HIGH SCHOOL MUSIC (BAND)

New Construction

I. PROGRAM PHILOSOPHY

Music is one of the primary expressions of every culture. It is functional art, a fine art and a science. As such, it must be creatively cultivated, skillfully mastered, emotionally appreciated and intellectually understood. Music wisdom is not born from the acquisition of simple skill or the development of rote motor responses, but evolves from experience, judgment, thought and intrinsic concern.

II. PROGRAM GOALS

1. Music should enable each individual to develop his/her creative and expressive natures.
2. Music should enable each individual to find satisfaction and meaning in a musical experience.
3. Music should enable each individual to develop skills to express his/her emotions through music.
4. Music should enable each individual to exercise judgment about music.
5. Music should enable each individual to develop musical sensitivity.
6. Music should enable each individual to increase his/her understanding of the world and its culture.
7. Music should enable each individual to develop his/her principles of loyalty and responsibility in relation to home, school and nation.

III. PROGRAM ACTIVITIES

In instrumental music (band and orchestra) each student will participate in small group and large group instruction in the fundamentals of technique and musicianship. In addition to playing instruments, students will listen and view audio visuals, participate in and observe demonstrations, listen to lectures, use technology, make simple instrument repair and participate in rhythmic exercise.

IV. ORGANIZATIONAL NOMENCLATURE

Teacher – Student Ratio:	1:10 – 1:120
Student Capacity Per Period:	24 per room
Total Number of Teachers:	2
Total Number Aides:	0 (if applicable)
Grade Levels or Age Levels for Which Program is intended:	9 – 12
Hours per Day Space Will Be Used:	7

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V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

1. Area must be capable of being secured from remainder of school plant to facilitate evening use.
2. Material storage and Uniform Storage were combined.
3. Two restrooms were added.

VI. SQUARE FOOTAGE CHANGES EXPLANATION THAT VARIES FROM APPROVED FACILITIES LIST.

NA

VII. SPACE CHART

SPACE RELATIONSHIPS

THE PA/E IS TO CONTACT THE BAND DIRECTOR AT THE SCHOOL FOR SPATIAL RELATIONSHIPS.

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VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM
*Shown on drawings
purchased and installed by contractor
-Wenger is the preferred vendor and any other vendor needs to meet the same specifications.
The Performing Arts Specialist is to be contacted for approval of items to be purchased.

Space or Area	Number of Items	Description of Furniture/Equipment Needed
BAND RECORDING ROOM		
	*3	iMac Work Stations 3+ GHz dual-core 16+ GB RAM 500 GB Solid State Drive Audio Interface (Focusrite Scarlett 2Pre) Audio Microphones (RODE NT-1A, Audio-Technica AT2050) Instrument Microphones (Shure SM57) Audio Headphones (Sennheiser HD280) Studio Speakers (JBL LSR305) 1DAW (Digital Audio Workstation) Ex. Pro Tools, Logic, Ableton Live, SONAR, Cubase
		** Technology is always evolving, and the Music Specialist should be consulted during the selection of equipment.*
BAND REHEARSAL		
	*1	Studio Upright Piano with Dolly, Bench, and Cover and Humidity Control System
	*110	Music Posture Student Chairs, 18-1/2", Wenger #0930000 or equivalent
	*1	Conductor's System Wenger or equivalent
	*80	(Heavy Duty) Music Stands/Wenger Rough Neck or equivalent
	4	Tuba Stands, Wenger or equivalent
	1	Percussion Center Wenger or equivalent
	*4	Wall Racks for Sousaphones Wenger or equivalent
	25	Stand Lights
	*#1	Full-Length Mirror (22" x 60")
	*1	Complete Sound System including Mixer (Alesis MultiMix 10) Amplifier (min 4000 W) Speakers (QSC E112 12" Two-Way Passive Loudspeaker (Black)) Wireless headset microphone (1) Shure BLX14/CVL) Locking Sound Cabinet (Atlas Sound 607-15) Mounting hardware Microphones for classroom recording (Samson CO2 Pencil Mics Cables/Stands Connections to Smart Board/TV ¼" mini jack for computer playback

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3	Band/Orchestra Folio Cabinets from Wenger or equivalent
*1	Interactive Flat TV Panel and Stand
1	Electric Keyboard (88 key touch sensitive and weighted)
5	iMac Workstations and One Laser Printer

**Placement of equipment as well as exact specifications should be made with the teacher and /or the district performing arts technology staff. Note: ideally the sound design for these rooms would involve an acoustic engineer who makes recommendations on equipment and placement of equipment.*

THREE PRACTICE ROOMS AND ONE ENSEMBLE ROOM (BAND)

*4	Studio Upright Pianos with Bench, Dolly, Cover and Humidity Control System
*18	Music Posture Student Chairs Wenger or equivalent
*#1	Full Length Mirror (22” x 60”) in Ensemble Room

REFERENCE (BAND)

*6	Four-Drawer File Cabinets, Legal Size, Lockable

INSTRUMENT STORAGE BUILT-IN

*#	Individual Locking Cabinets – Wenger or equivalent

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*Shown on drawings

purchased and installed by contractor

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Space or Area	Number of Items	Description of Furniture/Equipment Needed
UNIFORM STORAGE BUILT-IN		Built-In (See XI Special Considerations (17) Built-ins
	* #1	Full-Length Mirror (22” x 60”)
	*#1	Washer/Dryer

TEACHER PLANNING (BAND)

*1	Teacher’s Desk and Chair with Casters
*2	Four-Drawer File Cabinets, Letter Size
2	Office Chairs
1	iMac Workstations and One Laser Printer

BAND REHERASAL (BASIC LIST OF INSTRUMENTS)

2	C-Piccolos (Concert)
4	Flutes
4	Oboes
4	Bassoons
1	Eb Clarinets (Bb)
4	Bass Clarinets (Bb)
1	Contra Bass Clarinet
4	Eb Alto Saxophones
8	Bb Tenor Saxophones
8	Baritone Saxophones

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12	French Horns (Double)
8	Baritone Horns (4-valve)
10	Tenor Trombones W/F Attachment
2	Bass Trombones
4	BB Flat Sousaphones
4	BB Flat Tubas (4 Valve)
2	String Basses
1 set	5-Tympani (20”, 23”, 26”, 29”, 31”) with covers and tuning Gauges
1	Concert Bass Drum with stand and cover
2	Concert Snare Drums
1	Orchestra Bells with Stand
1 pr. ea.	Cymbals (18”, 20”, 24”)
1 set	Trap Drum Set
1 set	Small Percussion
1	Concert Gong
1	Electric Tuner Chromatic
4	Mellophones
4	Marching Baritone Horns
2	Marching Piccolos
4	Marching Mellophones
1	Xylophone
1	Marching Bells with Stand and Case

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The Performing Arts Specialist is to be contacted for approval of items to be purchased.

Space or Area	Number of Items	Description of Furniture/Equipment Needed
BAND REHERASAL (BASIC LIST OF INSTRUMENTS) - CONTINUED		
	1	Vibraphone
	1	Suspended Cymbal 20”
	4	Marching Bass Drums
	4	Marching Snare Drums
	2	Marching Quad Drums
	2	Portable Tuners
	1	Bass Amplifier
	1	Guitar Amplifier
	1	Electronic Keyboard (Synthesizer)
	1	Electronic Keyboard Amplifier
	1	Soprano Saxophone
	1	Chimes
	1	Marimba
	1	3 Unit Double Bass Rack 49-3/8” wide x 24” deep x 47” high Wenger or equivalent
	1	Sound Reinforcement System with four microphones and stands with long cables
	1	Electric Bass Guitar with case
	1	Electric Guitar with case
REFERENCE		
	*1	Table
	*#4	Wenger Storage Systems

XI. SPECIAL CONSIDERATIONS

- Heating/Cooling/Ventilation

  It is strongly recommended that music facilities be designed for all weather air conditioning and heating. Because of the large class size, and because wind players and singers need large amounts of fresh air, it is necessary to have complete change of air in the room every three minutes. It is very important that any blowers be located outside of the building so that the sound of the fans will not disturb the rehearsal. The air should enter via silent duct work and registers. Another point of care is in the engineering of duct work. The duct system should be so designed that a separate duct system services each large rehearsal room. For other rooms in the area, an off-set insulated, baffled duct system should be used to minimize the problem. It is absolutely necessary that sound is not able to carry through heating or cooling duct work from any one room to another. HVAC should be designed to accommodate use during evening classes and/or performances without the necessity for operating the entire system. Thermostats are to be located in the Band and Vocal/Chorus Rehearsal Rooms.

  Provide for continuous humidity and temperature control in Uniform (band), Robe (vocal/chorus), and Instrument Storage Rooms, twenty-four hours per day, year around and independent of the building air conditioning system.

- Acoustics

  This topic is of primary importance and the acoustical design must be very carefully designed to provide the optimum rehearsal and teaching conditions. Some considerations follow:

  a. Two Main acoustical factors must exist; optimum acoustical environment and optimum hearing conditions by director and every student.
  b. Acoustical environment: the maximum background noise level is 25 decibels with the optimum much lower.
  c. Hearing conditions:

     1. Reverberation time to allow for the separation of successive sounds is a critical problem in designing rehearsal facilities. What would be optimum for a concert hall, for example, would not be at all satisfactory for a music room. The optimum reverberation time for a large rehearsal room is 1.1 seconds. If the time falls below .8 seconds for the band area, or 1.0 seconds for the vocal/chorus area, the room becomes too dead for effective use. If the time is much greater than 1.1 seconds for band or 1.2 seconds for vocal/chorus, then boom, echo and over loudness will result, causing severe distortion of sound and producing an impossible rehearsal situation. It should be noted that the reverberation times for band and vocal/chorus rehearsal rooms are different and should not be planned in the same way.

     2. Proper distribution of sound depends upon the uniform diffusion of all sounds throughout the room.

XI. SPECIAL CONSIDERATIONS (continued)

- Acoustics (continued)

    3. Frequency levels throughout the full spectrum of audible sound must be allowed to be diffused equally. If certain types of acoustical treatment are used, they may cut down the high frequencies much more than the low frequencies or vice-versa. A proper balancing of materials is essential to eliminate the obvious distortion caused by lack of attention to this detail.

    4. Since the field of acoustics is so complicated and because the acoustics of a room depend on so many factors, it is not feasible to go into greater detail in this document. However, it is absolutely essential that only the most expert advice be sought in designing a music room. This special advice must function from the very first conception of the shape and size of the room to the very last detail of the final plans.

    5. The use of soft materials for acoustical treatment should be limited in all areas of the building to locations higher than students can bump into or reach.

- Floor

  Carpeted throughout Music spaces

  Risers in Band Room deep enough to allow for chair and music stands.

- Walls

  All walls acoustically treated in rehearsal and practice room, to prevent sound transfer to adjacent spaces used for instruction. No temporary or demountable walls. All walls should be fully constructed to roof deck. **Non-paralleled walls** in rehearsal areas and practice rooms.

- Ceiling

  Band – Acoustical treatment, minimum of 14 foot ceilings for rehearsal areas. This would include the height from the highest riser.

- Lighting

  Two spotlight groups
  a. Perimeter of room
  b. Strip of spots to light the podium area
  c. Both groups on rheostat so that the rehearsal facility can be used as a chamber theater.

- Windows

  Small double windows in practice room doors. Double thickness view windows between Teacher Planning and rehearsal areas (band). Teacher planning window needs to be wide enough to view entire rehearsal room.

XI. SPECIAL CONSIDERATIONS (continued)

- Doors

  Double panes of glass are recommended. Doors should have a continuous rubber sound seal. Doors leading from the rehearsal area to the outside should be double doors with a removable center mullion so that large instruments can be moved. Doors on practice and ensemble rooms are to be constructed to prevent sound transfer from adjacent spaces used for instruction.

  Doors opening into Band shall be recessed.
  Lockable doors in Band and Teacher Planning spaces.

  Windows in doors to Teacher Planning spaces.

- Plumbing

  Single sink with hot and cold water in Reference room with counter top.

  Electric water fountain in rehearsal area.

  Large stainless steel sink (5' long x 24" wide x 14" deep) with hot and cold water and hand wand in instrument repair room to accommodate tuba.

- Communications

  Provide wireless distribution and video over IP broadcast system technology throughout the new construction at the school. Short throw interactive projector will be used in the music (band) room along with markerboards. Television and coaxial cable will **not** be used.

  Provide one-inch conduit with pull string from a two-gang metal box with single-gang cover plate at teaching wall up to future projector location with extra 10 feet of cable coiled up in ceiling to allow for future ceiling-mounted projector or other visual image projection device.

- Band Room Sound will need to have basic sound reinforcement and playback
  - Speaker selection should be designed for full range audio playback
  - Speakers should be acoustically designed for the space.
  - Mounted/Rolling sound cabinet should include, mixer with various input options such as XLR, ¼", 1/8" mini and USB.
  - All A/V equipment with sound should be run through the sound mixer, this include all smartboard installations.

- Electrical

  The main switch panel for the instrumental (band) area should be located inside and near the front entrance. Many electrical outlets must be provided because of the use of audiovisual equipment, amplified instruments, and other general needs. Each side wall should have three duplex outlets. The front wall should have at least four duplex outlets, spaced at convenient intervals. The back wall should have at least three. In addition,

duplex floor outlets should be provided as follows: One at the director's podium location and four more at equal intervals. This will eliminate the danger of running long extension cords which are inconvenient, unsightly, and hazardous. Microphone plug-ins should be provided in the front of the room, and at three locations, one-third the distance from each wall. Also, two permanent microphone plug-ins should be installed in the front ceiling for professional recordings. Use only heavy duty cable line for recording purposes to reduce interference from computers. Microphone cable should not run parallel with electrical wiring. This wiring should be shielded and Teflon coated. Permanent microphones that are 8' apart should be suspended 2' below the ceiling.

XI. SPECIAL CONSIDERATIONS (continued)

- Electrical (continued)

  Provide wiring for speakers from sound cabinet.

  Computer stations must have isolated ground circuit to panel.

  Six communications outlets in Band Room

  Four communications outlets in each Ensemble Room

  Two communication outlets in each Practice Room

  One communication outlet in each Recording Room

  One communication outlet in each Teacher Planning

  Provide outlet near proposed location of grand piano.

- Safety

  Keyed locks should be separated as follows:
  1. Teacher planning, reference room, uniform storage, recording room, instrument storage and instrument repair should be on the same key.
  2. Rehearsal, Ensemble and practice rooms should be on the same key.
  3. For vocal area, same except delete instrument storage and repair rooms.
  4. All individual lockers in instrument storage room to be keyed separately.

- Service Drives

  Because of the heavy use of music facilities at night, and also because of the need to transport students and equipment by bus and truck:

  a. Free access must be provided via hard surfaced roadways to the nearest street.

  b. The service road should be brought up to the loading doors of the building, especially to the instrumental side, because of the necessity of loading heavy equipment for trips.
  c. Service roadways and exterior loading areas should be well lighted for night use.

XI. SPECIAL CONSIDERATIONS (continued)

- Built-in Cabinetry

A. Built-in work counter/Storage Space

(The Performing Arts Specialist is to be consulted on specifications when plans are drawn).

Built-in bookshelves: Open bookcases or shelves near entrance of the band rehearsal room for students' books (for 120 students) purchased out of Furniture, Fixtures and Equipment (FF&E).

1. The instrumental Repair Room cabinet is to have a counter with a large sink (see Water). The counter is to be continuous along end wall; 36"high, 24"deep with doors and adjustable shelves below (minimum length 8'). Finish to be plastic laminated.

2. Base Cabinet (12'L x 2'W x 3'H) with stainless steel sink with hot and cold water in Band Room. Wall Cabinet 12'L x 12"W x 30"H with closed adjustable shelving and lockable.

3. Provide lockable storage in Band Room for sound equipment.

B. Built-in cabinets/shelving

1. Material/Uniform Storage (Band)

a. COATS: Room for the comfortable storage of 150 coats must be provided. Allow three inches on the hanging coat rod for each coat. The compartments for coats must be 42" high (including 6" above the rod) and 22" deep.
b. TROUSERS: Allowance should be made for 150 pairs of trousers. They can be stored in the same shape compartments, but need only one and one-half inches per pair.
c. HATS (Shakos): Most bands use the shako. Therefore, plans must include space for their storage. They may be stored on shelf above uniform rod. (150 hats)

	Shelf
	6"
	45"
	42"

Provide portable ladders to access the upper storage areas in the uniform/material storage room and in the robe/material storage area.

d. EXTRA STORAGE: At least 6 to 12 additional feet of hanging rod space should be provided for drum major and director uniforms and extra hanging for coats and trousers. Shelving and/or should be provided in the area over the hanging areas to allow room for storage of miscellaneous equipment.
e. FULL LENGTH MIRROR (22"x60")

XI. SPECIAL CONSIDERATIONS (continued)

- Built-In Cabinetry (continued)

C. Built-in Instructional Aids

1. Markerboards and tackboards: A large magnetic markerboard area should be provided at the center of the rehearsal room on the side which the students face. A minimum area of 8' x 4' of plain magnetic markerboard should be adjacent to a minimum area of 8' x 4' of magnetic markerboard containing permanent music staves. The five line staves should be approximately 6" high and 1" between the lines, and should run the full width of the board. The top staff should have its top line approximately 6" below the top of the board. A space of approximately 4" should separate each staff. This will allow for 4 staves of 4" or 16" in all. No markings are needed on the staves as they will be supplied by the teacher.

2. On the teaching wall, to the right hand side of the markerboard containing permanent music staves, install an interactive projector, in the center of the white boards to be provided by the district.

3. Provide cabinet with two shelves for sound enhancement equipment and amplifier. This cabinet will be purchased and provided by FF&E funding. Cabinet and equipment shall be located at, or adjacent to, the major teaching wall. The cabinet shall be 17 inches wide and 25 inches deep with a slide tray top (4 inches high), fold up side shelf (approximately 12 inches wide and 15 inches long) and two doors (one on front and the other on opposite side of fold up shelf). The slide Tray shall hold a document presenter provided by owner. The back of the cabinet must allow connections of white speaker wire for the four speakers used with sound enhancement equipment, a network connection, connection to interactive projector and power.

4. Install interactive projector/tv in the center of the markerboards.

5. Magnetic markerboards to have eraser tray, flag holder and demountable map railing.

6. A non-glare glass enclosed tackboard area is recommended for an outside wall where traffic is the heaviest. Location to be determined by the Performing Arts Specialist.

7. A rather large amount of tackboard should be provided because of the vast amount of announcements and information that must be posted. A 4' x 8' tackboard should be located near the main entrance. At least one 4' x 4' tackboard should be provided in another location in the rehearsal room where it can be easily observed.

XI. SPECIAL CONSIDERATIONS (continued)

- Built-in Cabinetry (continued)

D. Other Built-ins

Instrument Storage – Open Shelving

1. No instrumental group maintains a set instrumentation every year, but the recommendations below will indicate the size of space necessary to store each type of instrument, with a rough estimate of how many of each type might be expected in a large program.

Space needs for band instruments.

Wenger locking cabinets or equivalent with grill doors or built-ins:

Any substitutes for Wenger cabinets or equivalents must be approved by the Performing Arts Specialist.

Instrument	# Spaces for Each Instrument	Space Needed W	H	D
B-Flat Clarinet	25	8”	14”	16”
Flute (incl. room for piccolo)	20	6”	6”	18”
Alto Sax, Alto Clarinet and Bass Clarinet	16	8”	12”	18”
Tenor Sax and Contra Bass Clarinet	10	8”	12”	28”
Baritone Sax	12	10”	14”	36”
Bassoon	8	6”	14”	32”
Oboe	6	6”	10”	16”
Cornet or Trumpet	20	8”	16”	24”
Trombone	15	12”	16”	40”
Baritone	10	12”	22”	40”
Alto Horn	8	12”	16”	28”
French horn	12	32”	20”	24”
Tuba	15	48”	28”	40”
1 storage rack for 3 string basses				
Sousaphones will be stored on the wall racks				

Width and height could be interchangeable. It is suggested that where measurements are close to each other in size, the larger size compartment be made for both types of instruments. The number estimate is only an approximation.

2. Reference, Band
   a. Pass through cabinet in wall (purchased with FF&E from Wenger) between band rehearsal room and library – Cabinet with doors on rehearsal side 84” high x 38” wide x 16” deep, 5 sections 16” high,1-3/4” between dividers; capacity for 90 folders.
   b. Built-in wall shelves (adjustable); ceiling to file cabinet on all open wall spaces.
   c. Cabinet with lockable doors 84” high x 48” wide x 18” deep (I.S.) with adjustable shelves.

XI. SPECIAL CONSIDERATIONS (continued)

- Other Considerations

The Performing Arts Specialist is to be consulted on specifications when plans are drawn.

A. Size and Shape – Band
   1. Provide 20 feet in front of the player to allow for proper diffusion of sound, and also to serve as an area for observers, recording equipment, piano and portable equipment, and rehearsal activity.
   2. Ceiling height should be a minimum of 14', optimum of 16', depending upon the acoustical treatment and architectural shape of the room. National Broadcasting Company recommended room proportions of H: W: L—2:3:5.
   3. Non parallel walls are necessary. Ceiling should also be non-parallel to floor. Moderately splayed (zigzag) walls may be utilized.
   4. All practice rooms must have soundproofing and acoustical treatment.
   5. Band rehearsal rooms should face diagonally (corner to corner) facing opposite directions.
   6. Air conditioner in Uniform Rooms and Instrument Storage will run 24 hours per day for 12 months.

B. Adjacent to auditorium or concert site facility.

C. Near football field.

D. Covered walkways near the buildings and between the buildings. The auditorium and covered walkways should be well lighted for night use.

E. Overall campus planning must prohibit sound transmission from other areas into the music (band) facility.

F. Building must be located and/or acoustically designed so that transmission of sound is contained within the separate sections of the music building, so as not to interfere with other music rehearsals or other school areas.

G. Adjacent rest rooms which may be opened at night for workshops and rehearsals without entering the rest of the building.

H. Follow instructions carefully on keyed locks as listed under Safety (13).

I. Careful selection of paints is necessary in order to maintain proper acoustics. There cannot be any use of gloss/high gloss paints in any area used for rehearsal/practice/performance.

J. Intercom speakers in main and large ensemble rooms.

K. Provide the ability to hang pictures in lab areas.

L. No hidden corners in labs.

M. If possible connect music (band) suite to theatre by covered walkway.

XI. SPECIAL CONSIDERATIONS (continued)

- Other Considerations (continued)

  N. Uniform storage area needs to be placed for easy access by students.

  O. Located on an access road for loading and unloading instruments.

  P. Access to facility during nights and weekends.