



# REPORTER

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APWA's 2021  
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Inside: Annual Facilities and Grounds Issue



# The Downers Grove Township Center

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## The Original Condition:

The Downers Grove Township is the largest Township in DuPage County which includes almost 150,000 residents and encompasses all or part of the following municipalities: Downers Grove, Burr Ridge, Clarendon Hills, Darien, Hinsdale, Lemont, Oak Brook, Westmont, Willowbrook, and Woodridge. The Township offices have been housed at the current Administration Center located at 4340 Prince Street since the 1980s.

The Downers Grove Township provides a variety of social and senior services to residents and provides space to the all-volunteer FISH Food and Clothing Pantry.

The Administration Center is 9,500 square feet; therefore, it goes without saying that the Downers Grove Township was exceeding the capacity limits of its Administration Center.

## How to Move Forward?

The Downers Grove Township Leadership Team began discussions with Engineering Solutions Team beginning in early 2017 on how to best improve the existing conditions. This article describes the path and the processes undertaken by the Downers Grove Township to position themselves and then to plan, design and construct the new Downers Grove Township Multi-Purpose Senior Center.

Several important project phases were required to accomplish the successful construction of the new Township Center, and each phase is now summarized as follows.

## 1. The Property Consolidation and Re-Zoning Phase

At the onset, the Downers Grove Township and Engineering Solutions Team coordinated with the Village of Downers Grove to examine the original situation and the future demands and possible solutions.

Originally, the open space located immediately west of the Administration Center was utilized as five separate parcels and was occupied with single-family residence homes and one small apartment building. The Downers Grove Township purchased those parcels and the associated properties approximately thirty years ago. Several years after the purchase of those properties the houses were razed, and the properties sat and were minimally maintained by the DGT as a vacant lot until the Township would be better positioned to develop the consensus and the resources to understand how to best utilize those properties. One parcel was sold to enable Village of Downers Grove redevelopment efforts facing Ogden Avenue.

After analysis of various scenarios, it was determined by the Village that it would be in the best interest of all parties to consolidate and to re-zone these four remaining individual properties. Upon consolidation, the Village re-zoned the parcel to INP-1 (Neighborhood-Scale Institutional and Public District). The Village believed that the consolidation and re-zoning of the parcel would be a win-win for both the Village and the Township. The Village would win because the newly zoned parcel would better fit into its five-year master Village-Wide Zoning Plan. The Township would win because when it ultimately decided how to develop its parcel, they could immediately file for permit as opposed to having to first clean up old property lines.

A new Plat of Survey for the complete Township Campus was required to facilitate the successful completion of this Property Consolidation and Re-Zoning Phase.

This consolidation and re-zoning were completed in late 2017 and the entire process took almost one year to complete.

## 2. The Space Studies Phase – Evaluating the Real Demands

In 2018 the Downers Grove Township in concert with Engineering Solutions Team and MTZ Architects embarked on a Space Study Initiative to best understand how to lessen the congestion and create more room in its Administration Center.

The original intent was to better utilize the basement of the current Administration Center. The newly re-zoned adjacent parcel on the west side was originally intended to act as a parking lot and nature prairie complete with rain gardens.

The Space Study Initiative of the Administration Center did not develop as the Township Leaders originally hoped for. The Township Leaders had intended for the basement of the Administration Center to completely serve the demands of

the FISH Food and Clothing Pantry. This original plan by the Township did not materialize because of the following:

- The Administration Center basement was just not big enough and its ceiling did not provide enough head room.
- The demands on the FISH Food and Clothing Pantry continued to grow.
- The Administration Center would now require an elevator.
- The Administration Center would now require two new ADA-compliant stairwells.
- This type of reconstruction project to the Administration Center would require many more additional and expensive building retrofit improvements to bring this building up to current Building Code Standards.

All of the above reasons made the reconstruction of the Administration Center to be a poor alternative pertaining to its cost-effectiveness.

Ultimately, the conclusion of the Space Study Initiative was to recommend the plan, design and construction of the new Downers Grove Township Center to be located on the subject parcel located immediately west of the Administration Center.

## 3. The Site Plan Phase

At the onset of 2019, the Downers Grove Township and Engineering Solutions Team/MTZ Architects embarked on completing the proposed Site Plan for the new Downers Grove Township Center.

As previously stated, the west side of the DGT property had previously been four single-family residential properties and one small apartment building. Upon purchase closing the DGT then coordinated with the Village Fire Department and agreed to perform four separate practice burns on each house for the Village Fire Department. Upon completion of the burns, the DGT then had all building debris removed and then had the site leveled with the existing black dirt currently onsite. The four homes all had basements; therefore, the new elevation of the parcel had been lowered below its original elevation by three or four feet. At the time this seemed to be the most prudent approach. Unforeseen then, at the time of development this approach would prove to create additional expense.

During the previous 15-year period DuPage County experienced a couple record-breaking rainstorms. The County of DuPage became more proactive in the implementation of its county-wide stormwater ordinance. The Village of Downers Grove is a full-waiver community which means that it is solely responsible to enforce the County Stormwater Ordinance within the corporate limits of the Village.

During this 15-year period the Village of Downers Grove, similar to the County, has been more proactive in implementing the county stormwater ordinance on behalf of

the Village. The Village, like the County, remapped its floodplains. Due to this remap, the subject parcel was now reclassified to lie in the Village's "Local Poor Drainage Area" (LPDA). Meaning, development in the LPDA is much more restrictive and complicated from a stormwater perspective.

The purpose of the early completion of the Site Plan was to get in front of the Village pertaining to the design process and work hard to manage the design schedule to facilitate the intended 2020 construction of the Downers Grove Township Center. That was the objective of the DGT Board of Trustees.

**The Site Plan Phase - Scope of Work:** This 2019 Site Planning Study included the following:

- Complete Topographic Survey with Site Drawing.
- Perform and deliver Seasonal High-Water Ground Table Report for the subject parcel on the west side and adjacent to the Administration Building.
- Site Stormwater Plan will explore bioswales, prairie plantings, below-grade marshland or rain gardens, and a School District 99 Prairie Lab.
- The Intended Parking Concept will explore designated flood storage, proposed below-grade parking elevations, and ramp up/step up sidewalks.
- The Downers Grove Township Center will explore corporate funding options, grant funding options, 501 funding participation, and SAC funding participation.
- The viability of a Green Roof for the Downers Grove Township Center was explored.
- Other details to be explored included roof-installed solar panels to reduce the monthly electric bills, rain barrels, and raised bed gardens for pantry vegetables.
- Develop a summary DRAFT Site Planning Report to address parking concept, stormwater storage planning approach, the proposed building concept, the existing basement plan, and the proposed landscaping concept.

**Site Plan – Project Schedule:**

Engineering Solutions Team received Notice to Proceed in May 2019 and completed the Study and Report in July of 2019.



**Site Plan – Project Note:**

This Site Plan Study concluded with the development of an Inter-Governmental Agreement between the Township and the Village. This IGA prioritized a cost-sharing plan with the DGT and the Village for the required stormwater compensatory storage in exchange for a shared usage agreement for the Community Room between the Township and the Village.

**4. The Design Architectural/Engineering Phase**

The Engineering Solutions Team with its sub-consultant MTZ Architects was retained by the Downers Grove Township in August 2019 to perform all required Phase 2 Architectural/Engineering Services complete for the proposed Downers Grove Township Center.

**Scope of Work:** The Scope of Work for the Phase 2 Architectural & Engineering Services, to prepare for construction of the Downers Grove Township Center, included the following.

**Complete Site Plans included:**

- Plan Drawings for a Permeable Paver Parking Lot of 24 parking spaces, two handicap parking spaces, with concrete barrier curb, concrete trash corral, and new drive access to Saratoga Avenue.
- Plan Drawings addressed all Village Stormwater Requirements; the requisite compensatory storage was addressed by underground plastic piping mostly located under the new parking lot with capacity of approximately 25,000 cf. These pipes are connected to the Village 48" diameter Storm Sewer on Saratoga by an 8" diameter connection pipe with a structure located on DGT property to facilitate the piping transition.
- Plan Drawings for a complete concrete sidewalk system throughout the entire parcel complete with ADA transitions and lighting.

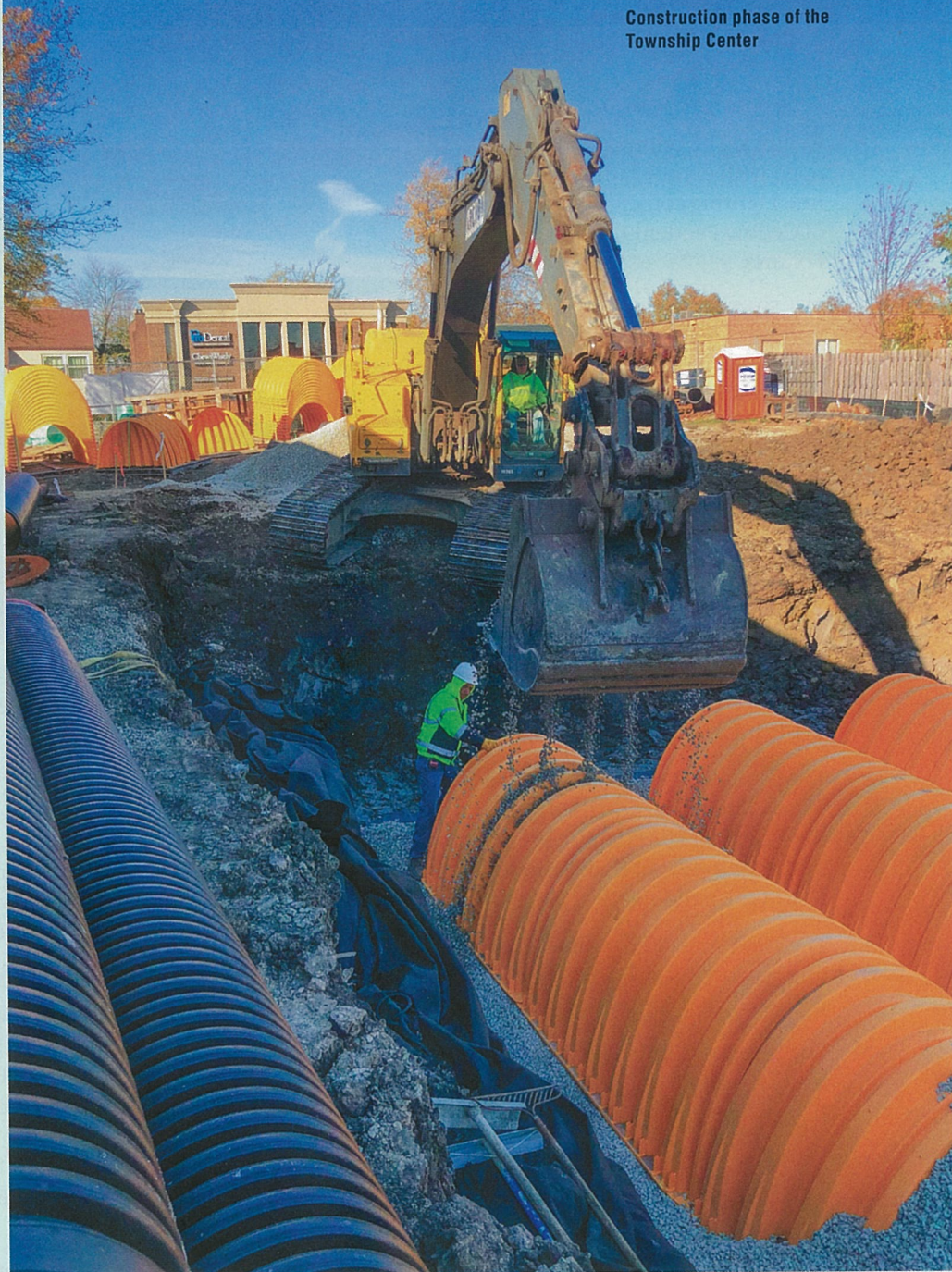
- Plan Drawings included a landscape plan presenting landscape guidance and details to District 99.
- Plan Drawings presented the Village Sanitary Service and connection and the Village Water Service and connection. Connection plan for Com Ed and NICOR was also included.

**Complete Architectural Building Plans included:**

- All Building Plans/Building Structural Plans/Mechanical and HVAC Plans/Plumbing Plans/Electrical Plans.
- The A&E Design Team was responsible to obtain the Village Permit (less the General Contractor's requirements for the Village Permit). The A&E Project Manager attended required Village Committee and Board Meetings.
- The Project Architect developed a Project Rendering to support the project with the DGT and with the Village.
- The Project Engineer and the Project Architect developed all the required Project Specifications.
- The Project Manager developed the Contract Document; the Contract Document included all plan drawings and all project specifications and all DGT legal contracting requirements.
- The A&E Team managed the Bid Process for the DGT, which included a Pre-Bid Meeting.

**Design Parameters: The Design Parameters for The Downers Grove Township Center, included the following:**

- The Proposed Parking Lot be constructed of Permeable Brick Pavers.
- The provided stormwater compensatory storage required 25,000 cf and this system consisted of large ADS plastic chambers and CA6 will be located under the permeable brick pavement parking lot.
- The Building Framing Plan: The Main Girders (three spans) traverse the Building in the East-West



direction. There are two lines of Interior Columns (six total columns).

- The Building Dimensions: The building measures 100-Ft in the East-West direction and 65-Ft in the North-South direction.
- The Building is a 1-Story Building complete with a Full Basement. The building includes an elevator and two ADA-compliant stairwells.
- The Setbacks: A 25-Ft Setback is required off the right-of-way line on the Saratoga Avenue Frontage. A 5-Ft Utility Easement is required on the east side of the lot.
- HVAC System: The HVAC System is a high-efficiency gas forced air system operated by three rooftop units.

- **Ceilings:** The ceilings are open with exposed utilities. Lighting consists of Ceiling Pendant LED Fixtures.
- **The Fire Safety System:** The Building will be a fully sprinkled wet system.
- **Ceiling Heights:** Main Floor to measure ten feet from floor to beam. Basement to measure eight feet from floor to beam.
- **The Doors:** The exterior doors are similar to the exterior doors at the Administration Building. The interior doors are similar to the interior doors at the Administration Building.
- **The Landscape Plan:** The Engineer developed the Landscape Plan for the north side, east side and west side of the Building. The Plans incorporate the Landscape Plan from Consolidated High School District 99 for the south side of the building.
- **The Trash Area:** The trash area is at the NW corner of the original lot. It is a concrete pad and measures two parking spaces and is corralled.
- **The Outside Lighting.** The outside lighting continues along the sidewalk adjacent to the parking lot, similar to the current system at the Administration building.

***The Most Significant Design Challenge:***

The Design Study and Preliminary Site Plan called for a one-story building on a slab foundation. During the design phase the design team observed that the required finish floor elevation due to the requirements of the LPDA was an elevation of 736.70 or higher. The field survey showed that the existing topographic elevations were at 733.50. Additionally, the soil borings presented data that approximately the top eight feet of soils should be removed to get to the solid clay suitable for foundations purposes. These numbers indicated that it was very cost effective to construct this building with a basement. The proposed building with a basement would provide much more capacity and allow for plenty of storage room. The Design Team presented this data and recommendation to the DGT Leadership Team. The Downers Grove Township agreed to construct the new building complete with basement.

The Village Permit Review Team did not initially share this opinion. Extra stormwater analyses and studies were



**Interior rooms of the Township Center**

required for submittal and review by the Village Permit review Team. Engineering Solutions Team brought on to its Design Team a highly respected geotechnical engineer and a respected expert on the County Stormwater Ordinance to help make the case for the new building to be complete with basement.

Finally, upon reviewing the additional expert analysis, the Village Permit Review Team consented that the new Township Center could be designed and built complete with a full basement.

**5. The Bidding Phase**

The Construction of the Downers Grove Township Center was set in motion for Fiscal Year 2020. The Planned Construction Schedule is the following:

Bid Opening = April 9, 2021

Obtained the Village Building and Site Development Permit = May 27, 2020

Groundbreaking Ceremony = June 5, 2021

Construction Completion = February 10, 2021

The Bid Opening included seven local successful building contractors. All seven proposals were well presented and priced in a competitive range.

The selected Contractor who submitted the best and most cost-effective proposal was E. P. Doyle and Son, LLC, of Wheaton, Illinois. The Doyle Contract with the Downers Grove Township was for a total of \$2,367,932.00.

**6. The Construction Phase**

E. P. Doyle began construction immediately after the Groundbreaking Ceremony. Doyle worked consistently on the project with multiple crews working most days. Work continued every day consistently through the summer and

fall and into the winter. Ultimately, the construction was completed with exceptional quality, on time and on budget.

#### **The Most Significant Construction Challenges:**

**Com Ed:** Eight feet beyond the northeast building corner is a Com Ed power pole. During the design process the site was visited by the Survey Team, the Design Team, Com Ed and several interested contractors. All parties believed the power pole would not be an issue during construction.

During excavation for the basement, it became obvious that the power pole location was a big issue. The excavation subcontractor and the concrete subcontractor threatened to leave the project if this situation was not safely resolved.

The Owner and the Design Leaders and E. P. Doyle all met to determine how best to resolve the issue. It was determined by the Leadership Team to prioritize the project schedule. It was felt by all that prioritizing the project schedule was in the best interests of all involved parties and the project.

So, after analyzing several alternatives, the following move-forward plan was agreed to by all parties:

- Downers Grove Township contracted with Com Ed for two months to provide a utility truck full-time to remain onsite and provide temporary pole bracing.

- Further, the northeast corner of the building foundation was redesigned to allow excavation and concrete work to be performed in a safe manner.
- Upon implementation of these two simple adjustments, construction continued to move forward.

**The Size of the Construction Site:** The size of the construction site was very compact. The small size of the site forced E. P. Doyle and its subcontractors to constantly strategize, plan ahead and coordinate with each other. Planning for the subcontractors to work side by side and not on top of each other was the continual challenge for Doyle and its site superintendent.

#### **7. The Opening of the New Facility**

The Downers Grove Township received its Temporary of Certificate of Occupancy from the Village of Downers Grove on February 10, 2021. The Downers Grove Township is now planning its move in and its official opening and its Facility Use Calendar for the Spring of 2021.

#### **8. Lessons Learned**

##### **The OWNER:**

- Early space utilization studies were critical to understanding the problems and possible solutions to space needs.

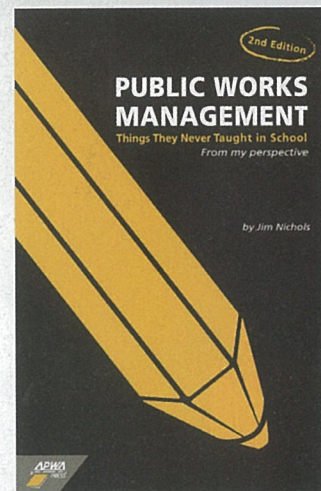
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- Initial meetings with the Village established Township intent to develop the site for Township needs, and field Village concerns.
- Take your time during the planning stage: an extra ounce of planning is preferable to extra tons of revisions and change orders.
- Picking the best qualified contractor is critical: Check the résumés of the team members and check their previous work product and references. Visit their other buildings to see them in person.
- KISS Keep It Simple. We stayed focused that the building served the specific purposes we needed and resisted the desire to add extras that would have blown out the budget.
- Leave room for future use. If and when additional parking becomes available, the basement can be finished for possible future use.


**The ENGINEER/ARCHITECT:**

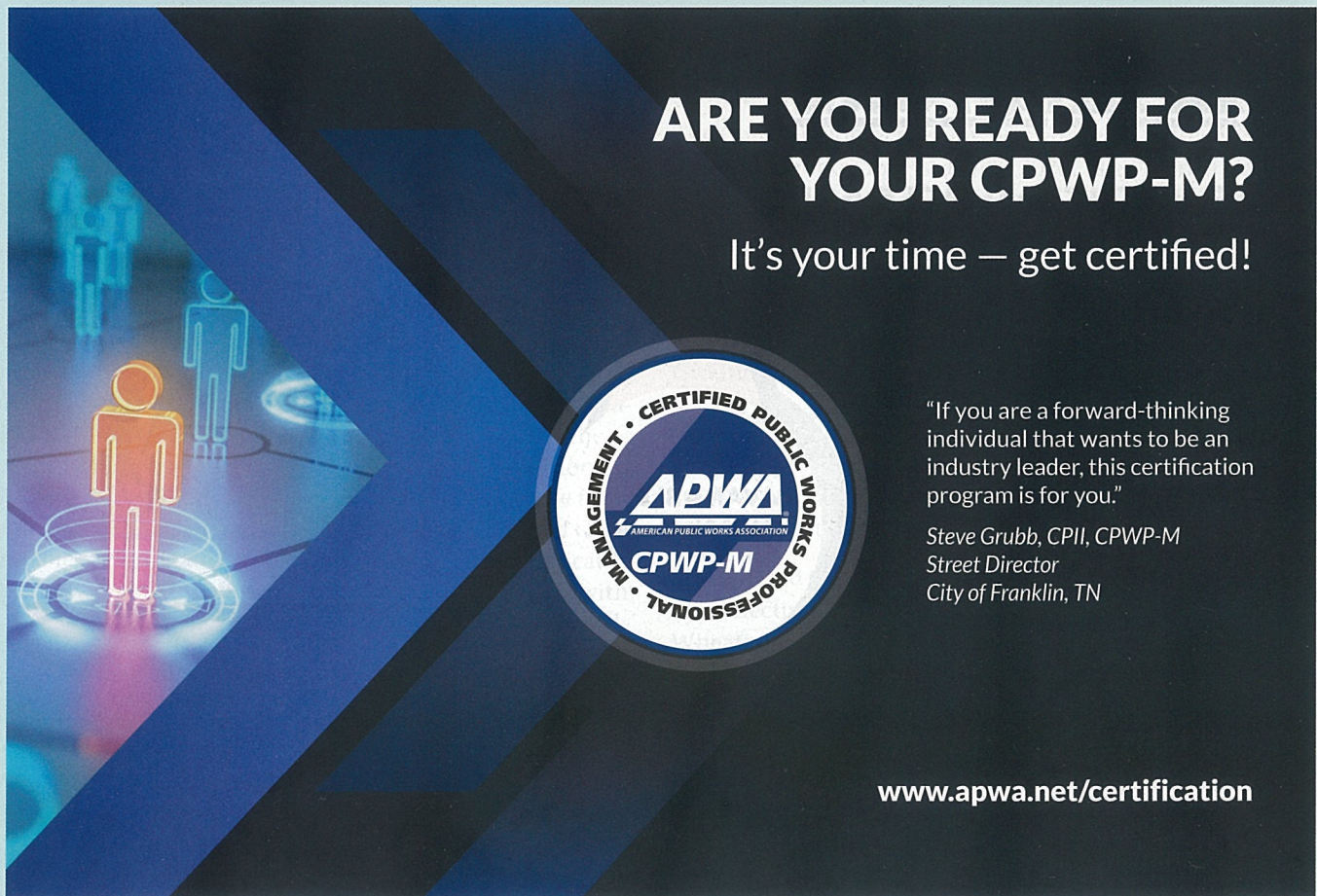
- Early Coordination with the Permitting Agencies and the Utilities: The Permitting Agencies and the Utilities will control your project schedule. The earlier that they are involved will best position your project to be on schedule.

- Onsite Project Inspections: Understanding the daily events of your construction project is essential to project success. The Engineer must understand all the various unique events that are happening on each and every project—only then is the Engineer properly positioned to be involved in the pending important required project decisions.

**The BUILDER:**


- This successful project is the result of careful planning, communication, deliberate decision making and teamwork—not necessarily a lesson learned but more reinforcement of theory.
- Active participation in progress meetings by the entire project team was extremely helpful in keeping the construction process moving and avoiding delays.
- Managing to build during COVID-19 reminds you that there is always something new to learn.

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