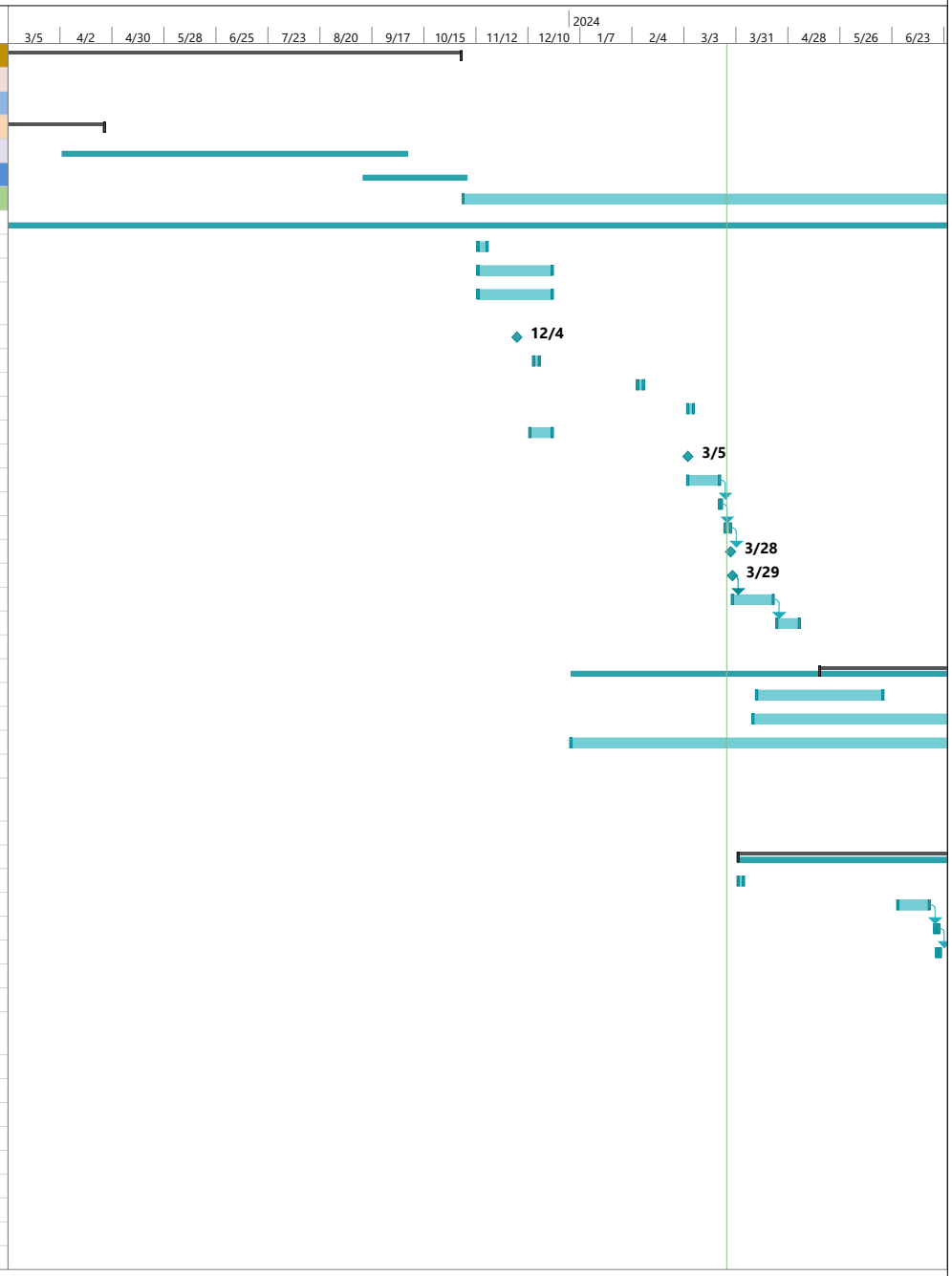
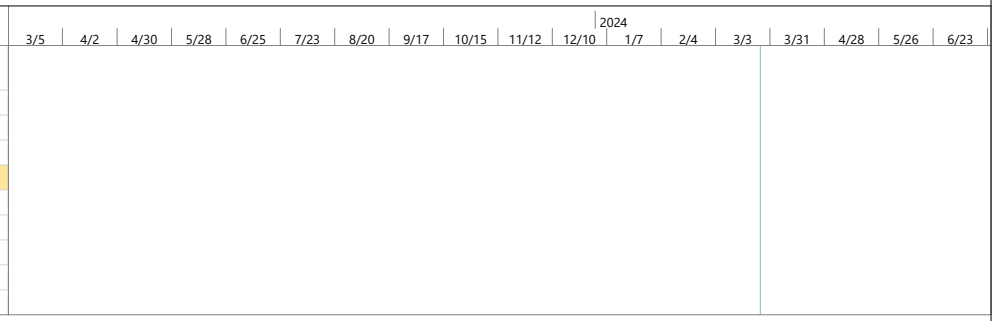
East Longmeadow High School
Designer Work Plan

Tue 3/26/24

ID	Task Name	Duration	Start	Finish
1	**Community Meetings**	**363 days**	**Wed 6/15/22**	**Fri 11/3/23**
7	**Project Start-up**	**39 days**	**Mon 4/18/22**	**Thu 6/9/22**
13	**MODULE 3 - Preliminary Design Program**	**105 days**	**Wed 5/18/22**	**Tue 10/11/22**
49	**MODULE 3 - PREFERRED SCHEMATIC REPORT**	**171 days**	**Tue 8/30/22**	**Wed 4/26/23**
77	**MODULE 4 - Schematic Design**			
113	**MODULE 5 - Project Scope and Budget Agreement**			
117	MODULE 6 - Detailed Design	296 days	Sun 11/5/23	Fri 12/20/24
118	**Design Development**			
119	Kick-off Meeting	5 days	Mon 11/13/23	Fri 11/17/23
120	DD Programming & Focus Group Meetings	30 days	Mon 11/13/23	Fri 12/22/23
121	Additional Geotech, Geoenv, Traffic, Survey, Hazmat Investigations	30 days	Mon 11/13/23	Fri 12/22/23
122	Finalize Plan Modfications	0 days	Mon 12/4/23	Mon 12/4/23
123	Bluebeam Check-set Review 1	3 days	Wed 12/13/23	Fri 12/15/23
124	Bluebeam Check-set Review 2	3 days	Wed 2/7/24	Fri 2/9/24
125	Bluebeam Check-set Review 3	3 days	Tue 3/5/24	Thu 3/7/24
126	USGBC LEED Registration for Project	10 days	Mon 12/11/23	Fri 12/22/23
127	Submit to Cost Estimators	0 days	Tue 3/5/24	Tue 3/5/24
128	Design Development Cost Estimate	13 days	Tue 3/5/24	Thu 3/21/24
129	Design Development Cost Estimate Reconciliation	1 day	Fri 3/22/24	Fri 3/22/24
130	Design Development Value Engineering	3 days	Mon 3/25/24	Wed 3/27/24
131	SBC Vote to submit DD Report to MSBA	0 days	Thu 3/28/24	Thu 3/28/24
132	Design Development to MSBA	0 days	Fri 3/29/24	Fri 3/29/24
133	MSBA Design Development Review Period	16 days	Fri 3/29/24	Fri 4/19/24
134	Design Team Reponse to MSBA Comments	10 days	Mon 4/22/24	Fri 5/3/24
135	Issue Early Package #1: Enabling	0 days	Fri 5/13/22	Fri 5/13/22
136	**DD/CDs Permitting**	**203 days**	**Wed 5/15/24**	**Fri 2/21/25**
137	NOI East Longmeadow ConCom	48 days	Thu 4/11/24	Mon 6/17/24
138	Site Plan Review East Longmeadow Planning Board	108 days	Tue 4/9/24	Thu 9/5/24
139	Earth Removal Special Permit	160 days	Tue 1/2/24	Mon 8/12/24
140	Stormwater Management Permit	60 days	Tue 12/3/24	Mon 2/24/25
141	Curbcut, Public way access, trench permit, water & sewer Connection permits	60 days	Tue 12/3/24	Mon 2/24/25
142	Building Permit	30 days	Tue 12/3/24	Mon 1/13/25
143	**60% Construction Documents**	**107 days?**	**Mon 4/1/24**	**Tue 8/27/24**
144	Phase Kick-off	3 days	Mon 4/1/24	Wed 4/3/24
145	60% Construction Documents Cost Estimate	13 days	Wed 6/26/24	Fri 7/12/24
146	60% Construction Documents Cost Estimate Reconciliation	2 days	Tue 7/16/24	Wed 7/17/24
147	60% Value Engineering	2 days	Wed 7/17/24	Thu 7/18/24
148	60% Construction Documents to MSBA	0 days	Tue 7/23/24	Tue 7/23/24
149	MSBA 60% Construction Documents Review Period	16 days	Tue 7/23/24	Tue 8/13/24
150	District 60% Construction Documents Review Response and Drawing Revisions	10 days	Wed 8/14/24	Tue 8/27/24
151	Issue Early Package #2: Site, Concrete, Steel, Elevator	0 days	Wed 7/24/24	Wed 7/24/24
152	**90% Construction Documents**	**94 days**	**Tue 7/23/24**	**Fri 11/29/24**
153	90% Construction Documents Development	52 days	Tue 7/23/24	Wed 10/2/24
154	90% CD Estimate	12 days	Wed 10/2/24	Thu 10/17/24
155	90% CDs Estimate Reconciliation	3 days	Fri 10/18/24	Tue 10/22/24
156	90% Value Engineering	2 days	Tue 10/22/24	Wed 10/23/24
157	90% Construction Documents to MSBA	0 days	Mon 10/28/24	Mon 10/28/24
158	Issue Early Package #3: MEP/FP	0 days	Mon 10/28/24	Mon 10/28/24
159	MSBA 90% Construction Documents Review Period	16 days	Mon 10/28/24	Mon 11/18/24



ID	Task Name	Duration	Start	Finish
160	District 90% Construction Documents Review Response and Drawing Revisions	10 days	Mon 11/18/24	Fri 11/29/24
161	**100% Construction Documents**	**26 days**	**Fri 10/25/24**	**Fri 11/29/24**
162	Issue Bid Package #4: Balance of Scope	0 days	Mon 12/2/24	Mon 12/2/24
163	100% Construction Documents to MSBA	0 days	Mon 12/2/24	Mon 12/2/24
164	**MODULE 7 - Construction**			
165	Phase 1	500 days	Wed 8/21/24	Tue 7/21/26
166	Substantial Completion Phase 1	0 days	Wed 7/22/26	Wed 7/22/26
167	Phase 2	190 days	Wed 7/22/26	Tue 4/13/27
168	Substantial Completion Phase 2	0 days	Wed 4/14/27	Wed 4/14/27
169	Final Completion	60 days	Wed 4/14/27	Tue 7/6/27



JONES WHITSETT ARCHITECTS

In association with

SMMA

3-1-b
BASIS OF DESIGN NARRATIVE - ARCHITECTURAL

The design of the new East Longmeadow High School adjacent to the existing high school solves many of the district's needs and fulfills the vision of the Educational Program. The all-new school facility, totaling 191,796 gross square feet, is proposed to be built on the same site as the current school, sited to the southeast of the existing building. This places the new school in proximity to a wooded area to the south and the existing track and turf field to the east. This location will allow for an expansive area of playing fields to the west of the school in the location where the current high school now stands.

The four-winged massing approach addresses multiple goals of the Educational Program that the current facility cannot. Two academic wings are oriented to the south, with two stories that face playing fields and a wooded area. Two single-story wings are oriented towards the north (Health & Wellness to the east, and Arts & Admin to the west), welcoming the community with their more public-facing program. All wings join at a central spine running from the main school entry at the north to the student terrace at the south, which also contains the Dining Commons and Media Center. The spine has several double height areas, ample daylighting, and serves as a vibrant social hub for the school.

Both massing and materiality of the building draw inspiration from East Longmeadow's historic brown and red sandstone quarries. The "wedge" form that is highlighted in the building spine as well as in the tapered academic wings is inspired by a common configuration of the abandoned quarries found throughout the town. The primary cladding material will be brick masonry in contrasting warm tones to create a horizontal banding effect. Likewise, interior wall treatments along the core of the building will likely incorporate elements of striations and seaming, and a combination of organic and more regular patterning. Glulam beams at the main entry gallery, a wood learning stair, and selective wood ceilings will help bring a warm and welcoming organic quality to the space – much as the overgrowth of trees and organic-matter have softened and complicated the otherwise austere quarries over time.

The layout of the academic wings optimizes solar orientation, natural daylighting, and energy performance. Internal borrowed lights and roof monitors maximize penetration of natural light into the core of the wings, and allow for visual connections to adjacent spaces. In the Arts and Health Wings, single-story spaces surround larger and taller program areas including the Gym, PE Alternatives, Weight Room, Auditorium, Band, and Chorus Rooms, allowing for clerestory light to reach these internal spaces.

The Schematic Design includes a substantial overhaul of the athletics fields and courts as well as a new concessions building at the existing turf field, among other site amenities. Varied natural features create distinctive exterior classrooms, both formal and informal, as well as a student dining terrace.

Following site clearing, the building will be constructed in one major phase entirely clear of the existing High School site, allowing construction to occur without disruption to ongoing educational activities. A move-in date of 2026 is targeted for the new school. An additional year of work would follow move-in, to demolish the existing school, and complete the recreation of athletic fields, final parking and site circulation, and other amenities.

a. General Information:

Area:	191,796 SF
Floors:	2
Construction Type:	IIA (non-combustible, protected)
Occupancy Type:	E – Educational

b. Environmental and Sustainability Goals

Project shall meet LEED-S requirements at a “Silver” level. Furthermore, it shall meet the following:

- Minimum total of five points (from seven points available) from the following three categories:
  - MR Building Product Disclosure and Optimization - Material Ingredients
  - IEQ - Low Emitting Materials
  - IEQ – Indoor Air Quality Assessment
- Must meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards.

Specific priorities listed by the owner:

- Indoor environmental quality
- Durable materials
- Low operating costs
- Future flexibility

c. Building Construction

New Construction

Floor Slab: (R-14.4 c.i.)

- 5” slab on grade (typical – see Structural Drawings)
- Vapor Barrier
- 4” continuous EPS rigid insulation for the first 4’ from the foundation wall, 2” continuous overall after that
- 6” sand and gravel

Roof: (R-50.7 c.i. + additional at tapered insulation)

- Membrane roof
    a. PVC membrane roofing
    b. Cover board
    c. Tapered insulation sloping to drain
    d. 8 1/2” polyiso: R=6.5/inch
    e. Vapor retarder
    f. Substrate board
    g. 1.5” composite metal deck

Exterior Walls:

- Stud Construction (R-37.96 ci)
    a. Brick veneer
    b. 1 ¾" air gap
    c. 6” continuous mineral wool insulation with staggered joints R=4/inch
    d. Air barrier
    e. Exterior sheathing
    f. 3 ½" batt mineral wool insulation (between studs) R=5.52/inch
- Stud Construction (R-37.73 ci)
    a. Rainscreen
    b. 2 ½" air gap
    c. 6” continuous mineral wool insulation with staggered joints R=4/inch
    d. Air barrier
    e. Exterior sheathing
    f. 3 ½" bat mineral wool insulation (between studs) R=5.52/inch

3-1-b

BASIS OF DESIGN NARRATIVE - STRUCTURAL

New construction will consist of shallow foundations and primarily a structural steel floor and roof system. Please reference the structural drawing set for the project for additional information. The ground floor will consist of 5" slab on grade. Elevated floors will have 6.25" slab on metal deck, and roofs will use 3" metal roof deck. Spaces requiring column-free clear spanning such as the gymnasium, auditorium, and over the main entry will use long span open web steel joists. The lateral system of the building will consist of steel braced frames.

There is also interest in strategic use of exposed mass timber structure to achieve both an aesthetic goal and promote a low carbon footprint. The double height central space encompassing the main entry, will use mass timber in the roof framing in the form of glulam beams supporting exposed cellular metal deck.

The roof will support mechanical units and mechanical screens. Discrete concrete pads will be used on the roof deck under the units for the purposes of mitigating acoustical and vibration concerns.

The building will have at least one structural expansion joint, strategically located based on geometry.

An additional small concessions building is planned. Its structure will involve shallow foundations, 5" slab on grade, load bearing 8" CMU walls and its roof structure will consist of steel beams & metal roof deck. Assume 8 psf steel weight of roof structure.

3-1-b
BASIS OF DESIGN NARRATIVE – SITE

The proposed school will be located on the site of the existing East Longmeadow High School, located at 180 Maple Street (the Site). The Site measures approximately 62.72 acres, is identified by the Town Assessor as Parcel 17-33-10, and is zoned as Residence B District. The property is bounded by Maple Street and residential properties to the North, Saint Michael's Parish and the Redstone Rail Trail to the east, industrial and residential properties to the south, and residential properties to the west. The Site is currently accessed from three (3) curb cuts along Maple Street and a singular point from Norden Street, with a large parking lot located northeast of the building and smaller parking areas located south and southwest of the building. The existing school utilizes a track and synthetic turf field with bleachers (the stadium) along the eastern edge of the property, two (2) natural turf baseball fields, and natural turf practice fields south and west of the building.

There are wetland resources interspersed within the wooded areas in the southeast portion of the Site, and beyond the south and southeast property lines. A maintained stormwater collection pond is located just north of the wetlands and is connected to the wetlands via an earthen channel. According to Flood Insurance Rate Map (FIRM) for Hampden County (Map 25013C0417E), the Site is not located within a floodplain area. A review of the Massachusetts Natural Heritage & Endangered Species Program online mapping indicates that no Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife are located on or in close proximity to the Site. There are no Areas of Critical Environmental Concern (ACECs) that impact the Site.

Approximately 30 feet of grade change exists across the Site, which generally slopes down from north to south. Moderate slopes occur in the northern portion of the Site, while the central and south portions of the Site (where the existing and proposed buildings are located) are considerably flatter. Site elevations, per NAVD 88, range from approximately Elevation 242 at the northwest corner of the property, to approximately Elevation 240 at the existing primary site entrance on Maple Street, to approximately Elevation 224 at the existing easternmost site entrance on Maple Street, down to approximately Elevation 212 at the existing drainage pond near the southeastern work limit. Generally, the higher elevations exist along Maple Street and the lower elevations exist in the southern and eastern portions of the site. The existing school sits approximately 14 feet below the northwest access point elevation on Maple Street. The existing synthetic turf and track are set at approximately elevation 221.

Site preparation work will consist of the demolition of paved surfaces, natural turf athletic fields, existing site improvements, and existing above and below ground utilities. The existing East Longmeadow High School is to remain functional, including vehicle access, utilities, parking, and all other functions critical to the use of the school, until such time that the existing school building has been vacated and all operations have been moved into the new school building. The existing building will then be demolished, and final site work will be completed.

The proposed sitework includes new vehicular and pedestrian circulation from Maple Street and Norden Street. School buses and service vehicles will enter and exit the site from Maple Street at the reconfigured driveway at the northeast corner of the property. School buses will utilize a two-way drive with a one-way counterclockwise circulation loop located at the end of the drive at the front of the building, while service vehicles will be directed to a two-way service driveway and loading dock on the east side of the building. Passenger vehicles, specifically for student drop off/pick up, staff, and visitors, will primarily enter and exit the site via a new site entrance located at the Maple Street / Melwood Avenue intersection and utilize a one-way counterclockwise circulation loop that extends to the front of the building. The proposed circulation system will serve to better segregate school buses and passenger vehicles while on the Site. Student vehicles will primarily enter the site at the reconfigured driveway at the northeast corner of the property and may exit to Maple Street via either driveway. Norden Street will now terminate at a small parking lot located adjacent to the western limit of the property. Emergency vehicles will primarily access the site from Maple Street via either driveway and will have access around the entire perimeter of the proposed building. Police and ambulance access to the natural turf athletic fields to the west and south of the building will be provided via both the emergency access route around the school perimeter and Norden Street.

Pedestrian circulation is accommodated by ADA compliant connections to existing sidewalks on the north side of Maple Street and to the parking lot located at the terminus of Norden Street. At Maple Street, the existing pedestrian signal located east of Melwood Avenue will be removed and the associated pedestrian crossing will be relocated to the west closer to Melwood Avenue. New crosswalks, curb cut ramps, and rectangular rapid flashing beacons are proposed at all new and relocated pedestrian crossings. The internal site pedestrian circulation network connects to all accessible doors in the proposed building with ADA compliant circulation routes, including connections to the accessible parking spaces in the proposed parking lots, the outdoor learning and dining spaces, the accessible seating in the existing stadium area, and the natural turf athletic fields. There are a total of 464 proposed parking spaces, including 283 spaces in the student lot, 106 spaces in the staff/visitor lot at the front of the building, 39 spaces in the secondary staff lot west of the building, 33 spaces in the custodial lot near the loading dock east of the building, and 3 accessible spaces in the lot located at the terminus of Norden Street.

The area to the north of the main building entrance will support an entrance plaza containing a mixture of hardscape and softscape elements designed to create transition from the parking and drop off areas to the building interior. Outdoor learning environments are located adjacent to the Art and Science wings of the building to support the educational plan, while an outdoor

dining area is provided off the south end of the cafeteria. A small playground is provided to support the Little BIG Kids Nursery School program.

The area south and west of the proposed building will support new natural turf varsity baseball, junior varsity baseball, soccer/lacrosse, football, and practice fields to replace the fields displaced by construction of the proposed building. This area will also support the addition of new natural turf varsity softball and junior varsity softball fields. The area northeast of the proposed building, between the school bus drop-off loop and the service driveway, will support two (2) new basketball courts. The area at the northeast corner of the property, north of the Stadium and adjacent to the eastern property line, will support six (6) new tennis courts with sport court lighting to replace the existing courts displaced by construction of the proposed building. A new concession/ticketing building, complete with restrooms and interior storage, is provided at the northwest corner of the existing Stadium. In addition, an elevated press box with ADA compliant access ramp system is proposed behind the existing bleacher structure located to the west of the existing track and synthetic turf field. A salvaged lacrosse throwing wall and associated synthetic turf surfacing will also be relocated to an existing area of open lawn at the southern end of the existing Stadium.

Hardscape and softscape features that are complimentary to the building design, including seat walls, shade canopies, lawns, and plantings, will be incorporated throughout the site to add scale, color, and seasonal interest to the building surroundings. New energy efficient site lighting will be incorporated throughout the site as well.

3-1-b

BASIS OF DESIGN NARRATIVE – MEP & FP

a. Mechanical:

The proposed East Longmeadow High School will include a new Heating, Ventilating and Air Conditioning system to serve the various program spaces and will meet current codes and energy standards.

An Air-Source Variable Refrigerant Flow (VRF) system will provide heating and cooling to the classroom, administration, and other support spaces. The VRF systems will be heat recovery type systems, which accommodate simultaneous heating and cooling for the spaces common to a VRF zone. The VRF zones will be by area and by floor. For example, the 1st floor classrooms in a given wing will be supported by a single VRF heat pump zone, whereby each space in the zone is served by a dedicated fan coil unit. Smaller spaces will be served by ceiling-mounted cassette type fan coil units, whereas classrooms will be supported by ducted fan coil units.

The Air-Source VRF heat recovery system will be configured with modular outdoor air-source condensing units (ACCU), Branch Distribution Control Units and distributed indoor heat pump fan coil units to provide heating and cooling to the building.

Refrigerant piping and control wiring will be provided between the ACCUs and Branch Distribution Control Units and between the Branch Distribution Control Units and indoor heat pump fan coil units. Condensate drain piping will be provided for ACUs and Branch Distribution Control Units.

Dedicated outdoor air systems (DOAS) will provide ventilation to the classrooms, Administration, and other teaching spaces. The DOAS units will provide conditioned and filtered fresh air as supply and after recovering energy from the air returned from the zones served before exhausting it. The DOAS units will be configured as packaged heat pump units and will be roof-mounted. Distribution of ventilation supply air will be through variable air volume boxes, which will be controlled to maintain carbon dioxide levels within the typical spaces served. Return air from the zones served will also be controlled with VAV boxes to manage space pressurization.

AHUs will support large single-zone spaces, including the Auditorium, gymnasium, cafeteria, media center and Large Group Instruction. The AHUs will operate as Variable Air Volume (VAV) systems to maintain space temperature. The AHUs will be configured as packaged heat pump units, mounted on the roof.

All auxiliary heating terminals cabinet unit heaters, unit heaters and finned tube radiation will be electric.

The kitchen system will include exhaust fans to support proposed grease and/or heat exhaust hoods, as well as exhaust for the dishwasher. Makeup air will be provided through a roof mounted, packaged heat pump unit ducted directly to the kitchen exhaust hoods. The hood exhaust fan(s) and makeup air unit will be variable volume, controlled by a Kitchen Demand Control Ventilation (DCV) system. The DCV will vary the amount of kitchen exhaust and make-up air flow as required for the cooking demand. The kitchen will be negatively pressurized for odor control, and the balance of the makeup air will come from adjacent spaces (Cafeteria). A VRF fan coil unit will provide space temperature control in the kitchen.

Exhaust fans will be provided for special exhaust requirements, such as the Art Room kiln.
Independent, split-type air conditioning systems will be provided for data closets and electrical rooms.

Acoustic attenuation and vibration control will be provided to minimize noise and vibration transmission to occupied spaces in the form of in-duct attenuators, duct lagging, vibration isolators and/or roof-level slabs beneath HVAC equipment.

The heating system will be powered from the emergency generator for freeze protection during a loss of normal power.

The school facility will be provided with a web-accessible, microprocessor-based, direct digital control (DDC) building management system (BMS) for control of HVAC systems & equipment and for monitoring of selected other building systems. The BMS is proposed to be a proprietary system by Stuxureware (Schneider Electric) to match other existing installations in East Longmeadow. The BMS will be integrated into the Town-wide networked system for energy management and monitoring.

b. Electrical

The new utility service will be provided by the Utility Co., National Grid, as adequate to accommodate the new High School building program. The new service will originate from the existing street overhead line and will extend underground towards a new outdoor pad-mounted utility transformer. The utility transformer will be provided by the Utility Company and will be installed adjacent to the building near the Main Electric room. The transformer's secondary feeder will run underground towards the Transclosure Cabinet serving as Point of Interconnection (POI) between the utility service and the photovoltaic (PV) system power equipment. From the Transclosure Cabinet power will extend underground towards the Main Electric room and will terminate in a 4,000 Amp 277/480V 3ph 4w Main Switchboard.
The Main Electric room will house the main power distribution equipment such as the main switchboard, panelboards, stepdown transformers, disconnect switches, etc. Power from the main switchboard will be distributed to five secondary electric rooms – three on the 1st floor and two on the 2nd floor. The secondary electric rooms will contain distribution panels, lighting panels, and "small power" panels supporting various building loads in respective building areas.

A dedicated kitchen panel will be provided to support kitchen equipment. Power will be provided to HVAC and plumbing equipment, Gym equipment, Auditorium stage equipment, motorized window treatments, door operators, special equipment in labs and Art rooms, etc.

A minimum of 50% of 120v duplex receptacles ("plug-in loads") will be controlled by local occupancy sensors or an automatic time-scheduled control system.

Power for outdoor EV dual charging stations will be provided in compliance with applicable MA Amendments to the latest Building and Energy Codes.

A networked power monitoring system will be provided. Approximately 35 energy sub-meters will be monitoring the energy use of various panelboards and large building loads representing 10% or more of the total annual consumption of the building. The metering system will be recording Consumption (kWH) and Demand (kW) values and transmitting the collected data at intervals to DDC (BMS).

The infrastructure will be provided to take advantage in future of the Utility Co Demand Response programs or dynamic, real-time pricing program. A comprehensive Demand Response SOO (Sequence of Operations) for shedding at least 10% of building estimated peak electricity demand will be developed.

An outdoor diesel-fired 277/480V 3ph 4w Emergency Generator (preliminary estimated as up to 900KW/ 1,125KVA) will be provided to support building equipment and loads requiring a back-up power source. A skid-based fuel tank will be sized for 24 hours of the generator operation without re-fueling. Standby and Life-safety ATS's and downstream panels will be provided. "Critical" loads such as the elevator, sewage pump station, heating system equipment, refrigeration equipment, HVAC serving the IDF/MDF rooms will be power fed from emergency "standby" power panels. The Life-safety equipment will be installed in dedicated 2-hr fire-rated emergency closets.

The energy-efficient lighting system will be provided in compliance with the Energy Code and IESNA recommendations. The lighting system will consist mostly of linear LED pendants and various recessed LED lights. The overall lighting design goal is to achieve the Lighting Power Density (LPD) of 0.5W/SF or less.

The auditorium stage will be equipped with an LED Performance lighting system consisting of track-mounted LED multi-color lights and dimming multi-scene preset controls.

A wireless type networked lighting control system will be provided to control the interior and exterior lights, as well as to control the "plug-in loads". The lighting control system will incorporate manual dimming and multi-scene control stations and automatic devices such as occupancy sensors and photocells. Classrooms, labs, administration offices, conference rooms, bathrooms, storage rooms, and other spaces will be equipped with occupancy sensors (and photocells where applicable). For the building areas without occupancy sensors a time-programmable lighting control concept will be implemented to facilitate automatic lighting shutoff on a scheduled basis with an occupant override. The networked control system will be connected to DDC (BMS).

Exterior lights will consist of building-mounted LED lights and pole-mounted LED lights at parking lots and along the access roads. The exterior lights will provide a minimum maintained lighting level 0.5 FC at grade level, and 1FC minimum maintained for walkways.

All exterior lights will be controlled by the networked programmable lighting control system and a photocell for additional energy savings.

A Lightning protection system will be provided. It will consist of roof mounted air terminals, grounding conductors, down leads, ground rods and bonding conductors.

The photovoltaic (PV) system will be installed. The roof-mounted PV system is preliminary estimated at 450 KWAC. Several roof-mounted PV inverters, the PV switchboard and PV battery storage will be installed to support this system (design to be finalized). The PV system will be interconnected with the utility power via the Transclosure Cabinet.

An addressable Fire Alarm system will be provided. Fire alarm system will consist of a Fire Alarm Control Panel (FACP) with microphone assembly, LCD type remote annunciator(s), event printer, automatic smoke and heat detectors, manual pull stations, audible and visible alarm signals, connections to automatic fire suppression systems. The system will transmit the alarm signals to the Monitoring Central Station via two dedicated telephone lines.

Distributed Antenna System (DAS) with Bi-Directional Amplifier (BDA) will be provided for Police and Fire Fighters use.

c. Plumbing

The new plumbing systems will be designed in accordance with 780 CMR Tenth Edition (IBC 2021 with Massachusetts amendments), and 248 CMR 10.00 Massachusetts Uniform State Plumbing Code. All plumbing fixtures, materials, and equipment shall be listed as accepted by the Massachusetts Plumbing Board. All wetted components shall meet the lead-free requirements of the Reduction of Lead in Drinking Water Act of 2011. The Plumbing systems shall be designed for LEED, with a goal of 30% water efficiency.

The building will be serviced by a new 6” domestic water supply that will enter the facility in the water service room. The existing schools water service meter and pit will be utilized for the connection to the new school building. An additional service to the site has been requested by the town and a new meter pit will be provided on the additional service by the site contractor. The new service within the building will be provided with a strainer, main shut off valve, and check meter (to monitor water usage for LEED). Two backflow preventers (installed in parallel) will be installed on the water service. These reduced pressure backflow preventers will be provided on the main domestic water supply to protect the service (per the DEP regulation 310 CMR 22). Based on the current flow test data, a domestic booster pump system is not anticipated. Final determination will be confirmed during design development.

Domestic cold water will be piped with lead-free type L hard drawn copper with lead-free soldered joints. Domestic cold-water piping will be insulated and distributed throughout the building serving all fixtures and equipment. Additional backflow preventers will be provided as

needed for equipment and systems such as HVAC make-up, ice machines, dishwashers, coffee makers, icemakers and protected hot and cold-water systems.

Domestic hot water will be provided by three 300-gallon electric resistance water heaters. Each estimated at 54 kW. Each heater will be sized to provide 66% of the demand. Water will be heated to 140 deg. F. for delivery to the kitchen. A central, master thermostatic mixing valve will reduce the temperature to 120 deg. F. for delivery to all other fixtures throughout the school. Digital mixing valves will be provided in lieu of mechanical types. Hand wash lavatories and showers will have integral temperature limit stops and/or point-of-use mixers to provide 110 deg. F. maximum temperature.

Domestic hot water will be piped with lead-free type L hard drawn copper with lead-free soldered joints. Domestic hot water piping will be insulated and distributed throughout the building serving all fixtures and equipment requiring hot water. Emergency shower and eyewash units will be fed from domestic potable water systems and point-of-use thermostatic mixing valves will be provided in each area. Thermostatic mixing valves shall be no further away than 10 feet from recirculated hot water. All domestic water supply systems will be circulated using circulating pumps controlled by immersion aquastats; Hot water will be circulated directly behind all lavatories and other low-flow fixtures.

Insulation for cold water piping will be 1/2” thick. For hot water and hot water return piping, insulation shall be 1” thick. Insulation shields will be installed to protect insulation at all pipe hangers.

Two separate protected hot water distribution system loops will be provided for the Science room sinks and equipment. A separate Mass. Approved, reduced pressure backflow preventer will be provided in the Water room for the science rooms to be used for protected hot water requirements for the lab sinks. There will be a separate 30 gallon electric water heater and hot water recirculation pump system for the science room hot water loop, downstream of the backflow preventers, for maintaining hot water temperatures in the science classrooms. Two separate protected cold water systems will be provided for the science room sinks and equipment. One loop will serve the science classrooms in Part E, while the second serves the lab sinks in Part D. Part D has a first floor water room for the backflow preventers, re-heat water heater. These components are located in a second floor water room in Part E.

Piping will be designed to collect liquid wastes from all plumbing fixtures, equipment, and drains requiring waste connections. Horizontal collection of the vertical stacks will be primarily below the first floor slab, to minimize the potential for interference with work of other trades. System to include atmospheric venting system, to maintain trap seals. Electrically operated trap primer systems will provide make-up water to fixture and drain traps where necessary to maintain liquid trap seals. Waste and vent piping shall be cast iron. All vent piping on the roof shall be kept a minimum of 25 feet away from any HVAC air intakes to eliminate sewer gases from entering the building. Several building drains will exit the building and connect by gravity to the site sanitary sewer system 10’-0" outside the building.

A dedicated kitchen waste line will be installed to collect grease-laden wastewater from the kitchen appliances and fixtures. The kitchen waste line will exit the building adjacent to the sanitary sewer and will be connected to a new exterior grease interceptor exterior to the building. The main from the kitchen to the exterior trap will be heat traced. Chamber vents from the interceptor will be routed to the roof independent of the sanitary waste and vent system.

Localized, interior grease traps will be provided at the source for individual grease-laden drainage fixtures and drains in the kitchen. The units will be PDI and ASSE approved and equipped with automatic draw-off hose. Grease traps will be recessed in the floor and will be provided to receive the waste discharge at the dishwasher, pot sink, tilting kettles, tilting skillets as well as other grease producing equipment and floor drains. The units will be supplied with flush floor access plates and equipped with automatic draw-off hoses. All kitchen waste will be conveyed to an exterior grease trap.

Art room sinks will be provided with solids interceptors. All above ground sanitary drainage and vent will be piped in cast iron with “no-hub” joints. Piping smaller than 2 inches may be piped in DWV copper (excluding urinal waste lines). Piping below slab (buried) will be cast iron hub and spigot type.

Discharge from the elevator sump pump, will flow by gravity to a Mass approved exterior gas oil interceptor. The interceptor is located on the first floor in the mechanical room. The vent piping from the separator will be routed within the building, independent from the rest of the sanitary vent system. The vent shall be extended independently 18” above the roof, or as approved by the local Authorities.

Polypropylene Laboratory Waste Piping, serving science room equipment and drains will flow through two (part E and Part D) acid waste chip tanks. The discharge from each chip tank will gather and drain by gravity out of the building as a dedicated line. The treated waste discharge will tie into the sanitary main outside of the building. Venting functions as its own system and will discharge through the roof under the same stipulations as ordinary venting systems.

Storm drainage systems will include dual function drains with primary and secondary outlets. The drains will be flashed into the waterproofing membrane. Overflow drainage systems will be provided. Overflow drains will be extended to exterior wall and day light 18” above finish floor. Storm drainage systems will be sized to handle a rainfall rate of 4 inches per hour, with a total runoff from the main roof and the roof deck of just under 1 cubic foot per second. The storm drainage system will be comprised of cast iron piping with all horizontal piping insulated to prevent condensation. The storm system will exit at various locations of the building and connect to the site storm water collection system. Storm drain and overflow piping shall be cast iron.

Insulation will be applied to all horizontal storm drainage piping and roof drain bodies to prevent condensation. Insulation will be ½" thick and be continuous through supports and include a vapor retarding jacket. Insulation shields will be installed to protect insulation at pipe hangers.

Plumbing fixtures will be provided in the facility to accommodate the projected population of male students and female students and shall be in accordance with 248 CMR Paragraph 10.10, Table 1. Plumbing fixtures will be equipped with water conserving features. Water closets and urinals will be commercial vitreous China, wall hung (ADA compliant.) Lavatories will be multi-station units or wall mounted China. Each floor will include a janitor's closet with a corner mop service basin. Toilet cores on each floor will include surface mounted electric water coolers with bottle filling stations and, in a high-low handicapped accessible configuration to meet MAAB requirement. All toilet and mechanical rooms will have floor drains complete with trap primers and chrome plated wall mounted hose bibbs.

Plumbing equipment and HVAC equipment will be electric. The kitchen equipment is also electric and the science rooms will utilize hot plates. Therefore, a natural gas system Is not required.

The geotechnical report includes a recommendation to provide radon plenum boxes for future radon mitigation considerations. Piping is not required. Plenum boxes will be provided underground within the building footprint to help with the collection of Radon. Design of radon system components will be by the geotechnical engineer and will be based upon ANSI/AARST CC-1000 (2017).

Emergency shower and eyewash units will be provided in areas where chemical are present and where chemical treatment of systems is performed. There will not be floor drains at emergency equipment. All recessed emergency shower/eyewash combination units will be provided with piped 2 inch drains to the Lab Waste System. Emergency shower and eyewash units will be free-standing, stanchion type in mechanical areas and recessed type in Science classrooms.

Nurse's Exam Room: Eyewash unit will be countertop mounted 90 degree swivel type.

Art Classroom: Eyewash unit will be countertop mounted 90 degree swivel type.

Interior Hose Bibbs: Shall be chrome plated, wall mounted, with integral vacuum breaker, and loose key handle. They shall be provided at all Toilet Rooms (except single person type), Mechanical rooms, and rooms with floor drains.

Exterior Wall Hydrants: Shall be non-freeze type with integral vacuum breaker. They shall be strategically placed around the building and mounted approximately 18 inches above grade. One will also be provided on each roof with HVAC equipment on it.

Trap Primers - Trap primer systems will provide make-up water to fixture and drain traps where necessary to maintain liquid trap seals. Electric time clock-operated automatic trap primers will be provided throughout. Insulation will be applied to all trap primer piping above ground.

Insulation will be continuous through supports and include a vapor retarding jacket. Insulation for trap primer piping will be 1/2" thick. Insulation shields will be installed to protect insulation at all pipe hangers.

d. Fire Protection

The entire building will be protected throughout with a wet automatic fire suppression system. The system will be designed in accordance with NFPA 13 (2019 ed), 780 CMR Tenth Edition (IBC 2021 with Massachusetts amendments), 527CMR 1.00 Massachusetts Comprehensive Fire Safety Code, & Local Jurisdictional regulations.

A new 8-inch fire protection service from the street will be provided. The service will enter the room and include a double check valve assembly, test header for full flow testing of the double check, and sprinkler floor control valves. Each valve will be supervised by the fire alarm system. A 4-inch fire department storz connection will be provided in accordance with the East Longmeadow Fire Department standards. The storz shall have a locking mechanism to prevent hoses from slipping off. The fire department connection will be provided at the exterior wall within 100 feet of a site hydrant. The fire department connection will be wall-mounted. The fire department connection will be provided with a check valve with an automatic ball drip. Exterior fire service to be equipped with a wall indicator valve, located on the buildings exterior wall. The valve will be equipped with a supervisory switch and will be wired to the building fire alarm system.

A hydrant flow test is required to confirm that the available water supply (pressure and flow) is sufficient for the new sprinkler system. An initial flow test was performed for the basis of this report. Based on the flow test data, a fire pump is not required. Note: a hydrant flow test is required to be within 12 months of the fire protection sub-contractor's working plan submittal. This future test will be used for the contractor's final calculations.

Since the height of the highest occupiable floor is less than 30 feet from the level of fire department access, standpipe systems are not required. However, firefighting operations may require standpipes with hose valves. Final determination will be coordinated with the East Longmeadow Fire Department during design. If required, standpipes will be designed in accordance with NFPA Standard 14, 2013, and local Fire Department requirements. Each standpipe will be equipped with a 2-1/2" fire department hose valve with 1-1/2" reducer. The standpipe system will be manual wet (required flow/pressure provided through the fire department connection). Provide Roof Manifold at each two story or greater roof area where roof hatches and ladders/stairs are provided.

Floor control valve assemblies, with monitored shut-off valve, flow switch, and an inspector's test valve, will be provided for each sprinkler zone. The sprinkler system will be zoned per floor to monitor water flow. Each zone will be limited to protect a maximum of 52,000 square feet. Four sprinkler zones are anticipated for the first floor and three for the second floor (7 zones total). The test valves for each zone shall be accessible, and their discharge lines are directed outside the building to a safe location.

Sprinklers will be supplied from distribution piping off the floor control valve assemblies described in the paragraph above. The building will primarily be protected as light hazard with some areas of ordinary hazard group 1, and ordinary hazard group 2.

Light hazard design shall have sprinkler spacing no more than 225 square feet (15’ x 15’ pattern) per sprinkler. The system will be hydraulically calculated to provide 0.10 GPM per square foot over the most hydraulically remote 1500 square feet. Areas to be protected as light hazard: general classrooms, fitness rooms, common areas, gymnasiums, offices, and toilet rooms.

Ordinary hazard (group 1) design shall have sprinkler spacing no more than 130 square feet (10’ x 13’ pattern) per sprinkler. The system will be hydraulically calculated to provide 0.15 GPM per square foot over the most hydraulically remote 1500 square feet. Areas to be protected as ordinary hazard (group 1): kitchens, storage rooms, electrical closets.

Ordinary hazard (group 2) design shall have sprinkler spacing no more than 130 square feet (10’ x 13’ pattern) per sprinkler. The system will be hydraulically calculated to provide 0.20 GPM per square foot over the most hydraulically remote 1500 square feet. Areas to be protected as ordinary hazard (group 2): stages.

Areas not to be provided with wet-pipe sprinkler protection: areas below raised floors, noncombustible concealed spaces above suspended ceilings, elevator shaft and pit, elevator machine room, and electrical transformer vaults (if meeting the conditions outlined in 780 CMR).

Dry Sprinkler systems will be provided for all enclosed areas that are unheated (includes loading dock areas with overhead doors). A supervised dry pipe valve with flow and tamper switches, and an air compressor sized to fill the system.

Sprinkler heads in areas with finished ceilings will be concealed pendant type. In areas with no suspended ceilings, there will be upright sprinkler heads. All sprinklers will be quick response heads. Sprinkler heads in mechanical rooms and gymnasiums will be provided with wire guards.

All shut-off valves and fire protection materials/equipment will be UL listed and FM approved type. Shut-off valves will be equipped with supervisory tamper switches. Tamper switches and flow switches will be monitored by the building fire alarm system.

JONES WHITSETT ARCHITECTS

In association with

SMMA

3-1-b

BASIS OF DESIGN NARRATIVE – DATA & SECURITY

a. Data

A Category 6A horizontal cable solution will provide high-speed voice and data connectivity from the work area voice/data outlets to their respective Telecommunication Rooms (TRs). A network of wireless access outlets will be distributed throughout the facility to ensure robust and reliable connectivity for mobile device users. Backbone cables will provide connectivity from each TR to the Main Telecommunications Equipment Room (TER). The TER will be constructed to serve as the primary hub of communications. Laser optimized, OM4, fiber optic and multi-pair copper backbone cables will be provided to connect the TER with the TRs throughout the building. Wiring, outlets and terminations will be installed to comply with EIA/TIA 568 standards.

A system of underground duct banks and maintenance holes will be provided as a cable pathway for Telecom service providers to use for extending outside plant cabling from a riser pole on Maple Street into a Telecommunications Service Entry Room.

An existing underground duct bank that enters the facility from the southeast side of the existing school carries the Municipal fiber optic network cables to the High School. The duct bank will be intercepted and routed underground around the area of work during the enabling phase over the summer of 2024 to maintain network connectivity in the existing High School throughout construction. This duct bank will be extended from the interception point to the new High School to provide an underground cable path to connect the new High School with the Municipal fiber optic network.

A new Atlas IP based public address and clock system will be installed with wired PoE end points. The system will integrate with the existing district VoiP phone technology to enable paging an individual room, initiate two-way communications with classrooms or offices or make a facility-wide announcement and broadcast emergency notifications. Classrooms will be equipped with speakers, clocks, emergency strobe lights, and call buttons.

Sound Field systems will be installed in up to 20 selected academic spaces. The Sound Field Systems will be made ready to interface with classroom displays to provide full sound distribution within the classroom. Sound field systems will also be installed in the Gymnasium and the Stadium to support sporting events and educational programs.

Audio visual systems will be provided in larger presentation and event spaces including the Gymnasium, Auditorium, Dining Commons, Band and Chorus rooms, Media Center and Large Group Instruction room. A new digital signage system will be designed to provide students and staff pertinent and timely school community information.

Emergency call stations will be provided at elevator landings above the first floor to provide voice communications between rescue team personnel and people who are unable to use the stairways for evacuation.

A two-way radio system consisting of distributed antennas, donor antennas, a dedicated cable infrastructure and radio amplifiers will be provided per code requirements for Fire and other Emergency Responders use.

A separate Technology Equipment budget has been developed to provide non-interactive large format televisions in the majority of Learning Spaces. As many as eight large format interactive video displays will be provided and distributed among selected rooms. A new VoIP telephone system and network electronic equipment (switches, firewalls, wireless access points) and related electronic educational peripheral equipment will be purchased as part of the Technology Equipment budget.

b. Security

The security design for the school is multi-layered, including active and passive measures. The layers include perimeter security, interior and exterior surveillance cameras, controlled and secure entry points, access control at appropriate interior doors, intrusion detection with multiple zones, intercommunication, classroom wing lock down capability, and individual classroom lock down capability.

OUTREACH

The Design Team has had a security meeting with District and Town emergency personnel on 6/23/23 to review the project. This meeting was to discuss the overall security philosophy and to review the crime prevention through environmental design (CPTED) requirements.

Based on the feedback garnered from the District and Town representatives, the security and visual access requirements are as follows.

SITE PERIMETER

Parking areas, parent drop off and pick up, and bus drop off and pick up will be clearly identified. Buses and cars will have separate paths to maximize safe transport of students. After a predetermined time at the beginning of school, only the front Main Entry will be open, via a secure visitor entry sequence.

Perimeter camera surveillance will include high resolution, lowlight and infrared fixed and multi-lens cameras in concert with video analytics, including motion detection, to establish a virtual perimeter and monitor activity within the site. Camera surveillance will be used to cover the

driveways, parking areas, playgrounds and outdoor classrooms. Cameras will be aesthetically mounted to the school façade, soffits and light poles in order to provide maximum coverage of the perimeter.

All exterior building cameras will be power over Ethernet (PoE), specified for the environment in which they are located and will include surge suppression. All PoE power supplies will be on UPS and emergency power.

The benefit of utilizing a PoE solution not only supplies low voltage rather than high voltage power to these devices, but also more importantly provides the means to control power to the device. Central control of the PoE devices allows for devices to be turned on or off based on a predetermined schedule, a sensor, or an event, such as motion detection. The result can be reduced consumption of power to devices, reduced power usage and a greener building. In addition, PoE reduces the use of materials, eliminating the need to provide a power cable to the device.

BUILDING PERIMETER

The proposed school has a main entry secure vestibule. These doors will be electronically controlled by a proximity card reader, door position switch and monitored by camera surveillance on both on the interior and exterior of the school. Each of these entry doors includes 2-way communication with the main office through the use of a video intercom system whereby a visitor will request access into the school.

All exterior doors not used for normal entry but for emergency egress only will be equipped with hardware on the interior side of the door only and door position switches. Alarms will be generated for unauthorized access and can be silent alarms, generated only on the access control workstation, and/or audible alarms for local annunciation.

A designated entrance will be provided for delivery vehicles. This door will be controlled through the access control system in addition to a video intercom, located outside of the delivery door, to allow the driver of the delivery vehicle to communicate with the main office or custodian office to request access into the school.

BUILDING INTERIOR

Card access will be employed at the inner and outer doors of the entry vestibule, designated interior doors, the entry doors into the administrative suite, tel/data and IT closets. All controlled and monitored doors, and motion detectors will communicate with access control field panels and an intrusion detection system mounted in a climate controlled secure closet inside the school. This location will also house the access control and video management server and PoE switches that power the cameras and video intercom system. These panels will

transmit the access control data to an access control system, controlled through a workstation over the school network. The system will have the capability to receive and acknowledge various types of facility alarm conditions to include door-propped-open and door-forced open. All alarms will be displayed on a facility map indicating specific location and type of alarm.

Through the access control system and associated equipment, personnel in the administrative office suite will have the capability to lockdown the school, rendering all card access doors only to be operated by pre-authorized credentials, i.e., the administrative team, and kept in the Knox Box on the exterior of the school for first responders. The system panels will also include a fire alarm module to support a connection with the fire alarm system.

As the school will welcome community use, the doors located at the classroom wings will have the ability to secure, disallowing access to visitors during non-school hours. Intrusion detection keypads will be located in the secure vestibule and admin vestibule for after-hours door status and motion detection monitoring. These keypads will be used to arm and disarm the intrusion system. Motion detection devices will be installed in all ground floor spaces with direct access to the exterior and in hallways on upper floors.

The access control system database will be linked to the district human resource database, which will allow new employee data to be passed to the system for pre-population of card holder data, which will allow personnel to quickly create a new access control credentials. Access control credentials will be produced with badging software within, or integrated with, the access control system and allow for multi-colored badges with a photograph and permit full user design of style, logo, fonts and data placement. The system will be part of, or integrated with, the access control system in order to permit tracking of individual badge usage, activation or deactivation of badges at any time or based upon user defined rule sets, and provide both standard and custom reporting capability.

Cameras will be employed within hallways, the gymnasium, cafeteria and other group gathering areas. The video management system will be capable of recording and storing all video, including the exterior cameras, for a minimum of 30 days at high definition resolution. The video management system will transmit video to a video management workstation located in the administrative office suite, and/or at alternate locations, where live viewing will be permitted of any camera image. All cameras will be capable of transmitting in color and exterior cameras will have low light capability where needed (based upon lighting design and configuration). Software for motion based as well as object based and/or forensic video detection will be used in order to provide discrimination of unwanted versus normal events. Interior cameras will be powered via PoE.

The dedicated reception desk in the administrative suite will house a master video intercom, a badge printer, lockdown button and duress button. It is from this desk that visitors requesting access into the building will communicate through the video intercom system. Once allowed

into the school's entry vestibule, through the remote unlocking capability from the master intercom, visitors will be identified and properly entered into a visitor management system. This desk will also have a workstation and monitor to view the access control and video management system and provide credentials to staff.

Similarly, the reception desks in the Sped Admin and CO Admin offices will house a master video intercom, a lockdown and duress button, and workstation and monitor to view the access control and video management system.

Inside the administrative suite, the principal's office will contain a master video intercom station, a lockdown and duress button and a workstation to view the access control and video management system.

Duress buttons should be installed to ensure that assistance can be summoned covertly without escalating a bad situation and to notify school personnel of an emergency. Positioning of the buttons should be such that the staff member can activate the button without obvious movements that could escalate a confrontation. Duress buttons should be fully functional and monitored by the school.

Indoor shooter detection system sensors will be installed throughout the school and alert when gunfire is detected inside the school. The sensors will be integrated with a shooter detection system that will immediately relay the shot location information through floor plan maps, and send text and e-mail notifications to key personnel including building administration, staff, and first responders with no required human interaction. The system will be integrated with the access control and video surveillance system to activate cameras in the area in order to give key personnel a visual overview of the event. Police department integration will be provided to send automated video feeds and mapping information of the incident directly to their mobile devices.

Consistent with contemporary educational research and thinking, classrooms and as much of the school as possible will be infused with ample daylight, views of nature, connection to natural materials, in an environment with fresh air and friendly acoustic properties. This commitment requires north south orientation for as many classrooms as possible, with windows on the long wall of the room wherever feasible. The classrooms and other learning spaces will be provided with a classroom type lockset, or similar functionality, where the corridor handle is always secure, only unlocked by a key, and the interior handle remains free. Ground floor windows with direct view from the exterior and all classrooms and offices with visibility from interior corridors will be fitted with easily controlled shades to allow teachers, staff and students to properly shelter in place while decreasing visibility.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Crime Prevention through Environmental Design (CPTED) is a multi-disciplinary approach to deter criminal behavior through environmental design. The major guidelines to follow when designing and creating policies and procedures for a building include natural surveillance, natural access control, natural territorial reinforcement, maintenance and activity support.

NATURAL SURVEILLANCE

Natural surveillance deters criminal activity by giving the perception that people can be seen. This includes designing the placement of the building against the built and unbuilt environment, locating landscaping features to dictate where activities occur, and how people utilize the exterior spaces. Maximizing visibility will also assist in creating an inviting atmosphere and building positive interactions among users. The design:

- increases pedestrian and non-vehicular traffic as a surveillance asset,
- provides windows and maintains natural surveillance by keeping exterior windows unobstructed,
- creates landscape designs that provide surveillance, especially in proximity to designated points of entry and entrances,
- uses topography to allow visibility, and
- provides consistent lighting to decrease shadows, blind spots and entrapment areas.

NATURAL ACCESS CONTROL

Natural Access Control utilizes the built environment to guide vehicles and pedestrians onto the site and into the building. This not only includes clear wayfinding, but also perimeter fencing, lighting and pathways. Directing the flow of traffic to and from the building will decrease the opportunity for criminal activity. The design:

- provides clear entrances into the building,
- uses building features to direct people to authorized areas,
- uses landscaping to prohibits climbing and intrusion into the building,
- eliminate landscaping and other design features that provide access to roofs or upper levels, and
- promotes interaction with neighbors.

NATURAL TERRITORIAL REINFORCEMENT

Natural territorial reinforcement makes the normal users feel safe and promotes a sense of ownership. This allows staff members to be more apt to challenge intruders or report suspicious activity to the police. In this design public areas are clearly defined from private areas, through the use of fences, signs, pavement, lighting and the landscape. People looking to engage in criminal activity recognize this distinction and are likely discouraged, as they will be more easily identified. The design:

- maintains the premises so that it is perceived as an occupied environment,

- restricts private activities to defined private areas and public activities to public areas,
- displays security system equipment and signage at conspicuous places,
- utilizes topography and natural elements to communicates the absence of a physical presence and an increase in the risk of being detected, and
- includes motion sensor lighting at all entry points.

MAINTENANCE

Maintenance is an important aspect of CPTED because it expresses a sense of ownership. Deterioration or neglect of a space may encourage acts of vandalism or crime. For example, the "Broken Window Theory" suggests that vandalism or criminal acts leads to similar acts and potentially the rapid decline of not only the site but also the entire neighborhood. Properties known to be neglected are more likely to encourage criminal activity. The design includes:

- procedures for repairing and replacing damaged property.

ACTIVITY SUPPORT

Activity support increases the safe usage of the area by increasing the detection of criminal activities. Natural surveillance is casual, however through the use of signage the users of the area will be more involved and aware of their surroundings. This will increase their vigilance to challenge intruders or report suspicious activity to the police. The design includes:

proper identification and signage of site activities.

SIGNAGE

All doors with access into the school should be marked in numerical order based on the clock position method, starting with the main entry as number one. All doors should be clearly labeled with large, reflective numbers. These markings will serve as a reference point for first responders. Classrooms windows will be adequately identified. Exterior doors will also be identified. Knox box and fire alarm locations will be coordinated with local first responders.

3-1-c
BUILDING CODE ANALYSIS

Applicable Codes

Code Type	Applicable Code (Model Code Basis)
Building	780 CMR: Massachusetts State Building Code, 10th Edition[A] • Amended 2021 International Building Code (IBC) • Amended 2021 International Existing Building Code (IEBC)
Fire Prevention	527 CMR: Massachusetts Fire Prevention Regulations
Accessibility	521 CMR: Massachusetts Architectural Access Board Regulations 2010 ADA Standards
Electrical	527 CMR 12.00: Massachusetts Electrical Code • Amended 2023 National Electrical Code
Elevators	524 CMR: Massachusetts Elevator Code • Amended ASME A17.1-2013/CSA B44-13
Mechanical	2021 International Mechanical Code (IMC)[A]
Plumbing	248 CMR: Massachusetts Plumbing Code
Energy Conservation	2021 International Energy Conservation Code (IECC) & Stretch Energy Code (225 CMR 23)

A. The 10th Edition of 780 CMR is expected to take effect in 2024, although a specific date has yet to be announced. The 10th Edition will be based on the 2021 International Codes.

Occupancy Classification

- Use Group E (School)
- Use Group A-1 (Auditorium – Non-School Function)
- Use Group A-3 (Gym & Cafeteria – Non-School Function)
- Use Group A-4 (Gym with Spectator Seating)

For the purposes of this report, it has been assumed that the Gym, Cafeteria and Auditorium could be used for non-school events and therefore must be considered a Use Group A occupancies rather than part of the primary Use Group E occupancy (IBC 303.1.3).

Hazardous materials in the building must be maintained below the exempt amounts in IBC Section 307.1.

Construction Type

- Type IB (2-hour, non-combustible)

Height and Area Limitations

The following tables summarize the height and area limitations for the primary Use Group E and the most restrictive Use Group A-1 occupancy:

Construction Type IB

Code Reference	Use Group E		Use Group A-1	
	Height	**Area**	**Height**	**Area**
IBC Tables 504.3, 504.4 & 506.2: Tabular Value	6 St. (180 ft)	Unlimited	6 St. (180 ft)	Unlimited
Height and Footprint Area Allowed	**6 St. (180 ft)**	**Unlimited**	**6 St. (180 ft)**	**Unlimited**
Actual Height and Footprint Area	**2 St. 141,320 ft^2**			

As indicated in the table above, the building will comply with the height and area limitations for Type IB construction.

Fire Department Access

All newly constructed facilities, buildings, or portions thereof are required to be provided with a fire department access road which may consist of roadways, fire lanes, parking lot lanes, or some combination thereof (527 CMR 1 Section 18.2.3.1). These access roads must have the following features,

- Must extend to within 50’ of an exterior door that can be opened from the outside and provide access to the interior of the building.

- No portion of the facility or exterior wall on the first story of a building is greater than 250’ from fire department access roads measured along an approved route.
- Multiple access roads can be required by the AHJ if it is determined that a single road can be significantly impaired by external factors.
- Unobstructed minimum width of 20’ unless constructed boulevard-style which a 10’ minimum width is permitted.
- Unobstructed vertical clearance of 13’-6”.

Fire Resistance Ratings

The following fire resistance ratings are required in accordance with IBC Table 601 and various sections of the code.

Building Element	Fire Resistance Rating (Hrs)
	Type IB
Primary Structural Frame[A]	2
Exterior Bearing Walls	2
Interior Bearing Walls	2
Exterior Non-Bearing Walls	0 Based on Fire Separation Distance > 20 feet
Interior Non-Bearing Walls	2
Floor Construction	2
Roof Construction (not including Primary Structural Frame)	1[B]

A. Includes beams, trusses, floor members, etc. having a direct connection to the columns (IBC 202). The primary structural frame shall include all of the following structural members:
   a) The columns;
   b) Structural members having direct connections to the columns, including girders, beams, trusses and spandrels;
   c) Members of the floor construction and roof construction having direct connections to the columns; and
   d) Bracing members that are essential to the vertical stability of the primary structural frame under gravity loading shall be considered part of the primary structural frame whether or not the bracing member carries gravity loads.

B. Fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Heavy timber is allowed in roof construction where a 1-hour or less fire-resistance rating is required. Note that under the current code these exceptions do not apply to the structural members that are considered part of the primary structural frame as defined by IBC 202. However, in the 10th Edition (2021 IBC) all structure located entirely more than 20 feet above the floor below (including primary structural framing) does not require a fire rating and all roof structure (including primary members) can be of heavy timber regardless of the height above the floor below.

Building Element	Fire Resistance Rating (Hrs)	Opening Protectives (Hrs)
Exit Access Corridors & Stairs (IBC Table 1020.1)	0	0

Shafts (IBC 713.4 – Not less than the floor rating)		2	1½
Elevator Machine Room (IBC 3005.4)		2	1½
Storage Room Under Stairs (IBC 1011.7.3)		1	¾
Stage and Appurtenant Rooms (IBC 410)		See Stage Section of Code Report	
Emergency Electrical Room (527 CMR 12.00 700-10(D)(2))		2[A]	1½
Electrical Rooms	With Sprinklers	0	
	Without Sprinklers (NFPA 13)	2	

A. No rating is required for the room when fully sprinklered, however a 2-hr rating is still required for the emergency feeder-circuit wiring and rooms containing an emergency generator (NFPA 110 Section 7.2.1.1).

Incidental Accessory Occupancies (IBC Table 509)	
Room or Area	**Separation and/or Protection***
Furnace room where any piece of equipment is over 400,000 Btu per hour input	Smoke Resistant
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	Smoke Resistant
Laboratories and vocational shops not classified as Group H in Group E occupancies	Smoke Resistant

*Where an automatic fire-extinguishing system without a fire barrier is permitted, accessory occupancies shall be separated from the remainder of the building by construction capable of resisting the passage of smoke and doors shall be self- or automatic-closing upon detection of smoke.

Fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions, or any other wall required to have protected openings or penetrations must be identified with signs or stenciling within accessible concealed spaces (i.e. above suspended ceiling assemblies, in attic spaces) at 30 ft intervals (IBC 703.7).

Exterior Wall Openings & Fire Resistance Ratings

The nonbearing exterior wall rating requirements and opening limitations are based on the fire separation distance for each wall. The fire separation distance is measured perpendicular to the exterior wall to the centerline of a public street, an interior lot line, or an imaginary lot line between two buildings on the same lot (IBC 702.0). Where the fire separation distance is more than 20 ft the wall is not required to be rated and the allowable area of openings is not limited (IBC Table 602 Note g and Table 705.8).

Vertical Floor Openings

Vertical openings are required to comply with IBC 712. The proposed plans include various two-story floor openings that can be completely open in accordance with IBC Section 712.1.9 and

open exit access stairs permitted by IBC Section 1019.3 that can be used for egress without requiring any enclosure or further protection.

Finishes

Interior Finish

The interior finish of walls and ceilings must comply with the table below.

Walls & Ceilings (IBC Table 803.11) - Sprinklered

Building Component	Use Group E	Use Group A
Corridors & Exit Access Stairs	Class C	Class B
Rooms & Enclosed Spaces	Class C	Class C

Note that where exit stairs and exit access corridors serve all use groups, the most restrictive interior finish is required.

Floor Finishes

Since the building will be equipped with an automatic sprinkler system, traditional floor coverings such as wood, vinyl and other resilient floor coverings as well as carpeting passing the DOC FF-1 pill test are allowed throughout the building, including all exits, exit passageways and exit access corridors (IBC Section 804.4.2).

Exterior Finish

Exterior wall finishes must fully comply with the requirements of IBC Chapter 14. Combustible materials are permitted to be used as an exterior wall finish for this building in accordance with IBC Section 1406.0; however, all exterior wall finishes and architectural trim located greater than 40 feet above grade plane must be constructed of approved noncombustible materials and must be secured to the wall with metal or other approved noncombustible brackets (IBC Section 1406.2.2). Additionally, combustible exterior wall finish is limited to 10% of the exterior wall surface area where the fire separation distance is 5 ft or less.

The use of plastic materials as part of the exterior wall assembly (i.e. foam plastic insulation) must comply with 780 CMR 26 (IBC 1404.8). The wall assembly must be tested in accordance with NFPA 285 or one of the alternative standards listed in IBC Section 2603.9.

Stage Requirements

The stage areas must comply with IBC 410 which includes the following requirements:

a. Stages must be constructed of materials as required for floors for the type of construction of the building unless the finished floor is constructed of wood or

approved non-combustible materials and openings through stage floors shall be equipped with tight-fitting, solid wood trap doors with approved safety locks (410.3.1).

b. Galleries, gridirons, and catwalks shall be constructed of approved materials consistent with the requirements of the type of construction of the building (i.e. non-combustible) but do not require structural fire ratings (410.3.2).
c. Combustible materials used for sets and scenery shall meet NFPA 701 fire propagation performance criteria (410.3.6).
d. If the height of the stage is greater than 50 feet, a 2-hour rated proscenium wall and proscenium fire curtain are required (IBC 410.3.4 & 410.3.5).
e. Emergency ventilation is required since the stage is larger than 1,000 square feet. It must comply with one of the following options (410.3.7).
    i. Two or more heat activated roof vents with aggregate opening of not less than 5% of stage area.
    ii. Smoke control system that maintains a smoke layer interface not less than 6 feet above the highest level of the assembly seating.
f. Stage must be separated from other parts of the building including dressing rooms and scene docks by 1 hour-rated construction (410.5.1).
g. Appurtenant rooms to the stage, such as dressing rooms, scene shop, and storerooms, must be separated by 1 hour-rated construction for each other and other parts of the building (410.5.2).
h. Exit access doors must be provided on each side of the stage (410.6.1).
i. Standpipe hose connections in accordance with IBC 905.3.4 are required on the stage since the stage is more than 1,000 ft^2 in area (410.8).
j. Technical production areas (i.e. catwalks) only require a single means of access and egress provided the common path of travel does not exceed 100 feet (IBC 410.6.3.3).

Means of Egress

a. Maximum exit access travel distance must be less than 250 feet (IBC Table 1017.2).

b. Maximum dead-end corridor length must be less than 20 ft or 2.5 times the least width of space on the First Floor due to the Use Group A occupancy (IBC 1020.4). On the Second Floor (Use Group E) dead end corridors are permitted up to 50 feet in length (IBC 1020.4 Exception 2).

   The proposed plans don't include any dead-ends exceeding the allowed limits.

c. Corridors serving 100 or more occupants must have a minimum width of 72 inches. Corridor serving 50-99 occupants must have a minimum width of 44 inches. Corridors serving 49 occupants or less may have a minimum width of 36 inches. (IBC Table 1020.2).

d. All rooms or spaces with an occupant load greater than 49 people or a common path of travel distance over 75 ft must be provided with two egress doors swinging

in the direction of egress and illuminated exit signs at each exit (IBC Table 1006.2.1 & Sections 1010.1.2.1 & 1013.1). Boiler rooms require two means of egress if the room is greater than 500 sqft. and includes individual fuel-fired equipment greater than 400,000 Btuh input capacity.

This includes the Gym, Auditorium, Cafeteria, and Stage which all have multiple means of egress as required.

Individual classrooms with an area over 980 ft^2 have a calculated occupant load exceeding 49 people and require two means of egress, except for classrooms that can be considered "vocational" (typically applied to science classrooms, art classrooms, etc.) which can be up to 2,450 ft^2 with a single means of egress. The plans indicate that all of the rooms with a calculated occupant load greater than 49 people will be provided with two means of egress.

e. Doors serving assembly or educational rooms with more than 49 people and doors along the path of egress travel from such rooms must be provided with panic hardware (IBC 1010.1.10). Doors from main electrical rooms must swing in the direction of egress with panic hardware and have high/low exit signs where required by the Electrical Code (NFPA 70).

f. All means of egress lighting and exit signs throughout the building must be provided with an emergency power supply to assure continued illumination for not less than 1.5 hours in case of primary power loss (IBC 1008.2 & 1008.3.4).

g. Remote means of egress must be separated by ⅓ of the diagonal dimension of the room or space they serve (IBC 1007.1.1). The distance between exits must be measured in a straight line between exit doors.

Both floors and all rooms and spaces which require two means of egress are provided with remote egress routes.

h. Since the building is only two stories, all egress stairs can be considered open exit-access stairs in accordance with IBC Section 1019.3 Exception 1.

i. Stairway with a required width over 60 inches must have an intermediate center handrail (IBC 1014.9).

Although the proposed plans include stairs greater than 60 inches in width, based on the occupant load served none of the proposed stairways have a required width greater than 60 inches. Therefore, a center handrail is not required.

j. A stair or alternating tread device must be provided to any main roof surface four or more stories above grade (IBC 1011.12). Roofs and penthouses containing elevator equipment that must be accessed for maintenance are required to be accessed by a stairway (IBC 1011.12.1). Permanent means of

access to any roof containing mechanical equipment must be provided in accordance with the Mechanical Code.

k. A two-way communication system is required at each elevator landing on each floor above the level of exit discharge (780 CMR 1009.8).

l. The passenger elevator must be sized to accommodate the loading and transportation of an ambulance gurney or stretcher sized 24" wide by 84" long with 5" radius corners (524 CMR 35.00(2.27.12)).

Required Fire Protection Systems

a. NFPA 13 sprinkler system (780 CMR Table 903.2 & M.G.L. c148 s26G)

b. Voice/Alarm signaling system (IBC 907.2.3)

c. Standpipe system – at the stage only (IBC 410.8). Since the 2nd Floor elevation is less than 30 feet above the lowest level of fire department vehicle access additional standpipe hose connections are not required within the building (IBC 905.3.1)

d. Fire extinguishers (527 CMR 1, Table 13.6.2(a) & IBC 906.1).
Fire extinguishers must be located throughout the building so that the maximum travel distance to an extinguisher is less than 75 feet (527 CMR 1, Table 13.6.2(a)).

e. Carbon monoxide detection in accordance with IBC 915 and 527 CMR 1 chapter 13.

f. Emergency responder radio coverage (IBC 916)

Energy Code Provisions

The Massachusetts Stretch Code as adopted by the City of East Longmeadow adopts the 2021 International Energy Conservation Code (IECC) with Massachusetts Amendments (225 CMR 23) that will apply to this project.

Accessibility for Persons with Disabilities

Massachusetts Architectural Access Board Regulations

All areas open to students or the general public are required to comply with the requirements of the Massachusetts Architectural Access Board (521 CMR), and in particular Section 12: Educational Occupancies and Section 14: Places of Assembly. 521 CMR includes the following major provisions:

a. All public entrances must be accessible (521 CMR 25.1).
b. All public and common use areas must be accessible and provided with an accessible route thereto (521 CMR Section 12.2.2 and 20.1).

c. Accessible toilet rooms and bathing fixtures must be provided in each toilet room and bathing room location (521 CMR 30.1).
d. Where tables, study carrels, computer workstations, sinks or counters provided in classrooms, at least 5% with a minimum of one of each item must be accessible (521 CMR Section 12.2.2).
e. Wheelchair accessible seating locations integrated into the seating plan must be provided in the Audtorium and Gym (521 CMR 14.4.1).
f. Wheelchair access directly from the Auditorium seating area to the stage is required (521 CMR 14.6).

American's with Disabilities Act

The ADA Guidelines are not enforced by the Commonwealth of Massachusetts, they can only be enforced through a civil lawsuit or complaint filed with the U.S. Department of Justice. Although the provisions of the MAAB do not apply to employee only areas, the ADAAG requires that employee only workspaces must be designed to allow employees to approach, enter, and exit the work area. However, the work areas are not required be provided with accessible features (i.e. shelves, etc.).

3-1-d
GREEN COMMUNITIES, LEED SCORECARD, ENERGY SAVINGS, LCCA

This is an acknowledgement that the Town of East Longmeadow has identified a goal of attaining the High Efficiency Green School Program, under the new 2023 Green Policy. The Town of East Longmeadow elected to pursue the 3% additional reimbursement available to projects that meet the requirements of the MA 2023 Specialized [Opt-in] Code and the additional 1% reimbursement for achieving 5 of 7 LEED Materials and Resources (MR)/Indoor Air Quality (IAQ) points.

The Town of East Longmeadow is a Stretch Code Community and in the process of becoming a Massachusetts Green Community. The Project includes a high performance all-electric heating and cooling system (VRF/ASHP) with a DOAS system for ventilation, electric domestic hot water (DHW) and all-electric kitchen, in compliance with MA 2023 Specialized (Opt-In) Energy Code, All-Electric Systems Pathway.

- MSBA Green Policy (2023): Compliance with the 2023 MA Stretch Code (estimated to pursue the ASHRAE 90.1 Pathway) and Specialized (Opt-in) Code All-Electric Systems Pathway (3% additional reimbursement).

- Project Construction Permit (2023): East Longmeadow is a Stretch Code Community. The Construction Documents will be permitted in December 2024 under the 2023 Massachusetts Stretch Code (IECC 2021 with MA Stretch Code Amendments).

- Project energy performance goals: EUI 30 kBtu/SF/yr. or better.

The East Longmeadow High School Project LEEDv4 For Schools Scorecard shows 58 attempted points with a goal of LEEDv4 Silver Certification, including the 20% Water Efficiency and the Enhanced Commissioning MSBA requirements. The Project Design includes the following LEED MR and IAQ credits criteria, striving to achieve a minimum total of 5 points (from 7 points available) to qualify for the 1% additional reimbursement:

- MR Building Product Disclosure and Optimization - Material Ingredients -v4.1 (1 point)

- IEQ - Low Emitting Materials – v4.1 (3 points)

- IEQ – Indoor Air Quality Assessment – v4.1 (1 point)

The Project has been registered with the USGBC/GBCI under the LEEDv4 BD+C for Schools in January 2024. The Project GBCI ID is 1000193273.

A preliminary LEED scorecard follows this narrative.

Specifications include instructions to Contractor regarding waste management and waste diversion goals (95%), sustainable material procurement goals, and construction indoor air quality goals. The scope of work for this project will include the construction elements and performance tasks to achieve that goal, and all subsequent documents, including but not limited to, specifications, drawings, cost estimates will match the scope of work indicated in the submitted scorecard and energy performance goal.

Energy Performance related to the Massachusetts Energy Code

The Schematic Design phase preliminary energy model was updated to reflect the Design Development documents and compliance with the 2023 MA Energy Stretch Code. The energy performance analysis used the Stretch Code's ASHRAE 90.1-2019 Pathway to provide a true representation of the facility's design energy systems, in order to best inform the HVAC system selection. In addition, the final HVAC design is trending at ventilation rate of => 0.5 cfm/SF, in compliance with this pathway, to be confirmed in the Construction Documents Design phase.

A preliminary energy analysis was conducted for the Design Development Report estimating the preliminary energy performance in compliance with the 2023 MA Stretch Code (ASHRAE 90.1 Pathway) and Specialized (Opt-in) Code (All-Electric Systems Pathway).

The proposed Design Development preliminary energy analysis demonstrates an estimated 56.8% energy savings and 56.8% energy cost savings relative to MA Energy Stretch Code (IECC 2021 with MA amendments/90.1-2019 Performance pathway) all electric baseline (ASHRAE system #8). The MA Energy Stretch Code's performance pathway requires that the project design complies [pass] the 90.1-2019 PEIt. *[Note: ASHRAE 90.1-2019 lowered the baseline to 2004 levels and normalizes project's estimated savings using the PEIt calculation]*. The estimated preliminary 56.8% energy savings result in an ASHRAE PEIt of 29%, passing the PEIt threshold, and compliant with the said Stretch Code, as required under the MSBA 2023 Green School Policy. The building is modeled with the preferred conditioned air HVAC system: high performance all-electric heating and cooling system (VRF/ASHP) with a DOAS system for

ventilation. The facility proposed design is seeking a predicted EUI (pEUI) of 30 kBtu/SF/yr. or better.

Please note that the 56.8% estimated energy savings are subject to change during the Construction Documents phases, due to more detailed performance of building enclosure, lighting and HVAC systems, including final total ventilation rate. Relative to the LEEDv4 EAc2-energy performance credit predicted points, the GBCI review and EIA based electricity rates at the time of the final LEED design review will impact final EAc2 points approval.

Please note that the predicted annual energy savings and energy costs savings are not representative of actual annual energy costs upon building occupancy. Many variables such as operational practices, actual occupancy schedules, additional equipment and occupant behaviors will likely impact the actual energy usage of the facility.

Table 1 summarizes the Design Development predicted energy savings relative to the current MA energy Code (IECC 2018 with MA amendments)

Table 1 Predicted Energy Savings and Energy Cost Savings

	MA Energy Code	**LEED v4**
	IECC 2018/ASHRAE 90.1-2013 (as modified per MA amendments)	**EAc1 Optimize Energy Performance**
	%	Estimated Points
Estimated Energy Savings	56.8%	
Energy Costs savings[1]	56.8%	14[3]
Estimated GHG Emissions reduction (ISO 2023 Grid)	55.1%	

1. Using East Longmeadow's Utility energy costs, based on $0.2177/kWh.

2. LEED EAc2 points are based on LEEDv4 Optimize Energy Performance, with 14 points. The 56.8% represents an early energy analysis. Estimated points are pending GBCI final approval of electrical energy costs savings and rates at the time of the LEED design

documentation submissions. The USGBC/GBCI final review may impact the final energy costs savings results and final LEEDv4 certification credit/points awarded. The project may pursue the ACP95 pilot credit as needed for additional points, with a minimum goal of 14 pts and up to 16 points.

Table 2 shows the predicted Energy Use Intensity (kBtu/SF/yr.) relative to the Massachusetts Energy Code baseline.

Table 2 - Predicted Energy Use Intensity (pEUI)

Predicted EUI (kBtu/SF/YR)	
MA energy Stretch Code IECC 2021/ASHRAE 90.1-2019 Perf. Pathway (ASHRAE PEIt at 29%)	61.7
Proposed Design (All Electric – VRF)	26.6

Table 3 shows the energy model inputs for Proposed Design relative to relative to the Massachusetts Energy Code (IECC 2021 with MA amendments/ASHRAE 90.1-2019 Performance Pathway)

Table 3 – Energy Analysis Model Inputs

Description	Base Case	Design Case
Building Enclosure	Wall assembly U-factor=0.124 Btu/h·ft²·°F	Wall assembly U-factor=0.0167 Btu/h·ft²·°F
	Roof assembly U-factor=0.063 Btu/h·ft²·°F Roof reflectance=0.7	Roof assembly U-factor=0.018 Btu/h·ft²·°F Roof Reflectance=0.7
	WWR all facades = 22%	WWR all facades = 25%
Glazing Systems	Curtain wall U-factor=0.57 Btu/h·ft²·°F	Curtain wall U-factor=0.23 Btu/h·ft²·°F

	SHGC=0.39	SHGC=0.32
Air Infiltration Reduction	0.25 cfm/sf (75 Pa) - cfm/sf @ 0.3 in. of water (75 Pa)	0.25 cfm/sf (75 Pa) - cfm/sf @ 0.3 in. of water (75 Pa)
Lighting Power Density	0.72 W/ft²	0.50 W/ft² *
Exterior Lighting	2.0 kW load	2.0 kW load
Equipment Power Density	0.750 W/ft²	0.750 W/ft²
HVAC System Type	ASHRAE 90.1-2013 Baseline System 7 – water cooled Chiller	DOAS ventilation system with ASHP/VRF for heating and cooling
Heating	Natural Gas Boilers: 82% efficiency	All-electric VRF (3.56 COP)
Cooling	Cooling with VAV - EER of 9.1	All-electric VRF (12.2 EER)
Energy Recovery	50% effectiveness	75%+ effectiveness
DHW Heaters	Natural Gas water heater with 80% thermal efficiency	All-electric high efficiency hot water boilers, with point of use water heaters 100% efficiency

Building Systems Life Cycle Cost Analysis (LCCA)

The Schematic Design 50-year life cycle cost analysis (LCCA) was updated for the Design Development phase to estimate the potential energy savings for the proposed design's energy systems relative to the Massachusetts Energy Stretch Code (IECC 2021 with MA Amendments/ASHRAE 90.1-2019 Performance Pathway and with a targeted EUI of 30 kBtu/SF/yr. or better. The updated energy analysis estimated the project's proposed design preliminary Energy Performance, based on the all-electric VRF(ASHP)/DOAS system selected as the preferred HVAC system during Schematic Design.

Please note that the predicted annual energy savings and energy costs savings are not representative of actual annual energy costs upon building occupancy. Many variables such as operational practices, actual occupancy schedules, additional equipment and occupant behaviors will likely impact the actual energy usage of the facility.

Table 4 – Life Cycle Cost Analysis – HVAC Systems & Building Enclosure

System Options		Systems Costs as Present Value					Predict. EUI	Predicted Carbon emissions reduction
		Installation	Replacement	Maintenance	Energy	50-Year Life	kBtu/SF/yr	%
Baseline	MA Energy Code (IECC 2021 w. MA Amendements) (90.1-2019)	$14,548,806	$10,472,560	$643,244	$9,579,604	**$35,244,000**	61.7	
Proposed	HVAC system - Electric Heating & Cooling VRF system with DOAS units.	$14,452,402	$11,913,214	$656,109	$8,383,884	**$34,406,000**	26.6	55.1

Notes:

1. Installati*on costs are based on project cost estimates.*
2. Replacement costs are specific to each system, based on ASHRAE useful life data and using unit costs brought forward as Present Value *costs.*
3. Maintenance costs are estimated to include third-party service to sy*stems, but in-house routine maintenance.*
4. Energy *costs are based on energy modeling analysis and current energy costs based on East Longmeadow Utility,,* $0.2177*/kWh.* NOTE: potential electricity rate increases may be implemented at the completion of this project. The rate increase will further improve the LCCA analysis and payback.
5. Total Cost is *the sum of Installation, Replacement, Maintenance and Energy costs*

6. Present Va*lue modeled on a 50-year lifecycle cost, 3% depreciation*

Table 5 – Initial Project Cost & Payback Analysis

System Options		Installation Costs	Incremental Costs		Predicted Annual Savings	Payback
		($)	($)	(%)	($)	(Years)
Baseline	**MA Energy Code (IECC 2018 w. MA Amendments)** All Electric Package Rooftop Dx Heat Pump Constant Volume	$14,930,806				
Proposed	**HVAC system - Electric Heating & Cooling VRF system with DOAS units** VRF Heating & Cooling + DOAS (Full cooling)	$14,600,000	(330,806)	(0.4)%	$46,476	0

Notes:

1. Utility costs savings are based on current utility costs: based on East Longmeadow Utilities, $0.2177/kWh.

2. All cost estimates are sourced from recent project costs estimate and bids (SMMA Schools).

3. Incremental Costs percentage (%) is compared to the estimated construction costs and budget: $120,007,420.

Utility Incentives Programs

The project is pursuing the applicable MassSave utility incentives program. The project is located in National Grid's utility territory, The project team has engaged with National Grid's team and plans to pursue MassSave's incentives program Pathway for High School, with a goal for Tier 1 (EUI 25). Note: pending on final Design Documents and Utility's Post-Verification, the project may result under Tier 2.

Table 1: EUI Targets & Incentives

K-12 Schools	Site EUI Range	Incentives				
		Payable at end of Construction		Payable at end of 1 yr. post occupancy		
		Construction Incentive $/sf	Heat Pump Adder*	Post Occ. Inc. $/sf	Adder for getting under ZNE EUI target	Certification Incentive
Tier 2 (high schools only)	26-29	$1.50	Air Source Heat Pumps: $800/ton	$ 1.50	Not applicable	$3,000
Tier 1 - Net Zero Level (all Schools)	25 or less	$2.00	Variable Refrigerant Flow (VRF): $1200/ton Ground Source Heat Pumps: $4500/ton		$0.05/ EUI point reduction/sf	

* Equipment must be used as a primary heating source to qualify. The heat pump adder is only available for equipment that transfers heat from a source outside of the

Water Devices Life Cycle Cost Analysis (LCCA)

The 50 yr. life-cycle cost analysis (LCCA) was updated for the Design Development phase estimating the cost benefits and payback of the proposed design water efficient systems relative to the LEEDv4 water efficiency credit baseline. The LEEDv4 water efficiency (indoor potable water) calculator was used to estimate the predicted annual water savings.

The proposed design resulted in no incremental construction cost over a Base Code/LEEDv4 equivalent facility construction cost. The predicted annual water utility costs savings are estimated at $2,064 when compared to a Base Code equivalent facility, with an instant payback based on no incremental costs. Please note that the predicted annual water savings and water utility costs savings are not representative of actual annual water costs upon building

occupancy. Many variables such as operational practices, actual occupancy schedules and occupant behaviors will likely impact the actual water usage of the facility.

The proposed design shows predicted annual potable water savings of 62,082 gallons or 32.0% and predicted annual sewer savings of 274,804 gallons or 34.3%. The LEEDv4 preliminary water savings calculations resulted in 33.9% combined water and sewer savings. Please note that the LEEDv4 potable water calculations combines both water and sewer in their pre-set calculator, while the LCCA % savings requires the potable water and sewer be tabulated and priced separately for the purpose of the water costs savings informing the LCCA outcome.

Table 1 Life Cycle Cost Analysis (50 yrs.) – Water Systems

		Life Cycle Cost Analysis – Domestic Water				
		System Costs as Present Value				
		Installation	Replacement	Maintenance	Water Utility Costs	50-Year Life
MA Code IECC 2018 & 248 CMR	Standard efficiency (80%) water heater + standard water fixtures per code	$175,121	$83,639	$30,876	$146,000	$436,000
Proposed Design	Electric Efficient Water Heater + Low Flow Water Fixtures	$129,206	$61,710	$40,010	$93,000	$324,000

Notes:

1. Water Utility Costs and savings are based on $0.013/GA for water utility costs and $0.018/GA for sewer utility costs.

2. Installation costs are based on Schematic Design project cost estimate.

3. Replacement costs are specific to each system, based on useful life data and using unit costs brought forward as Present Value costs.

4. Maintenance costs are estimated to include third-party service to systems, but in-house routine maintenance.

5. Total Cost is the sum of Installation, Replacement, Maintenance, and water/sewer costs.

6. Present Value modeled on a 50-year lifecycle cost, 3% depreciation

Table 2 Preliminary Project Incremental Costs & Payback Analysis

Preliminary Project Incremental Cost & Payback Analysis						
System Options		**Installation Costs**	**Incremental Costs**		**Annual Utility Savings**	**Payback**
		($)	($)	(%)	($)	($)
MA Code IECC 2018 & 248 CMR	Standard efficiency (80%) water heater + standard water fixtures per code	$175,121				
Proposed Design	Electric Efficient Water Heater + High Efficiency Water Fixtures	$129,206	($45,915)	(0.04%)	$2,064	0

Notes:

1. Water Utility Costs and savings are based on $0.0056/GA for water utility costs and $0.0054/GA for sewer utility costs.

2. All cost estimates are sourced from recent project costs estimate and bids (SMMA Schools).

3. Incremental Costs percentage (%) is compared to the estimated construction costs and budget: $120,007,420.

Table 3 Preliminary Project Water Consumption & Costs

Preliminary Water Consumption & Costs							
Systems Options		Preliminary Total Annual Water Costs Use					2050 (50 yrs.)
		Potable (Utility) (GA)	Sewer (Utility) (GA)	Annual Water Costs ($)	Annual Sewer Costs ($)	Annual Costs ($)	
MA Energy Code IECC 2018 & CMR 248	Standard efficiency (80%) water heater + standard water fixtures per code (248 CMR)	193,781	801,450	$1,356	$4,328	$5,684	$146,256
Proposed Design	Electric Efficient Water Heater + Low Flow Water Fixtures	131,699	526,646	$776	$2,844	$3,620	$93,147

Notes:

1. Utility Costs and savings are based on $0.0056/GA for water utility costs and $0.0054/GA for sewer utility costs.

2. All cost estimates are sourced *from recent project costs estimate and bids (SMMA Schools).*

LEED v4 for BD+C: Schools
Project Checklist

DRAFT

Project Name: **East Longmeadow High School**
Date: 26-Mar-24

THE CREDITS INDICATED BY "YES" TO BE INCLUDED IN THE DESIGN DEVELOPMENT BUDGET

Y	?	N			
1			Credit	Integrative Process	1

1	5	24	**Location and Transportation**	**Preliminary**	**15**	
		15	Credit	LEED for Neighborhood Development Location	15	
	1		Credit	Sensitive Land Protection	1	
	1	1	Credit	High Priority Site	2	
	1	4	Credit	Surrounding Density and Diverse Uses	5	
		4	Credit	Access to Quality Transit	4	
	1		Credit	Bicycle Facilities	1	
	1		Credit	Reduced Parking Footprint	1	
1			Credit	Green Vehicles	1	

5	7	1	**Sustainable Sites**	**Preliminary**	**12**	
Y			Prereq	Construction Activity Pollution Prevention	Required	
Y			Prereq	Environmental Site Assessment	Required	
1			Credit	Site Assessment	1	
	2		Credit	Site Development - Protect or Restore Habitat	2	
	1		Credit	Open Space	1	
2	1	1	Credit	Rainwater Management	3	
1	1		Credit	Heat Island Reduction	2	
	1		Credit	Light Pollution Reduction	1	
	1		Credit	Site Master Plan	1	
1			Credit	Joint Use of Facilities	1	

4	2	6	**Water Efficiency**	**Preliminary**	**12**	
Y			Prereq	Outdoor Water Use Reduction	Required	
Y			Prereq	Indoor Water Use Reduction	Required	
Y			Prereq	Building-Level Water Metering	Required	
1	1		Credit	Outdoor Water Use Reduction	2	
2	1	4	Credit	Indoor Water Use Reduction	7	
		2	Credit	Cooling Tower Water Use	2	
1			Credit	Water Metering	1	

22	6	3	**Energy and Atmosphere**	**Preliminary**	**31**	
Y			Prereq	Fundamental Commissioning and Verification	Required	
Y			Prereq	Minimum Energy Performance	Required	
Y			Prereq	Building-Level Energy Metering	Required	
Y			Prereq	Fundamental Refrigerant Management	Required	
6			Credit	Enhanced Commissioning	6	
14	2	0	Credit	Optimize Energy Performance - ACP95 Alternative pathway	16	
1			Credit	Advanced Energy Metering	1	
1	1		Credit	Demand Response	2	
	2	1	Credit	Renewable Energy Production -v4.1 Green Energy Innovative	3	
	1		Credit	Enhanced Refrigerant Management	1	
		2	Credit	Green Power and Carbon Offsets	2	

6	1	6	**Materials and Resources**	**Preliminary**	**13**	
Y			Prereq	Storage and Collection of Recyclables	Required	
Y			Prereq	Construction and Demolition Waste Management Planning	Required	
1	1	3	Credit	Building Life-Cycle Impact Reduction	5	
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations - v4.1	2	
1		1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2	
1		1	Credit	Building Product Disclosure and Optimization - Material Ingredients - v4.1	2	MSBA Required
2			Credit	Construction and Demolition Waste Management	2	

10	4	2	**Indoor Environmental Quality**	**Preliminary**	**16**	
Y			Prereq	Minimum Indoor Air Quality Performance	Required	
Y			Prereq	Environmental Tobacco Smoke Control	Required	
Y			Prereq	Minimum Acoustic Performance	Required	
2			Credit	Enhanced Indoor Air Quality Strategies -CO2 sensors at all occupied spaces	2	
3			Credit	Low-Emitting Materials -v4.1	3	MSBA required
1			Credit	Construction Indoor Air Quality Management Plan	1	
1	1		Credit	Indoor Air Quality Assessment	2	MSBA required
1			Credit	Thermal Comfort	1	
1	1		Credit	Interior Lighting	2	
	1	2	Credit	Daylight	3	
1			Credit	Quality Views	1	
	1		Credit	Acoustic Performance	1	

6	0	0	**Innovation**	**Preliminary**	**6**	
5			Credit	Innovation: Green Edu, Low Merc. Lamps, Exempl. HPDs & EPDs, pilot cr.	5	
1			Credit	LEED Accredited Professional	1	

1	2	1	**Regional Priority**	**Preliminary**	**4**	
	1		Credit	Regional Priority: Building LCA - MR credit (Tally)	1	
1			Credit	Regional Priority: Optimize Energy Performance (8 points min)	1	
		1	Credit	Regional Priority: Renewable Energy Production (2 points min)	1	
	1		Credit	Regional Priority: Outdoor Water Use Reduction (2 points min)	1	

56	27	43	**TOTALS**	Possible Points: **110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

Note: Renewable Energy and Green Power Credits - project PV/renewable procurement only qualifies if school district owns the RECs through owning system or through PPA agreement/RE purchase agreement.

3-1-e
PROPOSED PROPRIETARY ITEMS & ALTERNATES

a. Proprietary Items

As voted on by the School Building Committee on 8/10/23:

- *Item #1: StruxureWare - for BMS*
- *Item #2: 3XlOGIC - for door access system*
- *Item #3: Schlage - for door hardware*
- *Item #4: AXIS - for security cameras*
- *Item #5: Atlas - for clocks and paging*
- *Item #6: ExacqVision – video surveillance system*

b. Alternates

The list of Add Alternates is as follows:

1. Sports Field Storage Building
2. Additional athletic field irrigation (beyond base project scope) @ 245,000 sq ft
3. Provide 435,000 sq ft sod in lieu of seed for athletic fields

These will continue to be evaluated in order to determine the priorities of the School Building Committee (and therefore the order they will be listed in for the final Construction Documents). The Design Team is also aiming to make further cuts in other areas so that some of these may be included as part of the base bid. This list will be refined at both the 60% and 90% CD phases.

3-1-f

Interior Color Theory Statement

The design of this school draws inspiration from East Longmeadow's historic brown and red sandstone quarries, both in its massing and materiality. The "wedge" shape used in the spine of the building as well as the tapered academic wings is inspired by the common configuration found in the abandoned quarries scattered throughout the town. Flooded with natural light and surrounded by the warmth of natural wood, the intention of this central spine is to draw students together. The monumental staircase leading to the library from the spine not only facilitates circulation but also acts as a social hub, with built-in wooden seating to encourage casual gatherings.

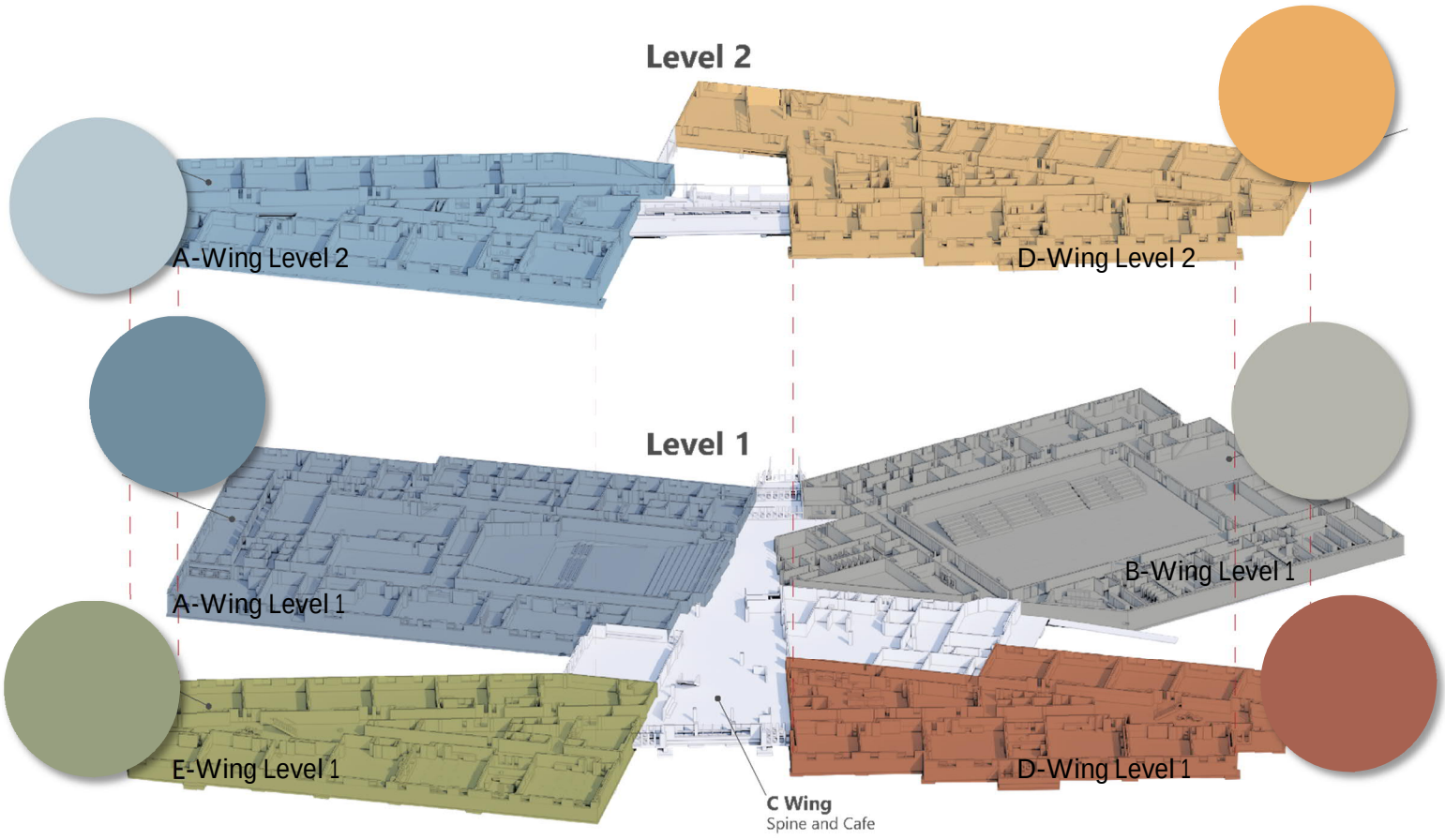
Recognizing that different personalities thrive in different environments, we've tailored the cafeterias accordingly. Cafeteria-A, with its lower ceilings, cozy corners, and coffee-shop ambiance, caters to those who may feel more comfortable in an intimate setting. In contrast, Cafeteria-B provides an open, double-high, bright space for students who prefer a break in their day with more activity. The design wants to respect all types of students but aims to be especially students recovering from the pandemic and are struggling with social and sensory integration issues. The warm and welcoming organic quality of the space is intended to feel calming, restorative, bright, and inspiring – much like the gradual softening of stone quarry walls with the buildup of lichen, vegetation and natural erosion.

Working with tighter budget constraints the design still prioritizes the inclusion of wood finishes because of the impact of wood on the sympathetic nervous system and its ability to connect us to the natural world. Wood finishes are included in the Media Center, Cafeteria, Large Group Instruction Room and the Auditorium, as well as the central spine. Exposed glulam beams support the roof framing of the spine and carry through into the Media Center circulation hallway and reading room. In the Media Center attention has been paid to lighting and acoustics, dividing the reading room from the stacks area in order to acoustically separate the two spaces. The Auditorium entrance shares both the space of the central spine and its materiality with abundant wood and fabric wrapped acoustic materials to create a cohesive transition with a gradient of fin-shaped walls compressing towards an intentionally open, flexible stage. The north wall of the auditorium includes windows and mechanized shades to introduce natural light. Acoustic curtains on sidewalls add color and allow the acoustics of the space to be tuned for different uses.

Wood is less evident in the academic wings. Here the design uses a restrained pallet of colors and durable materials to create academic communities that will age gracefully. (The designers were asked to learn from the mistake of the overly abundant pastel glazed blocks of the original high school.) Small group learning spaces are also sprinkled throughout the building for more focused, group learning opportunities. These spaces will offer flexibility and room for quiet meetings / intervention work or noisy project-based work. The academic wing corridors will be lined with a matte porcelain tile inspired by the striations of the compressed earth. In alignment with the project's sustainability and air quality goals, the design uses linoleum flooring with an acoustic

backing to eliminate chemical off-gassing and to mitigate hallway sound. A fractal floor pattern visually ties the spine and wing shapes. Large daylighting monitors over the each wing's stair help natural light to penetrate to the first floor and create a more pleasing common space to each wing and academic house. The four houses (two directional wings / two floors=four "houses") will each have a defining accent color to act as a navigational prompt. All classroom entrances will be highlighted with a matte, textural tile in the accent color of the wing and an accent wall within the classroom.

Given the student body's impressive athletic achievements, the gymnasium wing celebrates Spartan spirit with accent colors drawn from the school's logo and traditional school colors. Matte tiled entrances and naturally inspired textures continue to thread through the design. For a touch of playfulness, the design incorporated accent penny tiles in the locker room wet wall areas, that use energetic and contrasting shades of red and grey.



NAVIGATIONAL COLOR ACCENTS METHODOLOGY:

A-WING LEVEL 1: Administrative offices, Auditorium, Art

B-WING LEVEL 1: Administrative offices, Nurse, Special Ed, Gymnasium, Locker rooms

C-WING LEVEL 1: Main entrance, Auditorium Entrance, Cafeteria A & B

D-WING LEVEL 1 & 2: Academic Wing

E-WING LEVEL 1 & 2: Academic Wing

SPINE RENDERS:

CAFETERIA A RENDER:

CAFETERIA B RENDER:

ACADEMIC WINGS RENDERS:

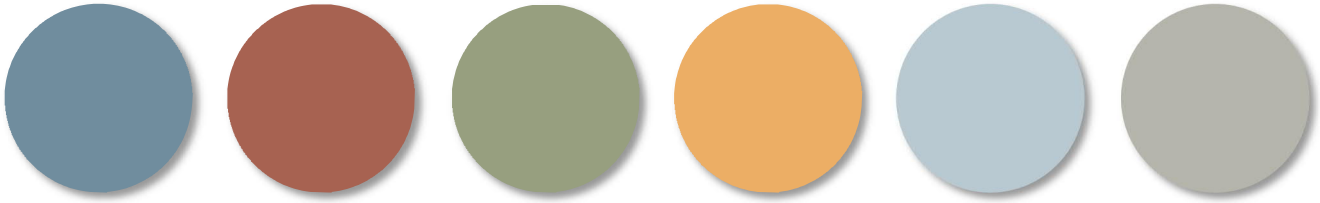
GYMNASIUM RENDER:

AUDITORIUM RENDER:

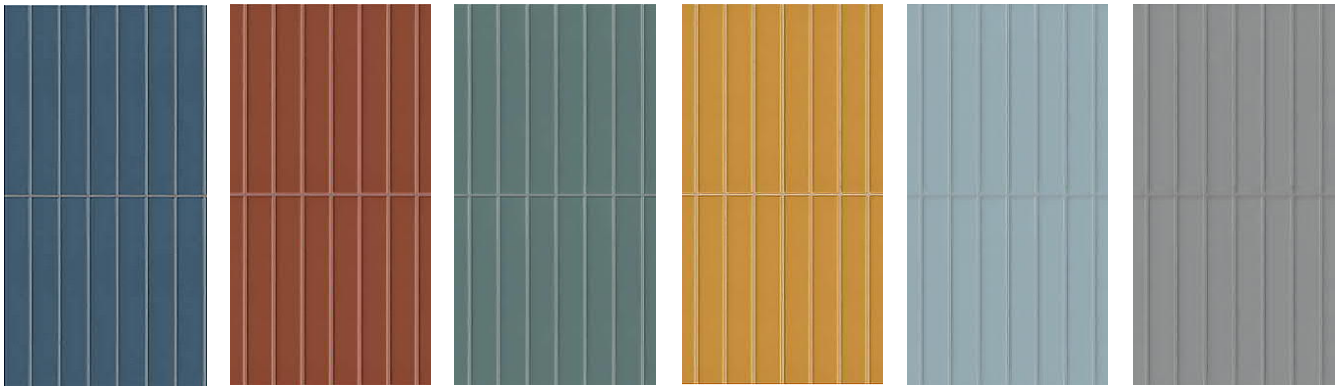
The following images depict the preliminary color and material selections:

PORCELAIN TILE WAINSCOT AND FLOORS:

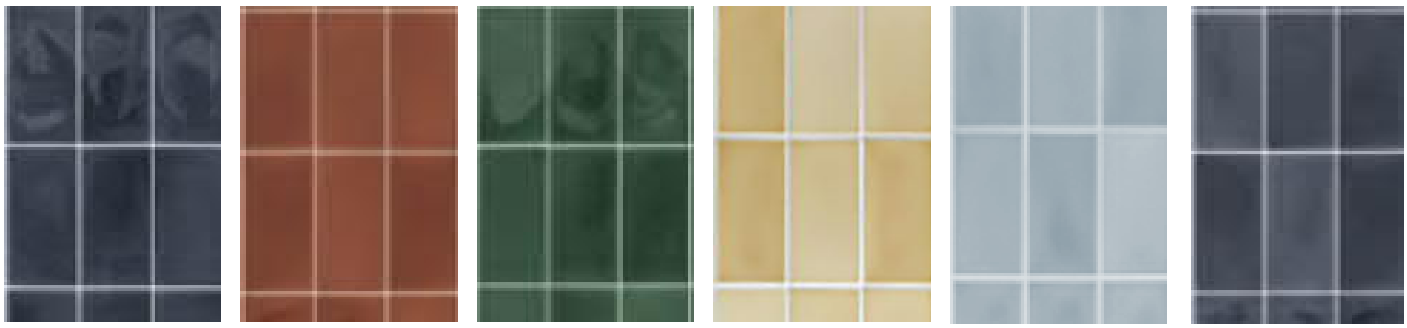
PAINT ACCENTS:



CLASSROOM NAVIGATIONAL TILE ACCENTS:



WATER FOUNTAINS/BATHROOM WET-WALL TILE ACCENTS:



CARPET:

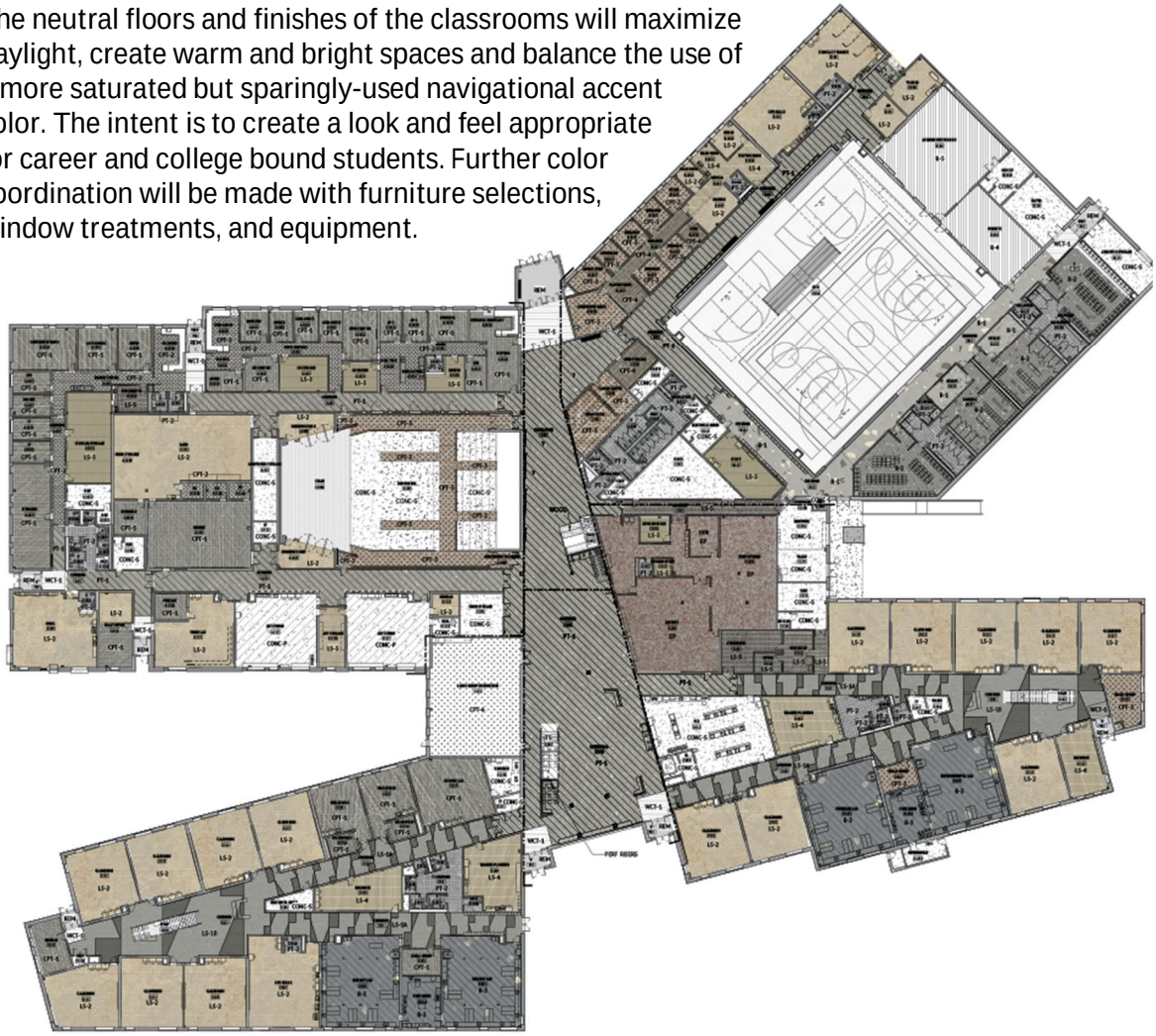


Interior Finish Materials

Walk off mat:	At all exterior entrances
Porcelain tile:	Floors at spine, B-Wing, and public access corridor in A-Wing
Linoleum/Resilient Sheet:	Corridor floors at D & E Wings and classrooms. ALT PE
Carpet Tile:	Small Group Rooms, Media Center, Reading Room, & Administration Offices
Hardwood floor:	Gymnasium (sports)
Ceramic tile:	Classroom, Gymnasium, locker rooms & auditorium entrances, water fountain walls, toilet rooms and, and Servery wall
Epoxy:	Servery floors and Pool Locker room
Wood panels:	Cafeteria B, Spine and Auditorium (+ acoustic wood panels)
Rubber:	Academic wing stairs, Locker room and PE corridor
Specialized Rubber:	Weight Rm

Interior Floor Finishes

The neutral floors and finishes of the classrooms will maximize daylight, create warm and bright spaces and balance the use of a more saturated but sparingly-used navigational accent color. The intent is to create a look and feel appropriate for career and college bound students. Further color coordination will be made with furniture selections, window treatments, and equipment.



RSE ASSOCIATES Inc.

EAST LONGMEADOW HIGH SCHOOL

Design Development

March 27th, 2024

RSE Associates
63 Pleasant Street, Suite 300
Watertown, MA 02472

STRUCTURAL CACULATIONS PACKAGE TABLE OF CONTENTS:

- Basis of Design
- RAM Structural System – General Criteria
- RAM Structural System – Echo of Input Data
- RAM Steel – Beam Design Criteria

STRUCTURAL BASIS OF DESIGN

1. **Referenced Standards:**
    a. Massachusetts State Building Code – 9th Edition
    b. 2015 International Building Code
    c. ASCE 7-10 – Minimum Design Loads for Buildings and Other Structures

2. **Design Criteria:**
    a. Live Loads:
        - Classrooms: 40 psf + 15 psf Partitions
        - First Floor Corridors: 100 psf
        - Upper Level Corridors: 80 psf
        - Media Center: 150 psf
        - Catwalks: 40 psf
        - Solar Panel All Roofs: 10 psf added uniform dead load
        - Mechanical Units: 75 psf

    b. Snow Loads:
        - Ground Snow Load: 35 psf
        - Roof Snow Load: 35 psf

    c. Wind Design Criteria:
        - Ultimate Wind Speed: 130 mph (Risk Category: III)

    d. Seismic Design Criteria:
        - Ss: 0.174
        - S1: 0.065
        - Site Classifications: D
        - Risk Category: III
        - Seismic Design Category: B

BUILDING CODE FOR LIVE LOAD REDUCTION: IBC

Live Load Reduction Method: General

ROOF LOADS:

Consider Snow Loads, Ignore Roof Live Loads

DETERMINING NUMBER OF STORIES FOR LIVE LOAD REDUCTION:

Include Roof Levels:	No
Include Unreducible Levels:	Yes
Include Storage Levels:	Yes

SELF-WEIGHT:

Automatically calculate and include Self-Weight for Member Dead Loads:

Beams:	Yes
Columns:	Yes
Walls:	Yes
Apply to top of wall	
Slabs / Decks:	Yes

Automatically calculate and include Self-Weight for Story Masses:

Beams:	Yes
Columns:	Yes
Include half mass of columns above and below	
Walls:	Yes
Include half mass of walls above and below	
Slabs / Decks:	Yes

Layout Types:

LEVEL 2
ROOF
LGI ROOF
AUDITORIUM ROOF

Tables Selected:

Deck Table:	ramdecks
Master Steel Table:	ramaisc
Default Steel Table:	ramaisc
Alternate Steel Table:	ramaisc
Column Steel Table:	ramaisc
Reinforcement Table:	ramastm
Pan Form Table:	ramceco

Story Data:

Level	Story Label	Layout Type	Height (ft)
4	AUDITORIUM ROOF	AUDITORIUM ROOF	8.330
3	ROOF	ROOF	6.000
2	LGI ROOF	LGI ROOF	9.330
1	LEVEL 2	LEVEL 2	15.330

Composite Deck Properties:

ID	Label	Deck Type
1	6.25 LWT CONCRETE	VULCRAFT 3VL
2	6.25" NWT Conc On 3" Deck	VULCRAFT 3VL

ID	Thick in	Unit Wt pcf	f'c ksi	Stud in	Diam in	Shored
1	3.25	115.00	4.00	4.50	0.75	No
2	3.25	150.00	4.00	4.50	0.75	No

ID	Hr in	Rib Space in	Wr in	AcRib in	YBar in	Self-Weight psf
1	3.00	12.00	6.000	18.000	1.604	3.00
2	3.00	12.00	6.000	18.000	1.604	3.00

Composite Deck Diaphragm Properties:

ID	Effect Thick in	Poisson's	Elastic Mod ksi
1	1.5000	0.28	29000.00
2	0.0000	0.00	0.00

ID	f11	f22	f12	m11	m22	m12
1	---	---	---	---	---	---
2	---	---	---	---	---	---

Noncomposite Deck Properties:

ID	Label	Unit Wt psf	Effect Thick in	Poisson's	Elastic Mod ksi
1	ROOF DECK	0.00	0.0480	0.28	29000.00

ID	Angle	f11	f22	f12	m11	m22	m12
1	---	---	---	---	---	---	---

Load Properties:

Surface:

ID	DL psf	Constr DL psf	LL psf	Reduct. Type	Partition psf	Constr LL psf	Mass DL psf
ACCOUSTICAL ROOF	36.0	36.0	0.0	Red.	0.0	0.0	43.0
MECHANICAL ROOF	109.0	34.0	0.0	Red.	0.0	0.0	116.0
HIGH ROOF	34.0	34.0	0.0	Red.	0.0	0.0	41.0
TYP ROOF	34.0	34.0	0.0	Red.	0.0	0.0	41.0
TYP CANOPY	25.0	25.0	0.0	Red.	0.0	0.0	32.0
TYP CORRIDOR	20.0	20.0	80.0	Red.	0.0	0.0	20.0
TYP CLASSROOOM	20.0	20.0	40.0	Red.	15.0	0.0	20.0
TYP MEDIA CENTER	20.0	20.0	150.0	Unred.	0.0	0.0	20.0
A ROOF w CATWALK	46.0	46.0	60.0	Unred.	0.0	0.0	53.0

Line:

ID	DL k/ft	Constr DL k/ft	LL k/ft	Reduct. Type	Partition k/ft	Constr LL k/ft	Mass DL k/ft
2W1	0.154	0.154	0.000	Unred.	0.000	0.000	0.154
2W2	0.356	0.356	0.000	Red.	0.000	0.000	0.356
2W3	0.230	0.230	0.000	Red.	0.000	0.000	0.230
2W4	0.140	0.140	0.000	Red.	0.000	0.000	0.140
2W5	0.296	0.296	0.000	Red.	0.000	0.000	0.296
2W6	0.191	0.191	0.000	Red.	0.000	0.000	0.191
RW1+SSW	0.608	0.608	0.900	Unred.	0.000	0.000	0.608
RW2	0.125	0.125	0.000	Red.	0.000	0.000	0.125
LW1	0.212	0.212	0.000	Red.	0.000	0.000	0.212
LW2	0.087	0.087	0.000	Red.	0.000	0.000	0.087
CW1	0.202	0.202	0.000	Red.	0.000	0.000	0.202
PRW1	0.105	0.105	0.000	Red.	0.000	0.000	0.105

ID	DL	Constr DL	LL	Reduct.	Partition	Constr LL	Mass DL
RW1+SLW	0.932	0.932	1.550	Unred.	0.000	0.000	0.932
SW2+2S1	0.743	0.743	0.775	Unred.	0.000	0.000	0.743
2S2	0.700	0.700	1.400	Unred.	0.000	0.000	0.700
2S3	0.238	0.238	0.475	Unred.	0.000	0.000	0.238
2S4	0.750	0.750	1.500	Unred.	0.000	0.000	0.750
2S5	0.350	0.350	0.700	Unred.	0.000	0.000	0.350
2S6	0.850	0.850	1.700	Unred.	0.000	0.000	0.850
2S7	0.750	0.750	1.500	Unred.	0.000	0.000	0.750
2S8	0.250	0.250	0.500	Unred.	0.000	0.000	0.250
2W3+2S3	0.580	0.580	0.475	Unred.	0.000	0.000	0.580

Point:

ID	DL	Constr DL	LL	Reduct.	Partition	Constr LL	Mass DL
	kips	kips	kips	Type	kips	kips	kips
MECH SCREEN	0.000	0.000	2.000	Unred.	0.000	0.000	0.000

Snow:

ID	Type	Magnitude 1 psf	Magnitude 2 psf	Magnitude 3 psf
TYP. SNOW	Constant	35.00	---	---
ASECOND1	Drift	80.10	80.10	35.00
ASECOND2	Drift	88.90	88.90	35.00
ASECOND3	Drift	94.30	94.30	35.00
ASECOND4	Drift	109.20	109.20	35.00
ASECOND5	Drift	103.50	103.50	35.00
ASECOND6	Drift	94.30	94.30	35.00
ALGI1	Drift	94.30	94.30	35.00
ALGI2	Drift	88.50	88.50	35.00
ALGI3	Drift	114.40	114.40	35.00
BSECOND1	Drift	111.30	111.30	35.00
BSECOND2	Drift	111.30	111.30	35.00
BSECOND3	Drift	106.20	106.20	35.00
BSECOND4	Drift	106.20	106.20	35.00
BSECOND5	Drift	96.60	96.60	35.00
BSECOND6	Drift	81.20	81.20	40.00
BSECOND7	Drift	96.60	96.60	35.00
BSECOND8	Drift	105.30	105.30	35.00
BSECOND9	Drift	112.40	112.40	35.00
BSECOND10	Drift	100.10	100.10	35.00
BSECOND11	Drift	88.50	88.50	35.00
BSECOND12	Drift	110.50	110.50	35.00
BPEROOF1	Drift	111.30	111.30	35.00
CSECOND1	Drift	130.00	130.00	35.00
CROOF1	Drift	130.00	130.00	35.00

ID	Type	Magnitude 1	Magnitude 2	Magnitude 3
CCANOPY1	Drift	110.50	110.50	35.00
CCANOPY2	Drift	132.80	132.80	75.00
CCANOPY3	Drift	135.60	135.60	35.00
DROOF1	Drift	107.70	107.70	35.00
DROOF2	Drift	85.70	85.70	35.00
DROOF3	Drift	72.80	72.80	35.00
DROOF4	Drift	72.80	72.80	35.00
DROOF5	Drift	106.20	106.20	35.00
DROOF6	Drift	86.10	86.10	35.00
DROOF7	Drift	97.20	97.20	35.00
EROOF1	Drift	91.50	91.50	35.00
EROOF2	Drift	91.60	91.60	35.00
EROOF3	Drift	76.60	76.60	35.00
EROOF4	Drift	76.60	76.60	35.00
EROOF5	Drift	106.50	106.50	35.00
ACHORUS1	Drift	106.80	106.80	35.00
AROOF1	Drift	100.80	100.80	41.00
AROOF2	Drift	77.80	77.80	41.00
DHIGHROOF1	Drift	84.30	84.30	35.00
ASECOND7	Drift	68.00	68.00	35.00

Grid Systems:

System Label	Type	X Offset ft	Y Offset ft	Rotation
A Wing	Orthogonal	0.000	0.000	0.00
B Wing	Orthogonal	374.250	197.150	45.00
D Wing	Orthogonal	267.090	46.820	15.00
D' Wing	Orthogonal	267.090	46.820	0.00
E Wing	Orthogonal	0.000	0.000	15.00
E' Wing	Orthogonal	0.000	0.000	0.00

Grids:

System: A Wing

X Grids Label	X ft	Min Y ft	Max Y ft
AA	0.0000	----	----
AA.9	21.9200	----	----
AB	23.8300	----	----
AB.9	41.9200	----	----
AC	44.2500	----	----
AD	60.0000	----	----
AD.1	63.0000	----	----
AE	87.3300	----	----
AE.4	100.5000	----	----

X Grids	Label	X	Min Y	Max Y
	AE.8	106.8300	----	----
	AE.9	115.6700	----	----
	AF	120.3300	----	----
	AF.6	137.8500	----	----
	AF.4	146.3300	----	----
	AF.7	147.2800	----	----
	AG.3	165.2000	----	----
	AG	168.8300	----	----
	AG.1	169.9000	----	----
	AG.9	187.2000	-75.0000	----
	AH	189.0000	-50.0000	----
	AH.1	190.1500	-50.0000	----
	AH.6	206.0175	-50.0000	----
	AI	215.3300	----	----
	AI.1	216.3800	----	----
	AI.3	222.1100	----	----
	AJ	229.3300	----	----
	AI.8	230.3300	-30.0000	----
	AJ.5	238.0100	-50.0000	----
	AJ.9	245.5400	-50.0000	350.0000
	AK	249.8300	----	----
	AK.2	252.8300	----	----

Y Grids	Label	Y	Min X	Max X
		ft	ft	ft
	A12	163.6600	----	----
	A115	179.4400	----	----
	A10	197.0000	----	----
	A9	208.3300	----	----
	A8.2	225.8000	----	300.0000
	A7.9	233.9200	----	----
	A6	243.3300	----	----
	A5.7	254.9700	----	----
	A5.5	260.8000	----	----
	A5.1	276.3400	----	----
	A5	278.5000	----	----
	A4.5	283.0300	----	----
	A4	288.0830	----	----
	A3.5	295.8300	----	----
	A3.3	297.8300	----	----
	A3	317.0000	----	----
	A2	325.0000	----	----
	A1	343.0000	----	----

System: B Wing

X Grids	Label	X ft	Min Y ft	Max Y ft
	BA	0.0000	----	----
	BA.5	15.6400	----	----
	BB	29.0000	----	----
	BB.5	44.8600	----	----
	BB.8	52.8300	----	----
	BC	57.5000	----	----
	BD	79.0000	----	----
	BD.1	81.1700	----	----
	BD.2	93.0800	----	----
	BD.3	100.5000	----	----
	BD.5	117.0000	----	----
	BE	122.0000	----	----
	BE.8	145.0000	----	----
	BF	150.5000	----	----
	BG	168.1700	----	----
	BG.2	170.0300	----	----
	BG.6	172.2000	----	----
	BH	188.8300	----	----
	BH.3	190.2800	----	----
	BI	198.8300	----	----
	BJ	204.8300	----	----

Y Grids	Label	Y ft	Min X ft	Max X ft
	B11	0.0000	----	----
	B102	32.2500	----	----
	B10	35.7500	----	----
	B9	44.8300	----	----
	B8	57.3300	----	----
	B7.4	70.5300	----	----
	B7	78.6700	----	----
	B6	96.6700	----	----
	B5.8	102.8600	-75.0000	----
	B5.2	118.2800	----	----
	B5	129.8100	----	----
	B4	136.3300	----	----
	B3	145.5000	-30.0000	----
	B2	157.3300	----	----
	B1	186.3300	----	----

System: D Wing

X Grids	Label	X ft	Min Y ft	Max Y ft
	CH.7	-16.0300	----	300.0000

X Grids	Label	X	Min Y	Max Y
	CI	-1.5000	----	300.0000
	CJ	15.5000	----	300.0000
	C.4	23.1100	----	300.0000
	CI.5	30.5500	----	300.0000
	CK	43.2900	----	300.0000
	CK.3	52.9500	----	300.0000
	CK.4	56.9600	----	300.0000
	CK.7	63.9900	----	300.0000
	CL	72.3700	----	300.0000
	CL.3	80.4900	----	300.0000
	CL.9	100.6200	----	300.0000
	CM	101.6200	----	300.0000
	CM.3	109.1200	----	300.0000
	CN	137.2900	----	100.0000
	CO	155.2900	----	----
	CP	191.2100	----	----
	CP.1	193.3100	----	----
	CP.5	204.5900	----	----
	CP.7	210.9900	----	----
	CQ	219.7100	----	----
	CQ.3	227.4900	----	----
	CR	236.9500	----	----
	CR.2	245.6800	----	----

Y Grids	Label	Y	Min X	Max X
		ft	ft	ft
	C8	0.0000	----	300.0000
	C7	9.6700	----	300.0000
	C6	24.5800	----	300.0000
	C5.5	32.2500	-50.0000	300.0000
	C5.6	32.6000	----	300.0000
	C5.3	38.0600	----	300.0000
	C5	41.5000	----	300.0000
	C3	52.5000	----	300.0000
	C2.7	55.3600	----	300.0000
	A7.8	66.6100	----	300.0000

System: D' Wing

X Grids	Label	X	Min Y	Max Y
		ft	ft	ft
	AL	32.0700	----	----
	AL.2	35.6800	----	----
	AI.7	93.4100	----	----
	AM	100.9100	----	----
	AM.7	121.9300	----	----

X Grids	Label	X	Min Y	Max Y
	AN	130.3200	----	----
	AN.3	138.4300	----	----
	AO	158.8200	----	----
	A0.7	178.9300	----	----
	AP	187.5700	----	----
	AP.3	195.4300	----	----
	AP.8	214.1100	-75.0000	----
	AQ	215.8200	----	----
	AR	243.5700	-50.0000	----

Y Grids	Label	Y	Min X	Max X
		ft	ft	ft
	A14	103.0700	-150.0000	----
	A136	106.8800	-150.0000	----
	A13	114.0900	-150.0000	----
	A11	145.8400	-150.0000	----
	A9.5	159.0100	-150.0000	----
	A8.5	169.8400	-150.0000	----
	A8	184.8400	-150.0000	----
	A7	194.1700	-150.0000	----
	A4.1	212.8400	-150.0000	----

System: E Wing

X Grids	Label	X	Min Y	Max Y
		ft	ft	ft
	CA	18.5400	-50.0000	----
	CB	42.5500	-50.0000	----
	CB.7	62.0100	-50.0000	----
	CB.8	62.5600	-50.0000	----
	CC	70.5500	-50.0000	----
	CC.3	78.5100	-50.0000	----
	CD	99.0500	-50.0000	----
	CE	128.0500	-50.0000	----
	CE.3	135.5100	-50.0000	----
	CF	156.5500	-50.0000	----
	CF.7	171.2600	-50.0000	----
	CG	179.6300	-50.0000	----
	CG.3	186.2600	-50.0000	----
	CH	202.2100	-50.0000	----

Y Grids	Label	Y	Min X	Max X
		ft	ft	ft
	C5	17.6000	----	300.0000
	C4	25.6400	----	300.0000
	C3.2	29.8600	----	300.0000

Y Grids	Label	Y	Min X	Max X
	C2	36.6400	----	300.0000
	C1.8	42.1700	----	300.0000
	C1	68.5200	----	300.0000

System: E' Wing

X Grids	Label	X	Min Y	Max Y
		ft	ft	ft
	AC.4	39.5300	----	----
	AC.5	47.8300	----	----
	AD.3	68.7000	----	----
	AD.5	77.0800	----	----
	AD.7	85.2000	----	----
	AD.9	86.2000	----	----
	AE.5	105.8300	----	----
	AE.7	113.9500	----	----
	AF.5	139.0800	----	----
	AG.7	175.3300	----	----
	AH.2	194.0800	----	----
	AH.3	213.1100	----	----
	AJ	229.3300	----	----

Y Grids	Label	Y	Min X	Max X
		ft	ft	ft
	A17	0.0000	-50.0000	----
	A16	31.8300	-50.0000	----
	A158	37.2300	-50.0000	----
	A15	52.3300	-50.0000	----
	A142	121.4300	-50.0000	300.0000
	A141	143.9200	-50.0000	300.0000

DATA FOR FLOOR TYPE: LEVEL 2

Grid Systems:

A Wing
B Wing
D Wing
D' Wing
E Wing
E' Wing

Columns:

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
	ft	ft		Angle	ksi	%	Type	Maj	Min
1	0.000	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
2	0.000	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
3	0.000	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
4	0.000	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
5	0.000	276.340	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
6	0.000	317.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
7	6.994	45.532	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
8	13.353	21.799	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
9	19.194	0.000	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
10	21.920	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
11	21.920	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
12	23.366	77.198	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
13	23.830	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
14	23.830	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
15	23.830	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
16	23.830	317.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
17	31.617	46.404	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
18	35.522	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
19	41.920	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
20	41.920	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
21	44.250	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
22	44.250	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
23	44.250	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
24	44.250	317.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
25	47.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
26	47.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
27	50.412	84.445	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
28	50.414	51.441	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
29	60.000	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
30	60.000	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
31	60.000	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
32	63.000	163.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
33	63.000	197.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
34	63.000	297.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
35	63.000	317.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
36	66.352	55.711	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
37	68.700	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
38	77.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
39	77.941	91.821	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
40	85.200	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
41	86.192	61.028	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
42	87.330	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
43	87.330	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
44	87.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
45	87.330	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
46	87.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
47	87.330	288.083	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
48	87.330	325.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
49	105.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
50	105.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
51	105.830	66.290	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
52	105.953	99.327	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
53	100.500	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
54	106.830	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
55	106.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
56	106.830	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
57	106.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
58	113.950	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
59	115.670	288.083	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
60	115.670	325.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
61	117.051	57.908	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
62	120.330	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
63	120.330	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
64	120.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
65	120.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
66	120.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
67	120.330	260.800	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
68	120.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
69	121.409	70.464	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
70	133.481	106.703	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
71	146.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
72	146.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
73	137.850	163.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
74	137.850	197.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
75	137.850	288.083	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
76	137.850	325.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
77	139.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
78	139.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
79	139.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
80	141.733	75.910	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
81	144.580	65.284	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
82	155.775	112.677	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
83	155.941	79.717	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
84	168.830	163.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
85	168.830	197.000	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
86	168.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
87	168.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
88	165.200	288.083	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
89	165.200	325.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
90	166.873	71.258	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
91	170.430	83.599	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
92	175.330	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
93	175.330	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
94	175.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
95	177.586	118.521	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
96	185.837	87.727	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
97	187.200	76.705	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
98	187.200	288.083	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
99	187.200	325.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
100	189.000	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
101	189.000	163.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
102	189.000	197.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
103	189.000	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
104	187.200	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
105	194.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
106	194.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
107	194.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
108	213.110	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
109	213.110	83.647	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
110	213.110	95.035	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
111	213.110	121.430	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
112	215.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
113	215.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
114	215.330	288.083	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
115	206.018	325.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
116	222.110	179.440	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
117	229.330	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
118	229.330	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
119	229.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
120	229.330	79.670	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
121	229.330	288.083	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
122	229.330	325.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
123	229.330	343.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
124	230.330	99.649	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
125	230.330	121.430	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
126	230.330	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
127	230.330	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
128	230.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
129	230.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
130	230.330	259.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
131	230.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
132	238.010	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
133	245.540	347.322	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
134	249.830	278.500	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
136	249.830	336.240	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
137	251.313	99.905	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
138	252.830	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
139	254.877	259.660	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
140	254.900	86.518	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
141	260.445	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
142	263.950	225.800	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
143	263.001	349.411	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
144	269.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
145	271.366	300.034	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
146	271.321	90.918	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
147	272.829	192.660	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
148	281.337	160.910	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
149	283.507	328.905	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
150	284.290	149.890	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
151	279.851	366.262	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
152	286.316	254.682	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
153	290.613	280.787	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
154	291.665	122.365	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
155	291.872	320.540	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
156	292.485	231.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
157	294.577	111.498	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
158	298.164	98.110	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
159	299.160	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
160	302.770	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
161	302.770	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
162	305.720	149.890	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
163	305.894	265.506	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
164	303.660	349.058	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
165	306.402	67.365	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
166	298.356	384.767	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
167	311.120	301.293	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
168	312.025	340.693	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
169	315.312	114.093	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
170	318.159	103.468	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
171	319.849	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
172	321.732	231.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
173	322.802	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
174	324.378	247.022	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
175	325.226	411.637	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
176	326.400	286.012	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
177	328.653	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
178	318.862	364.261	HS	135.00	46.0	Calc	Grv.	+ 2.50 + 2.50
179	331.249	118.363	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
180	332.182	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
181	334.096	107.738	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
182	334.491	74.891	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
183	327.227	355.895	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
184	339.740	231.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
185	341.724	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
186	344.677	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
187	344.884	267.528	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
188	345.732	391.131	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
189	348.914	435.325	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
190	351.659	123.832	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
191	357.633	386.301	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
192	360.500	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
193	360.500	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
194	361.751	115.148	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
195	363.057	249.356	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
196	364.259	450.669	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
197	365.247	73.121	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
198	368.000	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
199	368.000	216.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
200	368.000	240.990	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
201	369.420	414.819	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
202	376.018	462.428	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
203	377.786	406.454	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
204	381.606	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
205	384.765	430.163	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
206	383.209	269.508	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
207	386.114	133.064	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
208	388.961	122.439	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
209	389.020	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
210	389.630	263.088	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
211	393.852	240.990	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
212	396.524	441.922	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
213	390.280	418.948	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
214	397.410	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
215	388.880	395.359	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
216	399.702	82.353	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
217	400.241	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
218	403.501	137.723	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
219	405.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
220	406.348	127.098	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
221	401.375	407.854	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
222	398.412	284.711	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
223	404.889	433.557	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
224	404.832	278.291	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
225	412.314	371.926	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
226	417.089	87.012	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
227	418.090	240.990	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
228	411.960	440.628	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
229	415.983	422.463	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
230	425.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
231	425.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
232	423.055	429.534	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
233	428.817	315.117	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
234	430.797	353.442	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
236	430.111	253.011	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
237	441.044	136.395	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
238	446.020	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
239	446.488	406.100	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
240	451.785	96.309	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
241	448.970	335.269	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
242	454.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
243	451.501	324.960	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
244	462.453	132.917	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
245	462.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
247	462.780	349.079	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
249	464.972	387.616	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
250	469.200	342.658	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
251	477.099	363.398	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
252	478.391	137.188	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
253	487.387	373.686	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
254	479.314	103.685	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
255	482.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
256	482.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
257	483.519	356.977	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
258	476.780	299.680	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
259	489.604	131.890	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
260	493.808	367.266	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
261	494.479	317.379	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
262	495.966	108.147	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
263	508.798	331.698	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
264	510.660	137.531	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
265	510.660	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
266	510.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
267	519.087	341.987	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
270	216.380	254.970	HS	90.00	46.0	Calc	Grv. Hang	0.00	0.00
271	216.380	233.920	HS	90.00	46.0	Calc	Grv. Hang	0.00	0.00
272	445.314	268.214	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
273	420.035	293.493	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
274	413.615	299.914	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
275	342.430	371.098	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
276	328.818	374.217	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
277	313.559	399.969	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
279	230.330	143.920	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
280	260.991	289.659	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
281	253.396	318.004	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
284	267.734	104.305	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
285	243.259	73.822	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
287	288.252	85.878	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
288	189.000	143.920	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
289	434.177	302.686	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
290	456.982	279.881	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50

* Parameter: Steel - Fy
Concrete - f'c
Other - E

* Eccentricity: Values with + indicate eccentricity plus 1/2 column dimension; values without + indicate absolute eccentricity (in)

Beams:

ID	Xi ft	Yi ft	Xj ft	Yj ft	Param* ksi	LLRed %	Type	Frame Type	User Size
1	0.000	163.660	0.000	197.000	50.0	Calc	NonC	Gravity	W18X35
2	0.000	163.660	21.920	163.660	50.0	Calc	NonC	Gravity	W16X26
3	0.000	197.000	0.000	208.330	50.0	Calc	NonC	Gravity	W14X22
4	0.000	197.000	21.920	197.000	50.0	Calc	NonC	Gravity	W16X26
5	0.000	208.330	0.000	243.330	50.0	Calc	NonC	Gravity	W18X35
6	0.000	208.330	23.830	208.330	50.0	Calc	NonC	Gravity	W18X40
7	0.000	243.330	0.000	276.340	50.0	Calc	NonC	Gravity	W18X35
8	0.000	243.330	23.830	243.330	50.0	Calc	NonC	Gravity	W21X48
9	0.000	276.340	0.000	317.000	50.0	Calc	NonC	Gravity	W21X48
10	0.000	276.340	23.830	276.340	50.0	Calc	NonC	Gravity	W21X48
11	0.000	317.000	23.830	317.000	50.0	Calc	NonC	Gravity	W16X31
12	6.994	45.532	13.353	21.799	50.0	Calc	Comp	Gravity	W16X26
13	6.994	45.532	30.186	51.746	50.0	Calc	Comp	Gravity	W16X31
14	7.307	163.660	7.307	197.000	50.0	Calc	NonC	Gravity	W16X31
15	7.943	197.000	7.943	208.330	50.0	Calc	NonC	Gravity	W10X15
16	7.943	208.330	7.943	243.330	50.0	Calc	NonC	Gravity	W18X35
17	7.943	243.330	7.943	276.340	50.0	Calc	NonC	Gravity	W18X35
18	7.943	276.340	7.943	317.000	50.0	Calc	NonC	Gravity	W18X40
19	13.353	21.799	19.194	0.000	50.0	Calc	Comp	Gravity	W14X22
20	13.353	21.799	35.522	27.739	50.0	Calc	Comp	Gravity	W16X31
21	14.613	163.660	14.613	197.000	50.0	Calc	NonC	Gravity	W16X31
22	15.887	197.000	15.887	208.330	50.0	Calc	NonC	Gravity	W10X15
24	15.887	208.330	15.887	243.330	50.0	Calc	NonC	Gravity	W18X40
25	23.830	219.130	34.040	219.130	50.0	Calc	NonC	Gravity	W12X22
26	23.830	231.130	34.040	231.130	50.0	Calc	NonC	Gravity	W12X22
27	15.887	243.330	15.887	276.340	50.0	Calc	NonC	Gravity	W18X40
28	23.830	255.130	34.040	255.130	50.0	Calc	NonC	Gravity	W12X22
29	23.830	267.120	34.040	267.120	50.0	Calc	NonC	Gravity	W12X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
30	15.887	276.340	15.887	317.000	50.0	Calc	NonC	Gravity	W18X40
31	15.887	282.730	23.830	282.730	50.0	Calc	NonC	Gravity	W10X15
32	18.597	48.641	25.554	25.068	50.0	Calc	Comp	Gravity	W16X26
33	19.194	0.000	47.830	0.000	50.0	Calc	Comp	Gravity	W21X44
34	21.920	163.660	21.920	197.000	50.0	Calc	NonC	Gravity	W18X35
35	21.920	163.660	41.920	163.660	50.0	Calc	NonC	Gravity	W14X22
36	21.920	197.000	21.920	208.330	50.0	Calc	NonC	Gravity	W10X15
37	21.920	197.000	41.920	197.000	50.0	Calc	NonC	Gravity	W18X35
38	21.920	193.200	31.920	193.200	50.0	Calc	NonC	Gravity	W12X22
39	23.366	77.198	31.617	46.404	50.0	Calc	Comp	Gravity	W21X44
40	23.366	77.198	50.412	84.445	50.0	Calc	Comp	Gravity	W21X44
41	23.830	208.330	23.830	243.330	50.0	Calc	NonC	Gravity	W21X44
42	23.830	208.330	44.250	208.330	50.0	Calc	NonC	Gravity	W24X55
43	23.830	243.330	23.830	278.500	50.0	Calc	NonC	Gravity	W21X50
44	23.830	243.330	44.250	243.330	50.0	Calc	NonC	Gravity	W24X68
45	23.830	278.500	23.830	317.000	50.0	Calc	NonC	Gravity	W21X48
46	23.830	278.500	44.250	278.500	50.0	Calc	NonC	Gravity	W24X62
47	23.830	282.730	34.040	282.730	50.0	Calc	NonC	Gravity	W12X22
48	23.830	317.000	44.250	317.000	50.0	Calc	NonC	Gravity	W18X35
49	24.372	0.000	24.372	24.751	50.0	Calc	Comp	Gravity	W14X22
50	31.617	46.404	35.522	31.830	50.0	Calc	Comp	Gravity	W10X15
51	31.617	46.404	50.414	51.441	50.0	Calc	Lat	Lateral	W16X57
52	31.920	163.660	31.920	197.000	50.0	Calc	NonC	Gravity	W18X35
53	32.764	79.716	41.015	48.923	50.0	Calc	Comp	Gravity	W18X35
54	34.040	197.000	34.040	208.330	50.0	Calc	NonC	Gravity	W12X19
55	31.920	193.200	41.920	193.200	50.0	Calc	NonC	Gravity	W12X22
56	34.040	208.330	34.040	243.330	50.0	Calc	NonC	Gravity	W24X62
57	34.040	243.330	34.040	278.500	50.0	Calc	NonC	Gravity	W24X62
58	34.040	278.500	34.040	317.000	50.0	Calc	NonC	Gravity	W21X44
59	34.040	282.730	44.250	282.730	50.0	Calc	NonC	Gravity	W12X22
60	35.522	0.000	35.522	31.830	50.0	Calc	Comp	Gravity	W18X40
61	35.522	31.830	47.830	31.830	50.0	Calc	Comp	Gravity	W12X19
62	39.383	48.485	43.846	31.830	50.0	Calc	Comp	Gravity	W10X15
63	41.920	163.660	41.920	197.000	50.0	Calc	NonC	Gravity	W18X35
64	41.920	163.660	63.000	163.660	50.0	Calc	NonC	Gravity	W14X22
65	41.920	197.000	41.920	208.330	50.0	Calc	NonC	Gravity	W10X15
66	41.920	197.000	63.000	197.000	50.0	Calc	NonC	Gravity	W18X40
67	41.920	193.200	52.460	193.200	50.0	Calc	NonC	Gravity	W12X22
68	42.163	82.235	50.414	51.441	50.0	Calc	Comp	Gravity	W18X35
69	44.250	208.330	44.250	243.330	50.0	Calc	Lat	Lateral	W18X86
70	44.250	208.330	60.000	208.330	50.0	Calc	NonC	Gravity	W21X44
71	44.250	243.330	44.250	278.500	50.0	Calc	Lat	Lateral	W18X86
72	44.250	243.330	60.000	243.330	50.0	Calc	NonC	Gravity	W21X48
73	44.250	278.500	44.250	317.000	50.0	Calc	NonC	Gravity	W18X40
74	44.250	278.500	60.000	278.500	50.0	Calc	NonC	Gravity	W21X44

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
75	44.250	282.730	49.250	282.730	50.0	Calc	NonC	Gravity	W12X22
76	44.250	317.000	63.000	317.000	50.0	Calc	NonC	Gravity	W16X26
77	47.149	50.566	52.169	31.830	50.0	Calc	Comp	Gravity	W16X36
78	47.830	0.000	47.830	31.830	50.0	Calc	Lat	Lateral	W18X76
79	47.830	0.000	77.080	0.000	50.0	Calc	Comp	Gravity	W21X44
80	47.830	31.830	68.700	31.830	50.0	Calc	Lat	Lateral	W18X60
81	48.601	45.147	84.350	54.726	50.0	Calc	Comp	Gravity	W18X40
82	49.250	278.500	49.250	317.000	50.0	Calc	NonC	Gravity	W18X35
83	50.412	84.445	58.663	53.651	50.0	Calc	Comp	Gravity	W18X35
84	50.412	84.445	77.941	91.821	50.0	Calc	Comp	Gravity	W21X44
85	50.414	51.441	66.352	55.711	50.0	Calc	Comp	Gravity	W16X26
86	50.682	37.380	66.170	37.380	50.0	Calc	NonC	Gravity	W16X26
87	51.720	33.508	87.469	43.087	50.0	Calc	Comp	Gravity	W18X40
88	52.125	243.330	52.125	278.500	50.0	Calc	NonC	Gravity	W24X55
89	52.125	243.330	52.128	208.330	50.0	Calc	NonC	Gravity	W24X55
90	52.460	163.660	52.460	197.000	50.0	Calc	NonC	Gravity	W18X35
91	52.670	197.000	52.670	208.330	50.0	Calc	NonC	Gravity	W12X19
92	52.460	193.200	63.000	193.200	50.0	Calc	NonC	Gravity	W12X22
93	54.182	37.380	54.985	34.383	50.0	Calc	NonC	Gravity	W10X15
94	56.084	52.960	57.536	47.541	50.0	Calc	NonC	Gravity	W10X15
95	56.580	278.500	56.580	317.000	50.0	Calc	NonC	Gravity	W18X35
96	58.101	86.505	66.352	55.711	50.0	Calc	Comp	Gravity	W18X35
97	58.263	0.000	58.263	31.830	50.0	Calc	Comp	Gravity	W18X35
98	60.000	208.330	60.000	243.330	50.0	Calc	Lat	Lateral	W18X76
99	60.000	208.330	87.330	208.330	50.0	Calc	NonC	Gravity	W21X44
100	60.000	243.330	60.000	278.500	50.0	Calc	Lat	Lateral	W18X76
101	60.000	278.500	87.330	278.500	50.0	Calc	NonC	Gravity	W18X35
102	63.000	163.660	63.000	197.000	50.0	Calc	Lat	Lateral	W18X76
103	63.000	163.660	87.330	163.660	50.0	Calc	NonC	Gravity	W21X48
104	63.000	197.000	63.000	208.330	50.0	Calc	NonC	Gravity	W12X19
105	63.000	197.000	87.330	197.000	50.0	Calc	NonC	Gravity	W24X68
106	63.000	278.500	63.000	297.830	50.0	Calc	NonC	Gravity	W16X31
107	63.000	297.830	63.000	317.000	50.0	Calc	Lat	Lateral	W14X43
108	63.000	288.083	87.330	288.083	50.0	Calc	NonC	Gravity	W18X35
109	63.000	317.000	87.330	317.000	50.0	Calc	NonC	Gravity	W16X26
110	63.591	36.689	64.945	31.830	50.0	Calc	NonC	Gravity	W10X15
111	65.019	55.354	66.471	49.935	50.0	Calc	NonC	Gravity	W10X15
112	66.352	55.711	86.192	61.028	50.0	Calc	Lat	Lateral	W18X55
113	68.021	89.163	76.272	58.369	50.0	Calc	Comp	Gravity	W18X35
114	68.700	0.000	68.700	31.830	50.0	Calc	Comp	Gravity	W18X35
115	68.700	31.830	85.200	31.830	50.0	Calc	Comp	Gravity	W14X22
116	71.110	163.660	71.110	197.000	50.0	Calc	NonC	Gravity	W21X44
117	71.110	197.000	71.110	208.330	50.0	Calc	NonC	Gravity	W10X15
118	71.110	278.500	71.110	288.083	50.0	Calc	NonC	Gravity	W10X15
119	71.110	288.083	71.110	317.000	50.0	Calc	NonC	Gravity	W16X26

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
120	73.956	57.749	75.408	52.330	50.0	Calc	NonC	Gravity	W10X15
121	75.511	39.883	77.755	31.830	50.0	Calc	NonC	Gravity	W10X15
122	77.080	0.000	77.080	31.830	50.0	Calc	Comp	Gravity	W16X31
123	77.080	0.000	105.830	0.000	50.0	Calc	Comp	Gravity	W21X44
124	77.941	91.821	86.192	61.028	50.0	Calc	Lat	Lateral	W18X76
125	77.941	91.821	105.953	99.327	50.0	Calc	Comp	Gravity	W21X44
126	79.220	163.660	79.220	197.000	50.0	Calc	NonC	Gravity	W21X44
127	79.220	197.000	79.220	208.330	50.0	Calc	NonC	Gravity	W10X15
128	79.220	278.500	79.220	288.083	50.0	Calc	NonC	Gravity	W10X15
129	79.220	288.083	79.220	317.000	50.0	Calc	NonC	Gravity	W16X26
130	82.898	60.145	90.485	31.830	50.0	Calc	Comp	Gravity	W24X55
131	85.200	0.000	85.200	31.830	50.0	Calc	Comp	Gravity	W18X35
132	85.200	31.830	105.830	31.830	50.0	Calc	Lat	Lateral	W18X60
133	86.192	61.028	105.830	66.290	50.0	Calc	Comp	Gravity	W16X31
134	87.330	163.660	87.330	197.000	50.0	Calc	NonC	Gravity	W21X48
135	87.330	163.660	100.500	163.660	50.0	Calc	NonC	Gravity	W18X35
136	87.330	197.000	87.330	208.330	50.0	Calc	NonC	Gravity	W10X15
137	87.330	197.000	106.830	197.000	50.0	Calc	NonC	Gravity	W21X44
138	87.330	208.330	106.830	208.330	50.0	Calc	Lat	Lateral	W14X34
139	87.330	278.500	87.330	288.083	50.0	Calc	NonC	Gravity	W10X15
140	87.330	278.500	106.830	278.500	50.0	Calc	Lat	Lateral	W14X34
141	87.330	288.083	87.330	325.000	50.0	Calc	NonC	Gravity	W24X55
142	87.330	288.083	115.670	288.083	50.0	Calc	NonC	Gravity	W21X44
143	87.330	325.000	115.670	325.000	50.0	Calc	NonC	Gravity	W21X44
144	87.760	94.452	96.011	63.659	50.0	Calc	Comp	Gravity	W18X35
145	94.364	63.217	102.774	31.830	50.0	Calc	Comp	Gravity	W18X40
146	95.515	0.000	95.515	31.830	50.0	Calc	Comp	Gravity	W18X35
147	96.777	288.083	96.777	325.000	50.0	Calc	NonC	Gravity	W18X40
148	93.915	163.660	93.915	197.000	50.0	Calc	NonC	Gravity	W21X50
149	97.080	197.000	97.080	208.330	50.0	Calc	NonC	Gravity	W10X15
150	97.080	278.500	97.080	288.083	50.0	Calc	NonC	Gravity	W10X15
151	97.579	97.083	105.830	66.290	50.0	Calc	Comp	Gravity	W18X35
152	105.830	0.000	105.830	31.830	50.0	Calc	Lat	Lateral	W18X76
153	105.830	0.000	139.080	0.000	50.0	Calc	Comp	Gravity	W24X68
154	105.830	31.830	139.080	31.830	50.0	Calc	Comp	Gravity	W24X62
155	105.830	66.290	114.109	35.392	50.0	Calc	Comp	Gravity	W18X35
156	105.830	66.290	121.409	70.464	50.0	Calc	Comp	Gravity	W16X26
157	105.953	99.327	114.204	68.533	50.0	Calc	Comp	Gravity	W18X35
158	105.953	99.327	133.481	106.703	50.0	Calc	Comp	Gravity	W21X44
159	106.223	288.083	106.223	325.000	50.0	Calc	NonC	Gravity	W18X40
160	106.830	163.660	106.830	197.000	50.0	Calc	NonC	Gravity	W21X44
161	100.500	163.660	120.330	163.660	50.0	Calc	NonC	Gravity	W18X35
162	106.830	197.000	106.830	208.330	50.0	Calc	NonC	Gravity	W10X15
163	106.830	197.000	120.330	197.000	50.0	Calc	NonC	Gravity	W16X26
164	106.830	208.330	120.330	208.330	50.0	Calc	NonC	Gravity	W14X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
165	106.830	278.500	106.830	288.083	50.0	Calc	NonC	Gravity	W10X15
166	106.830	278.500	120.330	278.500	50.0	Calc	NonC	Gravity	W14X22
167	113.158	101.258	121.409	70.464	50.0	Calc	Comp	Gravity	W18X35
168	113.580	163.660	113.580	197.000	50.0	Calc	NonC	Gravity	W21X44
169	113.580	197.000	113.580	208.330	50.0	Calc	NonC	Gravity	W12X19
170	113.950	52.330	114.142	31.830	50.0	Calc	Comp	Gravity	W16X26
171	113.950	52.330	139.080	52.330	50.0	Calc	Comp	Gravity	W16X26
172	114.204	68.533	117.051	57.908	50.0	Calc	Comp	Gravity	W10X15
173	115.618	278.500	115.670	288.083	50.0	Calc	NonC	Gravity	W10X15
174	115.670	288.083	115.670	325.000	50.0	Calc	NonC	Gravity	W18X35
175	115.670	288.083	137.850	288.083	50.0	Calc	NonC	Gravity	W18X35
176	115.670	325.000	137.850	325.000	50.0	Calc	NonC	Gravity	W16X26
177	116.913	0.000	116.913	31.830	50.0	Calc	Comp	Gravity	W18X35
178	117.051	57.908	118.545	52.330	50.0	Calc	NonC	Gravity	W10X15
179	117.051	57.908	144.580	65.284	50.0	Calc	Comp	Gravity	W16X31
180	120.330	163.660	120.330	197.000	50.0	Calc	NonC	Gravity	W21X44
181	120.330	163.660	137.850	163.660	50.0	Calc	NonC	Gravity	W18X35
182	120.330	197.000	120.330	208.330	50.0	Calc	NonC	Gravity	W12X19
183	120.330	197.000	137.850	197.000	50.0	Calc	NonC	Gravity	W18X40
184	120.330	208.330	146.330	208.330	50.0	Calc	NonC	Gravity	W21X44
185	120.330	278.500	120.330	288.083	50.0	Calc	NonC	Gravity	W12X40
186	120.330	278.500	146.330	278.500	50.0	Calc	NonC	Gravity	W16X31
187	121.409	70.464	141.733	75.910	50.0	Calc	Lat	Lateral	W16X40
188	123.063	288.083	123.063	325.000	50.0	Calc	NonC	Gravity	W18X35
189	123.320	103.981	131.571	73.187	50.0	Calc	Comp	Gravity	W18X35
190	124.636	71.329	127.483	60.703	50.0	Calc	Comp	Gravity	W10X15
191	126.227	60.367	128.380	52.330	50.0	Calc	NonC	Gravity	W10X15
192	126.515	31.830	126.515	52.330	50.0	Calc	Comp	Gravity	W14X22
193	127.997	0.000	127.997	31.830	50.0	Calc	Comp	Gravity	W18X35
196	129.090	163.660	129.090	197.000	50.0	Calc	NonC	Gravity	W21X48
197	130.457	288.083	130.457	325.000	50.0	Calc	NonC	Gravity	W18X35
198	133.481	106.703	141.733	75.910	50.0	Calc	Lat	Lateral	W18X76
199	133.481	106.703	155.775	112.677	50.0	Calc	Comp	Gravity	W16X31
200	135.068	74.124	137.915	63.499	50.0	Calc	Comp	Gravity	W10X15
201	142.580	52.330	142.580	64.749	50.0	Calc	Comp	Gravity	W10X15
203	146.330	208.330	168.830	208.330	50.0	Calc	NonC	Gravity	W18X35
204	146.330	278.500	146.330	288.083	50.0	Calc	NonC	Lateral	W12X19
205	146.330	278.500	168.830	278.500	50.0	Calc	NonC	Lateral	W16X26
206	137.850	163.660	137.850	197.000	50.0	Calc	Lat	Lateral	W16X67
207	137.850	163.660	168.830	163.660	50.0	Calc	NonC	Gravity	W24X62
208	137.850	197.000	168.830	197.000	50.0	Calc	NonC	Gravity	W27X84
209	137.850	288.083	137.850	325.000	50.0	Calc	NonC	Gravity	W18X35
210	137.850	288.083	165.200	288.083	50.0	Calc	NonC	Lateral	W21X44
211	137.850	325.000	165.200	325.000	50.0	Calc	NonC	Gravity	W18X40
212	139.080	0.000	139.080	31.830	50.0	Calc	Comp	Gravity	W18X35

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
213	139.080	0.000	175.330	0.000	50.0	Calc	Comp	Gravity	W27X84
214	139.080	31.830	139.080	52.330	50.0	Calc	Comp	Gravity	W14X22
215	139.080	31.830	175.330	31.830	50.0	Calc	Comp	Gravity	W24X68
216	139.080	52.330	175.330	52.330	50.0	Calc	Comp	Gravity	W21X48
217	141.733	75.910	155.941	79.717	50.0	Calc	Comp	Gravity	W16X26
218	144.580	65.284	148.051	52.330	50.0	Calc	Comp	Gravity	W10X15
219	144.580	65.284	166.873	71.258	50.0	Calc	Comp	Gravity	W16X26
220	144.628	109.690	152.879	78.896	50.0	Calc	Comp	Gravity	W18X35
221	145.500	76.919	148.347	66.294	50.0	Calc	Comp	Gravity	W10X15
223	146.967	288.083	146.967	325.000	50.0	Calc	NonC	Gravity	W18X40
226	151.163	0.000	151.163	31.830	50.0	Calc	Comp	Gravity	W18X40
227	151.163	31.830	151.163	52.330	50.0	Calc	Comp	Gravity	W14X22
228	155.726	68.271	159.998	52.330	50.0	Calc	Comp	Gravity	W12X19
229	155.775	112.677	164.026	81.883	50.0	Calc	Comp	Gravity	W18X35
230	155.775	112.677	177.586	118.521	50.0	Calc	Comp	Gravity	W16X26
231	155.941	79.717	158.788	69.092	50.0	Calc	Comp	Gravity	W10X15
232	155.941	79.717	170.430	83.599	50.0	Calc	Comp	Gravity	W16X26
233	156.083	288.083	156.083	325.000	50.0	Calc	NonC	Gravity	W18X40
235	168.830	163.660	168.830	197.000	50.0	Calc	NonC	Gravity	W24X55
236	168.830	163.660	189.000	163.660	50.0	Calc	NonC	Gravity	W24X62
237	168.830	197.000	168.830	208.330	50.0	Calc	NonC	Gravity	W10X15
238	168.830	197.000	189.000	197.000	50.0	Calc	NonC	Gravity	W21X48
239	168.830	208.330	189.000	208.330	50.0	Calc	Lat	Lateral	W21X44
240	168.830	278.500	187.200	278.500	50.0	Calc	Lat	Lateral	W21X44
241	163.247	0.000	163.247	31.830	50.0	Calc	Comp	Gravity	W18X40
242	163.247	31.830	163.247	52.330	50.0	Calc	Comp	Gravity	W14X22
243	164.026	81.883	166.873	71.258	50.0	Calc	Comp	Gravity	W10X15
247	165.200	288.083	165.200	325.000	50.0	Calc	Lat	Lateral	W18X76
248	165.200	288.083	187.200	288.083	50.0	Calc	NonC	Lateral	W16X31
249	165.200	325.000	187.200	325.000	50.0	Calc	NonC	Gravity	W16X26
250	166.680	115.599	174.931	84.805	50.0	Calc	Comp	Gravity	W18X35
251	166.873	71.258	171.945	52.330	50.0	Calc	Comp	Gravity	W12X19
252	166.873	71.258	187.200	76.705	50.0	Calc	Comp	Gravity	W14X22
253	170.430	83.599	173.277	72.974	50.0	Calc	Comp	Gravity	W10X15
254	170.430	83.599	185.837	87.727	50.0	Calc	Comp	Gravity	W16X26
256	172.533	288.083	172.533	325.000	50.0	Calc	NonC	Gravity	W18X35
257	178.915	163.660	178.915	197.000	50.0	Calc	NonC	Gravity	W24X55
258	178.915	197.000	178.915	208.330	50.0	Calc	NonC	Gravity	W12X19
259	175.330	0.000	175.330	31.830	50.0	Calc	Lat	Lateral	W18X76
260	175.330	0.000	194.080	0.000	50.0	Calc	Comp	Gravity	W16X26
261	175.330	31.830	175.330	52.330	50.0	Calc	Comp	Gravity	W12X19
262	175.330	31.830	194.080	31.830	50.0	Calc	Comp	Gravity	W16X26
263	175.330	52.330	194.080	52.330	50.0	Calc	Comp	Gravity	W14X22
264	177.037	73.981	182.838	52.330	50.0	Calc	Comp	Gravity	W14X22
265	177.586	118.521	185.837	87.727	50.0	Calc	Comp	Gravity	W18X35

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
266	177.586	118.521	189.000	121.430	50.0	Calc	Comp	Gravity	W14X22
268	179.867	288.083	179.867	325.000	50.0	Calc	NonC	Gravity	W18X35
271	181.094	86.457	183.941	75.831	50.0	Calc	Comp	Gravity	W10X15
272	184.705	0.000	184.705	31.830	50.0	Calc	Comp	Gravity	W18X35
273	184.705	31.830	184.705	52.330	50.0	Calc	Comp	Gravity	W12X19
274	185.837	87.727	213.110	95.035	50.0	Calc	Comp	Gravity	W18X40
275	187.200	76.705	194.080	52.330	50.0	Calc	Comp	Gravity	W16X26
276	187.200	76.705	213.110	83.647	50.0	Calc	Comp	Gravity	W18X35
277	187.200	288.083	187.200	325.000	50.0	Calc	NonC	Gravity	W18X35
278	187.200	288.083	215.330	288.083	50.0	Calc	NonC	Gravity	W21X44
279	187.200	325.000	206.018	325.000	50.0	Calc	NonC	Gravity	W21X44
280	189.000	121.430	197.214	90.776	50.0	Calc	Comp	Gravity	W18X40
281	189.000	121.430	213.110	121.430	50.0	Calc	NonC	Gravity	W18X40
282	189.000	163.660	189.000	197.000	50.0	Calc	Lat	Lateral	W30X99
283	189.000	197.000	189.000	208.330	50.0	Calc	NonC	Gravity	W12X19
284	189.000	208.330	215.330	208.330	50.0	Calc	Lat	Lateral	W24X68
286	187.200	278.500	215.330	278.500	50.0	Calc	Lat	Lateral	W16X40
287	191.758	89.314	194.605	78.689	50.0	Calc	Comp	Gravity	W10X15
288	194.080	0.000	194.080	31.830	50.0	Calc	Comp	Gravity	W18X35
289	194.080	0.000	229.330	0.000	50.0	Calc	Comp	Gravity	W24X76
290	194.080	31.830	194.080	52.330	50.0	Calc	Comp	Gravity	W12X19
291	194.080	31.830	229.330	31.830	50.0	Calc	Comp	Gravity	W24X55
292	194.080	52.330	213.110	52.330	50.0	Calc	Comp	Gravity	W14X22
294	196.403	79.171	203.595	52.330	50.0	Calc	Comp	Gravity	W16X26
296	201.030	121.430	208.438	93.783	50.0	Calc	Comp	Gravity	W18X35
297	202.422	92.171	205.269	81.546	50.0	Calc	Comp	Gravity	W10X15
298	203.595	31.830	203.595	52.330	50.0	Calc	Comp	Gravity	W12X19
300	205.281	81.549	213.110	52.330	50.0	Calc	Comp	Gravity	W16X31
302	205.830	0.000	205.830	31.830	50.0	Calc	Comp	Gravity	W18X35
303	213.110	31.830	213.110	52.330	50.0	Calc	Comp	Gravity	W12X19
304	213.110	52.330	229.330	52.330	50.0	Calc	Comp	Gravity	W16X26
305	213.110	83.647	221.501	52.330	50.0	Calc	Comp	Gravity	W18X35
306	213.110	83.647	230.299	88.253	50.0	Calc	Comp	Gravity	W14X22
307	213.110	95.035	215.952	84.409	50.0	Calc	Comp	Gravity	W10X15
308	213.110	95.035	230.330	99.649	50.0	Calc	Comp	Gravity	W14X22
309	213.110	121.430	219.709	96.803	50.0	Calc	Comp	Gravity	W16X26
310	213.110	121.430	230.330	121.430	50.0	Calc	Lat	Lateral	W14X43
311	215.330	208.330	230.330	208.330	50.0	Calc	NonC	Gravity	W18X35
312	215.330	278.500	215.330	288.083	50.0	Calc	NonC	Gravity	W10X15
313	215.330	278.500	230.330	278.500	50.0	Calc	NonC	Gravity	W14X22
314	215.330	288.083	215.330	325.000	50.0	Calc	NonC	Gravity	W18X40
315	215.330	288.083	229.330	288.083	50.0	Calc	NonC	Gravity	W18X35
316	206.018	325.000	229.330	325.000	50.0	Calc	NonC	Gravity	W18X35
317	217.580	0.000	217.580	31.830	50.0	Calc	Comp	Gravity	W18X35
318	221.220	31.830	221.220	52.330	50.0	Calc	Comp	Gravity	W12X19

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
319	222.330	288.083	222.330	325.000	50.0	Calc	NonC	Gravity	W21X44
320	221.701	85.949	229.330	57.539	50.0	Calc	Comp	Gravity	W16X26
321	221.723	121.430	227.745	98.957	50.0	Calc	Comp	Gravity	W12X19
322	221.726	97.344	224.552	86.713	50.0	Calc	Comp	Gravity	W10X15
323	222.110	179.440	222.110	208.330	50.0	Calc	Comp	Gravity	W18X35
324	222.110	179.440	230.330	179.440	50.0	Calc	Comp	Gravity	W14X22
326	229.330	0.000	229.330	31.830	50.0	Calc	Comp	Gravity	W18X35
327	229.330	31.830	229.330	52.330	50.0	Calc	Comp	Gravity	W14X22
328	229.330	52.330	229.330	79.670	50.0	Calc	Comp	Gravity	W16X31
329	229.330	63.601	238.097	65.951	50.0	Calc	NonC	Gravity	W14X22
331	229.330	288.083	229.330	325.000	50.0	Calc	Lat	Lateral	W24X76
340	230.276	79.923	230.330	99.649	50.0	Calc	Comp	Gravity	W18X35
341	230.315	94.279	251.313	99.905	50.0	Calc	Comp	Gravity	W21X44
342	230.330	99.649	230.330	121.430	50.0	Calc	Comp	Gravity	W12X19
343	230.330	121.430	238.010	121.430	50.0	Calc	NonC	Gravity	W14X22
344	230.330	160.910	230.330	205.830	50.0	Calc	Comp	Gravity	W33X118
345	230.330	160.910	260.445	160.910	50.0	Calc	Comp	Gravity	W33X130
346	230.330	205.830	230.330	225.800	50.0	Calc	NonC	Gravity	W16X26
347	230.330	205.830	252.830	205.830	50.0	Calc	Comp	Gravity	W24X55
348	230.330	225.800	230.330	243.330	50.0	Calc	Lat	Lateral	W14X22
349	230.330	243.330	230.330	259.660	50.0	Calc	Lat	Lateral	W14X22
350	230.330	259.660	230.330	278.500	46.0	Calc	NonC	Gravity	HSS14X6X3/8
351	229.330	278.500	229.330	288.083	50.0	Calc	NonC	Gravity	W10X15
353	234.459	95.389	237.860	81.954	50.0	Calc	NonC	Gravity	W10X15
355	238.010	96.341	238.010	121.430	50.0	Calc	Comp	Gravity	W21X50
356	241.580	160.910	241.580	205.830	50.0	Calc	Comp	Gravity	W24X55
357	244.882	67.767	251.914	69.650	50.0	Calc	NonC	Gravity	W14X22
358	242.886	97.647	246.380	84.236	50.0	Calc	NonC	Gravity	W10X15
362	249.830	278.500	254.877	259.660	50.0	Calc	NonC	Gravity	W21X44
364	249.830	278.500	260.991	289.659	50.0	Calc	NonC	Lateral	W24X55
366	253.396	318.004	271.366	300.034	50.0	Calc	NonC	Gravity	W16X31
367	249.830	336.240	263.001	349.411	50.0	Calc	NonC	Gravity	W16X26
368	249.830	336.240	278.701	307.369	50.0	Calc	NonC	Gravity	W21X48
369	253.396	318.004	260.991	289.659	50.0	Calc	NonC	Lateral	W18X35
370	251.914	69.650	258.917	71.527	50.0	Calc	NonC	Gravity	W14X22
371	252.367	269.029	276.514	244.880	50.0	Calc	NonC	Gravity	W24X55
372	252.614	281.283	282.765	251.131	50.0	Calc	NonC	Gravity	W24X103
373	251.313	99.905	254.900	86.518	50.0	Calc	NonC	Gravity	W10X15
374	251.313	99.905	267.734	104.305	50.0	Calc	Comp	Gravity	W12X19
375	252.830	160.910	252.830	205.830	50.0	Calc	Comp	Gravity	W36X135
376	252.830	197.628	272.829	202.987	50.0	Calc	NonC	Gravity	W24X62
379	254.877	259.660	263.950	225.800	50.0	Calc	NonC	Gravity	W27X84
380	254.900	86.518	271.321	90.918	50.0	Calc	Comp	Gravity	W18X35
381	256.413	342.824	285.284	313.952	50.0	Calc	NonC	Gravity	W18X40
382	259.518	102.104	263.106	88.716	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
383	257.569	249.611	269.407	237.773	50.0	Calc	NonC	Gravity	W14X22
384	258.864	287.534	289.015	257.381	50.0	Calc	NonC	Gravity	W24X103
385	258.917	71.527	267.127	73.726	50.0	Calc	NonC	Gravity	W14X22
386	260.445	160.910	260.445	199.668	50.0	Calc	Comp	Gravity	W21X44
387	260.445	160.910	281.337	160.910	50.0	Calc	Comp	Gravity	W16X26
388	263.950	225.800	269.301	205.830	50.0	Calc	NonC	Gravity	W24X55
389	262.573	230.939	286.316	254.682	50.0	Calc	NonC	Gravity	W30X108
390	263.001	349.411	283.507	328.905	50.0	Calc	NonC	Gravity	W16X26
391	263.001	349.411	279.851	366.262	50.0	Calc	NonC	Gravity	W18X40
393	264.746	222.828	274.199	213.374	50.0	Calc	NonC	Gravity	W10X15
394	265.115	293.783	295.266	263.632	50.0	Calc	NonC	Gravity	W24X103
395	265.699	234.065	280.295	219.469	50.0	Calc	NonC	Gravity	W16X26
396	268.741	207.916	292.485	231.660	50.0	Calc	NonC	Gravity	W27X84
397	267.734	104.305	271.321	90.918	50.0	Calc	NonC	Gravity	W10X15
398	269.301	205.830	270.248	202.295	50.0	Calc	NonC	Gravity	W10X15
399	269.301	205.830	299.160	205.830	50.0	Calc	Lat	Lateral	W24X68
400	268.601	355.012	289.107	334.505	50.0	Calc	NonC	Gravity	W16X26
401	271.366	300.034	290.613	280.787	50.0	Calc	NonC	Gravity	W21X44
402	271.366	300.034	291.872	320.540	50.0	Calc	NonC	Gravity	W27X84
403	271.794	240.160	286.390	225.565	50.0	Calc	NonC	Gravity	W16X26
404	271.321	90.918	298.164	98.110	50.0	Calc	Comp	Gravity	W18X40
405	272.829	160.910	272.829	192.660	50.0	Calc	Comp	Gravity	W18X40
406	272.829	192.660	272.829	205.830	50.0	Calc	NonC	Gravity	W21X44
407	272.829	192.660	302.770	192.660	50.0	Calc	Comp	Gravity	W21X50
408	274.511	213.686	282.367	205.830	50.0	Calc	NonC	Gravity	W10X15
409	275.338	75.926	282.341	77.803	50.0	Calc	NonC	Gravity	W14X22
411	277.890	246.256	292.485	231.660	50.0	Calc	NonC	Gravity	W16X26
412	274.216	360.626	294.722	340.120	50.0	Calc	NonC	Gravity	W16X26
413	278.204	306.872	297.451	287.624	50.0	Calc	NonC	Gravity	W21X44
414	281.030	220.205	295.406	205.830	50.0	Calc	NonC	Gravity	W16X26
415	281.337	160.910	284.290	149.890	50.0	Calc	Lat	Lateral	W14X22
416	281.337	160.910	302.770	160.910	50.0	Calc	Comp	Gravity	W16X31
417	282.104	250.470	296.700	235.874	50.0	Calc	NonC	Gravity	W14X22
418	282.810	160.910	282.810	192.660	50.0	Calc	Comp	Gravity	W18X40
419	283.507	328.905	291.872	320.540	50.0	Calc	NonC	Gravity	W10X15
420	283.507	328.905	303.660	349.058	50.0	Calc	NonC	Gravity	W21X44
421	284.290	149.890	291.665	122.365	50.0	Calc	Comp	Gravity	W16X31
422	284.290	149.890	305.720	149.890	50.0	Calc	Comp	Gravity	W21X44
423	282.341	77.803	289.876	79.818	50.0	Calc	NonC	Gravity	W14X22
424	285.041	313.709	304.289	294.462	50.0	Calc	NonC	Gravity	W21X48
425	279.851	366.262	300.357	345.756	50.0	Calc	NonC	Gravity	W16X26
426	279.851	366.262	298.356	384.767	50.0	Calc	NonC	Gravity	W18X35
427	285.629	109.100	289.216	95.713	50.0	Calc	NonC	Gravity	W10X15
428	286.000	192.660	286.000	205.830	50.0	Calc	Comp	Gravity	W10X15
429	286.316	254.682	300.912	240.087	50.0	Calc	NonC	Gravity	W14X22

Echo of Input Data

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
430	286.316	254.682	301.517	269.883	50.0	Calc	NonC	Gravity	W24X68
431	287.550	226.725	302.173	212.101	50.0	Calc	NonC	Gravity	W16X26
432	290.613	280.787	305.894	265.506	50.0	Calc	NonC	Gravity	W24X55
433	290.613	280.787	311.120	301.293	50.0	Calc	NonC	Gravity	W27X84
434	290.225	335.623	298.590	327.258	50.0	Calc	NonC	Gravity	W10X15
435	291.379	259.745	305.975	245.150	50.0	Calc	NonC	Gravity	W16X26
436	291.665	122.365	301.662	125.043	50.0	Calc	Comp	Gravity	W14X22
437	291.872	320.540	311.120	301.293	50.0	Calc	NonC	Gravity	W21X44
438	291.872	320.540	312.025	340.693	50.0	Calc	NonC	Lateral	W24X68
439	292.052	149.890	292.052	160.910	50.0	Calc	Comp	Gravity	W10X15
440	292.485	231.660	316.113	255.287	50.0	Calc	NonC	Gravity	W27X84
441	292.790	160.910	292.790	192.660	50.0	Calc	Comp	Gravity	W18X40
442	286.526	372.937	307.032	352.431	50.0	Calc	NonC	Gravity	W16X26
443	289.876	79.818	295.816	81.409	50.0	Calc	NonC	Gravity	W14X22
444	294.069	233.244	308.693	218.621	50.0	Calc	NonC	Gravity	W16X26
445	294.577	111.498	298.164	98.110	50.0	Calc	Comp	Gravity	W10X15
446	294.577	111.498	314.571	116.855	50.0	Calc	Comp	Gravity	W18X35
447	295.005	149.890	304.574	114.177	50.0	Calc	Comp	Gravity	W21X44
448	295.902	205.830	321.732	231.660	50.0	Calc	NonC	Gravity	W30X90
449	296.442	264.808	311.038	250.213	50.0	Calc	NonC	Gravity	W16X26
450	297.451	287.624	312.732	272.344	50.0	Calc	NonC	Gravity	W16X31
451	298.164	98.110	306.402	67.365	50.0	Calc	Lat	Lateral	W21X57
452	298.164	98.110	318.159	103.468	50.0	Calc	Comp	Gravity	W16X26
453	296.942	342.340	305.307	333.975	50.0	Calc	NonC	Gravity	W10X15
454	299.160	192.660	299.160	205.830	50.0	Calc	Comp	Gravity	W10X15
455	299.160	205.830	328.653	205.830	50.0	Calc	Comp	Gravity	W21X44
456	300.589	239.764	315.212	225.140	50.0	Calc	NonC	Gravity	W16X26
457	293.201	379.612	313.707	359.106	50.0	Calc	NonC	Gravity	W16X26
458	301.360	211.288	306.817	205.830	50.0	Calc	NonC	Gravity	W10X15
459	302.770	149.890	302.770	160.910	50.0	Calc	Comp	Gravity	W10X15
460	302.770	160.910	302.770	192.660	50.0	Calc	Comp	Gravity	W18X40
461	302.770	160.910	319.849	160.910	50.0	Calc	Lat	Lateral	W16X40
462	302.770	192.660	332.182	192.660	50.0	Calc	Comp	Gravity	W24X55
463	304.289	294.462	319.569	279.181	50.0	Calc	NonC	Gravity	W18X35
464	304.574	114.177	308.161	100.789	50.0	Calc	Comp	Gravity	W10X15
465	305.720	149.890	315.312	114.093	50.0	Calc	Comp	Gravity	W18X40
466	305.720	149.890	322.802	149.890	50.0	Calc	Comp	Gravity	W16X26
467	305.894	265.506	324.378	247.022	50.0	Calc	NonC	Gravity	W27X84
468	305.894	265.506	326.400	286.012	50.0	Calc	NonC	Gravity	W27X84
469	303.660	349.058	312.025	340.693	50.0	Calc	NonC	Gravity	W10X15
470	303.660	349.058	318.862	364.261	50.0	Calc	NonC	Gravity	W16X26
471	306.402	67.365	334.491	74.891	50.0	Calc	Comp	Gravity	W21X44
472	306.818	216.747	317.735	205.830	50.0	Calc	NonC	Gravity	W14X22
473	307.108	246.283	321.732	231.660	50.0	Calc	NonC	Gravity	W16X26
474	308.161	100.789	316.399	70.044	50.0	Calc	Comp	Gravity	W18X35

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
475	298.356	384.767	313.559	399.969	50.0	Calc	NonC	Gravity	W16X26
476	298.356	384.767	318.862	364.261	50.0	Calc	NonC	Gravity	W16X26
477	310.180	192.660	310.180	205.830	50.0	Calc	Comp	Gravity	W10X15
478	311.120	301.293	326.400	286.012	50.0	Calc	Lat	Lateral	W14X43
479	311.389	160.910	311.389	192.660	50.0	Calc	Comp	Gravity	W18X35
480	311.613	250.788	326.236	236.164	50.0	Calc	NonC	Gravity	W14X22
481	312.277	222.206	328.653	205.830	50.0	Calc	NonC	Gravity	W16X31
482	312.732	272.344	331.215	253.860	50.0	Calc	NonC	Gravity	W21X44
483	312.780	149.890	312.780	160.910	50.0	Calc	Comp	Gravity	W10X15
484	308.727	354.125	317.092	345.760	50.0	Calc	NonC	Gravity	W10X15
486	312.025	340.693	327.227	355.895	50.0	Calc	Lat	Lateral	W16X40
487	315.312	114.093	318.159	103.468	50.0	Calc	Comp	Gravity	W10X15
488	315.312	114.093	331.249	118.363	50.0	Calc	Comp	Gravity	W16X26
489	318.159	103.468	326.397	72.722	50.0	Calc	Comp	Gravity	W18X35
490	318.159	103.468	334.096	107.738	50.0	Calc	Comp	Gravity	W14X22
491	318.429	228.357	334.805	211.982	50.0	Calc	NonC	Gravity	W16X31
492	318.702	149.890	327.424	117.339	50.0	Calc	Comp	Gravity	W18X40
493	319.569	279.181	338.053	260.698	50.0	Calc	NonC	Gravity	W21X44
494	313.559	399.969	334.065	379.463	50.0	Calc	NonC	Gravity	W16X26
495	319.849	160.910	319.849	192.660	50.0	Calc	Comp	Gravity	W18X40
496	319.849	160.910	341.724	160.910	50.0	Calc	Comp	Gravity	W16X26
497	321.200	192.660	321.200	205.830	50.0	Calc	Comp	Gravity	W10X15
498	313.795	359.193	322.160	350.828	50.0	Calc	NonC	Gravity	W10X15
499	321.732	231.660	330.736	240.664	50.0	Calc	NonC	Gravity	W16X26
500	322.802	149.890	322.802	160.910	50.0	Calc	Comp	Gravity	W10X15
501	322.802	149.890	344.677	149.890	50.0	Calc	Comp	Gravity	W16X26
502	323.280	116.228	326.127	105.603	50.0	Calc	Comp	Gravity	W10X15
503	324.378	247.022	339.740	231.660	50.0	Calc	NonC	Gravity	W18X40
504	324.378	247.022	344.884	267.528	50.0	Calc	NonC	Gravity	W27X84
505	324.581	234.509	340.957	218.134	50.0	Calc	NonC	Gravity	W16X31
506	325.226	411.637	345.732	391.131	50.0	Calc	Lat	Lateral	W16X50
507	325.226	411.637	348.914	435.325	50.0	Calc	NonC	Gravity	W24X55
508	326.253	105.637	334.491	74.891	50.0	Calc	Comp	Gravity	W16X31
509	326.400	286.012	344.884	267.528	50.0	Calc	Lat	Lateral	W16X57
510	328.653	205.830	332.182	192.660	50.0	Calc	Lat	Lateral	W14X22
511	328.653	205.830	347.111	224.289	50.0	Calc	NonC	Gravity	W24X62
512	318.862	364.261	327.227	355.895	50.0	Calc	NonC	Gravity	W10X15
513	318.862	364.261	328.818	374.217	50.0	Calc	NonC	Gravity	W16X26
514	329.653	206.830	343.823	192.660	50.0	Calc	NonC	Gravity	W12X19
515	331.148	417.559	351.654	397.053	50.0	Calc	NonC	Gravity	W16X26
516	331.215	253.860	346.662	238.413	50.0	Calc	NonC	Gravity	W16X31
517	331.249	118.363	334.096	107.738	50.0	Calc	Comp	Gravity	W10X15
518	331.249	118.363	351.659	123.832	50.0	Calc	Comp	Gravity	W16X26
519	329.614	149.890	337.605	120.066	50.0	Calc	Comp	Gravity	W16X31
520	332.182	160.910	332.182	192.660	50.0	Calc	Comp	Gravity	W18X40

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
521	332.182	192.660	368.000	192.660	50.0	Calc	Comp	Gravity	W24X84
522	332.272	149.890	332.272	160.910	50.0	Calc	Comp	Gravity	W10X15
523	334.096	107.738	342.335	76.993	50.0	Calc	Comp	Gravity	W18X35
524	334.096	107.738	361.751	115.148	50.0	Calc	Comp	Gravity	W27X84
526	334.491	74.891	362.745	82.462	50.0	Calc	Comp	Gravity	W21X44
527	335.472	212.650	355.462	192.660	50.0	Calc	NonC	Gravity	W16X26
528	337.070	423.481	357.576	402.975	50.0	Calc	NonC	Gravity	W16X26
529	327.227	355.895	342.430	371.098	50.0	Calc	Lat	Lateral	W16X40
530	338.053	260.698	353.585	245.166	50.0	Calc	NonC	Gravity	W18X35
531	339.740	231.660	360.500	251.912	50.0	Calc	NonC	Gravity	W24X68
532	339.740	231.660	368.000	203.400	50.0	Calc	NonC	Gravity	W24X84
533	334.065	379.463	342.430	371.098	50.0	Calc	NonC	Gravity	W10X15
534	341.292	218.469	367.101	192.660	50.0	Calc	NonC	Gravity	W18X40
535	341.454	121.098	344.306	110.474	50.0	Calc	Comp	Gravity	W10X15
536	341.724	149.890	341.724	160.910	50.0	Calc	Comp	Gravity	W10X15
537	341.724	160.910	341.724	192.660	50.0	Calc	Comp	Gravity	W18X35
538	341.724	160.910	360.500	160.910	50.0	Calc	Comp	Gravity	W16X26
539	342.992	429.403	363.498	408.897	50.0	Calc	NonC	Gravity	W16X26
540	344.306	110.474	352.544	79.729	50.0	Calc	Comp	Gravity	W18X35
541	344.677	149.890	351.659	123.832	50.0	Calc	Comp	Gravity	W16X26
542	344.677	149.890	360.500	149.890	50.0	Calc	Comp	Gravity	W14X22
543	344.884	267.528	363.057	249.356	50.0	Calc	Lat	Lateral	W18X60
544	345.732	391.131	354.097	382.766	50.0	Calc	NonC	Gravity	W10X15
545	345.732	391.131	369.420	414.819	50.0	Calc	NonC	Gravity	W21X55
546	346.452	238.208	368.000	216.660	50.0	Calc	NonC	Gravity	W18X35
547	348.914	435.325	364.259	450.669	50.0	Calc	NonC	Gravity	W16X26
548	348.914	435.325	369.420	414.819	50.0	Calc	Lat	Lateral	W16X50
549	351.112	149.890	351.112	160.910	50.0	Calc	Comp	Gravity	W10X15
550	351.112	160.910	351.114	192.660	50.0	Calc	Comp	Gravity	W18X35
551	349.268	394.666	357.633	386.301	50.0	Calc	NonC	Gravity	W10X15
552	351.659	123.832	354.506	113.207	50.0	Calc	Comp	Gravity	W10X15
553	351.659	123.832	386.114	133.064	50.0	Calc	Comp	Gravity	W21X48
554	352.590	149.890	359.043	125.811	50.0	Calc	Comp	Gravity	W14X22
555	353.475	245.059	368.000	230.533	50.0	Calc	NonC	Gravity	W14X22
556	354.029	440.440	374.535	419.933	50.0	Calc	NonC	Gravity	W14X22
557	354.506	113.207	365.247	73.121	50.0	Calc	Comp	Gravity	W30X90
558	355.985	401.384	364.351	393.019	50.0	Calc	NonC	Gravity	W10X15
559	358.904	125.773	361.751	115.148	50.0	Calc	Comp	Gravity	W10X15
560	359.144	445.554	379.650	425.048	50.0	Calc	NonC	Gravity	W14X22
561	357.633	386.301	377.786	406.454	50.0	Calc	NonC	Lateral	W24X68
562	360.500	149.890	360.500	160.910	50.0	Calc	Comp	Gravity	W10X15
563	360.500	149.890	366.422	127.788	50.0	Calc	Comp	Gravity	W14X22
564	360.500	149.890	381.606	149.890	50.0	Calc	Comp	Gravity	W14X22
565	360.500	160.910	360.500	192.660	50.0	Calc	Comp	Gravity	W16X31
566	360.500	160.910	389.020	160.910	50.0	Calc	Comp	Gravity	W18X40

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
567	361.751	115.148	388.961	122.439	50.0	Calc	Lat	Lateral	W18X65
568	363.057	249.356	371.422	240.990	50.0	Calc	NonC	Gravity	W10X15
569	363.057	249.356	383.209	269.508	50.0	Calc	NonC	Gravity	W24X55
570	362.703	408.101	371.068	399.736	50.0	Calc	NonC	Gravity	W10X15
571	364.259	450.669	376.018	462.428	50.0	Calc	NonC	Gravity	W14X22
572	364.259	450.669	384.765	430.163	50.0	Calc	NonC	Gravity	W16X26
573	365.247	73.121	399.702	82.353	50.0	Calc	Comp	Gravity	W27X94
574	365.991	116.284	376.732	76.199	50.0	Calc	Comp	Gravity	W21X48
575	368.000	160.910	368.000	192.660	50.0	Calc	Comp	Gravity	W18X35
576	368.000	192.660	368.000	216.660	50.0	Calc	NonC	Gravity	W18X35
577	368.000	192.660	397.410	192.660	50.0	Calc	Comp	Gravity	W21X44
578	368.000	216.660	368.000	240.990	50.0	Calc	NonC	Gravity	W14X22
579	368.000	240.990	393.852	240.990	50.0	Calc	NonC	Gravity	W16X26
582	369.420	414.819	384.765	430.163	50.0	Calc	NonC	Gravity	W16X26
583	370.000	149.890	370.000	160.910	50.0	Calc	Comp	Gravity	W10X15
584	370.051	128.760	372.898	118.135	50.0	Calc	Comp	Gravity	W10X15
585	370.138	456.549	390.644	436.042	50.0	Calc	NonC	Gravity	W16X26
586	371.056	149.890	376.271	130.427	50.0	Calc	Comp	Gravity	W12X19
587	369.420	414.819	377.786	406.454	50.0	Calc	NonC	Gravity	W10X15
588	374.271	260.570	393.852	240.990	50.0	Calc	NonC	Gravity	W16X26
589	376.018	462.428	396.524	441.922	50.0	Calc	NonC	Gravity	W16X26
591	377.476	119.362	388.217	79.276	50.0	Calc	Comp	Gravity	W21X48
592	377.786	406.454	390.280	418.948	50.0	Calc	NonC	Gravity	W14X43
594	378.510	160.910	378.510	192.660	50.0	Calc	Comp	Gravity	W18X35
595	379.510	149.890	379.510	160.910	50.0	Calc	Comp	Gravity	W10X15
597	381.197	131.747	384.044	121.122	50.0	Calc	Comp	Gravity	W10X15
598	377.786	406.454	388.880	395.359	50.0	Calc	NonC	Gravity	W14X22
599	381.606	149.890	386.114	133.064	50.0	Calc	Comp	Gravity	W12X19
600	381.606	149.890	400.241	149.890	50.0	Calc	Comp	Gravity	W12X19
601	381.915	427.313	390.280	418.948	50.0	Calc	NonC	Gravity	W14X30
602	384.765	430.163	396.524	441.922	50.0	Calc	Lat	Lateral	W14X22
603	383.209	269.508	389.630	263.088	50.0	Calc	NonC	Gravity	W10X15
604	383.209	269.508	398.412	284.711	50.0	Calc	Lat	Lateral	W16X40
606	386.114	133.064	403.501	137.723	50.0	Calc	Comp	Gravity	W12X19
607	388.961	122.439	399.702	82.353	50.0	Calc	Lat	Lateral	W18X106
608	388.961	122.439	406.348	127.098	50.0	Calc	Comp	Gravity	W16X26
609	389.020	149.890	389.020	160.910	50.0	Calc	Comp	Gravity	W10X15
610	389.020	160.910	389.020	192.660	50.0	Calc	Comp	Gravity	W18X35
611	389.020	160.910	405.520	160.910	50.0	Calc	Comp	Gravity	W16X26
612	389.927	435.325	398.292	426.960	50.0	Calc	NonC	Gravity	W12X19
613	390.923	149.890	394.807	135.394	50.0	Calc	Comp	Gravity	W10X15
615	389.630	263.088	404.832	278.291	50.0	Calc	NonC	Gravity	W24X55
616	392.344	134.734	395.191	124.109	50.0	Calc	Comp	Gravity	W10X15
617	392.811	266.269	418.090	240.990	50.0	Calc	NonC	Gravity	W21X48
618	393.852	240.990	418.090	240.990	50.0	Calc	NonC	Gravity	W18X35

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
619	388.880	395.359	401.375	407.854	50.0	Calc	NonC	Gravity	W14X22
620	396.524	441.922	404.889	433.557	50.0	Calc	NonC	Gravity	W14X22
621	390.280	418.948	401.375	407.854	50.0	Calc	NonC	Gravity	W10X15
622	390.280	418.948	404.889	433.557	50.0	Calc	NonC	Gravity	W14X22
624	397.410	160.910	397.410	192.660	50.0	Calc	Comp	Gravity	W16X31
625	397.410	192.660	425.910	192.660	50.0	Calc	Comp	Gravity	W18X40
626	397.654	124.769	408.395	84.683	50.0	Calc	Comp	Gravity	W21X44
627	388.880	395.359	412.314	371.926	46.0	Calc	Lat	Lateral	HSS16X8X3/8
628	399.702	82.353	417.089	87.012	50.0	Calc	Comp	Gravity	W16X26
630	400.241	149.890	400.241	160.910	50.0	Calc	Comp	Gravity	W10X15
631	400.241	149.890	403.501	137.723	50.0	Calc	Comp	Gravity	W10X15
633	403.501	137.723	406.348	127.098	50.0	Calc	Comp	Gravity	W10X15
634	398.292	426.960	409.386	415.865	50.0	Calc	NonC	Gravity	W10X15
635	405.520	160.910	405.520	192.660	50.0	Calc	Comp	Gravity	W18X35
636	405.520	160.910	414.028	129.156	50.0	Calc	Comp	Gravity	W18X35
637	405.520	160.910	425.910	160.910	50.0	Calc	Lat	Lateral	W16X50
638	406.348	127.098	417.089	87.012	50.0	Calc	Comp	Gravity	W21X48
639	406.348	127.098	441.044	136.395	50.0	Calc	Comp	Gravity	W24X68
640	401.375	407.854	415.983	422.463	50.0	Calc	Lat	Lateral	W14X43
642	398.412	284.711	404.832	278.291	50.0	Calc	NonC	Gravity	W10X15
643	398.412	284.711	413.615	299.914	50.0	Calc	Lat	Lateral	W16X40
644	404.889	433.557	411.960	440.628	50.0	Calc	NonC	Gravity	W14X22
645	404.889	433.557	415.983	422.463	50.0	Calc	NonC	Gravity	W10X15
647	404.832	278.291	420.035	293.493	50.0	Calc	NonC	Gravity	W21X48
648	404.832	278.291	430.111	253.011	50.0	Calc	NonC	Gravity	W21X44
649	415.715	160.910	415.715	192.660	50.0	Calc	Comp	Gravity	W18X35
650	415.715	160.910	423.538	131.704	50.0	Calc	Comp	Gravity	W18X35
651	412.314	371.926	430.797	353.442	46.0	Calc	Lat	Lateral	HSS16X8X3/8
652	417.089	87.012	451.785	96.309	50.0	Calc	Comp	Gravity	W27X84
653	417.913	130.197	428.654	90.111	50.0	Calc	Comp	Gravity	W21X48
654	418.090	240.990	430.111	253.011	50.0	Calc	NonC	Gravity	W18X35
655	411.960	440.628	423.055	429.534	50.0	Calc	NonC	Gravity	W14X22
656	413.615	299.914	420.035	293.493	50.0	Calc	NonC	Gravity	W10X15
658	415.983	422.463	423.055	429.534	50.0	Calc	NonC	Gravity	W14X22
660	425.910	160.910	425.910	192.660	50.0	Calc	Lat	Lateral	W18X76
661	425.910	160.910	433.053	134.254	50.0	Calc	Comp	Gravity	W16X26
662	425.910	160.910	446.020	160.910	50.0	Calc	Comp	Gravity	W18X40
663	425.910	192.660	454.660	192.660	50.0	Calc	Comp	Gravity	W18X40
664	420.035	293.493	445.314	268.214	50.0	Calc	NonC	Gravity	W21X44
665	423.055	429.534	446.488	406.100	46.0	Calc	Lat	Lateral	HSS16X8X3/8
666	429.478	133.296	440.219	93.210	50.0	Calc	Comp	Gravity	W21X48
667	428.817	315.117	435.238	308.696	50.0	Calc	NonC	Gravity	W10X15
668	428.817	315.117	448.970	335.269	50.0	Calc	NonC	Gravity	W21X48
670	430.797	353.442	448.970	335.269	46.0	Calc	Lat	Lateral	HSS16X8X3/8
671	434.475	160.910	441.044	136.395	50.0	Calc	Comp	Gravity	W24X55

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
672	435.965	160.910	435.965	192.660	50.0	Calc	Comp	Gravity	W18X35
673	436.238	154.330	482.910	154.330	50.0	Calc	Comp	Gravity	W24X62
674	431.702	305.161	451.501	324.960	50.0	Calc	NonC	Gravity	W24X76
677	439.185	143.330	482.910	143.330	50.0	Calc	NonC	Gravity	W24X76
678	430.111	253.011	445.314	268.214	50.0	Calc	NonC	Gravity	W18X40
679	441.044	136.395	451.785	96.309	50.0	Calc	Lat	Lateral	W24X104
680	443.347	127.798	462.453	132.917	50.0	Calc	Comp	Gravity	W16X26
681	446.078	319.536	471.357	294.257	50.0	Calc	NonC	Gravity	W21X44
683	446.020	154.330	446.020	160.910	50.0	Calc	NonC	Gravity	W10X15
684	446.020	160.910	446.020	192.660	50.0	Calc	Comp	Gravity	W18X35
685	446.020	160.910	462.520	160.910	50.0	Calc	Comp	Gravity	W16X26
686	446.488	406.100	464.972	387.616	46.0	Calc	NonC	Gravity	HSS16X8X3/8
687	449.424	143.330	452.900	130.358	50.0	Calc	Comp	Gravity	W10X15
688	451.501	324.960	476.780	299.680	50.0	Calc	NonC	Gravity	W21X44
689	451.785	96.309	479.314	103.685	50.0	Calc	Comp	Gravity	W21X44
690	448.970	335.269	455.391	328.849	50.0	Calc	NonC	Gravity	W10X15
691	448.970	335.269	462.780	349.079	50.0	Calc	NonC	Gravity	W16X26
692	452.900	130.358	461.338	98.869	50.0	Calc	Comp	Gravity	W18X35
693	454.270	154.330	454.270	160.910	50.0	Calc	NonC	Gravity	W10X15
694	454.660	160.910	454.660	192.660	50.0	Calc	Comp	Gravity	W16X31
695	454.660	192.660	482.910	192.660	50.0	Calc	Comp	Gravity	W18X40
696	455.875	342.174	462.295	335.754	50.0	Calc	NonC	Gravity	W10X15
697	451.501	324.960	469.200	342.658	50.0	Calc	NonC	Gravity	W24X62
700	459.663	143.330	462.453	132.917	50.0	Calc	Comp	Gravity	W10X15
701	462.453	132.917	470.891	101.428	50.0	Calc	Comp	Gravity	W18X35
702	462.453	132.917	478.391	137.188	50.0	Calc	Comp	Gravity	W16X26
703	462.520	154.330	462.520	160.910	50.0	Calc	NonC	Gravity	W10X15
704	462.520	160.910	462.520	192.660	50.0	Calc	Comp	Gravity	W18X35
705	462.520	160.910	482.910	160.910	50.0	Calc	Comp	Gravity	W18X35
706	456.982	279.881	476.780	299.680	50.0	Calc	NonC	Gravity	W24X62
707	462.780	349.079	469.200	342.658	50.0	Calc	NonC	Gravity	W10X15
708	462.780	349.079	477.099	363.398	50.0	Calc	Lat	Lateral	W16X40
712	464.972	387.616	483.144	369.444	46.0	Calc	NonC	Gravity	HSS16X8X3/8
713	468.204	143.330	470.422	135.053	50.0	Calc	NonC	Gravity	W10X15
714	469.200	342.658	483.519	356.977	50.0	Calc	NonC	Gravity	W21X48
715	469.200	342.658	494.479	317.379	50.0	Calc	NonC	Gravity	W24X55
716	469.939	356.238	476.360	349.818	50.0	Calc	NonC	Gravity	W10X15
717	470.876	135.174	479.314	103.685	50.0	Calc	Comp	Gravity	W18X35
718	472.715	154.330	472.715	160.910	50.0	Calc	NonC	Gravity	W10X15
719	472.715	160.910	472.715	192.660	50.0	Calc	Comp	Gravity	W18X35
721	476.360	349.818	501.639	324.539	50.0	Calc	NonC	Gravity	W24X55
722	476.745	143.330	478.391	137.188	50.0	Calc	NonC	Gravity	W10X15
723	477.099	363.398	483.519	356.977	50.0	Calc	NonC	Gravity	W10X15
724	477.099	363.398	487.387	373.686	50.0	Calc	Lat	Lateral	W16X67
725	478.391	137.188	486.828	105.699	50.0	Calc	Comp	Gravity	W18X35

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
726	478.391	137.188	510.660	145.834	50.0	Calc	Comp	Gravity	W24X55
727	487.387	373.686	493.808	367.266	50.0	Calc	NonC	Gravity	W44X335
728	479.314	103.685	495.966	108.147	50.0	Calc	Comp	Gravity	W16X26
729	482.910	138.399	482.910	160.910	50.0	Calc	Comp	Gravity	W24X55
730	482.910	160.910	482.910	192.660	50.0	Calc	Lat	Lateral	W18X76
731	482.910	160.910	510.660	160.910	50.0	Calc	Comp	Gravity	W18X40
732	482.910	192.660	510.660	192.660	50.0	Calc	Comp	Gravity	W18X40
733	483.144	369.444	489.565	363.023	50.0	Calc	NonC	Gravity	W10X15
734	483.519	356.977	493.808	367.266	50.0	Calc	NonC	Gravity	W18X35
735	483.519	356.977	508.798	331.698	50.0	Calc	NonC	Gravity	W21X50
736	476.780	299.680	494.479	317.379	50.0	Calc	NonC	Gravity	W21X44
737	487.529	139.636	489.604	131.890	50.0	Calc	NonC	Gravity	W10X15
738	488.325	160.910	493.590	141.260	50.0	Calc	Comp	Gravity	W12X19
739	489.565	363.023	514.844	337.744	50.0	Calc	NonC	Gravity	W21X44
740	489.604	131.890	495.966	108.147	50.0	Calc	Lat	Lateral	W14X43
741	489.604	131.890	510.660	137.531	50.0	Calc	Comp	Gravity	W14X22
742	492.160	160.910	492.160	192.660	50.0	Calc	Comp	Gravity	W18X35
743	493.808	367.266	519.087	341.987	50.0	Calc	NonC	Gravity	W24X55
744	494.479	317.379	508.798	331.698	50.0	Calc	NonC	Gravity	W21X44
745	499.091	142.734	501.166	134.988	50.0	Calc	NonC	Gravity	W10X15
746	499.588	160.910	504.099	144.076	50.0	Calc	Comp	Gravity	W12X19
747	501.410	160.910	501.410	192.660	50.0	Calc	Comp	Gravity	W18X35
748	508.798	331.698	519.087	341.987	50.0	Calc	NonC	Gravity	W18X35
749	510.660	137.531	510.660	160.910	50.0	Calc	Comp	Gravity	W21X44
750	510.660	160.910	510.660	192.660	50.0	Calc	Comp	Gravity	W18X35
751	120.330	225.800	120.330	243.330	46.0	Calc	Lat	Lateral	HSS14X6X3/8
752	120.330	243.330	120.330	260.800	46.0	Calc	Lat	Lateral	HSS14X6X3/8
753	230.330	143.920	230.330	160.910	50.0	Calc	Lat	Lateral	W14X43
754	216.380	233.920	230.330	233.920	50.0	Calc	Comp	Gravity	W14X22
755	216.380	254.970	230.330	254.970	50.0	Calc	Comp	Gravity	W14X22
756	216.380	233.920	216.380	254.970	50.0	Calc	Comp	Gravity	W14X22
758	222.110	208.330	222.205	233.920	50.0	Calc	Comp	Gravity	W14X22
759	222.175	225.800	230.330	225.800	50.0	Calc	NonC	Gravity	W10X15
760	223.355	233.920	223.355	254.970	50.0	Calc	Comp	Gravity	W14X22
761	223.355	243.330	230.330	243.330	50.0	Calc	Comp	Gravity	W10X15
764	368.664	254.963	382.637	240.990	50.0	Calc	NonC	Gravity	W12X14
765	380.338	266.637	405.986	240.990	50.0	Calc	NonC	Gravity	W21X44
766	398.821	272.279	424.100	247.000	50.0	Calc	NonC	Gravity	W21X48
767	445.314	268.214	456.982	279.881	50.0	Calc	NonC	Gravity	W18X40
768	409.902	283.360	435.181	258.081	50.0	Calc	NonC	Gravity	W21X44
769	414.972	288.430	440.251	263.151	50.0	Calc	NonC	Gravity	W21X44
770	425.869	299.327	451.148	274.048	50.0	Calc	NonC	Gravity	W21X44
772	408.548	294.847	414.969	288.427	50.0	Calc	NonC	Gravity	W10X15
774	403.482	289.781	409.902	283.360	50.0	Calc	NonC	Gravity	W10X15
776	388.279	274.578	394.700	268.158	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
777	393.349	279.648	399.769	273.228	50.0	Calc	NonC	Gravity	W10X15
778	384.029	412.697	395.124	401.603	50.0	Calc	NonC	Gravity	W10X15
779	375.664	421.062	384.029	412.697	50.0	Calc	NonC	Gravity	W10X15
780	420.035	293.493	431.702	305.161	50.0	Calc	NonC	Gravity	W21X48
781	413.615	299.914	428.817	315.117	50.0	Calc	NonC	Lateral	W18X65
782	419.448	305.747	425.869	299.327	50.0	Calc	NonC	Gravity	W10X15
783	425.282	311.581	434.177	302.686	50.0	Calc	NonC	Gravity	W21X50
784	342.430	371.098	357.633	386.301	50.0	Calc	NonC	Lateral	W24X68
785	328.818	374.217	345.732	391.131	50.0	Calc	NonC	Gravity	W18X35
786	339.899	385.297	348.264	376.932	50.0	Calc	NonC	Gravity	W10X15
787	319.393	405.803	339.899	385.297	50.0	Calc	NonC	Gravity	W16X26
788	303.426	389.837	323.932	369.331	50.0	Calc	NonC	Gravity	W16X26
789	308.312	394.723	328.818	374.217	50.0	Calc	NonC	Gravity	W16X26
790	323.932	369.331	332.297	360.965	50.0	Calc	NonC	Gravity	W10X15
791	328.818	374.217	337.183	365.852	50.0	Calc	NonC	Gravity	W10X15
792	313.559	399.969	325.226	411.637	50.0	Calc	NonC	Gravity	W14X22
793	254.877	259.660	258.306	263.089	50.0	Calc	NonC	Gravity	W10X15
800	276.681	106.703	280.269	93.315	50.0	Calc	NonC	Gravity	W10X15
801	338.931	149.890	346.299	122.396	50.0	Calc	Comp	Gravity	W16X26
802	335.664	127.311	344.357	129.640	50.0	Calc	Comp	Gravity	W14X22
803	333.024	137.163	341.717	139.493	50.0	Calc	Comp	Gravity	W14X22
804	216.537	215.630	230.330	215.630	50.0	Calc	NonC	Gravity	W14X22
805	216.537	208.330	216.537	215.630	50.0	Calc	NonC	Gravity	W14X22
806	222.110	254.970	222.110	278.500	50.0	Calc	Comp	Gravity	W14X22
807	222.110	259.660	230.330	259.660	50.0	Calc	Comp	Gravity	W10X15
808	129.080	278.500	129.080	288.083	50.0	Calc	NonC	Gravity	W10X15
809	137.850	278.500	137.850	288.083	50.0	Calc	NonC	Gravity	W10X15
810	120.330	283.030	129.080	283.030	50.0	Calc	NonC	Gravity	W10X15
811	155.830	278.500	155.830	288.083	50.0	Calc	NonC	Lateral	W12X19
812	165.200	278.500	165.200	288.083	50.0	Calc	NonC	Gravity	W10X15
813	168.830	278.500	168.830	288.083	50.0	Calc	NonC	Lateral	W12X19
814	175.550	278.500	175.550	288.083	50.0	Calc	NonC	Lateral	W12X19
815	182.270	278.500	182.270	288.083	50.0	Calc	NonC	Gravity	W10X15
816	187.200	278.500	187.200	288.083	50.0	Calc	NonC	Gravity	W12X19
817	192.957	278.500	192.957	288.083	50.0	Calc	NonC	Gravity	W12X19
818	198.699	278.500	198.699	288.083	50.0	Calc	NonC	Gravity	W10X15
819	206.018	278.500	206.018	288.083	50.0	Calc	NonC	Gravity	W12X40
820	198.699	283.030	206.018	283.030	50.0	Calc	NonC	Gravity	W10X15
821	187.200	283.030	192.957	283.030	50.0	Calc	NonC	Gravity	W12X40
822	168.830	283.030	175.550	283.030	50.0	Calc	NonC	Lateral	W12X40
823	146.330	283.030	155.830	283.030	50.0	Calc	NonC	Lateral	W12X40
824	196.609	288.083	196.609	325.000	50.0	Calc	NonC	Gravity	W18X40
826	206.018	288.083	206.018	325.000	50.0	Calc	NonC	Gravity	W18X40
827	223.330	278.500	223.330	288.083	50.0	Calc	NonC	Gravity	W10X15
828	161.080	163.660	161.080	197.000	50.0	Calc	NonC	Gravity	W21X44

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
829	153.340	163.660	153.340	197.000	50.0	Calc	NonC	Gravity	W21X44
830	145.590	163.660	145.590	197.000	50.0	Calc	NonC	Gravity	W21X44
831	146.330	197.000	146.330	208.330	50.0	Calc	NonC	Gravity	W10X15
832	137.850	197.000	137.850	208.330	50.0	Calc	NonC	Gravity	W10X15
833	129.080	208.330	129.090	197.000	50.0	Calc	NonC	Gravity	W10X15
834	153.830	197.000	153.830	208.330	50.0	Calc	NonC	Gravity	W10X15
835	161.330	197.000	161.330	208.330	50.0	Calc	NonC	Gravity	W10X15
836	260.991	289.659	271.366	300.034	50.0	Calc	NonC	Gravity	W21X44
837	249.830	336.240	253.396	318.004	50.0	Calc	NonC	Gravity	W14X22
838	267.734	104.305	294.577	111.498	50.0	Calc	Comp	Gravity	W16X26
840	282.457	84.325	300.558	89.175	50.0	Calc	NonC	Gravity	W18X76
841	229.330	70.090	249.374	75.461	50.0	Calc	NonC	Gravity	W18X76
843	254.900	86.518	257.294	77.583	50.0	Calc	NonC	Gravity	W14X30
844	271.321	90.918	273.715	81.983	50.0	Calc	NonC	Gravity	W14X30
851	236.556	72.026	238.097	65.951	50.0	Calc	NonC	Gravity	W14X30
852	250.291	75.706	251.914	69.650	50.0	Calc	NonC	Gravity	W14X30
853	257.294	77.583	258.917	71.527	50.0	Calc	NonC	Gravity	W14X30
854	265.505	79.783	267.127	73.726	50.0	Calc	NonC	Gravity	W14X30
855	273.715	81.983	275.338	75.926	50.0	Calc	NonC	Gravity	W14X30
856	280.718	83.859	282.341	77.803	50.0	Calc	NonC	Gravity	W14X30
857	294.193	87.470	295.816	81.409	50.0	Calc	NonC	Gravity	W14X30
858	243.259	73.822	244.882	67.767	50.0	Calc	NonC	Gravity	W14X30
859	288.252	85.878	289.876	79.818	50.0	Calc	NonC	Gravity	W14X30
860	267.127	73.726	275.338	75.926	50.0	Calc	NonC	Gravity	W14X22
861	295.816	81.409	302.180	83.121	50.0	Calc	NonC	Gravity	W14X22
862	238.097	65.951	244.882	67.767	50.0	Calc	NonC	Gravity	W14X22
866	285.858	94.813	288.252	85.878	50.0	Calc	NonC	Gravity	W14X30
867	249.374	75.461	282.457	84.325	50.0	Calc	NonC	Gravity	W18X76
868	233.902	80.894	236.556	72.026	50.0	Calc	NonC	Gravity	W14X30
870	263.106	88.716	265.505	79.783	50.0	Calc	NonC	Gravity	W14X30
871	291.798	96.405	294.193	87.470	50.0	Calc	NonC	Gravity	W14X30
873	52.670	202.000	63.000	202.000	50.0	Calc	NonC	Gravity	W12X22
874	24.880	206.330	34.040	206.330	50.0	Calc	NonC	Gravity	W12X22
875	24.880	199.770	34.040	199.770	50.0	Calc	NonC	Gravity	W12X22
876	56.580	282.730	63.000	282.730	50.0	Calc	NonC	Gravity	W12X22
877	289.227	309.523	296.058	316.354	50.0	Calc	NonC	Gravity	W14X30
878	282.390	302.686	289.227	309.523	50.0	Calc	NonC	Gravity	W14X30
879	275.552	295.848	282.390	302.686	50.0	Calc	NonC	Gravity	W14X30
880	269.301	289.597	275.552	295.848	50.0	Calc	NonC	Gravity	W14X30
881	256.800	277.097	263.051	283.347	50.0	Calc	NonC	Gravity	W14X30
882	59.290	278.500	59.290	282.730	50.0	Calc	NonC	Gravity	W12X22
883	46.710	278.500	46.710	282.730	50.0	Calc	NonC	Gravity	W12X22
884	39.430	278.500	39.430	282.730	50.0	Calc	NonC	Gravity	W12X22
885	24.870	278.500	24.870	282.730	50.0	Calc	NonC	Gravity	W12X22
886	32.150	278.500	32.150	282.730	50.0	Calc	NonC	Gravity	W12X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
887	24.880	193.200	24.880	197.000	50.0	Calc	NonC	Gravity	W12X22
888	24.880	197.000	24.880	208.330	50.0	Calc	NonC	Gravity	W12X22
889	35.960	193.200	35.960	197.000	50.0	Calc	NonC	Gravity	W12X22
890	47.050	193.200	47.050	197.000	50.0	Calc	NonC	Gravity	W12X22
891	58.130	193.200	58.130	197.000	50.0	Calc	NonC	Gravity	W12X22
893	58.130	197.000	58.130	202.000	50.0	Calc	NonC	Gravity	W12X22
894	24.870	219.130	24.870	231.130	50.0	Calc	NonC	Gravity	W10X17
895	24.870	231.130	24.870	243.330	50.0	Calc	NonC	Gravity	W10X17
896	24.870	243.330	24.870	255.130	50.0	Calc	NonC	Gravity	W10X17
897	24.870	255.130	24.870	267.120	50.0	Calc	NonC	Gravity	W10X17
898	178.915	165.910	189.000	165.910	50.0	Calc	NonC	Gravity	W12X22
899	178.915	174.160	189.000	174.160	50.0	Calc	NonC	Gravity	W12X22
900	168.830	174.160	178.915	174.160	50.0	Calc	NonC	Gravity	W10X17
901	161.080	174.160	168.830	174.160	50.0	Calc	NonC	Gravity	W10X17
902	153.340	174.160	161.080	174.160	50.0	Calc	NonC	Gravity	W10X17
903	145.590	174.160	153.340	174.160	50.0	Calc	NonC	Gravity	W10X17
904	137.850	174.160	145.590	174.160	50.0	Calc	NonC	Gravity	W10X17
905	129.090	174.160	137.850	174.160	50.0	Calc	NonC	Gravity	W10X17
906	120.330	174.160	129.090	174.160	50.0	Calc	NonC	Gravity	W10X17
907	113.580	174.160	120.330	174.160	50.0	Calc	NonC	Gravity	W10X17
908	79.220	181.760	87.330	181.760	50.0	Calc	NonC	Gravity	W12X22
909	79.220	189.360	87.330	189.360	50.0	Calc	NonC	Gravity	W12X22
910	82.820	174.160	82.820	181.760	50.0	Calc	NonC	Gravity	W10X17
911	82.820	181.760	82.820	189.360	50.0	Calc	NonC	Gravity	W10X17
912	79.220	205.000	87.330	205.000	50.0	Calc	NonC	Gravity	W12X22
913	82.820	197.000	82.820	205.000	50.0	Calc	NonC	Gravity	W10X17
914	189.000	179.440	222.110	179.440	50.0	Calc	NonC	Gravity	W30X90
915	189.000	163.660	230.330	163.660	50.0	Calc	NonC	Gravity	W24X55
916	222.110	163.660	222.110	179.440	50.0	Calc	NonC	Gravity	W12X19
917	215.330	179.440	215.330	208.330	50.0	Calc	NonC	Gravity	W18X40
920	197.777	179.440	197.777	208.330	50.0	Calc	NonC	Gravity	W21X44
921	206.553	179.440	206.553	208.330	50.0	Calc	NonC	Gravity	W21X44
922	215.330	163.660	215.330	179.440	50.0	Calc	NonC	Gravity	W12X19
923	197.777	163.660	197.777	179.440	50.0	Calc	NonC	Gravity	W12X19
924	206.553	163.660	206.553	179.440	50.0	Calc	NonC	Gravity	W12X19
925	206.553	174.160	215.330	174.160	50.0	Calc	NonC	Gravity	W10X17
926	197.777	174.160	206.553	174.160	50.0	Calc	NonC	Gravity	W10X17
927	189.000	174.160	197.777	174.160	50.0	Calc	NonC	Gravity	W10X17
928	437.126	310.584	462.405	285.305	50.0	Calc	NonC	Gravity	W21X44
929	490.240	335.937	497.400	343.097	50.0	Calc	NonC	Gravity	W10X15
930	483.081	328.778	490.240	335.937	50.0	Calc	NonC	Gravity	W10X15
934	459.958	305.656	465.382	311.079	50.0	Calc	NonC	Gravity	W10X15
935	451.006	296.704	455.836	301.533	50.0	Calc	NonC	Gravity	W10X15
936	445.583	291.280	451.006	296.704	50.0	Calc	NonC	Gravity	W10X15
937	439.749	285.446	445.583	291.280	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
938	433.916	279.613	439.749	285.446	50.0	Calc	NonC	Gravity	W10X15
939	428.853	274.550	433.916	279.613	50.0	Calc	NonC	Gravity	W10X15
940	423.783	269.480	428.853	274.550	50.0	Calc	NonC	Gravity	W10X15
941	418.713	264.410	423.783	269.480	50.0	Calc	NonC	Gravity	W10X15
942	412.702	258.399	418.713	264.410	50.0	Calc	NonC	Gravity	W10X15
943	406.691	252.389	412.702	258.399	50.0	Calc	NonC	Gravity	W10X15
944	400.639	246.336	406.691	252.389	50.0	Calc	NonC	Gravity	W10X15
946	434.177	302.686	456.982	279.881	50.0	Calc	Comp	Lateral	W18X76
947	434.177	302.686	439.601	308.109	50.0	Calc	NonC	Gravity	W10X15
948	100.500	163.660	100.500	197.000	50.0	Calc	NonC	Gravity	W21X50
949	441.955	315.414	467.235	290.135	50.0	Calc	NonC	Gravity	W21X44
950	435.535	321.834	441.955	315.414	50.0	Calc	NonC	Gravity	W10X15
951	442.252	328.552	448.673	322.131	50.0	Calc	NonC	Gravity	W10X15
952	457.399	330.857	482.678	305.578	50.0	Calc	NonC	Gravity	W21X44
953	463.296	336.754	488.575	311.475	50.0	Calc	NonC	Gravity	W21X44
954	465.382	311.079	471.279	316.976	50.0	Calc	Comp	Gravity	W10X15
955	471.279	316.976	477.176	322.874	50.0	Calc	Comp	Gravity	W10X15
956	477.176	322.874	483.081	328.778	50.0	Calc	Comp	Gravity	W10X15
958	455.836	301.533	459.958	305.656	50.0	Calc	NonC	Gravity	W10X15
959	-8.000	205.330	7.943	205.330	50.0	Calc	NonC	Gravity	W8X18
960	-8.000	200.000	7.943	200.000	50.0	Calc	NonC	Gravity	W8X18
961	-8.000	200.000	-8.000	205.330	50.0	Calc	NonC	Gravity	W8X15
962	-1.500	200.000	-1.500	205.330	50.0	Calc	NonC	Gravity	W8X15
963	263.950	225.800	268.957	230.807	50.0	Calc	Comp	Gravity	W10X15
965	229.330	79.670	254.900	86.518	50.0	Calc	Comp	Gravity	W18X40
966	247.897	84.642	250.291	75.706	50.0	Calc	NonC	Gravity	W14X30
967	240.865	82.759	243.259	73.822	50.0	Calc	NonC	Gravity	W14X30
968	278.323	92.794	280.718	83.859	50.0	Calc	NonC	Gravity	W14X30
969	238.010	104.305	267.734	104.305	50.0	Calc	NonC	Gravity	W21X68
970	241.152	104.305	242.886	97.647	50.0	Calc	NonC	Gravity	W10X15
971	250.134	104.305	251.313	99.905	50.0	Calc	NonC	Gravity	W10X15
972	258.928	104.305	259.518	102.104	50.0	Calc	NonC	Gravity	W10X15
973	106.830	174.160	113.580	174.160	50.0	Calc	NonC	Gravity	W10X17
974	100.500	174.160	106.830	174.160	50.0	Calc	NonC	Gravity	W10X17
975	93.915	174.160	100.500	174.160	50.0	Calc	NonC	Gravity	W10X17
976	87.330	174.160	93.915	174.160	50.0	Calc	NonC	Gravity	W10X17
977	79.220	174.160	87.330	174.160	50.0	Calc	NonC	Gravity	W10X17

* Parameter: Steel - Fy
Concrete - f'c
Other - E

Steel Beam Properties:

ID	Max Depth in	Min Depth in	Min Width in	Steel Table	Defl Criteria
1	None	0.00	0.00	Def.	spandrel
2	None	0.00	0.00	Def.	spandrel
3	None	0.00	0.00	Def.	spandrel
4	None	0.00	0.00	Def.	
5	None	0.00	0.00	Def.	spandrel
6	None	0.00	0.00	Def.	
7	None	0.00	0.00	Def.	spandrel
8	None	0.00	0.00	Def.	
9	None	0.00	0.00	Def.	spandrel
10	None	0.00	0.00	Def.	
11	None	0.00	0.00	Def.	spandrel
12	None	0.00	0.00	Def.	spandrel
13	None	0.00	0.00	Def.	spandrel
14	None	0.00	0.00	Def.	
15	None	0.00	0.00	Def.	
16	None	0.00	0.00	Def.	
17	None	0.00	0.00	Def.	
18	None	0.00	0.00	Def.	
19	None	0.00	0.00	Def.	spandrel
20	None	0.00	0.00	Def.	
21	None	0.00	0.00	Def.	
22	None	0.00	0.00	Def.	
24	None	0.00	0.00	Def.	
25	None	0.00	0.00	Def.	
26	None	0.00	0.00	Def.	
27	None	0.00	0.00	Def.	
28	None	0.00	0.00	Def.	
29	None	0.00	0.00	Def.	
30	None	0.00	0.00	Def.	
31	None	0.00	0.00	Def.	
32	None	0.00	0.00	Def.	
33	None	0.00	0.00	Def.	spandrel
34	None	0.00	0.00	Def.	
35	None	0.00	0.00	Def.	spandrel
36	None	0.00	0.00	Def.	
37	None	0.00	0.00	Def.	
38	None	0.00	0.00	Def.	
39	None	0.00	0.00	Def.	spandrel
40	None	0.00	0.00	Def.	spandrel
41	None	0.00	0.00	Def.	
42	None	0.00	0.00	Def.	
43	None	0.00	0.00	Def.	
44	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
45	None	0.00	0.00	Def.	
46	None	0.00	0.00	Def.	
47	None	0.00	0.00	Def.	
48	None	0.00	0.00	Def.	spandrel
49	None	0.00	0.00	Def.	
50	None	0.00	0.00	Def.	
51	None	0.00	0.00	Def.	
52	None	0.00	0.00	Def.	
53	None	0.00	0.00	Def.	
54	None	0.00	0.00	Def.	
55	None	0.00	0.00	Def.	
56	None	0.00	0.00	Def.	
57	None	0.00	0.00	Def.	
58	None	0.00	0.00	Def.	
59	None	0.00	0.00	Def.	
60	None	0.00	0.00	Def.	
61	None	0.00	0.00	Def.	
62	None	0.00	0.00	Def.	
63	None	0.00	0.00	Def.	
64	None	0.00	0.00	Def.	spandrel
65	None	0.00	0.00	Def.	
66	None	0.00	0.00	Def.	
67	None	0.00	0.00	Def.	
68	None	0.00	0.00	Def.	
69	None	0.00	0.00	Def.	
70	None	0.00	0.00	Def.	
71	None	0.00	0.00	Def.	
72	None	0.00	0.00	Def.	
73	None	0.00	0.00	Def.	
74	None	0.00	0.00	Def.	
75	None	0.00	0.00	Def.	
76	None	0.00	0.00	Def.	spandrel
77	None	0.00	0.00	Def.	
78	None	0.00	0.00	Def.	
79	None	0.00	0.00	Def.	spandrel
80	None	0.00	0.00	Def.	
81	None	0.00	0.00	Def.	
82	None	0.00	0.00	Def.	
83	None	0.00	0.00	Def.	
84	None	0.00	0.00	Def.	spandrel
85	None	0.00	0.00	Def.	
86	None	0.00	0.00	Def.	
87	None	0.00	0.00	Def.	
88	None	0.00	0.00	Def.	
89	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
90	None	0.00	0.00	Def.	
91	None	0.00	0.00	Def.	
92	None	0.00	0.00	Def.	
93	None	0.00	0.00	Def.	
94	None	0.00	0.00	Def.	
95	None	0.00	0.00	Def.	
96	None	0.00	0.00	Def.	
97	None	0.00	0.00	Def.	
98	None	0.00	0.00	Def.	spandrel
99	None	0.00	0.00	Def.	spandrel
100	None	0.00	0.00	Def.	spandrel
101	None	0.00	0.00	Def.	spandrel
102	None	0.00	0.00	Def.	
103	None	0.00	0.00	Def.	spandrel
104	None	0.00	0.00	Def.	
105	None	0.00	0.00	Def.	
106	None	0.00	0.00	Def.	
107	None	0.00	0.00	Def.	
108	None	0.00	0.00	Def.	
109	None	0.00	0.00	Def.	spandrel
110	None	0.00	0.00	Def.	
111	None	0.00	0.00	Def.	
112	None	0.00	0.00	Def.	
113	None	0.00	0.00	Def.	
114	None	0.00	0.00	Def.	
115	None	0.00	0.00	Def.	
116	None	0.00	0.00	Def.	
117	None	0.00	0.00	Def.	
118	None	0.00	0.00	Def.	
119	None	0.00	0.00	Def.	
120	None	0.00	0.00	Def.	
121	None	0.00	0.00	Def.	
122	None	0.00	0.00	Def.	
123	None	0.00	0.00	Def.	spandrel
124	None	0.00	0.00	Def.	
125	None	0.00	0.00	Def.	spandrel
126	None	0.00	0.00	Def.	
127	None	0.00	0.00	Def.	
128	None	0.00	0.00	Def.	
129	None	0.00	0.00	Def.	
130	None	0.00	0.00	Def.	
131	None	0.00	0.00	Def.	
132	None	0.00	0.00	Def.	
133	None	0.00	0.00	Def.	
134	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
135	None	0.00	0.00	Def.	spandrel
136	None	0.00	0.00	Def.	
137	None	0.00	0.00	Def.	
138	None	0.00	0.00	Def.	spandrel
139	None	0.00	0.00	Def.	
140	None	0.00	0.00	Def.	spandrel
141	None	0.00	0.00	Def.	spandrel
142	None	0.00	0.00	Def.	
143	None	0.00	0.00	Def.	spandrel
144	None	0.00	0.00	Def.	
145	None	0.00	0.00	Def.	
146	None	0.00	0.00	Def.	
147	None	0.00	0.00	Def.	
148	None	0.00	0.00	Def.	
149	None	0.00	0.00	Def.	
150	None	0.00	0.00	Def.	
151	None	0.00	0.00	Def.	
152	None	0.00	0.00	Def.	
153	None	0.00	0.00	Def.	spandrel
154	None	0.00	0.00	Def.	
155	None	0.00	0.00	Def.	
156	None	0.00	0.00	Def.	
157	None	0.00	0.00	Def.	
158	None	0.00	0.00	Def.	spandrel
159	None	0.00	0.00	Def.	
160	None	0.00	0.00	Def.	
161	None	0.00	0.00	Def.	spandrel
162	None	0.00	0.00	Def.	
163	None	0.00	0.00	Def.	
164	None	0.00	0.00	Def.	spandrel
165	None	0.00	0.00	Def.	
166	None	0.00	0.00	Def.	spandrel
167	None	0.00	0.00	Def.	
168	None	0.00	0.00	Def.	
169	None	0.00	0.00	Def.	
170	None	0.00	0.00	Def.	
171	None	0.00	0.00	Def.	
172	None	0.00	0.00	Def.	
173	None	0.00	0.00	Def.	
174	None	0.00	0.00	Def.	
175	None	0.00	0.00	Def.	
176	None	0.00	0.00	Def.	spandrel
177	None	0.00	0.00	Def.	
178	None	0.00	0.00	Def.	
179	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
180	None	0.00	0.00	Def.	
181	None	0.00	0.00	Def.	spandrel
182	None	0.00	0.00	Def.	
183	None	0.00	0.00	Def.	
184	None	0.00	0.00	Def.	spandrel
185	None	0.00	0.00	Def.	
186	None	0.00	0.00	Def.	spandrel
187	None	0.00	0.00	Def.	
188	None	0.00	0.00	Def.	
189	None	0.00	0.00	Def.	
190	None	0.00	0.00	Def.	
191	None	0.00	0.00	Def.	
192	None	0.00	0.00	Def.	
193	None	0.00	0.00	Def.	
196	None	0.00	0.00	Def.	
197	None	0.00	0.00	Def.	
198	None	0.00	0.00	Def.	
199	None	0.00	0.00	Def.	spandrel
200	None	0.00	0.00	Def.	
201	None	0.00	0.00	Def.	
203	None	0.00	0.00	Def.	spandrel
204	None	0.00	0.00	Def.	
205	None	0.00	0.00	Def.	spandrel
206	None	0.00	0.00	Def.	
207	None	0.00	0.00	Def.	spandrel
208	None	0.00	0.00	Def.	
209	None	0.00	0.00	Def.	
210	None	0.00	0.00	Def.	
211	None	0.00	0.00	Def.	spandrel
212	None	0.00	0.00	Def.	
213	None	0.00	0.00	Def.	spandrel
214	None	0.00	0.00	Def.	
215	None	0.00	0.00	Def.	
216	None	0.00	0.00	Def.	
217	None	0.00	0.00	Def.	
218	None	0.00	0.00	Def.	
219	None	0.00	0.00	Def.	
220	None	0.00	0.00	Def.	
221	None	0.00	0.00	Def.	
223	None	0.00	0.00	Def.	
226	None	0.00	0.00	Def.	
227	None	0.00	0.00	Def.	
228	None	0.00	0.00	Def.	
229	None	0.00	0.00	Def.	
230	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
231	None	0.00	0.00	Def.	
232	None	0.00	0.00	Def.	
233	None	0.00	0.00	Def.	
235	None	0.00	0.00	Def.	
236	None	0.00	0.00	Def.	spandrel
237	None	0.00	0.00	Def.	
238	None	0.00	0.00	Def.	
239	None	0.00	0.00	Def.	spandrel
240	None	0.00	0.00	Def.	spandrel
241	None	0.00	0.00	Def.	
242	None	0.00	0.00	Def.	
243	None	0.00	0.00	Def.	
247	None	0.00	0.00	Def.	
248	None	0.00	0.00	Def.	
249	None	0.00	0.00	Def.	spandrel
250	None	0.00	0.00	Def.	
251	None	0.00	0.00	Def.	
252	None	0.00	0.00	Def.	
253	None	0.00	0.00	Def.	
254	None	0.00	0.00	Def.	
256	None	0.00	0.00	Def.	
257	None	0.00	0.00	Def.	
258	None	0.00	0.00	Def.	
259	None	0.00	0.00	Def.	
260	None	0.00	0.00	Def.	spandrel
261	None	0.00	0.00	Def.	
262	None	0.00	0.00	Def.	
263	None	0.00	0.00	Def.	
264	None	0.00	0.00	Def.	
265	None	0.00	0.00	Def.	
266	None	0.00	0.00	Def.	spandrel
268	None	0.00	0.00	Def.	
271	None	0.00	0.00	Def.	
272	None	0.00	0.00	Def.	
273	None	0.00	0.00	Def.	
274	None	0.00	0.00	Def.	
275	None	0.00	0.00	Def.	
276	None	0.00	0.00	Def.	
277	None	0.00	0.00	Def.	
278	None	0.00	0.00	Def.	
279	None	0.00	0.00	Def.	spandrel
280	None	0.00	0.00	Def.	
281	None	0.00	0.00	Def.	spandrel
282	None	0.00	0.00	Def.	spandrel
283	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
284	None	0.00	0.00	Def.	spandrel
286	None	0.00	0.00	Def.	spandrel
287	None	0.00	0.00	Def.	
288	None	0.00	0.00	Def.	
289	None	0.00	0.00	Def.	spandrel
290	None	0.00	0.00	Def.	
291	None	0.00	0.00	Def.	
292	None	0.00	0.00	Def.	
294	None	0.00	0.00	Def.	
296	None	0.00	0.00	Def.	
297	None	0.00	0.00	Def.	
298	None	0.00	0.00	Def.	
300	None	0.00	0.00	Def.	
302	None	0.00	0.00	Def.	
303	None	0.00	0.00	Def.	
304	None	0.00	0.00	Def.	
305	None	0.00	0.00	Def.	
306	None	0.00	0.00	Def.	
307	None	0.00	0.00	Def.	
308	None	0.00	0.00	Def.	
309	None	0.00	0.00	Def.	
310	None	0.00	0.00	Def.	spandrel
311	None	0.00	0.00	Def.	spandrel
312	None	0.00	0.00	Def.	
313	None	0.00	0.00	Def.	spandrel
314	None	0.00	0.00	Def.	
315	None	0.00	0.00	Def.	
316	None	0.00	0.00	Def.	spandrel
317	None	0.00	0.00	Def.	
318	None	0.00	0.00	Def.	
319	None	0.00	0.00	Def.	
320	None	0.00	0.00	Def.	
321	None	0.00	0.00	Def.	
322	None	0.00	0.00	Def.	
323	None	0.00	0.00	Def.	spandrel
324	None	0.00	0.00	Def.	spandrel
326	None	0.00	0.00	Def.	spandrel
327	None	0.00	0.00	Def.	spandrel
328	None	0.00	0.00	Def.	spandrel
329	None	0.00	0.00	Def.	Default
331	None	0.00	0.00	Def.	spandrel
340	None	0.00	0.00	Def.	
341	None	0.00	0.00	Def.	spandrel
342	None	0.00	0.00	Def.	
343	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
344	None	0.00	0.00	Def.	spandrel
345	None	0.00	0.00	Def.	spandrel
346	None	0.00	0.00	Def.	spandrel
347	None	0.00	0.00	Def.	spandrel
348	None	0.00	0.00	Def.	spandrel
349	None	0.00	0.00	Def.	spandrel
350	None	0.00	0.00	Def.	spandrel
351	None	0.00	0.00	Def.	spandrel
353	None	0.00	0.00	Def.	
355	None	0.00	0.00	Def.	spandrel
356	None	0.00	0.00	Def.	
357	None	0.00	0.00	Def.	Default
358	None	0.00	0.00	Def.	
362	None	0.00	0.00	Def.	spandrel
364	None	0.00	0.00	Def.	spandrel
366	None	0.00	0.00	Def.	
367	None	0.00	0.00	Def.	spandrel
368	None	0.00	0.00	Def.	
369	None	0.00	0.00	Def.	spandrel
370	None	0.00	0.00	Def.	Default
371	None	0.00	0.00	Def.	
372	None	0.00	0.00	Def.	
373	None	0.00	0.00	Def.	
374	None	0.00	0.00	Def.	spandrel
375	None	0.00	0.00	Def.	spandrel
376	None	0.00	0.00	Def.	spandrel
379	None	0.00	0.00	Def.	spandrel
380	None	0.00	0.00	Def.	spandrel
381	None	0.00	0.00	Def.	
382	None	0.00	0.00	Def.	spandrel
383	None	0.00	0.00	Def.	
384	None	0.00	0.00	Def.	
385	None	0.00	0.00	Def.	Default
386	None	0.00	0.00	Def.	
387	None	0.00	0.00	Def.	spandrel
388	None	0.00	0.00	Def.	spandrel
389	None	0.00	0.00	Def.	
390	None	0.00	0.00	Def.	
391	None	0.00	0.00	Def.	spandrel
393	None	0.00	0.00	Def.	
394	None	0.00	0.00	Def.	
395	None	0.00	0.00	Def.	
396	None	0.00	0.00	Def.	
397	None	0.00	0.00	Def.	
398	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
399	None	0.00	0.00	Def.	
400	None	0.00	0.00	Def.	
401	None	0.00	0.00	Def.	
402	None	0.00	0.00	Def.	
403	None	0.00	0.00	Def.	
404	None	0.00	0.00	Def.	spandrel
405	None	0.00	0.00	Def.	
406	None	0.00	0.00	Def.	
407	None	0.00	0.00	Def.	
408	None	0.00	0.00	Def.	
409	None	0.00	0.00	Def.	Default
411	None	0.00	0.00	Def.	
412	None	0.00	0.00	Def.	
413	None	0.00	0.00	Def.	
414	None	0.00	0.00	Def.	
415	None	0.00	0.00	Def.	spandrel
416	None	0.00	0.00	Def.	
417	None	0.00	0.00	Def.	
418	None	0.00	0.00	Def.	
419	None	0.00	0.00	Def.	
420	None	0.00	0.00	Def.	
421	None	0.00	0.00	Def.	spandrel
422	None	0.00	0.00	Def.	
423	None	0.00	0.00	Def.	Default
424	None	0.00	0.00	Def.	
425	None	0.00	0.00	Def.	
426	None	0.00	0.00	Def.	spandrel
427	None	0.00	0.00	Def.	Default
428	None	0.00	0.00	Def.	
429	None	0.00	0.00	Def.	
430	None	0.00	0.00	Def.	
431	None	0.00	0.00	Def.	
432	None	0.00	0.00	Def.	
433	None	0.00	0.00	Def.	
434	None	0.00	0.00	Def.	
435	None	0.00	0.00	Def.	
436	None	0.00	0.00	Def.	spandrel
437	None	0.00	0.00	Def.	spandrel
438	None	0.00	0.00	Def.	spandrel
439	None	0.00	0.00	Def.	
440	None	0.00	0.00	Def.	
441	None	0.00	0.00	Def.	
442	None	0.00	0.00	Def.	
443	None	0.00	0.00	Def.	Default
444	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
445	None	0.00	0.00	Def.	Default
446	None	0.00	0.00	Def.	spandrel
447	None	0.00	0.00	Def.	spandrel
448	None	0.00	0.00	Def.	
449	None	0.00	0.00	Def.	
450	None	0.00	0.00	Def.	
451	None	0.00	0.00	Def.	spandrel
452	None	0.00	0.00	Def.	
453	None	0.00	0.00	Def.	
454	None	0.00	0.00	Def.	
455	None	0.00	0.00	Def.	
456	None	0.00	0.00	Def.	
457	None	0.00	0.00	Def.	
458	None	0.00	0.00	Def.	
459	None	0.00	0.00	Def.	
460	None	0.00	0.00	Def.	
461	None	0.00	0.00	Def.	
462	None	0.00	0.00	Def.	
463	None	0.00	0.00	Def.	
464	None	0.00	0.00	Def.	Default
465	None	0.00	0.00	Def.	
466	None	0.00	0.00	Def.	
467	None	0.00	0.00	Def.	
468	None	0.00	0.00	Def.	
469	None	0.00	0.00	Def.	
470	None	0.00	0.00	Def.	
471	None	0.00	0.00	Def.	spandrel
472	None	0.00	0.00	Def.	
473	None	0.00	0.00	Def.	
474	None	0.00	0.00	Def.	
475	None	0.00	0.00	Def.	spandrel
476	None	0.00	0.00	Def.	
477	None	0.00	0.00	Def.	
478	None	0.00	0.00	Def.	spandrel
479	None	0.00	0.00	Def.	
480	None	0.00	0.00	Def.	
481	None	0.00	0.00	Def.	
482	None	0.00	0.00	Def.	
483	None	0.00	0.00	Def.	
484	None	0.00	0.00	Def.	
486	None	0.00	0.00	Def.	spandrel
487	None	0.00	0.00	Def.	
488	None	0.00	0.00	Def.	
489	None	0.00	0.00	Def.	
490	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
491	None	0.00	0.00	Def.	
492	None	0.00	0.00	Def.	
493	None	0.00	0.00	Def.	
494	None	0.00	0.00	Def.	Default
495	None	0.00	0.00	Def.	
496	None	0.00	0.00	Def.	
497	None	0.00	0.00	Def.	
498	None	0.00	0.00	Def.	
499	None	0.00	0.00	Def.	
500	None	0.00	0.00	Def.	
501	None	0.00	0.00	Def.	
502	None	0.00	0.00	Def.	
503	None	0.00	0.00	Def.	
504	None	0.00	0.00	Def.	
505	None	0.00	0.00	Def.	
506	None	0.00	0.00	Def.	
507	None	0.00	0.00	Def.	spandrel
508	None	0.00	0.00	Def.	
509	None	0.00	0.00	Def.	spandrel
510	None	0.00	0.00	Def.	
511	None	0.00	0.00	Def.	
512	None	0.00	0.00	Def.	
513	None	0.00	0.00	Def.	
514	None	0.00	0.00	Def.	
515	None	0.00	0.00	Def.	
516	None	0.00	0.00	Def.	
517	None	0.00	0.00	Def.	
518	None	0.00	0.00	Def.	
519	None	0.00	0.00	Def.	
520	None	0.00	0.00	Def.	
521	None	0.00	0.00	Def.	
522	None	0.00	0.00	Def.	
523	None	0.00	0.00	Def.	
524	None	0.00	0.00	Def.	
526	None	0.00	0.00	Def.	spandrel
527	None	0.00	0.00	Def.	
528	None	0.00	0.00	Def.	
529	None	0.00	0.00	Def.	spandrel
530	None	0.00	0.00	Def.	
531	None	0.00	0.00	Def.	
532	None	0.00	0.00	Def.	
533	None	0.00	0.00	Def.	
534	None	0.00	0.00	Def.	
535	None	0.00	0.00	Def.	
536	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
537	None	0.00	0.00	Def.	
538	None	0.00	0.00	Def.	
539	None	0.00	0.00	Def.	
540	None	0.00	0.00	Def.	
541	None	0.00	0.00	Def.	
542	None	0.00	0.00	Def.	
543	None	0.00	0.00	Def.	spandrel
544	None	0.00	0.00	Def.	
545	None	0.00	0.00	Def.	
546	None	0.00	0.00	Def.	
547	None	0.00	0.00	Def.	spandrel
548	None	0.00	0.00	Def.	
549	None	0.00	0.00	Def.	
550	None	0.00	0.00	Def.	
551	None	0.00	0.00	Def.	
552	None	0.00	0.00	Def.	
553	None	0.00	0.00	Def.	
554	None	0.00	0.00	Def.	
555	None	0.00	0.00	Def.	
556	None	0.00	0.00	Def.	
557	None	0.00	0.00	Def.	spandrel
558	None	0.00	0.00	Def.	
559	None	0.00	0.00	Def.	
560	None	0.00	0.00	Def.	
561	None	0.00	0.00	Def.	spandrel
562	None	0.00	0.00	Def.	
563	None	0.00	0.00	Def.	
564	None	0.00	0.00	Def.	
565	None	0.00	0.00	Def.	
566	None	0.00	0.00	Def.	
567	None	0.00	0.00	Def.	
568	None	0.00	0.00	Def.	
569	None	0.00	0.00	Def.	spandrel
570	None	0.00	0.00	Def.	
571	None	0.00	0.00	Def.	spandrel
572	None	0.00	0.00	Def.	
573	None	0.00	0.00	Def.	spandrel
574	None	0.00	0.00	Def.	
575	None	0.00	0.00	Def.	
576	None	0.00	0.00	Def.	spandrel
577	None	0.00	0.00	Def.	spandrel
578	None	0.00	0.00	Def.	spandrel
579	None	0.00	0.00	Def.	spandrel
582	None	0.00	0.00	Def.	
583	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
584	None	0.00	0.00	Def.	
585	None	0.00	0.00	Def.	
586	None	0.00	0.00	Def.	
587	None	0.00	0.00	Def.	
588	None	0.00	0.00	Def.	
589	None	0.00	0.00	Def.	spandrel
591	None	0.00	0.00	Def.	
592	None	0.00	0.00	Def.	
594	None	0.00	0.00	Def.	
595	None	0.00	0.00	Def.	
597	None	0.00	0.00	Def.	
598	None	0.00	0.00	Def.	
599	None	0.00	0.00	Def.	
600	None	0.00	0.00	Def.	
601	None	0.00	0.00	Def.	
602	None	0.00	0.00	Def.	
603	None	0.00	0.00	Def.	
604	None	0.00	0.00	Def.	spandrel
606	None	0.00	0.00	Def.	
607	None	0.00	0.00	Def.	
608	None	0.00	0.00	Def.	
609	None	0.00	0.00	Def.	
610	None	0.00	0.00	Def.	
611	None	0.00	0.00	Def.	
612	None	0.00	0.00	Def.	
613	None	0.00	0.00	Def.	
615	None	0.00	0.00	Def.	
616	None	0.00	0.00	Def.	
617	None	0.00	0.00	Def.	
618	None	0.00	0.00	Def.	spandrel
619	None	0.00	0.00	Def.	spandrel
620	None	0.00	0.00	Def.	spandrel
621	None	0.00	0.00	Def.	
622	None	0.00	0.00	Def.	
624	None	0.00	0.00	Def.	
625	None	0.00	0.00	Def.	spandrel
626	None	0.00	0.00	Def.	
627	None	0.00	0.00	Def.	spandrel
628	None	0.00	0.00	Def.	spandrel
630	None	0.00	0.00	Def.	
631	None	0.00	0.00	Def.	
633	None	0.00	0.00	Def.	
634	None	0.00	0.00	Def.	
635	None	0.00	0.00	Def.	
636	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
637	None	0.00	0.00	Def.	
638	None	0.00	0.00	Def.	
639	None	0.00	0.00	Def.	
640	None	0.00	0.00	Def.	spandrel
642	None	0.00	0.00	Def.	
643	None	0.00	0.00	Def.	spandrel
644	None	0.00	0.00	Def.	spandrel
645	None	0.00	0.00	Def.	
647	None	0.00	0.00	Def.	
648	None	0.00	0.00	Def.	
649	None	0.00	0.00	Def.	
650	None	0.00	0.00	Def.	
651	None	0.00	0.00	Def.	spandrel
652	None	0.00	0.00	Def.	spandrel
653	None	0.00	0.00	Def.	
654	None	0.00	0.00	Def.	spandrel
655	None	0.00	0.00	Def.	spandrel
656	None	0.00	0.00	Def.	
658	None	0.00	0.00	Def.	spandrel
660	None	0.00	0.00	Def.	
661	None	0.00	0.00	Def.	
662	None	0.00	0.00	Def.	
663	None	0.00	0.00	Def.	spandrel
664	None	0.00	0.00	Def.	
665	None	0.00	0.00	Def.	spandrel
666	None	0.00	0.00	Def.	
667	None	0.00	0.00	Def.	
668	None	0.00	0.00	Def.	spandrel
670	None	0.00	0.00	Def.	spandrel
671	None	0.00	0.00	Def.	
672	None	0.00	0.00	Def.	
673	None	0.00	0.00	Def.	
674	None	0.00	0.00	Def.	
677	None	0.00	0.00	Def.	
678	None	0.00	0.00	Def.	spandrel
679	None	0.00	0.00	Def.	
680	None	0.00	0.00	Def.	
681	None	0.00	0.00	Def.	
683	None	0.00	0.00	Def.	
684	None	0.00	0.00	Def.	
685	None	0.00	0.00	Def.	
686	None	0.00	0.00	Def.	spandrel
687	None	0.00	0.00	Def.	
688	None	0.00	0.00	Def.	
689	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
690	None	0.00	0.00	Def.	
691	None	0.00	0.00	Def.	spandrel
692	None	0.00	0.00	Def.	
693	None	0.00	0.00	Def.	
694	None	0.00	0.00	Def.	
695	None	0.00	0.00	Def.	spandrel
696	None	0.00	0.00	Def.	
697	None	0.00	0.00	Def.	
700	None	0.00	0.00	Def.	
701	None	0.00	0.00	Def.	
702	None	0.00	0.00	Def.	
703	None	0.00	0.00	Def.	
704	None	0.00	0.00	Def.	
705	None	0.00	0.00	Def.	
706	None	0.00	0.00	Def.	spandrel
707	None	0.00	0.00	Def.	
708	None	0.00	0.00	Def.	spandrel
712	None	0.00	0.00	Def.	spandrel
713	None	0.00	0.00	Def.	
714	None	0.00	0.00	Def.	
715	None	0.00	0.00	Def.	
716	None	0.00	0.00	Def.	
717	None	0.00	0.00	Def.	
718	None	0.00	0.00	Def.	
719	None	0.00	0.00	Def.	
721	None	0.00	0.00	Def.	
722	None	0.00	0.00	Def.	
723	None	0.00	0.00	Def.	
724	None	0.00	0.00	Def.	spandrel
725	None	0.00	0.00	Def.	
726	None	0.00	0.00	Def.	
727	None	0.00	0.00	Def.	spandrel
728	None	0.00	0.00	Def.	spandrel
729	None	0.00	0.00	Def.	
730	None	0.00	0.00	Def.	
731	None	0.00	0.00	Def.	
732	None	0.00	0.00	Def.	spandrel
733	None	0.00	0.00	Def.	
734	None	0.00	0.00	Def.	
735	None	0.00	0.00	Def.	
736	None	0.00	0.00	Def.	spandrel
737	None	0.00	0.00	Def.	
738	None	0.00	0.00	Def.	
739	None	0.00	0.00	Def.	
740	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
741	None	0.00	0.00	Def.	spandrel
742	None	0.00	0.00	Def.	
743	None	0.00	0.00	Def.	spandrel
744	None	0.00	0.00	Def.	spandrel
745	None	0.00	0.00	Def.	
746	None	0.00	0.00	Def.	
747	None	0.00	0.00	Def.	
748	None	0.00	0.00	Def.	spandrel
749	None	0.00	0.00	Def.	spandrel
750	None	0.00	0.00	Def.	spandrel
751	None	0.00	0.00	Def.	
752	None	0.00	0.00	Def.	
753	None	0.00	0.00	Def.	
754	None	0.00	0.00	Def.	
755	None	0.00	0.00	Def.	
756	None	0.00	0.00	Def.	
758	None	0.00	0.00	Def.	
759	None	0.00	0.00	Def.	
760	None	0.00	0.00	Def.	
761	None	0.00	0.00	Def.	
764	None	0.00	0.00	Def.	
765	None	0.00	0.00	Def.	
766	None	0.00	0.00	Def.	
767	None	0.00	0.00	Def.	
768	None	0.00	0.00	Def.	
769	None	0.00	0.00	Def.	
770	None	0.00	0.00	Def.	
772	None	0.00	0.00	Def.	
774	None	0.00	0.00	Def.	
776	None	0.00	0.00	Def.	
777	None	0.00	0.00	Def.	
778	None	0.00	0.00	Def.	
779	None	0.00	0.00	Def.	
780	None	0.00	0.00	Def.	
781	None	0.00	0.00	Def.	
782	None	0.00	0.00	Def.	
783	None	0.00	0.00	Def.	
784	None	0.00	0.00	Def.	
785	None	0.00	0.00	Def.	
786	None	0.00	0.00	Def.	
787	None	0.00	0.00	Def.	
788	None	0.00	0.00	Def.	
789	None	0.00	0.00	Def.	
790	None	0.00	0.00	Def.	
791	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
792	None	0.00	0.00	Def.	
793	None	0.00	0.00	Def.	
800	None	0.00	0.00	Def.	
801	None	0.00	0.00	Def.	
802	None	0.00	0.00	Def.	
803	None	0.00	0.00	Def.	
804	None	0.00	0.00	Def.	
805	None	0.00	0.00	Def.	
806	None	0.00	0.00	Def.	
807	None	0.00	0.00	Def.	
808	None	0.00	0.00	Def.	
809	None	0.00	0.00	Def.	
810	None	0.00	0.00	Def.	
811	None	0.00	0.00	Def.	
812	None	0.00	0.00	Def.	
813	None	0.00	0.00	Def.	
814	None	0.00	0.00	Def.	
815	None	0.00	0.00	Def.	
816	None	0.00	0.00	Def.	
817	None	0.00	0.00	Def.	
818	None	0.00	0.00	Def.	
819	None	0.00	0.00	Def.	
820	None	0.00	0.00	Def.	
821	None	0.00	0.00	Def.	
822	None	0.00	0.00	Def.	
823	None	0.00	0.00	Def.	
824	None	0.00	0.00	Def.	
826	None	0.00	0.00	Def.	
827	None	0.00	0.00	Def.	
828	None	0.00	0.00	Def.	
829	None	0.00	0.00	Def.	
830	None	0.00	0.00	Def.	
831	None	0.00	0.00	Def.	
832	None	0.00	0.00	Def.	
833	None	0.00	0.00	Def.	
834	None	0.00	0.00	Def.	
835	None	0.00	0.00	Def.	
836	None	0.00	0.00	Def.	
837	None	0.00	0.00	Def.	spandrel
838	None	0.00	0.00	Def.	
840	None	0.00	0.00	Def.	
841	None	0.00	0.00	Def.	
843	None	0.00	0.00	Def.	
844	None	0.00	0.00	Def.	
851	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
852	None	0.00	0.00	Def.	
853	None	0.00	0.00	Def.	
854	None	0.00	0.00	Def.	
855	None	0.00	0.00	Def.	
856	None	0.00	0.00	Def.	
857	None	0.00	0.00	Def.	
858	None	0.00	0.00	Def.	
859	None	0.00	0.00	Def.	
860	None	0.00	0.00	Def.	
861	None	0.00	0.00	Def.	
862	None	0.00	0.00	Def.	
866	None	0.00	0.00	Def.	
867	None	0.00	0.00	Def.	
868	None	0.00	0.00	Def.	
870	None	0.00	0.00	Def.	
871	None	0.00	0.00	Def.	
873	None	0.00	0.00	Def.	
874	None	0.00	0.00	Def.	
875	None	0.00	0.00	Def.	
876	None	0.00	0.00	Def.	
877	None	0.00	0.00	Def.	
878	None	0.00	0.00	Def.	
879	None	0.00	0.00	Def.	
880	None	0.00	0.00	Def.	
881	None	0.00	0.00	Def.	
882	None	0.00	0.00	Def.	
883	None	0.00	0.00	Def.	
884	None	0.00	0.00	Def.	
885	None	0.00	0.00	Def.	
886	None	0.00	0.00	Def.	
887	None	0.00	0.00	Def.	
888	None	0.00	0.00	Def.	
889	None	0.00	0.00	Def.	
890	None	0.00	0.00	Def.	
891	None	0.00	0.00	Def.	
893	None	0.00	0.00	Def.	
894	None	0.00	0.00	Def.	
895	None	0.00	0.00	Def.	
896	None	0.00	0.00	Def.	
897	None	0.00	0.00	Def.	
898	None	0.00	0.00	Def.	
899	None	0.00	0.00	Def.	
900	None	0.00	0.00	Def.	
901	None	0.00	0.00	Def.	
902	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
903	None	0.00	0.00	Def.	
904	None	0.00	0.00	Def.	
905	None	0.00	0.00	Def.	
906	None	0.00	0.00	Def.	
907	None	0.00	0.00	Def.	
908	None	0.00	0.00	Def.	
909	None	0.00	0.00	Def.	
910	None	0.00	0.00	Def.	
911	None	0.00	0.00	Def.	
912	None	0.00	0.00	Def.	
913	None	0.00	0.00	Def.	
914	None	0.00	0.00	Def.	
915	None	0.00	0.00	Def.	
916	None	0.00	0.00	Def.	
917	None	0.00	0.00	Def.	
920	None	0.00	0.00	Def.	
921	None	0.00	0.00	Def.	
922	None	0.00	0.00	Def.	
923	None	0.00	0.00	Def.	
924	None	0.00	0.00	Def.	
925	None	0.00	0.00	Def.	
926	None	0.00	0.00	Def.	
927	None	0.00	0.00	Def.	
928	None	0.00	0.00	Def.	
929	None	0.00	0.00	Def.	
930	None	0.00	0.00	Def.	
934	None	0.00	0.00	Def.	
935	None	0.00	0.00	Def.	
936	None	0.00	0.00	Def.	
937	None	0.00	0.00	Def.	
938	None	0.00	0.00	Def.	
939	None	0.00	0.00	Def.	
940	None	0.00	0.00	Def.	
941	None	0.00	0.00	Def.	
942	None	0.00	0.00	Def.	
943	None	0.00	0.00	Def.	
944	None	0.00	0.00	Def.	
946	None	0.00	0.00	Def.	
947	None	0.00	0.00	Def.	
948	None	0.00	0.00	Def.	
949	None	0.00	0.00	Def.	
950	None	0.00	0.00	Def.	
951	None	0.00	0.00	Def.	
952	None	0.00	0.00	Def.	
953	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
954	None	0.00	0.00	Def.	
955	None	0.00	0.00	Def.	
956	None	0.00	0.00	Def.	
958	None	0.00	0.00	Def.	
959	None	0.00	0.00	Def.	
960	None	0.00	0.00	Def.	
961	None	0.00	0.00	Def.	
962	None	0.00	0.00	Def.	
963	None	0.00	0.00	Def.	
965	None	0.00	0.00	Def.	
966	None	0.00	0.00	Def.	
967	None	0.00	0.00	Def.	
968	None	0.00	0.00	Def.	
969	None	0.00	0.00	Def.	
970	None	0.00	0.00	Def.	
971	None	0.00	0.00	Def.	
972	None	0.00	0.00	Def.	
973	None	0.00	0.00	Def.	
974	None	0.00	0.00	Def.	
975	None	0.00	0.00	Def.	
976	None	0.00	0.00	Def.	
977	None	0.00	0.00	Def.	

Slab Edges:

Xi ft	Yi ft	Xj ft	Yj ft	Edge Dist in
Diaphragm 1:				
0.000	197.000	0.000	200.000	24.0
-8.000	200.000	0.000	200.000	24.0
-8.000	200.000	-8.000	205.330	24.0
-8.000	205.330	0.000	205.330	24.0
0.000	205.330	0.000	208.330	24.0
0.000	208.330	0.000	243.330	24.0
0.000	243.330	0.000	276.340	24.0
0.000	276.340	0.000	317.000	24.0
0.000	317.000	23.830	317.000	24.0
23.830	317.000	44.250	317.000	24.0
44.250	317.000	63.000	317.000	24.0
63.000	317.000	87.330	317.000	24.0
87.330	317.000	87.330	325.000	24.0
87.330	325.000	115.670	325.000	24.0
115.670	325.000	137.850	325.000	24.0
137.850	325.000	165.200	325.000	24.0
165.200	325.000	187.200	325.000	24.0
187.200	325.000	215.330	325.000	24.0
215.330	325.000	229.330	325.000	24.0

Xi	Yi	Xj	Yj	Edge Dist
229.330	288.083	229.330	325.000	24.0
229.330	278.500	229.330	288.083	24.0
229.330	278.500	230.330	278.500	24.0
230.330	259.660	230.330	278.500	24.0
230.330	243.330	230.330	259.660	24.0
230.330	225.800	230.330	243.330	24.0
230.330	205.830	230.330	225.800	24.0
230.330	205.830	252.830	205.830	24.0
252.830	197.628	252.830	205.830	24.0
252.830	197.628	270.248	202.295	24.0
269.301	205.830	270.248	202.295	24.0
262.573	230.939	269.301	205.830	24.0
254.877	259.660	262.573	230.939	24.0
249.830	278.500	254.877	259.660	24.0
249.830	278.500	260.991	289.659	24.0
253.396	318.004	260.991	289.659	24.0
253.396	318.004	249.830	336.240	24.0
249.830	336.240	263.001	349.411	24.0
263.001	349.411	279.851	366.262	24.0
279.851	366.262	298.356	384.767	24.0
298.356	384.767	313.559	399.969	24.0
313.559	399.969	348.914	435.325	24.0
348.914	435.325	364.259	450.669	24.0
364.259	450.669	376.018	462.428	24.0
376.018	462.428	396.524	441.922	24.0
396.524	441.922	404.889	433.557	24.0
404.889	433.557	411.960	440.628	24.0
411.960	440.628	423.055	429.534	24.0
415.983	422.463	423.055	429.534	24.0
401.375	407.854	415.983	422.463	24.0
388.880	395.359	401.375	407.854	24.0
377.786	406.454	388.880	395.359	24.0
342.430	371.098	377.786	406.454	24.0
327.227	355.895	342.430	371.098	24.0
312.025	340.693	327.227	355.895	24.0
291.872	320.540	312.025	340.693	24.0
291.872	320.540	311.120	301.293	24.0
311.120	301.293	326.400	286.012	24.0
326.400	286.012	344.884	267.528	24.0
344.884	267.528	363.057	249.356	24.0
363.057	249.356	383.209	269.508	24.0
383.209	269.508	398.412	284.711	24.0
398.412	284.711	413.615	299.914	24.0
413.615	299.914	448.970	335.269	24.0
448.970	335.269	462.780	349.079	24.0

Xi	Yi	Xj	Yj	Edge Dist
462.780	349.079	477.099	363.398	24.0
477.099	363.398	483.144	369.444	24.0
483.144	369.444	487.387	373.686	24.0
487.387	373.686	493.808	367.266	24.0
493.808	367.266	519.087	341.987	24.0
508.798	331.698	519.087	341.987	24.0
494.479	317.379	508.798	331.698	24.0
476.780	299.680	494.479	317.379	24.0
445.314	268.214	476.780	299.680	24.0
430.111	253.011	445.314	268.214	24.0
418.090	240.990	430.111	253.011	24.0
393.852	240.990	418.090	240.990	24.0
368.000	240.990	393.852	240.990	24.0
368.000	216.660	368.000	240.990	24.0
368.000	192.660	368.000	216.660	24.0
368.000	192.660	397.410	192.660	24.0
397.410	192.660	425.910	192.660	24.0
425.910	192.660	454.660	192.660	24.0
454.660	192.660	482.910	192.660	24.0
482.910	192.660	510.660	192.660	24.0
510.660	160.910	510.660	192.660	24.0
510.660	137.531	510.660	160.910	24.0
489.604	131.890	510.660	137.531	24.0
489.604	131.890	495.966	108.147	24.0
479.314	103.685	495.966	108.147	24.0
451.785	96.309	479.314	103.685	24.0
417.089	87.012	451.785	96.309	24.0
399.702	82.353	417.089	87.012	24.0
365.247	73.121	399.702	82.353	24.0
362.745	82.462	365.247	73.121	24.0
334.491	74.891	362.745	82.462	24.0
306.402	67.365	334.491	74.891	24.0
302.180	83.121	306.402	67.365	24.0
295.816	81.409	302.180	83.121	24.0
289.876	79.818	295.816	81.409	24.0
282.341	77.803	289.876	79.818	24.0
275.338	75.926	282.341	77.803	24.0
267.127	73.726	275.338	75.926	24.0
258.917	71.527	267.127	73.726	24.0
251.914	69.650	258.917	71.527	24.0
244.882	67.767	251.914	69.650	24.0
238.097	65.951	244.882	67.767	24.0
229.330	63.601	238.097	65.951	24.0
229.330	57.539	229.330	63.601	24.0
229.330	52.330	229.330	57.539	24.0

Xi	Yi	Xj	Yj	Edge Dist
229.330	31.830	229.330	52.330	24.0
229.330	0.000	229.330	31.830	24.0
194.080	0.000	229.330	0.000	24.0
175.330	0.000	194.080	0.000	24.0
139.080	0.000	175.330	0.000	24.0
105.830	0.000	139.080	0.000	24.0
77.080	0.000	105.830	0.000	24.0
47.830	0.000	77.080	0.000	24.0
19.194	0.000	47.830	0.000	24.0
13.353	21.799	19.194	0.000	24.0
6.994	45.532	13.353	21.799	24.0
6.994	45.532	30.186	51.746	24.0
23.366	77.198	30.186	51.746	24.0
23.366	77.198	50.412	84.445	24.0
50.412	84.445	77.941	91.821	24.0
77.941	91.821	105.953	99.327	24.0
105.953	99.327	133.481	106.703	24.0
133.481	106.703	155.775	112.677	24.0
155.775	112.677	177.586	118.521	24.0
177.586	118.521	189.000	121.430	24.0
189.000	121.430	213.110	121.430	24.0
213.110	121.430	230.330	121.430	24.0
230.330	121.430	238.010	121.430	24.0
238.010	104.305	238.010	121.430	24.0
238.010	104.305	267.734	104.305	24.0
267.734	104.305	304.574	114.177	24.0
301.662	125.043	304.574	114.177	24.0
291.665	122.365	301.662	125.043	24.0
284.290	149.890	291.665	122.365	24.0
281.337	160.910	284.290	149.890	24.0
260.445	160.910	281.337	160.910	24.0
230.330	160.910	260.445	160.910	24.0
230.330	160.910	230.330	163.660	24.0
189.000	163.660	230.330	163.660	24.0
168.830	163.660	189.000	163.660	24.0
137.850	163.660	168.830	163.660	24.0
120.330	163.660	137.850	163.660	24.0
106.830	163.660	120.330	163.660	24.0
87.330	163.660	106.830	163.660	24.0
63.000	163.660	87.330	163.660	24.0
41.920	163.660	63.000	163.660	24.0
21.920	163.660	41.920	163.660	24.0
0.000	163.660	21.920	163.660	24.0
0.000	163.660	0.000	197.000	24.0

Slab Openings:

Xi	Yi	Xj	Yj	Edge Dist
ft	ft	ft	ft	in
48.601	45.147	50.682	37.380	12.0
50.682	37.380	66.170	37.380	12.0
66.170	37.380	87.469	43.087	12.0
84.350	54.726	87.469	43.087	12.0
48.601	45.147	84.350	54.726	12.0
439.185	143.330	482.910	143.330	12.0
482.910	143.330	482.910	154.330	12.0
436.238	154.330	482.910	154.330	12.0
436.238	154.330	439.185	143.330	12.0
142.580	52.330	142.580	64.749	12.0
126.227	60.367	142.580	64.749	12.0
126.227	60.367	128.380	52.330	12.0
128.380	52.330	139.080	52.330	12.0
139.080	52.330	142.580	52.330	12.0
333.024	137.163	341.717	139.493	12.0
341.717	139.493	344.357	129.640	12.0
335.664	127.311	344.357	129.640	12.0
333.024	137.163	335.664	127.311	12.0
60.000	243.330	60.000	278.500	12.0
60.000	278.500	87.330	278.500	12.0
87.330	278.500	106.830	278.500	12.0
106.830	278.500	120.330	278.500	12.0
120.330	278.500	146.330	278.500	12.0
146.330	278.500	168.830	278.500	12.0
168.830	278.500	187.200	278.500	12.0
187.200	278.500	215.330	278.500	12.0
215.330	278.500	222.110	278.500	12.0
222.110	254.970	222.110	278.500	12.0
216.380	254.970	222.110	254.970	12.0
216.380	233.920	216.380	254.970	12.0
216.380	233.920	222.205	233.920	12.0
222.137	215.630	222.205	233.920	12.0
216.537	215.630	222.137	215.630	12.0
216.537	208.330	216.537	215.630	12.0
215.330	208.330	216.537	208.330	12.0
189.000	208.330	215.330	208.330	12.0
168.830	208.330	189.000	208.330	12.0
146.330	208.330	168.830	208.330	12.0
120.330	208.330	146.330	208.330	12.0
106.830	208.330	120.330	208.330	12.0
87.330	208.330	106.830	208.330	12.0
60.000	208.330	87.330	208.330	12.0
60.000	208.330	60.000	243.330	12.0

Deck Polygons:

Deck Prop Type	ID	Slab Action	Angle	X-Coord ft	Y-Coord ft
Noncomposite	1	One-Way	0.00	191.00	210.33
				215.33	210.33
				215.54	208.33
				222.11	208.33
				222.11	179.44
				230.33	179.44
				230.33	161.66
				-2.00	161.66
				-2.00	198.00
				-10.00	198.00
				-10.00	207.33
				-2.00	207.33
				-2.00	319.00
				85.33	319.00
				85.33	327.00
				227.33	327.00
				227.33	363.00
				250.56	363.00
				250.56	339.80
				249.83	336.24
				249.83	278.50
				248.30	276.50
				62.00	276.50
				62.00	210.33
				191.00	210.33
Noncomposite	1	One-Way	45.00	269.30	205.83
				267.23	205.83
				248.30	276.50
				249.83	278.50
				249.83	336.24
				249.56	337.38
				376.02	465.26
				404.89	436.39
				411.96	443.46
				435.45	425.62
				388.88	392.53
				377.79	403.63
				294.70	320.54
				360.50	259.66
				468.26	372.24
				457.80	393.37
				463.46	399.03
				521.92	341.99

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
				418.92	238.99
				370.00	238.99
				370.00	194.66
				368.00	192.66
				332.18	192.66
				328.65	205.83
				269.30	205.83
Composite	1	One-Way	15.00	11.42	21.28
				4.54	46.95
				27.74	53.16
				20.92	78.61
				188.75	123.43
				240.01	123.43
				240.01	106.31
				267.47	106.31
				302.12	115.59
				300.00	121.43
				290.25	119.92
				282.22	149.89
				400.24	149.89
				400.24	160.91
				434.47	160.91
				436.24	154.33
				437.54	153.33
				439.95	144.33
				481.91	144.33
				481.91	153.33
				482.91	154.33
				482.91	160.91
				512.66	160.91
				512.66	136.00
				490.83	131.18
				498.42	106.73
				363.83	70.67
				361.33	80.01
				304.99	64.92
				300.77	80.67
				231.33	62.07
				231.33	52.33
				113.95	52.33
				113.95	31.83
				35.52	31.83
				35.52	27.74
				11.42	21.28
Composite	1	One-Way	0.00	35.52	31.83

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
				35.52	27.74
				12.39	21.54
				18.43	-1.00
				230.33	-1.00
				230.33	52.33
				113.95	52.33
				113.95	31.83
				35.52	31.83
Composite	1	One-Way	0.00	512.66	160.91
				482.91	160.91
				482.91	154.33
				481.91	153.33
				437.54	153.33
				436.24	154.33
				434.47	160.91
				400.24	160.91
				400.24	149.89
				282.22	149.89
				279.80	158.91
				228.33	158.91
				228.33	177.44
				220.11	177.44
				220.11	207.33
				215.53	207.33
				215.61	216.63
				220.14	216.63
				220.20	231.92
				214.38	231.92
				214.38	256.97
				221.20	256.97
				221.20	276.50
				232.33	276.50
				232.33	254.97
				232.33	207.83
				254.83	207.83
				254.83	200.23
				267.80	203.71
				267.23	205.83
				268.26	205.83
				328.65	205.83
				332.18	192.66
				368.00	192.66
				370.00	194.66
				512.66	194.66
				512.66	160.91

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
Noncomposite	1	One-Way	15.00	229.33	63.60
				229.33	79.67
				298.16	98.11
				302.70	81.19
				229.33	61.53
				229.33	63.60
Composite	2	One-Way	0.00	215.33	210.33
				63.00	210.33
				63.00	174.16
				215.33	174.16
				215.33	210.33
Composite	2	One-Way	0.00	62.00	276.50
				63.00	276.50
				63.00	282.73
				23.83	282.73
				23.83	197.00
				63.00	197.00
				63.00	210.33
				62.00	210.33
				62.00	276.50
Composite	2	One-Way	45.00	487.39	376.51
				509.19	354.71
				400.29	245.82
				378.49	267.62
				487.39	376.51
Composite	2	One-Way	45.00	248.30	276.50
				291.87	320.54
				294.70	320.54
				363.06	252.18
				363.06	249.36
				367.62	244.79
				328.65	205.83
				267.23	205.83
				248.30	276.50

Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft
TYP ROOF	-2.00	161.66
	-2.00	198.00
	-10.00	198.00
	-10.00	207.33
	-2.00	207.33
	-2.00	319.00
	85.33	319.00
	85.33	327.00

Load Properties ID	X-Coord	Y-Coord
	227.33	327.00
	227.33	363.00
	250.56	363.00
	252.83	343.00
	376.02	465.26
	404.89	436.39
	411.96	443.46
	435.45	425.62
	388.88	392.53
	377.79	403.63
	306.32	322.02
	360.50	259.66
	467.23	371.21
	457.80	393.37
	487.39	376.51
	521.92	341.99
	425.91	231.66
	380.75	231.66
	382.93	205.83
	512.66	206.33
	512.66	136.00
	492.05	130.48
	498.42	106.73
	363.83	70.67
	361.33	80.01
	304.99	64.92
	300.77	80.67
	294.10	78.88
	260.88	69.98
	242.88	65.16
	231.33	62.07
	231.33	-2.00
	17.66	-2.00
	4.54	46.95
	27.74	53.16
	20.92	78.61
	177.08	120.46
	188.75	123.43
	240.01	123.43
	240.01	98.95
	253.45	101.51
	251.74	107.88
	258.21	109.61
	259.91	103.24
	303.35	114.88

Load Properties ID	X-Coord	Y-Coord
	300.96	123.82
	290.96	121.14
	279.80	158.91
	228.33	158.91
	228.33	161.66
	191.00	161.66
	-2.00	161.66
TYP CLASSROOOM	240.01	123.43
	188.75	123.43
	20.92	78.61
	27.74	53.16
	4.54	46.95
	17.66	-2.00
	231.33	-2.00
	231.33	62.07
	229.33	79.67
	297.20	97.85
	300.77	80.67
	304.99	64.92
	361.33	80.01
	363.83	70.67
	498.42	106.73
	492.05	130.48
	512.66	136.00
	512.66	194.66
	370.00	194.66
	368.00	192.66
	270.76	192.66
	272.83	160.91
	290.25	119.92
	300.25	122.59
	302.12	115.59
	240.01	98.95
	240.01	123.43
TYP CORRIDOR	230.33	99.65
	179.24	85.96
	178.22	89.31
	160.83	84.65
	161.74	81.27
	121.41	70.46
	120.50	73.84
	104.89	69.80
	105.83	66.29
	66.35	55.71
	65.45	59.09

Load Properties ID	X-Coord	Y-Coord
	49.51	54.82
	50.41	51.44
	31.62	46.40
	35.52	31.83
	105.83	31.83
	105.83	41.83
	231.33	41.83
	231.33	52.33
	113.95	52.33
	113.95	57.08
	230.30	88.25
	230.33	99.65
TYP CORRIDOR	298.16	98.11
	294.06	113.43
	267.47	106.31
	240.01	106.31
	240.01	102.24
	230.33	99.65
	229.33	87.99
	229.33	79.67
	298.16	98.11
TYP CANOPY	229.33	79.67
	297.20	97.85
	300.77	80.67
	231.33	62.07
	229.33	79.67
TYP CORRIDOR	294.06	113.43
	329.16	121.80
	330.16	118.07
	439.16	147.28
	442.01	136.65
	298.16	98.11
	294.06	113.43
TYP CORRIDOR	329.16	121.80
	325.81	134.31
	290.00	124.71
	290.42	119.28
	300.25	122.59
	302.12	115.59
	329.16	121.80
TYP CORRIDOR	310.96	130.33
	305.72	149.89
	400.24	149.89
	403.50	137.72
	439.16	147.28

Load Properties ID	X-Coord	Y-Coord
	435.51	160.91
	405.52	160.91
	405.52	164.41
	389.02	164.41
	389.02	160.91
	368.00	160.91
	368.00	164.41
	360.50	164.41
	360.50	160.91
	281.34	160.91
	279.80	158.91
	290.25	119.92
	310.96	130.33
TYP CORRIDOR	441.04	136.39
	443.35	127.80
	462.45	132.92
	463.36	129.54
	479.30	133.81
	478.39	137.19
	488.54	139.91
	490.83	131.18
	492.05	130.48
	500.16	132.65
	492.44	160.91
	435.51	160.91
	437.54	153.33
	481.91	153.33
	481.91	144.33
	439.95	144.33
	441.04	136.39
TYP MEDIA CENTER	299.41	205.83
	328.65	205.83
	341.72	160.91
	281.34	160.91
	279.80	158.91
	228.33	158.91
	228.33	177.44
	220.11	177.44
	220.11	210.33
	232.33	210.33
	232.33	207.83
	254.83	207.83
	254.83	200.23
	267.80	203.71
	267.23	205.83

Load Properties ID	X-Coord	Y-Coord
	299.41	205.83
MECHANICAL ROOF	63.00	210.33
	63.00	173.66
	215.33	174.16
	215.33	210.33
	63.00	210.33
MECHANICAL ROOF	63.00	283.03
	23.83	283.03
	23.83	193.20
	63.00	193.20
	63.00	210.33
	62.00	210.33
	62.00	276.50
	63.00	276.50
	63.00	283.03
MECHANICAL ROOF	291.87	320.54
	248.20	276.87
	267.23	205.83
	328.65	205.83
	369.48	242.94
	363.06	249.36
	363.06	252.18
	294.70	320.54
	291.87	320.54
MECHANICAL ROOF	487.39	376.51
	509.19	354.71
	400.29	245.82
	378.49	267.62
	487.39	376.51

User Input Line Loads:

Load Properties ID	Xi ft	Yi ft	Xj ft	Yj ft
2W1	60.00	208.33	120.33	208.33
2W1	60.00	208.33	60.00	278.50
2W1	60.00	278.50	120.33	278.50
2W2	120.33	278.50	229.33	278.50
2W2	249.83	278.50	262.52	231.13
2W2	269.30	205.83	328.65	205.83
2W2	328.65	205.83	332.18	192.66
2W3	332.18	192.66	510.66	192.66
2W3	510.66	137.53	510.66	192.66
2W3	489.60	131.89	510.66	137.53
2W3	489.60	131.89	495.97	108.15
2W3	365.25	73.12	495.97	108.15
2W3	362.74	82.46	365.25	73.12

Load Properties ID	Xi	Yi	Xj	Yj
2W3	306.40	67.36	362.74	82.46
2W3	298.16	98.11	306.40	67.36
2W3	229.33	79.67	298.16	98.11
2W3	229.33	52.33	229.33	79.67
2W3	229.33	0.00	229.33	52.33
2W3	19.19	0.00	229.33	0.00
2W3	6.99	45.53	19.19	0.00
2W3	6.99	45.53	30.19	51.75
2W3	23.37	77.20	30.19	51.75
2W3	23.37	77.20	189.00	121.43
2W3	189.00	121.43	238.01	121.43
2W3	281.34	160.91	291.67	122.36
2W3	230.33	160.91	281.34	160.91
2W3	230.33	160.91	230.33	179.44
2W3	222.11	179.44	230.33	179.44
2W3	222.11	179.44	222.11	208.33
2W2	120.33	208.33	222.11	208.33
2W4	189.00	163.66	189.00	208.33
2W5	363.06	249.36	448.97	335.27
2W5	291.87	320.54	363.06	249.36
2W5	291.87	320.54	377.79	406.45
2W5	377.79	406.45	388.88	395.36
2W6	423.05	429.53	483.14	369.44
2W6	448.97	335.27	483.14	369.44
2W6	388.88	395.36	448.97	335.27
SW2+2S1	262.57	230.94	270.25	202.29
2S2	252.83	197.63	270.25	202.29
2S3	436.24	154.33	482.91	154.33
2S3	439.19	143.33	482.91	143.33
2S4	482.91	143.33	482.91	154.33
2S4	436.24	154.33	439.19	143.33
2S7	84.35	54.73	87.47	43.09
2S7	48.60	45.15	51.72	33.51
2S8	51.72	33.51	87.47	43.09
2S8	48.60	45.15	84.35	54.73
2W6	388.88	395.36	423.05	429.53
2W2	253.40	318.00	260.99	289.66
2W2	249.83	278.50	260.99	289.66
2W2	249.83	336.24	253.40	318.00
2W2	229.33	278.50	229.33	325.00
2S6	238.01	104.31	267.73	104.31
2W3+2S3	238.01	104.31	238.01	121.43

User Input Point Loads:

Load Properties ID	X-Coord ft	Y-Coord ft
MECH SCREEN	87.33	174.16
MECH SCREEN	93.92	174.16
MECH SCREEN	100.50	174.16
MECH SCREEN	106.83	174.16
MECH SCREEN	113.58	174.16
MECH SCREEN	120.33	174.16
MECH SCREEN	129.09	174.16
MECH SCREEN	137.85	174.16
MECH SCREEN	145.59	174.16
MECH SCREEN	153.34	174.16
MECH SCREEN	161.08	174.16
MECH SCREEN	168.83	174.16
MECH SCREEN	178.91	174.16
MECH SCREEN	187.50	174.16
MECH SCREEN	82.82	174.16
MECH SCREEN	82.82	181.76
MECH SCREEN	82.82	189.36
MECH SCREEN	82.82	205.00
MECH SCREEN	82.83	197.00
MECH SCREEN	58.17	202.00
MECH SCREEN	58.17	193.20
MECH SCREEN	47.06	193.20
MECH SCREEN	35.92	193.20
MECH SCREEN	24.92	193.20
MECH SCREEN	24.88	199.75
MECH SCREEN	24.88	206.33
MECH SCREEN	24.83	219.13
MECH SCREEN	24.83	231.13
MECH SCREEN	24.83	243.33
MECH SCREEN	24.83	255.13
MECH SCREEN	24.83	267.12
MECH SCREEN	24.87	279.60
MECH SCREEN	32.15	279.60
MECH SCREEN	39.43	279.60
MECH SCREEN	46.71	279.60
MECH SCREEN	56.58	279.60

Snow Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft	Magnitude Points
TYP. SNOW	215.33	210.33	
	215.33	208.33	

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	222.11	208.33	
	222.11	179.44	
	230.33	179.44	
	230.33	162.10	
	-2.00	161.66	
	-2.00	319.00	
	85.33	319.00	
	85.33	327.00	
	227.33	327.00	
	227.33	363.00	
	250.56	363.00	
	249.83	278.50	
	248.30	276.50	
	62.00	276.50	
	63.00	210.33	
TYP. SNOW	370.00	194.66	
	368.00	192.66	
	332.18	192.66	
	328.65	205.83	
	267.80	203.71	
	248.30	276.50	
	249.83	278.50	
	250.56	339.80	
	376.02	465.26	
	404.89	436.39	
	411.96	443.46	
	425.88	429.53	
	388.88	392.53	
	377.79	403.63	
	294.70	320.54	
	363.06	252.18	
	467.23	371.21	
	457.80	393.37	
	487.39	376.51	
	521.92	341.99	
	418.92	238.99	
	370.00	238.99	
ASECOND1	15.89	282.73	M1
	15.89	206.33	M2
	6.19	206.33	M3
	6.19	279.95	
ASECOND2	60.00	278.50	M1
	60.00	208.33	M2
	48.40	208.33	M3
	48.40	278.50	

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
ASECOND3	15.89	276.34	M1
	226.13	278.50	M2
	213.83	291.30	M3
	15.89	291.30	
ASECOND4	229.33	278.50	M1
	229.33	327.00	M2
	213.33	327.00	M3
	213.33	291.30	
	226.13	278.50	
ASECOND5	222.11	179.44	M1
	222.11	208.33	M2
	197.78	208.33	M3
	197.78	179.44	
ASECOND6	207.31	207.99	M1
	15.89	208.33	M2
	15.89	195.53	M3
	197.78	197.00	
ASECOND1	15.89	208.33	M1
	15.89	276.34	M2
	25.59	278.50	M3
	25.59	208.33	
ASECOND3	15.89	276.34	M1
	60.00	278.50	M2
	48.40	265.70	M3
	25.59	265.70	
ASECOND6	15.89	208.33	M1
	60.00	208.33	M2
	48.40	221.13	M3
	25.59	221.13	
BSECOND1	291.87	320.54	M1
	363.06	249.36	M2
	351.39	237.69	M3
	280.20	308.87	
BSECOND2	376.37	405.04	M1
	388.88	392.53	M2
	393.47	406.76	M3
	385.78	414.45	
BSECOND3	377.79	406.45	M1
	291.87	320.54	M2
	281.05	331.36	M3
	366.97	417.27	
BSECOND4	363.06	249.36	M1
	448.97	335.27	M2
	463.30	327.96	M3
	376.33	240.99	

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	371.42	240.99	
BSECOND5	448.97	335.27	M1
	483.14	369.44	M2
	492.55	360.04	M3
	461.88	329.37	
BSECOND6	483.14	369.44	M1
	459.22	393.37	M2
	463.46	397.61	M3
	487.39	373.69	
BSECOND7	388.88	392.53	M1
	425.88	429.53	M2
	421.06	434.36	M3
	393.47	406.76	
BSECOND8	269.30	205.83	M1
	249.83	278.50	M2
	262.24	290.91	M3
	285.03	205.83	
BSECOND9	252.83	265.70	M1
	299.56	312.85	M2
	286.71	325.70	M3
	260.06	299.05	
BSECOND9	252.83	266.13	M1
	299.56	312.85	M2
	299.56	291.32	M3
	270.04	261.80	
BSECOND10	269.30	205.83	M1
	328.65	205.83	M2
	324.90	219.83	M3
	281.28	219.83	
BSECOND11	332.18	192.66	M1
	344.09	192.66	
	340.42	206.33	M3
	328.65	205.83	M2
BSECOND12	368.00	192.66	M1
	332.18	192.66	M2
	339.72	208.96	M3
	368.00	208.96	
CCANOPY1	229.33	61.53	M1
	230.28	79.92	M2
	247.90	84.64	M3
	240.01	64.39	
CCANOPY2	230.28	79.92	M1
	298.16	98.11	M2
	292.93	78.57	M3
	240.01	64.39	

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
CCANOPY3	298.16	98.11	M1
	302.70	81.19	M2
	292.93	78.57	M3
	297.20	97.85	
BSECOND8	260.99	289.66	M1
	253.40	318.00	M2
	250.04	336.45	
	261.37	347.78	M3
	271.22	310.21	
ASECOND5	230.33	179.44	M1
	230.33	162.10	M2
	206.55	161.66	M3
	206.55	179.44	
ASECOND7	-2.00	207.33	M1
	-2.00	198.00	M2
	-10.00	198.00	M3
	-10.00	207.33	

DATA FOR FLOOR TYPE: ROOF

Grid Systems:

A Wing
B Wing
D Wing
D' Wing
E Wing
E' Wing

Columns:

ID	X ft	Y ft	Shape	Orient. Angle	Param* ksi	LLRed %	Frame Type	Eccent* Maj	Eccent* Min
1	6.994	45.532	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
2	13.353	21.799	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
3	19.194	0.000	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
4	23.366	77.198	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
5	31.617	46.404	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
6	35.522	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
7	47.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
8	47.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
9	50.412	84.445	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
10	50.414	51.441	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
11	66.352	55.711	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
12	68.700	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
13	77.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
14	77.941	91.821	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
15	85.200	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
16	86.192	61.028	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
17	105.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
19	105.830	66.290	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
20	105.953	99.327	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
21	113.950	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
22	117.051	57.908	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
23	120.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
24	120.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
25	120.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
26	120.330	260.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
27	120.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
28	121.409	70.464	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
29	133.481	106.703	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
30	146.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
31	146.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
32	139.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
33	139.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
34	139.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
35	141.733	75.910	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
36	144.580	65.284	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
37	155.775	112.677	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
38	155.941	79.717	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
39	168.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
40	168.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
41	166.873	71.258	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
43	175.330	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
44	175.330	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
45	175.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
46	177.586	118.521	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
47	185.837	87.727	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
48	187.200	76.705	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
49	189.000	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
50	187.200	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
51	187.200	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
52	194.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
53	194.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
54	194.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
55	213.110	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
56	213.110	83.647	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
57	213.110	95.035	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
58	215.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
59	215.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
60	229.330	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
61	229.330	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
62	229.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
63	229.330	79.670	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
65	230.330	99.649	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
66	230.330	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
67	230.330	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
68	230.330	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
69	230.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
70	230.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
71	230.330	259.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
72	230.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
74	249.830	278.500	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
75	251.313	99.905	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
76	252.830	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
77	254.877	259.660	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
78	254.900	86.518	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
79	260.445	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
80	263.950	225.800	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
81	269.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
82	271.321	90.918	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
83	272.829	192.660	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
84	281.337	160.910	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
85	284.290	149.890	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
86	291.665	122.365	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
87	291.872	320.540	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
88	294.577	111.498	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
89	298.164	98.110	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
90	299.160	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
91	302.770	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
92	302.770	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
93	305.720	149.890	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
94	306.402	67.365	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
95	311.120	301.293	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
96	312.025	340.693	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
97	315.312	114.093	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
98	318.159	103.468	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
99	319.849	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
100	322.802	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
101	326.400	286.012	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
102	328.653	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
103	331.249	118.363	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
104	332.182	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
105	334.096	107.738	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
106	334.491	74.891	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
107	327.227	355.895	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
108	341.724	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
109	344.677	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
110	344.884	267.528	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
111	351.659	123.832	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
112	357.633	386.301	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
113	360.500	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
114	360.500	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
116	363.057	249.356	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
117	365.247	73.121	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
118	368.000	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
119	377.786	406.454	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
120	381.606	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
121	383.209	269.508	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
122	386.114	133.064	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
123	388.961	122.439	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
124	389.020	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
125	397.410	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
126	388.880	395.359	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
127	399.702	82.353	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
128	400.241	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
129	403.501	137.723	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
130	405.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
131	406.348	127.098	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
132	398.412	284.711	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
133	412.314	371.926	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
134	417.089	87.012	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
135	425.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
136	425.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
137	428.817	315.117	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
138	430.797	353.442	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
139	441.044	136.395	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
140	446.020	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
141	451.785	96.309	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
142	448.970	335.269	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
143	454.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
144	462.453	132.917	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
145	462.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
146	478.391	137.188	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
147	479.314	103.685	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
148	482.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
149	482.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
150	489.604	131.890	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
151	495.966	108.147	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
152	510.660	137.531	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
153	510.660	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
154	510.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
156	361.751	115.148	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
157	401.375	407.854	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
158	415.983	422.463	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
159	423.055	429.534	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
160	446.488	406.100	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
161	464.972	387.616	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
162	483.144	369.444	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
163	462.780	349.079	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
164	60.000	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
165	87.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
166	106.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
167	60.000	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
168	87.330	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
169	106.830	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
170	106.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
171	87.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
172	60.000	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
173	279.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
174	342.430	371.098	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
175	413.615	299.914	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
176	120.330	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
177	147.280	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
178	169.900	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
179	190.150	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
180	206.018	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
181	230.330	143.920	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
184	230.330	179.440	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
185	222.110	179.440	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
186	105.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
187	267.734	104.305	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

* Parameter: Steel - Fy
Concrete - f'c
Other - E

* Eccentricity: Values with + indicate eccentricity plus 1/2 column dimension;
values without + indicate absolute eccentricity (in)

Beams:

ID	Xi ft	Yi ft	Xj ft	Yj ft	Param* ksi	LLRed %	Type	Frame Type	User Size
1	6.994	45.532	13.353	21.799	50.0	Calc	NonC	Gravity	W14X22
2	6.994	45.532	30.029	52.330	50.0	Calc	NonC	Gravity	W16X26
3	13.353	21.799	19.194	0.000	50.0	Calc	NonC	Gravity	W14X22
4	13.353	21.799	35.522	27.739	50.0	Calc	NonC	Gravity	W16X31
5	14.679	47.800	21.090	23.872	50.0	Calc	NonC	Gravity	W14X22
6	19.194	0.000	47.830	0.000	50.0	Calc	NonC	Gravity	W21X44
7	20.742	0.000	20.742	23.779	50.0	Calc	NonC	Gravity	W12X19

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
8	22.354	50.065	28.818	25.942	50.0	Calc	NonC	Gravity	W14X22
9	23.366	77.198	31.617	46.404	50.0	Calc	NonC	Gravity	W18X40
10	23.366	77.198	50.412	84.445	50.0	Calc	NonC	Gravity	W18X40
11	28.132	0.000	28.132	25.759	50.0	Calc	NonC	Gravity	W14X22
12	31.617	46.404	35.522	31.830	50.0	Calc	NonC	Gravity	W10X15
13	31.617	46.404	50.414	51.441	50.0	Calc	Lat	Lateral	W18X55
14	32.764	79.716	41.015	48.923	50.0	Calc	NonC	Gravity	W16X31
15	35.522	0.000	35.522	31.830	50.0	Calc	NonC	Gravity	W18X35
16	35.522	31.830	47.830	31.830	50.0	Calc	Lat	Lateral	W18X50
18	41.676	0.000	41.676	31.830	50.0	Calc	NonC	Gravity	W16X26
19	42.163	82.235	50.414	51.441	50.0	Calc	NonC	Gravity	W16X31
20	47.830	0.000	47.830	31.830	50.0	Calc	Lat	Lateral	W16X67
21	47.830	0.000	77.080	0.000	50.0	Calc	NonC	Gravity	W21X44
22	47.830	31.830	68.700	31.830	50.0	Calc	Lat	Lateral	W24X68
23	50.412	84.445	58.663	53.651	50.0	Calc	NonC	Gravity	W16X31
24	50.412	84.445	77.941	91.821	50.0	Calc	NonC	Gravity	W18X40
25	50.414	51.441	66.352	55.711	50.0	Calc	NonC	Lateral	W18X35
26	58.101	86.505	66.352	55.711	50.0	Calc	NonC	Gravity	W16X31
27	58.265	0.000	58.265	31.830	50.0	Calc	NonC	Gravity	W18X35
28	66.352	55.711	86.192	61.028	50.0	Calc	Lat	Lateral	W21X50
29	68.021	89.163	76.272	58.369	50.0	Calc	NonC	Gravity	W18X35
30	68.700	0.000	68.700	31.830	50.0	Calc	NonC	Gravity	W16X31
31	68.700	31.830	85.200	31.830	50.0	Calc	NonC	Gravity	W18X35
32	77.080	0.000	77.080	31.830	50.0	Calc	NonC	Gravity	W16X31
33	77.080	0.000	105.830	0.000	50.0	Calc	NonC	Gravity	W21X44
34	77.941	91.821	86.200	61.030	50.0	Calc	Lat	Lateral	W18X76
35	77.941	91.821	105.953	99.327	50.0	Calc	NonC	Gravity	W21X44
36	85.200	0.000	85.200	31.830	50.0	Calc	NonC	Gravity	W16X31
37	85.200	31.830	105.830	31.830	50.0	Calc	Lat	Lateral	W21X50
38	86.192	61.028	105.830	66.290	50.0	Calc	NonC	Lateral	W21X44
39	87.760	94.452	96.011	63.659	50.0	Calc	NonC	Gravity	W18X35
40	95.515	0.000	95.515	31.830	50.0	Calc	NonC	Gravity	W18X35
41	97.579	97.083	105.830	66.290	50.0	Calc	NonC	Gravity	W16X31
42	105.830	0.000	105.830	31.830	50.0	Calc	Lat	Lateral	W16X67
43	105.830	0.000	139.080	0.000	50.0	Calc	NonC	Gravity	W24X55
44	105.830	31.830	105.830	66.290	50.0	Calc	Lat	Lateral	W18X76
45	105.830	31.830	139.080	31.830	50.0	Calc	NonC	Gravity	W24X76
46	105.830	52.330	113.950	52.330	50.0	Calc	NonC	Gravity	W10X15
47	105.830	66.290	121.409	70.464	50.0	Calc	NonC	Gravity	W16X26
48	105.953	99.327	114.204	68.533	50.0	Calc	NonC	Gravity	W16X26
49	105.953	99.327	133.481	106.703	50.0	Calc	NonC	Gravity	W21X44
50	108.273	66.944	112.189	52.330	50.0	Calc	NonC	Gravity	W10X15
51	113.158	101.258	121.409	70.464	50.0	Calc	NonC	Gravity	W16X26
52	113.950	31.830	113.950	52.330	50.0	Calc	NonC	Gravity	W16X26
53	113.950	52.330	139.080	52.330	50.0	Calc	NonC	Gravity	W21X44

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
54	114.142	0.000	114.142	31.830	50.0	Calc	NonC	Gravity	W16X26
55	114.204	68.533	117.051	57.908	50.0	Calc	NonC	Gravity	W10X15
56	117.051	57.908	118.545	52.330	50.0	Calc	NonC	Gravity	W10X15
57	117.051	57.908	144.580	65.284	50.0	Calc	NonC	Gravity	W18X35
58	119.933	103.073	128.184	72.279	50.0	Calc	NonC	Gravity	W16X26
59	121.409	70.464	124.256	59.839	50.0	Calc	NonC	Gravity	W10X15
60	121.409	70.464	141.733	75.910	50.0	Calc	Lat	Lateral	W16X36
61	122.327	31.830	122.327	52.330	50.0	Calc	NonC	Gravity	W16X26
62	122.455	0.000	122.455	31.830	50.0	Calc	NonC	Gravity	W16X26
63	123.435	59.619	125.389	52.330	50.0	Calc	NonC	Gravity	W10X15
64	126.707	104.888	134.958	74.094	50.0	Calc	NonC	Gravity	W16X26
65	128.184	72.279	131.031	61.654	50.0	Calc	NonC	Gravity	W10X15
66	129.820	61.330	132.232	52.330	50.0	Calc	NonC	Gravity	W10X15
67	130.703	52.330	130.768	31.830	50.0	Calc	NonC	Gravity	W16X26
68	130.768	0.000	130.768	31.830	50.0	Calc	NonC	Gravity	W16X26
69	133.481	106.703	141.733	75.910	50.0	Calc	Lat	Lateral	W16X67
70	133.481	106.703	155.775	112.677	50.0	Calc	NonC	Gravity	W16X26
71	134.958	74.094	137.805	63.469	50.0	Calc	NonC	Gravity	W10X15
72	136.210	63.042	139.080	52.330	50.0	Calc	NonC	Gravity	W10X15
73	139.080	0.000	139.080	31.830	50.0	Calc	NonC	Gravity	W16X31
74	139.080	0.000	175.330	0.000	50.0	Calc	NonC	Gravity	W24X68
75	139.080	31.830	139.080	52.330	50.0	Calc	NonC	Gravity	W16X26
76	139.080	31.830	175.330	31.830	50.0	Calc	NonC	Gravity	W24X68
77	139.080	52.330	175.330	52.330	50.0	Calc	NonC	Gravity	W24X68
78	140.586	108.607	148.837	77.813	50.0	Calc	NonC	Gravity	W16X31
79	141.733	75.910	144.580	65.284	50.0	Calc	NonC	Gravity	W10X15
80	141.733	75.910	155.941	79.717	50.0	Calc	NonC	Gravity	W16X26
81	144.580	65.284	148.143	52.330	50.0	Calc	NonC	Gravity	W10X15
82	144.580	65.284	166.873	71.258	50.0	Calc	NonC	Gravity	W18X40
83	147.690	110.511	155.941	79.717	50.0	Calc	NonC	Gravity	W16X31
84	148.143	0.000	148.143	31.830	50.0	Calc	NonC	Gravity	W16X31
85	148.143	31.830	148.143	52.330	50.0	Calc	NonC	Gravity	W16X26
86	148.837	77.813	151.684	67.188	50.0	Calc	NonC	Gravity	W10X15
87	152.008	67.275	156.118	52.330	50.0	Calc	NonC	Gravity	W12X19
88	155.775	112.677	164.026	81.883	50.0	Calc	NonC	Gravity	W16X31
89	155.775	112.677	177.586	118.521	50.0	Calc	NonC	Gravity	W16X26
90	155.941	79.717	158.788	69.092	50.0	Calc	NonC	Gravity	W10X15
92	157.205	0.000	157.205	31.830	50.0	Calc	NonC	Gravity	W16X31
93	157.205	31.830	157.205	52.330	50.0	Calc	NonC	Gravity	W14X22
94	159.436	69.265	164.094	52.330	50.0	Calc	NonC	Gravity	W12X19
95	162.179	114.393	170.430	83.599	50.0	Calc	NonC	Gravity	W16X26
96	164.026	81.883	166.873	71.258	50.0	Calc	NonC	Gravity	W10X15
97	166.268	0.000	166.268	31.830	50.0	Calc	NonC	Gravity	W16X31
98	166.268	31.830	166.268	52.330	50.0	Calc	NonC	Gravity	W12X19
99	166.873	71.258	171.945	52.330	50.0	Calc	NonC	Gravity	W12X19

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
100	166.873	71.258	187.200	76.705	50.0	Calc	NonC	Gravity	W18X35
101	169.882	116.457	178.133	85.663	50.0	Calc	NonC	Gravity	W16X31
102	170.430	83.599	173.277	72.974	50.0	Calc	NonC	Gravity	W10X15
103	155.941	79.717	185.837	87.727	50.0	Calc	NonC	Gravity	W24X62
104	173.654	73.075	179.213	52.330	50.0	Calc	NonC	Gravity	W14X22
105	175.330	0.000	175.330	31.830	50.0	Calc	Lat	Lateral	W16X67
106	175.330	0.000	194.080	0.000	50.0	Calc	NonC	Gravity	W14X22
107	175.330	31.830	175.330	52.330	50.0	Calc	NonC	Gravity	W12X19
108	175.330	31.830	194.080	31.830	50.0	Calc	NonC	Gravity	W16X26
109	175.330	52.330	194.080	52.330	50.0	Calc	NonC	Gravity	W16X26
110	177.404	85.468	180.251	74.843	50.0	Calc	NonC	Gravity	W10X15
111	177.586	118.521	185.837	87.727	50.0	Calc	NonC	Gravity	W16X26
112	177.586	118.521	189.000	121.430	50.0	Calc	NonC	Gravity	W14X22
113	180.435	74.892	186.480	52.330	50.0	Calc	NonC	Gravity	W16X26
114	183.293	119.976	191.149	89.151	50.0	Calc	NonC	Gravity	W16X26
115	184.353	87.330	187.200	76.705	50.0	Calc	NonC	Gravity	W10X15
116	184.705	0.000	184.705	31.830	50.0	Calc	NonC	Gravity	W16X31
117	184.705	31.830	184.705	52.330	50.0	Calc	NonC	Gravity	W12X19
118	185.837	87.727	213.110	95.035	50.0	Calc	NonC	Gravity	W18X40
119	187.200	76.705	194.080	52.330	50.0	Calc	NonC	Gravity	W16X26
120	187.200	76.705	213.110	83.647	50.0	Calc	NonC	Gravity	W21X44
121	189.000	121.430	197.214	90.776	50.0	Calc	NonC	Gravity	W16X26
122	189.000	121.430	230.330	132.654	50.0	Calc	NonC	Gravity	W30X108
123	192.989	89.644	195.836	79.019	50.0	Calc	NonC	Gravity	W10X15
124	194.080	0.000	194.080	31.830	50.0	Calc	NonC	Gravity	W16X31
125	194.080	0.000	229.330	0.000	50.0	Calc	NonC	Gravity	W24X62
126	194.080	31.830	194.080	52.330	50.0	Calc	NonC	Gravity	W12X19
127	194.080	31.830	229.330	31.830	50.0	Calc	NonC	Gravity	W24X55
128	194.080	52.330	213.110	52.330	50.0	Calc	NonC	Gravity	W16X26
129	195.836	79.019	203.369	52.330	50.0	Calc	NonC	Gravity	W16X31
130	196.942	123.587	205.163	92.906	50.0	Calc	NonC	Gravity	W16X31
131	201.625	91.958	204.472	81.333	50.0	Calc	NonC	Gravity	W10X15
132	202.893	0.000	202.892	31.830	50.0	Calc	NonC	Gravity	W16X31
133	203.595	31.830	203.595	52.330	50.0	Calc	NonC	Gravity	W12X19
134	204.472	81.333	212.659	52.330	50.0	Calc	NonC	Gravity	W16X31
135	204.882	125.743	213.110	95.035	50.0	Calc	NonC	Gravity	W16X31
136	210.263	94.272	213.110	83.647	50.0	Calc	NonC	Gravity	W10X15
137	211.705	0.000	211.705	31.830	50.0	Calc	NonC	Gravity	W16X31
138	213.110	31.830	213.110	52.330	50.0	Calc	NonC	Gravity	W12X19
139	213.110	52.330	229.330	52.330	50.0	Calc	NonC	Gravity	W14X22
140	213.110	83.647	221.501	52.330	50.0	Calc	NonC	Gravity	W16X31
141	213.110	83.647	230.299	88.253	50.0	Calc	NonC	Gravity	W14X22
142	213.110	95.035	230.330	99.649	50.0	Calc	NonC	Gravity	W16X26
143	213.442	128.068	221.678	97.331	50.0	Calc	NonC	Gravity	W18X35
144	216.947	96.063	219.782	85.435	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
145	220.518	0.000	220.518	31.830	50.0	Calc	NonC	Gravity	W16X31
146	221.220	31.830	221.220	52.330	50.0	Calc	NonC	Gravity	W12X19
147	221.691	85.946	229.330	57.500	50.0	Calc	NonC	Gravity	W14X22
148	222.086	130.415	230.330	99.649	50.0	Calc	NonC	Gravity	W18X35
149	223.631	97.854	226.454	87.223	50.0	Calc	NonC	Gravity	W10X15
150	224.494	121.430	230.330	121.430	50.0	Calc	NonC	Gravity	W10X15
151	229.330	0.000	229.330	31.830	50.0	Calc	NonC	Gravity	W16X31
152	229.330	31.830	229.330	52.330	50.0	Calc	NonC	Gravity	W14X22
153	229.330	52.330	229.330	79.670	50.0	Calc	NonC	Gravity	W14X22
154	229.330	79.670	254.899	86.521	50.0	Calc	NonC	Gravity	W18X40
155	230.276	79.923	230.330	99.649	50.0	Calc	NonC	Gravity	W16X26
156	230.330	99.649	230.330	132.654	50.0	Calc	NonC	Gravity	W33X130
158	235.074	95.554	238.482	82.122	50.0	Calc	NonC	Gravity	W10X15
159	243.193	97.730	246.690	84.321	50.0	Calc	NonC	Gravity	W10X15
161	249.971	104.912	254.900	86.518	50.0	Calc	NonC	Gravity	W18X35
162	254.900	86.518	271.321	90.918	50.0	Calc	NonC	Gravity	W14X22
163	259.523	102.105	263.110	88.718	50.0	Calc	NonC	Gravity	W10X15
165	271.321	90.918	298.164	98.110	50.0	Calc	NonC	Gravity	W18X40
166	281.337	160.910	284.290	149.890	50.0	Calc	Lat	Lateral	W14X22
167	281.337	160.910	302.770	160.910	50.0	Calc	NonC	Gravity	W14X22
169	284.290	149.890	291.665	122.365	50.0	Calc	NonC	Gravity	W18X35
170	284.290	149.890	305.720	149.890	50.0	Calc	NonC	Gravity	W18X40
171	291.665	122.365	294.577	111.498	50.0	Calc	NonC	Gravity	W16X26
172	291.665	122.365	301.942	125.118	50.0	Calc	NonC	Gravity	W16X26
173	292.190	149.890	292.190	160.910	50.0	Calc	NonC	Gravity	W10X15
174	294.577	111.498	298.164	98.110	50.0	Calc	NonC	Gravity	W10X15
175	294.577	111.498	314.571	116.855	50.0	Calc	NonC	Gravity	W21X44
176	295.305	149.890	304.854	114.252	50.0	Calc	NonC	Gravity	W21X48
177	298.164	98.110	306.402	67.365	50.0	Calc	Lat	Lateral	W16X67
178	298.164	98.110	318.159	103.468	50.0	Calc	NonC	Gravity	W16X31
179	302.770	149.890	302.770	160.910	50.0	Calc	NonC	Gravity	W10X15
180	302.770	160.910	319.849	160.910	50.0	Calc	Lat	Lateral	W14X22
181	304.574	114.177	308.161	100.789	50.0	Calc	NonC	Gravity	W10X15
182	305.720	149.890	315.312	114.093	50.0	Calc	NonC	Gravity	W24X62
183	305.720	149.890	322.802	149.890	50.0	Calc	NonC	Gravity	W16X31
184	306.402	67.365	334.491	74.891	50.0	Calc	NonC	Gravity	W21X44
185	308.161	100.789	316.399	70.044	50.0	Calc	NonC	Gravity	W16X31
186	311.309	149.890	311.309	160.910	50.0	Calc	NonC	Gravity	W10X15
187	314.395	149.890	323.406	116.262	50.0	Calc	NonC	Gravity	W21X48
188	315.312	114.093	318.159	103.468	50.0	Calc	NonC	Gravity	W10X15
189	315.312	114.093	331.249	118.363	50.0	Calc	NonC	Gravity	W18X35
190	318.159	103.468	326.397	72.722	50.0	Calc	NonC	Gravity	W16X31
191	318.159	103.468	334.096	107.741	50.0	Calc	NonC	Gravity	W16X26
192	319.849	149.890	319.849	160.910	50.0	Calc	NonC	Gravity	W10X15
193	319.849	160.910	341.724	160.910	50.0	Calc	NonC	Gravity	W14X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
194	322.802	149.890	331.249	118.363	50.0	Calc	NonC	Gravity	W18X40
195	322.802	149.890	344.677	149.890	50.0	Calc	NonC	Gravity	W18X35
196	323.406	116.262	326.253	105.638	50.0	Calc	NonC	Gravity	W10X15
197	326.253	105.638	334.491	74.891	50.0	Calc	NonC	Gravity	W16X26
198	327.139	149.890	327.139	160.910	50.0	Calc	NonC	Gravity	W10X15
199	330.094	149.890	338.053	120.186	50.0	Calc	NonC	Gravity	W18X40
200	331.249	118.363	334.096	107.738	50.0	Calc	NonC	Gravity	W10X15
201	331.249	118.363	351.659	123.832	50.0	Calc	NonC	Gravity	W21X44
202	332.182	192.660	341.724	160.910	50.0	Calc	NonC	Gravity	W21X44
203	332.182	192.660	368.000	192.660	50.0	Calc	NonC	Gravity	W24X76
204	334.096	107.738	342.335	76.993	50.0	Calc	NonC	Gravity	W16X26
205	334.096	107.738	361.750	115.151	50.0	Calc	NonC	Gravity	W21X48
206	334.379	149.890	334.379	160.910	50.0	Calc	NonC	Gravity	W10X15
207	334.491	74.891	362.745	82.462	50.0	Calc	NonC	Gravity	W21X44
208	337.385	149.890	344.856	122.009	50.0	Calc	NonC	Gravity	W18X35
209	340.468	120.833	343.314	110.209	50.0	Calc	NonC	Gravity	W10X15
210	340.896	109.561	349.135	78.815	50.0	Calc	NonC	Gravity	W16X26
211	341.150	162.821	341.150	192.660	50.0	Calc	NonC	Gravity	W16X31
212	341.724	149.890	341.724	160.910	50.0	Calc	NonC	Gravity	W10X15
213	341.724	160.910	360.500	160.910	50.0	Calc	NonC	Gravity	W16X26
214	344.677	149.890	351.659	123.832	50.0	Calc	NonC	Gravity	W16X26
215	344.677	149.890	360.500	149.890	50.0	Calc	NonC	Gravity	W14X22
216	347.696	111.384	355.935	80.637	50.0	Calc	NonC	Gravity	W16X26
217	349.686	123.303	352.532	112.680	50.0	Calc	NonC	Gravity	W10X15
218	350.100	160.910	350.100	192.660	50.0	Calc	NonC	Gravity	W18X35
219	351.114	149.890	351.114	160.910	50.0	Calc	NonC	Gravity	W10X15
220	351.659	123.832	386.114	133.064	50.0	Calc	NonC	Gravity	W27X84
221	352.587	149.890	359.039	125.810	50.0	Calc	NonC	Gravity	W16X26
222	354.506	113.209	365.247	73.121	50.0	Calc	NonC	Gravity	W24X76
223	358.904	125.773	361.751	115.148	50.0	Calc	NonC	Gravity	W10X15
224	359.050	160.910	359.050	192.660	50.0	Calc	NonC	Gravity	W16X31
225	360.500	149.890	360.500	160.910	50.0	Calc	NonC	Gravity	W10X15
226	360.500	149.890	366.422	127.788	50.0	Calc	NonC	Gravity	W16X31
227	360.500	149.890	381.606	149.890	50.0	Calc	NonC	Gravity	W18X40
228	360.500	160.910	389.020	160.910	50.0	Calc	NonC	Gravity	W21X50
229	361.751	115.148	388.961	122.439	50.0	Calc	Lat	Lateral	W24X68
230	361.751	115.148	372.492	75.062	50.0	Calc	NonC	Gravity	W21X44
231	365.247	73.121	399.702	82.353	50.0	Calc	NonC	Gravity	W24X76
232	367.974	128.204	370.821	117.579	50.0	Calc	NonC	Gravity	W10X15
233	368.000	160.910	368.000	192.660	50.0	Calc	NonC	Gravity	W16X31
234	368.000	192.660	397.410	192.660	50.0	Calc	NonC	Gravity	W21X44
235	370.770	149.890	376.004	130.355	50.0	Calc	NonC	Gravity	W16X26
236	370.821	117.579	381.557	77.491	50.0	Calc	NonC	Gravity	W21X44
237	371.050	149.890	371.050	160.910	50.0	Calc	NonC	Gravity	W10X15
238	377.044	130.634	379.891	120.009	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
239	377.803	160.910	377.803	192.660	50.0	Calc	NonC	Gravity	W16X31
240	379.891	120.009	390.627	79.922	50.0	Calc	NonC	Gravity	W21X44
241	381.606	149.890	381.606	160.910	50.0	Calc	NonC	Gravity	W10X15
242	381.606	149.890	386.114	133.064	50.0	Calc	NonC	Gravity	W14X22
243	381.606	149.890	400.241	149.890	50.0	Calc	NonC	Gravity	W16X31
244	386.114	133.064	388.961	122.439	50.0	Calc	NonC	Gravity	W10X15
245	386.114	133.064	403.501	137.723	50.0	Calc	NonC	Gravity	W16X26
246	387.607	160.910	387.607	192.660	50.0	Calc	NonC	Gravity	W16X31
247	388.961	122.439	399.702	82.353	50.0	Calc	Lat	Lateral	W18X86
248	388.961	122.439	406.348	127.098	50.0	Calc	NonC	Gravity	W18X35
249	389.020	149.890	389.020	160.910	50.0	Calc	NonC	Gravity	W10X15
250	389.020	160.910	405.520	160.910	50.0	Calc	NonC	Gravity	W16X26
251	390.354	149.890	394.276	135.251	50.0	Calc	NonC	Gravity	W12X19
252	394.807	135.394	397.654	124.769	50.0	Calc	NonC	Gravity	W10X15
253	397.410	160.910	397.410	192.660	50.0	Calc	NonC	Gravity	W16X31
254	397.410	192.660	425.910	192.660	50.0	Calc	NonC	Gravity	W18X40
255	397.654	124.769	408.395	84.683	50.0	Calc	NonC	Gravity	W18X40
256	399.702	82.353	417.089	87.012	50.0	Calc	NonC	Gravity	W16X26
257	400.241	149.890	400.241	160.910	50.0	Calc	NonC	Gravity	W10X15
258	400.241	149.890	403.501	137.723	50.0	Calc	NonC	Gravity	W10X15
259	403.501	137.723	406.348	127.098	50.0	Calc	NonC	Gravity	W10X15
260	405.520	160.910	414.028	129.156	50.0	Calc	NonC	Gravity	W21X48
261	405.520	160.910	425.910	160.910	50.0	Calc	Lat	Lateral	W18X60
262	406.348	127.098	417.089	87.012	50.0	Calc	NonC	Gravity	W18X40
263	406.348	127.098	441.044	136.395	50.0	Calc	NonC	Gravity	W30X116
264	406.910	160.910	406.910	192.660	50.0	Calc	NonC	Gravity	W16X31
265	415.022	129.422	425.763	89.336	50.0	Calc	NonC	Gravity	W18X40
266	415.717	160.910	423.543	131.705	50.0	Calc	NonC	Gravity	W21X44
267	416.410	160.910	416.410	192.660	50.0	Calc	NonC	Gravity	W16X31
268	417.089	87.012	451.785	96.309	50.0	Calc	NonC	Gravity	W24X76
269	423.696	131.746	434.437	91.660	50.0	Calc	NonC	Gravity	W18X40
270	425.910	160.910	425.910	192.660	50.0	Calc	Lat	Lateral	W18X76
271	425.910	160.910	433.053	134.254	50.0	Calc	NonC	Gravity	W21X44
272	425.910	160.910	446.020	160.910	50.0	Calc	Lat	Lateral	W24X68
273	425.910	192.660	454.660	192.660	50.0	Calc	NonC	Gravity	W21X44
274	432.370	134.071	443.111	93.985	50.0	Calc	NonC	Gravity	W18X40
275	435.960	160.910	435.960	192.660	50.0	Calc	NonC	Gravity	W16X31
276	436.649	160.910	445.376	128.341	50.0	Calc	NonC	Gravity	W24X55
277	441.044	136.395	451.785	96.309	50.0	Calc	Lat	Lateral	W24X94
278	443.347	127.798	462.453	132.917	50.0	Calc	Lat	Lateral	W24X62
279	446.020	160.910	446.020	192.660	50.0	Calc	NonC	Gravity	W16X31
280	446.020	160.910	462.520	160.910	50.0	Calc	NonC	Lateral	W24X55
281	451.785	96.309	479.314	103.685	50.0	Calc	NonC	Gravity	W18X40
282	452.900	130.358	461.338	98.869	50.0	Calc	NonC	Gravity	W18X35
283	454.660	192.660	454.953	160.910	50.0	Calc	NonC	Gravity	W16X31

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
284	454.660	192.660	482.910	192.660	50.0	Calc	NonC	Gravity	W18X40
285	462.453	132.917	470.891	101.428	50.0	Calc	NonC	Gravity	W16X31
286	462.453	132.917	478.391	137.188	50.0	Calc	NonC	Gravity	W18X35
287	462.520	160.910	462.520	192.660	50.0	Calc	NonC	Gravity	W16X31
288	462.520	160.910	482.910	160.910	50.0	Calc	NonC	Lateral	W21X44
289	470.876	135.174	479.314	103.685	50.0	Calc	NonC	Gravity	W16X31
290	472.720	160.910	472.720	192.660	50.0	Calc	NonC	Gravity	W18X35
291	478.391	137.188	486.828	105.699	50.0	Calc	NonC	Gravity	W16X31
292	478.391	137.188	510.660	145.834	50.0	Calc	Lat	Lateral	W24X55
293	479.314	103.685	495.966	108.147	50.0	Calc	NonC	Gravity	W14X22
294	482.910	160.910	482.910	192.660	50.0	Calc	Lat	Lateral	W18X76
295	482.910	160.910	510.660	160.910	50.0	Calc	Lat	Lateral	W24X76
296	482.910	192.660	510.660	192.660	50.0	Calc	NonC	Gravity	W18X40
297	487.529	139.636	489.604	131.890	50.0	Calc	NonC	Gravity	W10X15
298	489.604	131.890	495.966	108.147	50.0	Calc	Lat	Lateral	W14X34
299	489.604	131.890	510.660	137.531	50.0	Calc	NonC	Gravity	W14X22
300	492.844	160.910	497.806	142.390	50.0	Calc	NonC	Gravity	W12X19
301	492.160	160.910	492.160	192.660	50.0	Calc	NonC	Gravity	W16X31
302	495.237	141.702	497.312	133.955	50.0	Calc	NonC	Gravity	W10X15
303	501.747	160.910	506.113	144.616	50.0	Calc	NonC	Gravity	W12X19
304	501.410	160.910	501.410	192.660	50.0	Calc	NonC	Gravity	W16X31
305	502.945	143.767	505.021	136.020	50.0	Calc	NonC	Gravity	W10X15
306	510.660	137.531	510.660	160.910	50.0	Calc	Lat	Lateral	W30X90
307	510.660	160.910	510.660	192.660	50.0	Calc	NonC	Gravity	W16X31
308	388.880	395.359	401.375	407.854	50.0	Calc	NonC	Gravity	W14X22
309	401.375	407.854	415.983	422.463	50.0	Calc	Lat	Lateral	W24X68
310	415.983	422.463	423.055	429.534	50.0	Calc	NonC	Gravity	W14X22
311	423.055	429.534	446.488	406.100	50.0	Calc	Lat	Lateral	W21X62
312	446.488	406.100	464.972	387.616	50.0	Calc	NonC	Gravity	W21X44
313	464.972	387.616	483.144	369.444	50.0	Calc	NonC	Gravity	W18X40
314	448.970	335.269	462.780	349.079	50.0	Calc	NonC	Gravity	W14X22
315	462.780	349.079	483.144	369.444	50.0	Calc	Lat	Lateral	W24X68
316	388.880	395.359	412.314	371.926	50.0	Calc	Lat	Lateral	W24X76
317	412.314	371.926	430.797	353.442	50.0	Calc	Lat	Lateral	W21X55
318	430.797	353.442	448.970	335.269	50.0	Calc	Lat	Lateral	W21X48
319	412.314	371.926	446.488	406.100	50.0	Calc	NonC	Gravity	W24X55
320	430.797	353.442	464.972	387.616	50.0	Calc	NonC	Gravity	W24X55
323	418.475	365.764	452.649	399.939	50.0	Calc	NonC	Gravity	W24X55
324	424.636	359.603	458.811	393.778	50.0	Calc	NonC	Gravity	W24X55
325	436.855	347.384	471.029	381.559	50.0	Calc	NonC	Gravity	W24X55
326	442.912	341.327	477.087	375.501	50.0	Calc	NonC	Gravity	W24X55
327	60.000	208.330	87.330	208.330	50.0	Calc	NonC	Gravity	W18X40
328	87.330	208.330	106.830	208.330	50.0	Calc	Lat	Lateral	W16X26
329	106.830	208.330	120.330	208.330	50.0	Calc	NonC	Gravity	W16X26
330	120.330	208.330	120.330	225.800	50.0	Calc	NonC	Gravity	W14X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
331	120.330	225.800	120.330	243.330	50.0	Calc	Lat	Lateral	W14X34
332	120.330	243.330	120.330	260.800	50.0	Calc	Lat	Lateral	W14X34
333	120.330	260.800	120.330	278.500	50.0	Calc	NonC	Gravity	W14X22
334	60.000	278.500	87.330	278.500	50.0	Calc	NonC	Gravity	W18X40
335	87.330	278.500	106.830	278.500	50.0	Calc	Lat	Lateral	W16X26
336	106.830	278.500	120.330	278.500	50.0	Calc	NonC	Gravity	W16X26
337	60.000	208.330	60.000	243.330	50.0	Calc	Lat	Lateral	W18X65
338	60.000	243.330	60.000	278.500	50.0	Calc	Lat	Lateral	W18X65
339	60.000	243.330	87.330	243.330	50.0	Calc	NonC	Gravity	W21X48
340	87.330	243.330	106.830	243.330	50.0	Calc	NonC	Gravity	W16X31
341	106.830	243.330	120.330	243.330	50.0	Calc	NonC	Gravity	W16X26
342	69.110	243.330	69.110	278.500	50.0	Calc	NonC	Gravity	W18X35
343	78.220	243.330	78.220	278.500	50.0	Calc	NonC	Gravity	W18X35
344	87.330	243.330	87.330	278.500	50.0	Calc	NonC	Gravity	W18X35
345	97.080	243.330	97.080	278.500	50.0	Calc	NonC	Gravity	W18X35
346	106.830	243.330	106.830	278.500	50.0	Calc	NonC	Gravity	W18X35
347	113.580	243.330	113.580	278.500	50.0	Calc	NonC	Gravity	W18X40
348	69.110	208.330	69.110	243.330	50.0	Calc	NonC	Gravity	W18X35
349	78.220	208.330	78.220	243.330	50.0	Calc	NonC	Gravity	W18X35
350	87.330	208.330	87.330	243.330	50.0	Calc	NonC	Gravity	W18X35
351	97.080	208.330	97.080	243.330	50.0	Calc	NonC	Gravity	W18X35
352	106.830	208.330	106.830	243.330	50.0	Calc	NonC	Gravity	W18X35
353	113.580	208.330	113.580	243.330	50.0	Calc	NonC	Gravity	W18X40
354	113.580	260.800	120.330	260.800	50.0	Calc	NonC	Gravity	W10X15
355	113.580	225.800	120.330	225.800	50.0	Calc	NonC	Gravity	W10X15
356	406.367	377.872	440.541	412.047	50.0	Calc	NonC	Gravity	W24X55
357	400.420	383.819	434.595	417.994	50.0	Calc	NonC	Gravity	W24X55
358	394.473	389.766	428.648	423.940	50.0	Calc	NonC	Gravity	W21X50
359	215.330	278.500	230.330	278.500	50.0	Calc	NonC	Gravity	W30X90
360	230.330	205.830	230.330	225.800	50.0	Calc	Lat	Lateral	W27X84
361	230.330	225.800	230.330	243.330	50.0	Calc	Lat	Lateral	W16X26
362	230.330	243.330	230.330	259.660	50.0	Calc	Lat	Lateral	W16X26
363	230.330	259.660	230.330	278.500	50.0	Calc	NonC	Gravity	W14X22
364	215.330	208.330	215.330	278.500	50.0	Calc	Lat	Lateral	W36X150
365	215.330	208.330	230.330	208.330	50.0	Calc	Lat	Lateral	W30X90
366	223.610	208.330	223.610	278.500	50.0	Calc	NonC	Gravity	W33X130
368	223.610	225.800	230.330	225.800	50.0	Calc	NonC	Gravity	W10X15
369	223.610	243.330	230.330	243.330	50.0	Calc	NonC	Gravity	W10X15
370	223.610	259.660	230.330	259.660	50.0	Calc	NonC	Gravity	W10X15
371	215.330	233.920	223.610	233.920	50.0	Calc	NonC	Gravity	W10X15
372	215.330	254.970	223.610	254.970	50.0	Calc	NonC	Gravity	W10X15
373	328.653	205.830	332.182	192.660	50.0	Calc	Lat	Lateral	W14X34
374	269.301	205.830	279.301	205.830	50.0	Calc	Lat	Lateral	W14X22
375	187.200	208.330	215.330	208.330	50.0	Calc	Lat	Lateral	W16X36
376	187.200	278.500	215.330	278.500	50.0	Calc	Lat	Lateral	W16X26

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
377	215.330	243.330	223.610	243.330	50.0	Calc	NonC	Gravity	W10X15
378	215.330	260.800	223.610	260.800	50.0	Calc	NonC	Gravity	W10X15
379	215.330	225.800	223.610	225.800	50.0	Calc	NonC	Gravity	W10X15
380	251.313	99.905	267.734	104.305	50.0	Calc	NonC	Gravity	W12X19
381	266.392	109.312	271.321	90.918	50.0	Calc	NonC	Gravity	W18X35
382	276.681	106.703	280.269	93.315	50.0	Calc	NonC	Gravity	W10X15
383	285.629	109.100	289.216	95.713	50.0	Calc	NonC	Gravity	W10X15
384	147.280	283.030	168.830	278.500	50.0	Calc	Comp	Lateral	W14X43
385	169.900	283.030	187.200	278.500	50.0	Calc	Comp	Lateral	W14X43
386	448.327	160.910	456.271	131.261	50.0	Calc	NonC	Lateral	W27X84
387	481.200	137.941	481.200	160.910	50.0	Calc	NonC	Lateral	W24X62
388	450.259	153.700	481.200	153.700	50.0	Calc	NonC	Lateral	W24X62
389	454.858	136.535	481.200	143.593	50.0	Calc	NonC	Lateral	W24X55
390	469.463	140.448	470.876	135.174	50.0	Calc	NonC	Gravity	W10X15
391	463.980	160.910	465.912	153.700	50.0	Calc	NonC	Gravity	W10X15
392	456.154	160.910	458.085	153.700	50.0	Calc	NonC	Gravity	W10X15
393	472.594	160.910	474.526	153.700	50.0	Calc	NonC	Gravity	W10X15
394	462.161	138.492	463.574	133.218	50.0	Calc	NonC	Gravity	W10X15
395	483.940	160.910	489.499	140.164	50.0	Calc	NonC	Gravity	W12X19
396	54.791	37.230	86.198	37.230	50.0	Calc	NonC	Lateral	W24X68
397	86.192	61.028	86.200	31.830	50.0	Calc	NonC	Lateral	W27X84
398	50.945	51.583	56.238	31.830	50.0	Calc	NonC	Lateral	W24X68
399	52.700	45.034	86.194	54.009	50.0	Calc	NonC	Lateral	W24X84
400	66.352	55.711	68.106	49.162	50.0	Calc	NonC	Gravity	W10X15
401	71.280	31.830	71.280	37.230	50.0	Calc	NonC	Gravity	W10X15
402	37.359	47.943	41.676	31.830	50.0	Calc	NonC	Gravity	W12X19
403	43.100	49.481	47.830	31.830	50.0	Calc	NonC	Gravity	W12X19
404	96.011	31.830	96.011	63.659	50.0	Calc	NonC	Gravity	W16X31
405	78.730	31.830	78.730	37.230	50.0	Calc	NonC	Gravity	W10X15
406	63.063	31.830	63.063	37.230	50.0	Calc	NonC	Gravity	W10X15
407	58.663	53.651	60.418	47.102	50.0	Calc	NonC	Gravity	W10X15
408	76.272	58.369	78.027	51.820	50.0	Calc	NonC	Gravity	W10X15
409	230.330	179.440	230.330	205.830	50.0	Calc	NonC	Gravity	W14X22
410	222.110	179.440	222.110	208.330	50.0	Calc	NonC	Gravity	W16X26
411	215.330	179.440	230.330	179.440	50.0	Calc	NonC	Gravity	W14X22
412	215.330	179.440	215.330	208.330	50.0	Calc	NonC	Gravity	W16X26
413	298.767	136.970	308.484	139.574	50.0	Calc	NonC	Gravity	W10X15
414	308.484	139.574	316.578	141.743	50.0	Calc	NonC	Gravity	W10X15
415	316.578	141.743	324.422	143.845	50.0	Calc	NonC	Gravity	W10X15
416	327.243	133.316	334.046	135.139	50.0	Calc	NonC	Gravity	W10X15
417	334.046	135.139	340.850	136.962	50.0	Calc	NonC	Gravity	W10X15
418	340.850	136.962	347.653	138.785	50.0	Calc	NonC	Gravity	W10X15
419	362.615	111.922	371.685	114.352	50.0	Calc	NonC	Gravity	W10X15
420	371.685	114.352	380.755	116.783	50.0	Calc	NonC	Gravity	W10X15
421	380.755	116.783	389.825	119.213	50.0	Calc	NonC	Gravity	W10X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
422	389.825	119.213	398.519	121.542	50.0	Calc	NonC	Gravity	W10X15
423	398.519	121.542	407.212	123.872	50.0	Calc	NonC	Gravity	W10X15
424	403.695	136.999	411.376	139.057	50.0	Calc	NonC	Gravity	W10X15
425	411.376	139.057	420.890	141.606	50.0	Calc	NonC	Gravity	W10X15
426	420.890	141.606	430.400	144.154	50.0	Calc	NonC	Gravity	W10X15
427	430.400	144.154	440.419	146.839	50.0	Calc	NonC	Gravity	W14X22
428	435.960	145.644	435.960	160.910	50.0	Calc	NonC	Gravity	W14X22
429	486.052	108.597	495.190	111.045	50.0	Calc	NonC	Gravity	W8X15
430	478.537	106.583	486.052	108.597	50.0	Calc	NonC	Gravity	W8X15
431	470.114	104.326	478.537	106.583	50.0	Calc	NonC	Gravity	W8X15
432	460.561	101.766	470.114	104.326	50.0	Calc	NonC	Gravity	W8X15
433	451.008	99.207	460.561	101.766	50.0	Calc	NonC	Gravity	W8X15
434	442.334	96.882	451.008	99.207	50.0	Calc	NonC	Gravity	W8X15
435	433.660	94.558	442.334	96.882	50.0	Calc	NonC	Gravity	W8X15
436	424.986	92.234	433.660	94.558	50.0	Calc	NonC	Gravity	W8X15
437	416.312	89.910	424.986	92.234	50.0	Calc	NonC	Gravity	W8X15
438	407.619	87.580	416.312	89.910	50.0	Calc	NonC	Gravity	W8X15
439	398.926	85.251	407.619	87.580	50.0	Calc	NonC	Gravity	W8X15
440	389.851	82.820	398.926	85.251	50.0	Calc	NonC	Gravity	W8X15
441	380.781	80.389	389.851	82.820	50.0	Calc	NonC	Gravity	W8X15
442	371.715	77.960	380.781	80.389	50.0	Calc	NonC	Gravity	W8X15
443	364.471	76.019	371.715	77.960	50.0	Calc	NonC	Gravity	W8X15
444	355.109	83.718	361.919	85.543	50.0	Calc	NonC	Gravity	W8X15
445	348.309	81.896	355.109	83.718	50.0	Calc	NonC	Gravity	W8X15
446	341.509	80.074	348.309	81.896	50.0	Calc	NonC	Gravity	W8X15
447	333.666	77.973	341.509	80.074	50.0	Calc	NonC	Gravity	W8X15
448	325.571	75.804	333.666	77.973	50.0	Calc	NonC	Gravity	W8X15
449	315.574	73.125	325.571	75.804	50.0	Calc	NonC	Gravity	W8X15
450	305.577	70.446	315.574	73.125	50.0	Calc	NonC	Gravity	W8X15
451	220.518	3.000	229.330	3.000	50.0	Calc	NonC	Gravity	W8X15
452	211.705	3.000	220.518	3.000	50.0	Calc	NonC	Gravity	W8X15
453	202.893	3.000	211.705	3.000	50.0	Calc	NonC	Gravity	W8X15
454	194.080	3.000	202.893	3.000	50.0	Calc	NonC	Gravity	W8X15
455	184.705	3.000	194.080	3.000	50.0	Calc	NonC	Gravity	W8X15
456	175.330	3.000	184.705	3.000	50.0	Calc	NonC	Gravity	W8X15
457	166.267	3.000	175.330	3.000	50.0	Calc	NonC	Gravity	W8X15
458	157.205	3.000	166.267	3.000	50.0	Calc	NonC	Gravity	W8X15
459	148.142	3.000	157.205	3.000	50.0	Calc	NonC	Gravity	W8X15
460	139.080	3.000	148.142	3.000	50.0	Calc	NonC	Gravity	W8X15
461	130.768	3.000	139.080	3.000	50.0	Calc	NonC	Gravity	W8X15
462	122.455	3.000	130.768	3.000	50.0	Calc	NonC	Gravity	W8X15
463	114.143	3.000	122.455	3.000	50.0	Calc	NonC	Gravity	W8X15
464	105.830	3.000	114.143	3.000	50.0	Calc	NonC	Gravity	W8X15
465	95.515	3.000	105.830	3.000	50.0	Calc	NonC	Gravity	W8X15
466	85.200	3.000	95.515	3.000	50.0	Calc	NonC	Gravity	W8X15

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
467	77.080	3.000	85.200	3.000	50.0	Calc	NonC	Gravity	W8X15
468	68.700	3.000	77.080	3.000	50.0	Calc	NonC	Gravity	W8X15
469	58.265	3.000	68.700	3.000	50.0	Calc	NonC	Gravity	W8X15
470	47.830	3.000	58.265	3.000	50.0	Calc	NonC	Gravity	W8X15
471	41.676	3.000	47.830	3.000	50.0	Calc	NonC	Gravity	W8X15
472	35.522	3.000	41.676	3.000	50.0	Calc	NonC	Gravity	W8X15
473	28.132	3.000	35.522	3.000	50.0	Calc	NonC	Gravity	W8X15
474	20.742	3.000	28.132	3.000	50.0	Calc	NonC	Gravity	W8X15
477	230.330	99.649	249.971	104.912	50.0	Calc	NonC	Gravity	W14X22
478	249.971	104.912	266.392	109.312	50.0	Calc	NonC	Gravity	W14X22
479	266.392	109.312	293.235	116.505	50.0	Calc	NonC	Gravity	W18X35
480	267.734	104.305	294.577	111.498	50.0	Calc	NonC	Gravity	W18X35
481	230.315	94.279	251.313	99.905	50.0	Calc	NonC	Gravity	W16X26
482	233.815	100.583	235.074	95.554	50.0	Calc	NonC	Gravity	W10X15
483	241.893	102.748	243.193	97.730	50.0	Calc	NonC	Gravity	W10X15
484	258.182	107.112	259.523	102.105	50.0	Calc	NonC	Gravity	W10X15
485	275.340	111.710	276.681	106.703	50.0	Calc	NonC	Gravity	W10X15
486	284.287	114.107	285.629	109.100	50.0	Calc	NonC	Gravity	W10X15

* Parameter: Steel - Fy
Concrete - f'c
Other - E

Steel Beam Properties:

ID	Max Depth in	Min Depth in	Min Width in	Steel Table	Defl Criteria
1	None	0.00	0.00	Def.	spandrel
2	None	0.00	0.00	Def.	spandrel
3	None	0.00	0.00	Def.	spandrel
4	None	0.00	0.00	Def.	
5	None	0.00	0.00	Def.	
6	None	0.00	0.00	Def.	spandrel
7	None	0.00	0.00	Def.	
8	None	0.00	0.00	Def.	
9	None	0.00	0.00	Def.	spandrel
10	None	0.00	0.00	Def.	spandrel
11	None	0.00	0.00	Def.	
12	None	0.00	0.00	Def.	
13	None	0.00	0.00	Def.	
14	None	0.00	0.00	Def.	
15	None	0.00	0.00	Def.	
16	None	0.00	0.00	Def.	
18	None	0.00	0.00	Def.	
19	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
20	None	0.00	0.00	Def.	
21	None	0.00	0.00	Def.	spandrel
22	None	0.00	0.00	Def.	
23	None	0.00	0.00	Def.	
24	None	0.00	0.00	Def.	spandrel
25	None	0.00	0.00	Def.	
26	None	0.00	0.00	Def.	
27	None	0.00	0.00	Def.	
28	None	0.00	0.00	Def.	
29	None	0.00	0.00	Def.	
30	None	0.00	0.00	Def.	
31	None	0.00	0.00	Def.	
32	None	0.00	0.00	Def.	
33	None	0.00	0.00	Def.	spandrel
34	None	0.00	0.00	Def.	
35	None	0.00	0.00	Def.	spandrel
36	None	0.00	0.00	Def.	
37	None	0.00	0.00	Def.	
38	None	0.00	0.00	Def.	
39	None	0.00	0.00	Def.	
40	None	0.00	0.00	Def.	
41	None	0.00	0.00	Def.	Default
42	None	0.00	0.00	Def.	
43	None	0.00	0.00	Def.	spandrel
44	None	0.00	0.00	Def.	
45	None	0.00	0.00	Def.	
46	None	0.00	0.00	Def.	
47	None	0.00	0.00	Def.	
48	None	0.00	0.00	Def.	
49	None	0.00	0.00	Def.	spandrel
50	None	0.00	0.00	Def.	
51	None	0.00	0.00	Def.	
52	None	0.00	0.00	Def.	
53	None	0.00	0.00	Def.	
54	None	0.00	0.00	Def.	
55	None	0.00	0.00	Def.	
56	None	0.00	0.00	Def.	
57	None	0.00	0.00	Def.	
58	None	0.00	0.00	Def.	
59	None	0.00	0.00	Def.	
60	None	0.00	0.00	Def.	
61	None	0.00	0.00	Def.	
62	None	0.00	0.00	Def.	
63	None	0.00	0.00	Def.	
64	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
65	None	0.00	0.00	Def.	
66	None	0.00	0.00	Def.	
67	None	0.00	0.00	Def.	
68	None	0.00	0.00	Def.	
69	None	0.00	0.00	Def.	
70	None	0.00	0.00	Def.	spandrel
71	None	0.00	0.00	Def.	
72	None	0.00	0.00	Def.	
73	None	0.00	0.00	Def.	
74	None	0.00	0.00	Def.	spandrel
75	None	0.00	0.00	Def.	
76	None	0.00	0.00	Def.	
77	None	0.00	0.00	Def.	
78	None	0.00	0.00	Def.	
79	None	0.00	0.00	Def.	
80	None	0.00	0.00	Def.	
81	None	0.00	0.00	Def.	
82	None	0.00	0.00	Def.	
83	None	0.00	0.00	Def.	
84	None	0.00	0.00	Def.	
85	None	0.00	0.00	Def.	
86	None	0.00	0.00	Def.	
87	None	0.00	0.00	Def.	
88	None	0.00	0.00	Def.	
89	None	0.00	0.00	Def.	spandrel
90	None	0.00	0.00	Def.	
92	None	0.00	0.00	Def.	
93	None	0.00	0.00	Def.	
94	None	0.00	0.00	Def.	
95	None	0.00	0.00	Def.	
96	None	0.00	0.00	Def.	
97	None	0.00	0.00	Def.	
98	None	0.00	0.00	Def.	
99	None	0.00	0.00	Def.	
100	None	0.00	0.00	Def.	
101	None	0.00	0.00	Def.	
102	None	0.00	0.00	Def.	
103	None	0.00	0.00	Def.	
104	None	0.00	0.00	Def.	
105	None	0.00	0.00	Def.	
106	None	0.00	0.00	Def.	spandrel
107	None	0.00	0.00	Def.	
108	None	0.00	0.00	Def.	
109	None	0.00	0.00	Def.	
110	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
111	None	0.00	0.00	Def.	
112	None	0.00	0.00	Def.	spandrel
113	None	0.00	0.00	Def.	
114	None	0.00	0.00	Def.	
115	None	0.00	0.00	Def.	
116	None	0.00	0.00	Def.	
117	None	0.00	0.00	Def.	
118	None	0.00	0.00	Def.	
119	None	0.00	0.00	Def.	
120	None	0.00	0.00	Def.	
121	None	0.00	0.00	Def.	
122	None	0.00	0.00	Def.	spandrel
123	None	0.00	0.00	Def.	
124	None	0.00	0.00	Def.	
125	None	0.00	0.00	Def.	spandrel
126	None	0.00	0.00	Def.	
127	None	0.00	0.00	Def.	
128	None	0.00	0.00	Def.	
129	None	0.00	0.00	Def.	
130	None	0.00	0.00	Def.	
131	None	0.00	0.00	Def.	
132	None	0.00	0.00	Def.	
133	None	0.00	0.00	Def.	
134	None	0.00	0.00	Def.	
135	None	0.00	0.00	Def.	
136	None	0.00	0.00	Def.	
137	None	0.00	0.00	Def.	
138	None	0.00	0.00	Def.	
139	None	0.00	0.00	Def.	
140	None	0.00	0.00	Def.	
141	None	0.00	0.00	Def.	
142	None	0.00	0.00	Def.	
143	None	0.00	0.00	Def.	
144	None	0.00	0.00	Def.	
145	None	0.00	0.00	Def.	
146	None	0.00	0.00	Def.	
147	None	0.00	0.00	Def.	
148	None	0.00	0.00	Def.	
149	None	0.00	0.00	Def.	
150	None	0.00	0.00	Def.	
151	None	0.00	0.00	Def.	spandrel
152	None	0.00	0.00	Def.	spandrel
153	None	0.00	0.00	Def.	spandrel
154	None	0.00	0.00	Def.	spandrel
155	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
156	None	0.00	0.00	Def.	spandrel
158	None	0.00	0.00	Def.	
159	None	0.00	0.00	Def.	
161	None	0.00	0.00	Def.	spandrel
162	None	0.00	0.00	Def.	spandrel
163	None	0.00	0.00	Def.	
165	None	0.00	0.00	Def.	spandrel
166	None	0.00	0.00	Def.	spandrel
167	None	0.00	0.00	Def.	spandrel
169	None	0.00	0.00	Def.	spandrel
170	None	0.00	0.00	Def.	
171	None	0.00	0.00	Def.	spandrel
172	None	0.00	0.00	Def.	
173	None	0.00	0.00	Def.	
174	None	0.00	0.00	Def.	
175	None	0.00	0.00	Def.	
176	None	0.00	0.00	Def.	
177	None	0.00	0.00	Def.	spandrel
178	None	0.00	0.00	Def.	
179	None	0.00	0.00	Def.	
180	None	0.00	0.00	Def.	spandrel
181	None	0.00	0.00	Def.	
182	None	0.00	0.00	Def.	
183	None	0.00	0.00	Def.	
184	None	0.00	0.00	Def.	spandrel
185	None	0.00	0.00	Def.	
186	None	0.00	0.00	Def.	
187	None	0.00	0.00	Def.	
188	None	0.00	0.00	Def.	
189	None	0.00	0.00	Def.	
190	None	0.00	0.00	Def.	
191	None	0.00	0.00	Def.	
192	None	0.00	0.00	Def.	
193	None	0.00	0.00	Def.	spandrel
194	None	0.00	0.00	Def.	
195	None	0.00	0.00	Def.	
196	None	0.00	0.00	Def.	
197	None	0.00	0.00	Def.	
198	None	0.00	0.00	Def.	
199	None	0.00	0.00	Def.	
200	None	0.00	0.00	Def.	
201	None	0.00	0.00	Def.	
202	None	0.00	0.00	Def.	spandrel
203	None	0.00	0.00	Def.	spandrel
204	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
205	None	0.00	0.00	Def.	
206	None	0.00	0.00	Def.	
207	None	0.00	0.00	Def.	spandrel
208	None	0.00	0.00	Def.	
209	None	0.00	0.00	Def.	
210	None	0.00	0.00	Def.	
211	None	0.00	0.00	Def.	
212	None	0.00	0.00	Def.	
213	None	0.00	0.00	Def.	
214	None	0.00	0.00	Def.	
215	None	0.00	0.00	Def.	
216	None	0.00	0.00	Def.	
217	None	0.00	0.00	Def.	
218	None	0.00	0.00	Def.	
219	None	0.00	0.00	Def.	
220	None	0.00	0.00	Def.	
221	None	0.00	0.00	Def.	
222	None	0.00	0.00	Def.	spandrel
223	None	0.00	0.00	Def.	
224	None	0.00	0.00	Def.	
225	None	0.00	0.00	Def.	
226	None	0.00	0.00	Def.	
227	None	0.00	0.00	Def.	
228	None	0.00	0.00	Def.	
229	None	0.00	0.00	Def.	
230	None	0.00	0.00	Def.	
231	None	0.00	0.00	Def.	spandrel
232	None	0.00	0.00	Def.	
233	None	0.00	0.00	Def.	
234	None	0.00	0.00	Def.	spandrel
235	None	0.00	0.00	Def.	
236	None	0.00	0.00	Def.	
237	None	0.00	0.00	Def.	
238	None	0.00	0.00	Def.	
239	None	0.00	0.00	Def.	
240	None	0.00	0.00	Def.	
241	None	0.00	0.00	Def.	
242	None	0.00	0.00	Def.	
243	None	0.00	0.00	Def.	
244	None	0.00	0.00	Def.	
245	None	0.00	0.00	Def.	
246	None	0.00	0.00	Def.	
247	None	0.00	0.00	Def.	
248	None	0.00	0.00	Def.	
249	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
250	None	0.00	0.00	Def.	
251	None	0.00	0.00	Def.	
252	None	0.00	0.00	Def.	
253	None	0.00	0.00	Def.	
254	None	0.00	0.00	Def.	spandrel
255	None	0.00	0.00	Def.	
256	None	0.00	0.00	Def.	spandrel
257	None	0.00	0.00	Def.	
258	None	0.00	0.00	Def.	
259	None	0.00	0.00	Def.	
260	None	0.00	0.00	Def.	
261	None	0.00	0.00	Def.	
262	None	0.00	0.00	Def.	
263	None	0.00	0.00	Def.	
264	None	0.00	0.00	Def.	
265	None	0.00	0.00	Def.	
266	None	0.00	0.00	Def.	
267	None	0.00	0.00	Def.	
268	None	0.00	0.00	Def.	spandrel
269	None	0.00	0.00	Def.	
270	None	0.00	0.00	Def.	
271	None	0.00	0.00	Def.	
272	None	0.00	0.00	Def.	
273	None	0.00	0.00	Def.	spandrel
274	None	0.00	0.00	Def.	
275	None	0.00	0.00	Def.	
276	None	0.00	0.00	Def.	
277	None	0.00	0.00	Def.	
278	None	0.00	0.00	Def.	
279	None	0.00	0.00	Def.	
280	None	0.00	0.00	Def.	
281	None	0.00	0.00	Def.	spandrel
282	None	0.00	0.00	Def.	
283	None	0.00	0.00	Def.	
284	None	0.00	0.00	Def.	spandrel
285	None	0.00	0.00	Def.	
286	None	0.00	0.00	Def.	
287	None	0.00	0.00	Def.	
288	None	0.00	0.00	Def.	
289	None	0.00	0.00	Def.	
290	None	0.00	0.00	Def.	
291	None	0.00	0.00	Def.	
292	None	0.00	0.00	Def.	
293	None	0.00	0.00	Def.	spandrel
294	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
295	None	0.00	0.00	Def.	
296	None	0.00	0.00	Def.	spandrel
297	None	0.00	0.00	Def.	
298	None	0.00	0.00	Def.	spandrel
299	None	0.00	0.00	Def.	spandrel
300	None	0.00	0.00	Def.	
301	None	0.00	0.00	Def.	
302	None	0.00	0.00	Def.	
303	None	0.00	0.00	Def.	
304	None	0.00	0.00	Def.	
305	None	0.00	0.00	Def.	
306	None	0.00	0.00	Def.	spandrel
307	None	0.00	0.00	Def.	spandrel
308	None	0.00	0.00	Def.	
309	None	0.00	0.00	Def.	
310	None	0.00	0.00	Def.	
311	None	0.00	0.00	Def.	
312	None	0.00	0.00	Def.	
313	None	0.00	0.00	Def.	
314	None	0.00	0.00	Def.	
315	None	0.00	0.00	Def.	
316	None	0.00	0.00	Def.	
317	None	0.00	0.00	Def.	
318	None	0.00	0.00	Def.	
319	None	0.00	0.00	Def.	
320	None	0.00	0.00	Def.	
323	None	0.00	0.00	Def.	
324	None	0.00	0.00	Def.	
325	None	0.00	0.00	Def.	
326	None	0.00	0.00	Def.	
327	None	0.00	0.00	Def.	
328	None	0.00	0.00	Def.	
329	None	0.00	0.00	Def.	
330	None	0.00	0.00	Def.	
331	None	0.00	0.00	Def.	
332	None	0.00	0.00	Def.	
333	None	0.00	0.00	Def.	
334	None	0.00	0.00	Def.	
335	None	0.00	0.00	Def.	
336	None	0.00	0.00	Def.	
337	None	0.00	0.00	Def.	
338	None	0.00	0.00	Def.	
339	None	0.00	0.00	Def.	
340	None	0.00	0.00	Def.	
341	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
342	None	0.00	0.00	Def.	
343	None	0.00	0.00	Def.	
344	None	0.00	0.00	Def.	
345	None	0.00	0.00	Def.	
346	None	0.00	0.00	Def.	
347	None	0.00	0.00	Def.	
348	None	0.00	0.00	Def.	
349	None	0.00	0.00	Def.	
350	None	0.00	0.00	Def.	
351	None	0.00	0.00	Def.	
352	None	0.00	0.00	Def.	
353	None	0.00	0.00	Def.	
354	None	0.00	0.00	Def.	
355	None	0.00	0.00	Def.	
356	None	0.00	0.00	Def.	
357	None	0.00	0.00	Def.	
358	None	0.00	0.00	Def.	
359	None	0.00	0.00	Def.	
360	None	0.00	0.00	Def.	
361	None	0.00	0.00	Def.	
362	None	0.00	0.00	Def.	
363	None	0.00	0.00	Def.	
364	None	0.00	0.00	Def.	
365	None	0.00	0.00	Def.	
366	None	0.00	0.00	Def.	
368	None	0.00	0.00	Def.	
369	None	0.00	0.00	Def.	
370	None	0.00	0.00	Def.	
371	None	0.00	0.00	Def.	
372	None	0.00	0.00	Def.	
373	None	0.00	0.00	Def.	
374	None	0.00	0.00	Def.	
375	None	0.00	0.00	Def.	
376	None	0.00	0.00	Def.	
377	None	0.00	0.00	Def.	
378	None	0.00	0.00	Def.	
379	None	0.00	0.00	Def.	
380	None	0.00	0.00	Def.	
381	None	0.00	0.00	Def.	spandrel
382	None	0.00	0.00	Def.	
383	None	0.00	0.00	Def.	
384	None	0.00	0.00	Def.	
385	None	0.00	0.00	Def.	
386	None	0.00	0.00	Def.	
387	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
388	None	0.00	0.00	Def.	
389	None	0.00	0.00	Def.	
390	None	0.00	0.00	Def.	
391	None	0.00	0.00	Def.	
392	None	0.00	0.00	Def.	
393	None	0.00	0.00	Def.	
394	None	0.00	0.00	Def.	
395	None	0.00	0.00	Def.	
396	None	0.00	0.00	Def.	
397	None	0.00	0.00	Def.	
398	None	0.00	0.00	Def.	
399	None	0.00	0.00	Def.	
400	None	0.00	0.00	Def.	
401	None	0.00	0.00	Def.	
402	None	0.00	0.00	Def.	
403	None	0.00	0.00	Def.	
404	None	0.00	0.00	Def.	
405	None	0.00	0.00	Def.	
406	None	0.00	0.00	Def.	
407	None	0.00	0.00	Def.	
408	None	0.00	0.00	Def.	
409	None	0.00	0.00	Def.	
410	None	0.00	0.00	Def.	
411	None	0.00	0.00	Def.	
412	None	0.00	0.00	Def.	
413	None	0.00	0.00	Def.	
414	None	0.00	0.00	Def.	
415	None	0.00	0.00	Def.	
416	None	0.00	0.00	Def.	
417	None	0.00	0.00	Def.	
418	None	0.00	0.00	Def.	
419	None	0.00	0.00	Def.	
420	None	0.00	0.00	Def.	
421	None	0.00	0.00	Def.	
422	None	0.00	0.00	Def.	
423	None	0.00	0.00	Def.	
424	None	0.00	0.00	Def.	
425	None	0.00	0.00	Def.	
426	None	0.00	0.00	Def.	
427	None	0.00	0.00	Def.	
428	None	0.00	0.00	Def.	
429	None	0.00	0.00	Def.	
430	None	0.00	0.00	Def.	
431	None	0.00	0.00	Def.	
432	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
433	None	0.00	0.00	Def.	
434	None	0.00	0.00	Def.	
435	None	0.00	0.00	Def.	
436	None	0.00	0.00	Def.	
437	None	0.00	0.00	Def.	
438	None	0.00	0.00	Def.	
439	None	0.00	0.00	Def.	
440	None	0.00	0.00	Def.	
441	None	0.00	0.00	Def.	
442	None	0.00	0.00	Def.	
443	None	0.00	0.00	Def.	
444	None	0.00	0.00	Def.	
445	None	0.00	0.00	Def.	
446	None	0.00	0.00	Def.	
447	None	0.00	0.00	Def.	
448	None	0.00	0.00	Def.	
449	None	0.00	0.00	Def.	
450	None	0.00	0.00	Def.	
451	None	0.00	0.00	Def.	
452	None	0.00	0.00	Def.	
453	None	0.00	0.00	Def.	
454	None	0.00	0.00	Def.	
455	None	0.00	0.00	Def.	
456	None	0.00	0.00	Def.	
457	None	0.00	0.00	Def.	
458	None	0.00	0.00	Def.	
459	None	0.00	0.00	Def.	
460	None	0.00	0.00	Def.	
461	None	0.00	0.00	Def.	
462	None	0.00	0.00	Def.	
463	None	0.00	0.00	Def.	
464	None	0.00	0.00	Def.	
465	None	0.00	0.00	Def.	
466	None	0.00	0.00	Def.	
467	None	0.00	0.00	Def.	
468	None	0.00	0.00	Def.	
469	None	0.00	0.00	Def.	
470	None	0.00	0.00	Def.	
471	None	0.00	0.00	Def.	
472	None	0.00	0.00	Def.	
473	None	0.00	0.00	Def.	
474	None	0.00	0.00	Def.	
477	None	0.00	0.00	Def.	spandrel
478	None	0.00	0.00	Def.	spandrel
479	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
480	None	0.00	0.00	Def.	
481	None	0.00	0.00	Def.	
482	None	0.00	0.00	Def.	
483	None	0.00	0.00	Def.	
484	None	0.00	0.00	Def.	
485	None	0.00	0.00	Def.	
486	None	0.00	0.00	Def.	

Slab Edges:

Xi	Yi	Xj	Yj	Edge Dist
ft	ft	ft	ft	in
Diaphragm 1:				
332.182	192.660	368.000	192.660	24.0
368.000	192.660	397.410	192.660	24.0
397.410	192.660	425.910	192.660	24.0
425.910	192.660	454.660	192.660	24.0
454.660	192.660	482.910	192.660	24.0
482.910	192.660	510.660	192.660	24.0
510.660	160.910	510.660	192.660	24.0
510.660	137.531	510.660	160.910	24.0
489.604	131.890	510.660	137.531	24.0
489.604	131.890	495.966	108.147	24.0
479.314	103.685	495.966	108.147	24.0
451.785	96.309	479.314	103.685	24.0
417.089	87.012	451.785	96.309	24.0
399.702	82.353	417.089	87.012	24.0
365.247	73.121	399.702	82.353	24.0
362.745	82.462	365.247	73.121	24.0
334.491	74.891	362.745	82.462	24.0
306.402	67.365	334.491	74.891	24.0
298.164	98.110	306.402	67.365	24.0
271.321	90.918	298.164	98.110	24.0
254.900	86.518	271.321	90.918	24.0
254.899	86.521	254.900	86.518	24.0
229.330	79.670	254.899	86.521	24.0
229.330	52.330	229.330	79.670	24.0
229.330	31.830	229.330	52.330	24.0
229.330	0.000	229.330	31.830	24.0
194.080	0.000	229.330	0.000	24.0
175.330	0.000	194.080	0.000	24.0
139.080	0.000	175.330	0.000	24.0
105.830	0.000	139.080	0.000	24.0
77.080	0.000	105.830	0.000	24.0
47.830	0.000	77.080	0.000	24.0
19.194	0.000	47.830	0.000	24.0
13.353	21.799	19.194	0.000	24.0

Xi	Yi	Xj	Yj	Edge Dist
6.994	45.532	13.353	21.799	24.0
6.994	45.532	30.029	52.330	24.0
23.366	77.198	30.029	52.330	24.0
23.366	77.198	50.412	84.445	24.0
50.412	84.445	77.941	91.821	24.0
77.941	91.821	105.953	99.327	24.0
105.953	99.327	133.481	106.703	24.0
133.481	106.703	155.775	112.677	24.0
155.775	112.677	177.586	118.521	24.0
177.586	118.521	189.000	121.430	24.0
189.000	121.430	230.330	132.654	12.0
230.330	121.430	230.330	132.654	24.0
230.330	99.649	230.330	121.430	24.0
230.330	99.649	293.235	116.505	24.0
291.665	122.365	293.235	116.505	24.0
284.290	149.890	291.665	122.365	24.0
281.337	160.910	284.290	149.890	24.0
281.337	160.910	302.770	160.910	24.0
302.770	160.910	319.849	160.910	24.0
319.849	160.910	341.724	160.910	24.0
332.182	192.660	341.724	160.910	24.0
Diaphragm 2:				
423.055	429.534	446.488	406.100	24.0
446.488	406.100	464.972	387.616	24.0
464.972	387.616	483.144	369.444	24.0
462.780	349.079	483.144	369.444	24.0
448.970	335.269	462.780	349.079	24.0
430.797	353.442	448.970	335.269	24.0
412.314	371.926	430.797	353.442	24.0
388.880	395.359	412.314	371.926	24.0
388.880	395.359	401.375	407.854	24.0
401.375	407.854	415.983	422.463	24.0
415.983	422.463	423.055	429.534	24.0
Diaphragm 3:				
60.000	278.500	87.330	278.500	24.0
87.330	278.500	106.830	278.500	24.0
106.830	278.500	120.330	278.500	24.0
120.330	260.800	120.330	278.500	24.0
120.330	243.330	120.330	260.800	24.0
120.330	225.800	120.330	243.330	24.0
120.330	208.330	120.330	225.800	24.0
106.830	208.330	120.330	208.330	24.0
87.330	208.330	106.830	208.330	24.0
60.000	208.330	87.330	208.330	24.0
60.000	208.330	60.000	243.330	24.0

Xi	Yi	Xj	Yj	Edge Dist
60.000	243.330	60.000	278.500	24.0
Diaphragm 4:				
215.330	278.500	230.330	278.500	12.0
230.330	259.660	230.330	278.500	12.0
230.330	243.330	230.330	259.660	12.0
230.330	225.800	230.330	243.330	12.0
230.330	179.440	230.330	225.800	12.0
215.330	179.440	230.330	179.440	12.0
215.330	179.440	215.330	278.500	12.0

Slab Openings:

Xi	Yi	Xj	Yj	Edge Dist
ft	ft	ft	ft	in
481.200	143.593	481.200	153.700	12.0
450.259	153.700	481.200	153.700	12.0
450.259	153.700	454.858	136.535	12.0
454.858	136.535	481.200	143.593	12.0
86.194	54.009	86.198	37.230	12.0
54.791	37.230	86.198	37.230	12.0
52.700	45.034	54.791	37.230	12.0
52.700	45.034	86.194	54.009	12.0

Deck Polygons:

Deck Prop Type	ID	Slab Action	Angle	X-Coord ft	Y-Coord ft
Noncomposite	1	One-Way	15.00	4.56	46.90
				27.59	53.70
				20.92	78.61
				177.08	120.46
				188.51	123.37
				232.33	134.23
				232.33	102.26
				290.79	117.92
				278.73	162.91
				339.03	162.91
				329.49	194.66
				512.66	194.66
				512.66	136.00
				492.05	130.48
				498.42	106.73
				363.83	70.67
				361.33	80.01
				304.99	64.92
				296.75	95.66
				255.64	85.68
				255.64	85.68

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
				231.33	78.13
				231.33	-2.00
				17.66	-2.00
				4.56	46.90
Noncomposite	1	One-Way	0.00	12.39	21.54
				35.52	27.74
				35.52	31.83
				39.53	31.83
				40.53	32.83
				56.24	31.83
				54.79	37.23
				55.56	38.23
				85.20	38.23
				85.20	48.34
				86.19	61.03
				86.20	61.00
				108.27	66.94
				112.19	52.33
				230.33	52.33
				230.33	-1.00
				18.43	-1.00
				12.39	21.54
Noncomposite	1	One-Way	0.00	283.25	149.89
				280.03	161.91
				340.38	161.91
				330.84	193.66
				511.66	193.66
				511.66	160.91
				492.84	160.91
				490.10	159.91
				437.95	159.91
				436.65	160.91
				400.24	160.91
				400.24	149.89
				283.25	149.89
Noncomposite	1	One-Way	135.00	386.05	395.36
				423.05	432.36
				485.97	369.44
				448.97	332.44
				386.05	395.36
Noncomposite	1	One-Way	0.00	58.00	280.50
				122.41	280.50
				122.41	206.33
				58.00	206.33
				58.00	280.50

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
Noncomposite	1	One-Way	0.00	208.83	279.50
				231.33	279.50
				231.33	178.44
				214.33	178.44
				208.83	207.33
				208.83	279.50
Composite	2	One-Way	15.00	361.75	115.15
				362.64	111.83
				407.24	123.78
				403.69	137.00
				435.96	145.64
				435.96	165.77
				350.10	165.77
				350.10	160.91
				352.59	149.89
				361.75	115.15
Composite	2	One-Way	15.00	308.44	100.86
				298.77	136.97
				324.49	143.59
				327.24	133.32
				347.65	138.78
				354.51	113.21
				308.44	100.86
Composite	2	One-Way	15.00	105.83	52.33
				105.83	54.90
				144.58	65.28
				139.81	83.09
				183.91	94.91
				185.84	87.73
				184.35	87.33
				189.00	72.22
				157.21	63.70
				157.21	52.33
				105.83	52.33
Composite	2	One-Way	0.00	105.83	52.33
				105.83	31.83
				157.21	31.83
				157.21	52.33
				105.83	52.33

Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft
TYP ROOF	4.56	46.90
	27.59	53.70
	20.92	78.61

Load Properties ID	X-Coord	Y-Coord
	177.08	120.46
	188.51	123.37
	238.01	134.71
	238.01	107.43
	290.79	117.92
	278.73	162.91
	339.03	162.91
	329.49	194.66
	512.66	194.66
	512.66	136.00
	492.05	130.48
	498.42	106.73
	363.83	70.67
	361.33	80.01
	304.99	64.92
	296.75	95.66
	255.64	85.68
	255.64	85.68
	231.33	78.13
	231.33	-2.00
	17.66	-2.00
	4.56	46.90
MECHANICAL ROOF	350.10	165.77
	435.96	165.77
	446.08	129.57
	364.05	106.55
	350.10	165.77
MECHANICAL ROOF	114.14	31.83
	113.95	57.08
	144.58	65.28
	139.08	82.90
	182.49	94.27
	189.28	68.94
	157.21	60.34
	157.21	31.83
	114.14	31.83
TYP ROOF	58.00	206.33
	58.00	280.50
	122.41	280.50
	122.41	206.33
	58.00	206.33
ACCOUSTICAL ROOF	208.83	207.33
	208.83	279.50
	231.33	279.50
	231.33	207.33

Load Properties ID	X-Coord	Y-Coord
	208.83	207.33
TYP ROOF	423.05	432.36
	386.05	395.36
	448.97	332.44
	485.97	369.44
	423.05	432.36
MECHANICAL ROOF	308.16	100.79
	298.77	136.97
	324.49	143.59
	327.24	133.32
	347.65	138.78
	354.51	113.21
	308.16	100.79

User Input Line Loads:

Load Properties ID	Xi ft	Yi ft	Xj ft	Yj ft
RW1+SSW	450.26	153.70	481.20	153.70
RW1+SSW	454.86	136.53	481.20	143.59
RW1+SLW	450.26	153.70	454.86	136.53
RW1+SLW	481.20	153.70	481.20	143.59
RW1+SLW	86.20	37.23	86.19	61.03
RW1+SLW	54.79	37.23	52.70	45.03
RW1+SSW	54.79	37.23	86.20	37.23
RW1+SSW	52.70	45.03	86.19	61.03
RW2	230.33	99.65	230.33	132.65
RW2	230.33	99.65	293.24	116.50
RW2	281.34	160.91	293.24	116.50
RW2	281.34	160.91	341.72	160.91
RW2	332.18	192.66	341.72	160.91

Snow Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft	Magnitude Points
TYP. SNOW	0.78	414.96	
	516.66	414.96	
	516.66	-6.00	
	0.78	-6.00	
CROOF1	231.33	100.95	M1
	230.33	78.90	M3
	297.46	96.89	
	292.01	117.21	M2
DROOF1	434.00	153.70	
	439.69	132.47	M3
	454.86	136.53	M2

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	450.26	153.70	M1
DROOF2	481.20	153.70	M1
	481.20	143.59	M2
	495.51	143.59	M3
	492.80	153.70	
DROOF3	450.26	153.70	M1
	481.20	153.70	M2
	481.51	162.10	M3
	448.01	162.10	
DROOF4	454.86	136.53	M2
	456.95	128.71	
	481.20	135.21	M3
	481.20	143.59	M1
DROOF5	341.72	160.91	M1
	357.70	160.91	M3
	348.16	192.66	
	332.18	192.66	M2
DROOF6	281.34	160.91	M1
	341.72	160.91	M2
	344.68	149.89	M3
	284.28	149.89	
	281.33	160.91	
DROOF7	281.33	160.91	M1
	293.24	116.50	M2
	306.18	119.97	M3
	298.16	149.89	
	281.34	160.91	
EROOF1	39.53	48.52	M1
	39.53	31.83	M2
	27.33	28.56	M3
	27.33	45.26	
EROOF2	105.83	66.29	M1
	105.83	31.83	M2
	118.03	31.83	M3
	118.03	69.56	
EROOF3	39.53	48.52	M1
	105.83	66.29	M2
	105.83	75.61	M3
	39.53	57.84	
EROOF4	39.53	31.83	M1
	105.83	31.83	M2
	105.83	22.83	M3
	39.53	22.83	
EROOF5	230.33	132.65	M1
	230.33	99.65	M2

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	214.93	95.52	M3
	214.93	128.53	
TYP. SNOW	409.51	405.41	
	429.05	424.95	
	447.20	406.81	
BSECOND1	386.05	395.36	M1
	448.97	332.44	M2
	465.73	349.20	M3
	402.81	412.12	
ACHORUS1	122.41	280.50	M1
	122.41	206.33	M2
	104.67	206.33	M3
	104.67	280.50	
AROOF1	214.33	279.50	M1
	214.33	178.44	M2
	223.81	179.44	
	224.03	279.50	M3
AROOF2	231.33	279.50	M1
	231.33	178.44	M2
	223.81	179.44	M3
	224.03	279.50	
TYP. SNOW	402.81	412.12	
	423.05	432.36	
	444.18	411.24	

DATA FOR FLOOR TYPE: LGI ROOF

Grid Systems:

A Wing
B Wing
D Wing
D' Wing
E Wing
E' Wing

Columns:

ID	X ft	Y ft	Shape	Orient. Angle	Param* ksi	LLRed %	Frame Type	Eccent* Maj	Eccent* Min
1	6.994	45.532	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
2	13.353	21.799	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
3	19.194	0.000	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
4	23.366	77.198	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
5	31.617	46.404	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
6	35.522	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
7	47.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
8	47.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
9	50.412	84.445	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
10	50.414	51.441	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
11	60.000	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
12	60.000	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
13	60.000	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
14	66.352	55.711	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
15	68.700	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
16	77.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
17	77.941	91.821	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
18	85.200	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
19	86.192	61.028	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
20	87.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
21	87.330	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
22	87.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
23	105.830	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
24	105.830	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
25	105.830	66.290	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
26	105.953	99.327	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
27	106.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
28	106.830	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
29	106.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
30	113.950	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
31	117.051	57.908	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
32	120.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
33	120.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
34	120.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
35	120.330	260.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
36	120.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
37	121.409	70.464	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
38	133.481	106.703	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
39	146.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
40	146.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
41	139.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
42	139.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
43	139.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
44	141.733	75.910	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
45	144.580	65.284	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
46	155.775	112.677	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
47	155.941	79.717	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
48	168.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
49	168.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
50	166.873	71.258	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
52	175.330	0.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
53	175.330	31.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
54	175.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
55	177.586	118.521	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
56	185.837	87.727	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
57	187.200	76.705	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
58	189.000	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
59	189.000	163.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
61	187.200	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
62	187.200	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
63	194.080	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
64	194.080	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
65	194.080	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
66	213.110	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
67	213.110	83.647	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
68	213.110	95.035	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
69	215.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
70	215.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
71	229.330	0.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
72	229.330	31.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
73	229.330	52.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
74	229.330	79.670	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
76	230.330	99.649	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
77	230.330	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
78	230.330	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
79	230.330	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
80	230.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
81	230.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
82	230.330	259.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
83	230.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
85	249.830	278.500	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
86	251.313	99.905	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
87	252.830	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
88	254.877	259.660	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
89	254.900	86.518	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
90	260.445	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
91	263.950	225.800	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
92	269.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
93	271.321	90.918	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
94	272.829	192.660	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
95	281.337	160.910	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
96	284.290	149.890	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
97	291.665	122.365	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
98	291.872	320.540	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
99	294.577	111.498	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
100	298.164	98.110	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
101	299.160	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
102	302.770	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
103	302.770	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
104	305.720	149.890	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
105	306.402	67.365	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
106	311.120	301.293	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
107	312.025	340.693	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
108	315.312	114.093	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
109	318.159	103.468	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
110	319.849	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
111	322.802	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
112	326.400	286.012	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
113	328.653	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
114	331.249	118.363	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
115	332.182	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
116	334.096	107.738	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
117	334.491	74.891	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
118	327.227	355.895	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
119	341.724	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
120	344.677	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
121	344.884	267.528	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
122	351.659	123.832	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
123	357.633	386.301	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
124	360.500	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
125	360.500	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
126	361.751	115.148	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
127	363.057	249.356	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
128	365.247	73.121	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
129	368.000	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
130	377.786	406.454	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
131	381.606	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
132	383.209	269.508	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
133	386.114	133.064	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
134	388.961	122.439	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
135	389.020	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
136	397.410	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
137	388.880	395.359	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
138	399.702	82.353	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
139	400.241	149.890	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
140	403.501	137.723	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
141	405.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
142	406.348	127.098	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
143	401.375	407.854	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
144	398.412	284.711	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
145	412.314	371.926	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
146	417.089	87.012	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
147	415.983	422.463	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
148	425.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
149	425.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
150	423.055	429.534	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
151	428.817	315.117	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
152	430.797	353.442	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
153	441.044	136.395	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
154	446.020	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
155	446.488	406.100	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
156	451.785	96.309	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
157	448.970	335.269	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
158	454.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
159	462.453	132.917	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
160	462.520	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
161	462.780	349.079	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
162	464.972	387.616	HS	135.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
164	478.391	137.188	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
165	479.314	103.685	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
166	482.910	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
167	482.910	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
168	483.144	369.444	HS	45.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
169	489.604	131.890	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
170	495.966	108.147	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
171	510.660	137.531	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
172	510.660	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
173	510.660	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
174	216.380	254.970	HS	90.00	46.0	Calc	Grv. Hang	0.00	0.00
175	216.380	233.920	HS	90.00	46.0	Calc	Grv. Hang	0.00	0.00
176	279.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
177	342.430	371.098	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
178	413.615	299.914	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
181	230.330	143.920	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
182	120.330	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
183	147.280	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
184	169.900	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
185	190.150	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
186	206.018	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
187	229.330	288.083	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
188	229.330	325.000	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
189	229.330	343.000	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
190	245.540	347.322	HS	105.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
191	253.396	318.004	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
192	260.991	289.659	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
195	189.000	143.920	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
196	230.330	132.654	HS	90.00	46.0	Calc	Grv. Hang	0.00	0.00
197	222.110	179.440	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
198	230.330	179.440	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
199	267.734	104.305	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50

* Parameter: Steel - Fy
Concrete - f'c
Other - E

* Eccentricity: Values with + indicate eccentricity plus 1/2 column dimension;
values without + indicate absolute eccentricity (in)

Beams:

ID	Xi ft	Yi ft	Xj ft	Yj ft	Param* ksi	LLRed %	Type	Frame Type	User Size
1	168.830	208.330	187.200	208.330	50.0	Calc	Lat	Lateral	W16X89
2	189.000	143.920	189.000	163.660	50.0	Calc	NonC	Gravity	W16X31
8	189.000	163.660	230.330	163.660	50.0	Calc	NonC	Lateral	W18X40
15	187.200	208.330	215.330	208.330	50.0	Calc	Lat	Lateral	W14X43
17	230.330	143.920	230.330	163.660	50.0	Calc	Lat	Lateral	W18X60
22	189.000	121.430	230.330	132.654	50.0	Calc	NonC	Gravity	W24X62
23	189.000	143.920	230.330	143.920	50.0	Calc	NonC	Gravity	W21X44
24	189.000	152.410	230.330	152.410	50.0	Calc	NonC	Gravity	W18X40
25	230.330	132.654	230.330	143.920	50.0	Calc	NonC	Gravity	W14X22
26	189.000	160.910	230.330	160.910	50.0	Calc	NonC	Gravity	W18X40
29	229.330	325.000	229.330	367.825	50.0	Calc	NonC	Gravity	W21X73
30	239.328	370.504	253.396	318.004	50.0	Calc	NonC	Gravity	W21X93
31	229.330	288.083	229.330	325.000	50.0	Calc	NonC	Lateral	W24X76
32	253.396	318.004	260.991	289.659	50.0	Calc	NonC	Lateral	W24X55
33	249.830	278.500	260.991	289.659	50.0	Calc	NonC	Lateral	W14X22
34	215.330	278.500	230.330	278.500	50.0	Calc	NonC	Gravity	W24X55
35	229.330	278.500	229.330	288.083	50.0	Calc	NonC	Gravity	W24X55
36	229.330	281.175	260.991	289.659	50.0	Calc	NonC	Gravity	W24X55
37	249.979	286.708	251.682	280.352	50.0	Calc	NonC	Gravity	W14X22
38	229.330	311.556	253.396	318.004	50.0	Calc	NonC	Gravity	W14X22
39	229.330	325.000	250.035	330.548	50.0	Calc	NonC	Gravity	W18X35
40	229.330	343.000	245.540	347.322	50.0	Calc	NonC	Gravity	W21X44
41	229.330	288.083	259.264	296.104	50.0	Calc	NonC	Gravity	W18X35
42	229.330	295.830	257.307	303.406	50.0	Calc	NonC	Gravity	W16X26
43	229.330	303.662	255.351	310.709	50.0	Calc	NonC	Gravity	W14X22
44	229.330	318.275	251.716	324.273	50.0	Calc	NonC	Gravity	W14X22
45	229.330	333.997	241.024	337.130	50.0	Calc	NonC	Gravity	W14X22
48	229.330	359.461	234.658	360.889	50.0	Calc	NonC	Gravity	W14X22
49	229.330	351.282	236.703	353.258	50.0	Calc	NonC	Gravity	W14X22
50	232.567	368.693	239.328	370.504	50.0	Calc	NonC	Gravity	W14X22
51	189.000	121.430	189.000	143.920	50.0	Calc	NonC	Gravity	W24X55
52	189.000	132.654	230.330	132.654	50.0	Calc	NonC	Gravity	W24X55
53	232.567	368.693	243.273	328.736	50.0	Calc	NonC	Gravity	W21X73
54	229.330	367.825	232.567	368.693	50.0	Calc	NonC	Gravity	W14X22

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
55	234.658	360.889	241.419	362.700	50.0	Calc	NonC	Gravity	W14X22
56	236.703	353.258	243.464	355.069	50.0	Calc	NonC	Gravity	W14X22
57	241.024	337.130	247.786	338.942	50.0	Calc	NonC	Gravity	W14X22

* Parameter: Steel - Fy
Concrete - f'c
Other - E

Steel Beam Properties:

ID	Max Depth in	Min Depth in	Min Width in	Steel Table	Defl Criteria
1	None	0.00	0.00	Def.	
2	None	0.00	0.00	Def.	spandrel
8	None	0.00	0.00	Def.	
15	None	0.00	0.00	Def.	spandrel
17	None	0.00	0.00	Def.	spandrel
22	None	0.00	0.00	Def.	
23	None	0.00	0.00	Def.	
24	None	0.00	0.00	Def.	
25	None	0.00	0.00	Def.	
26	None	0.00	0.00	Def.	
29	None	0.00	0.00	Def.	canopy
30	None	0.00	0.00	Def.	canopy
31	None	0.00	0.00	Def.	spandrel
32	None	0.00	0.00	Def.	spandrel
33	None	0.00	0.00	Def.	spandrel
34	None	0.00	0.00	Def.	
35	None	0.00	0.00	Def.	spandrel
36	None	0.00	0.00	Def.	spandrel
37	None	0.00	0.00	Def.	spandrel
38	None	0.00	0.00	Def.	
39	None	0.00	0.00	Def.	
40	None	0.00	0.00	Def.	
41	None	0.00	0.00	Def.	
42	None	0.00	0.00	Def.	
43	None	0.00	0.00	Def.	
44	None	0.00	0.00	Def.	
45	None	0.00	0.00	Def.	
48	None	0.00	0.00	Def.	
49	None	0.00	0.00	Def.	
50	None	0.00	0.00	Def.	spandrel
51	None	0.00	0.00	Def.	
52	None	0.00	0.00	Def.	
53	None	0.00	0.00	Def.	canopy

ID	Max	Min	Min	Steel	Defl
54	None	0.00	0.00	Def.	
55	None	0.00	0.00	Def.	
56	None	0.00	0.00	Def.	
57	None	0.00	0.00	Def.	

Slab Edges:

	Xi ft	Yi ft	Xj ft	Yj ft	Edge Dist in
Diaphragm 1:					
	239.328	370.504	241.419	362.700	36.0
	241.419	362.700	245.540	347.322	36.0
	245.540	347.322	253.396	318.004	36.0
	253.396	318.004	260.991	289.659	36.0
	251.682	280.352	260.991	289.659	36.0
	249.979	286.708	251.682	280.352	36.0
	229.330	281.175	249.979	286.708	36.0
	229.330	281.175	229.330	288.083	36.0
	229.330	288.083	229.330	325.000	36.0
	229.330	325.000	229.330	343.000	36.0
	229.330	343.000	229.330	359.461	36.0
	229.330	359.461	229.330	367.825	36.0
	229.330	367.825	232.567	368.693	36.0
	232.567	368.693	239.328	370.504	36.0
Diaphragm 2:					
	230.330	160.910	230.330	163.660	24.0
	189.000	163.660	230.330	163.660	24.0
	189.000	143.920	189.000	163.660	24.0
	189.000	121.430	189.000	143.920	24.0
	189.000	121.430	230.330	132.654	24.0
	230.330	132.654	230.330	143.920	24.0
	230.330	143.920	230.330	160.910	24.0

Deck Polygons:

Deck Prop Type	ID	Slab Action	Angle	X-Coord ft	Y-Coord ft
Noncomposite	1	One-Way	90.00	187.00	119.43
				165.20	225.80
				238.76	216.66
				238.01	107.43
				187.00	119.43
Noncomposite	1	One-Way	105.00	226.33	277.27
				226.33	369.11
				241.70	373.23
				264.34	288.76
				250.13	274.56
				247.86	283.03

Deck Prop	Slab Action	Angle	X-Coord	Y-Coord
			226.33	277.27

Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft
TYP ROOF	177.59	118.52
	187.20	216.66
	238.76	216.66
	238.01	107.43
	177.59	118.52
TYP ROOF	226.33	277.27
	226.33	369.11
	241.70	373.23
	264.34	288.76
	250.13	274.56
	247.86	283.03
	226.33	277.27

User Input Line Loads:

Load Properties ID	Xi ft	Yi ft	Xj ft	Yj ft
LW2	189.00	121.43	230.33	132.65
2W2	229.33	281.18	249.98	286.71
2W2	249.98	286.71	251.68	280.35
2W2	249.83	278.50	251.68	280.35
2W2	215.33	278.50	230.33	278.50
2W2	229.33	278.50	229.33	281.18
LW1	230.33	132.65	230.33	163.66
LW1	168.83	208.33	215.33	208.33

Snow Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft	Magnitude Points
TYP. SNOW	1.99	428.54	
	515.66	428.54	
	515.66	-5.00	
	1.99	-5.00	
ALGI1	187.00	210.33	M1
	232.33	210.33	M2
	230.33	195.53	M3
	187.00	195.53	
ALGI2	232.33	210.33	M1
	232.33	119.43	M2
	218.73	123.26	M3
	219.00	197.00	
ALGI3	187.00	119.43	M1

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	232.33	119.43	M2
	218.73	140.36	M3
	187.00	140.36	
TYP. SNOW	1.99	434.53	
	515.66	434.53	
	515.66	-5.00	
	1.99	-5.00	
CSECOND1	226.33	277.27	M2
	226.33	301.59	M3
	258.58	310.24	
	264.34	288.76	M1
	250.13	274.55	
	247.84	283.03	
ALGI3	187.00	118.81	M1
	232.33	131.12	M2
	232.33	150.89	M3
	187.20	138.80	
ALGI2	232.33	165.66	M1
	232.33	131.12	M2
	218.83	147.28	M3
	218.83	165.77	

DATA FOR FLOOR TYPE: AUDITORIUM ROOF

Grid Systems:
A Wing
B Wing
D Wing
D' Wing
E Wing
E' Wing

Columns:

ID	X ft	Y ft	Shape	Orient. Angle	Param* ksi	LLRed %	Frame Type	Eccent* Maj	Eccent* Min
5	52.700	45.034	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
6	54.791	37.230	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
7	71.304	37.230	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
8	68.106	49.162	HS	105.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
9	86.200	37.230	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
11	120.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
12	120.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
13	120.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
14	120.330	260.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
15	120.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
16	146.330	208.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
17	146.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*
18	168.830	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
19	168.830	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
20	187.200	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
21	187.200	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
22	215.330	208.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
23	215.330	278.500	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
25	230.330	105.370	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
26	230.330	121.430	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
27	230.330	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
28	230.330	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
29	230.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
30	230.330	243.330	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
31	230.330	259.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
32	230.330	278.500	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
34	249.830	278.500	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
35	254.877	259.660	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
36	260.445	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
37	263.950	225.800	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
38	269.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
39	272.829	192.660	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
40	281.337	160.910	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
41	284.290	149.890	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
42	291.665	122.365	HS	105.00	46.0	Calc	Grv.	+ 2.50 + 2.50
43	299.160	205.830	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
44	302.770	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
45	302.770	192.660	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
46	319.849	160.910	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
47	328.653	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
48	332.182	192.660	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
49	341.724	160.910	HS	90.00	46.0	Calc	Grv.	+ 2.50 + 2.50
50	450.259	153.700	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
51	454.858	136.535	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
52	465.912	153.700	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
53	469.463	140.448	HS	105.00	46.0	Calc	Lat.	+ 2.50 + 2.50
54	481.200	153.700	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
55	481.200	143.593	HS	90.00	46.0	Calc	Lat.	+ 2.50 + 2.50
60	291.872	320.540	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
61	312.025	340.693	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
62	327.227	355.895	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
63	357.633	386.301	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
64	377.786	406.454	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
65	388.880	395.359	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
66	412.314	371.926	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
67	430.797	353.442	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50
68	448.970	335.269	HS	135.00	46.0	Calc	Lat.	+ 2.50 + 2.50

ID	X	Y	Shape	Orient.	Param*	LLRed	Frame	Eccent*	
69	428.817	315.117	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
70	398.412	284.711	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
71	383.209	269.508	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
72	363.057	249.356	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
73	344.884	267.528	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
74	326.400	286.012	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
75	311.120	301.293	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
77	279.301	205.830	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
78	215.330	260.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
79	215.330	225.800	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
80	215.330	243.330	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
81	413.615	299.914	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
82	342.430	371.098	HS	135.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
83	120.330	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
84	147.280	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
85	169.900	283.030	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50
86	190.150	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
87	206.018	283.030	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
88	230.330	143.920	HS	90.00	46.0	Calc	Grv.	+ 2.50	+ 2.50
90	86.194	54.009	HS	90.00	46.0	Calc	Lat.	+ 2.50	+ 2.50

* Parameter: Steel - Fy
Concrete - f'c
Other - E

* Eccentricity: Values with + indicate eccentricity plus 1/2 column dimension;
values without + indicate absolute eccentricity (in)

Beams:

ID	Xi ft	Yi ft	Xj ft	Yj ft	Param* ksi	LLRed %	Type	Frame Type	User Size
8	52.700	45.034	68.106	49.162	50.0	Calc	NonC	Lateral	W14X34
10	54.791	37.230	71.304	37.230	50.0	Calc	NonC	Lateral	W14X34
12	71.304	37.230	86.200	37.230	50.0	Calc	NonC	Lateral	W14X34
14	68.106	49.162	86.194	54.009	50.0	Calc	NonC	Lateral	W14X34
16	86.194	54.009	86.200	37.230	50.0	Calc	NonC	Lateral	W14X34
17	120.330	208.330	120.330	225.800	50.0	Calc	NonC	Gravity	W14X22
18	120.330	208.330	146.330	208.330	50.0	Calc	NonC	Gravity	W27X84
19	120.330	225.800	120.330	243.330	50.0	Calc	Lat	Lateral	W14X22
20	120.330	243.330	120.330	260.800	50.0	Calc	Lat	Lateral	W14X22
21	120.330	260.800	120.330	278.500	50.0	Calc	NonC	Gravity	W14X22
22	120.330	278.500	146.330	278.500	50.0	Calc	NonC	Gravity	W27X84
24	146.330	208.330	146.330	278.500	50.0	Calc	NonC	Gravity	W33X130
25	146.330	208.330	168.830	208.330	50.0	Calc	NonC	Gravity	W24X62
26	146.330	278.500	168.830	278.500	50.0	Calc	NonC	Gravity	W24X62
28	168.830	208.330	168.830	278.500	50.0	Calc	NonC	Gravity	W36X135

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
29	168.830	208.330	187.200	208.330	50.0	Calc	Lat	Lateral	W24X62
30	168.830	278.500	187.200	278.500	50.0	Calc	Lat	Lateral	W24X62
34	187.200	208.330	187.200	278.500	50.0	Calc	NonC	Gravity	W33X130
35	187.200	208.330	215.330	208.330	50.0	Calc	Lat	Lateral	W24X62
36	187.200	278.500	215.330	278.500	50.0	Calc	Lat	Lateral	W24X62
39	215.330	260.800	215.330	278.500	50.0	Calc	Lat	Lateral	W14X43
48	230.330	99.590	230.330	121.430	50.0	Calc	NonC	Gravity	W30X90
49	230.330	99.590	293.233	116.511	50.0	Calc	NonC	Gravity	W30X116
57	230.330	160.910	230.330	205.830	50.0	Calc	NonC	Gravity	W33X118
63	230.330	205.830	230.330	225.800	50.0	Calc	NonC	Gravity	W18X35
66	230.330	225.800	230.330	243.330	50.0	Calc	Lat	Lateral	W14X43
69	230.330	243.330	230.330	259.660	50.0	Calc	Lat	Lateral	W14X43
72	230.330	259.660	230.330	288.100	50.0	Calc	NonC	Gravity	W16X31
77	246.143	292.265	254.877	259.660	50.0	Calc	NonC	Gravity	W24X55
78	254.877	259.660	263.950	225.800	50.0	Calc	NonC	Gravity	W24X55
80	263.950	225.800	269.301	205.830	50.0	Calc	NonC	Gravity	W18X35
81	269.301	205.830	272.829	192.660	50.0	Calc	NonC	Gravity	W14X22
82	279.301	205.830	299.160	205.830	50.0	Calc	NonC	Gravity	W16X31
83	272.829	192.660	281.337	160.910	50.0	Calc	NonC	Gravity	W21X57
84	272.829	192.660	302.770	192.660	50.0	Calc	NonC	Gravity	W21X44
85	279.301	192.660	279.301	205.830	50.0	Calc	NonC	Gravity	W10X15
86	281.337	160.910	284.290	149.890	50.0	Calc	Lat	Lateral	W14X22
87	281.337	160.910	302.770	160.910	50.0	Calc	NonC	Gravity	W16X26
88	282.690	160.910	282.770	192.660	50.0	Calc	NonC	Gravity	W16X31
89	284.290	149.890	293.233	116.511	50.0	Calc	NonC	Gravity	W30X90
90	289.455	192.660	289.455	205.830	50.0	Calc	NonC	Gravity	W10X15
91	292.730	160.910	292.770	192.660	50.0	Calc	NonC	Gravity	W18X35
92	299.160	192.660	299.160	205.830	50.0	Calc	NonC	Gravity	W10X15
93	299.160	205.830	328.653	205.830	50.0	Calc	NonC	Gravity	W16X31
94	302.770	160.910	302.770	192.660	50.0	Calc	NonC	Gravity	W16X31
95	302.770	160.910	319.849	160.910	50.0	Calc	Lat	Lateral	W14X22
96	302.770	192.660	302.770	205.830	50.0	Calc	NonC	Gravity	W10X15
97	302.770	192.660	332.182	192.660	50.0	Calc	NonC	Gravity	W16X40
98	311.310	160.910	311.342	192.660	50.0	Calc	NonC	Gravity	W16X31
99	312.520	192.660	312.520	205.830	50.0	Calc	NonC	Gravity	W10X15
100	319.849	160.910	319.849	192.660	50.0	Calc	NonC	Gravity	W16X26
101	319.849	160.910	341.724	160.910	50.0	Calc	NonC	Gravity	W14X22
102	322.270	192.660	322.270	205.830	50.0	Calc	NonC	Gravity	W10X15
103	326.796	160.910	326.796	192.660	50.0	Calc	NonC	Gravity	W16X26
104	328.653	205.830	332.182	192.660	50.0	Calc	Lat	Lateral	W14X22
105	332.182	192.660	341.724	160.910	50.0	Calc	NonC	Gravity	W16X31
106	333.742	160.910	333.742	187.467	50.0	Calc	NonC	Gravity	W12X19
107	450.259	153.700	454.858	136.535	50.0	Calc	NonC	Lateral	W14X34
108	450.259	153.700	465.912	153.700	50.0	Calc	NonC	Lateral	W14X34
109	454.858	136.535	469.463	140.448	50.0	Calc	NonC	Lateral	W14X34

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
111	465.912	153.700	481.200	153.700	50.0	Calc	NonC	Lateral	W14X34
112	465.912	153.700	469.463	140.448	50.0	Calc	NonC	Gravity	W14X22
113	469.463	140.448	481.200	143.593	50.0	Calc	NonC	Lateral	W14X34
116	481.200	143.593	481.200	153.700	50.0	Calc	NonC	Lateral	W14X34
136	291.872	320.540	311.120	301.293	50.0	Calc	NonC	Gravity	W14X22
137	311.120	301.293	326.400	286.012	50.0	Calc	Lat	Lateral	W14X43
138	326.400	286.012	344.884	267.528	50.0	Calc	Lat	Lateral	W14X43
139	344.884	267.528	363.057	249.356	50.0	Calc	Lat	Lateral	W14X43
140	363.057	249.356	383.209	269.508	50.0	Calc	NonC	Gravity	W24X76
141	383.209	269.508	398.412	284.711	50.0	Calc	Lat	Lateral	W27X94
142	398.412	284.711	413.615	299.914	50.0	Calc	Lat	Lateral	W27X94
143	428.817	315.117	448.970	335.269	50.0	Calc	NonC	Gravity	W27X84
144	430.797	353.442	448.970	335.269	50.0	Calc	Lat	Lateral	W14X48
145	412.314	371.926	430.797	353.442	50.0	Calc	Lat	Lateral	W14X48
146	388.880	395.359	412.314	371.926	50.0	Calc	Lat	Lateral	W14X48
147	377.786	406.454	388.880	395.359	50.0	Calc	NonC	Gravity	W14X22
148	291.872	320.540	312.025	340.693	50.0	Calc	NonC	Lateral	W27X94
149	312.025	340.693	327.227	355.895	50.0	Calc	Lat	Lateral	W27X94
150	327.227	355.895	342.430	371.098	50.0	Calc	Lat	Lateral	W27X94
151	357.633	386.301	377.786	406.454	50.0	Calc	NonC	Lateral	W27X94
155	312.025	340.693	383.209	269.508	50.0	Calc	NonC	Gravity	W40X149
159	327.227	355.895	398.412	284.711	50.0	Calc	NonC	Gravity	W40X149
160	334.829	363.497	406.013	292.312	50.0	Calc	NonC	Gravity	W40X149
161	342.430	371.098	413.615	299.914	50.0	Calc	NonC	Gravity	W40X149
163	357.633	386.301	428.817	315.117	50.0	Calc	NonC	Gravity	W40X149
167	269.301	205.830	279.301	205.830	50.0	Calc	Lat	Lateral	W14X22
168	215.330	208.330	215.330	225.800	50.0	Calc	Lat	Lateral	W14X43
169	215.330	243.330	215.330	260.800	50.0	Calc	NonC	Gravity	W14X22
170	215.330	225.800	215.330	243.330	50.0	Calc	NonC	Gravity	W14X22
171	342.430	371.098	357.633	386.301	50.0	Calc	NonC	Lateral	W27X94
172	413.615	299.914	428.817	315.117	50.0	Calc	NonC	Lateral	W27X94
173	305.307	333.975	376.492	262.791	50.0	Calc	NonC	Gravity	W40X149
174	298.590	327.258	369.774	256.073	50.0	Calc	NonC	Gravity	W40X149
175	319.626	348.294	390.810	277.110	50.0	Calc	NonC	Gravity	W40X149
176	350.032	378.700	421.216	307.515	50.0	Calc	NonC	Gravity	W40X149
177	364.351	393.019	435.535	321.834	50.0	Calc	NonC	Gravity	W40X149
178	371.068	399.736	442.252	328.552	50.0	Calc	NonC	Gravity	W40X149
185	129.080	208.330	129.080	278.500	50.0	Calc	NonC	Gravity	W33X130
186	137.663	208.330	137.663	278.500	50.0	Calc	NonC	Gravity	W33X130
187	153.830	208.330	153.830	278.500	50.0	Calc	NonC	Gravity	W33X118
188	161.330	208.330	161.330	278.500	50.0	Calc	NonC	Gravity	W33X118
189	178.915	208.330	178.915	278.500	50.0	Calc	NonC	Gravity	W36X135
190	195.587	208.330	195.587	278.500	50.0	Calc	NonC	Gravity	W33X118
191	202.165	208.330	202.165	278.500	50.0	Calc	NonC	Gravity	W33X118
192	208.748	208.330	208.748	278.500	50.0	Calc	NonC	Gravity	W33X118

ID	Xi	Yi	Xj	Yj	Param*	LLRed	Type	Frame	User
193	206.018	283.030	215.330	278.500	50.0	Calc	NonC	Gravity	W14X22
194	187.200	278.500	190.150	283.030	50.0	Calc	NonC	Gravity	W14X22
195	168.830	278.500	169.900	283.030	50.0	Calc	NonC	Gravity	W14X22
196	169.900	283.030	187.200	278.500	50.0	Calc	NonC	Lateral	W14X43
197	146.330	278.500	147.280	283.030	50.0	Calc	NonC	Gravity	W14X22
198	147.280	283.030	168.830	278.500	50.0	Calc	NonC	Lateral	W14X43
199	120.330	278.500	120.330	283.030	50.0	Calc	NonC	Gravity	W14X22
200	120.330	283.030	146.330	278.500	50.0	Calc	NonC	Gravity	W16X36
201	190.150	283.030	203.565	278.500	50.0	Calc	NonC	Gravity	W14X22
202	204.573	278.500	206.018	283.030	50.0	Calc	NonC	Gravity	W14X22
203	230.330	288.100	246.143	292.265	50.0	Calc	NonC	Gravity	W14X22
207	230.330	278.500	248.524	283.375	50.0	Calc	NonC	Gravity	W14X22
208	230.330	278.500	249.830	278.500	50.0	Calc	NonC	Gravity	W12X14
209	230.330	259.660	254.877	259.660	50.0	Calc	NonC	Gravity	W14X22
211	230.330	243.330	259.252	243.330	50.0	Calc	NonC	Gravity	W16X26
213	230.330	225.800	263.950	225.800	50.0	Calc	NonC	Gravity	W18X35
214	230.330	205.830	269.301	205.830	50.0	Calc	NonC	Gravity	W27X84
216	230.330	192.660	272.829	192.660	50.0	Calc	NonC	Gravity	W27X84
217	230.330	160.910	260.445	160.910	50.0	Calc	NonC	Gravity	W27X84
218	260.445	160.910	279.937	166.133	50.0	Calc	NonC	Gravity	W27X84
220	230.330	152.841	260.445	160.910	50.0	Calc	NonC	Gravity	W27X84
221	230.330	147.243	281.337	160.910	50.0	Calc	NonC	Gravity	W27X84
222	230.330	135.432	284.290	149.890	50.0	Calc	NonC	Gravity	W27X84
223	230.330	121.430	287.790	136.826	50.0	Calc	NonC	Gravity	W27X84
224	230.330	105.374	291.665	122.365	50.0	Calc	NonC	Gravity	W27X84
225	230.330	113.676	289.729	129.592	50.0	Calc	NonC	Gravity	W27X84
226	230.330	128.428	286.040	143.356	50.0	Calc	NonC	Gravity	W27X84
232	230.330	143.920	230.330	160.910	50.0	Calc	NonC	Gravity	W14X22
233	230.330	121.430	230.330	143.920	50.0	Calc	NonC	Gravity	W18X40
234	230.330	143.920	282.167	157.810	50.0	Calc	NonC	Gravity	W21X44
235	457.992	153.700	462.074	138.468	50.0	Calc	NonC	Gravity	W14X22
236	473.459	153.700	476.505	142.335	50.0	Calc	NonC	Gravity	W14X22
237	52.700	45.034	54.791	37.230	50.0	Calc	NonC	Lateral	W14X34
238	68.106	49.162	71.304	37.230	50.0	Calc	NonC	Gravity	W14X22
239	60.418	47.102	63.063	37.230	50.0	Calc	NonC	Gravity	W14X22
240	77.157	51.588	81.004	37.230	50.0	Calc	NonC	Gravity	W14X22
241	230.330	269.080	252.353	269.080	50.0	Calc	NonC	Gravity	W12X19
242	230.330	251.490	257.066	251.490	50.0	Calc	NonC	Gravity	W14X22
243	230.330	235.160	261.442	235.160	50.0	Calc	NonC	Gravity	W16X31
244	230.330	215.820	266.624	215.820	50.0	Calc	NonC	Gravity	W27X84
245	230.330	199.248	271.064	199.248	50.0	Calc	NonC	Gravity	W27X84
246	230.330	184.720	274.957	184.720	50.0	Calc	NonC	Gravity	W27X84
247	230.330	176.780	277.084	176.780	50.0	Calc	NonC	Gravity	W27X84
248	230.330	168.840	279.212	168.840	50.0	Calc	NonC	Gravity	W27X84

* Parameter: Steel - Fy
Concrete - f'c
Other - E

Steel Beam Properties:

ID	Max Depth in	Min Depth in	Min Width in	Steel Table	Defl Criteria
8	None	0.00	0.00	Def.	spandrel
10	None	0.00	0.00	Def.	spandrel
12	None	0.00	0.00	Def.	spandrel
14	None	0.00	0.00	Def.	spandrel
16	None	0.00	0.00	Def.	spandrel
17	None	0.00	0.00	Def.	spandrel
18	None	0.00	0.00	Def.	spandrel
19	None	0.00	0.00	Def.	spandrel
20	None	0.00	0.00	Def.	spandrel
21	None	0.00	0.00	Def.	spandrel
22	None	0.00	0.00	Def.	spandrel
24	None	0.00	0.00	Def.	
25	None	0.00	0.00	Def.	spandrel
26	None	0.00	0.00	Def.	spandrel
28	None	0.00	0.00	Def.	
29	None	0.00	0.00	Def.	spandrel
30	None	0.00	0.00	Def.	spandrel
34	None	0.00	0.00	Def.	
35	None	0.00	0.00	Def.	spandrel
36	None	0.00	0.00	Def.	spandrel
39	None	0.00	0.00	Def.	
48	None	0.00	0.00	Def.	spandrel
49	None	0.00	0.00	Def.	spandrel
57	None	0.00	0.00	Def.	spandrel
63	None	0.00	0.00	Def.	spandrel
66	None	0.00	0.00	Def.	spandrel
69	None	0.00	0.00	Def.	spandrel
72	None	0.00	0.00	Def.	spandrel
77	None	0.00	0.00	Def.	spandrel
78	None	0.00	0.00	Def.	spandrel
80	None	0.00	0.00	Def.	spandrel
81	None	0.00	0.00	Def.	
82	None	0.00	0.00	Def.	spandrel
83	None	0.00	0.00	Def.	
84	None	0.00	0.00	Def.	
85	None	0.00	0.00	Def.	
86	None	0.00	0.00	Def.	spandrel
87	None	0.00	0.00	Def.	spandrel

ID	Max	Min	Min	Steel	Defl
88	None	0.00	0.00	Def.	
89	None	0.00	0.00	Def.	spandrel
90	None	0.00	0.00	Def.	
91	None	0.00	0.00	Def.	
92	None	0.00	0.00	Def.	
93	None	0.00	0.00	Def.	spandrel
94	None	0.00	0.00	Def.	
95	None	0.00	0.00	Def.	spandrel
96	None	0.00	0.00	Def.	
97	None	0.00	0.00	Def.	
98	None	0.00	0.00	Def.	
99	None	0.00	0.00	Def.	
100	None	0.00	0.00	Def.	
101	None	0.00	0.00	Def.	spandrel
102	None	0.00	0.00	Def.	
103	None	0.00	0.00	Def.	
104	None	0.00	0.00	Def.	spandrel
105	None	0.00	0.00	Def.	spandrel
106	None	0.00	0.00	Def.	
107	None	0.00	0.00	Def.	spandrel
108	None	0.00	0.00	Def.	spandrel
109	None	0.00	0.00	Def.	spandrel
111	None	0.00	0.00	Def.	spandrel
112	None	0.00	0.00	Def.	
113	None	0.00	0.00	Def.	spandrel
116	None	0.00	0.00	Def.	
136	None	0.00	0.00	Def.	
137	None	0.00	0.00	Def.	
138	None	0.00	0.00	Def.	
139	None	0.00	0.00	Def.	
140	None	0.00	0.00	Def.	
141	None	0.00	0.00	Def.	
142	None	0.00	0.00	Def.	
143	None	0.00	0.00	Def.	
144	None	0.00	0.00	Def.	
145	None	0.00	0.00	Def.	
146	None	0.00	0.00	Def.	
147	None	0.00	0.00	Def.	
148	None	0.00	0.00	Def.	
149	None	0.00	0.00	Def.	
150	None	0.00	0.00	Def.	
151	None	0.00	0.00	Def.	
155	None	0.00	0.00	Def.	
159	None	0.00	0.00	Def.	
160	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
161	None	0.00	0.00	Def.	
163	None	0.00	0.00	Def.	
167	None	0.00	0.00	Def.	
168	None	0.00	0.00	Def.	
169	None	0.00	0.00	Def.	
170	None	0.00	0.00	Def.	
171	None	0.00	0.00	Def.	
172	None	0.00	0.00	Def.	
173	None	0.00	0.00	Def.	
174	None	0.00	0.00	Def.	
175	None	0.00	0.00	Def.	
176	None	0.00	0.00	Def.	
177	None	0.00	0.00	Def.	
178	None	0.00	0.00	Def.	
185	None	0.00	0.00	Def.	
186	None	0.00	0.00	Def.	
187	None	0.00	0.00	Def.	
188	None	0.00	0.00	Def.	
189	None	0.00	0.00	Def.	
190	None	0.00	0.00	Def.	
191	None	0.00	0.00	Def.	
192	None	0.00	0.00	Def.	
193	None	0.00	0.00	Def.	
194	None	0.00	0.00	Def.	
195	None	0.00	0.00	Def.	
196	None	0.00	0.00	Def.	
197	None	0.00	0.00	Def.	
198	None	0.00	0.00	Def.	
199	None	0.00	0.00	Def.	
200	None	0.00	0.00	Def.	
201	None	0.00	0.00	Def.	
202	None	0.00	0.00	Def.	
203	None	0.00	0.00	Def.	
207	None	0.00	0.00	Def.	
208	None	0.00	0.00	Def.	
209	None	0.00	0.00	Def.	
211	None	0.00	0.00	Def.	
213	None	0.00	0.00	Def.	
214	None	0.00	0.00	Def.	
216	None	0.00	0.00	Def.	
217	None	0.00	0.00	Def.	
218	None	0.00	0.00	Def.	
220	None	0.00	0.00	Def.	
221	None	0.00	0.00	Def.	
222	None	0.00	0.00	Def.	

ID	Max	Min	Min	Steel	Defl
223	None	0.00	0.00	Def.	
224	None	0.00	0.00	Def.	
225	None	0.00	0.00	Def.	
226	None	0.00	0.00	Def.	
232	None	0.00	0.00	Def.	spandrel
233	None	0.00	0.00	Def.	spandrel
234	None	0.00	0.00	Def.	
235	None	0.00	0.00	Def.	
236	None	0.00	0.00	Def.	
237	None	0.00	0.00	Def.	
238	None	0.00	0.00	Def.	
239	None	0.00	0.00	Def.	
240	None	0.00	0.00	Def.	
241	None	0.00	0.00	Def.	
242	None	0.00	0.00	Def.	
243	None	0.00	0.00	Def.	
244	None	0.00	0.00	Def.	
245	None	0.00	0.00	Def.	
246	None	0.00	0.00	Def.	
247	None	0.00	0.00	Def.	
248	None	0.00	0.00	Def.	

Slab Edges:

Xi ft	Yi ft	Xj ft	Yj ft	Edge Dist in
Diaphragm 1:				
52.700	45.034	68.106	49.162	12.0
68.106	49.162	86.194	54.009	12.0
86.194	54.009	86.200	37.230	12.0
71.304	37.230	86.200	37.230	12.0
54.791	37.230	71.304	37.230	12.0
52.700	45.034	54.791	37.230	12.0
Diaphragm 2:				
450.259	153.700	465.912	153.700	12.0
465.912	153.700	481.200	153.700	12.0
481.200	153.700	481.200	143.593	12.0
469.463	140.448	481.200	143.593	12.0
454.858	136.535	469.463	140.448	12.0
450.259	153.700	454.858	136.535	12.0
Diaphragm 3:				
120.330	225.800	120.330	243.330	24.0
120.330	243.330	120.330	260.800	24.0
120.330	260.800	120.330	278.500	24.0
120.330	278.500	146.330	278.500	60.0
146.330	278.500	168.830	278.500	60.0
168.830	278.500	187.200	278.500	60.0

Xi	Yi	Xj	Yj	Edge Dist
187.200	278.500	215.330	278.500	60.0
215.330	260.800	215.330	278.500	24.0
215.330	208.330	215.330	260.800	24.0
168.830	208.330	215.330	208.330	24.0
146.330	208.330	168.830	208.330	24.0
120.330	208.330	146.330	208.330	24.0
120.330	208.330	120.330	225.800	24.0
Diaphragm 4:				
254.877	259.660	263.950	225.800	36.0
263.950	225.800	269.301	205.830	36.0
269.301	205.830	299.160	205.830	24.0
299.160	205.830	328.653	205.830	24.0
328.653	205.830	332.182	192.660	24.0
332.182	192.660	341.724	160.910	24.0
319.849	160.910	341.724	160.910	24.0
302.770	160.910	319.849	160.910	24.0
281.337	160.910	302.770	160.910	24.0
281.337	160.910	284.290	149.890	36.0
284.290	149.890	291.665	122.365	36.0
291.665	122.365	293.233	116.511	36.0
230.330	99.590	293.233	116.511	12.0
230.330	99.590	230.330	105.370	48.0
230.330	105.370	230.330	121.430	48.0
230.330	121.430	230.330	160.910	48.0
230.330	160.910	230.330	205.830	48.0
230.330	205.830	230.330	225.800	48.0
230.330	225.800	230.330	243.330	48.0
230.330	243.330	230.330	259.660	48.0
230.330	259.660	230.330	278.500	48.0
230.330	278.500	230.330	288.100	48.0
230.330	288.100	246.143	292.265	36.0
246.143	292.265	249.830	278.500	36.0
249.830	278.500	254.877	259.660	36.0
Diaphragm 5:				
413.615	299.914	448.970	335.269	24.0
430.797	353.442	448.970	335.269	24.0
412.314	371.926	430.797	353.442	24.0
388.880	395.359	412.314	371.926	24.0
377.786	406.454	388.880	395.359	24.0
342.430	371.098	377.786	406.454	60.0
327.227	355.895	342.430	371.098	60.0
312.025	340.693	327.227	355.895	60.0
291.872	320.540	312.025	340.693	60.0
291.872	320.540	311.120	301.293	24.0
311.120	301.293	326.400	286.012	24.0

Xi	Yi	Xj	Yj	Edge Dist
326.400	286.012	344.884	267.528	24.0
344.884	267.528	363.057	249.356	24.0
363.057	249.356	383.209	269.508	24.0
383.209	269.508	398.412	284.711	24.0
398.412	284.711	413.615	299.914	24.0

Deck Polygons:

Deck Prop Type	ID	Slab Action	Angle	X-Coord ft	Y-Coord ft
Noncomposite	1	One-Way	15.00	38.53	30.83
				38.53	49.29
				106.83	67.59
				106.83	30.83
				38.53	30.83
Noncomposite	1	One-Way	15.00	435.38	161.91
				491.63	161.91
				497.19	141.19
				444.67	127.12
				435.38	161.91
Noncomposite	1	One-Way	0.00	118.41	206.33
				118.41	283.50
				229.46	287.54
				228.33	309.17
				242.65	309.17
				246.15	296.09
				250.80	278.76
				255.84	259.92
				271.87	207.83
				330.19	207.83
				334.11	193.21
				344.41	158.91
				284.98	158.91
				296.39	116.32
				229.33	98.29
				230.33	205.83
				118.41	206.33
Noncomposite	1	One-Way	90.00	225.33	309.17
				244.72	309.17
				271.87	207.83
				281.34	160.91
				226.33	160.91
				226.33	208.33
				226.33	277.50
				225.33	277.50
				225.33	309.17
Noncomposite	1	One-Way	105.00	281.34	160.91

Deck Prop		Slab Action	Angle	X-Coord	Y-Coord
				284.98	158.91
				296.39	116.32
				226.33	97.48
				226.33	160.91
				281.34	160.91
Noncomposite	1	One-Way	45.00	286.92	322.66
				379.17	414.91
				467.89	341.34
				360.50	240.99
				286.92	322.66

Load Polygons:

Load Properties ID	X-Coord ft	Y-Coord ft
ACCOUSTICAL ROOF	225.33	288.08
	225.33	309.17
	244.72	309.17
	248.08	296.61
	252.83	278.50
	257.77	260.44
	271.87	207.83
	330.19	207.83
	334.11	193.21
	344.41	158.91
	284.98	158.91
	296.39	116.32
	226.33	97.48
	224.48	205.83
	225.33	288.08
HIGH ROOF	435.38	161.91
	491.63	161.91
	497.19	141.19
	444.67	127.12
	435.38	161.91
HIGH ROOF	38.53	30.83
	38.53	49.29
	106.83	67.59
	106.83	30.83
	38.53	30.83
ACCOUSTICAL ROOF	276.67	322.07
	381.92	427.31
	467.89	341.34
	360.50	233.96
	276.67	322.07
A ROOF w CATWALK	118.33	283.50
	217.33	283.50

Load Properties ID	X-Coord	Y-Coord	
	217.33	206.33	
	117.09	205.83	
	118.33	283.50	

Snow Load Polygons:

Load Properties ID	X-Coord	Y-Coord	Magnitude Points
	ft	ft	
TYP. SNOW	33.53	416.38	
	502.19	416.38	
	502.19	25.83	
	33.53	25.83	
DHIGHROOF1	281.60	159.91	M1
	269.03	206.83	M2
	280.01	206.83	M3
	292.58	159.91	

TABLES SELECTED:

Master Steel Table:	ramaisc
Default Steel Table:	ramaisc
Alternate Steel Table:	ramaisc

UNBRACED LENGTH:

Check Unbraced Length
Do Not Consider Point of Inflection as Brace Point
Noncomposite/Precomposite Beam Design:
- Deck Perpendicular to Beam Braces flange
- Deck Parallel to Beam does not Brace flange

Calculate Cb for all Simple Span Beams
Use Cb=1 for all Cantilevers

SPAN/DEPTH CRITERIA:

Maximum Span/Depth Ratio (ft/ft): 0.00

COMPOSITE IEFF:

Do Not Reduce Ieff per AISC 360 Commentary

DEMAND/CAPACITY LIMITS:

	Strength	Deflection
Steel Beam:	1.000	1.000
C-Beams:	1.000	1.000

DEFLECTION CRITERIA:

Default Criteria	L/d	delta (in)
Unshored		
Initial (Construction Load):	0.0	0.0
Post Composite		
Live Load:	360.0	0.0
Total Superimposed:	240.0	0.0
Total (Init+Superimp-Camber):	240.0	0.0
Shored		
Dead Load:	0.0	0.0
Live Load:	360.0	0.0
Total Load:	240.0	0.0
Noncomposite		
Dead Load:	0.0	0.0
Live Load:	360.0	0.0
Total Load:	240.0	0.0

spandrel Criteria	L/d	delta (in)
Unshored		
Initial (Construction Load):	0.0	0.0
Post Composite		
Live Load:	480.0	0.5
Total Superimposed:	240.0	0.5
Total (Init+Superimp-Camber):	240.0	0.0

Shored		
Dead Load:	0.0	0.0
Live Load:	480.0	0.5
Total Load:	240.0	0.0
Noncomposite		
Dead Load:	0.0	0.0
Live Load:	480.0	0.5
Total Load:	240.0	0.0

canopy Criteria	L/d	delta (in)
Unshored		
Initial (Construction Load):	0.0	0.0
Post Composite		
Live Load:	240.0	2.0
Total Superimposed:	240.0	0.0
Total (Init+Superimp-Camber):	240.0	0.0
Shored		
Dead Load:	0.0	0.0
Live Load:	240.0	2.0
Total Load:	240.0	0.0
Noncomposite		
Dead Load:	0.0	0.0
Live Load:	240.0	0.0
Total Load:	240.0	2.0

Note: 0.0 indicates No Limit

CAMBER CRITERIA FOR COMPOSITE BEAMS:

Do not Camber Beams with Span < 24.0 ft
Do not Camber Beams with Weight < 40.0 lbs/ft
Do not Camber Beams with Weight > 1000.0 lbs/ft
Do not Camber Beams with Depth < 16.0 in
Do not Camber Beams with Depth > 100.0 in
Do not Camber Beams with Cantilevers
Percent of Dead Load used for Camber: 80.00
(For Unshored Composite the specified % of Construction DL is used)
Camber Increment (in): 0.250
Minimum Camber (in): 0.750
Maximum Camber (in): 4.000

CAMBER CRITERIA FOR NONCOMPOSITE BEAMS:

Do not Camber Beams with Span < 24.0 ft
Do not Camber Beams with Weight < 40.0 lbs/ft
Do not Camber Beams with Weight > 1000.0 lbs/ft
Do not Camber Beams with Depth < 16.0 in
Do not Camber Beams with Depth > 100.0 in
Do not Camber Beams with Cantilevers

Percent of Dead Load used for Camber: 80.00
Camber Increment (in): 0.250
Minimum Camber (in): 0.750
Maximum Camber (in): 4.000

STUD CRITERIA:

Stud Distribution: Use Uniform
Maximum % of Full Composite Allowed: 100.00
Minimum % of Full Composite Allowed - Short Span: 25.00
Minimum % of Full Composite Allowed - Long Span: 50.00
Long Span Defined as Span Greater Than: 30.00 ft
Maximum Rows of Studs Allowed: 3
Minimum Flange Width for 2 Rows of Studs (in): 5.500
Minimum Flange Width for 3 Rows of Studs (in): 8.500
Maximum Stud Spacing - Deck Parallel: Per Code
Maximum Stud Spacing - Deck Not Parallel: Per Code
Ductility of Shear Connection:
Enforce AISC 360-16 Commentary I3.2d(1) for Spans greater than 30'

WEB OPENING CRITERIA:

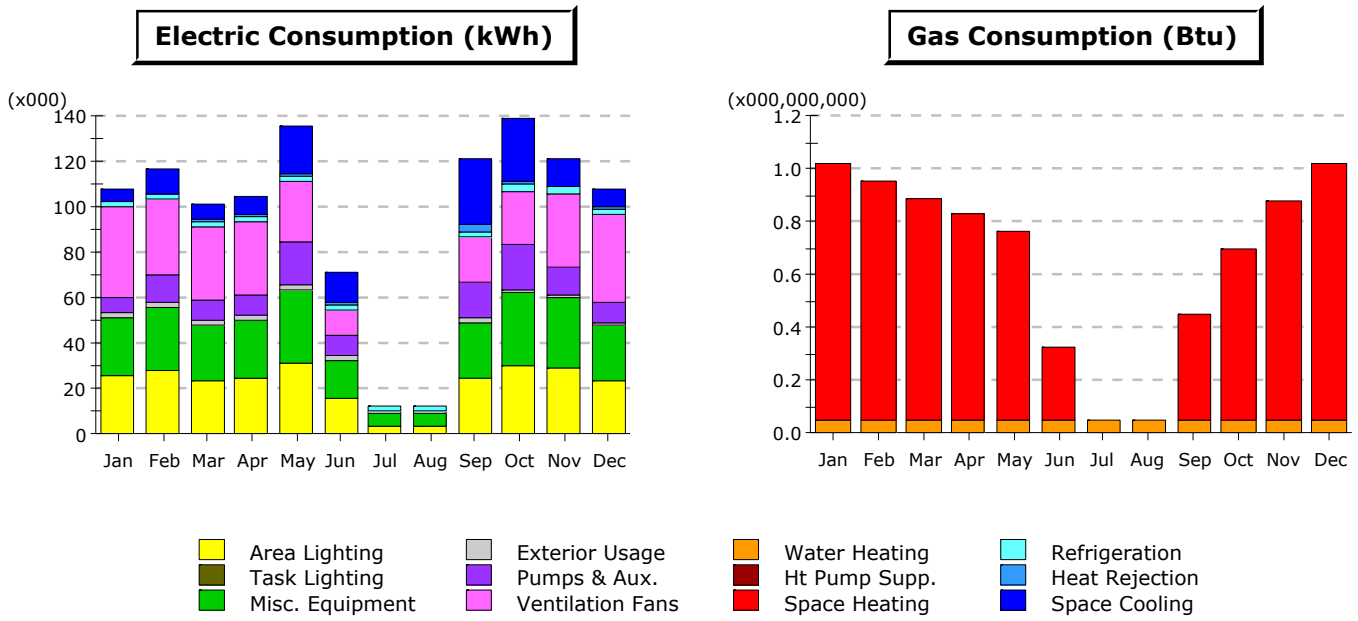
Stiffener Fy (ksi): 36.000
Stiffener Dimensions
Minimum Width (in): 1.000
Minimum Thickness (in): 0.250
Increment of Width (in): 0.250
Increment of Thickness (in): 0.125
Increment of Length (in): 1.000
Do Not Allow Stiffeners on One Side of web
Allow Stiffeners on Two Sides of web

3-1-h
INDEPENDENT STRUCTURAL REVIEW

The Design Team is working with DM Berk Consultants, P.C. for the structural peer review process. We will send along the DD MSBA Set to them at the same time as this submission. Scope of services is as follows:

> SCOPE/INTENT AND EXTENT OF SERVICES: Independent Structural Engineering Review performed in accordance with the Massachusetts State Building Code, Ninth Edition, Section 105.9: Peer review of new two-story High School with an approximate area of 192,000 square feet in two phases: Phase 1) Peer review of DD set; and Phase 2) Peer review of 60% CD set.

We will include all comments with the next MSBA submission.

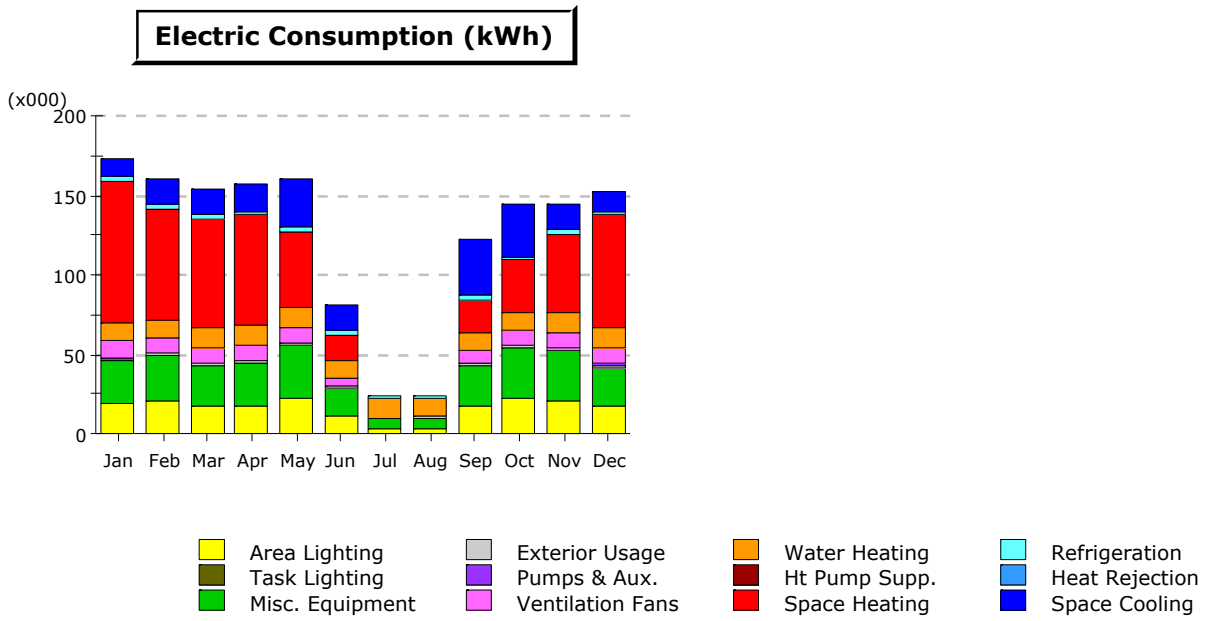


Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	5.6	10.8	7.5	8.4	20.9	12.9	-	-	29.0	27.1	12.0	8.7	142.8
Heat Reject.	0.1	0.3	0.2	0.3	1.1	0.9	-	-	2.9	1.5	0.4	0.3	8.0
Refrigeration	2.6	2.6	2.6	2.6	2.9	2.3	1.9	1.9	2.6	2.8	2.7	2.6	30.0
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	39.4	33.1	32.8	32.5	26.5	11.2	-	-	19.4	24.3	33.0	38.7	290.9
Pumps & Aux.	7.0	12.6	8.8	9.1	19.1	9.5	-	-	16.4	19.4	12.1	8.7	122.7
Ext. Usage	1.5	1.3	1.5	1.4	1.5	1.4	1.5	1.5	1.4	1.5	1.4	1.5	17.5
Misc. Equip.	26.6	28.5	25.1	26.0	32.7	17.5	5.3	5.3	24.9	31.5	30.2	24.2	277.7
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	25.1	27.6	23.0	24.3	31.1	15.2	3.3	3.5	24.5	30.5	29.3	23.6	260.8
Total	107.9	116.9	101.5	104.5	135.8	70.9	11.9	12.1	121.0	138.5	121.0	108.3	1,150.4

Gas Consumption (Btu x000,000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	0.97	0.90	0.83	0.78	0.71	0.28	-	-	0.40	0.65	0.83	0.97	7.31
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.60
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	-	-	-	-	-	-	-	-	-	-	-	-	-
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1.02	0.95	0.88	0.83	0.76	0.33	0.05	0.05	0.45	0.70	0.88	1.02	7.91



Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	11.8	16.1	15.3	16.6	29.8	16.6	-	-	35.7	33.2	15.4	11.9	202.4
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	2.6	2.6	2.6	2.6	2.9	2.3	1.9	1.9	2.6	2.8	2.7	2.6	30.0
Space Heat	88.9	69.4	69.5	70.3	48.0	16.0	-	-	21.7	32.5	50.0	70.7	537.0
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	12.2	11.0	12.2	11.8	12.2	11.8	12.2	11.5	11.0	11.5	11.5	12.2	141.0
Vent. Fans	10.3	9.7	9.4	9.6	9.5	4.1	-	-	7.2	9.2	9.8	9.8	88.5
Pumps & Aux.	1.0	0.6	0.6	0.6	0.1	-	-	-	-	0.0	1.0	1.1	5.0
Ext. Usage	1.5	1.3	1.5	1.4	1.5	1.4	1.5	1.5	1.4	1.5	1.4	1.5	17.5
Misc. Equip.	26.9	28.9	25.5	26.4	33.1	17.8	5.4	5.4	25.4	31.9	30.6	24.7	282.2
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	18.3	20.2	16.8	17.8	22.7	11.5	3.4	3.6	17.9	22.3	21.4	17.3	193.3
Total	173.6	159.8	153.3	157.1	159.7	81.5	24.3	23.9	122.9	144.9	143.8	151.8	1,496.8

Gas Consumption (Btu)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool													
Heat Reject.													
Refrigeration													
Space Heat													
HP Supp.													
Hot Water													
Vent. Fans													
Pumps & Aux.													
Ext. Usage													
Misc. Equip.													
Task Lights													
Area Lights													
Total													

Air System Sizing Summary for AHU-A-1 AUDITORIUM

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:40PM

Air System Information

Air System Name	**AHU-A-1 AUDITORIUM**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**8424.0**	ft²
Air System Type	**SZCAV**		Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**58.9**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**706.8**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**452.5**	MBH	Entering DB / WB	**87.3 / 70.2**	°F
Coil CFM at Jul 1500	**11617**	CFM	Leaving DB / WB	**50.9 / 49.7**	°F
Max block CFM	**11617**	CFM	Coil ADP	**46.9**	°F
Sum of peak zone CFM	**11617**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.640**		Resulting RH	**49**	%
CFM/Ton	**197.2**		Design supply temp.	**55.0**	°F
ft²/Ton	**143.0**		Zone T-stat Check	**0 of 1**	OK
BTU/(hr·ft²)	**83.9**		Max zone temperature deviation	**0.1**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**643.9**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**11617**	CFM	BTU/(hr·ft²)	**76.4**	
Max coil CFM	**11617**	CFM	Ent. DB / Lvg DB	**15.3 / 67.1**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**11617**	CFM	Fan motor BHP	**21.87**	BHP
Standard CFM	**11514**	CFM	Fan motor kW	**17.35**	kW
Actual max CFM/ft²	**1.38**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**11617**	CFM	Fan motor BHP	**15.62**	BHP
Standard CFM	**11514**	CFM	Fan motor kW	**12.39**	kW
Actual max CFM/ft²	**1.38**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**8597**	CFM	CFM/person	**16.47**	CFM/person
CFM/ft²	**1.02**	CFM/ft²			

Zone Sizing Summary for AHU-A-1 AUDITORIUM

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:40PM

Air System Information

Air System Name ..... **AHU-A-1 AUDITORIUM**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **8424.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	11384	11384	1.35	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	243.7	Jul 1600	26.0	8424.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
A100 AUDITORIUM	1	162.4	Jul 1600	7584	17.5	5290.0	1.43
A100A STAGE	1	68.6	Jul 1600	3203	7.0	1590.0	2.01
A100B DRESSING ROOM	1	2.9	Jan 2300	136	0.0	290.0	0.47
A100C DRESSING ROOM	1	2.9	Jan 2300	136	0.0	290.0	0.47
A102 AUDITORIUM STORAGE	1	1.3	Jul 1400	61	0.6	410.0	0.15
A200 CONTROLS	1	4.9	Jul 1400	227	0.5	304.0	0.75
A2xx CONTROLS CORRIDOR	1	0.8	Jul 1400	37	0.4	250.0	0.15

Air System Sizing Summary for AHU-A-2 LG GRP INSTRUCTION

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:41PM

Air System Information

Air System Name	**AHU-A-2 LG GRP INSTRUCTION**	Number of zones	**1**
Equipment Class	**PKG ROOF**	Floor Area	**2200.0** ft²
Air System Type	**SZCAV**	Location	**Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**14.5**	Tons	Load occurs at	**Aug 1500**	
Total coil load	**174.1**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**129.6**	MBH	Entering DB / WB	**82.7 / 65.8**	°F
Coil CFM at Aug 1500	**3819**	CFM	Leaving DB / WB	**51.0 / 49.7**	°F
Max block CFM	**3819**	CFM	Coil ADP	**47.5**	°F
Sum of peak zone CFM	**3819**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.744**		Resulting RH	**43**	%
CFM/Ton	**263.3**		Design supply temp.	**55.0**	°F
ft²/Ton	**151.7**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**79.1**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**88.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**3819**	CFM	BTU/(hr·ft²)	**40.1**	
Max coil CFM	**3819**	CFM	Ent. DB / Lvg DB	**47.0 / 68.6**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**3819**	CFM	Fan motor BHP	**7.19**	BHP
Standard CFM	**3785**	CFM	Fan motor kW	**5.70**	kW
Actual max CFM/ft²	**1.74**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**3819**	CFM	Fan motor BHP	**5.13**	BHP
Standard CFM	**3785**	CFM	Fan motor kW	**4.07**	kW
Actual max CFM/ft²	**1.74**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**1268**	CFM	CFM/person	**16.90**	CFM/person
CFM/ft²	**0.58**	CFM/ft²			

Zone Sizing Summary for AHU-A-2 LG GRP INSTRUCTION

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:41PM

Air System Information

Air System Name **AHU-A-2 LG GRP INSTRUCTION**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **2200.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	3743	3743	1.70	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	80.1	Jul 1600	16.7	2200.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
C103 LG GRP INSTRUCTION	1	80.1	Jul 1600	3743	16.7	2200.0	1.70

Air System Sizing Summary for AHU-B-1 GYM Bball Game

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:42PM

Air System Information

Air System Name	**AHU-B-1 GYM Bball Game**	Number of zones	**1**
Equipment Class	**PKG ROOF**	Floor Area	**11370.0** ft²
Air System Type	**SZCAV**	Location	**Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**83.0**	Tons	Load occurs at	**Jul 1600**	
Total coil load	**995.7**	MBH	OA DB / WB	**89.4 / 71.8**	°F
Sensible coil load	**622.4**	MBH	Entering DB / WB	**85.0 / 69.6**	°F
Coil CFM at Jul 1600	**17213**	CFM	Leaving DB / WB	**51.2 / 50.1**	°F
Max block CFM	**17213**	CFM	Coil ADP	**47.4**	°F
Sum of peak zone CFM	**17213**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.625**		Resulting RH	**58**	%
CFM/Ton	**207.4**		Design supply temp.	**55.0**	°F
ft²/Ton	**137.0**		Zone T-stat Check	**0 of 1**	OK
BTU/(hr·ft²)	**87.6**		Max zone temperature deviation	**0.1**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**662.2**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**17213**	CFM	BTU/(hr·ft²)	**58.2**	
Max coil CFM	**17213**	CFM	Ent. DB / Lvg DB	**33.2 / 69.1**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**17213**	CFM	Fan motor BHP	**32.40**	BHP
Standard CFM	**17061**	CFM	Fan motor kW	**25.70**	kW
Actual max CFM/ft²	**1.51**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**17213**	CFM	Fan motor BHP	**23.14**	BHP
Standard CFM	**17061**	CFM	Fan motor kW	**18.36**	kW
Actual max CFM/ft²	**1.51**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**8855**	CFM	CFM/person	**10.30**	CFM/person
CFM/ft²	**0.78**	CFM/ft²			

Zone Sizing Summary for AHU-B-1 GYM Bball Game

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:42PM

Air System Information

Air System Name ..... **AHU-B-1 GYM Bball Game**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **11370.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	16869	16869	1.48	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	361.1	Jun 1700	56.8	11370.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
B106 GYM (PLAYERS)	1	108.5	Jun 1700	5069	56.8	7980.0	0.64
B106 GYM (SPECTATORS)	1	252.6	Jan 2300	11800	0.0	3390.0	3.48

Air System Sizing Summary for AHU-B-2 GYM Class Only

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:43PM

Air System Information

Air System Name	**AHU-B-2 GYM Class Only**	Number of zones	**1**	
Equipment Class	**PKG ROOF**	Floor Area	**7980.0**	ft²
Air System Type	**SZCAV**	Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**23.8**	Tons	Load occurs at	**Jul 1600**	
Total coil load	**285.3**	MBH	OA DB / WB	**89.4 / 71.8**	°F
Sensible coil load	**185.3**	MBH	Entering DB / WB	**85.3 / 69.2**	°F
Coil CFM at Jul 1600	**5172**	CFM	Leaving DB / WB	**51.8 / 50.7**	°F
Max block CFM	**5172**	CFM	Coil ADP	**48.1**	°F
Sum of peak zone CFM	**5172**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.649**		Resulting RH	**55**	%
CFM/Ton	**217.5**		Design supply temp.	**55.0**	°F
ft²/Ton	**335.6**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**35.8**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**233.8**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**5172**	CFM	BTU/(hr·ft²)	**29.3**	
Max coil CFM	**5172**	CFM	Ent. DB / Lvg DB	**33.3 / 75.5**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**5172**	CFM	Fan motor BHP	**9.73**	BHP
Standard CFM	**5126**	CFM	Fan motor kW	**7.72**	kW
Actual max CFM/ft²	**0.65**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**5172**	CFM	Fan motor BHP	**6.95**	BHP
Standard CFM	**5126**	CFM	Fan motor kW	**5.52**	kW
Actual max CFM/ft²	**0.65**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**2636**	CFM	CFM/person	**43.94**	CFM/person
CFM/ft²	**0.33**	CFM/ft²			

Zone Sizing Summary for AHU-B-2 GYM Class Only

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:43PM

Air System Information

Air System Name ..... **AHU-B-2 GYM Class Only**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **7980.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	5069	5069	0.64	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	108.5	Jun 1700	56.8	7980.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
B106 GYM (PLAYERS)	1	108.5	Jun 1700	5069	56.8	7980.0	0.64

Air System Sizing Summary for AHU-C-1 SPINE

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:44PM

Air System Information

Air System Name	**AHU-C-1 SPINE**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**5705.0**	ft²
Air System Type	**SZCAV**		Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**23.1**	Tons	Load occurs at	**Jul 1600**	
Total coil load	**277.6**	MBH	OA DB / WB	**89.4 / 71.8**	°F
Sensible coil load	**174.2**	MBH	Entering DB / WB	**89.2 / 71.7**	°F
Coil CFM at Jul 1600	**4416**	CFM	Leaving DB / WB	**52.4 / 51.2**	°F
Max block CFM	**4416**	CFM	Coil ADP	**48.3**	°F
Sum of peak zone CFM	**4416**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.627**		Resulting RH	**41**	%
CFM/Ton	**190.9**		Design supply temp.	**55.0**	°F
ft²/Ton	**246.6**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**48.7**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**382.1**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**4416**	CFM	BTU/(hr·ft²)	**67.0**	
Max coil CFM	**4416**	CFM	Ent. DB / Lvg DB	**-3.4 / 77.4**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**4416**	CFM	Fan motor BHP	**8.31**	BHP
Standard CFM	**4377**	CFM	Fan motor kW	**6.59**	kW
Actual max CFM/ft²	**0.77**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**4416**	CFM	Fan motor BHP	**5.94**	BHP
Standard CFM	**4377**	CFM	Fan motor kW	**4.71**	kW
Actual max CFM/ft²	**0.77**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**4327**	CFM	CFM/person	**865.46**	CFM/person
CFM/ft²	**0.76**	CFM/ft²			

Zone Sizing Summary for AHU-C-1 SPINE

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:44PM

Air System Information

Air System Name ..... **AHU-C-1 SPINE**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **5705.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	4327	4327	0.76	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	84.1	Jul 1500	58.5	5705.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
C10 CIRC	1	74.4	Jul 1600	3475	40.4	3630.0	0.96
C104 CUSTODIAN	1	0.4	Jul 1400	18	0.1	60.0	0.30
C11 CIRCULATION	1	2.4	Oct 1300	114	1.6	90.0	1.26
C119A RECEIVING	1	3.2	Jul 1500	408	10.9	355.0	1.15
C119 TRASH	1	1.2	Jul 1500	90	2.4	355.0	0.25
C115 CAN WASH & JC	1	0.3	Jul 1400	20	0.2	130.0	0.15
C12 CORRIDOR	1	3.3	Oct 1300	156	2.2	585.0	0.27
C117 STORAGE-CUSTODIAL	1	1.0	Jul 1400	47	0.8	500.0	0.09

Air System Sizing Summary for AHU-C-2 CAFETERIA

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:44PM

Air System Information

Air System Name	**AHU-C-2 CAFETERIA**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**9505.0**	ft²
Air System Type	**SZCAV**		Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**57.4**	Tons	Load occurs at	**Aug 1500**	
Total coil load	**688.7**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**465.4**	MBH	Entering DB / WB	**85.0 / 68.3**	°F
Coil CFM at Aug 1500	**12826**	CFM	Leaving DB / WB	**51.2 / 49.9**	°F
Max block CFM	**12826**	CFM	Coil ADP	**47.4**	°F
Sum of peak zone CFM	**12826**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.676**		Resulting RH	**48**	%
CFM/Ton	**223.5**		Design supply temp.	**55.0**	°F
ft²/Ton	**165.6**		Zone T-stat Check	**0 of 1**	OK
BTU/(hr·ft²)	**72.5**		Max zone temperature deviation	**0.1**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**462.5**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**12826**	CFM	BTU/(hr·ft²)	**48.7**	
Max coil CFM	**12826**	CFM	Ent. DB / Lvg DB	**34.7 / 68.3**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**12826**	CFM	Fan motor BHP	**24.14**	BHP
Standard CFM	**12713**	CFM	Fan motor kW	**19.15**	kW
Actual max CFM/ft²	**1.35**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**12826**	CFM	Fan motor BHP	**17.24**	BHP
Standard CFM	**12713**	CFM	Fan motor kW	**13.68**	kW
Actual max CFM/ft²	**1.35**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**6336**	CFM	CFM/person	**12.14**	CFM/person
CFM/ft²	**0.67**	CFM/ft²			

Zone Sizing Summary for AHU-C-2 CAFETERIA

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:44PM

Air System Information

Air System Name ..... **AHU-C-2 CAFETERIA**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **9505.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	12570	12570	1.32	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	269.1	Aug 1600	40.2	9505.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
C103 SERVERY	1	22.3	Jan 2300	1043	0.0	1665.0	0.63
C100 CAFETERIA A&B	1	246.8	Aug 1600	11526	40.2	7840.0	1.47

Air System Sizing Summary for AHU-D-1 MEDIA CTR

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:45PM

Air System Information

Air System Name	**AHU-D-1 MEDIA CTR**	Number of zones	**1**	
Equipment Class	**PKG ROOF**	Floor Area	**8155.0**	ft²
Air System Type	**SZCAV**	Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**35.4**	Tons	Load occurs at	**Aug 1500**	
Total coil load	**424.7**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**302.3**	MBH	Entering DB / WB	**84.6 / 67.2**	°F
Coil CFM at Aug 1500	**8423**	CFM	Leaving DB / WB	**51.1 / 49.7**	°F
Max block CFM	**8423**	CFM	Coil ADP	**47.3**	°F
Sum of peak zone CFM	**8423**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.712**		Resulting RH	**44**	%
CFM/Ton	**238.0**		Design supply temp.	**55.0**	°F
ft²/Ton	**230.4**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**52.1**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**288.1**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**8423**	CFM	BTU/(hr·ft²)	**35.3**	
Max coil CFM	**8423**	CFM	Ent. DB / Lvg DB	**38.7 / 70.6**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**8423**	CFM	Fan motor BHP	**15.85**	BHP
Standard CFM	**8349**	CFM	Fan motor kW	**12.58**	kW
Actual max CFM/ft²	**1.03**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**8423**	CFM	Fan motor BHP	**11.32**	BHP
Standard CFM	**8349**	CFM	Fan motor kW	**8.98**	kW
Actual max CFM/ft²	**1.03**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**3728**	CFM	CFM/person	**18.73**	CFM/person
CFM/ft²	**0.46**	CFM/ft²			

Zone Sizing Summary for AHU-D-1 MEDIA CTR

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:45PM

Air System Information

Air System Name ..... **AHU-D-1 MEDIA CTR**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **8155.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	8255	8255	1.01	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	175.6	Jul 1700	44.8	8155.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
C201 MEDIA CENTER STACKS	1	39.6	Jul 1700	1850	13.6	2085.0	0.89
C201C MEDIA CTR OFFICE	1	3.1	Jul 1500	185	5.0	150.0	1.24
C200 READING ROOM	1	79.3	Jul 1600	3705	11.0	2610.0	1.42
C201 MEDIA CTR INTERIOR	1	39.1	Jul 1500	1828	5.0	2660.0	0.69
C201 MEDIA CTR PRMTR	1	14.7	Jun 1700	686	10.3	650.0	1.06

Dedicated Outdoor Air System (DOAS) Sizing Summary for AHU-D-2 D WING LABS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:46PM

Air System Information

Air System Name	**AHU-D-2 D WING LABS**	Number of zones	**1**
Equipment Class	**TERM**	Floor Area	**6885.0** ft²
Air System Type	**VRF**	Location	**Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Cooling Coil Sizing Data

Total coil load	**6.5**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**78.6**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Total coil load	**567.3**	CFM/Ton	Entering DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**78.6**	MBH	Leaving DB / WB	**70.2 / 66.0**	°F
Coil CFM at Jul 1500	**3716**	CFM	Bypass Factor	**0.100**	
Max coil CFM	**3716**	CFM			
Sensible heat ratio	**1.000**				
Water flow @ 10.0 °F rise	**N/A**				

Heating Coil Sizing Data

Max coil load	**279.4**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**3716**	CFM	Ent. DB / Lvg DB	**-5.0 / 65.2**	°F
Max coil CFM	**3716**	CFM			
Water flow @ 20.0 °F drop	**N/A**				

Ventilation Fan Sizing Data

Actual max CFM	**3716**	CFM	Fan motor BHP	**6.99**	BHP
Standard CFM	**3683**	CFM	Fan motor kW	**5.55**	kW
Actual max CFM/ft²	**0.54**	CFM/ft²	Fan static	**7.00**	in wg

Exhaust Fan Sizing Data

Actual max CFM	**3716**	CFM	Fan motor BHP	**5.00**	BHP
Standard CFM	**3683**	CFM	Fan motor kW	**3.96**	kW
Actual max CFM/ft²	**0.54**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**3716**	CFM	CFM/person	**33.18**	CFM/person
CFM/ft²	**0.54**	CFM/ft²			

Zone Sizing Summary for AHU-D-2 D WING LABS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:46PM

Air System Information

Air System Name ..... **AHU-D-2 D WING LABS**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **6885.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	176.9	110.9	75.8 / 66.7	57.1 / 56.3	-	Aug 1300	0.80

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	25.1	70.4 / 74.6	-	5533	0.818	0.649	3716

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	176.9	14.7	25.1
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	176.9	14.7	25.1

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	118.4	Sep 1200	25.5	6885.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
D205 CHEMISTRY LAB	1	26.5	Sep 1200	1239	6.1	1475.0	0.84
D209 AP CHEMISTRY LAB	1	26.5	Sep 1200	1239	5.9	1475.0	0.84
D209A PREP ROOM	1	7.7	Sep 1200	358	2.4	400.0	0.89
D207 CHEM STORAGE	1	0.4	Jul 1400	18	0.3	195.0	0.09
D105 FORENSICS LAB	1	25.5	Sep 1200	1191	4.9	1470.0	0.81
D105A PREP ROOM	1	5.4	Sep 1200	253	1.2	400.0	0.63
D109 ENVIRONMENTAL LAB	1	26.4	Oct 1200	1235	4.7	1470.0	0.84

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-A-1 ARTS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:46PM

Air System Information

Air System Name	**DOAS-A-1 ARTS**		Number of zones	**1**	
Equipment Class	**TERM**		Floor Area	**8395.0**	ft²
Air System Type	**VRF**		Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Cooling Coil Sizing Data

Total coil load	**13.8**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**165.2**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Total coil load	**567.3**	CFM/Ton	Entering DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**165.2**	MBH	Leaving DB / WB	**70.2 / 66.0**	°F
Coil CFM at Jul 1500	**7811**	CFM	Bypass Factor	**0.100**	
Max coil CFM	**7811**	CFM			
Sensible heat ratio	**1.000**				
Water flow @ 10.0 °F rise	**N/A**				

Heating Coil Sizing Data

Max coil load	**587.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**7811**	CFM	Ent. DB / Lvg DB	**-5.0 / 65.2**	°F
Max coil CFM	**7811**	CFM			
Water flow @ 20.0 °F drop	**N/A**				

Ventilation Fan Sizing Data

Actual max CFM	**7811**	CFM	Fan motor BHP	**14.70**	BHP
Standard CFM	**7742**	CFM	Fan motor kW	**11.66**	kW
Actual max CFM/ft²	**0.93**	CFM/ft²	Fan static	**7.00**	in wg

Exhaust Fan Sizing Data

Actual max CFM	**7811**	CFM	Fan motor BHP	**10.50**	BHP
Standard CFM	**7742**	CFM	Fan motor kW	**8.33**	kW
Actual max CFM/ft²	**0.93**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**7811**	CFM	CFM/person	**31.63**	CFM/person
CFM/ft²	**0.93**	CFM/ft²			

Zone Sizing Summary for DOAS-A-1 ARTS

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:46PM

Air System Information

Air System Name ..... **DOAS-A-1 ARTS**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **8395.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	275.9	155.5	75.4 / 67.7	56.9 / 56.3	-	Aug 1400	0.94

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	33.1	70.4 / 74.3	-	7870	1.164	0.923	7811

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	275.9	23.0	33.1
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	275.9	23.0	33.1

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	164.8	Sep 1300	35.0	8395.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
A104 BAND	1	52.1	Jun 1700	2433	6.8	1600.0	1.52
A104A PRACTICE RM	1	2.0	Jan 2300	93	0.0	75.0	1.24
A104B MUSIC STORAGE	1	1.3	Jul 2200	66	1.8	560.0	0.12
A104C ENSEMBLE	1	5.0	Jul 1400	234	0.8	220.0	1.06
A115 ART STUDIO	1	27.3	Oct 1300	1275	7.3	1200.0	1.06
A115A ART STORAGE	1	0.7	Aug 1700	47	1.2	310.0	0.15
A110 CHORUS	1	40.1	Oct 1300	1872	6.2	1400.0	1.34
A116A PRACTICE RM	1	2.0	Jan 2300	93	0.0	75.0	1.24
A116B PRACTICE RM	1	2.0	Jan 2300	93	0.0	75.0	1.24

Zone Sizing Summary for DOAS-A-1 ARTS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:46PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft^2)	Space CFM/ft^2
A117 ART STUDIO	1	27.6	Oct 1300	1288	7.3	1230.0	1.05
A117B KILN RM	1	2.0	Aug 2100	91	0.8	110.0	0.83
A117A SEMINAR	1	2.2	Jul 1400	104	0.4	120.0	0.86
A10 CORRIDOR	1	3.7	Jun 1400	171	2.3	1315.0	0.13
A112 IT CLOSET	1	0.2	Jan 2300	9	0.0	105.0	0.09

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-A-2 ADMIN & TOWN

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:47PM

Air System Information

Air System Name	**DOAS-A-2 ADMIN & TOWN**	Number of zones	**2**
Equipment Class	**TERM**	Floor Area	**16372.0** ft²
Air System Type	**VRF**	Location	**Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Cooling Coil Sizing Data

Total coil load	**18.5**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**221.5**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Total coil load	**567.3**	CFM/Ton	Entering DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**221.5**	MBH	Leaving DB / WB	**70.2 / 66.0**	°F
Coil CFM at Jul 1500	**10472**	CFM	Bypass Factor	**0.100**	
Max coil CFM	**10472**	CFM			
Sensible heat ratio	**1.000**				
Water flow @ 10.0 °F rise	**N/A**				

Heating Coil Sizing Data

Max coil load	**787.4**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**10472**	CFM	Ent. DB / Lvg DB	**-5.0 / 65.2**	°F
Max coil CFM	**10472**	CFM			
Water flow @ 20.0 °F drop	**N/A**				

Ventilation Fan Sizing Data

Actual max CFM	**10472**	CFM	Fan motor BHP	**19.71**	BHP
Standard CFM	**10380**	CFM	Fan motor kW	**15.64**	kW
Actual max CFM/ft²	**0.64**	CFM/ft²	Fan static	**7.00**	in wg

Exhaust Fan Sizing Data

Actual max CFM	**10472**	CFM	Fan motor BHP	**14.08**	BHP
Standard CFM	**10380**	CFM	Fan motor kW	**11.17**	kW
Actual max CFM/ft²	**0.64**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**10472**	CFM	CFM/person	**56.30**	CFM/person
CFM/ft²	**0.64**	CFM/ft²			

Zone Sizing Summary for DOAS-A-2 ADMIN & TOWN

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:47PM

Air System Information

Air System Name ..... **DOAS-A-2 ADMIN & TOWN**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **2**
Floor Area ..... **16372.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	369.6	207.2	75.4 / 67.7	56.7 / 56.1	-	Jul 1700	0.64
Zone 2	5.6	3.6	75.8 / 66.3	55.9 / 55.1	-	Aug 1700	0.81

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	75.7	70.4 / 77.2	-	10366	1.533	1.216	10366
Zone 2	0.2	70.3 / 71.4	-	167	0.025	0.020	106

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	375.2	31.3	75.9
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	375.2	31.3	75.9

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	215.3	Jul 1600	79.1	16167.0
Zone 2	3.6	Jul 1400	0.3	205.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
A101 ADMIN CORRIDOR	1	0.7	Jul 1400	31	0.5	335.0	0.09
A101A WAITING AREA	1	6.8	Jul 1400	317	0.6	395.0	0.80
A101B PRINCIPAL SEC	1	4.0	Jun 1700	187	2.5	245.0	0.76
A101E PRINCIPAL	1	4.0	Jun 1700	189	2.4	250.0	0.76
A101F AP1	1	2.7	Jun 1700	125	1.3	150.0	0.83
A101G AP2	1	2.7	Jun 1700	125	1.3	150.0	0.83

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
A101H MAIL TIME	1	1.5	Jul 1400	70	0.2	100.0	0.70
A101I DUPLICATING	1	2.4	Jul 1400	114	0.3	200.0	0.57
A101D RECORD RM	1	0.4	Jul 1400	19	0.3	200.0	0.09
A101H TOILET	1	0.5	Jul 1400	24	0.1	55.0	0.44
A101C SRO	1	2.2	Jul 1400	102	0.2	145.0	0.70
A103 PUPIL SERVICES	1	3.5	Jul 1400	162	0.6	365.0	0.44
A103A WAITING AREA	1	2.2	Jul 1400	101	0.2	120.0	0.84
A103B SPED ADMIN	1	5.1	Jun 1700	236	3.2	320.0	0.74
A103C DIRECTOR	1	2.9	Jun 1700	136	1.5	175.0	0.78
A103D SPEECH	1	2.7	Jun 1700	125	1.3	150.0	0.83
A103E SPED OFFICE	1	3.0	Jun 1700	140	1.7	150.0	0.93
A103F SPED OFFICE	1	2.7	Jun 1700	125	1.3	150.0	0.83
A103G SPED CONF RM	1	6.9	Jun 1700	321	2.4	350.0	0.92
A103I CO STORAGE	1	0.7	Jul 1400	32	0.5	340.0	0.09
A103J SM CONF RM	1	4.0	Jul 1400	187	0.4	250.0	0.75
A103K OFFICE	1	2.2	Jul 1400	104	0.5	150.0	0.70
A105 DIST OFFICE CORR	1	4.1	Jul 1400	189	0.7	426.0	0.44
A105A CO ADMIN	1	6.6	Jul 1700	309	2.4	566.0	0.55
A105B SUPER	1	4.3	Jun 1700	200	2.2	285.0	0.70
A105C ACCOUNTING	1	5.2	Jun 1700	245	3.0	345.0	0.71
A105D CONF RM	1	10.5	Jun 1700	490	5.4	560.0	0.87
A105E CFO	1	4.6	Jul 1700	215	1.7	170.0	1.26
A105F DIR CUR	1	3.7	Jul 1700	171	1.3	170.0	1.01
A106A TOILET	1	0.1	Jul 1400	6	0.1	40.0	0.15
A105H TOILET	1	0.1	Jul 1400	9	0.1	60.0	0.15
A105G KITCHENETTE	2	2.1	Jul 1400	100	0.3	185.0	0.54
A105I TOILET	1	0.1	Jul 1400	9	0.1	60.0	0.15
A106F TOILET	1	0.1	Jul 1400	8	0.1	55.0	0.15
A106G TOILET	1	0.1	Jul 1400	5	0.1	35.0	0.15
A106C TOILET	1	0.1	Jul 1400	5	0.1	35.0	0.15
A106D TOILET	1	0.1	Jul 1400	5	0.1	35.0	0.15
A107 IT CORRIDOR	1	0.6	Jul 1400	27	0.5	290.0	0.09
A107A IT DIRECTOR	1	4.6	Jul 1700	215	1.7	170.0	1.26
A107B IT ASST DIR	1	3.7	Jul 1700	171	1.3	170.0	1.01
A107E IT REPAIR/STORAGE	1	14.6	Jul 1400	681	2.4	820.0	0.83
A107C IT SHARED OFFICE	1	19.1	Jul 1700	890	6.8	810.0	1.10
A107D MDF	1	0.6	Jul 1400	35	0.9	275.0	0.13
A109 PRE-K	1	30.9	Sep 1400	1444	11.2	1225.0	1.18
A109A TOILET	1	0.1	Jul 1400	8	0.1	55.0	0.15
A11 CORRIDOR	1	1.8	Jul 1400	83	1.4	885.0	0.09
A113 VIDEO LAB	1	26.0	Sep 1300	1216	5.2	950.0	1.28
A103H CO RECORD	1	0.4	Jul 1400	19	0.3	200.0	0.09
A111 ELCAT OFFICE	1	6.8	Sep 1300	317	2.6	500.0	0.63
A12 CORRIDOR	1	4.8	Jul 1400	223	3.4	1860.0	0.12
Zone 2							
A113A PODCAST	1	3.6	Jul 1400	167	0.3	205.0	0.81

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-B-1 GUIDANCE

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:47PM

Air System Information

Air System Name ..... **DOAS-B-1 GUIDANCE**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**
Number of zones **1**
Floor Area ..... **10415.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**
Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Cooling Coil Sizing Data

Total coil load ..... **9.9** Tons
Total coil load ..... **118.7** MBH
Total coil load ..... **567.3** CFM/Ton
Sensible coil load ..... **118.7** MBH
Coil CFM at Jul 1500 ..... **5610** CFM
Max coil CFM ..... **5610** CFM
Sensible heat ratio **1.000**
Water flow @ 10.0 °F rise ..... **N/A**
Load occurs at ..... **Jul 1500**
OA DB / WB ..... **90.0 / 72.0** °F
Entering DB / WB ..... **90.0 / 72.0** °F
Leaving DB / WB ..... **70.2 / 66.0** °F
Bypass Factor **0.100**

Heating Coil Sizing Data

Max coil load ..... **421.8** MBH
Coil CFM at Des Htg ..... **5610** CFM
Max coil CFM ..... **5610** CFM
Water flow @ 20.0 °F drop ..... **N/A**
Load occurs at ..... **Des Htg**
Ent. DB / Lvg DB ..... **-5.0 / 65.2** °F

Ventilation Fan Sizing Data

Actual max CFM ..... **5610** CFM
Standard CFM ..... **5561** CFM
Actual max CFM/ft² ..... **0.54** CFM/ft²
Fan motor BHP ..... **10.56** BHP
Fan motor kW ..... **8.38** kW
Fan static ..... **7.00** in wg

Exhaust Fan Sizing Data

Actual max CFM ..... **5610** CFM
Standard CFM ..... **5561** CFM
Actual max CFM/ft² ..... **0.54** CFM/ft²
Fan motor BHP ..... **7.54** BHP
Fan motor kW ..... **5.98** kW
Fan static ..... **5.00** in wg

Outdoor Ventilation Air Data

Design airflow CFM ..... **5610** CFM
CFM/ft² ..... **0.54** CFM/ft²
CFM/person ..... **39.79** CFM/person

Zone Sizing Summary for DOAS-B-1 GUIDANCE

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:47PM

Air System Information

Air System Name ..... **DOAS-B-1 GUIDANCE**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **10415.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	195.8	110.4	75.4 / 67.7	57.0 / 56.4	-	Jul 1500	0.54

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	42.2	70.4 / 77.4	-	5610	0.830	0.658	5610

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	195.8	16.3	42.2
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	195.8	16.3	42.2

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	117.2	Jun 1700	43.4	10415.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
B10 CORRIDOR	1	13.2	Jun 1300	617	11.1	3420.0	0.18
B100 TRAINER	1	4.8	Jul 2200	224	2.1	355.0	0.63
B101 MED FRAGILE	1	20.5	Jun 1700	958	7.5	930.0	1.03
B103 LIFE SKILLS	1	18.8	Jun 1700	877	5.3	860.0	1.02
B105 MEDICAL CORRIDOR	1	0.6	Jul 1400	26	0.4	275.0	0.09
B105A WAITING ROOM	1	1.8	Jul 1400	85	0.2	150.0	0.57
B105B NURSES OFFICE	1	3.0	Jun 1700	141	1.4	130.0	1.08
B105C EXAM RM	1	2.7	Jun 1700	125	1.8	130.0	0.96
B105D EXAM RM	1	1.7	Jun 1700	79	1.2	110.0	0.72

Zone Sizing Summary for DOAS-B-1 GUIDANCE

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:47PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft^2)	Space CFM/ft^2
B107G PSYCH	1	3.2	Jun 1700	150	1.4	150.0	1.00
B105F RESTING AREA	2	1.2	Jul 1400	92	0.4	240.0	0.38
B105E STORAGE	1	0.2	Jul 1400	9	0.2	100.0	0.09
B105J TOILET	1	0.3	Jul 1400	23	0.2	150.0	0.15
B107B CONF RM	1	6.5	Jul 1400	304	0.6	400.0	0.76
B107C ADJUST COUNSEL	1	3.4	Jun 1700	161	1.5	175.0	0.92
B107D COUNSELOR	1	2.9	Jun 1700	136	1.2	120.0	1.13
B107E GUIDANCE	1	3.2	Jun 1700	150	1.4	150.0	1.00
B107F GUIDANCE	1	3.2	Jun 1700	150	1.4	150.0	1.00
B109 GYM STORAGE	1	0.3	Jul 1400	14	0.2	150.0	0.09
B111 ELEC RM	1	0.5	Jul 1400	21	0.3	225.0	0.09
C110 GUID STORAGE	1	0.5	Jul 1400	22	0.2	245.0	0.09
B107 GUIDANCE CORR	1	3.4	Jul 1400	158	0.6	355.0	0.44
B107A WAITING AREA	1	1.8	Jul 1400	86	0.6	105.0	0.82
C106 GRAD COACH	1	9.4	Jul 1400	438	0.7	420.0	1.04
C108 CAREER CENTER	1	4.9	Jul 1400	228	0.4	230.0	0.99
B102 AD	1	0.8	Jul 1400	38	0.2	150.0	0.25
B107I GUIDANCE	1	2.2	Jul 1400	104	0.2	150.0	0.70
B107H GUIDANCE	1	2.2	Jul 1400	104	0.2	150.0	0.70

Air System Sizing Summary for DOAS-B-2 ALT. GYM/LOCKERS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:48PM

Air System Information

Air System Name **DOAS-B-2 ALT. GYM/LOCKERS**
Equipment Class **PKG ROOF**
Air System Type **SZCAV**
Number of zones **1**
Floor Area **12371.0** ft²
Location **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months **Jan to Dec**
Sizing Data **Calculated**
Zone CFM Sizing **Sum of space airflow rates**
Space CFM Sizing **Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**27.8**	Tons	Load occurs at	**Aug 1500**	
Total coil load	**334.0**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**214.4**	MBH	Entering DB / WB	**89.8 / 71.9**	°F
Coil CFM at Aug 1500	**5641**	CFM	Leaving DB / WB	**54.3 / 53.0**	°F
Max block CFM	**5641**	CFM	Coil ADP	**50.4**	°F
Sum of peak zone CFM	**5641**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.642**		Resulting RH	**57**	%
CFM/Ton	**202.7**		Design supply temp.	**55.0**	°F
ft²/Ton	**444.4**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**27.0**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**487.4**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**5641**	CFM	BTU/(hr·ft²)	**39.4**	
Max coil CFM	**5641**	CFM	Ent. DB / Lvg DB	**-3.4 / 77.3**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**5641**	CFM	Fan motor BHP	**10.62**	BHP
Standard CFM	**5592**	CFM	Fan motor kW	**8.42**	kW
Actual max CFM/ft²	**0.46**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**5641**	CFM	Fan motor BHP	**7.58**	BHP
Standard CFM	**5592**	CFM	Fan motor kW	**6.02**	kW
Actual max CFM/ft²	**0.46**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**5529**	CFM	CFM/person	**44.59**	CFM/person
CFM/ft²	**0.45**	CFM/ft²			

Zone Sizing Summary for DOAS-B-2 ALT. GYM/LOCKERS

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:48PM

Air System Information

Air System Name **DOAS-B-2 ALT. GYM/LOCKERS**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **12371.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	5529	5529	0.45	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	95.3	Jul 1600	74.9	12371.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
B108 WEIGHT RM	1	21.6	Aug 1000	1011	7.6	1010.0	1.00
B109 GYM STORAGE	1	0.3	Jul 1400	14	0.2	150.0	0.09
B12 CORRIDOR	1	7.1	Sep 1300	332	5.7	2206.0	0.15
B117 LOCKER RM	1	16.6	Aug 1100	919	10.7	2260.0	0.41
B121 PE INSTRUCTOR	1	2.9	Jul 1400	135	0.3	220.0	0.62
B125 PE INSTRUCTOR	1	2.9	Jul 1400	138	0.3	225.0	0.61
B123 LOCKER RM	1	18.7	Sep 1100	926	9.1	2340.0	0.40
B129 ATHLETICS STORAGE	1	4.8	Jul 1500	798	21.4	505.0	1.58
B104 ALTERNATIVE PE	1	17.5	Jun 1700	817	11.9	2005.0	0.41
B104A GYM STORAGE	1	0.6	Jul 2200	61	1.6	265.0	0.23
B112 WATER/MER	1	3.8	Aug 1000	186	5.0	640.0	0.29
B113 OT/PT	1	3.0	Jul 1400	191	0.8	545.0	0.35

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-D-1 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Air System Information

Air System Name **DOAS-D-1 CLASSROOMS EAST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **16160.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Cooling Coil Sizing Data

Total coil load ..... **16.0** Tons
Total coil load ..... **192.2** MBH
Total coil load ..... **567.3** CFM/Ton
Sensible coil load ..... **192.2** MBH
Coil CFM at Jul 1500 ..... **9086** CFM
Max coil CFM ..... **9086** CFM
Sensible heat ratio **1.000**
Water flow @ 10.0 °F rise ..... **N/A**

Load occurs at ..... **Jul 1500**
OA DB / WB ..... **90.0 / 72.0** °F
Entering DB / WB ..... **90.0 / 72.0** °F
Leaving DB / WB ..... **70.2 / 66.0** °F
Bypass Factor **0.100**

Heating Coil Sizing Data

Max coil load ..... **683.2** MBH
Coil CFM at Des Htg ..... **9086** CFM
Max coil CFM ..... **9086** CFM
Water flow @ 20.0 °F drop ..... **N/A**

Load occurs at ..... **Des Htg**
Ent. DB / Lvg DB ..... **-5.0 / 65.2** °F

Ventilation Fan Sizing Data

Actual max CFM ..... **9086** CFM
Standard CFM ..... **9006** CFM
Actual max CFM/ft² ..... **0.56** CFM/ft²

Fan motor BHP ..... **17.10** BHP
Fan motor kW ..... **13.57** kW
Fan static ..... **7.00** in wg

Exhaust Fan Sizing Data

Actual max CFM ..... **9086** CFM
Standard CFM ..... **9006** CFM
Actual max CFM/ft² ..... **0.56** CFM/ft²

Fan motor BHP ..... **12.22** BHP
Fan motor kW ..... **9.69** kW
Fan static ..... **5.00** in wg

Outdoor Ventilation Air Data

Design airflow CFM ..... **9086** CFM
CFM/ft² ..... **0.56** CFM/ft²

CFM/person ..... **25.31** CFM/person

Zone Sizing Summary for DOAS-D-1 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Air System Information

Air System Name **DOAS-D-1 CLASSROOMS EAST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **16160.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	417.8	245.6	75.6 / 67.1	56.1 / 55.4	-	Jul 1400	0.73

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	49.9	70.3 / 74.3	-	11734	1.735	1.377	9086

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	417.8	34.8	49.9
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	417.8	34.8	49.9

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	248.0	Jul 1400	60.8	16160.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
D102 TEACHER PLANNING	1	12.3	Jan 2300	575	0.0	740.0	0.78
D115 SMALL GROUP	1	10.5	Sep 1200	489	4.2	360.0	1.36
D117 CLASSROOM	1	17.5	Jul 1400	817	5.8	850.0	0.96
D119 CLASSROOM	1	16.5	Jun 1700	770	3.6	850.0	0.91
D121 CLASSROOM	1	16.5	Jun 1700	770	3.6	850.0	0.91
D123 CLASSROOM	1	16.5	Jun 1700	770	3.6	850.0	0.91
D125 CLASSROOM	1	16.5	Jun 1700	770	3.6	850.0	0.91
D202 TEACHER PLANNING	1	11.4	Jul 1400	534	1.0	635.0	0.84
D215 SMALL GROUP	1	9.4	Jul 0900	438	4.2	360.0	1.22

Zone Sizing Summary for DOAS-D-1 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
D217 CLASSROOM	1	17.7	Jul 1400	828	5.8	860.0	0.96
D219 CLASSROOM	1	16.7	Jun 1700	779	4.1	860.0	0.91
D221 CLASSROOM	1	16.7	Jun 1700	779	4.1	860.0	0.91
D223 CLASSROOM	1	16.7	Jun 1700	779	4.1	860.0	0.91
D225 CLASSROOM	1	16.7	Jun 1700	779	4.1	860.0	0.91
D227 RESOURCE	1	10.8	Jun 1700	506	2.6	525.0	0.96
D12 CORRIDOR	1	2.1	Jan 2300	97	0.0	1130.0	0.09
D22 CORRIDOR	1	1.7	Jul 1400	80	1.3	855.0	0.09
C111 WORKSHOP	1	4.7	Jan 2300	220	0.0	305.0	0.72
C111A WORKSHOP OFFICE	1	1.9	Jan 2300	90	0.0	150.0	0.60
C201A STUDENT ACTIVITY	1	4.3	Jul 1400	202	0.4	285.0	0.71
C201B STUDENT ACTIVITY	1	5.6	Jun 1700	259	1.7	300.0	0.86
D210 TECH SUPPORT	1	5.4	Jul 1400	252	0.6	380.0	0.66
C21 CORRIDOR D-WING	1	3.2	Jul 1400	148	2.5	1585.0	0.09

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-D-2 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Air System Information

Air System Name **DOAS-D-2 CLASSROOMS EAST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**
Number of zones **1**
Floor Area ..... **21635.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**
Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Cooling Coil Sizing Data

Total coil load ..... **20.6** Tons
Total coil load ..... **247.6** MBH
Total coil load ..... **567.3** CFM/Ton
Sensible coil load ..... **247.6** MBH
Coil CFM at Jul 1500 ..... **11707** CFM
Max coil CFM ..... **11707** CFM
Sensible heat ratio **1.000**
Water flow @ 10.0 °F rise ..... **N/A**
Load occurs at ..... **Jul 1500**
OA DB / WB ..... **90.0 / 72.0** °F
Entering DB / WB ..... **90.0 / 72.0** °F
Leaving DB / WB ..... **70.2 / 66.0** °F
Bypass Factor **0.100**

Heating Coil Sizing Data

Max coil load ..... **880.3** MBH
Coil CFM at Des Htg ..... **11707** CFM
Max coil CFM ..... **11707** CFM
Water flow @ 20.0 °F drop ..... **N/A**
Load occurs at ..... **Des Htg**
Ent. DB / Lvg DB ..... **-5.0 / 65.2** °F

Ventilation Fan Sizing Data

Actual max CFM ..... **11707** CFM
Standard CFM ..... **11604** CFM
Actual max CFM/ft² ..... **0.54** CFM/ft²
Fan motor BHP ..... **22.04** BHP
Fan motor kW ..... **17.48** kW
Fan static ..... **7.00** in wg

Exhaust Fan Sizing Data

Actual max CFM ..... **11707** CFM
Standard CFM ..... **11604** CFM
Actual max CFM/ft² ..... **0.54** CFM/ft²
Fan motor BHP ..... **15.74** BHP
Fan motor kW ..... **12.49** kW
Fan static ..... **5.00** in wg

Outdoor Ventilation Air Data

Design airflow CFM ..... **11707** CFM
CFM/ft² ..... **0.54** CFM/ft²
CFM/person ..... **35.37** CFM/person

Zone Sizing Summary for DOAS-D-2 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Air System Information

Air System Name **DOAS-D-2 CLASSROOMS EAST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **21635.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	500.3	309.9	75.7 / 67.0	57.6 / 56.8	-	Aug 1100	0.74

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	79.3	70.3 / 74.9	-	15973	2.362	1.874	11707

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	500.3	41.7	79.3
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	500.3	41.7	79.3

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	339.4	Sep 1200	96.5	21635.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
D201 CLASSROOM	1	19.4	Sep 1200	905	4.1	865.0	1.05
D203 CLASSROOM	1	19.4	Sep 1200	907	4.1	870.0	1.04
D205 CHEMISTRY LAB	1	26.5	Sep 1200	1239	6.1	1475.0	0.84
D207 CHEM STORAGE	1	0.4	Jul 1400	18	0.3	195.0	0.09
D209A PREP ROOM	1	7.7	Sep 1200	358	2.4	400.0	0.89
D210 TECH SUPPORT	1	5.4	Jul 1400	252	0.6	380.0	0.66
D209 AP CHEMISTRY LAB	1	26.5	Sep 1200	1239	5.9	1475.0	0.84
D211 CLASSROOM	1	19.3	Sep 1200	901	4.0	855.0	1.05
D213 ELL	1	12.1	Sep 1200	564	4.1	525.0	1.07

Zone Sizing Summary for DOAS-D-2 CLASSROOMS EAST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:49PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
D101 CLASSROOM	1	20.1	Sep 1300	937	5.4	855.0	1.10
D103 CLASSROOM	1	19.3	Oct 1200	899	3.6	855.0	1.05
D105 FORENSICS LAB	1	25.5	Sep 1200	1191	4.9	1470.0	0.81
D107 SMALL GROUP	1	3.7	Jan 2300	173	0.0	195.0	0.89
D105A PREP ROOM	1	5.4	Sep 1200	253	1.2	400.0	0.63
D109 ENVIRONMENTAL LAB	1	26.4	Oct 1200	1235	4.7	1470.0	0.84
D111 CLASSROOM	1	19.2	Oct 1200	899	3.9	855.0	1.05
D113 RESOURCE	1	14.5	Sep 1200	676	5.0	520.0	1.30
D10 CORRIDOR	1	6.1	Jan 2300	284	0.0	3305.0	0.09
D11 SEMINAR	1	4.1	Jan 2300	194	0.0	155.0	1.25
D20 CORRIDOR	1	11.9	Jul 1500	556	14.0	2995.0	0.19
D21 SEMINAR	1	4.1	Jan 2300	191	0.0	150.0	1.28
C21 CORRIDOR C-WING	1	45.0	Oct 1200	2101	22.2	1370.0	1.53

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-E-1 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Air System Information

Air System Name **DOAS-E-1 CLASSROOMS WEST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **21975.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Cooling Coil Sizing Data

Total coil load ..... **22.3** Tons
Total coil load ..... **267.5** MBH
Total coil load ..... **567.3** CFM/Ton
Sensible coil load ..... **267.5** MBH
Coil CFM at Jul 1500 ..... **12646** CFM
Max coil CFM ..... **12646** CFM
Sensible heat ratio **1.000**
Water flow @ 10.0 °F rise ..... **N/A**

Load occurs at ..... **Jul 1500**
OA DB / WB ..... **90.0 / 72.0** °F
Entering DB / WB ..... **90.0 / 72.0** °F
Leaving DB / WB ..... **70.2 / 66.0** °F
Bypass Factor **0.100**

Heating Coil Sizing Data

Max coil load ..... **950.9** MBH
Coil CFM at Des Htg ..... **12646** CFM
Max coil CFM ..... **12646** CFM
Water flow @ 20.0 °F drop ..... **N/A**

Load occurs at ..... **Des Htg**
Ent. DB / Lvg DB ..... **-5.0 / 65.2** °F

Ventilation Fan Sizing Data

Actual max CFM ..... **12646** CFM
Standard CFM ..... **12535** CFM
Actual max CFM/ft² ..... **0.58** CFM/ft²

Fan motor BHP ..... **23.80** BHP
Fan motor kW ..... **18.88** kW
Fan static ..... **7.00** in wg

Exhaust Fan Sizing Data

Actual max CFM ..... **12646** CFM
Standard CFM ..... **12535** CFM
Actual max CFM/ft² ..... **0.58** CFM/ft²

Fan motor BHP ..... **17.00** BHP
Fan motor kW ..... **13.49** kW
Fan static ..... **5.00** in wg

Outdoor Ventilation Air Data

Design airflow CFM ..... **12646** CFM
CFM/ft² ..... **0.58** CFM/ft²

CFM/person ..... **28.68** CFM/person

Zone Sizing Summary for DOAS-E-1 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Air System Information

Air System Name **DOAS-E-1 CLASSROOMS WEST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **21975.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	590.9	350.5	75.7 / 67.0	56.0 / 55.3	-	Jul 1700	0.76

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	73.6	70.3 / 74.5	-	16620	2.458	1.950	12646

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	590.9	49.2	73.6
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	590.9	49.2	73.6

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	355.0	Jun 1700	80.1	21975.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
E200 TEACHER PLANNING	1	12.7	Jul 1500	594	2.0	755.0	0.79
E215 RESOURCE	1	14.5	Jul 1000	679	5.4	545.0	1.25
E217 CLASSROOM	1	18.5	Jun 1700	862	5.5	855.0	1.01
E22 CORRIDOR	1	15.9	Jun 1700	742	15.7	2710.0	0.27
E219 CLASSROOM	1	17.5	Jun 1700	818	4.0	855.0	0.96
E221 CLASSROOM	1	17.5	Jun 1700	818	4.0	855.0	0.96
E223 CLASSROOM	1	17.5	Jun 1700	818	4.1	855.0	0.96
E225 CLASSROOM	1	17.4	Jun 1700	814	4.0	845.0	0.96
E227 STEM	1	43.0	Jun 1700	2010	5.8	1980.0	1.01

Zone Sizing Summary for DOAS-E-1 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
E115 SMALL GROUP	1	9.6	Aug 1600	446	3.7	340.0	1.31
E117 CLASSROOM	1	18.9	Jun 1700	881	5.4	855.0	1.03
E12 CORRIDOR	1	5.8	Jan 2300	270	0.0	3145.0	0.09
E119 CLASSROOM	1	17.4	Jun 1700	814	3.6	855.0	0.95
E121 CLASSROOM	1	17.4	Jun 1700	814	3.6	855.0	0.95
E123 CLASSROOM	1	17.4	Jun 1700	814	3.6	855.0	0.95
E125 WILLIE ROSS	1	13.0	Jun 1700	606	3.1	525.0	1.15
E125A WR SUPPORT	1	1.9	Jan 2300	90	0.0	120.0	0.75
E127 WILLIE ROSS	1	13.0	Jun 1700	606	3.1	525.0	1.15
E127A WR SUPPORT	1	1.9	Jan 2300	90	0.0	120.0	0.75
E129 GRAPHIC LAB	1	24.2	Jun 1700	1133	1.5	975.0	1.16
E129A PRINTING	1	3.1	Jan 2300	147	0.0	250.0	0.59
E100 TEACHER PLANNING	1	12.6	Jul 2100	587	1.2	755.0	0.78
E104 RESOURCE	2	10.1	Jan 2300	472	0.0	620.0	0.76
E210 SMALL GROUP	1	4.8	Jul 1400	224	0.5	305.0	0.73

Dedicated Outdoor Air System (DOAS) Sizing Summary for DOAS-E-2 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Air System Information

Air System Name **DOAS-E-2 CLASSROOMS WEST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **17625.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Cooling Coil Sizing Data

Total coil load ..... **16.4** Tons
Total coil load ..... **196.8** MBH
Total coil load ..... **567.3** CFM/Ton
Sensible coil load ..... **196.8** MBH
Coil CFM at Jul 1500 ..... **9302** CFM
Max coil CFM ..... **9302** CFM
Sensible heat ratio **1.000**
Water flow @ 10.0 °F rise ..... **N/A**

Load occurs at ..... **Jul 1500**
OA DB / WB ..... **90.0 / 72.0** °F
Entering DB / WB ..... **90.0 / 72.0** °F
Leaving DB / WB ..... **70.2 / 66.0** °F
Bypass Factor **0.100**

Heating Coil Sizing Data

Max coil load ..... **699.4** MBH
Coil CFM at Des Htg ..... **9302** CFM
Max coil CFM ..... **9302** CFM
Water flow @ 20.0 °F drop ..... **N/A**

Load occurs at ..... **Des Htg**
Ent. DB / Lvg DB ..... **-5.0 / 65.2** °F

Ventilation Fan Sizing Data

Actual max CFM ..... **9302** CFM
Standard CFM ..... **9220** CFM
Actual max CFM/ft² ..... **0.53** CFM/ft²

Fan motor BHP ..... **17.51** BHP
Fan motor kW ..... **13.89** kW
Fan static ..... **7.00** in wg

Exhaust Fan Sizing Data

Actual max CFM ..... **9302** CFM
Standard CFM ..... **9220** CFM
Actual max CFM/ft² ..... **0.53** CFM/ft²

Fan motor BHP ..... **12.51** BHP
Fan motor kW ..... **9.92** kW
Fan static ..... **5.00** in wg

Outdoor Ventilation Air Data

Design airflow CFM ..... **9302** CFM
CFM/ft² ..... **0.53** CFM/ft²

CFM/person ..... **26.28** CFM/person

Zone Sizing Summary for DOAS-E-2 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Air System Information

Air System Name **DOAS-E-2 CLASSROOMS WEST**
Equipment Class ..... **TERM**
Air System Type ..... **VRF**

Number of zones **1**
Floor Area ..... **17625.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft²
Zone 1	456.6	289.8	75.9 / 66.8	57.5 / 56.8	-	Aug 1300	0.84

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	63.8	70.3 / 74.4	-	14777	2.185	1.734	9302

VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	456.6	38.1	63.8
Estimated Piping / Line Losses	0.0	0.0	0.0
Total Required ODU Capacity	456.6	38.1	63.8

Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	312.8	Oct 1300	71.2	17625.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
E101 BIOLOGY LAB	1	27.3	Sep 1300	1276	7.6	1470.0	0.87
E103 SMALL GROUP	1	3.8	Jan 2300	178	0.0	205.0	0.87
E101A PREP ROOM	1	8.0	Oct 1300	373	2.3	410.0	0.91
E105 BIOLOGY LAB	1	26.9	Oct 1300	1257	4.5	1470.0	0.86
E107 LIFE SKILLS	1	23.4	Oct 1300	1093	3.8	1260.0	0.87
E109 CLASSROOM	1	19.7	Oct 1300	918	3.7	860.0	1.07
E111 CLASSROOM	1	19.7	Oct 1300	918	3.7	860.0	1.07
E113 CLASSROOM	1	19.5	Oct 1300	911	4.8	855.0	1.07
E13 SEMINAR	1	4.1	Jan 2300	194	0.0	155.0	1.25

Zone Sizing Summary for DOAS-E-2 CLASSROOMS WEST

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:50PM

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
E11 CORRIDOR	1	4.8	Jul 0900	225	2.1	1255.0	0.18
E201 LABORATORY	1	27.5	Sep 1300	1285	7.8	1475.0	0.87
E203 SMALL GROUP	1	3.8	Jul 1400	179	0.3	205.0	0.87
E201A PREP ROOM	1	8.0	Oct 1300	373	2.4	410.0	0.91
E205 PHYSICS LAB	1	26.8	Oct 1300	1251	5.8	1455.0	0.86
E207 ASD	1	25.1	Oct 1300	1172	5.5	1275.0	0.92
E209 CLASSROOM	1	19.7	Oct 1300	921	4.1	865.0	1.06
E211 CLASSROOM	1	19.7	Oct 1300	921	4.1	865.0	1.06
E213 SEL	1	19.5	Oct 1300	911	5.0	855.0	1.07
E21 CORRIDOR	1	4.9	Jul 0900	230	3.5	1270.0	0.18
E23 SEMINAR	1	4.1	Jul 1400	193	0.2	150.0	1.28

Air System Sizing Summary for MAU-2 CULINARY

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:52PM

Air System Information

Air System Name	**MAU-2 CULINARY**	Number of zones	**1**
Equipment Class	**PKG ROOF**	Floor Area	**1600.0** ft²
Air System Type	**SZCAV**	Location	**Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**5.4**	Tons	Load occurs at	**Jul 1400**	
Total coil load	**64.5**	MBH	OA DB / WB	**89.4 / 71.8**	°F
Sensible coil load	**43.9**	MBH	Entering DB / WB	**83.6 / 67.5**	°F
Coil CFM at Jul 1400	**1258**	CFM	Leaving DB / WB	**51.0 / 49.8**	°F
Max block CFM	**1258**	CFM	Coil ADP	**47.4**	°F
Sum of peak zone CFM	**1258**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.682**		Resulting RH	**50**	%
CFM/Ton	**234.2**		Design supply temp.	**55.0**	°F
ft²/Ton	**297.8**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**40.3**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**30.6**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**1258**	CFM	BTU/(hr·ft²)	**19.2**	
Max coil CFM	**1258**	CFM	Ent. DB / Lvg DB	**44.5 / 67.2**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**1258**	CFM	Fan motor BHP	**2.37**	BHP
Standard CFM	**1247**	CFM	Fan motor kW	**1.88**	kW
Actual max CFM/ft²	**0.79**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**1258**	CFM	Fan motor BHP	**1.69**	BHP
Standard CFM	**1247**	CFM	Fan motor kW	**1.34**	kW
Actual max CFM/ft²	**0.79**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**484**	CFM	CFM/person	**18.61**	CFM/person
CFM/ft²	**0.30**	CFM/ft²			

Zone Sizing Summary for MAU-2 CULINARY

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:52PM

Air System Information

Air System Name ..... **MAU-2 CULINARY**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **1600.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	1233	1233	0.77	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	26.4	Jan 2300	0.0	1600.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
D112 CULINARY	1	26.4	Jan 2300	1233	0.0	1600.0	0.77

Air System Sizing Summary for MAU-1 KITCHEN

Project Name: 22044 - East Longmeadow High School
Prepared by: SMMA

03/25/2024
12:51PM

Air System Information

Air System Name	**MAU-1 KITCHEN**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**2595.0**	ft²
Air System Type	**SZCAV**		Location	**Springfield, Massachusetts**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**7.2**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**86.6**	MBH	OA DB / WB	**90.0 / 72.0**	°F
Sensible coil load	**54.2**	MBH	Entering DB / WB	**89.8 / 71.8**	°F
Coil CFM at Jul 1500	**1327**	CFM	Leaving DB / WB	**51.7 / 50.5**	°F
Max block CFM	**1327**	CFM	Coil ADP	**47.5**	°F
Sum of peak zone CFM	**1327**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.626**		Resulting RH	**44**	%
CFM/Ton	**184.0**		Design supply temp.	**55.0**	°F
ft²/Ton	**359.6**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**33.4**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

Max coil load	**102.7**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**1327**	CFM	BTU/(hr·ft²)	**39.6**	
Max coil CFM	**1327**	CFM	Ent. DB / Lvg DB	**-3.4 / 68.9**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**1327**	CFM	Fan motor BHP	**2.50**	BHP
Standard CFM	**1316**	CFM	Fan motor kW	**1.98**	kW
Actual max CFM/ft²	**0.51**	CFM/ft²	Fan static	**7.00**	in wg

Return Fan Sizing Data

Actual max CFM	**1327**	CFM	Fan motor BHP	**1.78**	BHP
Standard CFM	**1316**	CFM	Fan motor kW	**1.42**	kW
Actual max CFM/ft²	**0.51**	CFM/ft²	Fan static	**5.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**1301**	CFM	CFM/person	**52.03**	CFM/person
CFM/ft²	**0.50**	CFM/ft²			

Zone Sizing Summary for MAU-1 KITCHEN

Project Name: 22044 - East Longmeadow High School 03/25/2024
Prepared by: SMMA 12:51PM

Air System Information

Air System Name ..... **MAU-1 KITCHEN**
Equipment Class ..... **PKG ROOF**
Air System Type ..... **SZCAV**

Number of zones **1**
Floor Area ..... **2595.0** ft²
Location ..... **Springfield, Massachusetts**

Sizing Calculation Information

Calculation Months ..... **Jan to Dec**
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**
Space CFM Sizing ..... **Individual peak space loads**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (CFM)	Minimum Supply Airflow (CFM)	Zone CFM/ft²	Reheat Coil Load (MBH)	Reheat Coil Water gpm @ 20.0 °F	Zone Htg Unit Coil Load (MBH)	Zone Htg Unit Water gpm @ 20.0 °F	Mixing Box Fan Airflow (CFM)
Zone 1	1301	1301	0.50	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft²)
Zone 1	27.8	Jul 1400	2.2	2595.0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
C105B WASHING STATION	1	5.5	Jan 2300	256	0.0	500.0	0.51
C105C PREP KITCHEN	1	20.7	Jul 1400	968	1.0	1310.0	0.74
C105D WALK IN REF	1	0.9	Jul 1400	44	0.7	470.0	0.09
C115 TOILET	1	0.1	Jul 1400	8	0.1	55.0	0.15
B130 DRY STORAGE	1	0.5	Jul 1400	24	0.4	260.0	0.09

New School Building Electrical Design Load Summary

Location	Load
Exterior Lighting	20 KVA
Interior Lighting @<0.5W/SF	95 KVA
Computer and Convenience Power @1W/SF	190 KVA
Heating/Air-Conditioning, Ventilation, all electric @7.5VA/SF	1,430 KVA
Plumbing equipment, all electric	250 KVA
Kitchen, all electric	300 KVA
Miscellaneous Loads	110 KVA
Elevator, 30HP	30 KVA
Future pool loads (allocated as “future” provisions only)	350 KVA
EV Dual Charging Stations, (5) initial and (19) additional as “provisions for future EV” connections	125 KVA
Auditorium Theatrical LED Lighting	30 KVA
Telephone/Data systems: IDF/MDF/Server room equipment	40 KVA
PA, Security and Fire Alarm systems	20 KVA
Outdoor Scoreboards, Pitching machines, etc.	25 KVA
Total Connected Load	**3,015 KVA**

The **Total Demand Load**, assuming the **non-simultaneous equipment operation**, can be estimated approximately as follows: 60% of Kitchen Equipment, 100% of Interior and Exterior Lighting and approximately 75% of the remaining Connected Loads - **2,250 KVA**, or 2,700 Amp at 277/480 volts 3 phase 4 wire power system.

A 4,000 Amp 277/480V 3 phase 4 wire Main Switchboard equipped with a 3,000 Amp 100% rated Main Circuit Breaker (MCB) will be provided.

3-1-n
FACILITY AND MAINTENANCE REQUIREMENTS

Bruce Fenney, Department Head of Public Works (which is also in control of school facilities), serves on the School Building Committee and has been an invaluable resource to the Design Team throughout the process. The Design Team has met with Bruce and consulted on everything from site design and plowing requirements, to the proposed MEP systems – and the goal for an all-electric building. Along with Bruce, the Design Team has specifically met with the Superintendent Gordon Smith and the IT Director, Ryan Quimby. Their input has been much appreciated.

The entire School Building Committee has voted on – and approved – the Value Engineering changes throughout the project.

Updates to specific issues are as follows:

- Details on Training hours and scheduling - have not yet been addressed, but will be during the Construction Document phase.
- HVAC systems - have been reviewed in great detail
- Building Management Systems - have been reviewed – and the District is electing to proceed with a proprietary system from StruxureWare
- Lighting fixtures and controls – have not yet been addressed in great detail, but will be during the Construction Document phase
- Cleaning procedures and materials – have been address generally, but not in great specifics yet. Overall, the District has approved the interior material choices.
- Access to all roof surfaces – has been addressed with the District.
- Mechanical room access – has been addressed with the District.

3-1-o
QUALITY CONTROL NARRATIVE

Key priorities at Design Development phase are to accurately depict the overall character of the project with inclusion of sufficient information on materials and systems to establish a more detailed understanding of cost. At this point in the process all consultants have shared 3D models and are working from the same base model (underlay) with the building locked to site survey and elevations confirmed. Overall structural grid is confirmed. Schematic diagrams have been moved to initial layouts of building systems. Conflicts between systems are now apparent to the architecture team and are able to be addressed.

The Quality Control/Quality Assurance process for JWA and team begins at this phase with an assessment of the effectiveness of the drawings at communicating to the reviewer and builder. The drawings are actively assessed to insure that:

- overall design intent is clear
- line weights, tags, hatches and dimensions are readable
- systems shared between sets are cross referenced to be sure all are covered
- sheets interior to each subset identify materials, typical dimensions, locations and keynotes
- source attribution is clear (surveys, delineations, etc)
- progressions of levels of information from plan to detail are clear and easy to follow
- material/keynote tagging is well underway
- typical room conditions communicate the inclusion of finishes and systems

The shift from DD to 60% CD will see a shift in review intent from focus on communication to verification of design constructability and function. Ceiling heights have been confirmed and are indicated in the drawings. Roof access confirmed. Fire rated locations are confirmed with Kevin Hastings (code consultant) and indicated. Details will be far more developed in the 60% CD set.

Current QA/QC concerns include the following:

Civil/Landscape:

- Coordination with Geotechnical engineer on existing soils to finalize cut, fill, and over-excavation requirements.
- Coordination between civil/landscape and electrical on lighting fixtures has been addressed but not fully executed.
- Coordination with security plans

- Coordination of exterior signage
- Final coordination of traffic controls with town
- Coordination of enabling work package and phasing
- Ongoing coordination of permitting and approvals

Structural:

- A few final adjustments to gridline locations need to be made in coordination with the needs of other disciplines
- A couple of column locations need to be revised due to conflicts.
- Braced frame shapes need to be revisited in several locations in coordination with architectural features.
- Confirmation of the structural approach at the auditorium including the relationship between catwalk and mechanical.
- Further detailing of structural steel at stairs and elevator shaft
- More clarity on connection details

MEP/FP:

- Confirm envelope assumptions on air infiltration rates to ensure systems are not oversized
- Further development of energy model per stretch code requirements
- Coordination of mechanical equipment with ceilings & acoustic controls at select unique room conditions.
- Final coordination of internal primary and overflow storm drain locations.
- Location of condensate collection area.
- Final coordination and detailing of exhaust at labs and culinary arts.
- Final coordination and detailing of kitchen & special equipment with MEP requirements
- Final coordination and detailing of rooftop photovoltaic system

Architectural:

- Coordinate locations of Fire extinguishers
- Building committee signage, fire alarm box, displays. Coordination with MEP needed
- ADA compliant spacing in typical bathrooms, stairwells, kitchen, etc. to be indicated
- Further development of exterior wall details & roof details
- Locations of control panels, access panels throughout building to be identified in elevations.
- Storefront details, detailing of sunshades at exterior
- Detailing of signage
- Further development of fireproofing details
- Coordination on acoustic assemblies and design
- Further development of vertical circulation detailing

EAST LONGMEADOW HIGH SCHOOL

180 Maple Street, East Longmeadow, MA 01028

Colliers
Project Leaders

Colliers Project Leaders
67 Hunt Street, Suite 119
Agawam, MA 01001

FONTAINE BROS., INC.

Fontaine Brothers., Inc.
510 Cottage St
Springfield, MA 01104

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Cambridge, MA 02138

MSBA
Massachusetts School Building Authority
Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

This project is funded in part by:
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109

Proposed Space Summary - High School

Date: 3/29/2024 Design Development Submittal

East Longmeadow School District East Longmeadow High School	EXISTING CONDITIONS			PROPOSED PROGRAM: EXISTING TO REMAIN / RENOVATED			PROPOSED PROGRAM: NEW CONSTRUCTION			PROPOSED PROGRAM: TOTAL			VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			**39,290**			**0**			**44,075**			**44,075**			**4,395**			**39,680**	Science Lab Guidelines
(List rooms of different sizes separately)																			
General Classroom	varies	33	25,415		0	0	850	7	5,950	850	7	5,950	-50	-20	-18,350	900	27	24,300	825 NSF (minimum size) - 950 NSF (maximum size)
							855	11	9,405	855	11	9,405							
							860	4	3,440	860	4	3,440							
							865	2	1,730	865	2	1,730							
Teacher Planning	400	1	400		0	0	640	1	640	640	1	640	540	-26	-2,060	100	27	2,700	
							655	1	655	655	1	655							
							660	1	660	660	1	660							
							665	1	665	665	1	665							
Small Group Seminar (20-30 seats)		0	0			0	125	1	125	125	1	125	-375	-1	-875	500	2	1,000	
							150	2	300	150	2	300							
							155	2	310	155	2	310							
							340	1	340	340	1	340							
Science Classroom / Lab	varies	10	9,345		0	0	1,460	2	2,920	1,460	2	2,920	20	-5	-7,160	1,440	7	10,080	Assumed schedule: 3 x 85% utilization = 20 seats; 1 period per day per student; 1,440 NSF (minimum size); refer to the Science Lab Guidelines for additional information
							1,465	6	8,790	1,465	6	8,790							
Prep Room	varies	4	1,285		0	0	400	1	400	400	1	400	200	-6	-1,000	200	7	1,400	(1) 200 NSF Prep Room required per Science Classroom / Lab
							405	1	405	405	1	405							
							410	2	820	410	2	820							
Central Chemical Storage Room		0	0		0	0	185	1	185	185	1	185	-15	0	-15	200	1	200	(1) 200 NSF Central Chemical Storage Room required
Greenhouse	245	1	245		0	0	215	1	215	215	1	215	215	1	215				
Business Classrooms	varies	3	2,600			0	850	2	1,700	850	2	1,700	850	2	1,700				
							855	2	1,710	855	2	1,710	855	2					
EL Classroom			0			0	515	1	515	515	1	515	515	1	515				
Large Group Instruction			0			0	2,195	1	2,195	2,195	1	2,195	2,195	1	2,195				
SPECIAL EDUCATION			**8,780**			**0**			**11,630**			**11,630**			**2,570**			**9,060**	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom	varies	4	2,910																
Self-Contained Medically Fragile	805	1	805			0	905	1	905	905	1	905	-45	-5	-4,795	950	6	5,700	825 NSF (minimum size) - 950 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Medically Fragile Toilet Room			0			0	120	1	120	120	1	120	60	-5	-240	60	6	360	
Self-Contained Life Skills	785	1	785				1,260	1	1,260	1,260	1	1,260							
Self-Contained Life Skills Toilet Room			0				60	1	60	60	1	60							
Self-Contained Life Skills 18-22			0				860	1	860	860	1	860							
Self-Contained Life Skills 18-22 Toilet-Room			0				50	1	50	50	1	50							
ASD Classroom/De-escalation	845	1	845				1,115	1	1,115	1,115	1	1,115							
ASD Meeting Room							90	1	90	90	1	90							
ASD Safe Room							55	1	55	55	1	55							
Self-Contained ASD Toilet Room			0				65	1	65	65	1	65							
Resource Room	varies	2	1,645			0	520	2	1,040	520	2	1,040	20	-1	-460	500	3	1,500	1/2 size of a General Classroom
							555	1	555	555	1	555							
							620	1	620	620	1	620							
Small Group Room			0			0	190	1	190	190	1	190	-310	-2	-1,310	500	3	1,500	1/2 size of a General Classroom
							205	2	410	205	2	410							
							300	1	300	300	1	300							
							360	2	720	360	2	720							
SEL Classroom			0			0	850	1	850	850	1	850	850	1	850				
Willie Ross Deaf Program	varies	2	1,530			0	530	1	530	530	1	530	530	1	530				
							535	1	535	535	1	535							
Willie Ross Deaf Program Suport			0			0	125	2	250	125	2	250	125	2	250				
SPED Conference Room			0			0	355	1	355	355	1	355	355	1	355				
Speech Pathologist	150	1	150			0	150	1	150	150	1	150	150	1	150				
OT/PT (shared with ASD in Existing)							545	1	545	545	1	545	545	1	545				
Testing	110	1	110																
ART & MUSIC			**8,425**			**0**			**6,835**			**6,835**			**210**			**6,625**	
Art Classroom (25 seats)	varies	2	3,765			0	1,205	1	1,205	1,205	1	1,205	5	-1	-1,195	1,200	2	2,400	Assumed schedule: 25% total enrollment; 5 times per week
							1,220	1	1,220	1,220	1	1,220							
Kiln	440	1	440			0	105	1	105	105	1	105	-45	-1	-195	150	2	300	
Art Storage	675	1	675				315	1	315	315	1	315							
Art Office	100	1	100																
Band (50-100 seats)	1,290	1	1,290			0	1,575	1	1,575	1,575	1	1,575	75	0	75	1,500	1	1,500	Assumed schedule: 25% total enrollment; 5 times per week
Chorus (50-100 seats)	1,230	1	1,230			0	1,410	1	1,410	1,410	1	1,410	-90	0	-90	1,500	1	1,500	
Music Tech/Keyboard	430	1	430																
Ensemble			0			0	220	1	220	220	1	220	20	0	20	200	1	200	
Music Practice Room	varies	2	190			0	75	3	225	75	3	225	0	0	0	75	3	225	
Music Storage	varies	3	305			0	560	1	560	560	1	560	60	0	60	500	1	500	
VOCATIONS & TECHNOLOGY			**5,460**			**0**			**7,200**			**7,200**			**0**			**7,200**	
Non-Chapter 74 Programs (List rooms separately below)																			STE Guidelines Policy
Technology / Engineering Rooms	1,010	1	1,010			0			0	0	0	0	-1,440	-5	-7,200	1,440	5	7,200	Assumed schedule: 100% total enrollment; 5 times per week; 825 NSF (minimum size) - 2,000 NSF (maximum size)
STEM Lab with Robotics							1,950	1	1,950	1,950	1	1,950							
STEM Support Room							70	1	70	70	1	70							
Graphic Design Lab	1,100	1	1,100			0	975	1	975	975	1	975	975	1	975				
Printing	485	1	485			0	250	1	250	250	1	250	250	1	250				
Family & Consumer Science	1,130	1	1,130			0	1,595	1	1,595	1,595	1	1,595	1,595	1	1,595				
PK-Child Care Lab	1,130	1	1,130			0	1,205	1	1,205	1,205	1	1,205	1,205	1	1,205				
Video Production		0	0			0	975	1	975	975	1	975	975	1	975				
Podcast Room							180	1	180	180	1	180	180	1					
Robotics	605	1	605																
HEALTH & PHYSICAL EDUCATION			**22,030**			**0**			**21,110**			**21,110**			**430**			**20,680**	Excess PE Spaces Policy
Gymnasium	8,565	1	8,565			0	11,980	1	11,980	11,980	1	11,980	-20	0	-20	12,000	1	12,000	
PE Alternatives	3,950	1	3,950			0	1,995	1	1,995	1,995	1	1,995	-1,005	0	-1,005	3,000	1	3,000	
Weight Room	1,255	1	1,255				990	1	990	990	1	990							
Gym Storeroom			0			0	265	1	265	265	1	265	-35	0	-35	300	1	300	
Locker Rooms - PE Lockers	varies	2	3,420			0	755	1	755	755	1	755	-3,725	0	-3,725	4,480	1	4,480	5.6 NSF per student (total enrollment)
							760	1	760	760	1	760							
Team Lockers							970	1	970	970	1	970							
							1,030	1	1,030	1,030	1	1,030							
Locker Room Toilets-Showers							435	1	435	435	1	435							
							470	1	470	470	1	470							
PE Storage	varies	13	1,825			0	405	1	405	405	1	405	-95	0	-95	500	1	500	
Athletic Director's Office	280	1	280			0	150	1	150	150	1	150	0	0	0	150	1	150	
PE Instructor's Office with Shower and Toilet	varies	5	800			0	195	1	195	195	1	195	-55	0	-55	250	1	250	
							220	1	220	220	1	220							
Gender Neutral Locker							90	2	180	90	2	180							
Trainer's Room	varies	3	845			0	310	1	310	310	1	310	310	1	310				
Shower	varies	2	525			0			0	0	0	0	0	0	0				
Uniform Drying Room	145	1	145			0			0	0	0	0	0	0	0				
Toilet Rooms - PE	30	2	60			0			0	0	0	0	0	0	0				
Physical Education Outdoor Storage	360	1	360																
MEDIA CENTER			**3,140**			**0**			**4,900**			**4,900**			**0**			**4,900**	
Media Center / Reading Room	2,825	1	2,825			0	1,995	1	1,995	1,995	1	1,995	-2,905	0	-2,905	4,900	1	4,900	
Media Center / Stacks			0			0	2,180	1	2,180	2,180	1	2,180	2,180	1	2,180				
Computer Lab	315	1	315			0			0	0	0	0	0	0	0				
Library Office			0			0	155	1	155	155	1	155	155	1	155				
Student Activity			0			0	285	1	285	285	1	285	285	1	285				
							300	1	285	300	1	285							
AUDITORIUM / DRAMA			**9,285**			**0**			**8,180**			**8,180**			**-3**			**8,183**	Excess Auditorium Spaces Policy
Auditorium	6,855	1	6,855			0	5,050	1	5,050	5,050	1	5,050	-283	0	-283	5,333	1	5,333	2/3 total enrollment at 10 NSF per seat (750 seats maximum)
Auditorium Vestibule							35	1	35	35	1	35							
							40	1	40	40	1	40							
							125	1	125	125	1	125							
							130	1	130	130	1	130							
Stage	2,140	1	2,140			0	1,550	1	1,550	1,550	1	1,550	-50	0	-50	1,600	1	1,600	
Auditorium Storage	90	2	180			0	435	1	435	435	1	435	-15	0	-15	450	1	450	
Make-up / Dressing Rooms			0			0	270	1	270	270	1	270	-30	-1	-330	300	2	600	
							275	1	275	275	1	275							
Controls / Lighting / Projection	110	1	110			0	270	1	270	270	1	270	70	0	70	200	1	200	
DINING & FOOD SERVICE			**8,235**			**0**			**8,690**			**8,690**			**1,190**			**7,500**	
Cafeteria / Dining / Student Lounge	5,140	1	5,140			0	1,855	1	1,855	1,855	1	1,855	-2,145	0	-2,145	4,000	1	4,000	Based on 3 lunch seatings - 15 NSF per seat
							1,985	1	1,985	1,985	1	1,985							
Chair / Table Storage			0			0	375	1	375	375	1	375	25	0	25	350	1	350	
Scramble Servery			0			0	1,665	1	1,665	1,665	1	1,665	1,065	0	1,065	600	1	600	
Kitchen	1,600	1	1,600			0	2,555	1	2,555	2,555	1	2,555	455	0	455	2,100	1	2,100	1,600 NSF for first 300 students + 1 NSF per additional student
Staff Lunch Room	725	1	725			0			0	0	0	0	-450	-1	-450	450	1	450	20 NSF per student
Freezer	215	1	215			0			0	0	0	0	0	0	0				
Dry Storage	180	1	180			0			0	0	0	0	0	0	0				
Kitchen Toilet	65	1	65			0	50	1	50	50	1	50	50	1	50				
Kitchen Office	310	1	310			0	140	1	140	140	1	140	140	1	140				
							65	1	65	65	1	65							
Can Washing			0			0				0	0	0	0	0	0				
MEDICAL			**765**			**0**			**910**			**910**			**0**			**910**	
Medical Suite Toilet	30	2	60			0	65	1	65	65	1	65	5	0	5	60	1	60	
Nurses' Office	310	1	310			0	155	1	155	155	1	155	-95	0	-95	250	1	250	
Waiting Room							125	1	125	125	1	125							
Examination Room	275	1	275			0	110	1	110	110	1	110	10	-1	-90	100	2	200	
							130	1	130	130	1	130							
Resting	120	1	120			0	230	1	230	230	1	230	130	-3	-170	100	4	400	
Storage							95	1	95	95	1	95							
ADMINISTRATION & GUIDANCE			**4,210**			**0**			**4,565**			**4,565**			**870**			**3,695**	
General Office / Waiting Room with Toilet	550	1	550			0	395	1	395	395	1	395	-5	0	-5	400	1	400	
Teachers' Mail and Time Room			0			0	85	1	85	85	1	85	-15	0	-15	100	1	100	
Copy Room			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Records Room	300	1	300			0	200	1	200	200	1	200	0	0	0	200	1	200	
Principal's Office with Conference Area	140	1	140			0	250	1	250	250	1	250	-125	0	-125	375	1	375	
Principal's Secretary			0			0	250	1	250	250	1	250	125	0	125	125	1	125	
Assistant Principal's Office - AP1	140	1	140			0	150	1	150	150	1	150	0	0	0	150	1	150	
Assistant Principal's Office - AP2	170	1	170			0	140	1	140	140	1	140	-10	1	140	150	0	-	
Spare Office / Counselling Room	100	2	200			0	120	1	120	120	1	120	0	0	0	120	1	120	
Conference Room	710	1	710			0	395	1	395	395	1	395	-55	0	-55	450	1	450	
Guidance Office	varies	4	360			0	145	2	290	145	2	290	-5	-2	-310	150	4	600	
							150	2	300	150	2	300							
Guidance Waiting Room	260	1	260			0	85	1	85	85	1	85	-15	0	-15	100	1	100	
Career Center	260	1	260			0	230	1	230	230	1	230	-120	0	-120	350	1	350	

Proposed Space Summary - High School

Date: 3/29/2024 Design Development Submittal

East Longmeadow School District East Longmeadow High School	EXISTING CONDITIONS			PROPOSED PROGRAM: EXISTING TO REMAIN / RENOVATED			PROPOSED PROGRAM: NEW CONSTRUCTION			PROPOSED PROGRAM: TOTAL			VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
Guidance Storage/Records Room	35	1	35			0	200	1	200	200	1	200	75	0	75	125	1	125	
Teachers' Work Room	445	1	445			0	100	4	400	100	4	400	-300	3	0	400	1	400	
SRO Office	260	1	260			0	145	1	145	145	1	145	145	1	145				
Grad Coach			0			0	425	1	425	425	1	425	425	1	425				
Adjustment Counselor	115	1	115			0	155	1	155	155	1	155	155	1	155				
Psychologist	200	1	200			0	150	1	150	150	1	150	150	1	150				
Kitchenette	65	1	65			0			0	0	0	0	0	0	0				
CUSTODIAL & MAINTENANCE			**2,605**			**0**			**2,225**			**2,225**			**0**			**2,225**	
Custodian's Office	195	1	195			0	110	1	110	110	1	110	-40	0	-40	150	1	150	
Custodian's Workshop	615	1	615			0	255	1	255	255	1	255	5	0	5	250	1	250	
Custodian's Storage	varies	4	1,025			0	25	1	25	25	1	25	-350	0	-350	375	1	375	
							30	2	60	30	2	60							
							45	1	45	45	1	45							
							50	1	50	50	1	50							
							105	1	105	105	1	105							
							130	1	130	130	1	130							
Recycling Room / Trash			0			0	355	1	355	355	1	355	-45	0	-45	400	1	400	
Receiving and General Supply			0			0	355	1	355	355	1	355	5	0	5	350	1	350	
Storeroom			0			0	60	1	60	60	1	60	-440	0	-440	500	1	500	
							400	1	400	400	1	400							
Network / Telecom Room	115	1	115			0	275	1	275	275	1	275	75	0	75	200	1	200	
Outside Equipment Storage	655	1	655			0			0	0	0	0	0	0	0				
OTHER			**9,740**			**0**			**7,805**			**7,805**			**7,805**			**0**	
(List rooms separately below)																			
ELCAT	1,090	1	1,090			0	500	1	500	500	1	500	500	1	500				
District SPED Director	730	1	730			0	180	1	180	180	1	180	180	1	180				
District SPED Staff Offices	varies	5	625			0	150	2	300	150	2	300	150	2	300				
District SPED Spare Office							155	1	155	155	1	155							
Consult RM			0			0	250	1	250	250	1	250	250	1	250				
District SPED Waiting	670	1	670			0	95	1	95	95	1	95	95	1	95				
District SPED Admin			0			0	250	1	250	250	1	250	250	1	250				
Superintendent	190	1	190			0	300	1	300	300	1	300	300	1	300				
District Accounts/ Bookeeping	345	1	345			0	350	1	350	350	1	350	350	1	350				
District CFO	80	1	80			0	170	1	170	170	1	170	170	1	170				
Director of Curriculum & Instruction	105	1	105			0	170	1	170	170	1	170	170	1	170				
Central Office Admin	715	1	715			0	250	1	250	250	1	250	250	1	250				
Central Office Conference Room	680	1	680			0	580	1	580	580	1	580	580	1	580				
District Spare Office	240	1	240			0			0	0	0	0	0	0	0				
Large Conference Room	680	1	680			0			0	0	0	0	0	0	0				
IT Open Office	765	1	765			0	815	1	815	815	1	815	815	1	815				
IT Storage/Computers/Repair	165	1	165			0	825	1	825	825	1	825	825	1	825				
IT Director			0			0	170	1	170	170	1	170	170	1	170				
IT AD			0			0	170	1	170	170	1	170	170	1	170				
IT Tech Support			0			0	360	1	360	360	1	360	360	1	360				
Kitchenette			0			0	185	1	185	185	1	185	185	1	185				
Garage	1,215	1	1,215			0			0	0	0	0	0	0	0				
Health Classrooms	varies	2	1,445			0	865	2	1,730	865	2	1,730	865	2	1,730				
Total Building Net Floor Area (NFA)			**121,965**			**0**			**128,125**			**128,125**			**17,467**			**110,658**	**Total Building Net Floor Area (NFA)**
Proposed Student Capacity / Enrollment																		**800**	**Enter Total Enrollment**
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**63,671**		% of GFA	**63,671**							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
Unoccupied MEP / FP Spaces				-	#DIV/0!		-	1.7545%	3,365	-	1.7545%	3,365							
Unoccupied Closets, Supply Rooms, and Storage Rooms				-	#DIV/0!		-	0.4953%	950	-	0.4953%	950							
Toilet Rooms				-	#DIV/0!		-	1.1132%	2,135	-	1.1132%	2,135							
Circulation (corridors, stairs, ramps and elevators)				-	#DIV/0!		-	21.0484%	40,370	-	21.0484%	40,370							
Remaining[3]				-	#DIV/0!	**0**	-	8.7859%	**16,851**	-	8.7859%	**16,851**							
Total Building Gross Floor Area (GFA)[2]			**186,890**			**0**			**191,796**			**191,796**			**#N/A**			**#N/A**	**Total Building Gross Floor Area (GFA)[2]**
Grossing Factor (GFA / NFA)			**1.53**			**#DIV/0!**			**1.50**			**1.50**			**#N/A**			**#N/A**	**Grossing Factor (GFA / NFA)**

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls.

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for. above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: Jones Whitsett Architects, Inc.

Name of Principal Architect: Dorrie Brooks, AIA

Signature of Principal Architect:

Date: 3/29/2024

JONES WHITSETT ARCHITECTS

In association with

SMMA

3-2-b
SPACE SUMMARY NARRATIVE

The space summary has stayed largely consistent with what was submitted at Schematic Design. Deviations from the previous submittal are addressed below. The details below compare the DD Space Summary with the SD submission and MSBA Guidelines. The total building gross floor area has not changed – and remains at 191,796 sf.

Core Academic Space:

MSBA Guidelines:	39,680*
SD Submission:	44,075
DD Submission:	44,075
Difference to SD:	No Change
Difference to MSBA	4,395

- The total Core Academic area is unchanged since SD.
- Generally, classrooms and labs have become more uniform in size as structure and mechanical chases have been accommodated. There are now no classrooms under 850 sf.
- The total area of small group seminars decreased, but still slightly exceeds the MSBA recommended area.
- The Chemistry Labs and Chemistry Storage Room were relocated to the "D-Wing" so that the Physics Labs could share a wing with the STEM/Robotics Lab. Because the physics lab does not require a hood, this decision more efficiently organizes the rooftop units.
- At PSR the Business Classrooms and Large Group Instruction were approved.
- Per MSBA guidance the Health Classrooms were relocated to the "Other" program category.
- The Greenhouse space was noted as ineligible for reimbursement. The Greenhouse space is 215 sf to allow for storage of teaching materials to be used in the outdoor classroom space.

Special Education:

MSBA Guidelines: 9,060
SD Submission: 11,575

DD Submission: 11,630

Difference: Increase of 55 sf

Difference to MSBA 2,570

- The square footage of the SPED programs has increased slightly since SD.
- At the Medically Fragile Classroom, the bathroom was enlarged to provide space for a shower, at the request of District staff working with medically fragile students. This square footage area for this was removed from the classroom square footage. This adjustment aligns with the district's expectations for this classroom
- Based on further discussion with the District SPED Director, a small meeting room and "safe room" were added within the ASD Classroom to provide an observable de-escalation space for students in crisis.
- The OT/PT Room has shifted to the south from its location in SD – to accommodate the double entry design of the large, gendered gang toiler rooms supporting the auditorium and gymnasium.
- All the remaining SPED programs have remained largely the same with only minor adjustments to each rooms area to adjust to finalized structural grid locations and mechanical and plumbing chases.

Art & Music:

MSBA Guidelines: 6,625
SD Submission: 6,625

DD Submission: 6,835

Difference: Increase of 210 sf

Difference to MSBA 210

- The area in the Art & Music category has increased 210 sf since SD.
- The District, with additional input from the Art faculty, reversed an earlier decision and decided to include a kiln room as part of this project. A dedicated kiln room has been added.

- With direction from the Band instructor – music storage is now open to the band room. The removal of the wall between those spaces and the previous vestibule added area to the band and music storage program without increasing the overall footprint from SD.

Vocations & Technology:

MSBA Guidelines: 7,200
SD Submission: 7,200

DD Submission: 7,200

Difference: No Change

Difference to MSBA 0

- The Design now includes a separate, enclosed support room for the STEM/Robotics Lab 3D printers and laser cutters across the hall from the STEM classroom. This new location for specialized printing equipment will allow other classes to access this equipment without disrupting the STEM classes.
- A specially vented printing room was added at SD to support the Graphics Lab from within the classroom – this room has been enlarged slightly to accommodate specific equipment needs.
- A dedicated podcast/editing room has been added within the Video Production studio at the request of the district to allow provide sound separation for two simultaneous activities in the video production classroom.

Health and Physical Education:

MSBA Guidelines: 20,680
SD Submission: 21,270

DD Submission: 21,110

Difference: Decrease of 160 sf

Difference to MSBA 430

- The overall area in this category has decreased slightly.
- After further discussions with the District and PE Instructors, the PE Instructor Area was integrated into the Locker Rooms to better meet the schools' supervisory needs. Two gender neutral locker and shower rooms were created in order to provide the most flexibility to meet the needs of students, PE instructors, coaches and referees.

Media Center:

MSBA Guidelines:	4,900
SD Submission:	4,900
DD Submission:	4,900
Difference:	No Change
Difference to MSBA	0

- The overall area dedicated to the Media Center and it overall program has remained the same.
- With input from the District, the student activity rooms have grown somewhat in size.
- The Media Center office has been moved to provide better supervision of the entire space.
- A wall was added at the Reading Room in order to allow that space to function as classroom and additional, flexible teaching space.

Auditorium / Drama:

MSBA Guidelines:	8,183
SD Submission:	8,180
DD Submission:	8,180
Difference:	No Change
Difference to MSBA	-3

- The Auditorium program and area are largely the same since SD. The layout of the Auditorium and the Stage have been refined based on the requirement of the District that the auditorium serve as a more multipurpose/multimedia venue rather than as a theater space. To support the ELCAT and video production program the auditorium will have a larger projection screen and projector. The traditional fly-space and proscenium are eliminated in favor of a more open, finished stage area with less curtain rigging and more attention to acoustic and lighting control supporting musical performance, lectures and media presentations. The small square footage changes is the result of minor bracing, framing and insulation changes in sidewalls.

Dining & Food Service:

MSBA Guidelines:	7,500
SD Submission:	8,690
DD Submission:	8,690
Difference:	No Change
Difference to MSBA	1,190

- The area dedicated to Dining & Food Service is unchanged since SD.
- Based on input from the Director of Food Services the overall organization of the kitchen has been updated since SD.
- The Custodial Storage room was moved to be adjacent to other Custodial spaces – and the Ware Washing area was moved to be closer to the cafeteria. A tray return was added so that students will have the opportunity to bus their own dishes.
- The amount of area dedicated to kitchen offices was reduced at the direction of the Director of Food Services in order to allow for larger walk-in freezers.
- One of the kitchen toilets was removed following the release of the updated plumbing code.

Medical:

MSBA Guidelines:	910
SD Submission:	910
DD Submission:	910
Difference:	No Change
Difference to MSBA	0

- The overall area for the Medical Suite is unchanged since the SD submission.
- With direction from the school Nurse and District – the medical suite was reconfigured to allow for easier supervision of students.
- The suite now has one closed and on open exam room and a resting area large enough to accommodate three cots. The nurse's office is larger and a dedicated storage room has been provided.

Administration & Guidance:

MSBA Guidelines: 3,795
SD Submission: 4,560

DD Submission: 4,565

Difference: Increase of 5 sf

Difference to MSBA 870

- Overall the program and dedicated area for Administration & Guidance has remained the same since SD. This category remains beyond MSBA anticipated guidelines because of the District's larger staffing numbers for administrative and guidance positions.
- The guidance storage room has been relocated to within the main Administration Office Suite.

Custodial & Maintenance:

MSBA Guidelines: 2,225
SD Submission: 2,225

DD Submission: 2,225

Difference: No change

Difference to MSBA 0

- There has been no change to the overall area dedicated to Custodial & Maintenance since the SD submission.
- With input from the Director of Facilities and the District, the organization of the custodial spaces have been updated to better reflect program and location needs.
- Adequately sized custodial storage spaces have been distributed throughout the building, with mop sinks and cart storage areas as required.
- The Custodial office has gotten its own room between the custodial workshop and storage area.

Other:

MSBA Guidelines: 0
SD Submission: 7,985

DD Submission: 7,805

Difference: Decrease of 180

Difference to MSBA 7,805

- The overall square footage in the "other" category decreased slightly from the SD Submission.
- Some reductions have been made to the size of waiting room areas – based on input from the District on the number of visitors that typically use the space.
- Based on further discussions with the District and the Director of SPED, the layout of the Pupil Services office space was slightly reconfigured. The Director's office was enlarged and moved towards the front of the office to allow better connectivity.
- Since this project began the District has moved more towards the digitalization of records, reducing the needed area for dedicated file storage. A spare office was added in lieu of the enlarged storage room.
- The small consult meeting room was also moved towards the front of the suite to reduce traffic through the office.
- Rather than a series of rooms, the ELCAT spaces have been consolidated into a single larger joint office and studio space, per the request of the ELCAT staff.

Net Square Footage:

MSBA Guidelines: 110,758*
SD Submission: 128,955

DD Submission: 128,125

Difference from SD: Reduced 830

Difference to MSBA: 17,367*

Grossing Factor:

Existing: 1.4
SD Submission: 1.5

DD Submission: 1.5

Gross Floor Area:	
Existing:	186,890
PDP Submission:	194,397
PSR Submission:	191,780
SD Submission:	191,796
DD Submission:	191,796
Difference:	No Change

**Note that the space summary is the new version which alters the MSBA Guidelines relative to core academic classrooms. These values have changed as a result of design changes and the revision of the template.*

JONES WHITSETT ARCHITECTS

March 29, 2024

Mr. Matt Deninger
Chief Strategy and Research Officer
Massachusetts Department of Secondary and Elementary Education
75 Pleasant Street
Malden, MA 02148

RE: MSBA East Longmeadow High School Building Project
Revision to DESE Submittal

On behalf of the East Longmeadow School District, Jones Whitsett Architects is submitting the following minor revisions to the required submittals for the Department of Secondary and Elementary Education (DESE) review of spaces.

1. District Cover Letter from SD (03-02-c2)
2. District Delivery Methodology from SD (03-02-c3)
3. Updated Space Summary (03-02-c4)
4. Updated DESE Floor Plans relevant to the Special Education Table(03-02-c5)
5. Updated Special Education Adjacency Table (03-02-c6)

The overall space allocation to DESE approved special education spaces has risen overall by only 55sf from the SD submission due largely to minor adjustments of the structural grid and wall locations. The location within the building of approved Special Education spaces has not deviated. The following minor revisions have occurred due to a follow up review of the plans with the District Special Education director, Michael Fredette.

- At the Medically Fragile Classroom, the bathroom was enlarged to provide space for a shower, at the request of District staff working with medically fragile students. This square footage area for this was removed from the classroom square footage. This adjustment aligns with the district's expectations for this classroom
- Based on further discussion with the District SPED Director, a small meeting room and "safe room" were added within the ASD Classroom to provide an observable de-escalation space for students in crisis.
- The OT/PT Room has shifted to the south from its previous location to accommodate the double entry design of the large, gendered gang toilet rooms supporting the auditorium and gymnasium. This new location allows for a larger OTPT space.

Sincerely,

Dorrie Brooks, AIA, ALEP

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Greenfield, MA 01301
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SKANSKA

Skanska USA Building Inc.
1350 Main St., Suite 1209
Springfield, MA 01103
usa.skanska.com

August 25th, 2023

Ms. Mary Pichetti
Director of Capital Planning
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, Massachusetts 02109

Dear Ms. Pichetti:

The District is pursuing execution of a Project Scope and Budget Agreement for the MSBA approved preferred schematic for the new East Longmeadow High School Project. The Project includes the construction of a 2-story, 191,796-square-foot building located on the same site as the existing high school. The District's 2023 enrollment is 2,556. The design enrollment for the proposed school project is 800. The existing East Longmeadow High School currently serves grades 9-12 and is proposed to serve grades 9-12.

In accordance with G.L. c. 70 B, MSBA staff has assembled the documents required for the review of the special education program at East Longmeadow High School. The following are attached per the 'Submittal Requirements':

1. A letter from Superintendent Gordon Smith of the East Longmeadow Public School District describing its special education program.
2. Proposed space summary that includes the existing facility, proposed spaces, and MSBA guidelines based on the agreed upon design enrollment. The first page of this summary indicates a total of 11,575 square feet of space dedicated to the delivery of special education.
3. The floor plans for the proposed 191,796 square foot East Longmeadow High School Project.
4. A completed Special Education Adjacency Table.

I have reviewed the attached documents and confirm that the District's School Building Committee has officially approved the attached submittal on August 24th, 2023 and verify that the space summary match the floor plan and is complete and conform to the MSBA requirements as described in Module 4 – Schematic Design Guidelines.

Sincerely,

Benjamin Murphy
Program Manager
617 275 6422
Ben.murphy@skanska.com

EAST LONGMEADOW PUBLIC SCHOOLS
180 Maple Street
East Longmeadow, MA. 01028-2788

Achievement *Accountability*

Gordon Smith
Superintendent of Schools

Pamela Blair
Asst. Superintendent for Business

August 25, 2023

Mr. Matthew Deninger
Chief Strategy and Research Officer
75 Pleasant Street
Malden, MA 02148

RE: **MSBA East Longmeadow High School Building Project**
Educational Delivery Methodology, DESE Submittal

The East Longmeadow Public District educates its students today for the challenges of tomorrow. In ELPS, we feel that if we strengthen core instruction within a safe, nurturing, joyful, equitable, and inclusive learning environment in which students feel valued, connected, and ready to learn, our students will develop and possess strong Twenty-First Century skills. ELPS students will graduate with effective communication skills, the ability to work collaboratively, think critically, and problem solve. Throughout a student's journey in ELPS, we consistently focus on the whole child supporting children as they grow academically, socially, and emotionally from pre-k through grade twelve.

At East Longmeadow High School, each day we seek to strengthen our school community through our mission:

As a community of learners, we will Engage in
critical thinking, Learn collaboratively, Honor
diversity & Strive for success.

The East Longmeadow High School faculty and staff strive to create learning experiences and learning environments that are rooted in Universal Design for Learning and Culturally Responsive Teaching practices. Through these learning experiences, our students are supported in developing the knowledge, the skills (academic, social, and emotional), and the mindset to become resilient and culturally proficient citizens.

Special Education Programming

ELPS seeks to provide all of its students the support needed to allow them to grow and achieve academically, socially, and emotionally. ELPS special educators work collaboratively with colleagues to provide learning environments that allow the majority of ELPS students to access all areas of the curriculum within the district. We strive to include all of our special education students with the least restrictions possible. ELPS has approximately 20.9% of its students on IEPs, with approximately 1.7% of its students receiving educational programming outside of the district.

At ELHS, the Special Education Department provides for the needs of students with disabilities through a team process by identification, assessment, and program development as required by both state and federal law. Special Education students are serviced through Individualized Education Programs (IEPs) which are developed to meet a student's unique learning needs and assist the student in making effective academic progress. Each special education student is assigned a special education liaison who oversees the development and implementation of the student's IEP. Currently, the ELHS special education department has eight special education teachers, eleven paraprofessionals, a school psychologist, and occupational and physical therapists who are shared with other buildings along with other part-time employees who provide PT, OT, and speech as needed. The whole department works together to support ELHS students on IEPs and build an inclusive, team atmosphere for the entire school.

A student's special education liaison is able to connect with students on a daily basis in order to help problem solve and ensure that the decisions of the full team are being implemented. Each student and their team, including the student, special education liaison, teachers, related service providers, guidance counselor, and parents, meet at least once during the school year to review the student's progress and develop a plan for future support and services, including transition planning needs. A variety of support and programming options are provided through both special and general education classrooms. For the 2023 - 2024 school year, approximately 18% of ELHS students have IEPs. The vast majority of the students with IEPs are fully included or partially included at ELHS.

2023-2024 In-District and Out of District (High School Services)								
Grade Level	**Inclusion**	**SEL (BEST)**	**Medically Fragile**	**ASD**	**Life Skills**	**Transition / Life Skills 18-22**	**Total**	**Out Of District**
9	**19**	**3**	**0**	**0**	**1**		**23**	**2**
10	**31**	**6**	**0**	**0**	**1**		**38**	**3**

11	28	5	0	0	1		34	5
12	34	1	0	0	0		35	2
SP			3	1	2	6	6	
Total	123	15	3	1	5	6	136	12

The charts below display the middle school and elementary schools' in-district programs for future high school projections.

2023-2024 In-District (Middle School Services 6-8)						
Grade Level	Inclusion	SEL	Medically Fragile	ASD	Life Skills	Total
6	33	2	1	0	1	37
7	39	3	1	0	5	48
8	38	1	0	2	2	43
Total	110	6	2	2	8	128

2023-2024 In-District (Elementary School Services K-5)					
Grade Level	Inclusion	SEL	Medically Fragile	ASD	Total
K	24	0	2	5	31
1	32	1	0	2	35
2	33	2	0	3	38
3	21	0	0	4	25
4	39	1	0	3	43
5	37	0	0	0	37
Total	186	4	2	17	209

The Proposed Special Education Spaces for ELHS are the Following:

Life Skills Program: (Ages 15 to 18)

This program focuses on the introduction to topics surrounding job skills, activities of daily living, and community awareness. The pre-vocational content includes school-related job opportunities where students can sample a wide variety of potential interest areas. Skills surrounding functional academics, self-identification, hygiene, interpersonal relations, and community awareness, with a concentration on the school community as a whole, are included within the curriculum. Controlled, real-world applications will occur throughout the course.

Instruction reflects a systematic, multi-sensory approach. Subjects and curricula are modified according to individual abilities and goals, but they are addressed in accordance with the Massachusetts Curriculum Frameworks. Opportunities for students to participate in less restrictive settings are available based on student readiness. Students in this program will utilize the classroom that is **1,260 sq. ft. (A)** and is outfitted with the equipment that will support the curriculum associated with the program. Students gradually build toward independently using the equipment in the room and increasing their daily living skills. The Life Skills Program also includes its own **60 sq. ft.** bathroom **(B1)** that is handicap accessible.

Transition / Life Skills Program Ages 18 - 22:

This program is very similar to the Life Skills Program for students ages 15 - 18. Students in the class have progressed toward a certain level of independence. This program will introduce more opportunities for students to become active in the community outside the school community. Students will be involved in more field trips and outings for which they would prepare in the classroom setting. Community integration can also become a job or responsibility in the surrounding community. This program would utilize the **860 sq. ft. classroom (C)** adjacent to the Medically Fragile Program. The space located at the front of the building provides for easier ability to enter and exit the building and access transportation for the planned outings. This Life Skills program also has its own **60 sq. ft.** bathroom **(B2)** that is handicap accessible.

Medically Fragile Program:

This program provides related services including but not limited to OT, PT, Speech, Vision, Mobility, Music Therapy, Feeding Therapy, Assistive Technology and Augmentative and Adaptive Communication. The program would be located in **935 sq. ft. classroom (D).** Students who are medically fragile also require nursing services and assistance, care plan implementation and medical intervention. A variety of equipment is needed for these students such as, but not limited to, standers, adaptive seating, adaptive strollers, wheelchairs, therapy tables, and technology. Medically fragile students require 1:1 special education services, instruction, support, and care. The program has its own **105 sq. ft. bathroom (E)** that has space for a Hoyer lift, a high/low changing table, and is handicap accessible.

OT/PT:

This space serves as an accessible, safe, and specialized location for students in our Medically Fragile, ASD, Life Skills, and Inclusion Programs with physical and locomotor disabilities. This

is a proposed **505 sq. ft.** room **(F)** that will house needed equipment to support the OT and PT needs of ELHS students.

This space, in addition to providing therapy with the necessary equipment, also provides an area to store and house such equipment. Equipment needed for OT and PT services includes but is not limited to, trampolines, an adaptive swing, therapy mats and tables, standers, walkers, lifts, and sensory equipment. This equipment is used for fine motor, gross motor, and sensory integration. This space also requires an open area for movement and adaptive physical education services. The OT/PT space is located near the Gymnasium, Alt PE room, and the locker rooms to allow for easy access for staff and students to access all of these spaces as needed.

SPED Conference Room:

This **350 sq. ft. room (G)** is located in the District Student Support Services office and allows team meetings and counseling meetings with families to take place with direct access to other District administrators if needed. It also centralizes the weekly meetings for the District Special Education Facilitators and the Director of Student Support Services.

Speech:

This **150 sq. ft. space (H)** is located in the District Student Support Services office, and it is the space for ELHS speech services and the District "Walk-In" speech services along with any needed auditory testing.

Small Group Instruction:

These rooms range in size from **200 - 360 sq. ft. (I1, I2, I3)** and are located in the academic wings of the building in order to help support the ELHS inclusive model and allow for quicker and easier ways to provide students one-to-one tutoring, small group testing, and academic coaching, and smaller group instruction.

The Inclusion Program:

Inclusion classes are designed to provide extra support to students who have exhibited deficiencies in executive functioning and behavioral skills. This would include assistance with organizational, self-monitoring, planning, prioritization, task initiation, and completion skills. Inclusion classrooms may also include small group instruction and various other types of remedial teaching practices to ensure that all students are meeting the class objectives. Inclusion classes take place in various core content classrooms to allow students with disabilities to learn alongside their peers. These classrooms include a general education teacher, a special education teacher, or a paraprofessional. These services are offered via a special education team approach in grades 9 - 12.

Students in the Inclusion Program will utilize the Resource Rooms in ELHS the most in addition to being in their regular education classrooms. These are the proposed **525 and 545 sq. ft. rooms (J1; J2)** where many inclusion students will have a scheduled academic support class in addition to their other academic classes on their schedule, and inclusion students may also receive pull-out services needed in these classrooms as well.

Willie Ross Program:

For the past 36 years, the East Longmeadow Public Schools have partnered with the Willie Ross School for the Deaf. This partnership has integrated Willie Ross students with their hearing peers in the East Longmeadow Public Schools, known as WRSD's Partnership Campus. This partnership has offered over the years many deaf students who are able to learn in a public school environment the opportunity to be mainstreamed at Mountain View Elementary School, Birchland Park Middle School, and East Longmeadow High School. At ELHS, Willie Ross uses two classrooms for their homerooms, where specialized services are offered to generally 8 - 10 students by Willie Ross staff. Willie Ross students also work with the ELHS guidance department to develop full schedules where they can engage in many of the ELHS elective classes along with higher-level academic courses that the WRSD staff cannot offer. The partnership allows deaf and hard of hearing students to be included in classes with ELHS students and be part of mainstream life of a public high school. Additionally, Willie Ross students have access to the services offered and managed by both a school for the deaf, along with access to all the opportunities that a public school offers ranging from academic opportunities through inclusion to extra-curricular participation. ELHS and Willie Ross are currently discussing the development of an American Sign Language class that could be added to the ELHS Program of Studies. Currently, the ASL class is offered by Willie Ross staff after regular school hours.

The Willie Ross program will use the two classrooms of **525 and 535 sq. ft. (K1, K2)** respectively for the homerooms where specialized services can be provided. Each of the classrooms will have a connected support room of **125 sq. ft (L1, L2)**. that will allow for one-on-one support when needed.

Best Program (SEL):

The BEST Program at East Longmeadow High School provides a therapeutic setting and interventions for special education students with social, emotional, or behavioral challenges that impede learning in the traditional classroom setting. The program is therapeutically based with a low student-to-teacher ratio that allows for the needed support. Student schedules are generated in an individualized manner as they enter into the program to meet their academic needs for ELHS's graduation requirements. The Best Program will utilize an **870 sq. ft.** classroom **(M)** furnished with furniture that will support social, emotional, and academic learning and growth.

Autism Spectrum Disorder Program:

The ASD Program at ELHS is the final destination for students in a district-wide program that has been successfully supporting ASD students for over a decade. Currently, at the elementary level, we have 17 students enrolled in the ASD program with more in our Pre-K program. Most of these students will be at ELHS or at the middle school preparing for ELHS when the new building opens. The ELHS ASD program has a homeroom classroom that has flexible furniture and partitions to allow staff the ability to move from a small group focus to working with an individual student quickly and easily. Students in this program will utilize the proposed **1290 sq. ft.** specially designed classroom **(N)** as their homeroom in which they will work with their special education liaison and the paraprofessionals assigned to the ASD program while also being mainstreamed throughout the day for other classes.

If there is additional information needed or additional questions, please do not hesitate to contact us.

Sincerely,

Gordon C. Smith
Superintendent of Schools

Frank R. Paige
Principal

Michael R. Fredette
Director of Student Support Services

Proposed Space Summary - High School

Date: 3/29/2024 Design Development Submittal

East Longmeadow School District East Longmeadow High School	EXISTING CONDITIONS			PROPOSED PROGRAM: EXISTING TO REMAIN / RENOVATED			PROPOSED PROGRAM: NEW CONSTRUCTION			PROPOSED PROGRAM: TOTAL			VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			**39,290**			**0**			**44,075**			**44,075**			**4,395**			**39,680**	Science Lab Guidelines
(List rooms of different sizes separately)																			
General Classroom	varies	33	25,415		0	0	850	7	5,950	850	7	5,950	-50	-20	-18,350	900	27	24,300	825 NSF (minimum size) - 950 NSF (maximum size)
							855	11	9,405	855	11	9,405							
							860	4	3,440	860	4	3,440							
							865	2	1,730	865	2	1,730							
Teacher Planning	400	1	400		0	0	640	1	640	640	1	640	540	-26	-2,060	100	27	2,700	
							655	1	655	655	1	655							
							660	1	660	660	1	660							
							665	1	665	665	1	665							
Small Group Seminar (20-30 seats)		0	0			0	125	1	125	125	1	125	-375	-1	-875	500	2	1,000	
							150	2	300	150	2	300							
							155	2	310	155	2	310							
							340	1	340	340	1	340							
Science Classroom / Lab	varies	10	9,345		0	0	1,460	2	2,920	1,460	2	2,920	20	-5	-7,160	1,440	7	10,080	Assumed schedule: 3 x 85% utilization = 20 seats; 1 period per day per student; 1,440 NSF (minimum size); refer to the Science Lab Guidelines for additional information
							1,465	6	8,790	1,465	6	8,790							
Prep Room	varies	4	1,285		0	0	400	1	400	400	1	400	200	-6	-1,000	200	7	1,400	(1) 200 NSF Prep Room required per Science Classroom / Lab
							405	1	405	405	1	405							
							410	2	820	410	2	820							
Central Chemical Storage Room		0	0		0	0	185	1	185	185	1	185	-15	0	-15	200	1	200	(1) 200 NSF Central Chemical Storage Room required
Greenhouse	245	1	245		0	0	215	1	215	215	1	215	215	1	215				
Business Classrooms	varies	3	2,600			0	850	2	1,700	850	2	1,700	850	2	1,700				
							855	2	1,710	855	2	1,710	855	2					
EL Classroom			0			0	515	1	515	515	1	515	515	1	515				
Large Group Instruction			0			0	2,195	1	2,195	2,195	1	2,195	2,195	1	2,195				
SPECIAL EDUCATION			**8,780**			**0**			**11,630**			**11,630**			**2,570**			**9,060**	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom	varies	4	2,910																
Self-Contained Medically Fragile	805	1	805			0	905	1	905	905	1	905	-45	-5	-4,795	950	6	5,700	825 NSF (minimum size) - 950 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Medically Fragile Toilet Room			0			0	120	1	120	120	1	120	60	-5	-240	60	6	360	
Self-Contained Life Skills	785	1	785				1,260	1	1,260	1,260	1	1,260							
Self-Contained Life Skills Toilet Room			0				60	1	60	60	1	60							
Self-Contained Life Skills 18-22			0				860	1	860	860	1	860							
Self-Contained Life Skills 18-22 Toilet-Room			0				50	1	50	50	1	50							
ASD Classroom/De-escalation	845	1	845				1,115	1	1,115	1,115	1	1,115							
ASD Meeting Room							90	1	90	90	1	90							
ASD Safe Room							55	1	55	55	1	55							
Self-Contained ASD Toilet Room			0				65	1	65	65	1	65							
Resource Room	varies	2	1,645			0	520	2	1,040	520	2	1,040	20	-1	-460	500	3	1,500	1/2 size of a General Classroom
							555	1	555	555	1	555							
							620	1	620	620	1	620							
Small Group Room			0			0	190	1	190	190	1	190	-310	-2	-1,310	500	3	1,500	1/2 size of a General Classroom
							205	2	410	205	2	410							
							300	1	300	300	1	300							
							360	2	720	360	2	720							
SEL Classroom			0			0	850	1	850	850	1	850	850	1	850				
Willie Ross Deaf Program	varies	2	1,530			0	530	1	530	530	1	530	530	1	530				
							535	1	535	535	1	535							
Willie Ross Deaf Program Suport			0			0	125	2	250	125	2	250	125	2	250				
SPED Conference Room			0			0	355	1	355	355	1	355	355	1	355				
Speech Pathologist	150	1	150			0	150	1	150	150	1	150	150	1	150				
OT/PT (shared with ASD in Existing)							545	1	545	545	1	545	545	1	545				
Testing	110	1	110																
ART & MUSIC			**8,425**			**0**			**6,835**			**6,835**			**210**			**6,625**	
Art Classroom (25 seats)	varies	2	3,765			0	1,205	1	1,205	1,205	1	1,205	5	-1	-1,195	1,200	2	2,400	Assumed schedule: 25% total enrollment; 5 times per week
							1,220	1	1,220	1,220	1	1,220							
Kiln	440	1	440			0	105	1	105	105	1	105	-45	-1	-195	150	2	300	
Art Storage	675	1	675				315	1	315	315	1	315							
Art Office	100	1	100																
Band (50-100 seats)	1,290	1	1,290			0	1,575	1	1,575	1,575	1	1,575	75	0	75	1,500	1	1,500	Assumed schedule: 25% total enrollment; 5 times per week
Chorus (50-100 seats)	1,230	1	1,230			0	1,410	1	1,410	1,410	1	1,410	-90	0	-90	1,500	1	1,500	
Music Tech/Keyboard	430	1	430																
Ensemble			0			0	220	1	220	220	1	220	20	0	20	200	1	200	
Music Practice Room	varies	2	190			0	75	3	225	75	3	225	0	0	0	75	3	225	
Music Storage	varies	3	305			0	560	1	560	560	1	560	60	0	60	500	1	500	
VOCATIONS & TECHNOLOGY			**5,460**			**0**			**7,200**			**7,200**			**0**			**7,200**	
Non-Chapter 74 Programs (List rooms separately below)																			STE Guidelines Policy
Technology / Engineering Rooms	1,010	1	1,010			0			0	0	0	0	-1,440	-5	-7,200	1,440	5	7,200	Assumed schedule: 100% total enrollment; 5 times per week; 825 NSF (minimum size) - 2,000 NSF (maximum size)
STEM Lab with Robotics							1,950	1	1,950	1,950	1	1,950							
STEM Support Room							70	1	70	70	1	70							
Graphic Design Lab	1,100	1	1,100			0	975	1	975	975	1	975	975	1	975				
Printing	485	1	485			0	250	1	250	250	1	250	250	1	250				
Family & Consumer Science	1,130	1	1,130			0	1,595	1	1,595	1,595	1	1,595	1,595	1	1,595				
PK-Child Care Lab	1,130	1	1,130			0	1,205	1	1,205	1,205	1	1,205	1,205	1	1,205				
Video Production		0	0			0	975	1	975	975	1	975	975	1	975				
Podcast Room							180	1	180	180	1	180	180	1					
Robotics	605	1	605																
HEALTH & PHYSICAL EDUCATION			**22,030**			**0**			**21,110**			**21,110**			**430**			**20,680**	Excess PE Spaces Policy
Gymnasium	8,565	1	8,565			0	11,980	1	11,980	11,980	1	11,980	-20	0	-20	12,000	1	12,000	
PE Alternatives	3,950	1	3,950			0	1,995	1	1,995	1,995	1	1,995	-1,005	0	-1,005	3,000	1	3,000	
Weight Room	1,255	1	1,255				990	1	990	990	1	990							
Gym Storeroom			0			0	265	1	265	265	1	265	-35	0	-35	300	1	300	
Locker Rooms - PE Lockers	varies	2	3,420			0	755	1	755	755	1	755	-3,725	0	-3,725	4,480	1	4,480	5.6 NSF per student (total enrollment)
							760	1	760	760	1	760							
Team Lockers							970	1	970	970	1	970							
							1,030	1	1,030	1,030	1	1,030							
Locker Room Toilets-Showers							435	1	435	435	1	435							
							470	1	470	470	1	470							
PE Storage	varies	13	1,825			0	405	1	405	405	1	405	-95	0	-95	500	1	500	
Athletic Director's Office	280	1	280			0	150	1	150	150	1	150	0	0	0	150	1	150	
PE Instructor's Office with Shower and Toilet	varies	5	800			0	195	1	195	195	1	195	-55	0	-55	250	1	250	
							220	1	220	220	1	220							
Gender Neutral Locker							90	2	180	90	2	180							
Trainer's Room	varies	3	845			0	310	1	310	310	1	310	310	1	310				
Shower	varies	2	525			0			0	0	0	0	0	0	0				
Uniform Drying Room	145	1	145			0			0	0	0	0	0	0	0				
Toilet Rooms - PE	30	2	60			0			0	0	0	0	0	0	0				
Physical Education Outdoor Storage	360	1	360																
MEDIA CENTER			**3,140**			**0**			**4,900**			**4,900**			**0**			**4,900**	
Media Center / Reading Room	2,825	1	2,825			0	1,995	1	1,995	1,995	1	1,995	-2,905	0	-2,905	4,900	1	4,900	
Media Center / Stacks			0			0	2,180	1	2,180	2,180	1	2,180	2,180	1	2,180				
Computer Lab	315	1	315			0			0	0	0	0	0	0	0				
Library Office			0			0	155	1	155	155	1	155	155	1	155				
Student Activity			0			0	285	1	285	285	1	285	285	1	285				
							300	1	285	300	1	285							
AUDITORIUM / DRAMA			**9,285**			**0**			**8,180**			**8,180**			**-3**			**8,183**	Excess Auditorium Spaces Policy
Auditorium	6,855	1	6,855			0	5,050	1	5,050	5,050	1	5,050	-283	0	-283	5,333	1	5,333	2/3 total enrollment at 10 NSF per seat (750 seats maximum)
Auditorium Vestibule							35	1	35	35	1	35							
							40	1	40	40	1	40							
							125	1	125	125	1	125							
							130	1	130	130	1	130							
Stage	2,140	1	2,140			0	1,550	1	1,550	1,550	1	1,550	-50	0	-50	1,600	1	1,600	
Auditorium Storage	90	2	180			0	435	1	435	435	1	435	-15	0	-15	450	1	450	
Make-up / Dressing Rooms			0			0	270	1	270	270	1	270	-30	-1	-330	300	2	600	
							275	1	275	275	1	275							
Controls / Lighting / Projection	110	1	110			0	270	1	270	270	1	270	70	0	70	200	1	200	
DINING & FOOD SERVICE			**8,235**			**0**			**8,690**			**8,690**			**1,190**			**7,500**	
Cafeteria / Dining / Student Lounge	5,140	1	5,140			0	1,855	1	1,855	1,855	1	1,855	-2,145	0	-2,145	4,000	1	4,000	Based on 3 lunch seatings - 15 NSF per seat
							1,985	1	1,985	1,985	1	1,985							
Chair / Table Storage			0			0	375	1	375	375	1	375	25	0	25	350	1	350	
Scramble Servery			0			0	1,665	1	1,665	1,665	1	1,665	1,065	0	1,065	600	1	600	
Kitchen	1,600	1	1,600			0	2,555	1	2,555	2,555	1	2,555	455	0	455	2,100	1	2,100	1,600 NSF for first 300 students + 1 NSF per additional student
Staff Lunch Room	725	1	725			0			0	0	0	0	-450	-1	-450	450	1	450	20 NSF per student
Freezer	215	1	215			0			0	0	0	0	0	0	0				
Dry Storage	180	1	180			0			0	0	0	0	0	0	0				
Kitchen Toilet	65	1	65			0	50	1	50	50	1	50	50	1	50				
Kitchen Office	310	1	310			0	140	1	140	140	1	140	140	1	140				
							65	1	65	65	1	65							
Can Washing			0			0				0	0	0	0	0	0				
MEDICAL			**765**			**0**			**910**			**910**			**0**			**910**	
Medical Suite Toilet	30	2	60			0	65	1	65	65	1	65	5	0	5	60	1	60	
Nurses' Office	310	1	310			0	155	1	155	155	1	155	-95	0	-95	250	1	250	
Waiting Room							125	1	125	125	1	125							
Examination Room	275	1	275			0	110	1	110	110	1	110	10	-1	-90	100	2	200	
							130	1	130	130	1	130							
Resting	120	1	120			0	230	1	230	230	1	230	130	-3	-170	100	4	400	
Storage							95	1	95	95	1	95							
ADMINISTRATION & GUIDANCE			**4,210**			**0**			**4,565**			**4,565**			**870**			**3,695**	
General Office / Waiting Room with Toilet	550	1	550			0	395	1	395	395	1	395	-5	0	-5	400	1	400	
Teachers' Mail and Time Room			0			0	85	1	85	85	1	85	-15	0	-15	100	1	100	
Copy Room			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Records Room	300	1	300			0	200	1	200	200	1	200	0	0	0	200	1	200	
Principal's Office with Conference Area	140	1	140			0	250	1	250	250	1	250	-125	0	-125	375	1	375	
Principal's Secretary			0			0	250	1	250	250	1	250	125	0	125	125	1	125	
Assistant Principal's Office - AP1	140	1	140			0	150	1	150	150	1	150	0	0	0	150	1	150	
Assistant Principal's Office - AP2	170	1	170			0	140	1	140	140	1	140	-10	1	140	150	0	-	
Spare Office / Counselling Room	100	2	200			0	120	1	120	120	1	120	0	0	0	120	1	120	
Conference Room	710	1	710			0	395	1	395	395	1	395	-55	0	-55	450	1	450	
Guidance Office	varies	4	360			0	145	2	290	145	2	290	-5	-2	-310	150	4	600	
							150	2	300	150	2	300							
Guidance Waiting Room	260	1	260			0	85	1	85	85	1	85	-15	0	-15	100	1	100	
Career Center	260	1	260			0	230	1	230	230	1	230	-120	0	-120	350	1	350	

Proposed Space Summary - High School

Date: 3/29/2024 Design Development Submittal

East Longmeadow School District East Longmeadow High School	EXISTING CONDITIONS			PROPOSED PROGRAM: EXISTING TO REMAIN / RENOVATED			PROPOSED PROGRAM: NEW CONSTRUCTION			PROPOSED PROGRAM: TOTAL			VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
Guidance Storage/Records Room	35	1	35			0	200	1	200	200	1	200	75	0	75	125	1	125	
Teachers' Work Room	445	1	445			0	100	4	400	100	4	400	-300	3	0	400	1	400	
SRO Office	260	1	260			0	145	1	145	145	1	145	145	1	145				
Grad Coach			0			0	425	1	425	425	1	425	425	1	425				
Adjustment Counselor	115	1	115			0	155	1	155	155	1	155	155	1	155				
Psychologist	200	1	200			0	150	1	150	150	1	150	150	1	150				
Kitchenette	65	1	65			0			0	0	0	0	0	0	0				
CUSTODIAL & MAINTENANCE			**2,605**			**0**			**2,225**			**2,225**			**0**			**2,225**	
Custodian's Office	195	1	195			0	110	1	110	110	1	110	-40	0	-40	150	1	150	
Custodian's Workshop	615	1	615			0	255	1	255	255	1	255	5	0	5	250	1	250	
Custodian's Storage	varies	4	1,025			0	25	1	25	25	1	25	-350	0	-350	375	1	375	
							30	2	60	30	2	60							
							45	1	45	45	1	45							
							50	1	50	50	1	50							
							105	1	105	105	1	105							
							130	1	130	130	1	130							
Recycling Room / Trash			0			0	355	1	355	355	1	355	-45	0	-45	400	1	400	
Receiving and General Supply			0			0	355	1	355	355	1	355	5	0	5	350	1	350	
Storeroom			0			0	60	1	60	60	1	60	-440	0	-440	500	1	500	
							400	1	400	400	1	400							
Network / Telecom Room	115	1	115			0	275	1	275	275	1	275	75	0	75	200	1	200	
Outside Equipment Storage	655	1	655			0			0	0	0	0	0	0	0				
OTHER			**9,740**			**0**			**7,805**			**7,805**			**7,805**			**0**	
(List rooms separately below)																			
ELCAT	1,090	1	1,090			0	500	1	500	500	1	500	500	1	500				
District SPED Director	730	1	730			0	180	1	180	180	1	180	180	1	180				
District SPED Staff Offices	varies	5	625			0	150	2	300	150	2	300	150	2	300				
District SPED Spare Office							155	1	155	155	1	155							
Consult RM			0			0	250	1	250	250	1	250	250	1	250				
District SPED Waiting	670	1	670			0	95	1	95	95	1	95	95	1	95				
District SPED Admin			0			0	250	1	250	250	1	250	250	1	250				
Superintendent	190	1	190			0	300	1	300	300	1	300	300	1	300				
District Accounts/ Bookeeping	345	1	345			0	350	1	350	350	1	350	350	1	350				
District CFO	80	1	80			0	170	1	170	170	1	170	170	1	170				
Director of Curriculum & Instruction	105	1	105			0	170	1	170	170	1	170	170	1	170				
Central Office Admin	715	1	715			0	250	1	250	250	1	250	250	1	250				
Central Office Conference Room	680	1	680			0	580	1	580	580	1	580	580	1	580				
District Spare Office	240	1	240			0			0	0	0	0	0	0	0				
Large Conference Room	680	1	680			0			0	0	0	0	0	0	0				
IT Open Office	765	1	765			0	815	1	815	815	1	815	815	1	815				
IT Storage/Computers/Repair	165	1	165			0	825	1	825	825	1	825	825	1	825				
IT Director			0			0	170	1	170	170	1	170	170	1	170				
IT AD			0			0	170	1	170	170	1	170	170	1	170				
IT Tech Support			0			0	360	1	360	360	1	360	360	1	360				
Kitchenette			0			0	185	1	185	185	1	185	185	1	185				
Garage	1,215	1	1,215			0			0	0	0	0	0	0	0				
Health Classrooms	varies	2	1,445			0	865	2	1,730	865	2	1,730	865	2	1,730				
Total Building Net Floor Area (NFA)			**121,965**			**0**			**128,125**			**128,125**			**17,467**			**110,658**	**Total Building Net Floor Area (NFA)**
Proposed Student Capacity / Enrollment																		**800**	**Enter Total Enrollment**
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**63,671**		% of GFA	**63,671**							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
Unoccupied MEP / FP Spaces				-	#DIV/0!		-	1.7545%	3,365	-	1.7545%	3,365							
Unoccupied Closets, Supply Rooms, and Storage Rooms				-	#DIV/0!		-	0.4953%	950	-	0.4953%	950							
Toilet Rooms				-	#DIV/0!		-	1.1132%	2,135	-	1.1132%	2,135							
Circulation (corridors, stairs, ramps and elevators)				-	#DIV/0!		-	21.0484%	40,370	-	21.0484%	40,370							
Remaining[3]				-	#DIV/0!	**0**	-	8.7859%	**16,851**	-	8.7859%	**16,851**							
Total Building Gross Floor Area (GFA)[2]			**186,890**			**0**			**191,796**			**191,796**			**#N/A**			**#N/A**	**Total Building Gross Floor Area (GFA)[2]**
Grossing Factor (GFA / NFA)			**1.53**			**#DIV/0!**			**1.50**			**1.50**			**#N/A**			**#N/A**	**Grossing Factor (GFA / NFA)**

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls.

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for. above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: Jones Whitsett Architects, Inc.

Name of Principal Architect: Dorrie Brooks, AIA

Signature of Principal Architect:

Date: 3/29/2024

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SMMA

CONSULTANTS:

FIRST FLOOR PLAN - DESE ADJACENCIES

EAST LONGMEADOW HIGH SCHOOL

EAST LONGMEADOW PUBLIC SCHOOLS

PROJECT:	2206
DATE:	03/29/24
DRAWN BY:	AG

SCALE: 1" = 50'-0"

A-1

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CONSULTANTS:

SECOND FLOOR PLAN - DESE ADJACENCIES

EAST LONGMEADOW HIGH SCHOOL

EAST LONGMEADOW PUBLIC SCHOOLS

PROJECT:	2206
DATE:	09/26/23
DRAWN BY:	AG

SCALE:	1" = 50'-0"

A-2

Special Education Adjacency Table

East Longmeadow Public Schools - East Longmeadow High School 3/29/2024

MSBA Guidelines Space	MSBA Guidelines SF	Proposed Room Name	Floor Plan Designation (A-Z)	Proposed SF (total)	Proposed Space Description and Reasoning for Adjacencies
Ground Floor					
Self-Contained Sped	950	Self-Contained CR (Life Skills)	**A**	1,260	The Life Skills Room for cognitively impaired students in grades 9-12 who need adaptive skills, including daily living skills.
Self-Contained Sped - Toilet	60	SPED Toilet	**B1**	60	Directly adjacent to the Life Skills Self-Contained SPED Classroom and is handicap accessible at 60 SF.
Self-Contained Sped	950	Self-Contained CR (Life Skills 18-22)	**C**	860	The Life Skills Room for students to learn functional skills associated with applying for and maintaining a job. This Classroom is for students who age 18-22 and are outside of the traditional high school academic program. The classroom is located near a bulding exit for to support these students as they transition in and out of the school to indepedent work and care programs.
Self-Contained Sped - Toilet	60	SPED Toilet	**B2**	50	Directly adjacent to the Life Skills 18-22 Self-Contained SPED Classroom and is handicap accessible at 50 SF.
Self-Contained Sped	950	Self-Contained CR (Medically Fragile)	**D**	905	The Medically Fragile Classroom supports students with severe medical needs that require a larger commitment of room area and equipment and individual medical staff assistance, in addition to similar life skills instructional space. The school's population of students requiring medical assistance vaaries from zero to four. When the room is not required to support this need it can be utilized as a third Life Skills classroom.
Self-Contained Sped - Toilet	60	SPED Toilet	**E**	120	Directly adjacent to the Medically Fragile Self-Contained SPED Classroom. It contains space for an adult sized bench and Hoyer lift and shower and is handicap accessible at 120 SF.
*Unique to District	Select SF	OT/PT	**F**	545	Requires a room with tables and other support equipment for small motor and sensory skill development and practice, and large motor therapy equipment for motor integration work. The OT/PT is adjacent to the Gym.
*Unique to District	Select SF	SPED Conf	**G**	355	This SPED Conf Rm will allow team meetings and meetings with caregivers to plan for individual educational plans. It is located within the SPED admin area near Pupil Services and can be directly accessed from the main entrance after check in with Main Office or via the District Offices entrance after check in with the Pupil Services admin.
Small Group Room/ Reading	Select SF	Speech	**H**	150	This room will support administration of speech and auditory testing, both for the building population and the rest of the district. It is adjacent to the Pupil Services admin and waiting area, so caregivers of younger students can wait in close proximity.
Small Group Room/ Reading	Select SF	Small Group	**I1**	190	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
Small Group Room/ Reading	Select SF	Small Group	**I2**	205	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
Small Group Room/ Reading	Select SF	Small Group	**I3**	360	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
Resource Room	500	Resource	**J1**	620	This half size scale classroom provides a home base for staff providing pull out services for students on IEPs including but not limited to BCBA, Speech and Occupation Therapy support. This space will contain learning resource materials, small group instruction area, a staff desk and a small sensory area for students. It is located centrally inside each academic wing, allowing for students to stay within their academic environment for their pull out support. Resource Rooms include a staff desk and personal storage area because they are typically staffed and typically support individual students and small groups.
Resource Room	500	Resource	**J2**	520	This half size classroom provides a home base for pull out services for students on IEPs including but not limited to cognitive and behavioral therapy and academic intervention. This space will contain learning resource materials, small group instruction area, a staff desk and a small sensory area for students. It is located centrally inside each academic wing, allowing for students to stay within their academic environment for their pull out support.
*Unique to District	Select SF	Willie Ross CR	**K1**	535	This half size classrooms provides specialized classroom spaces for 8-10 students enrolled in the Willie Ross School for the Deaf. The classroom is the location where students may receive the majority of their academic instruction but is integrated to the school to allow students to also choose to attend other general and special courses at ELHS. The room is specially outfitted to serve this population but can also be used to teach ASL to students with hearing.
*Unique to District	Select SF	Willie Ross CR	**K2**	530	This half size classrooms provides specialized classroom spaces for 8-10 students enrolled in the Willie Ross School for the Deaf. The classroom is the location where students may receive the majority of their academic instruction but is integrated to the school to allow students to also choose to attend other general and special courses at ELHS. The room is specially outfitted to serve this population but can also be used to teach ASL to students with hearing.
*Unique to District	Select SF	Willie Ross Support Room	**L1**	125	Support room with transparency to the classroom and within the classroom to support one on one instruction with Willie Ross Students.

*Unique to District	Select SF	Willie Ross Support Room	**L2**	125	Support room with transparency to the classroom and within the classroom to support one on one instruction with Willie Ross Students.
Second Floor					
Self-Contained Sped	950	Self-Contained CR (SEL)	**M**	850	SPED Self-contained SEL classroom supporting students who require more significant time and supportive instruction than might be available in the inclusive general education classrooms, but are taught in a similar manner. Similar to a Gen Ed CR but sub-separate and not inclusive of students who are not on an IEP.
Self-Contained Sped	950	Self-Contained CR (ASD)	**N**	1115	SPED Self-contained Classroom supporting students with Autism Spectrum Disorders(ASD). This classroom requires flexible desks and partitions to customize learning spaces and careful attention to acoustic treatment, lighting and finishes to reduce distraction.
*Unique to District		Meeting Room (ASD)	**O1**	90	Support room for and within the ASD Classroom. The Meeting Room is a space for one-on-one intervention, as the first of two rooms in a sequence to calm disregulated students. The space includes dimmable, color control lights and soft seating.
*Unique to District		Safe Room (ASD)	**O2**	55	Support room for the ASD Classroom. The Safe Room is a de-escalation space with soft walls and no door, as the second of two rooms in a sequence to calm disregulated students. The space includes dimmable, color control lights and a floor mat.
Self-Contained Sped - Toilet	60	SPED Toilet	**B3**	65	Directly adjacent to the Life Skills Self-Contained SPED Classroom and is handicap accessible at 65 SF.
Resource Room	500	Resource	**J3**	555	This half size classroom provides a home base for pull out services for students on IEPs including but not limited to cognitive and behavioral therapy and academic intervention. This space will contain learning resource materials, small group instruction area, a staff desk and a small sensory area for students. It is located centrally inside each academic wing, allowing for students to stay within their academic environment for their pull out support.
Resource Room	500	Resource	**J4**	520	This half size classroom provides a home base for pull out services for students on IEPs including but not limited to cognitive and behavioral therapy and academic intervention. This space will contain learning resource materials, small group instruction area, a staff desk and a small sensory area for students. It is located centrally inside each academic wing, allowing for students to stay within their academic environment for their pull out support.
Small Group Room/ Reading	500	Small Group	**I4**	300	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
Small Group Room/ Reading	500	Small Group	**I5**	205	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
Small Group Room/ Reading	500	Small Group	**I6**	360	Small group support spaces for tutoring, coaching, and one-on-one instruction near to the general classrooms and supportive of the ELHS inclusive model.
MSBA TOTAL			**District TOTAL**	11,630	

Square Footage Summary:

The proposed overall gross square footage of the new building is 191,796; Average size of General Classrooms is 850 sf

MSBA guidelines include 9,060 sf of dedicated special education space. The proposed program is 2,570 sf in excess of the guidelines.

***Indicates that space is unique to District's program and does not appear in MSBA space guidelines.**

3-3
PROJECT APPROVALS

a. Status of Approvals

The following is a summary of the approvals and permitting process to date:

- DESE – DESE approved the project at the Schematic Design level. Slight changes to the Special Education program require a re-submittal with the DD submission. Please see attached. JWA does not see any substantial issues, but is resubmitting the entire DESE package as a formality. Thank you for your help in coordinating those efforts.

- MHC – "After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources." - Elizabeth Sherva; 2-27-2023

- OIG – CM@R approved in September of 2023.

- EEA:

    - MEPA – N/A

    - Article 97 – N/A

- MA DEP – The project will submit a Notice of Intent for work within 100 feet of a wetland resource. Anticipated submission is April 2024.

- MA DOT – MassDOT review/approval is not required since we are not impacting any roads under State jurisdiction.

- MA DPH – N/A

- EPA – NPDES – The project will file a NPDES permit a minimum of 14 days prior to construction activities. Anticipated submission is May-June 2024.

- MAAB – N/A

b. Schedule for Local Zoning Approvals

Planning Board

Site Plan Review

A Site Plan Review (SPR) application package will be filed with the Town Planning Board, as required by the Zoning Bylaw for new school construction. The anticipated submission is mid-April 2024.

Special Permit – Earth Removal Operations

A Special Permit application package will be filed with the Town Planning Board, as required by the Zoning Bylaw for earth removal operations associated with the new school construction. The anticipated submission is mid-April 2024.

Conservation Commission

Notice of Intent

A Notice of Intent Application will be filed with the East Longmeadow Conservation Commission due to limited work within the 100-foot buffer zone. It is anticipated that the application package will be submitted by April 9, 2024.

Building Department

Building Permit

A building permit application will be submitted to the East Longmeadow Building Department prior to the start of construction and after other applicable permits are obtained.

Department of Public Works

Application for Curb Cut, Water and Sewer Services

An application for curb cut, water and sewer services will need to be filed with the East Longmeadow Department of Public Works for modifying or creating a new curb cut, new water connections, and new sewer connections.

c. Certification of Utility Officials Notification

The design team has been working with utility service providers to provide the services required. All the utility services to the new building will be new as described below.

East Longmeadow DPW

The existing on-site water piping and hydrants will be demolished. New on-site distribution mains will connect the existing service off Maple Street through the project to a second connection on Norden Street.

The on-site existing sanitary system will be demolished. New gravity piping will route sanitary waste from the building to a connection point in Norden Street to the municipal system. An exterior grease trap is proposed east of the building to collect all kitchen waste from the school and has been sized in accordance with Title 5 requirements. A pump station will be provided for the concessions stand and pumped to the school gravity system.

The on-site drainage system will be demolished and replaced with a new stormwater management system, except for two discharge locations to an on-site detention pond. The system will be designed to comply with Massachusetts Department of Environmental Protection's Stormwater Management Handbook. Bio-retention areas and an infiltration system are proposed, and will recharge groundwater and mitigate peak stormwater runoff rates. Pavement subject to vehicular loading will be graded to drain to deep sump hooded catch basins or bio-filtration areas. The site design team will continue to look for opportunities to utilize low-impact design where appropriate.

National Grid

The existing electrical service to the building will be demolished. A new underground duct bank will connect to the service in Maple Street.

3-7-a
PROJECT COORDINATION CHECKLIST

6A.3.7 Project Coordination	Comments
Verify the submittal is coordinated with any early-bid packages, if applicable.	*Noted. Please see the Early Release Package Matrix from Fontaine.*
All room names and numbers are coordinated between all disciplines.	***Complete.***
The structural, mechanical, or other disciplines, do not conflict with architectural plans or specifications.	*Noted. There are still some conflicts to be addressed.*
The finish grade elevations coordinated between all disciplines.	***Complete.***
Structural dimensions match Architectural drawings.	*Noted.*
Column grid lines and column orientation match Architectural drawings.	*Noted.*
Column locations and bearing walls coordinated with all other disciplines.	*Noted.*
Seismic detailing coordinated with Architectural drawings.	*Noted.*
Beams and columns are not protruding horizontally and vertically into stairwells, and other interior spaces.	*Noted.*
Verify modular dimensions at vertical masonry construction.	***Complete.***
Verify that architectural wall/partition type smoke and fire rating requirements are coordinated with the building code analysis floor plan information.	*Noted.*
Room wall/floor/ceiling construction coordinated with architectural finishes.	*Noted.*
Mechanical equipment power requirements and physical locations, including special information as to who mounts, connects, tests, etc.	***Complete.***
Verify potential spatial conflicts in mechanical equipment.	*Noted.*
Indicate adequate access to all roof surfaces, with roof protection to all equipment that requires maintenance.	*Noted.*

Equipment plan coordinates with architectural plans.	
All kitchen equipment with utility systems indicated.	***Complete***
The Designer confirms that the project continues to comply with the MSBA High School Science Lab Guidelines and/or Recommendations of Best Practices for K-12 STEM Learning Spaces	***Confirmed and complete.***