



September 4, 2025

Letter No. 226
BY-CRE-03417

Evelyn Pao, P.E., Project Director
Washington State Department of Transportation
18911 N Creek Pkwy S, Suite 150
Bothell, WA 98011

Reference: Contract No.: 9727
I-405, Brickyard to SR 527 Improvement Project

**Subject: Notice of DSC at Wall 23.80R, I-405 Mainline Bridge Abutment 10,
Wall 23.72R, Wall 23.73R, and Wall 23.74R**

Reference: §1-04.7 Differing Site Conditions

Dear Ms. Pao:

Pursuant to Section 1-02.4(1), 1-02.4(2), 1-04.7, 1-08.8, and 1-05.15 of the Design-Build Contract General Provisions, Skanska USA Civil West California District, Inc. ("Skanska") hereby provides formal notice to WSDOT of differing site conditions identified by AECOM Technical Services, Inc. ("AECOM") and GeoEngineers, Inc. ("GeoEngineers") on the I-405/Brickyard to SR 527 Improvement Project.

AECOM, under its design subcontract with Skanska, issued a Supplemental Notice of Differing Site Condition dated September 2, 2025 (AESK-0010, R2), which updates its prior notice AESK-0003. AECOM reports that differing site conditions originally identified at Wall 23.80R may also extend to the I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall 23.73R, and Wall 23.74R.

Additionally, GeoEngineers issued a Memorandum dated August 27, 2025, documenting subsurface conditions differing materially from those indicated in the Geotechnical Data Report (GDR). Their investigations, including new borings, in-situ vane shear testing, and a full-scale field surcharge load test, contend that the soil unit properties (particularly ESU 2C) vary significantly from the Contract Documents. These findings indicate potential for increased settlement and deeper soil strata than previously identified.

Both AECOM and GeoEngineers note that these differing site conditions will increase labor, time, and cost to complete and modify the design, and further evaluation is underway to quantify schedule and cost impacts.

For WSDOT's reference, copies of AECOM's September 2, 2025 letter and GeoEngineers' August 27, 2025 memorandum are attached.



This notice is provided without prejudice to Skanska, AECOM, or GeoEngineers' rights, remedies, or entitlement to equitable adjustment under the Contract.

We remain available to discuss the findings with WSDOT in detail and will provide supplemental updates as additional information and impacts are confirmed.

Sincerely,

A handwritten signature in black ink, appearing to read "P. Prendergast", written over a horizontal line.

Patrick Prendergast, Project Executive

Skanska USA Civil
18911 N Creek Pkwy S, Suite 300
Bothell, WA 98011

September 2, 2025

Via E-mail

Kyle Sharrer
Skanska USA Civil West California
District Inc.
18911 North Creek Pkwy
Suite 300
Bothell, WA 98011
Kyle.Sharrer@skanska.com

**Re: I-405/Brickyard to SR 527 Improvement Project (the "Project")
AECOM Project No. 60713342
AESK-0010
Supplemental Notice of Differing Site Condition / Claim Notice
Notice of Potential DSC at Wall 23.80R, I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall
23.73R, and Wall 23.74R. R2**

Dear Kyle:

This letter (the "Supplemental Claim Notice") is being sent pursuant to section 8.2 of the agreement between Skanska USA Civil West California District Inc. ("Skanska") and AECOM Technical Services, Inc. ("AECOM"), dated October 25, 2022 (the "Design Subcontract") concerning the Project. I am writing on behalf of AECOM to notify you of an update to our previous letter AESK-0003, "Notice of Differing Site Condition / Claim Notice," dated April 9, 2025. In this letter we notified you of a differing site condition discovered which we believe entitles AECOM to an equitable adjustment to its fee and the design schedule. As a result of the investigation of this issue, AECOM has received additional information indicating that the differing site condition may be more widespread than initially anticipated so there may be an increase in AECOM's entitlement for fee and design schedule. In accordance the Design Services Agreement, including Section 4.1, and/or Section 8.3, and with Arts. 1-02.4(1), 1-02.4(2) for subsurface DSC, 1-04.7, 1-08.8 and 1-05.15 of the General Provisions for the Design-Build Contract, I ask that you **please provide this Notice to the Washington State Department of Transportation ("WSDOT") as soon as possible.**

AECOM previously formally noticed the differing site condition at Wall 23.80R in letter AESK-003. However, GeoEngineers has now provided additional information notifying AECOM that differing site conditions are also likely located at proposed I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall 23.73R, and Wall 23.74R. Please refer to GeoEngineers' memorandum, attached as an enclosure, for additional information.

The discovery of these Differing Site Conditions will cause a labor increase in the cost and time required for AECOM to complete the design. At this time, we are evaluating these impacts and will provide details of the additional work, cost, and schedule implications once fully assessed.

Note that the foregoing description of Change is preliminary, based only on the information available to AECOM at this time. As more information becomes available, additional impacts may be discovered which are unknown as of today. The above description should not be considered binding and may need to be revised as additional information is gathered. If necessary, AECOM can send a supplemental written notice containing, as applicable, additional information regarding the circumstances

giving rise to the claim for relief and the specific contractual adjustment or relief requested, including a Change Proposal if so requested by WSDOT.

This letter is without prejudice to, and with a full reservation of, AECOM's and GeoEngineers rights, remedies, causes of action, and defenses under the Subcontract, at law, in equity, or otherwise. Nothing in this letter shall be interpreted as a modification or waiver, or an estoppel of AECOM and GeoEngineers' right to assert the same.

I appreciate your prompt attention to this matter. If you have any questions, please do not hesitate to contact me directly.

Yours sincerely,

AECOM Technical Services, Inc.



Ryan Abraham, PE
Vice President
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cc: Jon Guerrero, PE (AECOM)
Raina Richter (AECOM)



Memorandum

17425 NE Union Hill Road, Suite 250, Redmond, WA 98052, Telephone: 425.861.6000

www.geoengineers.com

To: Ryan Abraham, P.E., AECOM, Project Design Manager for the I-405/Brickyard to SR 527 Design-Build Team

From: Benjamin M. Upsall, P.E., GeoEngineers, Geotechnical Group Manager for the I-405/Brickyard to SR 527 Design-Build Team

Date: August 27, 2025

File: 000180-423-01

Subject: Update of Anticipated Differing Site Conditions
I-405, Brickyard to SR 527 Improvement Project
King and Snohomish Counties, Washington

I write on behalf of GeoEngineers to notify you of an anticipated differing site condition, which entitles GeoEngineers to an equitable adjustment to its fee and the design schedule on the I-405 Brickyard to SR 527 Improvement Project (the "Project"). Pursuant to our contractual obligations, this memorandum serves as notice of the anticipated differing site conditions. We ask that you immediately notify and request that Skanska promptly provide this memorandum to the Washington State Department of Transportation (WSDOT), in accordance with Articles 1-02.4(1), 1-02.4(2) for subsurface DSC, 1-04.7, 1-08.8 and 1-05.15 of the General Provisions for the Design-Build Contract.

GeoEngineers has identified an anticipated differing site condition at Wall 23.80R when that retaining wall exceeded the alert and action levels for both horizontal and vertical movement during construction. At that time, GeoEngineers informed AECOM and Skanska that an anticipated differing site condition likely exists and that the subsurface conditions encountered appeared to differ from those indicated in the contract documents and the Geotechnical Data Report ("GDR"). In close collaboration with WSDOT, Skanska, and AECOM, subsequent to that notification, GeoEngineers proposed to drill three new borings (B-01-25, B-02-25, and B-03-25) with in-situ Vane Shear testing in combination with a instrumented full-scale field surcharge load test to further investigate the subsurface conditions and to identify whether a similar differing site condition exists in the subsurface soils below the proposed I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall 23.73R, and even Wall 23.74R. WSDOT assisted in drilling and performing in-situ testing in two of those three borings and the geotechnical testing laboratories at both WSDOT and Haley & Aldrich (WSDOT's subconsultant) have been assisting in delivering the geotechnical laboratory testing program on the collected samples. We are working to finish the laboratory testing program but based on the results to date, we have confirmed that differing site conditions likely do exist in the subsurface soils at Wall 23.80R and also below the proposed I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall 23.73R, and Wall 23.74R. There is additional laboratory testing to complete, but in the interest of full transparency and keeping AECOM, Skanska, and WSDOT in the loop, we are notifying all parties of our findings and position for an anticipated differing site condition claim.

We have completed the three borings and performed in-situ testing as well as a portion of the lab testing alongside a full-scale field load test consisting of a large gravel surcharge pile instrumented with settlement monitoring plates in the vicinity of B-2-25 and a few things have surfaced as supporting the anticipated differing site conditions claim thus far:

- 1) The unit weight laboratory tests performed on the most recent samples suggest a significantly higher saturated unit weight than the average values that would have calculated overburden values as presented on two particular consolidation test reports that were provided by WSDOT in the GDR. The provided consolidation test reports in question are from the Sample S-12 in Boring NE-30vw-19 and Sample S-10 in Boring NE-32p-19. The recent unit weight test results support that the subgrade between the ground surface and these two samples is heavier and this leads to calculating a higher overburden value at those two test locations than what was provided on those test reports. The effective overburden stress values tie directly into determination of the Over-Consolidation Ratio (OCR) which is a primary factor in estimating the potential magnitude for a soil unit like ESU 2C (i.e. a soil unit susceptible to long-term consolidation settlement) to settle upon loading as described below.

No back-up calculations for the overburden values presented on the consolidation test reports were presented by WSDOT in the GDR. A back-calculation that we performed (assuming a consistent groundwater elevation of +24.3' and consistent soil properties in the other granular ESUs) on those overburden values suggest the following values for saturated unit weight in pounds per cubic foot:

	NE-30vw-19, Sample S-12	NE-32p-19, Sample S-10
Overburden Value Provided by WSDOT in the GDR in Pounds per Square Foot (psf)	1060 psf	1065 psf
Depth of Sample below Ground Surface in Feet	31.5 to 31.9'	25.7'
Estimate of ESU 2C Saturated Unit Weight from Back-Calculation in Pounds per Cubic Foot (pcf)	75 pcf	75 pcf

The lab testing results thus far have yielded four lab tests that provided a value of actual saturated unit weight in the ECU 2C material. The values were very consistent, ranging from 111 pcf to 115 pcf with an average value of saturated unit weight of approximately 113 pcf. Using these lab testing results alone, we estimate that the actual overburden calculations for the two consolidation test reports in question would be as follows:

	NE-30vw-19, Sample S-12	NE-32p-19, Sample S-10
Overburden Value Provided by WSDOT in the GDR in Pounds per Square Foot (psf)	1060 psf	1065 psf

Depth of Sample below Ground Surface in Feet	31.5 to 31.9'	25.7'
Average Saturated Unit Weight of ESU 2C from Post-Issue Lab Testing in Pounds per Cubic Foot (pcf)	113 pcf	113 pcf
Approximate Corrected Calculation for Overburden in the Consolidation Tests Provided by WSDOT (psf)	~2534 psf	2134 psf
Approximate Factor of Error in the Overburden Value Provided by WSDOT in the GDR	~2.39x	~2.00x

The resulting difference in Overconsolidation Ratio (OCR) between what WSDOT provided in the GDR and what is more accurately suggested by the recent lab testing results is as follows:

	NE-30vw-19, Sample S-12	NE-32p-19, Sample S-10
OCR Calculated from the Overburden and Pc' values Provided by WSDOT in the GDR	3.57	1.99
Approximate Corrected OCR Calculation as Informed by the recent Laboratory Testing Results	~1.6	~1.0

Our final design value of OCR was selected from three consolidation test results that were provided by WSDOT in the GDR. The OCR values in those three tests (Sample S-14 from Boring NE-21p-19, Sample S-12 from NE-30vw-19, and Sample S-10 from NE-32p-19) ranged from 1.63 to 3.57 with an average value of approximately 2.4. We selected our final design OCR value for this soil unit to be 2.0 for ESU 2C as presented in Appendix L1 of our RFC'd Segment 2, Early Design Package 1B Geotechnical Report dated April 19, 2024. Had we selected a higher design value of OCR (possibly more in line with the average value from the tests provided by WSDOT of 2.4), the resulting calculations would have suggested even less settlement than our calculations did. The resulting changes in settlement estimates by adjusting the OCR value in our settlement calculations are as follows:

	Estimated Settlement Under Wall 23.80R
Using the Selected Design Value of OCR (=2.0) as informed by the Overburden and Pc' values Provided by WSDOT on Three Consolidation Test Reports provided in the GDR	~1.12"
Using a New Design Value of OCR (=1.3) as informed by the Recent Lab Test Results	~8" to 9"

- 2) The thickness of the Lower ESU 2C soil unit as determined from the three new explorations was much greater than originally provided. The pre-award borings NE-30vw-19, NE-31p-19, and NE-32p-19 in the vicinity of the proposed I-405 Mainline Bridge Abutment 10, Wall 23.80R, Wall 23.72R, and Wall 23.73R provided by WSDOT in the GDR were terminated between 75' to 81' in a sand layer directly above the ESU 2C – Lower unit. Pre-award boring NE-21p-19 in the vicinity of the proposed I-405 Mainline Bridge Pier 9 did identify the ESU 2C – Lower unit but showed it transitioning to the glacially over-consolidated ESU 6B at a depth of approximately 150' below ground surface. Post-award, this area was included/covered by the SIP for post-award drilling and the Design-Builder added borings to meet contract requirements and support our geotechnical design. We installed one post-award boring, W-B120-23, in the vicinity of the proposed I-405 Mainline Bridge Abutment 10 that also identified the ESU 2C – Lower unit and terminated at a depth of approximately 121' below existing grade. In the three new borings advanced after Wall 23.80R was identified as having an issue, B-1-25, B-2-25, and B-3-25, the depth to bottom of the lower ESU 2C layer ranged from 193' to 217' feet below existing grade. We believe that this new information about how deep the lower ESU 2C layer actually goes in the vicinity of the proposed I-405 Mainline Bridge Abutment 10, Wall 23.80R, Wall 23.72R, and Wall 23.73R, would not have been a design factor if the overburden stress discussed above had been accurately depicted on the lab tests presented in the GDR. Using an OCR of 2.0, the settlement implications from the Lower ESU 2C were close to negligible, however, when an OCR in the range of 1.0 to 1.3 is used instead the settlement implications from this deeper soil unit are much greater.
- 3) The settlement curve of the instrumented full-scale field surcharge load test thus far is suggesting that this same differing site condition exists under portions of Wall 23.72R. The remainder of the lab testing should confirm our findings thus far that the whether the same differing site condition exists under Abutment 10 and Walls 23.73R and even 23.74R

Chapters 1 and 2 of the RFP and the Geotechnical Design Manual (“GDM”), which are each identified as a “Contract Document,” require that we use the boring logs and lab testing data contained in the GDR for our design. The following contract sections support the required use of the GDR data during the post-award geotechnical design:

- 1) RFP Section 1-04.7 states, “For Work unrelated to an ATC, Differing Site Conditions shall mean (a) *actual subsurface or latent physical conditions encountered at the Site that are substantially or materially different from the baseline conditions identified in the GBR and the data in the GDR as set forth in Section 1-02.4(2) and which are not discoverable from a reasonable investigation and analysis of the Site*, or (b) physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the type of Work provided for in the Contract and the Work Site characteristics, or (c) the discovery of Hazardous Materials , or asbestos, not identified in the Hazardous Materials Report, asbestos GFI report, or not ordinarily encountered and generally recognized in the type of Work provided for in the Contract and the Work Site characteristics provided in all cases that the Design-Builder had no actual or constructive knowledge of such conditions as of the Proposal Due Date.” (Emphasis added.)

- The excessive settlement observed after construction began on Wall 23.80R suggested that something in the in-situ soil properties did not match the geotechnical design assumptions for Wall 23.80R. The subsequent laboratory testing program reveals that the OCR value selected for ESU 2C in the RFC'd design was too high. At this point, we believe that the root cause of this over-estimation of OCR was a difference in the overburden value that we now calculate as compared to the overburden value presented on the WSDOT consolidation test results for Sample S-12 in Boring NE-30vw-19 and Sample S-10 in Boring NE-32p-19.
- 2) RFP Section 2.6.4 states, "The Design-Builder shall review the available information in the GDR and perform subsurface investigations to meet the requirements of applicable laws, permits, and the Contract."
 - 3) RFP Section 2.6.5.2 states, "Geotechnical engineering and analyses shall be based on the findings from subsurface field investigation explorations and laboratory tests performed by the Design-Builder and information contained in the GDR."
 - 4) GDM Section 22-2 states, "Geotechnical documents provided as part of or in support of a DB project include the Geotechnical Data Report (GDR), the Geotechnical Baseline Report (GBR), Geotechnical Reference documents, and other related Reference Documents. A GDR only presents factual geotechnical and geological information obtained through site and subsurface investigation, and laboratory testing, for the project, and should not include interpretive information. The GDR is a contract document."

Although completion of the laboratory testing is necessary to fully assess the impacts, we anticipate these differing site conditions will cause a labor increase in the cost and time required for GeoEngineers to revise the RFC'd design the proposed I-405 Mainline Bridge Abutment 10, Wall 23.72R, Wall 23.73R, and possibly Wall 23.74R. In close collaboration with WSDOT, Skanska, and AECOM, we are currently evaluating these preliminary impacts and will provide specific details of the additional work, cost, and schedule implications once fully assessed. I appreciate your prompt attention to this matter. If you have any questions, please do not hesitate to contact me directly.

Sincerely,



Benjamin M. Upsall, P.E.

Principal Geotechnical Engineer

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