April 19, 2022

Reid, Strickland & Gillette LLP
2514 E. Cedar Bayou Lynchburg
Baytown, TX 77521

Attn: Mr. Brandon E. Benoit
P: 281.420.4246
E: bbenoit@rsg-llp.com

Re: **LIMITED VISUAL CONDITION ASSESSMENT SERVICES**
Ross S. Sterling High School
300 W Baker Rd
Baytown, TX 77520
Terracon Project No. F3226076

Dear Mr. Benoit:

Terracon Consultants, Inc. (Terracon) is pleased to submit this report of our Limited Structural Visual Condition Assessment for the above referenced property. This scope of work was provided in general accordance with Terracon Proposal Number PF3226076 dated March 8, 2022. This summary letter presents the observations observed in the limited visual condition assessment performed, and our opinion regarding the overall condition of the crawl space structural members.

1.0 PROJECT INFORMATION

The above referenced project involves the Ross S. Sterling High School Building which is located at 300 W Baker Rd in Baytown, Texas. The construction of the primary building was reportedly completed circa 1966. The primary building structural system consists of a steel-framed structure. The first-floor slab is a concrete-on-steel deck floor supported on steel open-web-bar joists and steel beams. The first-floor framing members are supported on steel plinths on concrete footings and concrete foundation walls, which forms an under-floor crawl space. Personnel of Ross S. Sterling High School have observed indications of rusting of some structural steel members from a crawl space access point. Reid, Strickland & Gillette LLP (Client) requested Terracon to perform a limited visual condition assessment to evaluate the general condition of the first-floor framing system. A 31-page set of architectural and structural drawings dated November 1964 were provided for Terracon's review. Mr. Zhengqi Li of Terracon met with Mr. Simon Penn of Lockwood, Andrews & Newnam, Inc. on March 28, 2022, for a site visit.

2.0 SCOPE OF SERVICES

- Limited Visual Condition Assessment – Mr. Zhengqi Li conducted a limited visual condition assessment of the accessible areas of the crawl space using digital cameras and a remote-control crawler to document representative conditions of the structural members on March 28, 2022. The access condition inside the crawl space was limited by factors including concrete foundation walls, plumbing piping, trash, and uneven surface of the earth floor.

3.0 OBSERVATIONS

The general intent of our limited observations is to identify representative conditions pertinent to our scope of services. It was not our intent, nor is it likely, that all existing conditions including hidden conditions were documented. Photographs of representative conditions observed are encompassed in **Appendix A** of this report.

Our general observations of the building structure are summarized below.

- Per the structural design drawings, the first-floor area is divided into eight Sectors No. A through H. Refer to Exhibit 5 of Appendix B.
- It is estimated from the available structural plans that the crawl space occupies a floor area of about 175,000 square feet. Our visual observation field service was conducted from eight access points to the crawl space. We were able to visually observe the general conditions of the structural members mostly at the floor areas of Sectors A, B, D, E, G, and H, with an area of approximately 44,000 square feet which was about 25% of the estimated total floor area of the crawl space. We had limited access to Sectors C and F. See Exhibit 4 of Appendix B for the approximate floor areas observed.
- Per the structural drawings, the floor slab consists of a 3-inch thick light-weight concrete-on-steel deck floor supported on various sizes of steel open-web-bar H-joists, and hot-rolled steel junior beams, light beams, and wide flange beams which were commonly used in the 1960s. The steel beam members are designed to be supported on steel plinths and reinforced concrete foundation walls. The observations we obtained in the field appeared to be in general compliance with the structural design drawings.
- At the exterior areas of the building, we visually observed around 66 ventilation openings, including 3 blocked openings, on the foundation walls at the east elevation, south elevation, west elevation, and part of the north elevation of the building. Some of the ventilation openings were located in restricted areas that were considered hidden conditions. Each of the observed openings had approximate dimensions of 2 inches by 12.5 inches. The openings appeared to be located along the perimeter walls at a typical spacing of 12 to 13 feet on center. The estimated total area of the visible ventilation openings was about 11 square feet. See Appendix B for the general locations of the visible ventilation openings.

- Inside the crawl space, the earth floor was exposed in general, with exceptions of some isolated areas where plastic sheet materials covering the earth floor were observed. Refer to Photos No. 24 and 26 of Appendix A for the typical condition of the plastic sheet materials. We could not determine if the plastic sheet materials were vapor retarders. It is assumed that the crawl space floor was unfinished dating to the original construction, and at later dates plastic sheeting was placed on the ground in isolated locations, possibly for personnel access purposes.
- It is assumed that the steel deck of the first-floor slab is a form deck, as the steel deck did not appear to have embossments to achieve a composite action between steel deck and concrete.
- The vertical clearance between the bottom of the steel open-web-bar joists and the earth floor was about 2 feet to 3 feet.
- We observed cast iron sewer piping at some locations inside the crawl space, which is consistent with common plumbing installations in the 1960s.
- Based on our review of the historical satellite images obtained from Google Earth®, we identified two structures that were added to the north side and the south side of the primary school building between 1978 and 2002. It is possible that the structure added to the north side of the building might have changed the performance of ventilation openings on the north side of the original building.

a. Satellite Image taken in December 1978

b. Satellite Image taken in December 2002

Figure 1 Historical satellite images

- We visually observed some first-floor steel beams and steel deck that appeared to be newer than the surrounding steel members at Access Point No. D2. The newer steel beams were not indicated in the original design drawings. These observations indicated that possible structural modification(s) and/or replacement(s) have been performed in this area in the past.

The distress conditions that we observed in the crawl space are summarized as follows:

- We observed significant debris under the first-floor slab including deteriorated insulation materials, abandoned plumbing piping, and trash build-up on the earth floor throughout the crawl space.
- We visually observed minor to severe corrosion conditions of the steel form deck and the framing members, including surface rust and rust accumulation on flanges of steel beams, at the eight access points. The general visual rating of the corrosion conditions of the steel members is listed in Table 1 below:

Table 1 General Visual Rating of Corrosion Conditions of Steel Members

Access Point ID	Steel Members			
	Form Deck	Open-Web-Bar Joists	Beams	Plinths
A1	S	S	S	S
B1	G	M	M	M
D1	G	G	G	G
D2	G	M	M	M
E1	G	M	M	M
E2	S	S	S	S
G1	M	S	S	S
H1	M	M	M	M

Note: G -Minor corrosion conditions including minor deterioration of protective coating with superficial rust on surface at limited locations;
M -Minor to moderate corrosion conditions including significant deterioration of protective coating with minor to moderate accumulation of rust;
S -Moderate to severe corrosion conditions including significant accumulation of rust indicating possible significant section loss of steel members, and steel form deck detached from concrete.

- At Access Points No.A1 and E2, we observed a section of steel deck separating from the concrete slab under the stairs. Refer to Photos No.13, 14, and 52 of Appendix A.
- At Access Point No.G1, we observed spalls of concrete on the underside of concrete stairs. Refer to Photo No.65 of Appendix A.
- No significant deformation, movement, dislocation, or twisting of the first-floor steel framing members was observed in the crawl space.

4.0 OPINIONS

Based on the limited observations obtained in the field and presented herein, we have the following opinions on the conditions of the steel structural members in the crawl space:

- The visible first-floor steel framing members and the steel plinths appeared to be in minor to severe corrosion conditions. We did not observe significant structural distress conditions including deformation, movement, dislocation, or twisting of the first-floor framing members indicating immediate unsafe structural service conditions. However, a comprehensive program of maintenance, repair, and structural replacement should be implemented. The recommendations are listed in the following section.
- Despite the observations of steel deck detaching from concrete at some floor areas, the first-floor slab spanning between adjacent steel open-web-bar joists appeared to perform adequately in its designed service condition, as there appeared to be no composite action between steel deck and concrete and no slab failure was observed by us or reported by client.
- In general, the steel members located at the center of the building's footprint appeared to exhibit worse corrosion conditions than those located close to the perimeter of the building's footprint. The widespread pattern of the observed corrosion conditions including rust accumulation on the bottom flange of steel beams, and indications of water dripping droplets formation at the underside of steel open-web-bar joists and the underside of steel beams, appeared to indicate that the primary cause of corrosion was the accumulation of condensation from ambient air moisture on the steel members.
- It appears that the only source of crawl space ventilation is the openings on the foundation walls located along the perimeter of the building. Cursory calculations based on historic and current code requirements indicate that the amount of passive ventilation currently provided for the crawl space is grossly inadequate. The addition of a vapor barrier to the crawl space floor will significantly reduce the prescriptive code requirements for ventilation.
- The insulation materials under the floor slab have significantly deteriorated throughout the crawl space, likely from the aforementioned accumulation of condensation on the underside of the floor deck. Deterioration of the insulation also likely increased the probability of condensation at the underside of the steel deck and on the steel framing members.

5.0 RECOMMENDATIONS FOR REPAIR AND MAINTENANCE

While Terracon has not evaluated the structural adequacy of the existing first-floor framing structure for service or code-required loading conditions, we do not identify any immediate life safety issues based on our understanding of the structural design intent. However, Terracon has identified multiple locations where the steel deterioration is significant, and we anticipate the need for extensive repair or replacement in the immediate future. Terracon believes that this work can be phased based on the varying levels of observed deterioration. Based on the limited site conditions observed during Terracon's field activities, Terracon recommends performing several maintenance items, engineering assessment, and repair/replacement, in the crawl space as listed below:

Maintenance Items:

- Clean the crawl space to include removal of all deteriorated insulation materials, abandoned plumbing piping, plastic sheeting, and other trash on the earth floor. The goal should be to facilitate access and ventilation to all crawl space areas.
- Ensure that the minimum amount of crawl space ventilation is provided as required by code. This will likely require additional penetrations in the perimeter stem wall, even if a vapor barrier is added, due to the expansive nature of the crawl space. Alternatively, adding an active (powered) ventilation system should be considered.
- Terracon recommends installation of a mud slab (thin, lightly-reinforced concrete slab on vapor barrier) on the crawl space floor. A mud slab will significantly facilitate future maintenance efforts and protect the vapor barrier from damage. At a minimum, a continuous vapor barrier should be installed in the crawl space.

Assessment and Repair/Replacement Items:

- It is anticipated that the steel framing members including joists, beams, and plinths at the general floor areas of Sectors A, E, and G, should be replaced with new steel framing members in the immediate future, due to the observed severity of corrosion.
- At Sectors B, D, H, all the corroded surfaces of the steel structural members should be cleaned, and a corrosion-inhibiting paint applied.
- At Sectors C and F, perform a visual assessment of the existing steel framing when access to these sectors can be provided during the structural repairs and replacement phase.
- After all the deteriorated materials and trash have been removed and all the steel structural members have been cleaned, visually evaluate the remaining structural members for additional distress. Any new distress conditions of the steel structural members observed by the contractor should be reported to us for further evaluation.
- At Access Point G1 where a concrete spall was observed, remove loose concrete material and clean the rust on steel reinforcement. Apply a corrosion inhibiting coating to the exposed steel reinforcement. Patch concrete to match the existing.
- After all structural repair and replacement items are completed, an appropriate insulation should be added to the underside of the first-floor slab; Hygrothermal analysis is

recommended to ensure that the selected product is appropriate for the environmental conditions in the crawl space.

- Develop a schematic repair package to obtain preliminary pricing.

Repair documents of the above-mentioned items will likely include specifications and details for steel member replacement, cleaning and coating of steel members to remain, localized floor steel form deck replacement, and concrete repair. Terracon anticipates that a developing and implementing comprehensive scope of repairs as described above will be significant from a time and cost perspective. Preliminary pricing will be critical to supplement the phasing aspect of the repairs and inform project stakeholders for future decision making. Replacement of the school building could be an option considering that the existing primary school building has been in service for about 56 years.

6.0 LIMITATIONS

The opinions and conclusions presented in this report are based upon the information provided to us by others and observations observed at the project site at the date of our site visit. While additional conditions may exist that could alter our conclusions, it is our opinion that reasonable means have been made to fairly and accurately evaluate the existing conditions at this property. The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted engineering practices using the standard of care and skill currently exercised by professional engineers practicing in this area, for a project of similar scope and nature. No warranties, either express or implied, are intended or made. In the event that information described in this document which was provided by others is incorrect, or if additional information becomes available, the opinions and conclusions and contained in this report shall not be considered valid unless Terracon reviews the information and either verifies or modifies the conclusions of this report in writing.

We appreciate this opportunity to be of service to you on this project. If you have any questions regarding this document, please do not hesitate to contact Terracon.

Sincerely,
Terracon Consultants, Inc.
Firm Registration No. F-3272

Zhengqi Li, Ph.D., P.E., LEED AP
Senior Engineer
Facilities Services

Rick Miles, P.E.
Office Manager, Principal
Facilities Services

Appendix A - Photographic Documentation
Appendix B - Floor Plans

1111 N Loop W Fwy, Suite 350
Houston, Texas 77008
P (713) 467-9840
Terracon.com

August 17, 2022

Reid, Strickland & Gillette LLP
2514 E. Cedar Bayou Lynchburg
Baytown, TX 77521

Attn: Mr. Brandon E. Benoit
P: 281.420.4246
E: bbenoit@rsg-llp.com

Re: LIMITED VISUAL CONDITION ASSESSMENT SERVICES
Ross S. Sterling High School - Phase 2
300 W Baker Rd
Baytown, TX 77520
Terracon Project No. F3226076

Dear Mr. Benoit:

Terracon Consultants, Inc. (Terracon) is pleased to submit this report of our Limited Structural Visual Condition Assessment for the above referenced property. This scope of work was provided in general accordance with Terracon Proposal Number PF3226172 dated May 10, 2022. This summary letter presents the observations obtained in the limited visual condition assessment performed, and our opinions regarding the overall condition of the crawl space structural members.

1.0 PROJECT INFORMATION

The above referenced project involves the Ross S. Sterling High School Building which is located at 300 W Baker Road in Baytown, Texas. The construction of the primary building was reportedly completed circa 1966. The primary building structural system consists of a steel-framed structure. The first-floor slab is a concrete-on-steel deck floor supported on steel open-web-bar joists and steel beams. The first-floor framing members are supported on steel plinths on concrete footings and concrete foundation walls, which forms an under-floor crawl space. Personnel of Ross S. Sterling High School have observed indications of rusting of some structural steel members from a crawl space access point. As requested by Reid, Strickland & Gillette LLP (Client), Terracon previously performed a limited visual condition assessment (Phase 1) to evaluate the general condition of the first-floor framing system via eight existing access points to the crawl space. Those detailed findings were summarized in Terracon Report No. F3226076 dated April 19, 2022. Client subsequently requested that Terracon conduct an additional visual condition assessment as Phase 2 services at six new access points created by Client's contractor. Mr. Zhengqi Li of Terracon

met with Mr. Simon Penn of Lockwood, Andrews & Newnam, Inc. to conduct the additional visual condition assessment on July 27, 2022.

2.0 SCOPE OF SERVICES

- Site Meeting Prior to Visual Condition Assessment – Mr. Zhengqi Li conducted a site visit with Client's contractor on June 19, 2022, to review the locations of the six new crawl space access points proposed by Terracon after its Phase 1 Visual Condition Assessment. The new access points were created by Client's contractor by cutting an opening in the floor slab between open-web-bar joists at each proposed location. A steel floor hatch was installed to cover the floor opening at each location.
- Limited Visual Condition Assessment – Mr. Zhengqi Li conducted the limited visual condition assessment via the six new access points to the crawl space using digital cameras and a remote-control crawler to document representative conditions of the structural members on July 27, 2022. The access condition inside the crawl space was limited by factors including concrete foundation walls, plumbing piping, trash and construction debris, and the uneven surface of the unfinished dirt floor.

3.0 OBSERVATIONS

The general intent of our limited observations is to identify representative conditions pertinent to our scope of services. It was not our intent, nor is it likely, that all existing conditions including hidden conditions were documented. Photographs of representative conditions observed are encompassed in Appendix A of this report.

Our general observations of the building structure are summarized below.

- Based on the available structural plans, it is estimated that the crawl space occupies a floor area of about 175,000 square feet. Our Phase 1 visual assessment was conducted from the eight existing access points to the crawl space at the floor areas of Sectors A, B, D, E, G, and H, covering an floor area of about 25% of the estimated total floor area of the crawl space. Our Phase 2 visual assessment was conducted from the six new access points at the floor areas of Sectors A, C, E, F, G, and H. The total floor area observed during our Phase 1 and Phase 2 assessments was about 40% of the estimated total area of the crawl space. See Exhibit 4 of Appendix B for the approximate floor areas observed.
- Per the structural drawings, the floor slab consists of a 3-inch thick light-weight concrete-on-steel deck floor supported on various sizes of steel open-web-bar

H-joists, and hot-rolled steel junior beams, light beams, and wide flange beams which were commonly used in the 1960s. The steel beam members are designed to be supported on steel plinths and reinforced concrete foundation walls. The observations we obtained in the field appeared to be in general compliance with the structural design drawings.

- Inside the crawl space, the dirt floor was generally exposed and unfinished, with the limited exception of some isolated areas where the dirt floor was covered by plastic sheet materials. It is assumed that the crawl space floor was unfinished dating to the original construction, and at later dates plastic sheet materials were placed on the ground in isolated locations, possibly to facilitate personnel access and maintenance.
- It is assumed that the steel deck of the first-floor slab is a form deck, as the steel deck did not appear to have embossments to achieve a composite action between steel deck and concrete.
- The vertical clearance between the bottom of the steel open-web-bar joists and the crawl space floor was about 2 feet to 3 feet.
- We observed abandoned cast iron sewer piping at some locations inside the crawl space, which is consistent with common plumbing installations in the 1960s.
- At Access Point No. H2 which was located under a stairwell, we observed some steel HSS plinths that appeared to be newer than the surrounding floor framing members. The steel HSS plinths appeared to support the stair structure above. The plinth baseplates were not grouted. The wood formwork of the concrete foundations that supported these steel HSS plinths had not been removed. The trademark on the wood formwork read PS 1-95 which appeared to be referring to the voluntary product standard effective 1995. These findings indicated that the stair structure and the HSS plinths were probably installed after 1995. Refer to Photos No. 35-38 of Appendix A.

The distress conditions that we observed in the crawl space are summarized as follows:

- We observed significant debris under the first-floor slab including deteriorated insulation materials, abandoned plumbing piping, and trash build-up on the dirt floor surface throughout the crawl space.
- We visually observed minor to severe corrosion conditions of the steel form deck and the framing members at the six access points, including surface rust, rust accumulation on flanges of steel beams, and rust on dirt floor that fell from steel beams above. The general visual rating of the corrosion conditions of the steel members is listed in Table 1 of following page.

Table 1 General Visual Rating of Corrosion Conditions of Steel Members

Access Point ID	Steel Members			
	Form Deck	Open-Web-Bar Joists	Beams	Plinths
A2	G	S	S	S
C1	G	G	G	G
E3	M	S	S	S
F1	M	S	S	S
G2	M	S	S	S
H2	G	M	G	G

Note: G -Minor corrosion conditions including minor deterioration of protective coating with superficial rust on surface at limited locations;
M -Minor to moderate corrosion conditions including significant deterioration of protective coating with minor to moderate accumulation of rust;
S -Moderate to severe corrosion conditions including significant accumulation of rust indicating possible significant section loss of steel members, and steel form deck detached from concrete.

- At Access Points A2 and C2, we observed a section of steel deck separating from the concrete stairs. Refer to Photos No.3 and 10, of Appendix A.
- At Access Points E3 and F1, we observed condensation water at underside of steel floor deck, steel beams, joists, and PVC piping. There was standing water on top of plastic sheet material on earth floor at Access Point F1. We observed rust accumulation on dirt floor below steel floor beams; apparently from the floor beams as the accumulation followed the orientation of the steel floor beams. Refer to Photos No.16, 19, 23, 24, and 27, of Appendix A.
- At Access Point E3, we observed ventilation openings in the north concrete foundation wall of the primary building. These ventilation openings appeared to be blocked by the building structure later added to the north side of the primary building.
- No significant deformation, movement, dislocation, or twisting of the first-floor steel framing members was observed in the crawl space.

4.0 OPINIONS

Based on the observations obtained by us from the six new access points as Phase 2 condition assessment, we have the following opinions on the conditions of the observed steel structural members in the crawl space:

- The majority of the observed first-floor steel framing members and the steel plinths appeared to be in various states of corrosion from minor to severe,

which were generally similar to the structural members observed during our Phase 1 condition assessment conducted in March 2022. We did not observe significant structural distress conditions including deformation, movement, dislocation, or twisting of the first-floor framing members indicating immediate unsafe structural service conditions.

- During our Phase 1 assessment, we did not observe condensation water on the structural framing members, probably due to relatively drier environmental conditions and reduced interior cooling during the spring field visit. During this Phase 2 assessment which was conducted in the wet season of the year during active cooling of the interior spaces, we observed condensation water at underside of steel floor deck, steel beams, joists, and PVC piping at Access Points E3 and F1. We also returned to Access Point E2 which was assessed in Phase 1 assessment and observed condensation water at the underside of some PVC piping. These findings validated our opinions from Phase 1 assessment that the primary cause of corrosion was the accumulation of condensation from ambient crawl space air moisture on the steel members.
- In general, the steel members located at the center and the north side of the building's footprint appeared to exhibit worse corrosion conditions than those located close to the west, south, and east perimeter of the building's footprint. The floor areas exhibiting severe corrosion included Sectors A, E, F, and G. These findings indicated a general correlation between severe corrosion and reduced and/or inadequate ventilation condition.
- The insulation materials under the floor slab have significantly deteriorated throughout the crawl space, which had likely increased the probability of condensation at the underside of the steel deck and on the steel framing members.
- A comprehensive program of maintenance, repair, and structural replacement should be implemented. The recommendations are listed in the following section.

5.0 RECOMMENDATIONS FOR REPAIR AND MAINTENANCE

While Terracon has not evaluated the structural adequacy of the existing first-floor framing structure for service or code-required loading conditions, we did not identify any immediate life safety issues based on our understanding of the structural design intent from Phase 1 and Phase 2 assessments. However, Terracon has identified multiple locations where the steel deterioration is significant, and we anticipate the need for extensive repair or replacement in the immediate future. Terracon believes that this work can be phased based on the varying levels of observed deterioration.

Terracon recommends performing several maintenance items, engineering assessment, and repair/replacement, in the crawl space as listed below:

Maintenance Items:

- Clean the crawl space to include removal of all deteriorated insulation materials, abandoned plumbing piping, plastic sheet materials, and other trash on the earth floor. The goal should be to facilitate access and ventilation to all crawl space areas.
- Ensure that the minimum amount of crawl space ventilation is provided as required by code. This will likely require additional penetrations in the perimeter foundation wall, even if a vapor barrier is added, due to the expansive nature of the crawl space. Alternatively, adding an active (powered) ventilation system should be considered.
- Terracon recommends installation of a mud slab (thin, lightly-reinforced concrete slab on vapor barrier) on the crawl space floor. A mud slab will significantly facilitate future maintenance efforts and protect the vapor barrier from damage. At a minimum, a continuous vapor barrier should be installed in the crawl space.
- Retain a plumbing contractor to inspect the condition of all downspouts within structural columns. If leaks are detected, report to Engineer for evaluation.

Assessment and Repair/Replacement Items:

- It is anticipated that the steel framing members including joists, beams, and plinths at the general floor areas of Sectors A, E, F, and G, should be replaced with new steel framing members or strengthened in the immediate future, due to the observed severity of corrosion. See Appendix C for a conceptual plan of repair and additional assessment.
- At Sectors B, C, D, H, all the corroded surfaces of the steel structural members should be cleaned, and a corrosion-inhibiting paint applied.
- After all the deteriorated materials and trash have been removed and all the steel structural members have been cleaned, visually evaluate the remaining structural members for additional distress. Any new distress conditions of the steel structural members observed by the contractor should be reported to us for further evaluation.
- At Access Point G1 where a concrete spall was observed, remove loose concrete material and clean the rust on steel reinforcement. Apply a corrosion inhibiting coating to the exposed steel reinforcement. Patch concrete to match the existing.
- After all structural repair and replacement items are completed, an appropriate insulation should be added to the underside of the first-floor slab;

Hygrothermal analysis is recommended to ensure that the selected product is appropriate for the environmental conditions in the crawl space.

- Develop a schematic repair package to obtain preliminary pricing.

Terracon can assist client with the additional testing, repair design, and constriction administration, as additional services. A proposal can be provided upon request by client. Repair documents of the above-mentioned items will likely include specifications and details for steel member replacement, cleaning and coating of steel members to remain, localized floor steel form deck replacement, and concrete repair. Terracon anticipates that a developing and implementing comprehensive scope of repairs as described above will be significant from a time and cost perspective. Preliminary pricing will be critical to supplement the phasing aspect of the repairs and inform project stakeholders for future decision making.

Based on the likely extensive nature of the repairs needed combined with the difficulty in coordinating the implementation of these types of repairs during the constraints of a school calendar, and considering with the service period of the school to date, replacement of the school building may prove to be an option from a cost and schedule perspective, and should be considered as part of a long term capital expenditure plan.

6.0 LIMITATIONS

The opinions and conclusions presented in this report are based upon the information provided to us by others and observations observed at the project site at the date of our site visit. While additional conditions may exist that could alter our conclusions, it is our opinion that reasonable means have been made to fairly and accurately evaluate the existing conditions at this property. The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted engineering practices using the standard of care and skill currently exercised by professional engineers practicing in this area, for a project of similar scope and nature. No warranties, either express or implied, are intended or made. In the event that information described in this document which was provided by others is incorrect, or if additional information becomes available, the opinions and conclusions and contained in this report shall not be considered valid unless Terracon reviews the information and either verifies or modifies the conclusions of this report in writing.

We appreciate this opportunity to be of service to you on this project. If you have any questions regarding this document, please do not hesitate to contact Terracon.

Sincerely,
Terracon Consultants, Inc.
Firm Registration No. F-3272

Zhengqi Li, Ph.D., P.E., LEED AP
Senior Engineer
Facilities Services

Rick Miles, P.E.
Office Manager, Principal
Facilities Services

Appendix A - Photographic Documentation
Appendix B - Floor Plans
Appendix C – Conceptual Plan of Repair and Additional Assessment at Sectors A, E, F, and G