NASHVILLE WAREHOUSE COMPANY

Presented by Michael Hines and Rachel Killion



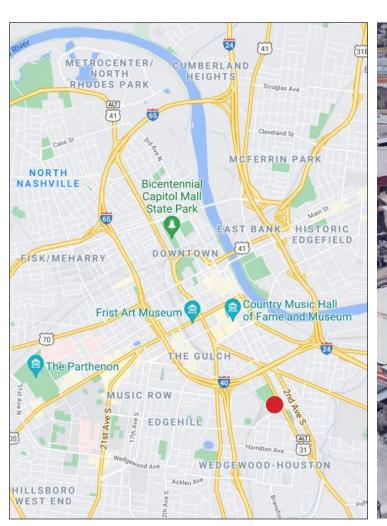
+ Disclaimer: This presentation was developed by a third party and is not funded by WoodWorks or the Softwood Lumber Board.

PROJECT TEAM

- **+ Owner**AJ Capital Partners
- + Project Manager CapEx
- + General Contractor
 DPR Construction
- + Architect
 Hartshorne Plunkard Architecture
- + Structural Engineer
 Forefront Structural Engineers, Inc.

- + Mass Timber Engineer
 StructureCraft
- + MEP Engineer IMEG Corp.
- + Civil Engineer
 Barge Cauthen & Associates
- + Landscape Architect
 Hodgson Douglas
- + Elevator Consultant
 Jenkins & Huntington

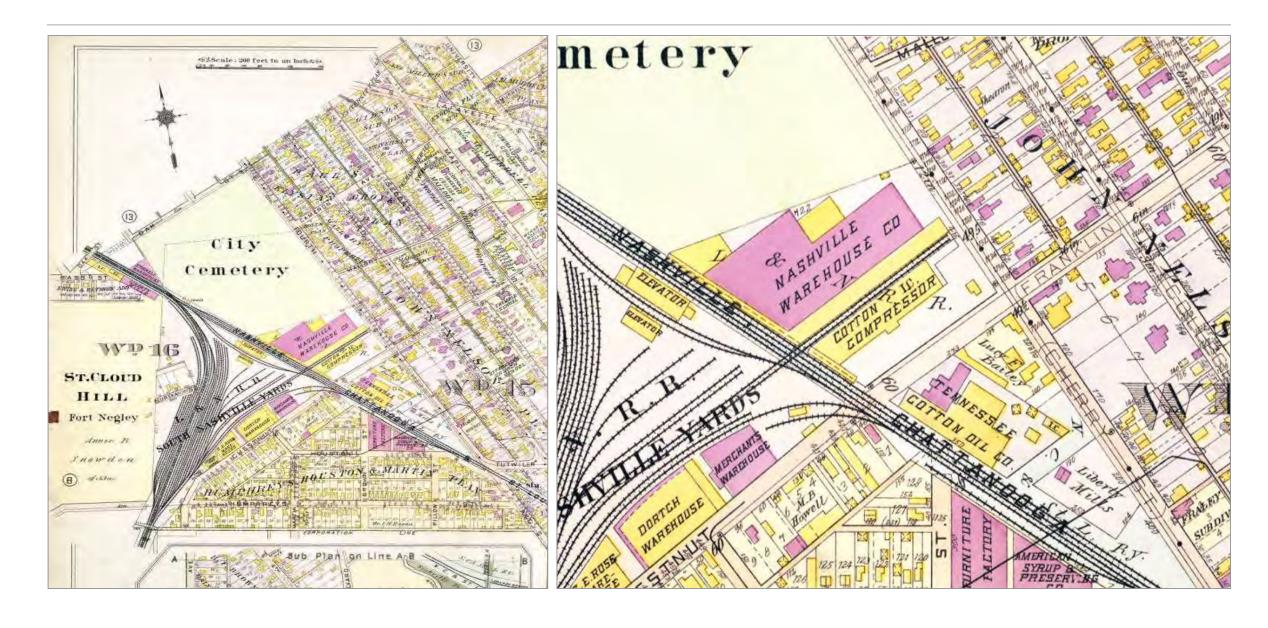
PROJECT LOCATION



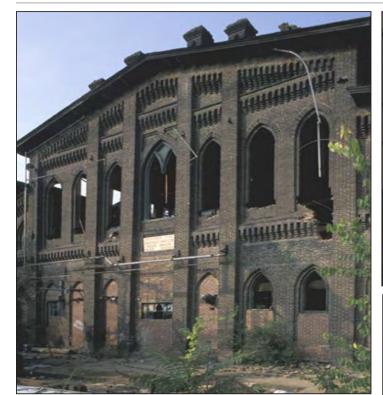


NASHVILLE WAREHOUSE CO. SITE

PROJECT LOCATION



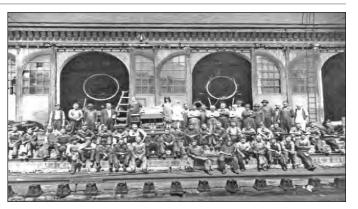
PROJECT HISTORY



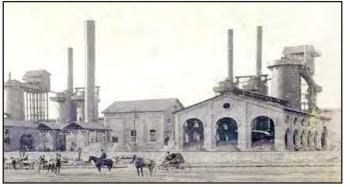
CUMMINS STATION



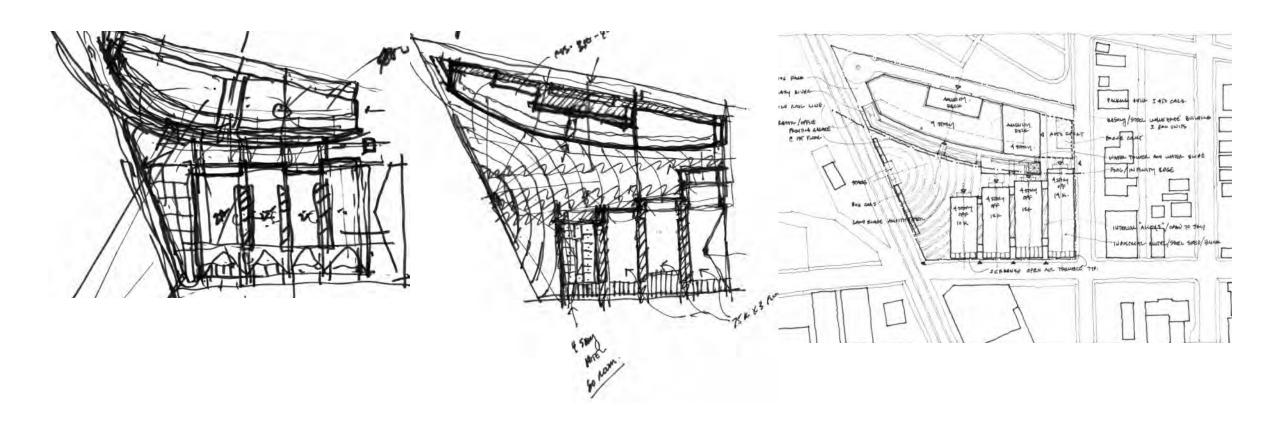






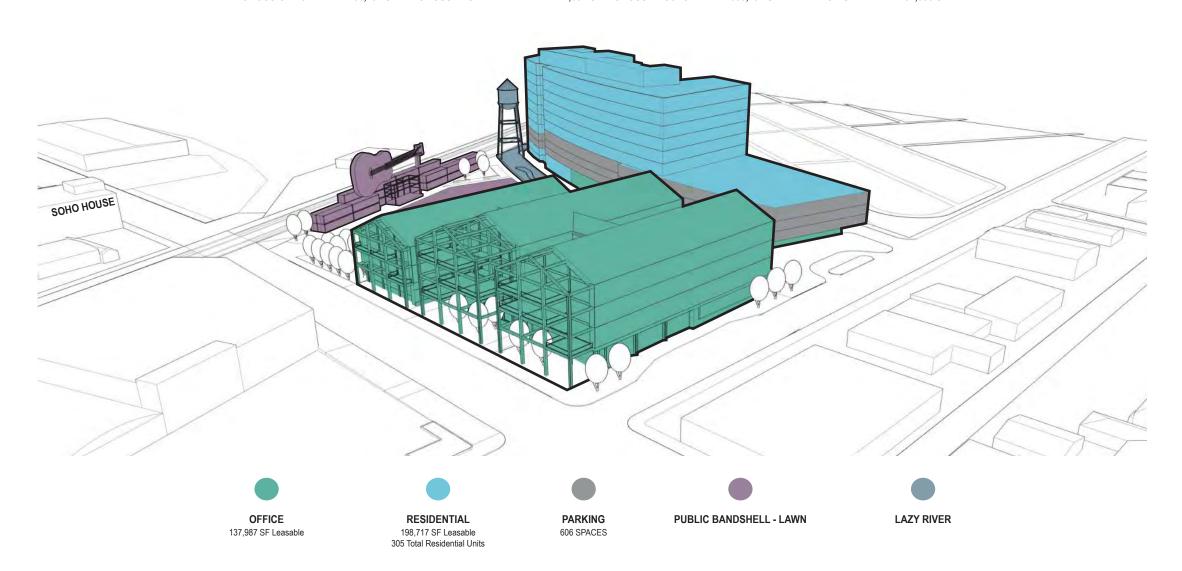


PROGRAMMING/EARLY DESIGN CONCEPTS



PROGRAMMING/EARLY DESIGN CONCEPTS

GROSS OFFICE AREA: 166,294 SF GROSS RESIDENTIAL AREA: 271,631 SF GROSS PROJECT AREA: 663,194 SF EXTERIOR SITE AREA: 131,500 SF













HEAVY TIMBER AND THE DESIGN CONCEPT



+ Industrial Inspiration

The use of heavy timber construction is a contemporary nod to the historic framing used in industrial buildings of the historical period.

+ Expressed Architectural Forms

Allow for interior expression of the overall architectural forms, including the gable roofs and cross gable framing prominent on the building exterior.

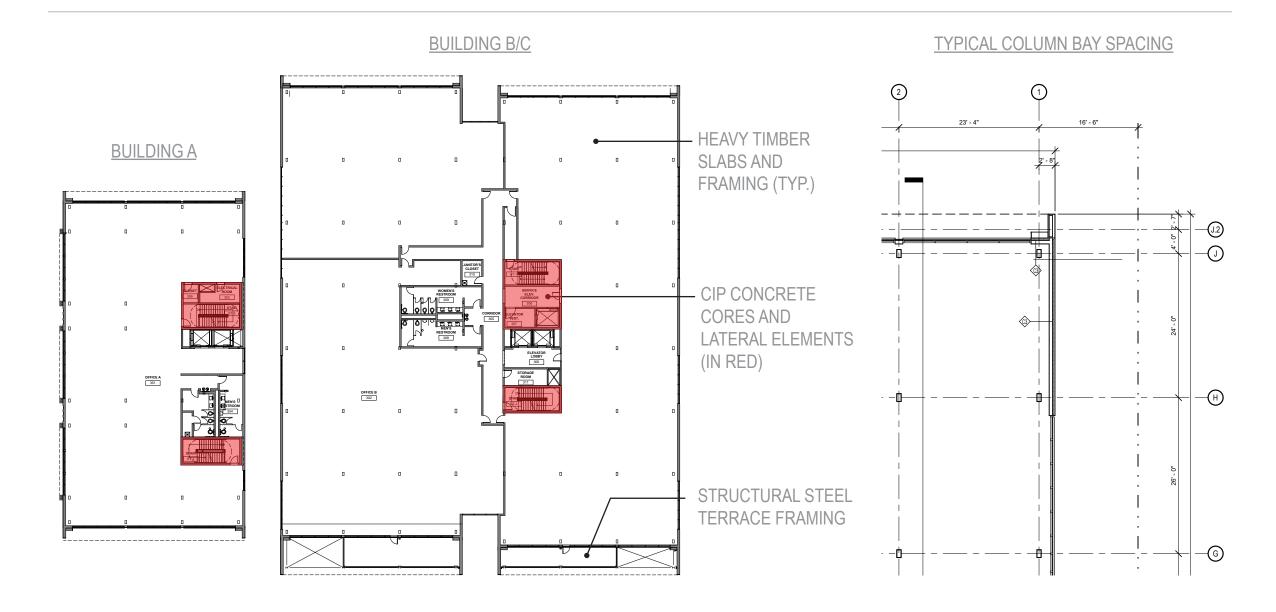
+ Exposed Interior Framing Aesthetic

Provide infrastructure for exposed architectural framing within tenant spaces consistent with Type IV Heavy Timber construction. Minimizes tenant fit out costs for interior finishes and provides a unique aesthetic.

Filling a Market Demand

Provide heavy timber office space available within the Nashville market given the lack of existing inventory in the market.

BUILDING PARTI AND STRUCTURAL CONCEPT



INTERIOR FRAMING - BUILDING A

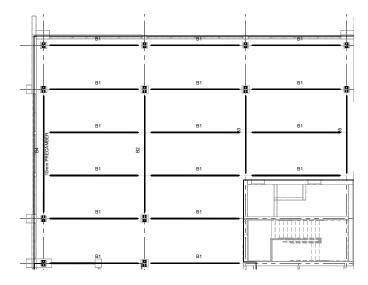


+ Flush Framing Approach

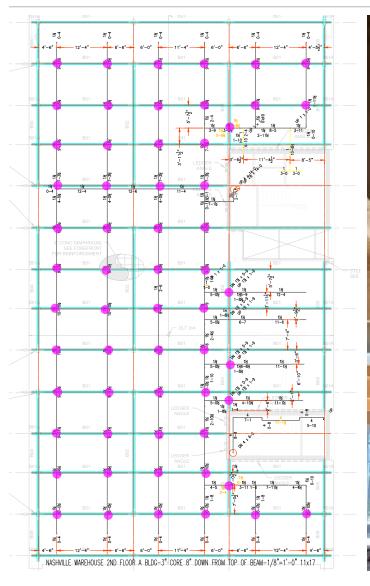
The proposed framing approach places the top of girders and purlins at the bottom of the slab depth above.

The proposed option was selected by the office tenant brought on early in the project and was enabled by girder-free bays at narrow column spans.

MEPFP routing is primarially to be run below the bottom of girder and purlins and exposed in the final installed condition.

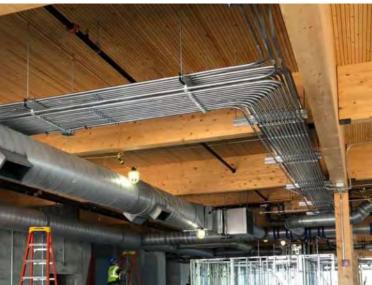


INTERIOR FRAMING - BUILDING A









INTERIOR FRAMING - BUILDING B/C

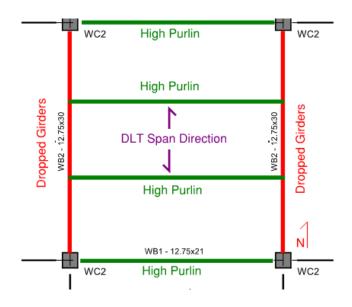


+ High Purlin Framing Approach

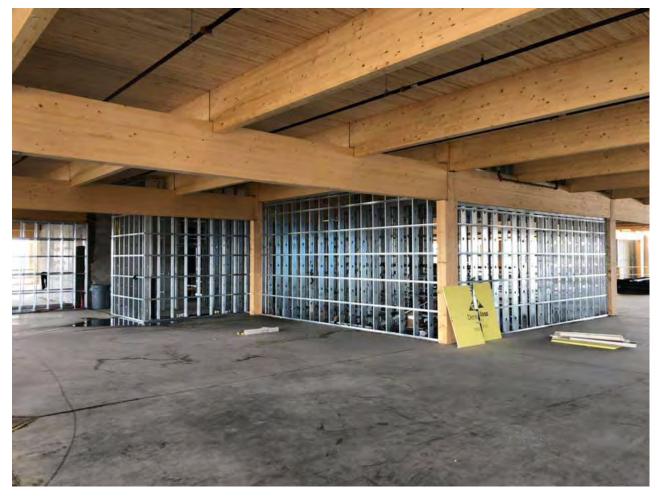
The proposed framing approach leaves a gap at the purlin and girder intersection to accommodate MEPFP routing.

MEPFP routing stays primarially higher along the bottom of slab. Girder and purlin framing becomes the primary aesthetic interior finish.

The proposed framing option was available given the project's 14'-0" floor to floor height.



INTERIOR FRAMING - BUILDING B/C





DOWEL LAMINATED TIMBER SLABS (DLT)





+ Structurally Efficient

2X Framing is friction fit with premilled boards together on edge, creating a structurally efficient panel for horizontal spans, specifically for one way spans.

+ All Wood

DLT panels are the only all wood mass timber product, in concept they provide no glue or nails.

Expressed Materiality and Profile Flexibility

Allow for interior expression of timber material in its natural form and CNC routing of jointing allows for significant profile and aesthetic options at exposed locations.

Installation Efficiency

Large, preassembled panels can be installed quickly

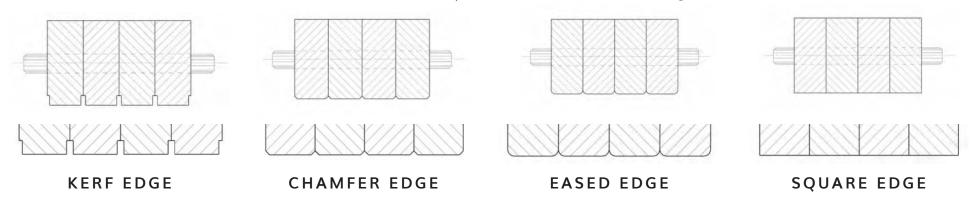
+ Source: StructureCraft

DOWEL LAMINATED TIMBER (DLT) - ARCHITECTURAL PROFILES

STANDARD DLT PROFILES

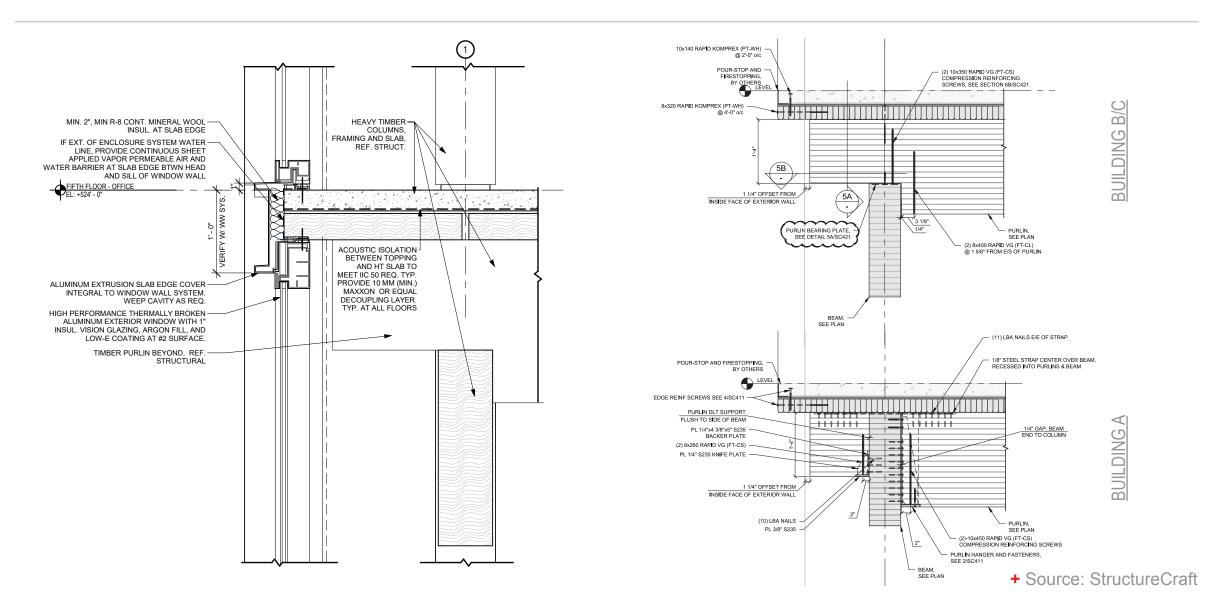
These standard profiles give the designer a variety of aesthetic options at no extra cost. Variations of these can be easily incorporated.

Depth available: 2x4 to 2x12, 3x4 to 3x12, 4x4 to 4x12. Max depth = $12 \frac{1}{4}$ " without sheathing



+ Source: StructureCraft

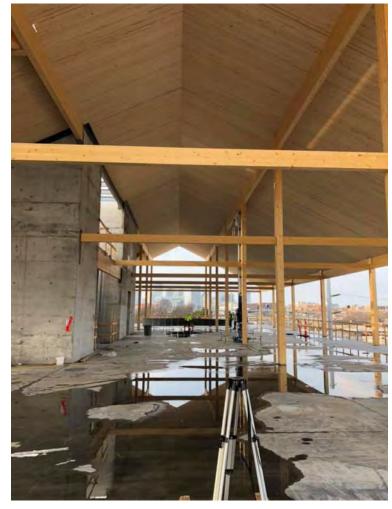
DOWEL LAMINATED TIMBER (DLT) - DESIGN SOLUTIONS



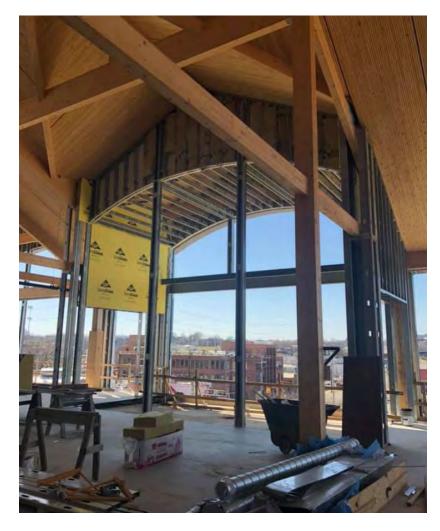
GABLED ROOF DESIGN - BUILDING B/C







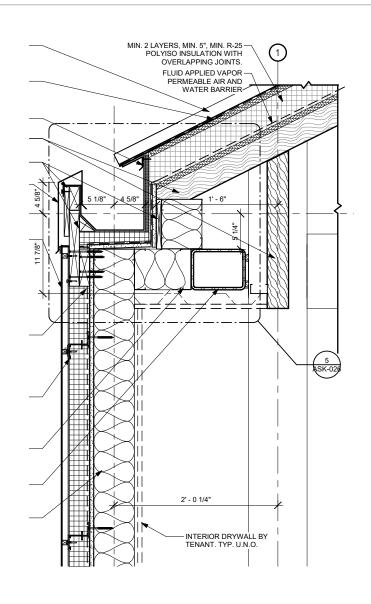
GABLED ROOF DESIGN BUILDING A

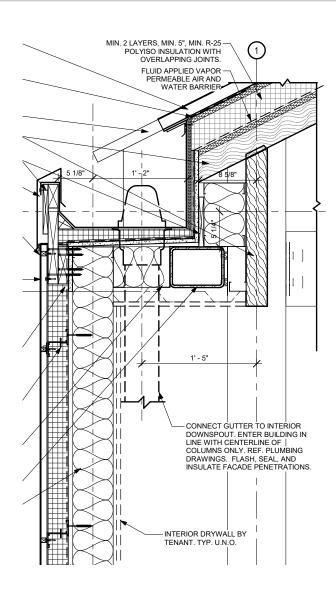


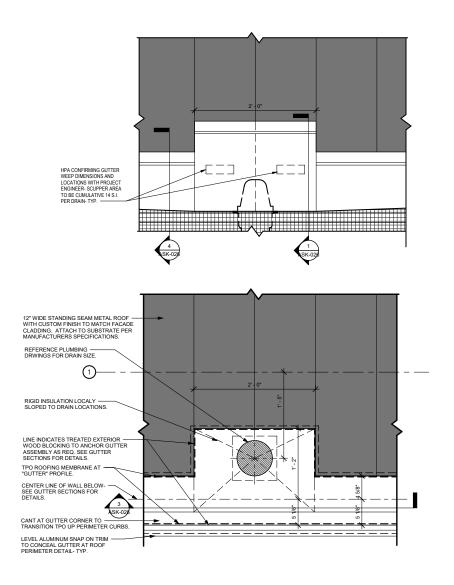




GABLE ROOF FRAMING AT ROOF PERIMETER







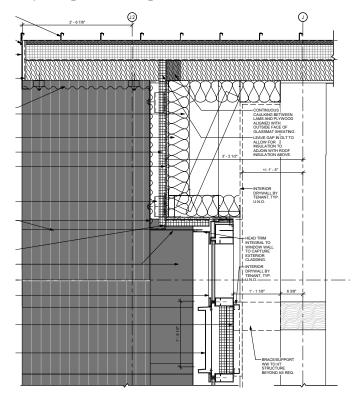
NORTH FACADE - CANTILEVERED ROOF



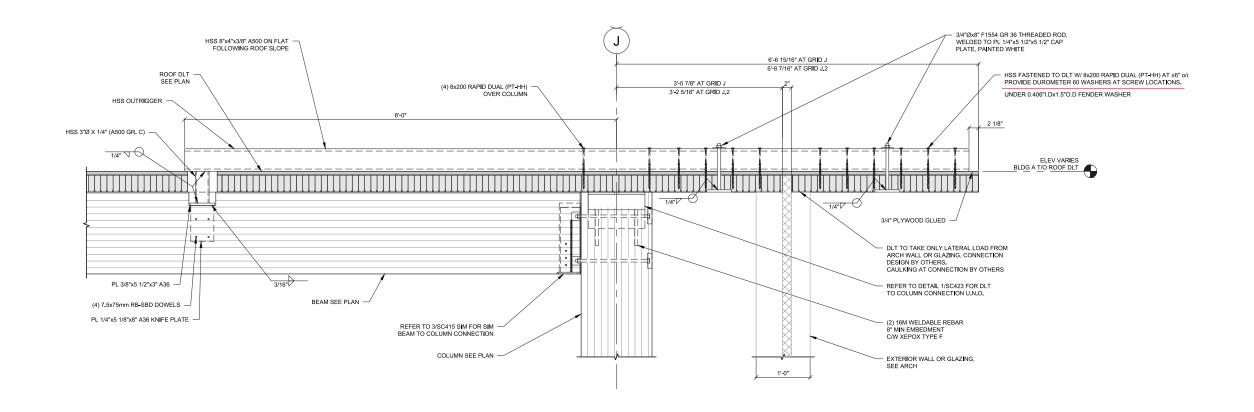


+ Gable End Architectural Expression

The architectural design intent was to express a thin edge profile at the perimeter of the gable frame. Spanning the DLT parallel to the gable profile meant the weak axis of the panel cantilevered at these conditions requiring a framing solution.



NORTH FACADE - CANTILEVERED ROOF



SOUTH FACADE - BALCONY DESIGN





+ Steel to Timber Interface Conditions

For the exterior expression of the terraces on the south facade, structural steel was preferred. The steel framing extends and connects to the interior timber framing in limited locations with careful coordinated

