of the mine workings: 5

Have multiple seams been worked at this mine? (•) No ( ) Yes

Distance From Panel Center:	226	140	116	103	94	79	71	54
Strain (extension) X1000:	0.00	1.57	3.14	4.71	6.27	7.84	6.27	0.00

Distance From Panel Center:	54	49	43	36	30	17	0
Strain (compression) X1000:	0.00	1.91	3.82	5.73	7.64	9.55	7.64

Maximum Subsidence | Subsidence Profile | Strain Profile

Main Menu | Potential Damage | Print

2.4'

Enter the depth of the mine workings: 215

Enter the width of the mine workings: 150

Enter the total open thickness of the mine workings: 5

Have multiple seams been worked at this mine? (•) No ( ) Yes

Distance From Panel Center:	226	105	84	71	62	54	45	39	30	21	0
Subsidence in Feet:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40

Maximum Subsidence | Subsidence Profile | Strain Profile

Main Menu | Potential Damage | Print