

# Incarnation Lutheran Church

## Congregation Discussion Forum: Roof Project Details

Hosted by the Congregation Council and ILC Facilities Committee  
Thursday, February 27<sup>th</sup> from 6-7 PM via Zoom

# Background Behind Additional Costs

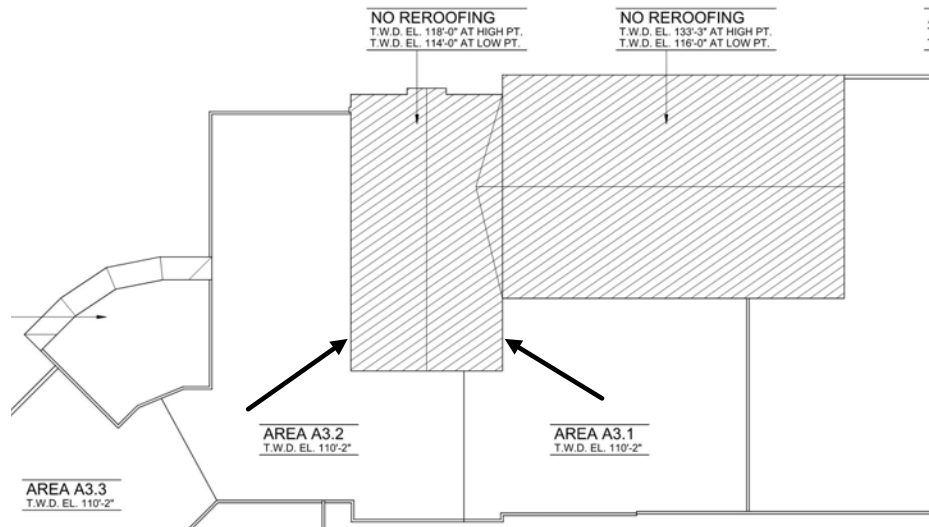
- ▶ The initial estimate we received was based on a basic square-foot cost for a new roofing membrane.
- ▶ The cost for the roofing membrane itself was on target with the original estimate.
- ▶ There are ancillary items that are needed as part of a roofing project.
- ▶ As the roof was inspected as part of the design process, multiple items were uncovered which need to be addressed.
- ▶ Excerpts from the roof design report follow.

# Wet, Damaged, and Deteriorated Deck and Insulation Replacement

- ▶ It is our understanding that wet, damaged, and deteriorated wood decking, wood blocking, and insulation are present. The extent of the damage and wet materials is currently unknown.
- ▶ All wet, damaged, and deteriorated deck, wood blocking, and insulation will be removed and replaced with new

# Roof Related Masonry

- ▶ At the masonry walls of the clerestory adjacent to Area A3 (this are the masonry walls at the original sanctuary, now the choir and bell rooms), there are low base flashing heights present adjacent to and below the windows.
- ▶ We recommend removal of the existing base flashings, and replacement with new sheet metal flashings and raising the sheet metal reglet insert to accommodate the new insulation heights.



# Windows at Bell Room



# Stucco Wall Modifications

- ▶ At the stucco walls on Areas A1, A1.1, A2 and A3.3, the stucco wall finishes at parapet to wall locations have low flashing heights.
- ▶ Modifications will be done to the existing stucco wall system at isolated areas to provide a weather resistant wall system and to accommodate the new sheet metal end closure at the parapet.

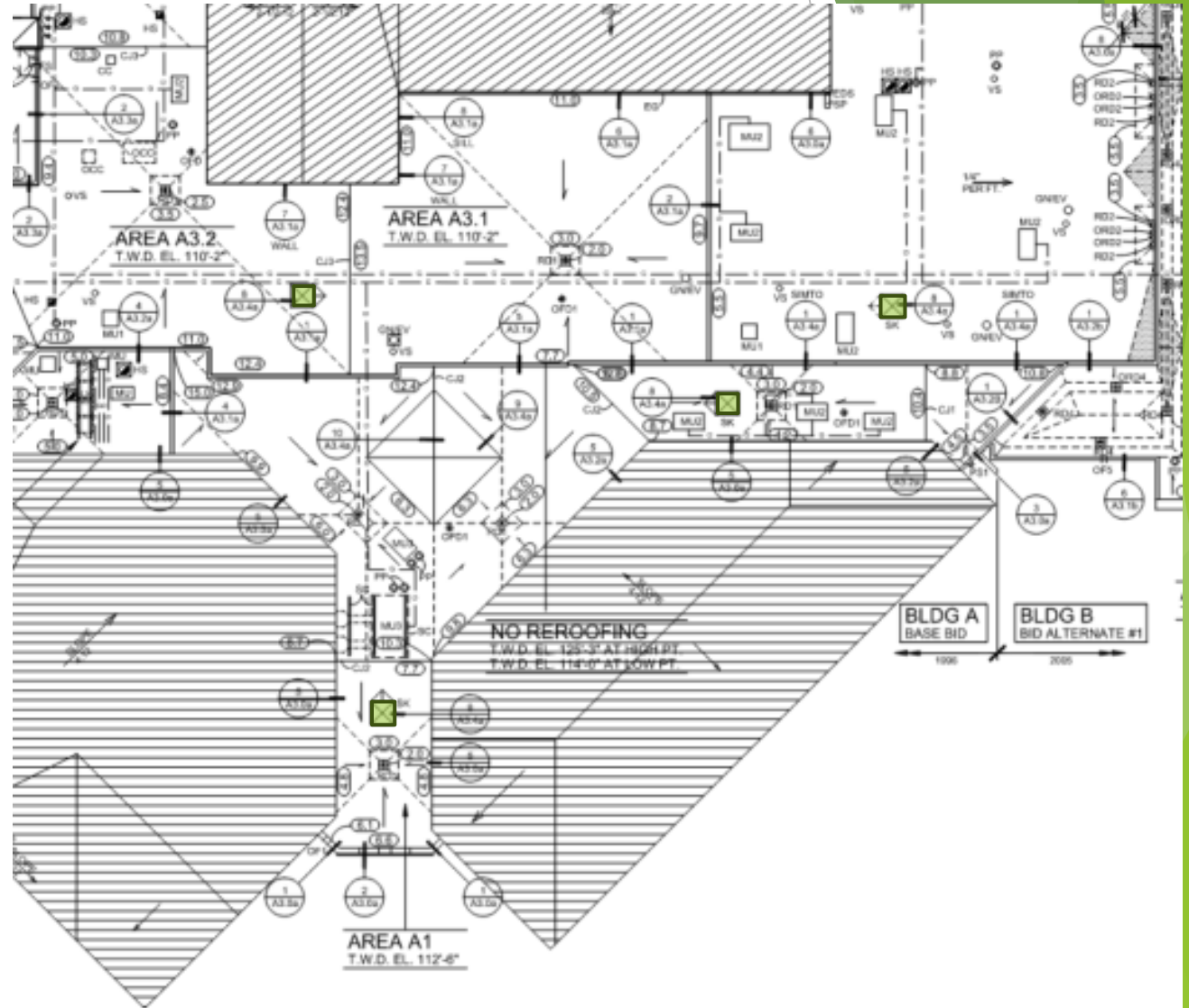
# Skylights

- ▶ The existing skylights will need to be removed at the time of construction to properly install the new roof membrane.
- ▶ At Area A1 there is a large translucent skylight present. The translucent panels were recently refurbished and replaced. We recommend that this translucent skylight be removed and reinstalled with new gaskets on the existing roof curb.



# Skylights

- ▶ At Areas A1, and A3.2 there are three acrylic pyramid skylights present. We recommend that these pyramid skylights be removed and reinstalled along with a fall protection cage or be replaced with translucent skylights.
- ▶ At Area A2 there is one acrylic pyramid skylights present. The acrylic surface on this skylight is severely crazed. We recommend that this pyramid skylight be replaced along with a fall protection cage or be replaced with translucent skylights





# SKYLIGHT DETERIORATION



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# Skylights

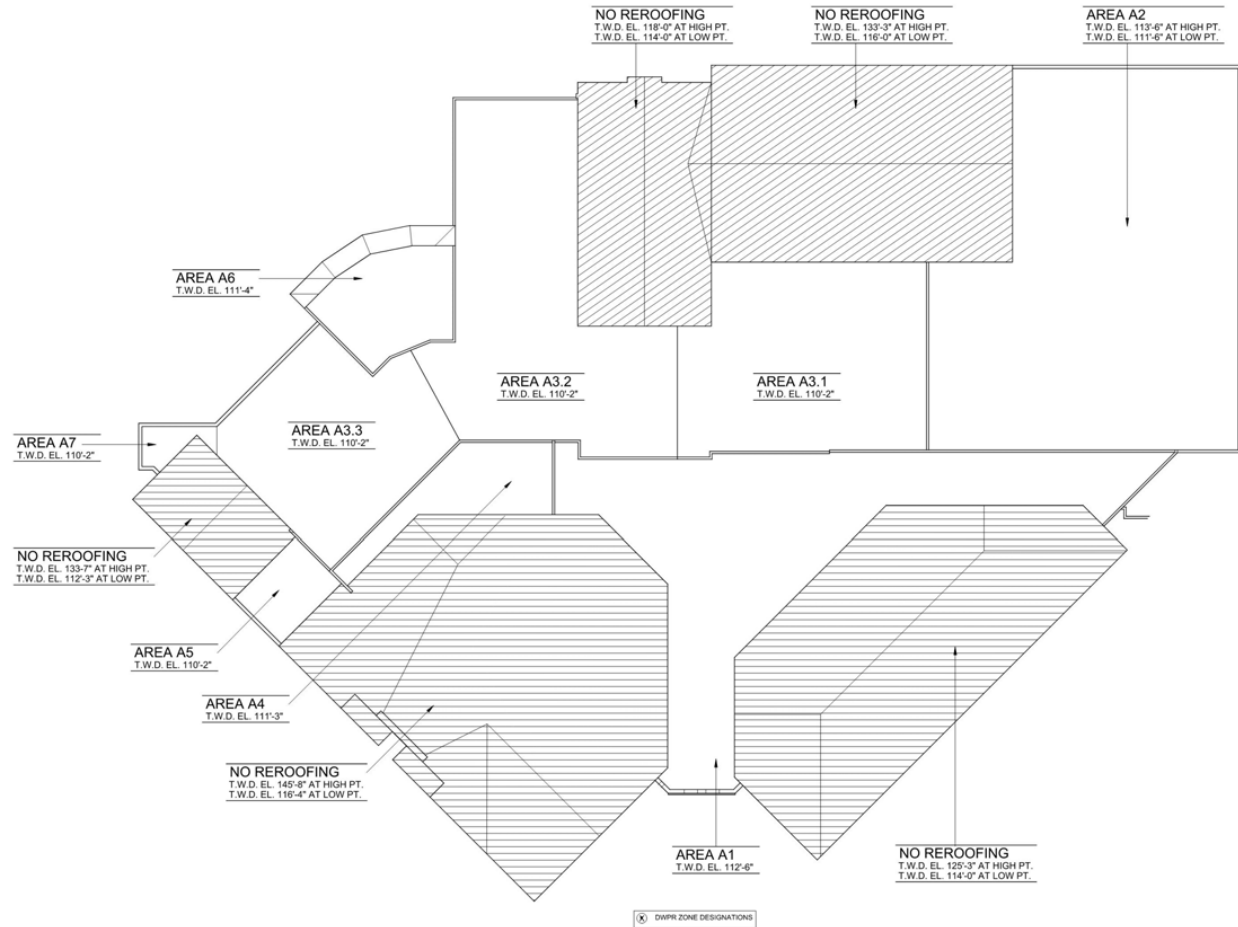
- ▶ At Area B5 (the gathering space outside of Incarnation Hall) there are seven translucent skylights present.
- ▶ The translucent panels are 20 years old and are deteriorated including delaminated face sheets.
- ▶ We recommend that these translucent skylights be replaced with new translucent skylights.



# Mechanical and Electrical Rooftop Equipment

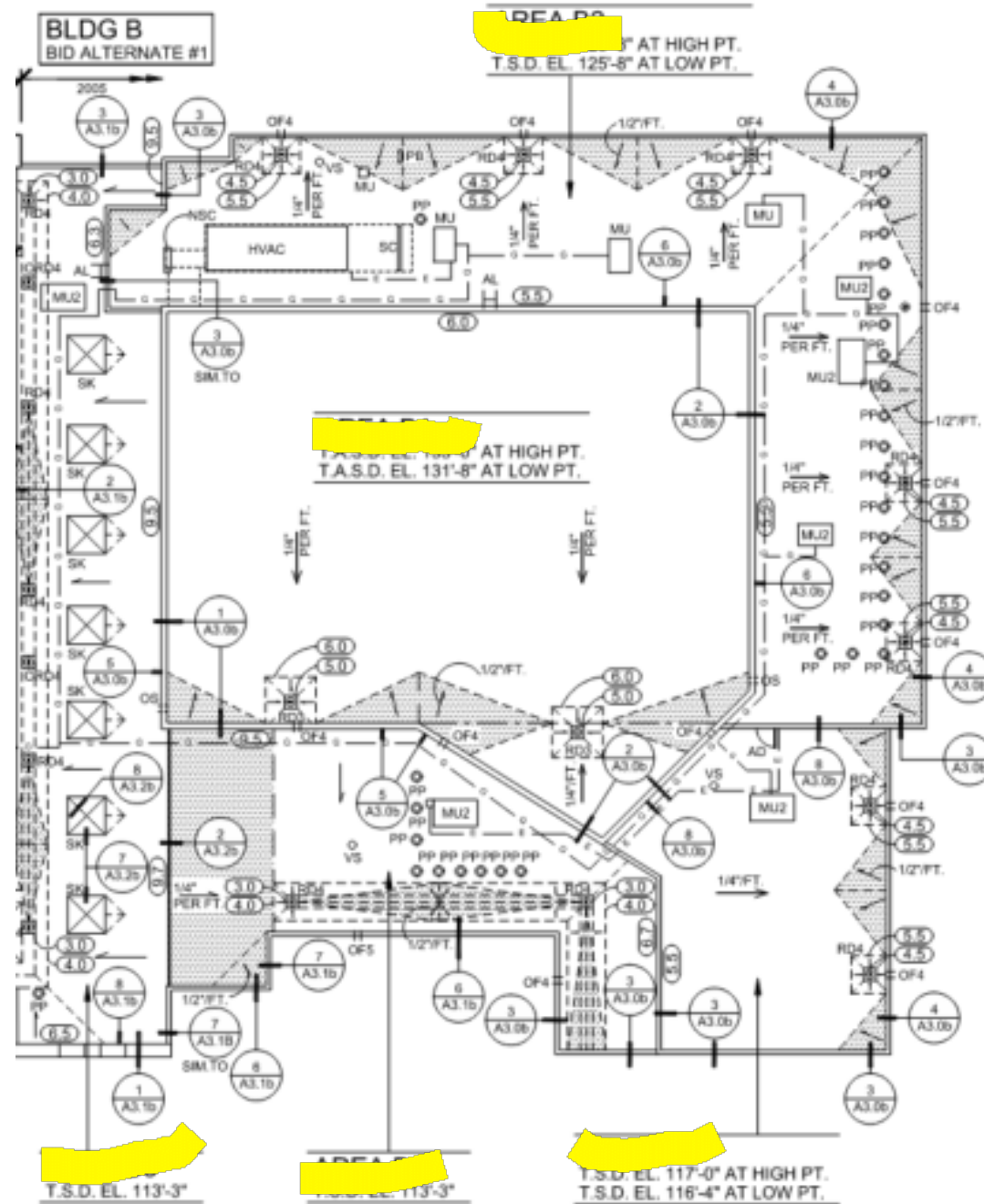
- ▶ At Areas A1 - A7, there are a series of existing mechanical units located on many of the roof areas that are currently set on mechanical curbs and/or sleeper curbs.
- ▶ At Areas B1 - B5, there are a series of existing mechanical units located on many of the roof areas that are currently set on mechanical curbs and/or sleeper curbs.

# Roof Areas





# Roof Areas



# Mechanical and Electrical Rooftop Equipment

- ▶ The large HVAC Unit will remain in place and the flashings will be modified to accommodate the new roof system if possible.
- ▶ We recommend that the existing small to medium sized mechanical units be removed to raise the curbs where needed and provide membrane and flashing over the top of the curb.



# Area B EIFS Walls

- ▶ EIFS stands for Exterior Insulation and Finish System. This is a synthetic stucco wall system that was widely used at the time of this addition was constructed.
- ▶ The existing roof membrane extends and is terminated behind this finish system. Portions will need to be removed to properly terminate the new membrane.
- ▶ At the EIFS walls on Areas B1-B5, the EIFS wall finishes are severely deteriorated and need replacement. There are also low base flashing heights present at adjacent roof areas.

# Damage to EIFS



# Area B EIFS Walls

- ▶ The existing EIFS wall system will be removed and replaced with a new metal wall panel system
- ▶ This will include the incorporation of a new air/moisture barrier, continuous rigid insulation and sub-framing girt system.
- ▶ This new metal panel wall system will accommodate the new roof insulation heights
- ▶ Will provide a more durable and weather resistant wall system.

# Area A Cost Additions

| COST ITEM                                                                    | COST               |
|------------------------------------------------------------------------------|--------------------|
| Areas A1 and A3 - A7: F.A. EPDM roof membrane 237 squares x \$4,000/square   | \$948,000          |
| Area A2: F.A. EPDM roof membrane 93 squares x \$3,500/square                 | \$326,000          |
| Wet, damaged, and deteriorated deck replacement (1,600 sf x \$50/sf)         | \$80,000           |
| Wet, damaged, and deteriorated insulation replacement (3,200 bf x \$5.00/bf) | \$16,000           |
| Mechanical Modifications (25 @ \$3,000 each)                                 | \$75,000           |
| Stucco Wall Modifications (5 @ \$3,000 each)                                 | \$15,000           |
| Masonry Wall and Window Modifications                                        | \$30,000           |
| Translucent Skylight Refurbishing at Area A1 (1 @ \$20,000 ea.)              | \$20,000           |
| Acrylic Skylight Replacement (1 @ \$9,000 ea.)                               | \$9,000            |
| Acrylic Skylight Modifications (3 @ \$3,000 ea.)                             | \$9,000            |
| Subtotal                                                                     | <b>\$1,528,000</b> |
| Contingency (10% minimum)                                                    | \$153,000          |
| Total                                                                        | <b>\$1,681,000</b> |

# Area B Cost Additions

| COST ITEM                                                                  | COST               |
|----------------------------------------------------------------------------|--------------------|
| Area B1: F.A. EPDM roof membrane 68 squares x \$3,600/square               | \$245,000          |
| Areas B2 - B3: F.A. EPDM roof membrane 72 squares x \$3,500/square         | \$252,000          |
| Areas B4 - B5: F.A. EPDM roof membrane 64 squares x \$3,500/square         | \$224,000          |
| Wet, damaged, and deteriorated deck replacement (4,000 bf x \$5.00/bf)     | \$20,000           |
| Mechanical Modification (9 @ \$3,000 each)                                 | \$27,000           |
| EIFS Wall Replacement with Metal Wall Panel System (5,400 sf x \$150/sf) . | \$810,000          |
| Translucent Skylight Replacement at Area B1 (7 @ \$10,000 ea)              | \$70,000           |
| Subtotal                                                                   | <b>\$1,648,000</b> |
| Contingency (10% minimum)                                                  | \$165,000          |
| Total                                                                      | <b>\$1,813,000</b> |

# Phasing Decision

- ▶ Total estimated cost has risen to just under \$3.5 million.
- ▶ Not certain sufficient funds will be available for total project.
- ▶ Replacement of Area A is critical
- ▶ Area B (2005 addition) was recently repaired which should extend its service life (with appropriate maintenance work) by an estimated 5+ years.
- ▶ Area B can easily be separated from the rest of the roof.
- ▶ Area B is going to be bid as an alternate which will allow us to choose whether or not to proceed with the work at this time.
- ▶ Decision will be based on how the bids come in and available funds.