



EXTERIOR REHABILITATION

MONTHLY CONSTRUCTION PROGRESS REPORT

August 2015



JE Dunn Construction | Treanor Architects | ADG



SUMMARY

In the month of August, the Design-Build Team has continued to investigate existing conditions and has tested various methods and materials for restoration activities. The information attained through investigation was recorded and analyzed to use in preparation of the scope development documents. These documents will contain the Design-Build Team’s recommendations to the State of Oklahoma to help determine what work can be accommodated with the current exterior restoration budget. The State Capitol Building has many exterior deficiencies that need to be addressed over time. The task at hand is to prioritize these deficiencies in a manner that will help identify the most essential issues. In order to prioritize, the Design-Build Team has categorized a priority matrix for classification:

1. Work which should be carried out in the next 1-3 years to correct safety issues that affect building users and potential failure or collapse of any building element.
2. Work which should be carried out within the next 2-5 years and involves materials and systems in poor condition. Also, Work that involves halting water infiltration of walls, roof, and foundation systems.
3. Work which should be carried out with the next 5-10 years and involves materials that are currently serviceable or in fair condition.
4. Work that is desirable to accomplish and involves upgrades to minimum recommended repairs, but may not be possible within the current budget.
5. Work that has no occupant safety concerns or immediate material degradation.

The life safety category includes work encompassing falling debris from the building façade, masonry anchorage systems, mortar deterioration, seismic anchorage, and bracing systems. The weather infiltration category refers to window restoration, masonry refurbishment, current drainage issues, and the overall sealing of the building envelope. The architectural longevity category encompasses staining of the exterior façade, bird deterrent, exterior lighting, exterior landscaping, and other similar architectural elements. The Design-Build Team will use all the information gained through the investigative period as well as historical data to develop conceptual budgets for all scope items. Ideally, all of the State Capitol deficiencies would be addressed in one period of time so it can be properly maintained over the next several decades. The current budget will only be able to address a portion of the deficiencies that exist with this Oklahoma landmark.

KEY ACTIVITIES

- Additional investigations have been performed for hazardous material and anchor locations. A geotechnical investigation has been scheduled.
- Revision of the priority matrix.
- Preliminary cost estimating to the owner using historical benchmark estimating practices.



SCOPE DEVELOPMENT

MASONRY

Recent Progress

ZFI has reviewed the documents provided by Terracon concerning the anchor location investigations conducted on two of the three scaffold areas. ZFI has begun development of protocol for various new and replacement anchor testing that will be necessary for schematic design of veneer repairs.

ZFI began development of a parapet bracing scheme to provide support of the various parapet elements in a seismic or wind event.

Treanor Architects completed masonry cleaning trials which included laser cleaning of limestone and granite to remove orange/brown staining, biological cleaning trials of limestone, heated water washing of limestone to remove orange/brown staining, and rust removal trials.

The repointing portion of the mortar joint trials has been completed. Discussions with masons regarding means, methods, and realistic outcomes from this portion of the work have taken place and are completed.

Treanor is currently developing options for pricing the masonry cleaning and repointing work.

One-Month Look Ahead

In September, the Design Team anticipates continuing the anchor investigation and analysis. Treanor will complete the outline of options for masonry cleaning and masonry joint repointing work. Periodical observation will be required of repointing work for signs of bond line or other failure modes.

Investigation is ongoing regarding limestone and granite anchorage of the original construction era. An investigation is on-going at the parapet level to confirm veneer anchorage conditions. Replacement and new anchor testing protocols will be developed and possibly implemented in the upcoming month. Parapet seismic bracing schemes will be suspended until a later date at the direction of the State..

The Design Team will continue to develop and refine scope options base on trial repair information for pricing.

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EXTERIOR DOORS AND WINDOWS

Recent Progress

Types of windows and levels of repair are now detailed and quantified for window restoration option pricing.

A draft document was provided for pricing storm window options as added value to window restoration option.

Treanor provided revised Trial Repair documents based on updated metals preparation and finish recommendations. Treanor continued to observe window conditions exposed within interior package construction zones and subsequently update levels of repair for restoration pricing.

Treanor accessed and observed monumental hollow metal door 201 at the South Portico and developed a draft document for pricing door restoration option.

ZFI has refined the anticipated trial repairs for the clerestory window lintel replacement with the aid of Treanor Architects and JE Dunn. The Design-Build Team is currently weighing several concerns regarding the interior lintel condition and is considering either a single trial repair or additional investigation openings to address these concerns. The possible location for the investigation openings is the north elevation of each chamber. The possible location for a trial repair is a single window location on the north elevation of the east wing.

ZFI has also aided Treanor Architects in structural-related scope for the planned window trial repairs.

One-Month Look Ahead

ZFI anticipates performing additional investigation opening or trial repair at the chosen locations during the month of September if approved by the State.

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ROOF

Recent Progress

Once the layout for parapet bracing is defined, the Design Team will be prepared to review with OMES the scope of roof repair, and discuss the options of spot repair, repair of roof sections, or whole roof replacement. Due to the Design-Build Team and Owner Team current discussion about the cost of the project, the roof has been given a low priority.

Copper roofing investigation work is on hold pending further direction from Owner Team.

One-Month Look Ahead

No additional work is anticipated.

LIGHT WELLS

Recent Progress

Observation of surfaces, drains and sumps for all light wells has been completed. The Design-Build team has evaluated the conditions and will develop pricing options.

The excavation for the light well on the North side of the west wing was conducted. In addition, selective demolition of a portion of the coating on the interior side of the light well was performed. Reinforcement location and selective demolition to observe the reinforcement in both the wall and the interior slab was performed by ZFI and JE Dunn. Where revealed, the reinforcement appeared to be in good condition. The selective demolition openings have been patched per ZFI's direction. Terracon has been contacted to provide backfill recommendations for the excavation.

One-Month Look Ahead

ADG is preparing drawings to identify existing drain and sump locations so consultants can prepare repair options for drainage.

JE Dunn will be backfilling the light well investigation excavation during September before moving to the tunnel investigations. The results of the light well investigation will be incorporated into architectural options to develop repair recommendations for pricing.

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TUNNEL

Recent Progress

ZFI has discussed excavation and access requirements for the planned tunnel investigation excavation.

One-Month Look Ahead

The Design Team will prepare a narrative of repairs/renovations that will serve as a proposed scope, as well as sketch proposed value-added enhancements for the tunnel and the entry building. The Design Team will perform initial accessibility analysis for an accessible route from parking to Capitol through tunnel.

PLAZA, TERRACES, WALKS AND STAIRS

Recent Progress

ADG is currently performing field verification of existing conditions. ZFI and JE Dunn have observed the conditions beneath the south half of the west vestibule plaza stairs in an effort to begin understanding the scope of the deterioration in that location. ZFI had limited access provided to the OG&E transformer room vault and visually confirmed that the framing in that area was consistent with the 1992 construction drawings.

One-Month Look Ahead

The Design Team will complete documenting the components of the battlements/cheek walls, light well railings and stairs, and coordinate phasing of restoration work with the overall phasing plan. Integrate stone numbering system to components of the plaza, terraces, walks and stairs. Additional visits to document the conditions under the west vestibule stairs will be conducted and the results will be utilized to develop repair recommendations for pricing.

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PROGRESS PHOTOS



**Completed
Repointing Trial**

**Biologic Agent
Cleaning Trial**



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Laser Cleaning Trial



Hot Water Wash Cleaning Trial



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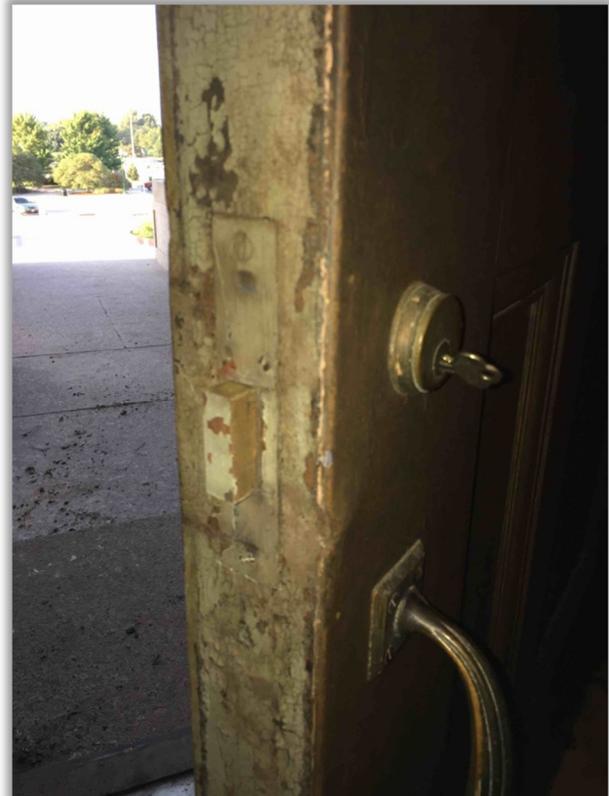
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Door 201



**Door 201 Mortise
Lock Condition**



**Door 201 Sill
Condition**

