

STATE COLLEGE AREA HIGH SCHOOL

30% SUBMISSION
OCTOBER 29, 2014



ARCHITECTS



**Crabtree, Rohrbaugh & Associates
Architects**
401 East Winding Hill Road
Mechanicsburg, Pennsylvania 17055
phone: (717) 458-0272 - fax: (717) 458-0047

MEP ENGINEERS

CENTERPOINT
ENGINEERING INC.

CM SERVICES



Massaro
CM SERVICES, LLC

CIVIL ENGINEERS

EA
group, inc.
DESIGN • LANDSCAPE ARCHITECTS

PURPOSE

THE GOAL OF THIS PROGRAM IS FOR COMMUNITY MEMBERS TO:

REVIEW THE PROGRESS OF THE PROJECT SINCE THE REFERENDUM PASSED

SHARE FEEDBACK WITH MEMBERS OF THE BOARD, DESIGN TEAM, & DISTRICT ADMINISTRATION.

AGENDA

PRESENTATION 6:00 – 6:30 PM

SESSION ONE 6:40 – 7:10 PM

SESSION TWO 7:15 – 7:45 PM

SESSION THREE 7:50 – 8:20 PM

OPEN SESSIONS UNTIL 9:00 PM

OPTIONAL:

PUBLIC COMMENT 8:30 PM

01 SITE

02 PROGRAM

03 BUILDING DESIGN

04 ENGINEERING

05 SCHEDULE

06 PHASING

07 COST

08 LEED

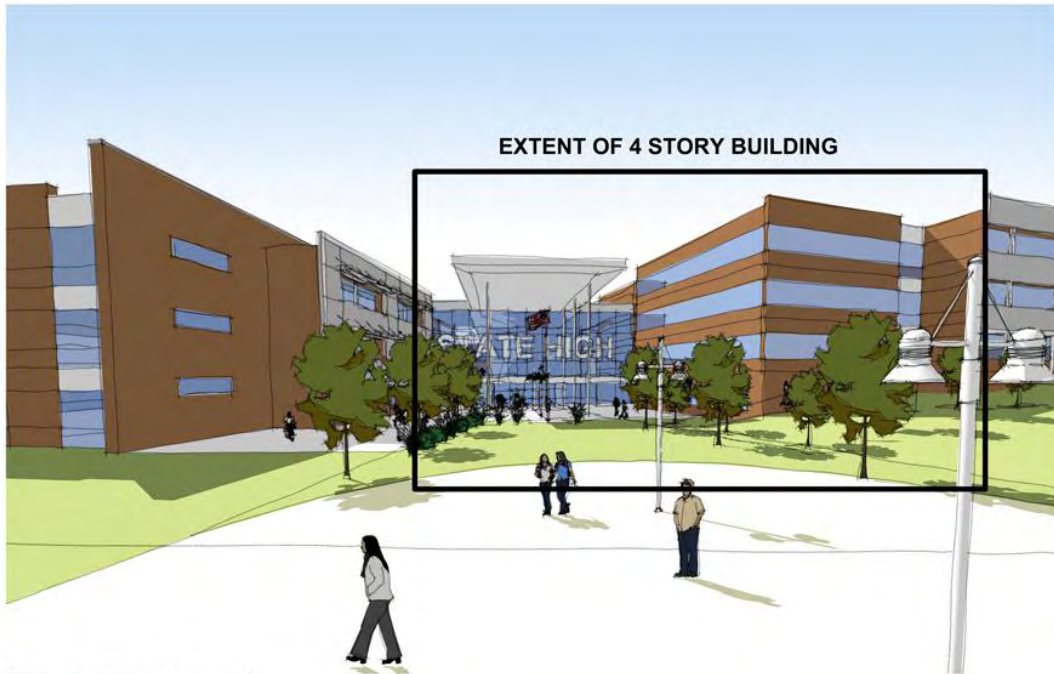


TO DATE

- 01 ZONING VARIANCES (PARKING RELATED)**
HEARING SCHEDULED OCTOBER 28TH
- 02 TEXT AMENDMENT (BUILDING HEIGHT)**
ZONING TEXT AMENDMENT REQUEST
PUBLIC HEARING DECEMBER 1ST
- 03 TRAFFIC IMPACT STUDY**
IN PROCESS (DATA COLLECTION IN
SEPTEMBER AND CURRENT)

UPCOMING

- 04 PRELIMINARY LAND DEVELOPMENT**
PLANS WITH CONDITIONAL USE FOR
PARKING REDUCTION
TENTATIVE SUBMISSION NOVEMBER 10TH



EXTENT OF 4 STORY BUILDING

MAIN ENTRANCE



ADMINISTRATION OFFICES ARE LOCATED ADJACENT THE MAIN ENTRANCE FOR EASE OF MONITORING VISITORS AND SECURE ACCESS INTO THE BUILDING.

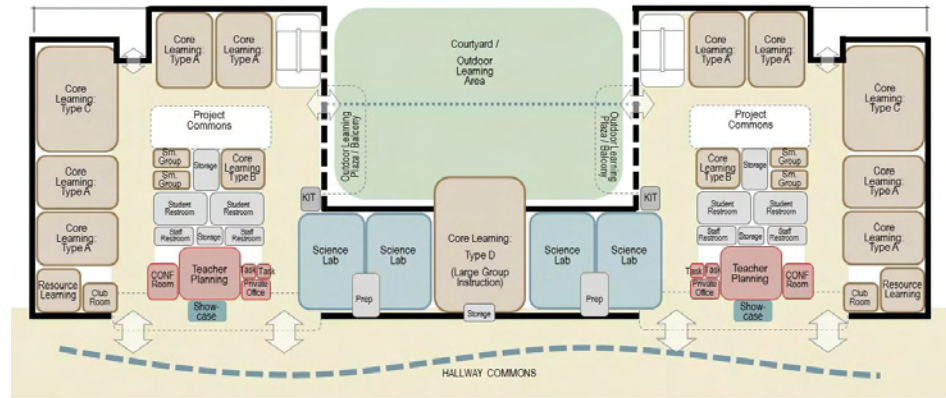
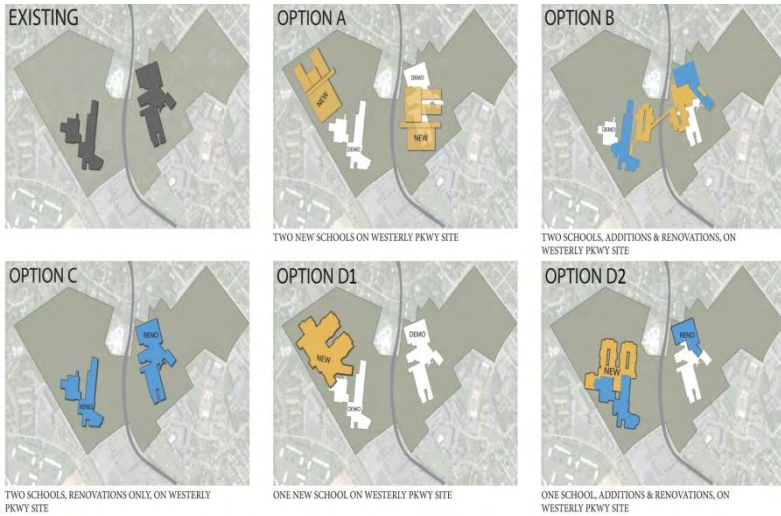
VIEWS/ DAYLIGHTING AT ADMINISTRATION OFFICES



VIEW FROM WESTERLY PARKWAY

EXTENT OF 4 STORY BUILDING

- 01 SITE
- 02 PROGRAM**
- 03 BUILDING DESIGN
- 04 ENGINEERING
- 05 SCHEDULE
- 06 PHASING
- 07 COST
- 08 LEED



STATION Planning Diagram: Learning Community – 9th

CONCEPT D OPTION 2
EXTENT OF EXISTING BUILDING RENOVATIONS



NOTE: THE BUILDING AND EDUCATIONAL MODEL FROM THE REFERENDUM HAS CONTINUED TO EVOLVE, NOW INCORPORATING FURTHER INPUT FROM SCASD STAFF ALONG WITH ENGINEERS, CONSTRUCTION MANAGERS, FOOD SERVICE PERSONNEL, CODE OFFICIALS, EMERGENCY SERVICES AND SPECIALTY CONSULTANTS.

CR REFERENDUM TO 30% SUBMISSION

DESIRED



ACTUAL

| SPACE CATEGORY | Net Area Sub-Total (sq. ft.) |
|--|------------------------------|
| 1.0 9th GRADE LEARNING COMMUNITY | |
| 1.01 Core Learning & Support | 13,800 |
| 1.02 9th Grade Science | 6,100 |
| 1.03 Student Commons | 2,700 |
| 1.04 Staff Support | 2,240 |
| Sub-Total: | 24,840 |
| 2.0 ARTS & HUMANITIES LC | |
| 2.01 Core Learning & Support | 12,100 |
| 2.02 Science | 6,100 |
| 2.03 Student Commons | 2,700 |
| 2.04 Staff Support | 2,240 |
| Sub-Total: | 23,140 |
| 3.0 BUSINESS & COMMUNICATONS LC | |
| 3.01 Core Learning & Support | 12,100 |
| 3.02 Science | 6,100 |
| 3.03 Business & Management | 5,000 |
| 3.04 Student Commons | 2,700 |
| 3.05 Staff Support | 2,240 |
| Sub-Total: | 28,140 |
| 4.0 HEALTH & HUMAN SERVICES LC | |
| 4.01 Core Learning & Support | 12,100 |
| 4.02 Science | 6,100 |
| 4.03 Applied Labs & Support | 10,120 |
| 4.04 Student Commons | 2,700 |
| 4.05 Staff Support | 2,240 |
| Sub-Total: | 33,260 |
| 5.0 S.T.E.M. LEARNING COMMUNITY | |
| 5.01 Core Learning & Support | 12,100 |
| 5.02 Science | 6,100 |
| 5.03 Tech Ed | 5,200 |
| 5.04 CTC | 15,600 |
| 5.05 Student Commons & Support | 4,800 |
| 5.06 Staff Support | 3,520 |
| Sub-Total: | 47,320 |
| 6.0 SPECIALTY PROGRAMS | |
| 6.01 World Languages | 10,700 |
| 6.02 Special Education | 5,150 |
| 6.03 ELL Program | 900 |
| Sub-Total: | 16,750 |

| PROGRAM | DESIRED NET AREA | ACTUAL NET AREA | % | DESIRED TEACHING STATIONS | ACTUAL TEACHING STATIONS | REFER TO THE FOLLOWING NOTES, BELOW | |
|--|------------------|-----------------|--------------|---------------------------|--------------------------|-------------------------------------|------|
| 1.0 9th GRADE LEARNING COMMUNITY | | | | | | | |
| 1.01 Core Learning & Support | 43,660 | 11,400 | 13.29% | 10 | 12 | 1 | |
| 1.02 9th Grade Science | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 | |
| 1.03 Student Commons | 2,700 | 2,926 | 8.4% | - | - | 3 | |
| 1.04 Staff Support | 2,240 | 2,600 | 16.1% | - | - | 3, 4 | |
| TOTAL | 22,440 | 25,696 | 14.5% | 14 | 16 | | |
| 2.0 ARTS & HUMANITIES LEARNING COMMUNITY | | | | | | | |
| 2.01 Core Learning & Support | 42,400 | 9,700 | 8.0% | 9 | 10 | 1, 5, 6 | |
| 2.02 Science | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 | |
| 2.03 Student Commons | 2,700 | 2,926 | 8.4% | - | - | 3 | |
| 2.04 Staff Support | 2,240 | 2,600 | 16.1% | - | - | 3, 4 | |
| TOTAL | 20,740 | 22,678 | 10.3% | 13 | 14 | | |
| 3.0 BUSINESS & COMMUNICATONS LEARNING COMMUNITY | | | | | | | |
| 3.01 Core Learning & Support | 42,400 | 9,700 | 9,913 | 2.2% | 9 | 9 | 1 |
| 3.02 Science | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 | |
| 3.03 Business & Management | 5,000 | 4,978 | -0.4% | 4 | 4 | 7 | |
| 3.04 Student Commons | 2,700 | 2,926 | 8.4% | - | - | 3 | |
| 3.05 Staff Support | 2,240 | 2,600 | 16.1% | - | - | 3 | |
| TOTAL | 25,740 | 27,289 | 6.0% | 17 | 17 | | |
| 4.0 HEALTH & HUMAN SERVICES LEARNING COMMUNITY | | | | | | | |
| 4.01 Core Learning & Support | 42,400 | 9,700 | 11,817 | 21.8% | 9 | 11 | 1 |
| 4.02 Science | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 | |
| 4.03 Applied Labs & Support | 49,420 | 4,880 | 5,604 | 14.8% | 3 | 3 | 8, 9 |
| 4.04 Student Commons | 2,700 | 2,694 | -0.2% | - | - | 3 | |
| 4.05 Staff Support | 2,240 | 2,792 | 24.6% | - | - | 3 | |
| TOTAL | 25,620 | 28,779 | 16.2% | 16 | 18 | | |
| 5.0 S.T.E.M. LEARNING COMMUNITY | | | | | | | |
| 5.01 Core Learning & Support | 42,400 | 9,700 | 10,043 | 3.5% | 9 | 10 | 1 |
| 5.02 Science | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 | |
| 5.03 Tech Ed | 5,200 | 4,953 | -4.8% | 2 | 2 | | |
| 5.04 CTC | 46,600 | 15,000 | 16,112 | 7.4% | 6 | 6 | 10 |
| 5.05 Student Commons & Support | 4,800 | 5,023 | 4.6% | - | - | 3 | |
| 5.06 Staff Support | 3,520 | 3,447 | -2.1% | - | - | 3 | |
| 5.07 Outdoor Areas | - | - | - | - | - | 3 | |
| TOTAL | 44,320 | 46,458 | 4.8% | 21 | 22 | | |
| 6.0 SPECIALTY PROGRAMS | | | | | | | |
| 6.01 World Languages | 10,700 | 11,447 | 7.0% | 12 | 12 | | |
| 6.02 Special Education | 5,150 | 5,892 | 14.4% | 4 | 5 | | |
| 6.03 ELL Program | 900 | 856 | -4.9% | 1 | 1 | | |
| TOTAL | 16,750 | 18,195 | 8.6% | 17 | 18 | | |

NOTE: IMPLEMENTED EDUCATIONAL PROGRAM IS WITHIN 8% OF FINAL EDUCATIONAL SPECIFICATIONS AND OVERALL BUILDING SQUARE FOOTAGE IS WITHIN 2% OF REFERENDUM DESIGN.

2.02

ACTUAL



LOCATION

| PROGRAM | DESIRED NET AREA | ACTUAL NET AREA | % | DESIRED TEACHING STATIONS | ACTUAL TEACHING STATIONS | REFER TO THE FOLLOWING NOTES, BELOW. | |
|---|------------------|-----------------|--------------|---------------------------|--------------------------|--------------------------------------|---------|
| 1.0 9th GRADE LEARNING COMMUNITY | | | | | | | |
| 1.01 Core Learning & Support | 43,800 | 11,400 | 13,298 | 16.6% | 10 | 12 | 1 |
| 1.02 9th Grade Science | | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 |
| 1.03 Student Commons | | 2,700 | 2,926 | 8.4% | * | * | 3 |
| 1.04 Staff Support | | 2,240 | 2,600 | 16.1% | * | * | 3, 4 |
| TOTAL | 22,440 | 25,696 | 14.5% | 14 | 16 | | |
| 2.0 ARTS & HUMANITIES LEARNING COMMUNITY | | | | | | | |
| 2.01 Core Learning & Support | 42,400 | 9,700 | 10,478 | 8.0% | 9 | 10 | 1, 5, 6 |
| 2.02 Science | | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 |
| 2.03 Student Commons | | 2,700 | 2,926 | 8.4% | * | * | 3 |
| 2.04 Staff Support | | 2,240 | 2,600 | 16.1% | * | * | 3, 4 |
| TOTAL | 20,740 | 22,876 | 10.3% | 13 | 14 | | |
| 3.0 BUSINESS & COMMUNICATIONS LEARNING COMMUNITY | | | | | | | |
| 3.01 Core Learning & Support | 42,400 | 9,700 | 9,913 | 2.2% | 9 | 9 | 1 |
| 3.02 Science | | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 |
| 3.03 Business & Management | | 5,000 | 4,978 | -0.4% | 4 | 4 | 7 |
| 3.04 Student Commons | | 2,700 | 2,926 | 8.4% | * | * | 3 |
| 3.05 Staff Support | | 2,240 | 2,600 | 16.1% | * | * | 3 |
| TOTAL | 25,740 | 27,289 | 6.0% | 17 | 17 | | |
| 4.0 HEALTH & HUMAN SERVICES LEARNING COMMUNITY | | | | | | | |
| 4.01 Core Learning & Support | 42,400 | 9,700 | 11,817 | 21.8% | 9 | 11 | 1 |
| 4.02 Science | | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 |
| 4.03 Applied Labs & Support | 40,420 | 4,880 | 5,604 | 14.8% | 6 | 3 | 8, 9 |
| 4.04 Student Commons | | 2,700 | 2,694 | -0.2% | * | * | 3 |
| 4.05 Staff Support | | 2,240 | 2,792 | 24.6% | * | * | 3 |
| TOTAL | 25,620 | 29,779 | 16.2% | 16 | 18 | | |
| 5.0 S.T.E.M. LEARNING COMMUNITY | | | | | | | |
| 5.01 Core Learning & Support | 42,400 | 9,700 | 10,043 | 3.5% | 9 | 10 | 1 |
| 5.02 Science | | 6,100 | 6,872 | 12.7% | 4 | 4 | 2 |
| 5.03 Tech Ed | | 5,200 | 4,953 | -4.8% | 2 | 2 | |
| 5.04 CTC | 46,600 | 15,000 | 16,112 | 7.4% | 6 | 6 | 10 |
| 5.05 Student Commons & Support | | 4,800 | 5,023 | 4.6% | * | * | 3 |
| 5.06 Staff Support | | 3,520 | 3,447 | -2.1% | * | * | 3 |
| 5.07 Outdoor Areas | | * | * | | * | * | 3 |
| TOTAL | 44,320 | 46,450 | 4.8% | 21 | 22 | | |
| 6.0 SPECIALTY PROGRAMS | | | | | | | |
| 6.01 World Languages | | 10,700 | 11,447 | 7.0% | 12 | 12 | |
| 6.02 Special Education | | 5,150 | 5,892 | 14.4% | 4 | 5 | |
| 6.03 ELL Program | | 900 | 856 | -4.9% | 1 | 1 | |
| TOTAL | 16,750 | 18,195 | 8.6% | 17 | 18 | | |



NOTE: EDUCATIONAL SPECIFICATIONS HAVE BEEN INCORPORATED INTO THE BUILDING DESIGN. AS DESIGN TEAM CONTINUES TO MEET WITH ADMINISTRATION, FACULTY AND STAFF THROUGH 60% PROCESS OVER NEXT 3-4 MONTHS, FINAL PROGRAM AND DESIGN WILL BE COMPLETED.

2.03



PROGRAM CONFORMANCE



Legend

- ADMIN & STUDENT SERVICES
- BUSINESS & COMMUNICATIONS LEARNING COMMUNITY
- CIRCULATION
- SUPPORT
- TOILETS
- WORLD LANGUAGES
- ARTS & HUMANITIES LEARNING COMMUNITY
- BUILDING SERVICES
- HEALTH & HUMAN SERVICES LEARNING COMMUNITY
- LARGE GROUP INSTRUCTIONS
- LIBRARY, LE & TECHNOLOGY
- S.T.E.M. LEARNING COMMUNITY
- SPECIAL EDUCATION
- SPECIALTY PROGRAMS - ELL PROGRAM
- STUDENT COMMONS/ DINING
- VISUAL & PERFORMING ARTS
- 9TH GRADE LEARNING COMMUNITY
- PHYS ED, HEALTH & ATHLETICS



2.04



PROGRAM CONFORMANCE



Legend

- ADMIN & STUDENT SERVICES
- CIRCULATION
- DELTA PROGRAM
- PHYS ED, HEALTH & ATHLETICS
- STUDENT COMMONS/ DINING
- SUPPORT
- TOILETS



2.05

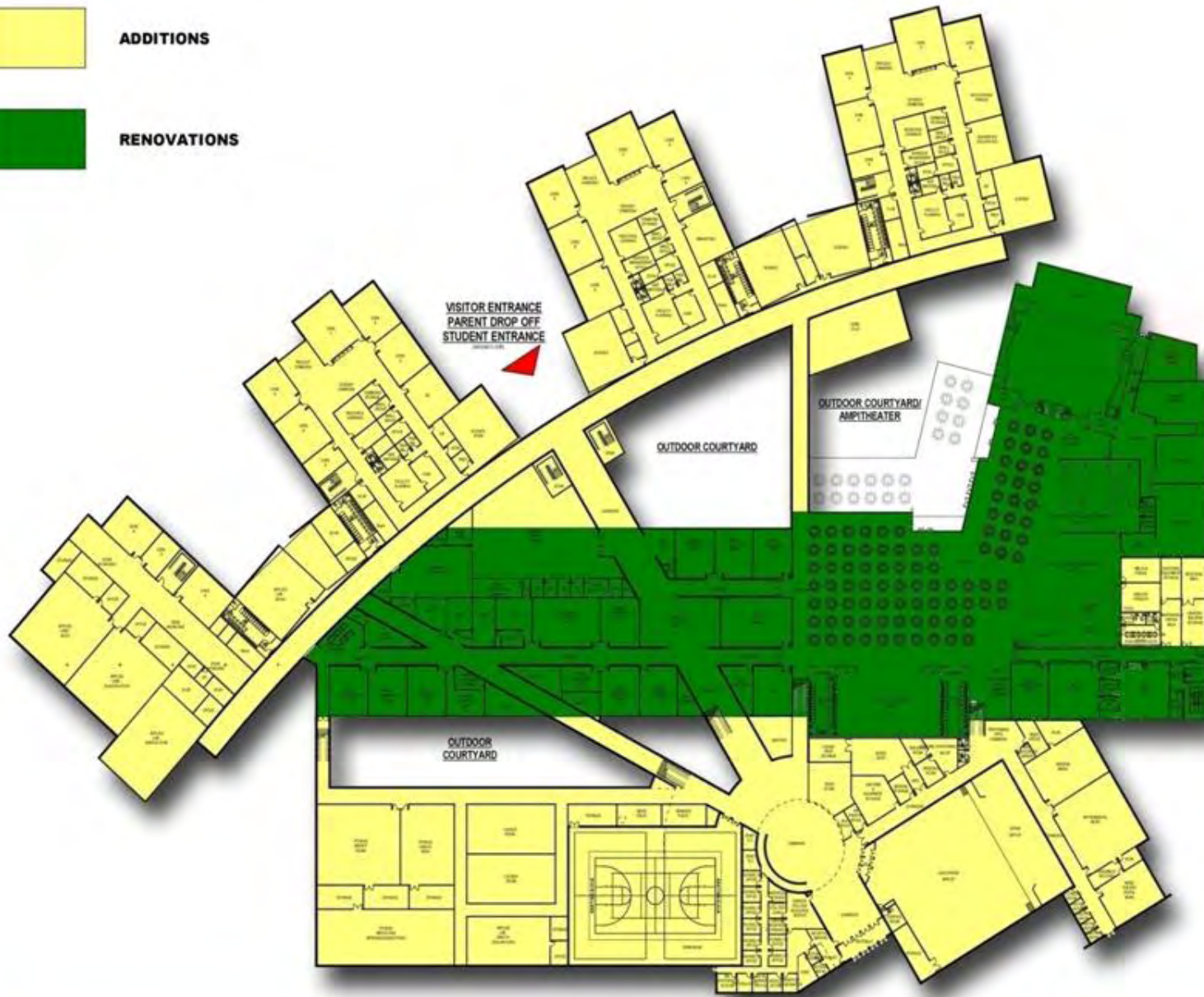
- 01 SITE
- 02 PROGRAM
- 03 BUILDING DESIGN**
- 04 ENGINEERING
- 05 SCHEDULE
- 06 PHASING
- 07 COST
- 08 LEED



ADDITIONS



RENOVATIONS



3.01

Legend

- Admin
- Classroom
- Corridor
- Science
- SGL
- Utility



3.02

Legend

- Admin
- Art
- Auditorium
- Classroom
- Corridor
- Gym
- Music
- Science
- SGI
- Utility



3.04

Legend

- Admin
- Classroom
- Corridor
- Science
- SGL
- Utility



Legend

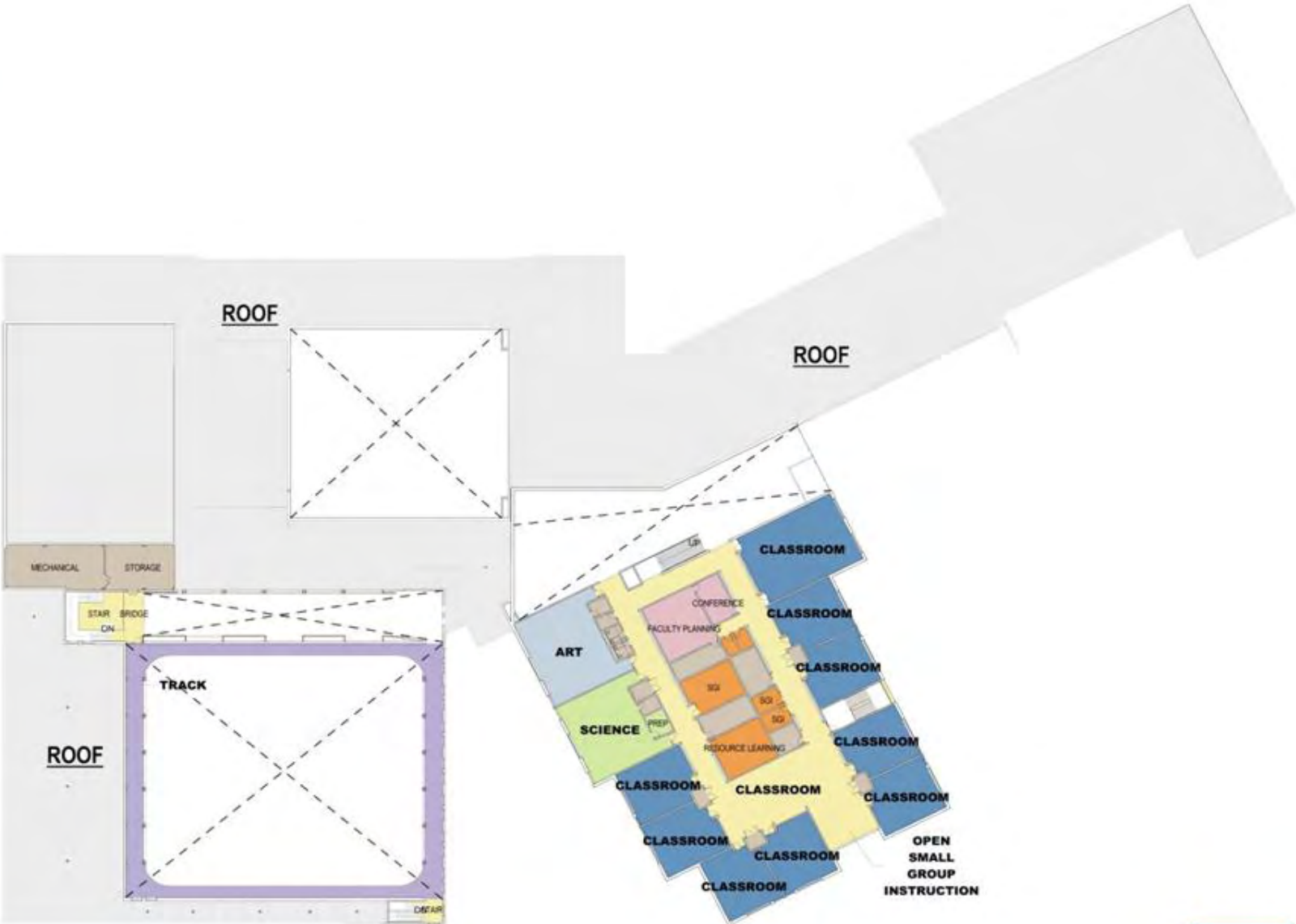
- Admin
- Cafeteria
- Classroom
- Corridor
- Gym
- Kitchen
- Locker
- Music
- Nurse
- Pool
- Science
- SGI
- Utility



3.06

Legend

- Admin
- Art
- Classroom
- Corridor
- Gym
- Science
- SGI
- Stairs
- Storage
- Toilet
- Utility



3.07

Legend

- Admin
- Classroom
- Corridor
- Science
- SGI
- Utility





VIEW FROM WESTERLY PARKWAY



VIEW FROM MAIN VEHICULAR ENTRANCE

3.09



OVERALL AERIAL VIEW



OVERALL AERIAL VIEW

- 01 SITE
- 02 PROGRAM
- 03 BUILDING DESIGN
- 04 ENGINEERING**
- 05 SCHEDULE
- 06 PHASING
- 07 COST
- 08 LEED

SYSTEM RECOMMENDED

- 01** **4 – PIPE ROOF-MOUNTED AHU**
WITH ENERGY RECOVERY & HYDRONIC
REHEAT IN VAV BOXES
CHILLER WATER COOLING

- 02** **WATER SOURCE HEAT PUMPS**
WITH CLOSED CIRCUIT & GAS-FIRED BOILER
DEDICATED OUTDOOR AIR SYSTEM (DOAS)
WITH ENERGY RECOVERY

- 03** **4 – PIPE CHILLED BEAMS**
DOAS WITH ENERGY RECOVERY

- 04** **4-PIPE SYSTEM WITH ROOF
MOUNTED AIR HANDLING UNITS**
WITH DISPLACEMENT VENTILATION
THERMAL “ICE” STORAGE TO REDUCE
SIZE OF CHILLER EQUIPMENT

4.01

SYSTEM RECOMMENDED



- 01 4 – PIPE ROOF-MOUNTED AHU
WITH ENERGY RECOVERY & HYDRONIC
REHEAT IN VAV BOXES
CHILLER WATER COOLING

- 02 **WATER SOURCE HEAT PUMPS**
WITH CLOSED CIRCUIT & GAS-FIRED BOILER
DEDICATED OUTDOOR AIR SYSTEM (DOAS)
WITH ENERGY RECOVERY

- 03 4 – PIPE CHILLED BEAMS
DOAS WITH ENERGY RECOVERY

- 04 4-PIPE SYSTEM WITH ROOF
MOUNTED AIR HANDLING UNITS
WITH DISPLACEMENT VENTILATION
THERMAL “ICE” STORAGE TO REDUCE
SIZE OF CHILLER EQUIPMENT

4.02

WHY WATER SOURCE HEAT PUMPS



- 01 **LOWEST FIRST COST**
OF ALL OPTIONS
- 02 **“EASY” ACCESS**
TO MAINTAIN EQUIPMENT
- 03 **ONE UNIT PER THERMAL ZONE**
ONE UNIT PER CLASSROOM
WILL GROUP SIMILAR
OCCUPANCIES TOGETHER
LARGER ROOF-MOUNTED UNITS
FOR LARGE OCCUPANCY AREAS
- 04 **DOAS W/ ENERGY RECOVERY
WHEELS**
CO₂ CONTROL
- 05 **BASE-MOUNTED PUMPS**
FOR WATER CIRCULATION

SYSTEMS SORTED BY CONSTRUCTION COST

(LOWEST TO HIGHEST)

1

| System type | Construction cost | Utility cost (Year 1) | Maintenance cost (Year 1) | Life cycle cost (20 Year) |
|-----------------------------------|-------------------|-----------------------|---------------------------|---------------------------|
| Water source heat pump system | \$13,860,000 | \$381,846 | \$247,500 | \$34,077,157 |
| 4-Pipe Rooftop VAV System | \$14,850,000 | \$395,195 | \$247,500 | \$35,578,863 |
| 4-Pipe Rooftop VAV System with DV | \$14,850,000 | \$328,929 | \$257,499 | \$33,658,423 |
| Four-pipe chilled beam system | \$17,325,000 | \$292,785 | \$217,800 | \$35,696,123 |

SYSTEMS SORTED BY LIFE CYCLE

(LOWEST TO HIGHEST)

2

| System type | Construction cost | Utility cost (Year 1) | Maintenance cost (Year 1) | Life cycle cost (20 Year) |
|-----------------------------------|-------------------|-----------------------|---------------------------|---------------------------|
| 4-Pipe Rooftop VAV System with DV | \$14,850,000 | \$425,504 | \$333,102 | \$33,658,423 |
| Water source heat pump system | \$13,860,000 | \$381,846 | \$247,500 | \$34,077,157 |
| 4-Pipe Rooftop VAV System | \$14,850,000 | \$395,195 | \$247,500 | \$35,578,863 |
| Four-pipe chilled beam system | \$17,325,000 | \$292,785 | \$217,800 | \$35,696,123 |

1. The utility costs are calculated using eQuest.
2. Utility cost based on 12 month average from existing high school buildings.
3. Assumptions: 3% interest rate, 2% escalation on utility costs.
4. Does not include associated general construction costs (ie heat pump closets)
5. Final building footprint will affect costs.
6. Conductivity testing data may make geothermal heat pumps a viable option.
7. \$\$ listed is not meant to be a specific dollar amount, but meant to establish a range and ranking of systems. These numbers will change as design progresses.

4.04

DESIGN INTENT

01 ALL NEW PLUMBING FIXTURES

VITREOUS CHINA FIXTURES IN BATHROOMS
S/S SINKS IN VARIOUS AREAS
MANUAL FLUSH VALVES ON WATER CLOSETS
URINALS (LOW FLOW VS WATERLESS)
BATTERY OPERATED SENSOR FAUCETS
SOLIDS INTERCEPTORS IN ART SINKS
BI-LEVEL WATER COOLERS

02 ALL NEW PIPING

DOMESTIC, WASTE, VENT, GAS, ETC.

03 GAS-FIRED HOT WATER GENERATOR

HIGH EFFICIENCY STORAGE TYPE
DISTRIBUTE 140°F WATER
MIXED DOWN AT POINT OF USE

04 FULLY SPRINKLERED BUILDING

STANDPIPE SYSTEM IN 2 PODS
FIRE PUMP REQUIRED

DESIGN INTENT

05 ACID NEUTRALIZATION SYSTEM

OUTDOOR CONCRETE VAULT TYPE

06 LIMITED RAINWATER HARVESTING SYSTEM

10,000 GALLON STORAGE TANK

GREY-WATER USE FOR PLUMBING FIXTURES OR HVAC
MAKEUP WATER

SKID-MOUNTED PROCESSING EQUIPMENT

DESIGN INTENT

- 01 NEW ELECTRICAL SERVICES
- 02 NEW POWER DISTRIBUTION
- 03 LED LIGHTING INTERIOR
- 04 DIGITAL LIGHTING MANAGEMENT SYSTEM
- 05 EMERGENCY GENERATOR SETS
- 06 DATA CENTER RELOCATION
- 07 TYPICAL CLASSROOM SYSTEMS LAYOUT
- 08 BUILDING SYSTEMS
- 09 FIRE ALARM SYSTEM
- 10 SECURITY & ACCESS CONTROL SYSTEMS

NEW ELECTRICAL SERVICES



NORTH BUILDING

EXISTING SERVICE TO REMAIN UNLESS
OPTION 2 IS SELECTED

NEW 480/277V, 3-PHASE, 4-WIRE SERVICE

SOUTH BUILDING

TWO (2) 480/277V, 3-PHASE, 4-WIRE SERVICE

NEW POWER DISTRIBUTION SERVICES



ELECTRICAL SWITCHBOARD

FOR EACH UTILITY SERVICE FEEDING THE
BUILDING

NEW PANELBOARDS

FED FROM NEAREST SWITCHBOARD AND
THROUGHOUT BUILDING

POWER WIRING & DISCONNECTING

PROVIDED FOR HVAC, PLUMBING, & OWNER
FURNISHED EQUIPMENT

LED LIGHTING INTERIOR

01 LIGHTING TO BE LED
EXCEPTION SPECIALTY FIXTURES

02 2 x 2 RECESSED FIXTURES
FOR CLASSROOMS WITH AVERAGE
35 – 50 FOOTCANDLES OF ILLUMINATION

03 2 x 4 RECESSED FIXTURES
FOR CORRIDORS WITH AVERAGE
10 – 20 FOOTCANDLES OF ILLUMINATION

04 HIGH BAY STYLE LED FIXTURES
FOR GYMNASIUM WITH AVERAGE
75 – 100 FOOTCANDLES OF ILLUMINATION

05 DECORATIVE FIXTURES
MAY BE SELECTED FOR SPACES LIKE MAIN
ENTRY, LIBRARY AND CAFETERIA.

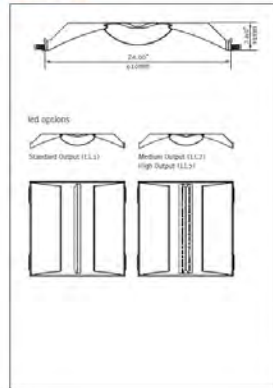
**06 ILLUMINATING ENGINEERING
SOCIETY (IES)**

RECOMMENDATIONS SHALL BE MET FOR
LIGHTING LEVELS

Amica® 2x2
LED



Dimensional Data



Features

Architectural recessed LED luminaires.
Sweeping curves and classic lines complement architecture.
Amica's center ribbed diffuser masks LED brightness and helps to create even illumination.
Amica features a shallow 3/4" housing depth which fits under the eaves of most premium applications.

Performance



TYP. CLASSROOM FIXTURES

DIGITAL LIGHTING MANAGEMENT SYSTEM

01 FOUR-BUTTON LOW VOLTAGE WALL STATION
FOR LIGHTING CONTROLS INCLUDING: ALL 'ON', ALL 'OFF',
A/V MODE, PLUG LOAD CONTROL

02 VACANCY SENSORS
TO PROVIDE AUTOMATIC 'SHUT-OFF'
LIGHTING SHALL BE MANUAL 'ON', AUTO 'OFF'

03 PHOTOSENSOR IN SELECT ROOMS
FOR DAYLIGHT HARVESTING

04 INTEGRATED CONTROL SETBACK OF HVAC
IN EACH SPACE WHEN ROOM IS UNOCCUPIED

05 INTEGRATED PLUG LOAD REDUCTION
DESIGNED TO SHUT OFF POWER TO SPECIFIC RECEPTACLES IN
CLASSROOMS AND OFFICES WHEN SPACE IS UNOCCUPIED.

BUILDING SYSTEMS

VOICE OVER INTERNET PROTOCOL (VOIP)

A NEW VOIP SYSTEM WILL BE PROVIDED BASED UPON THE SCHOOL DISTRICT'S CURRENT DISTRICT WIDE SYSTEM.

THE PHONE SYSTEM SHALL BE INTEGRATED WITH THE INTERCOM SYSTEM ALLOWING FOR INTERCOM ACCESS VIA ANY PROGRAMMED WALL OR DESK STATION.

INTERCOM SYSTEM

SHALL BE DESIGNED WITH THE ABILITY TO MAKE PROGRAM CHANGES VIA A NETWORK WEB PORTAL.

ALL OCCUPIED SPACES SHALL HAVE AN INTERCOM SPEAKER.

REMOTE SOUND SYSTEM

SHALL BE PROVIDED FOR GYMNASIUM, AUDITORIUM AND CAFETERIA.

CLOCK AND PROGRAM SYSTEM

SHALL BE WIRELESS CORRECTED ANALOG CLOCKS WITH HARDWIRED POWER.

DATA SYSTEM

COMPUTER DATA CABLING SHALL BE CATEGORY 6 RATED.
THE ENTIRE BUILDING SHALL BE PROVIDED WITH WIRELESS ACCESS POINT CONNECTIONS USING CATEGORY 6 CABLING.

4.11

FIRE ALARM SYSTEM

THE FIRE ALARM SYSTEM WILL BE A DIGITAL ADDRESSABLE SYSTEM.

VISUAL/AUDIBLE AND VISUAL NOTIFICATION DEVICES SHALL BE PROVIDED AS REQUIRED BY CODE.

SMOKE DETECTION SHALL BE PROVIDED AT ALL FIRE ALARM PANELS, STORAGE ROOMS, FIRE DOORS, DOOR OPENS, ELEVATORS, ETC., AS REQUIRED BY CODE.

CARBON MONOXIDE DETECTORS SHALL BE PROVIDED AT ALL ROOMS WITH A NATURAL GAS CONNECTION.

SECURITY + ACCESS CONTROL SYSTEMS

ACCESS CONTROL SYSTEM WILL BE BASED UPON THE DISTRICT WIDE SYSTEM.

ACCESS CONTROL CARD READERS WILL BE LOCATED AT AREAS AS DIRECTED BY THE SCHOOL DISTRICT.

SECURITY SYSTEM SHALL HAVE PANIC BUTTONS LOCATED IN THE MAIN OFFICE FOR EMERGENCY SITUATIONS.

INTERNET PROTOCOL CLOSED CIRCUIT TELEVISION (IP CCTV) COVER SHALL BE THROUGHOUT ALL GENERAL AREAS OF THE BUILDING.

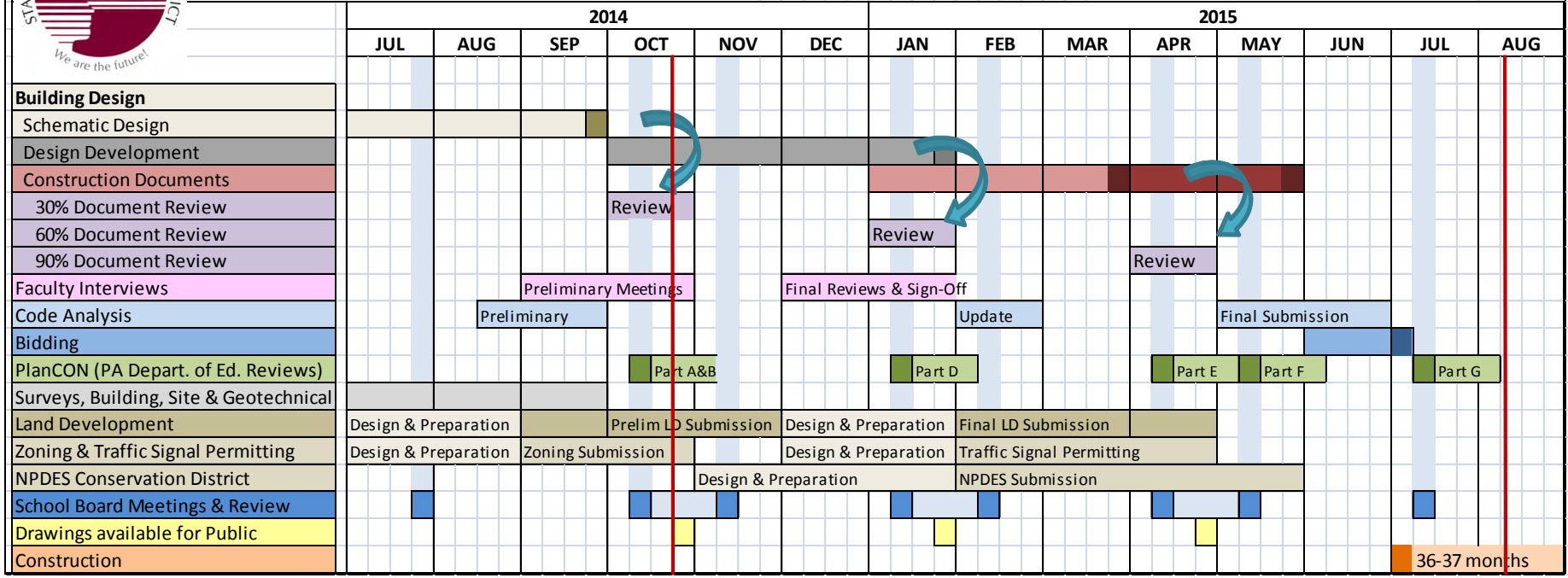
- 01 SITE
- 02 PROGRAM
- 03 BUILDING DESIGN
- 04 ENGINEERING
- 05 SCHEDULE**
- 06 PHASING
- 07 COST
- 08 LEED



STATE COLLEGE AREA SCHOOL DISTRICT

DESIGN SCHEDULE- State College Area High School

Crabtree, Rohrbaugh & Associates Architects 9-Oct-14



5.01

CR

SCHEDULE



- 01 SITE
- 02 PROGRAM
- 03 BUILDING DESIGN
- 04 ENGINEERING
- 05 SCHEDULE
- 06 PHASING**
- 07 COST
- 08 LEED

CONSIDERATIONS

- 01 **STUDENT PEDESTRIAN SAFETY**
- 02 **CONTROLLED WORK AREA SAFETY ZONES**
 FOR NORTH SITE & SOUTH SITE
- 03 **TEMPORARY ON-SITE PARKING**
 STUDENTS, STAFF, & DROP-OFFS
- 04 **SCHOOL CALENDAR**
 MAXIMUM SUMMER UTILIZATION
- 05 **TEMPORARY BAND PRACTICE AREAS**
- 06 **TEMPORARY POOL PARKING**
- 07 **BUS ACCESS + QUEUING & STUDENT**
 ENTRY POINTS

6.01

CONSIDERATIONS

- 07 OFF-SITE PARKING ANALYSIS**
NOT RECOMMENDED
- 08 LOSS/ REPLACEMENT OF PROGRAMMING**
WITH DEMO & NEW CONSTRUCTION
- 09 FOOD SERVICE AREAS**
INCLUDING EATERY, KITCHEN REPLACEMENT
& RELOCATION OF DISTRICT-WIDE KITCHEN
- 10 CONTRACTOR'S AREAS**
FIELD OFFICE & STAGING AREAS
- 11 COMPLETION OF SOUTH BUILDING**
WHILE NORTH IS BEING COMPLETED

6.02

JUNE 2015 – AUGUST 2015

Legend

| | |
|--|--|
|  | Existing Buildings |
|  | Buildings to be Demolished |
|  | New Construction |
|  | Renovation |
|  | Construction Trailer and Site Laydown Area |
|  | Site Fence / Limit of Construction |
|  | Additional Parking Locations for Consideration |
|  | Pool Parking |

Key Changes

- South Building Parking Lots Prepped for Construction

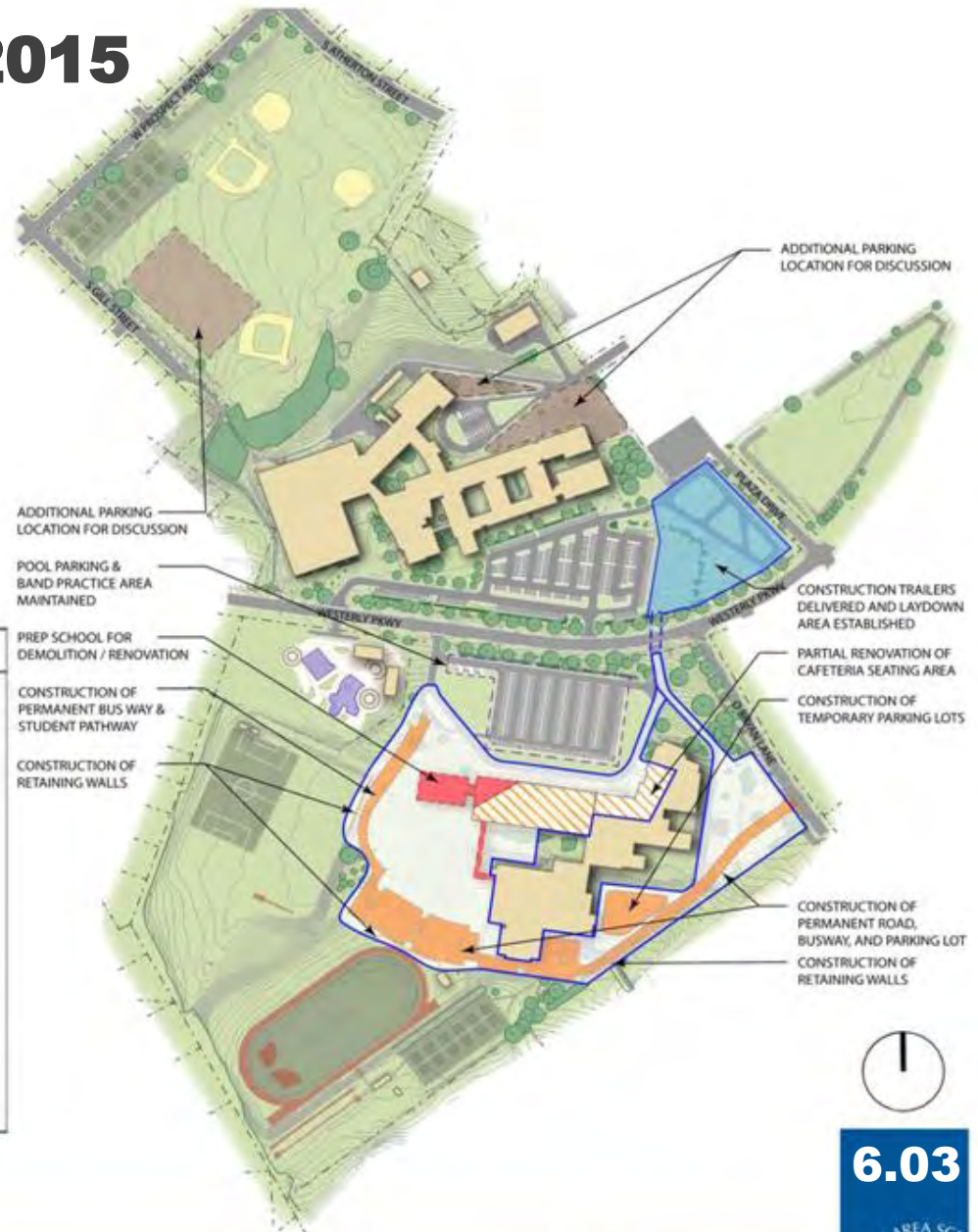
| | | |
|---------------------|---|-----------|
| Parking Spaces Lost | - | 35 Spaces |
|---------------------|---|-----------|
- Temporary Parking Lots Constructed

| | | |
|-------------------------|---|-----------|
| Parking Spaces Provided | - | 75 Spaces |
|-------------------------|---|-----------|
- Permanent Parking Lot Constructed

| | | |
|----------------------|---|------------|
| Parking Spaces Added | - | 197 Spaces |
|----------------------|---|------------|
- Partial Demolition of South Building

| | | |
|--------------------|---|---------------|
| Program Space Lost | - | XX Classrooms |
|--------------------|---|---------------|
- Partial Renovation of Cafeteria Seating Area

| | | |
|--------------------|---|------------------------------------|
| Program Space Lost | - | 0 (Completed prior to school year) |
|--------------------|---|------------------------------------|
- Bus Loop Established



6.03

JANUARY 2017 – MAY 2017

Legend

-  Existing Buildings
-  Demolished Buildings
-  New Construction
-  Renovation
-  Construction Trailer and Site Laydown Area
-  Site Fence / Limit of Construction
-  Temporary Parking Lots
-  Dedicated Student Pathway
-  School Bus Queue

Key Changes

- **Temporary Parking Lots**
 - Spaces Added (Ph 1) - 50 Spaces
 - Spaces Removed (Ph 2) - 50 Spaces
- **Permanent Parking Lots Constructed**
 - Spaces Added (Ph 1) - 226 Spaces
 - 52 Spaces Add'l for Pool
- **Remaining Demo / Reno of South Building**
 - Program Space Lost (Ph 1) - XX Classrooms
 - Program Space Lost (Ph 2) - XX Classrooms
- **Construction Started on Remaining South Bldg**
- **Renovation of Existing South Building**
- **West Wings Occupied by Students (Jan 2017)**
 - Program Space Added - XX Classrooms
- **East Wings Occupied by Students (Sept 2017)**
 - Program Space Added - XX Classrooms



6.05



PHASE 2.1



JUNE 2017 – AUGUST 2017

Legend

-  Existing Buildings
-  Demolition
-  New Construction
-  Renovation
-  Construction Trailer and Site Laydown Area
-  Site Fence / Limit of Construction
-  Temporary Parking Lots
-  Pool Parking

Key Changes





- **South Building Parking Lot Demolished**
 Spaces Lost (Ph 1) - 290 Spaces
- **Permanent Parking Lots Constructed**
 Spaces Added (Ph 1) - 226 Spaces
 Spaces Added (Ph 2.2) - 88 Spaces
 - 20 Spaces for Bus Queue
- **Remaining Renovation of South Building**
 Program Space Lost (Ph 1) - XX Classrooms
 Program Space Lost (Ph 2) - XX Classrooms
- **South Bldg Wings Completed & Occupiable by Students**
 Program Space Added - XX Classrooms
- **Continued Construction of South Building**
- **Busway Constructed**



6.06

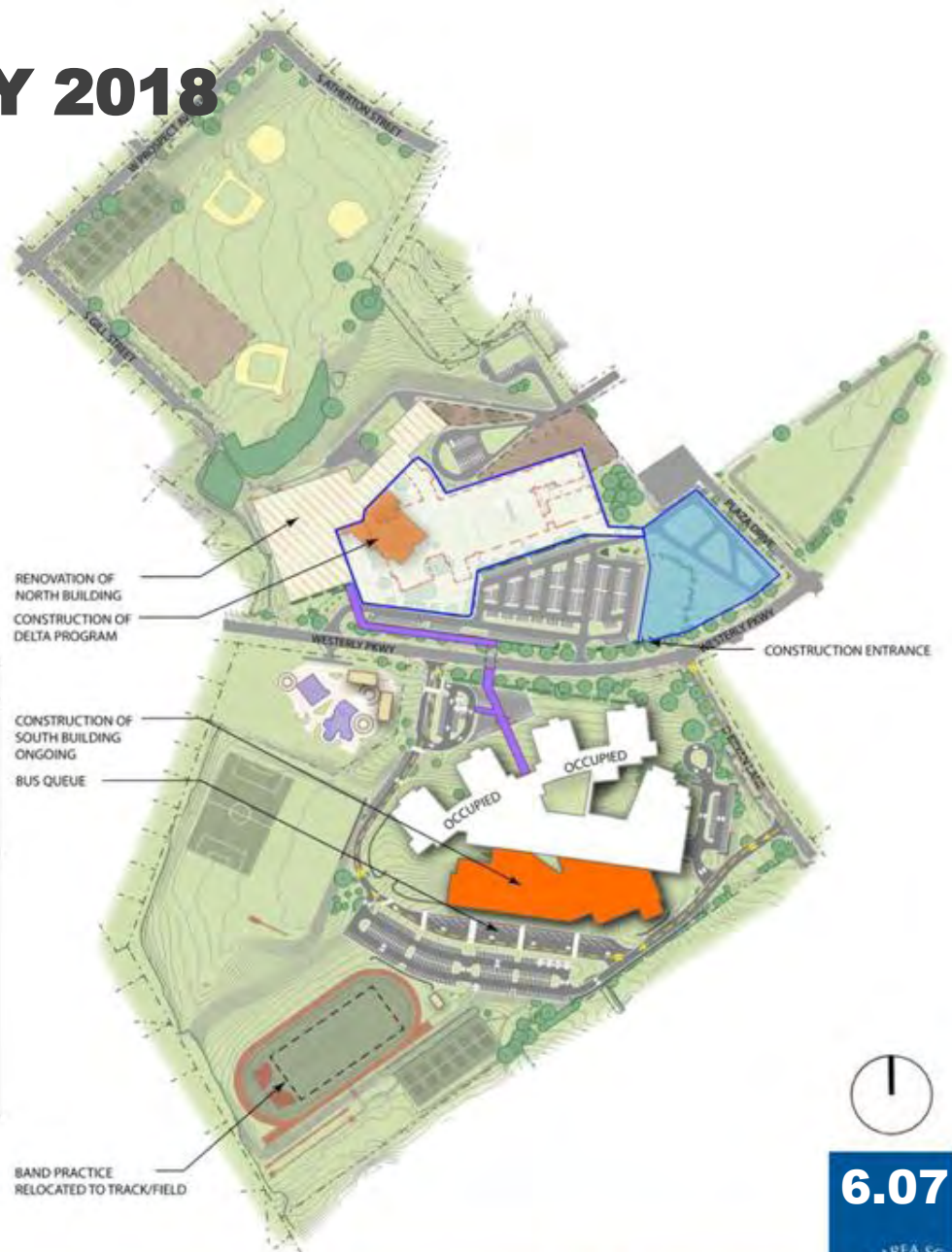
SEPTEMBER 2017 – MAY 2018

Legend

-  Existing Buildings
-  Demolished Buildings
-  New Construction
-  Renovation
-  Construction Trailer and Site Laydown Area
-  Site Fence / Limit of Construction
-  Dedicated Student Pathway

Key Changes

- **Permanent Parking Lots Constructed**
 - Spaces Added (Ph 1) - 226 Spaces
 - Spaces Added (Ph 2) - 52 Spaces Add'l for Pool
 - Spaces Added (Ph 2) - 88 Spaces
 - Spaces Added (Ph 2) - 20 Spaces for Bus Queue
- **Demolition of North Building**
 - Program Space Lost (Ph 3) - XX Classrooms
- **Renovation of North Building**
 - Program Space Lost (Ph 3) - XX Classrooms
- **South Building Completed**
 - Program Space Total - XX Classrooms
- **Construction of Delta Program**



6.07

JUNE 2018 – JULY 2018

Legend

-  Existing Buildings
-  Demolished Buildings
-  New Construction
-  Renovation
-  Construction Trailer and Site Laydown Area
-  Site Fence / Limit of Construction
-  Temporary Parking Lots
-  Dedicated Student Pathway
-  School Bus Queue

Key Changes

- North and South Buildings Complete
- Sitework and North Parking Lot Constructed
- Construction Trailers Demobilized
- All Construction Completed



6.08

- 01 SITE
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- SEPTEMBER 26, 2014** 30% DRAWINGS TO MASSARO
- SEPTEMBER 30, 2014** CRA/SCASD/MCMS MET TO DISCUSS 30%
- OCTOBER, 2014** CRA + MCMS INDEPENDENT COST ESTIMATES
- LATE OCTOBER, 2014** ANALYSIS OF COST ESTIMATES
“BELT & SUSPENDERS” APPROACH
- LATE OCTOBER, 2014** COST ESTIMATE REVIEWED BY SCASD
- NOVEMBER 3, 2014** COST ESTIMATE PRESENTED TO BOARD
- NOVEMBER 10, 2014** COST ESTIMATE TENTATIVELY APPROVED

PRELIMINARY ALTERNATES

LIST WILL EVOLVE AS WE PROCEED TO
60% & 90% SUBMISSIONS

01 VEGETATED ROOF AT SOUTH BUILDING

02 SOLAR ARRAY AT SOUTH BUILDING

03 TERRAZZO IN CORRIDORS

04 UNCLASSIFIED SOILS

05 ROOFING

Reimbursement Estimate

| | | | | | |
|----|---|--------------------|------------|--------------------------------|---|
| 1 | Project Type | | | Secondary | |
| 2 | Current Enrollment | | | 2,387 | <i>PDE 2011-2012 report</i> |
| 3 | Current Enrollment + 10% | | | 2,626 | |
| 4 | PDE Highest Projected Enrollment (PDE 7/2011) | | | 2,413 | <i>PDE 7/2011 report</i> |
| 5 | Highest Projected Enrollment for Calculation | | | 2,626 | <i>Current Enrollment + 10%</i> |
| 6 | Planned Special Education Rooms | | | 5 | <i>Amy Yurko Program 1/31/2013</i> |
| 7 | Planned Special Education Capacity | | | 125 | |
| 8 | Reimbursement Capacity Basis | | | 2751 | |
| 8 | Rated Pupil Capacity | Capacity | RPC factor | | |
| 9 | | 2751 | 1.11 | 3053 | <i>RPC</i> |
| | Legislated Per Pupil Reimbursement Allowance | | | \$6,200 | |
| | CTC FTE | | | 462 | |
| 10 | Legislated Per Pupil Reimbursement Allowance | | | \$7,600 | |
| 11 | Maximum Eligible Reimbursement Basis | High School | | \$18,930,317 | <i>Gross</i> |
| | Maximum Eligible Reimbursement Basis | CTC | | \$3,511,200 | <i>Gross</i> |
| | | Gross Total | | \$22,441,517 | <i>Gross</i> |
| 12 | District MVAR or CARF | | | 0.2891 | <i>New CARF, PDE Part D attachment C, April 8, 2013</i> |
| 13 | Existing Building Renovation- 10% Increase | | | \$648,784 | |
| 14 | Sustainable Design (LEED)- 10% Increase | | | \$648,784 | |
| 15 | Estimated <u>NET</u> Reimbursement * | | | \$5,500,000-\$6,500,000 | <i>NET</i> |

* This approximate estimate will change depending on final project scope and costs, validated by 60% Submission.

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Project Checklist

21 1 2 Sustainable Sites Possible Points: 24

Table with columns for Y, ?, N, Prereq, Credit, Description, and Points. Includes items like Construction Activity Pollution Prevention, Environmental Site Assessment, Site Selection, etc.

6 5 Water Efficiency Possible Points: 11

Table with columns for Y, ?, N, Prereq, Credit, Description, and Points. Includes items like Water Use Reduction-20% Reduction, Water Efficient Landscaping, etc.

17 7 1 Energy and Atmosphere Possible Points: 33

Table with columns for Y, ?, N, Prereq, Credit, Description, and Points. Includes items like Fundamental Commissioning of Building Energy Systems, Minimum Energy Performance, etc.

6 1 5 Materials and Resources Possible Points: 13

Table with columns for Y, ?, N, Prereq, Credit, Description, and Points. Includes items like Storage and Collection of Recyclables, Building Reuse-Maintain Existing Walls, Floors, and Roof, etc.

Materials and Resources, Continued

Table with columns for Y, ?, N, Credit, Description, and Points. Includes items like Materials Reuse, Recycled Content, Regional Materials, etc.

13 4 2 Indoor Environmental Quality Possible Points: 19

Table with columns for Y, ?, N, Prereq, Credit, Description, and Points. Includes items like Minimum Indoor Air Quality Performance, Environmental Tobacco Smoke (ETS) Control, etc.

6 Innovation and Design Process Possible Points: 6

Table with columns for Y, ?, N, Credit, Description, and Points. Includes items like Innovation in Design: Integrated Pest Management, Innovation in Design: Green Cleaning, etc.

4 Regional Priority Credits Possible Points: 4

Table with columns for Y, ?, N, Credit, Description, and Points. Includes items like Regional Priority: SSc3 Brownfield Redevelopment (Asbestos), Regional Priority: SSc4.4 Alternate Transportation, etc.

73 18 10 Total Possible Points: 110

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

NOTE: LEED CERTIFICATION MAY BE AFFECTED BY PEDA & DCED GRANTS WHICH WILL BE AWARDED IN THE NEXT MONTH. DESIGN TEAM HAS FULLY INTEGRATED LEED CERTIFICATION PROCESS INTO DESIGN AT THIS TIME INCLUDING INITIAL SPECIFICATIONS COMPLETED FOR THE 30% CERTIFICATION.



STATE COLLEGE AREA HIGH SCHOOL

30% SUBMISSION



**INTRODUCTION OF BREAK-OUT
SESSION LEADERS**

STATE COLLEGE AREA HIGH SCHOOL

30% SUBMISSION



NEXT UPDATES

60% SUBMISSION FEBRUARY 2015

90% SUBMISSION SPRING 2015

STATE COLLEGE AREA HIGH SCHOOL

30% SUBMISSION



MORE INFORMATION AT:

<http://www.scasd.org/Page/20967>