Questions and Answers for Project No. 517-14-121

Replace Building 1 Roofs, Beckley VAMC

1) WV recently adopted the latest version of the International Building Code. As such the wind up-lift pressures are to be calculated using ASCE 7-10. What design methodology was used to calculate the up-lift pressures for this project?

   There was no design method or calculations undertaken for this project which originated strictly as a removal/replacement exercise. If an improved overall system or individual materials can be substituted for the existing type roof materials, the contractor should provide submittal(s) for the new system and/or its design for COR approval. In all cases, VA specifications must be met or exceeded. Also note, all materials utilized in a selected roofing system will be required to be produced by the same manufacturer.

2) Section 7 52 16.13 1.5 D.4 of the specification should provide the wind up-lift values for zones I, II and III. The values given are zero (0). What are the calculated wind up-lift pressures for each zone that are used for attachment of the roofing system to the substrates?

   Design up-lift pressure minimums from past roof projects are summarized by the following:

   Mid roof - 29 lbf/sq.ft.
   Ridges and Hips – 45.5 lbf/sq.ft
   Corners – 62.1 lbf/sq.ft.

   Note the building's geographical location dictates that roofing systems are designed for maximum wind speed of at least 120 mph.

3) The specification appears to be a compilation of a couple of different specifications used as a guide. Typically, these guide specs provide several options for areas within the specification. Once one of these options is chosen by the specifier, the others are deleted from the final version to eliminate confusion. In this case, there are multiple areas where several options have not been eliminated, thus causing disagreements within the same specification. Can these areas be addressed? Example: 7 22 00 2.3 D 1, 2, 3 & 4 and E 1, 2, 3 & 4. Each area contains four options for products that are dissimilar and each area provides for multiple thicknesses. These areas and others should contain only one of these options with a firmly defined thickness.

   As a minimum, ½" thick wood fiber cover board is required. As a minimum, 80 mil thick fiberglass reinforced rubber sheets are required as a base substrate.

4) Upon inspection of aerial photos of the project site as well as knowledge of projects bid in the past, this facility does not have any EPDM roofs, either, fully adhered, mechanically fastened or ballasted. Is it fair to say that the facility will be using the SBS Modified Bituminous Roofing Membrane, Cold Applied section of the specs for this project, as delineated in the Scope of Work elsewhere in the bidding documents?

   For this project, it is preferred that a Modified Bituminous Roofing Membrane type system will be used to replace the existing roof system as utilized on previous recent roof repair projects.

5) The Scope of Work does not mention a two-ply vapor retarder on the decks. In Sections 7 22 00 2.3 A and C 1 and 2 and 3.4 a 1, 2, 3 and 4 and 7 52 16 2.2 D. 1, 2 and 3 discuss a vapor retarder adhered to the decks. Can the vapor retarder be eliminated from the specifications?

   If the prospective contractor submits a system for approval that might include a vapor retarder layer this section is necessary.

6) In Section 7 52 23 the published tensile and tear strengths do not agree with the products outlined in the Scope of Work. Can the tensile and tear strengths be changed to reflect the Scope of Work?

   The values cited in the VA specs are minimum values and in all instances must be equaled or exceeded. The cited scope of work values are based on materials approved for use in recent repair projects.

7) According to the scope of work on page 5 of the solicitation, the project does not include any base sheets or vapor retarder. Sections 7 22 00 3.4 and 7 52 16 2.2 D and elsewhere reference a two ply vapor retarder base in cold process adhesive? Typically, a single ply of modified material in cold process adhesive directly to the concrete deck provides a good vapor barrier/temporary roof. Would you accept a manufacturer approved single ply of modified material in cold process adhesive verses the two ply?

   Any system submitted for approval that requires a vapor retarder layer must use a 2 ply vapor barrier per VA specs.

8) There seem to be some minor discrepancies between specification sections in regard to material attributes: Section 7 52 16 2.2 E, F, G, H, I, J and K list multiple membrane ply sheets and cap sheets, none of which match the scope of work. We believe the entire VA Master Specification Sections 7 52 16 2.2 E, F, G, H, I, J and K, which normally list all the various roof material attributes may not have been edited. Based on the system listed as the basis of design in the scope of

work, can you clarify the physical properties of the roof system you are wishing to achieve? If the following system layers can be further defined, it will ensure that we are providing a comparable system to the other contractors bidding the project:

a. Membrane Ply Sheets b. Membrane Cap Sheet
c. Flashing Backer Sheets d. Flashing Cap Sheet

Recent roof repair projects have utilized Membrane Cap Sheet Systems.

9) Section 7 52 16 2.4 there is a description of a white roof coating which is not called out in the base scope of work. Typically coatings applied after the roof system is complete and the underlying roof materials cure (release all solvents) according to a manufacturer required period of time. Please confirm specification section 7 52 16 2.4 in that you wish to have a white coating installed after the roof system cures?

White Roof Coating will not be used for this project.

10) Can you please confirm the gauge sheet metal that should be used for the continuous cleat and copings for the different roof areas?

All new coping should be mill finished and be at least .040 thick aluminum material.

11) Campus use and logistics for the project are limited. Not understanding all the different areas of the building interior, all the different delivery schedules which occur on campus, could your team recommend your preferred areas for site set up to include dumpster, boom truck set up for materials and waste, and site staging for materials and equipment?

Given all the concurrent construction activities, the designated dumpster location will likely be on the West side of building 1. Any boom truck usage will have to be approved by the COR in advance and will likely be located on the East or West side of building 1 after normal clinic hours.

12) It appears that waste and materials will need to be lowered and lifted from lower roof areas, all of which will need to be hauled across roof areas not in the current scope of work. Will you allow the contractor to traverse over lower roof areas? If yes, could you recommend a preferred path across these roof areas as to not disturb mission critical and/or critical patient operations that may be occurring under lower roof areas?

The contractor may traverse roof areas not in the scope of work given the roof is adequately protected and proper safety precautions are taken. Specific paths will be suggested by the contractor and approved by COR before work begins.

13) If the contractor is required to traverse over already warranted roof areas, could you please define the roof protection that these roof material manufacturers will require to ensure their warranties are not disturbed?

Past projects requiring roof protection have used rolls of roofing material to create pathways topped with plywood to distribute weight. All possible precautions must be taken to protect warranted roof levels not included in this replacement project. Any damage resulting from project activity will have to be repaired to the warranty holder's specifications and re-certification or approval by the warranty holder.

14) Can roof demolition materials from the smaller roof area toward the front parking lots be properly bagged and carried through the building? If these materials were bagged and contained would ICRA plans be required? If yes what level?

These materials could be removed through the building if properly bagged and transported in sealed carts and the service elevator is utilized to lower the material to basement level. An Infection Control Risk Assessment plan would be required. Corridors utilized on patient care floors would require a High Level plan. Other areas a Mid-Level Plan may be sufficient.

15) There are several satellite dishes on the roof areas to be replaced. Can the VA please confirm whether the dishes to remain are to be moved by the VA or the contractor? Will they be recalibrated by the VA if they are to be moved?

Dishes in use or not used are marked on the drawings. Those not used may be discarded. Those in use will have to be replaced to original position by the contractor and calibrated by the VA if necessary. Disconnecting in-use dishes must be coordinated with COR prior to any move or relocation.

16) Some of the roof areas contain lightning protection. Will a UL Letter of Determination (please note a master UL certificate is not applicable unless the entire facilities lightning protection system is inspected from UL) be required from a licensed lightning protection installer upon re-installation of lightning protection conductors and at the conclusion of the project?

The existing lightning protection systems must be re-installed and reconnected as found prior to project start. No inspection or re-certification of the system will be required.

17) There are currently safety railings bolted through the copings on the upper roof

areas. Does the VA want these safety railings removed and then refastened through the new copings in the same manner as current?

Yes. The safety railings must be removed and re-installed as found prior to the project start.

18) There are currently tension cables securing towers which are attached to metal plates that are fastened on top of, and through the copings. Many times these tension cables are fastened to the roof deck and surrounded with pitch pockets. Will the contractor be required to:

a. Unfasten the metal plates securing the tension cables and if yes are there any studies required to ensure the towers structural integrity if these cables are unfastened (some were unfastened at the time of the walk through)?

No studies exist concerning tower structures. Yes, cable plates may have to be removed to install new roof system.

b. Will the metal plates and tension cables be required to be refastened as they are currently installed in the same locations?

Yes. All tension cables should be refastened in same location.

c. Is there any need to have a structural evaluation completed on the towers and/or tension cables after reinstallation?

No structural evaluation is required for this project.

19) Could you please provide roof core information for each roof area? If yes, could you provide information on each consecutive layer of the roof system from deck to top membrane?

No Core Information exists for the roof areas covered in this project. Substrate concrete slab thickness is 6".

20) Could you please confirm the current slope to drain of each roof?

The minimum required drain slope is .25.