

EL VERANO COMMUNITY SCHOOL MULTI-PURPOSE BUILDING

Utilizing Wood for Value and Versatility

Presented by

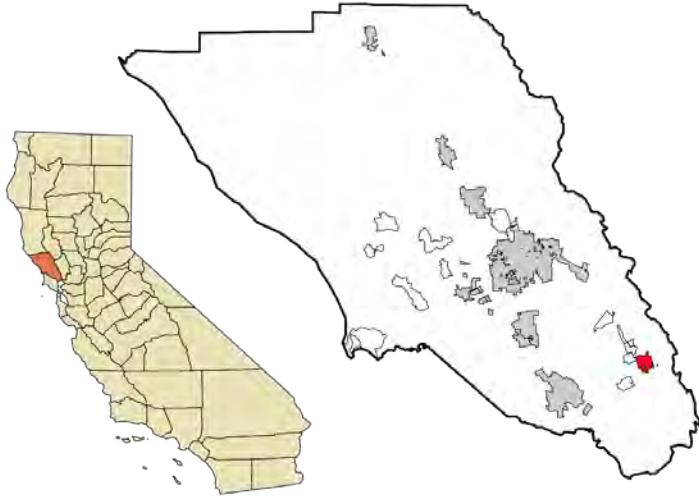
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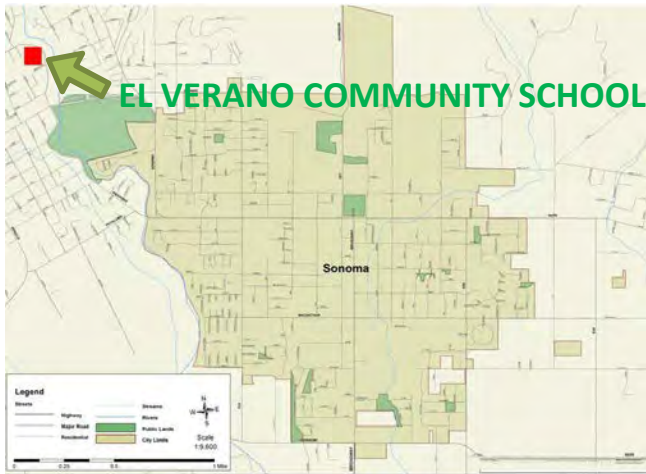
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PROJECT OVERVIEW

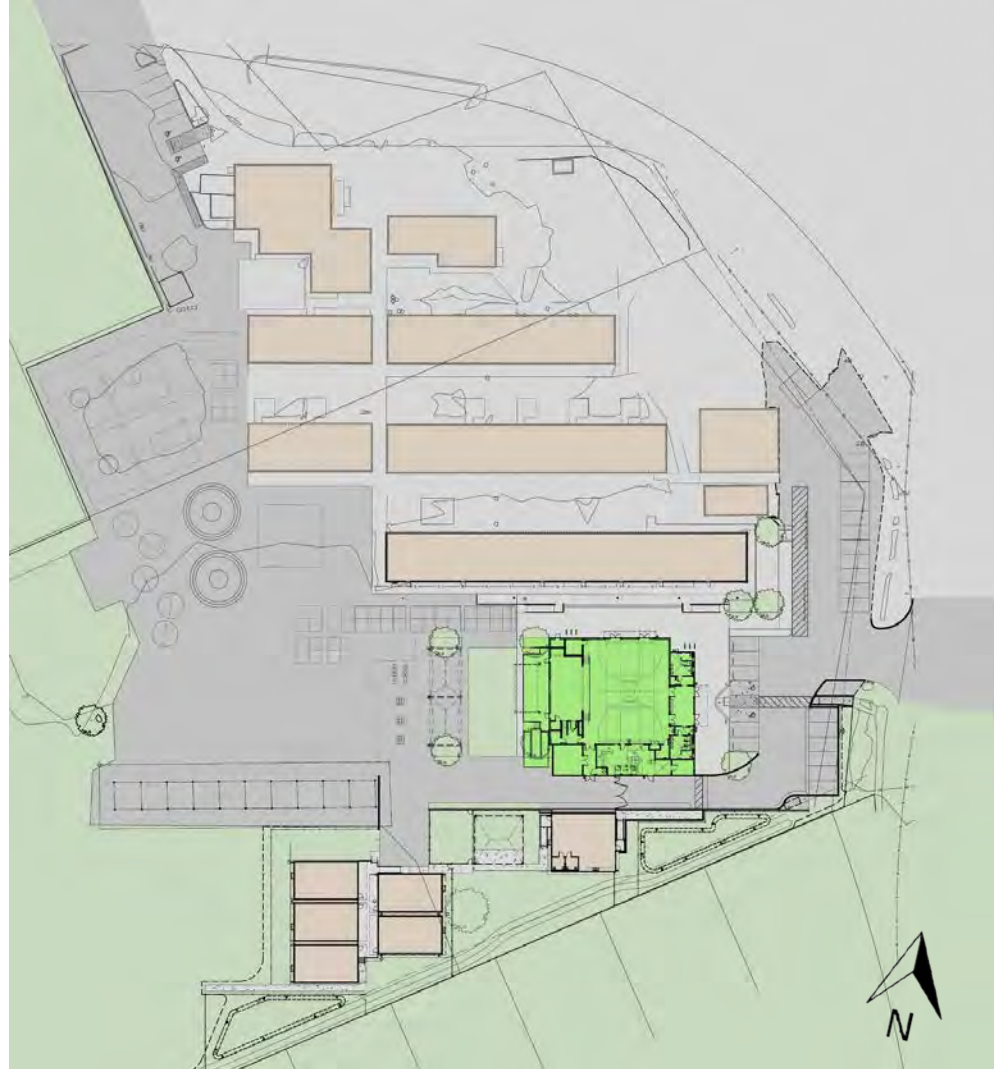


CALIFORNIA

SONOMA COUNTY



CITY OF SONOMA



EL VERANO COMMUNITY SCHOOL

- LOCATION: SONOMA, CA
- ELEMENTARY SCHOOL
- SONOMA VALLEY UNIFIED SCHOOL DISTRICT
- STUDENT POPULATION: 420

PROJECT GOALS

- AUDITORIUM SPACE FOR ENTIRE SCHOOL
- STAGE FOR PERFORMANCES
- SPORT COURTS
- INCREASED LUNCH AREA
- INDOOR/ OUTDOOR CONNECTIONS
- CONNECTION TO EXISTING CAMPUS
- CREATING WELCOMING PRESENCE TO THE COMMUNITY

PROJECT OVERVIEW



STREET VIEW AFTER



NEW MULTIPURPOSE BUILDING



STREET VIEW BEFORE



EXISTING MULTIPURPOSE BUILDING

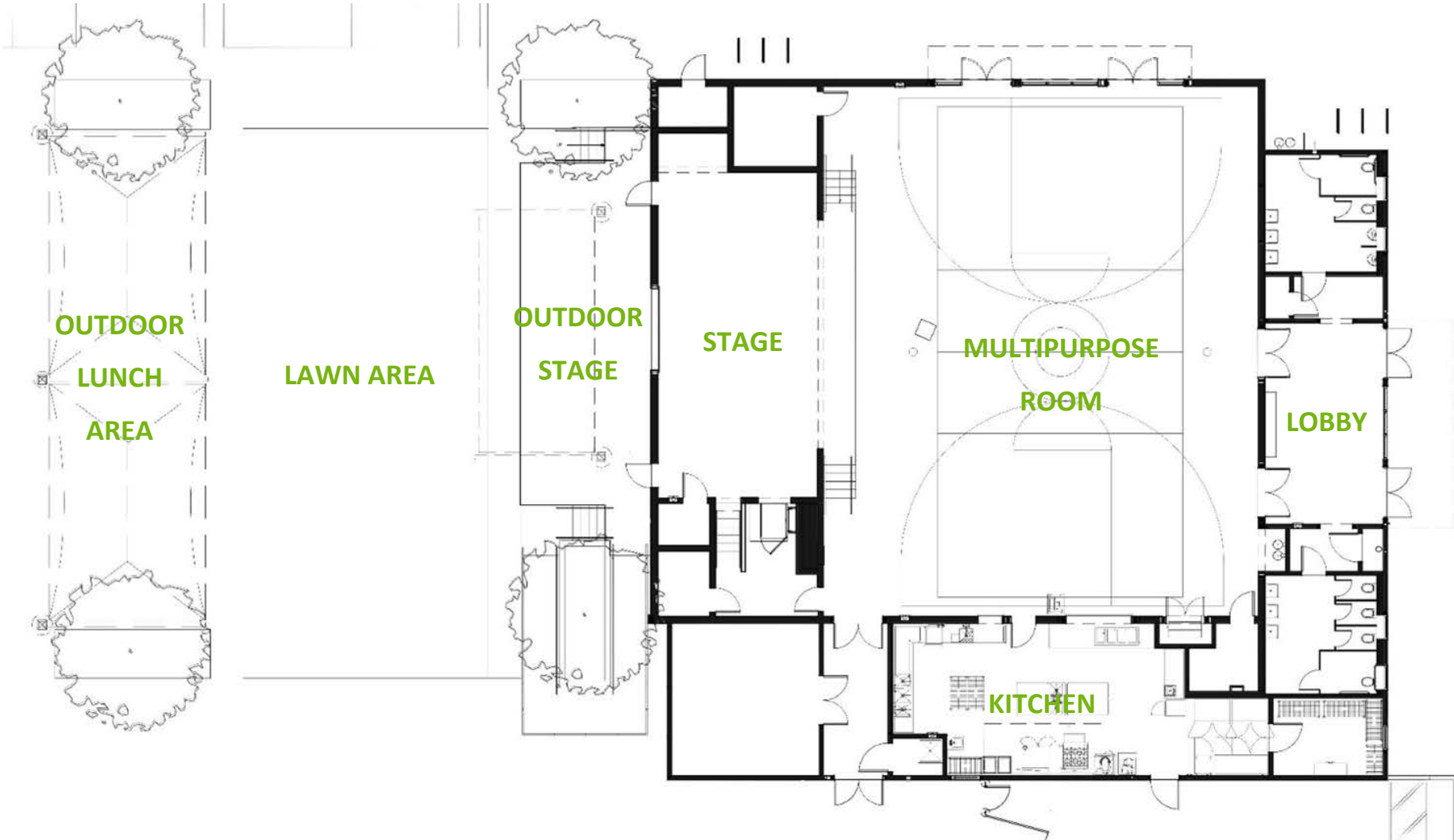
EXISTING CONDITION

- INADEQUATE LUNCH AREA
- SPORTS AREA NOT EASY TO USE
- SECONDARY ENTRANCE TO THE CAMPUS IS UNINVITING

PROJECT IMPROVEMENTS

- AUDITORIUM SPACE FOR ENTIRE SCHOOL
- STAGE FOR PERFORMANCES
- SPORT COURTS
- INCREASED LUNCH AREA
- INDOOR/ OUTDOOR CONNECTIONS
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PROJECT OVERVIEW



MULTIPURPOSE BUILDING

- 7,500 S.F.

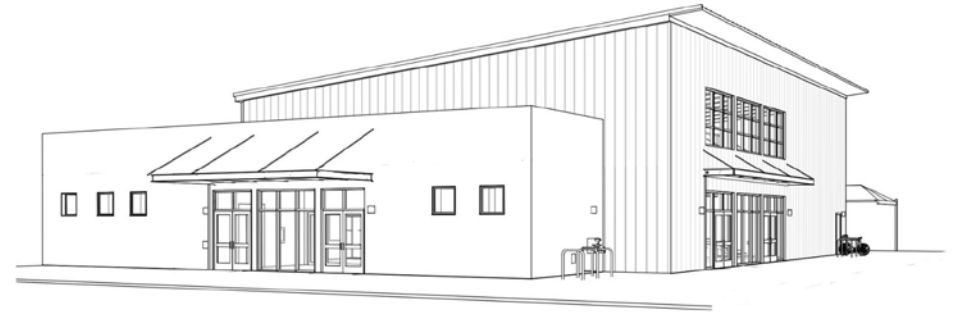
PROGRAM :

- MULTI-PURPOSE ROOM,
- FULL SERVICE KITCHEN,
- INDOOR & OUTDOOR STAGES,
- LOBBY AND RESTROOMS
- SUPPORT SPACES
- RELOCATION OF 6 EXISTING MODULAR CLASSROOM BUILDINGS

SITE WORK:

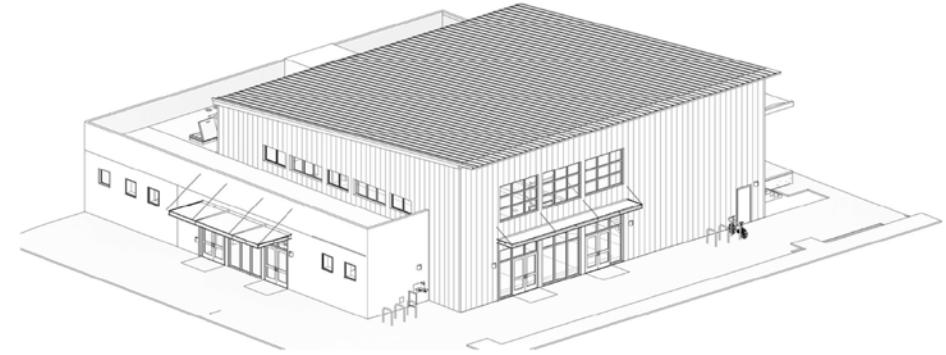
- REPAVING EXISTING PARKING AREA
- REGRADING FOR NEW PARKING
- IMPROVEMENT OF EXISTING SITE DRAINAGE
- NEW SCHOOL GARDEN
- LAWN AREA FOR OUTDOOR STAGE
- OUTDOOR EATING AREA

PROJECT OVERVIEW



- **BUILDING 90 FT X 86 FT**
- **MULTIPURPOSE ROOM 66 FT SINGLE SPAN TRUSSES, UP TO 30 FOOT HIGH AT NORTH END**
- **SIMPLIFIED DESIGN THAT COULD BE MODULAR**
- **WOOD FRAME, STEEL COLUMNS, STEEL WEB TRUSSES**
- **EXTERIOR CEMENT PLASTER AND CEMENT BOARD WITH BOARD AND BATTEN FINISH**
- **ALUMINUM WINDOWS AND STORE FRONT SYSTEM**
- **STANDING SEAM METAL ROOF**
- **TUBE STEEL CANOPIES**
- **MATERIALS SELECTED WITH DURABILITY IN MIND**

CODE COMPLIANCE



- **BUILDING PERMITTED BY THE DIVISION OF THE STATE ARCHITECT.**
- **COUNTY HEALTH DEPT REVIEW OF KITCHEN**
- **MIXED OCCUPANCY: A-3, B, S-1 & S-2**
- **TYPE VB CONSTRUCTION**
- **OCCUPANT LOAD: 476 MP ROOM**
- **FULLY SPRINKLERED**
- **FIRE ALARM**
- **FULL FIRE DEPARTMENT ACCESS**
- **ACCESS COMPLIANCE FOR SITE AND BUILDING**

TYPES OF CONSTRUCTION CONSIDERED



STEEL:

- FLEXIBILITY OF DESIGN.
- STEEL PRICES WERE HIGH AT TIME OF DESIGN.
- PROCUREMENT ISSUES.
- DSA REVIEW A POTENTIAL CHALLENGE.

MASONRY:

- DURABLE MATERIAL.
- LESS FLEXIBILITY FOR DESIGN,
- ROOF WOOD TRUSS OR STEEL.
- FURRED EXTERIOR WALLS FOR ENERGY RATING.
- STRUCTURE ABOUT 20% HIGHER THAN WOOD.

WOOD:

- FLEXIBILITY OF DESIGN,
- ENGINEERED STUDS AT MP ALLOWED FOR GREATER LENGTH,
- BETTER CONTROL OF SCHEDULE,
- SUBCONTRACTOR COORDINATE,
- DSA REVIEW MORE STRAIGHT FORWARD.

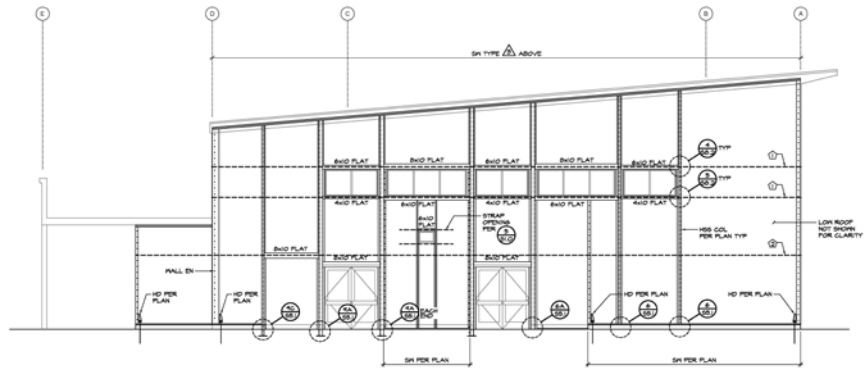
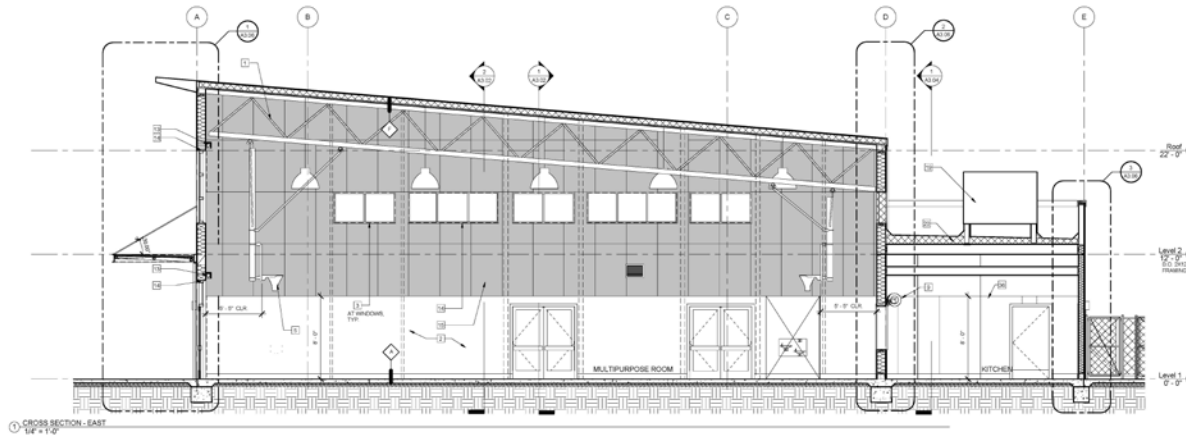
CONSTRUCTION METHOD



SITE BUILT VERSUS MODULAR CONSTRUCTION

- MODULAR WOULD BE PANELIZED WOOD FRAMES
- MODULAR BUILDING CONSTRUCTION SHORTER SCHEDULE
- CONSTRUCTION WAS PLANNED TO BE LEASE LEASE-BACK (LLB)
- COORDINATION CHALLENGE WITH LLB GC AND MODULAR CONTRACTOR
- MODULAR - SCHEDULE CHALLENGE FOR DESIGN AND BIDDING
- IF ALL WORK DONE UNDER LLB THEN MARK UP ON MODULAR CONSTRUCTION
- IF SEPARATE CONTRACTS THEN BUILDING WOULD BE BID SEPARATELY FROM SITE WORK
- ULTIMATELY BUILDING COST WAS THE SAME FOR SITE BUILT
- WOOD FRAMING MADE COMPARISON OF MODULAR AND SITE BUILT EASIER

WOOD CONSTRUCTION



1 EAST WALL ELEVATION

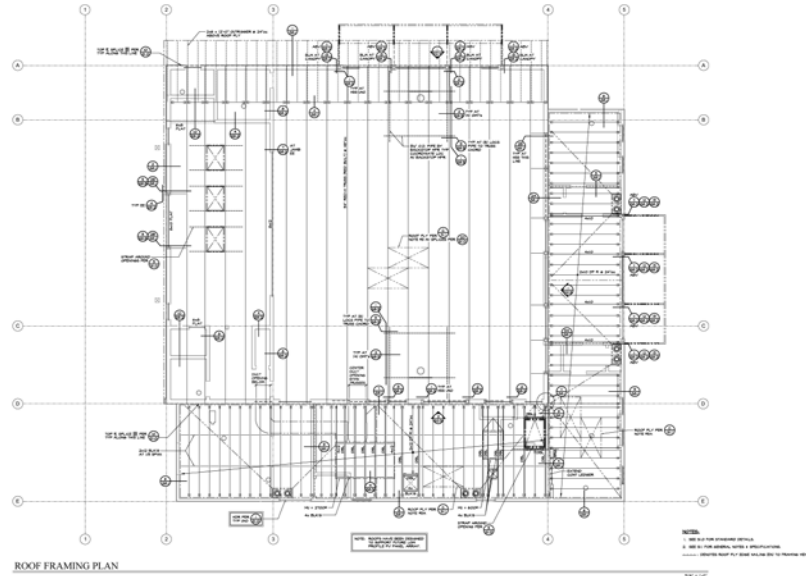
SCALE: 3/8" = 1'-0"



WALL FRAMING

- **BALLOON FRAMED**
- **MP ROOM TALL WALLS**
PRIMARILY LAMINATED STRAND LUMBER (LSL), TRIMMERS NOMINAL, SOME NOMINAL POSTS
- **LOBBY AND KITCHEN SHORTER WALLS**
PRIMARILY NOMINAL WOOD STUDS
- **TUBE STEEL COLUMNS AT OPENINGS**
- **PLYWOOD SHEATHING FOR SHEAR**
- **HOLD DOWNS AS SHEAR WALLS AND OPENINGS**
- **WOOD PROVIDED FLEXIBILITY FOR PLACEMENT OF OPENINGS**
- **SHEAR WALLS IMPACT OPENING SIZES**
- **PARAPET ON LOWER ROOF 42" TO HELP SCREEN EQUIPMENT. CANTILEVER OF BALLOON FRAMING ELIMATED BRACING**

WOOD CONSTRUCTION



ROOF FRAMING MULTIPURPOSE ROOM

- OPEN WEB, PARALLEL CHORD TRUSSES
 - INCREASED DEPTH AND MEMBERS DUE TO SPAN, AND LOADS FOR FP, BASKETBALL HOOPS
 - TRUSS 64 FEET LONG AND 54 INCHES
 - LVL TOP AND BOTTOM CHORDS
 - METAL TUBE WEB CHORDS
 - TRUSS DESIGN INCLUDED IN PERMIT PACKAGE NOT DEFERED – DSA REQUIREMENT

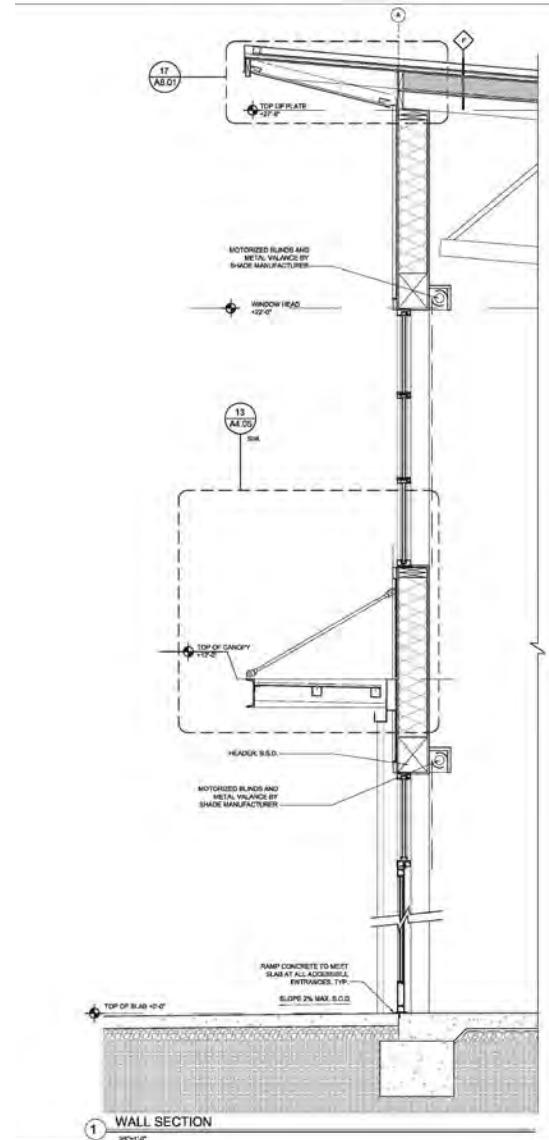
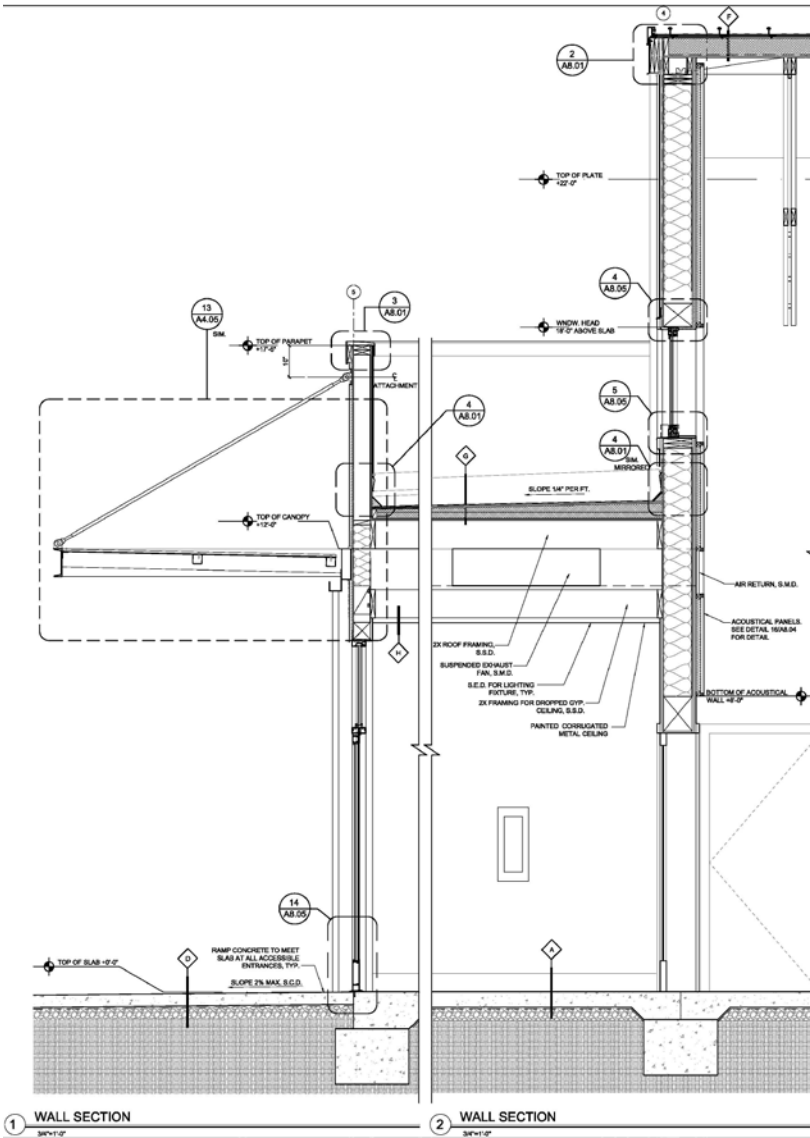


KITCHEN AND LOBBY

- 2X NOMINAL WOOD FRAMING ROOF
- SEPARATE WOOD FRAMED CEILING

PLYWOOD ROOF SHEATHING

DETAILING



FRAMING DETAILING

- LSL AT TALL WALLS
- NOMINAL PT SILL PLATE
- NOMINAL DOUBLE TOP PLATE
- NOMINAL HEADERS
- NOMINAL WOOD TRIMMERS AT HSS STEEL COLUMNS
- STUDS AT 16" O.C.
- LSL VERSUS NOMINAL LUMBER (2X10 OR 9 1/4 LSL-CUSTOM DIM. WENT TO STANDARD 9 1/2 WITH FURRING)

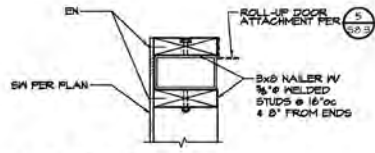
KITCHEN AND LOBBY

- SEPARATE FRAMED ROOF AND CEILINGS PROVIDED INTERSTITIAL SPACE FOR UTILITIES
- LOW ROOF LEDGERED TO BALLOON FRAMED WALLS

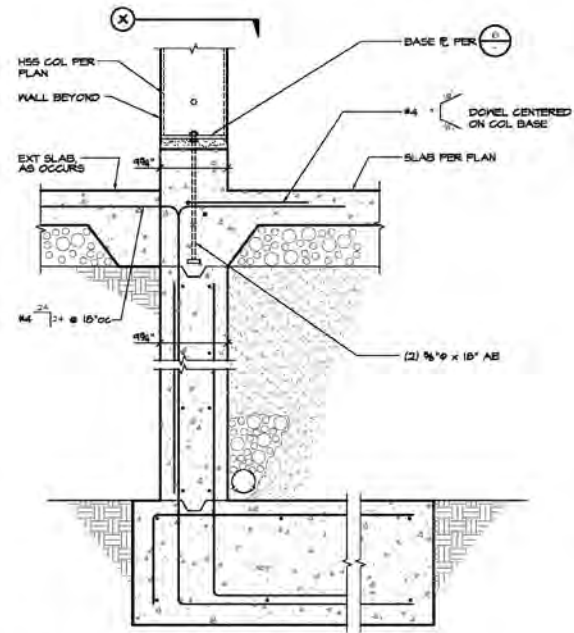
CANOPIES

- TIE RODS AND LEDGER ATTACHED BY STUDS WELDED TO STEEL POSTS

DETAILING

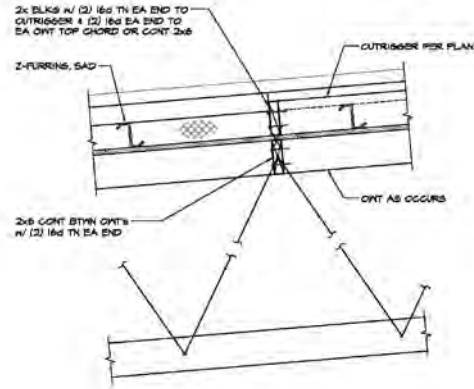


PLAN VIEW

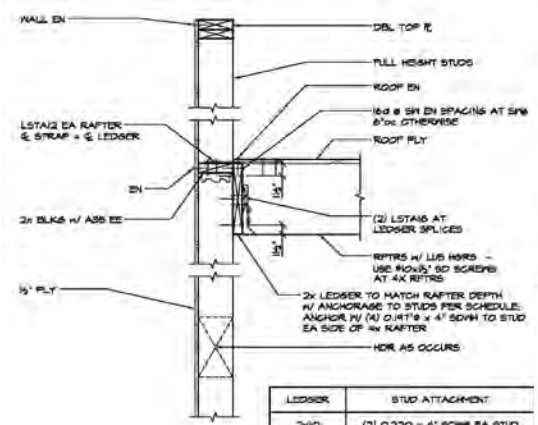


SEE 4 & 5 FOR INFO NOT SHOWN

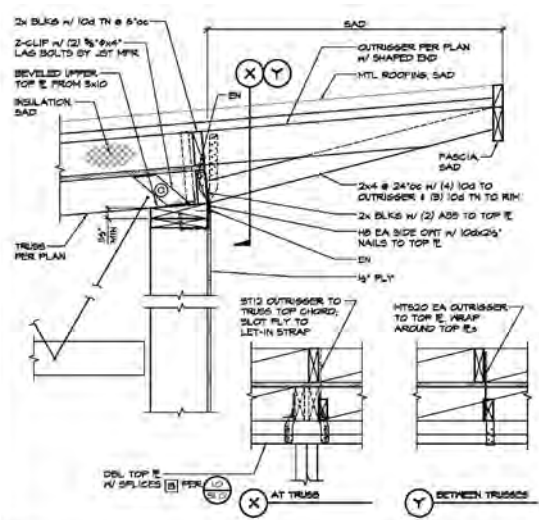
10 TUBE STEEL & WOOD NAILERS



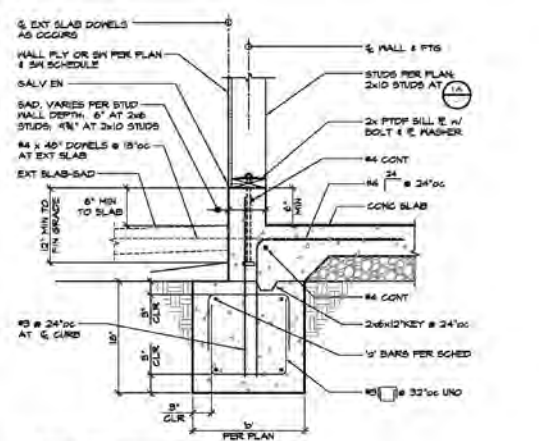
4 BACK SPAN @ OVERHANG



5 PARAPET @ LOW ROOF



1 HIGH ROOF OVERHANG



1A STANDARD WALL BASE

LEDGER	STUD ATTACHMENT
2x10	(2) 0.220 x 4" SCWS EA STUD
2x12	(3) 0.220 x 4" SCWS EA STUD

PTS REINFORCEMENT SCHEDULE	NOTES
1'	(2) #5 T&B #5 TIES PER NOTE ON DTL
18"	(2) #5 T&B
24"	(3) #5 T&B
30"	(3) #5 T&B

FRAMING

- PRESSURE TREATED 2X SILL PLATE ON 6" CONC CURB TYPICAL (1A)
- NOMINAL 2X NAILERS AT STEEL COLUMNS (10)
- PARAPET AND LEDGER ON BALLOON FRAMED WALL AT LOW ROOF (5)
- OUTRIGGER FRAMING AND BLOCKING AT CANTILEVER EAVE RAKE (4 & 1)

EXTERIOR FINISHES



- BOARD AND BATTEN CEMENT BOARD WALLS FOR MULTIPURPOSE ROOM
- STANDING SEAM METAL ROOF AND SOUTH WALL OF MULTI
- INTEGRAL COLOR AND PAINT EXTERIOR CEMENT PLASTER AT LOW SECTION
- TPO LOW ROOF
- PAINTED GALVANIZED ROOF CAP
- BRONZE ANODIZED ALUMINUM WINDOWS AND STOREFRONT SYSTEM
- PAINTED METAL FRAMES AND DOORS.
- PAINTED TUBE STEEL AND CORRUGATED METAL AWNINGS
- GALVANIZED HAND RAILS
- CONCRETE WALKS, STAIRS AND RAMPS

INTERIOR FINISHES



- WALLS ARE PAINTED DRYWALL WITH WOOD BASE IN MP
- WOOD TRIM AT STAGE OPENING TO MATCH BASE
- TECTUM WALL ROOF PANELS FOR SOUND ABOBRTION
- TOP AND BOTTOM CHORDS WERE PAINTED WHITE TO MATCH UNDERSIDE OF ROOF
- WEB CHORDS AND SUPPLY DUCT WERE GALAVANIZED TO ACT AS COUNTER POINT TO PAINTED FINISHES
- WINDOWS AND DOORS BRONZE ANODIZED TO PROVIDE PUNCH TO OPENINGS
- FLUSH WOOD TRIM AT WINDOWS TO BLEND WITH DRYWALL AND TECTUM
- FLOORS SHEET VINYL WITH SPORTS STRIPING
- POWER ACTUATED SHADES TO COMPLIMENT WALLS TO DARKEN AUDITIORUM

FINISHES



- WOOD FRAMING ALLOWED FOR DETAILING TO BE KEPT SIMPLE TO ACCENTUATE BASIC GEOMETRY AND SO THAT ACCENT ELEMENTS STAND OUT
- USE OF BRIGHT COLORS TO ACCENT BUILDING ELEMENTS
- CORRUGATED METAL ENTRY CANOPIES
- LOBBY CEILING MATCHES EXTERIOR
- SCHOOL NAME WITH STAND OFF LETTERS
- SCHOOL LOGO
- PRE-ENGINEERED CANOPIES AT OUTDOOR STAGE AND LUNCH AREA

QUESTIONS?

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