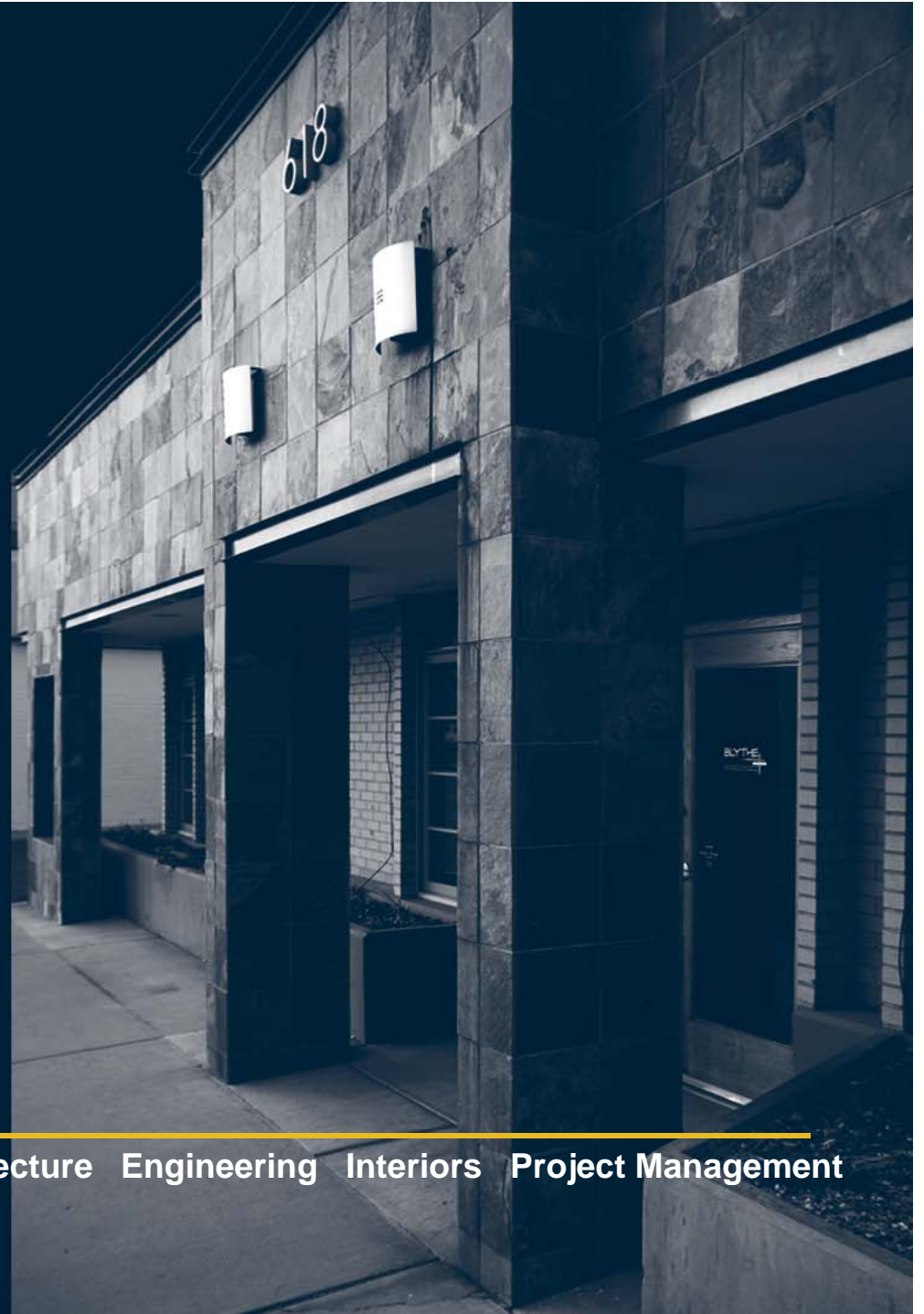


**BLYTHE**  
GROUP **co.**



Architecture Engineering Interiors Project Management



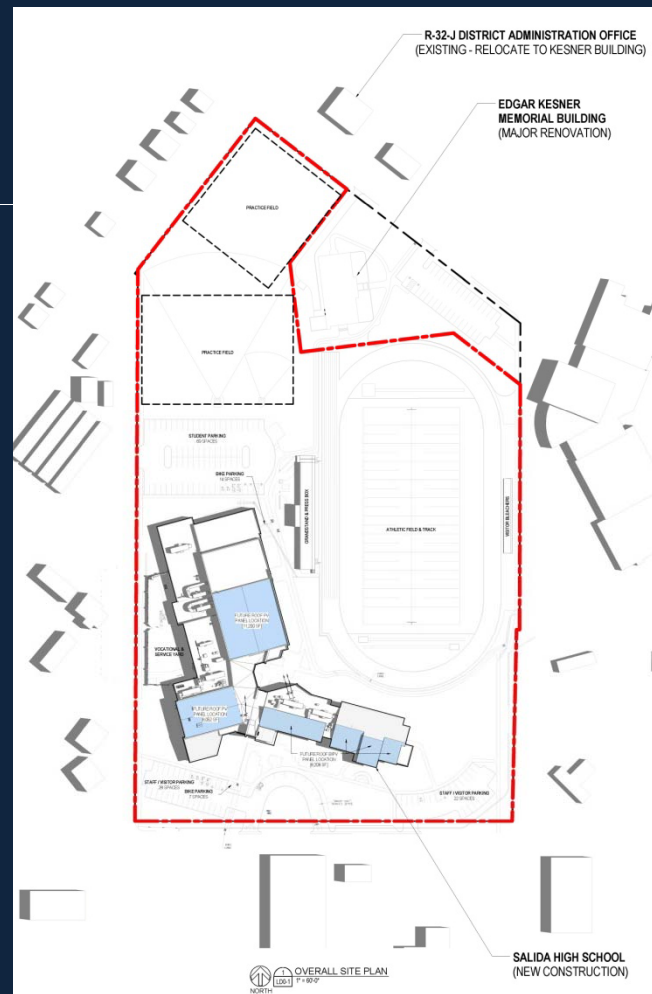


# sustainability

## Salida School District Salida High School

LEED Review Meeting

May 30, 2012





# sustainability

## LEED Scorecard Review

### LEED Scorecard [DPR Application] – 04/20/12

- WEc4 – Process Water Use Reduction (+1 Y ← M)
- MRc5 – Regional Materials (-1 Y → M)
- IEQc8.1 – Daylight & Views – Daylight (-2 Y → M; -1 M → N)
- IEQc9 – Enhanced Acoustical Performance (-1 Y → M)
- IDc1.1 – TBD ID Credit (+1 Y ← M)

### LEED Scorecard [DPR Comment Impact] – 05/21/12

- SSc4.1 – Alternative Transportation – Public Transportation (-4 Y → N)
- SSc8 – Light Pollution Reduction (-1 Y → M)
- WEc1 – Water Efficient Landscaping (-2 Y → M)
- IEQc8.1 – Daylight & Views – Daylight (-1 M → N)

### LEED CERTIFICATION LEVELS

- Certified: 40-49 points
- Silver: 50-59 points
- Gold: 60-79 points
- Platinum: 80+ points (100)

### 01/17/12 LEED Scorecard Review

- 63 YES
- 15 MAYBE
- 34 NO

### 04/20/12 LEED Scorecard Review

- 61 YES
- 16 MAYBE
- 35 NO

### 05/21/12 LEED Scorecard Review

- 54 YES
- 17 MAYBE
- 41 NO



# sustainability

## LEED Scorecard Review

### LEED Scorecard [Contractor Update] – 05/30/12

- MRc2 – Construction Waste Management – 75% (+1 Y ← M)
- MRc4 – Recycled Content -10% (-2 Y → M / IDc1.2 open)
- MRc7 – Certified Wood – 95% (+1 Y ← IDc1.2)

### LEED CERTIFICATION LEVELS

- Certified: 40-49 points
- Silver: 50-59 points
- Gold: 60-79 points
- Platinum: 80+ points (100)

### 05/30/12 LEED Scorecard Review

- 54 YES
- 17 MAYBE
- 41 NO





# sustainability

## LEED DPA Review

### SUSTAINABLE SITES (SS)

DPA REVIEW IMPACT: (-4 Y → N)

- Qualifying Bus Lines have regularly scheduled, set route

### SSc4.1 – Alternative Transportation – Public Transportation Access

- **Option 2 – Bus Stop Proximity**
  - (2) Public or Private Bus Lines with stops within ¼-mile of project
  - SSD School Bus
  - Chaffee Shuttle is non-qualifying on-call service
  - GBCI interprets available bus lines as non-compliant (Chaffee Shuttle bus to Pueblo & Black Hills Stage Line bus to Denver)
- **Alternate Options**
  - Option 1: Rail Station Proximity – ½-mile of commuter rail, light rail or subway station
  - Option 3: Pedestrian Access – 80%+ of students live within 1-1/2 mile walking distance (06/14/11
    - 31.8% of addresses located outside of boundary)



# sustainability

## LEED DPA Review

### SUSTAINABLE SITES (SS)

#### SSc4.3 – Alternative Transportation – Low-Emitting & Fuel-Efficient Vehicles

#### SSc4.4 – Alternative Transportation – Parking Capacity

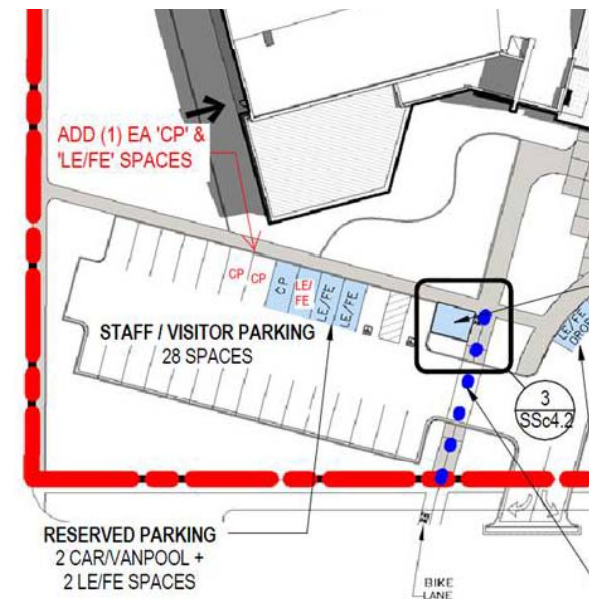
##### ▪ Off-Site Parking

- (9) Spaces identified as off-site parking to meet local City of Salida Zoning Code (128 spaces)
- GBCI requests that off-site spaces be included in calculations for provision of reserved LE/FE spaces & reserved Van/Car Pool spaces

##### ▪ Project Team Response

- Add (1) 'LE/FE' & (1) 'CP' reserved space & associated signage to SW parking lot

DPA REVIEW IMPACT:  
SSc4.3 (2 Y maintained)  
SSc4.4 (2 Y maintained)





# sustainability

## LEED DPA Review

### SUSTAINABLE SITES (SS)

#### SSc6.2 – Stormwater Design – Quality Control

- **TSS Rate at Raingardens**

- Stormwater runoff from 90% of average annual rainfall is captured or treated such that 80% of the average post-development TSS is removed
- GBCI requests that TSS rate for raingardens be typical based upon industry standards

- **Project Team Response**

- Crabtree has provided narrative response indicating TSS removal rates were taken from EPA Report 'Stormwater Best Management Practices (BMP) Performance Analysis', prepared by Tetra Tech Inc. & has provided PDF of report for reference by GBCI

#### DPA REVIEW IMPACT: SSc6.2 (1 Y maintained)

- TSS = Total Suspended Solids
- Industry Standards:
  - State, Local, National Sources
  - In-field Performance Testing
  - Manufacturer Specification
- EPA Report 'Stormwater BMP Performance Analysis':
  - Bioretention Areas - 94% TSS removal efficiency (pg. 43)
  - Infiltration Trenches - 98% TSS removal efficiency (pg. 42)
  - Efficiencies utilized were 90% & 80% (not all stormwater captured by BMPs)



# sustainability

## LEED DPA Review

### SUSTAINABLE SITES (SS)

#### SSc8 – Light Pollution Reduction

##### ▪ Sports Field Lighting

- Exempted from Lighting Power Density (LPD) requirements of credit; Must show light trespass calculations for condition in which only sports field lighting is turned on
- Photometric Plans at Submittal 265668-001 indicate values ranging from 0.0-2.5 fc (horizontal) & 0.4-3.5 fc (vertical) along East property boundary

##### ▪ Project Team Response

- Contact Musco Lighting to explore available options for cut-off, deflectors, etc. to meet trespass requirements
- Submit CIR: light trespass affects public property, State Street & Salida Middle School; used on limited basis; auto shut-off at 11:00 pm

#### DPA REVIEW IMPACT: (-1 Y → M)

- **LZ-2: Low** (primarily residential zones, neighborhood business districts, light industrial with limited nighttime use and residential mixed-use areas)
  - 0.3 fc at boundary
  - 0.01 fc 10' beyond boundary
- **CREDIT INTERPRETATION REQUEST/RULING (CIR)**
  - Applicable only to 1 project
  - \$220 / Credit
  - 3-4 Week Turnaround
  - Reviewed by GBCI
  - Not Published



# sustainability

## LEED DPA Review

### SUSTAINABLE SITES (SS)

#### SSc10 – Joint Use of Facilities

- **Option 1 – (3) Spaces available for Public Use**
  - Cafeteria vs. Commons – GBCI questioned programming of shared space
  - Joint Parking – GBCI interprets space to be shared by other facilities, not on-site users
- **Project Team Response**
  - BG to provide narrative to clarify programmed use of Commons (identical to Cafeteria)
  - Substitute Auditorium as proposed share space in lieu of Joint Parking – utilize same Restrooms D154 & D155 available for Commons – previously submitted District Policy covers use as shared space

**DPA REVIEW IMPACT:**  
SSc10 (1 Y maintained)

- **Option 1 – Shared Public Spaces**
  - Auditorium
  - Gymnasium
  - Cafeteria
  - 1 or more Classrooms
  - Playing Fields
  - Joint Parking
- **Auditorium Access**
  - Auditorium C111 & Stage C113
  - Backstage C119 & C121
  - Vestibules C109 & C129
  - Corridor C123 (North)
  - Choir/Band C115
  - IT Work C124 & Office C125
  - Mechanical C128
  - Kitchen C131



# sustainability

## LEED DPA Review

### WATER EFFICIENCY (WE)

#### WEc1 – Water Efficient Landscaping

- **Option 1 – Reduce potable water consumption for irrigation by 50% from calculated midsummer baseline case**
  - Synthetic Turf is non-vegetated, hardscape surface
  - remove area from both baseline (equivalent area of natural turf) & proposed design cases
- **Project Team Response**
  - Removal of area results in ~47% reduction (<50%)
  - Option to substitute more drought tolerant grass species for areas of Dryland Grass & Athletic Field Turf (not recommended by Landscape Architect):
    - Substitute species do not tolerate ‘wet feet’ for application at base of raingardens
    - Substitute species do not hold up as well to foot traffic (athletic fields used every day in Summer & Fall)

DPA REVIEW IMPACT: (-2 Y → N)

- Option 1 – Reduce by 50%
- Option 2 – No Potable Water Use or Irrigation [RPc4]

Synthetic Turf Area = 91,965 SF



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## LEED DPA Review

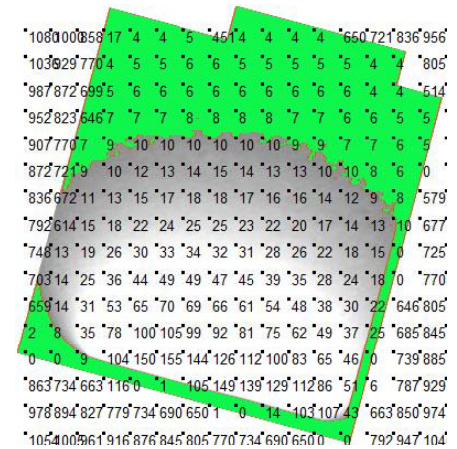
### INDOOR ENVIRONMENTAL QUALITY (IEQ)

DPA REVIEW IMPACT: (-1 M → N)

### IEQc8.1 – Daylight & Views - Daylight

- **Option 1 – Simulation**
  - Computer simulations demonstrating spaces achieve daylight illuminance levels of 10-500 fc in clear sky condition on 09/21 at 9am & 3pm
- **Option 2 – Prescriptive**
  - Achieve value, calculated as product of visible light transmittance (VLT) x window-to-floor area ratio (WFR) of daylight zone between 0.150 and 0.180
- **Option 3 – Measurement**
  - Demonstrate minimum daylight illumination level of 10 fc achieved via measurement on min 10' grid
- **Project Team Response**
  - Pursuing Option 3 for Core Learning/CR spaces
  - Explore toplighting at spaces not meeting 75%

- Core Learning/CR – 75% (1 pt)
- Core Learning/CR – 90% (+1 pt)
- Regularly Occupied – 75% (+1 pt)



Classroom D202 – 79%





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## LEED DPA Review

### INDOOR ENVIRONMENTAL QUALITY (IEQ)

#### CR SPACES NOT MEETING 75%:

- Wood Shop A136 (2,022 SF)
- Drafting Room B100 (715 SF)
- Classroom B105 (595 SF)
- Auto Shop B109 (2,236 SF)
- Choir/Band C115 (1,379 SF)
- Art D134 (1,213 SF)
- Science D207, D211 & D212 (2,835 SF)

- 10,995 SF OF 24,386 SF (45%)

#### GBCI REVIEW OF REGULARLY OCCUPIED SPACES:

- Auditorium C111
- Main Gym B114
- Wrestling A133
- Training A135





# sustainability

## LEED DPA Review

### MECHANICAL / PLUMBING DPA CREDIT REVIEW

- EAp2 – Minimum Energy Performance
- EAp3 – Fundamental Refrigerant Management
- EAc1 – Optimize Energy Performance
- EAc4 – Enhanced Refrigerant Management
- IEQp1 – Indoor Air Quality Performance
- IEQc2 – Increased Ventilation
- IEQc6.1 – Controllability of Systems – Lighting
- IEQc6.2 – Controllability of Systems – Thermal Comfort

### ENERGY & ATMOSPHERE (EA) & INDOOR ENVIRONMENTAL QUALITY (IEQ)

DPA REVIEW IMPACT: TBD

- **Clarifications at Credit Forms**
  - Signatures
  - Baseline vs. Proposed Inputs
  - Consistency across Credits
- **DPA to determine GBCI Focus**
  - Energy Model Study – may be some potential to elevate credit points (1-2 points?)
  - 06/08/12 – BGCE deadline for DFA Energy Model Review
- **LEED MEP Review Meeting**
  - Tuesday, 06/05/12, 10:00 AM





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## LEED Construction Review

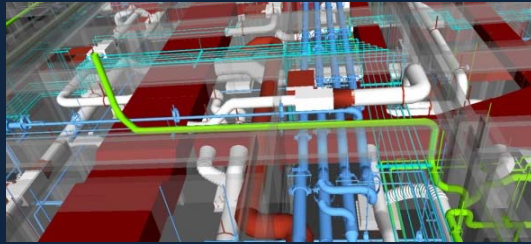
### CONSTRUCTION APPLICATION

### LEED CONSTRUCTION APPLICATION CREDIT REVIEW

- **CONTRACTOR** – Haselden/Diesslin Structures
  - MRc2 – Construction Waste Management
  - MRc3 – Materials Reuse
  - MRc4 – Recycled Content
  - MRc5 – Regional Materials
  - MRc6 – Rapidly Renewable Materials
  - MRc7 – Certified Wood
  - IEQc3.1 & 3.2 – Construction IAQMP – During Construction & Before Occupancy
  - IEQc4.1 – L-E Materials: Adhesives & Sealants
  - IEQc4.2 – L-E Materials: Paints & Coatings
  - IEQc4.4 – L-E Materials: Composite Wood
- **DESIGN TEAM** – Blythe Group + co. & Consultants
  - IEQc4.5 – L-E Materials: Furniture

### CREDIT REVIEW IMPACT:

- **MRc2 – CWM (+1 Y ← M)**
  - 50% Diversion (1 pt)
  - 75% Diversion (+1 pt)
- **MRc4 – Recycled (-2 Y → M)**
  - 10% Material Cost (1 pt)
  - 20% Material Cost (+1 pt)
  - 30% Material Cost (+1 pt – EP)
- **MRc5 – Regional (-1 Y → M)**
  - 10% Material Cost (1 pt)
  - 20% Material Cost (+1 pt)
- **MRc7 – Cert Wood (+1 Y ← M)**
  - 50% New Wood (1 pt)
  - 95% New Wood (+1 pt – EP)



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## LEED Construction Review

CONSTRUCTION APPLICATION

### LEED CONSTRUCTION APPLICATION CREDIT REVIEW

- COMMISSIONING AGENT – Mike Renner (ESA)
  - EAp1 – Fundamental Commissioning of Building Energy Systems
  - EAc3 – Enhanced Commissioning
  - EAc5 – Measurement & Verification
  
- OWNER – Salida School District / RLH Engineering
  - EAp6 – Green Power
  - IDc1.1 – TBD
  - IDc1.3 – Green Cleaning Policy
  - IDc1.4 – GC – Indoor Integrated Pest Management
  - IDc3 – School as a Teaching Tool





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## LEED Strategies

LEED CREDIT ASSESSMENT

### ASSESSMENT OF 'NO' CREDITS

- SSc3 – Brownfield Redevelopment [1]
  - Site not defined as contaminated or brownfield
- SSc4.1 – Alternative Transportation – Public Transportation Access [4]
  - No qualifying public transportation lines
- SSc5.1 – Site Development – Protect / Restore Habitat [1]
  - Restore 50% (w/ building) or 20% (w/o building) of site area with native or adapted vegetation
- WEc2 – Innovative Wastewater Technologies [2]
  - Reduce potable water use for sewage conveyance by 50% or treat 50% of wastewater on-site to tertiary standards



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## LEED Strategies

### LEED CREDIT ASSESSMENT

#### ASSESSMENT OF 'NO' CREDITS

- EAc4 – Enhanced Refrigerant Management [1]
  - Base building HVAC&R equipment refrigerants to comply with maximum threshold for combined contributions to ozone depletion & global warming potential
- MRc1.1 – Building Reuse – Exist Walls, Floors, Roof [2]
  - Maintain existing building structure & envelope
- MRc1.2 – Building Reuse – Interior Non-Structural [1]
  - Use existing interior non-structural element in 50% of completed building (walls, doors, floor coverings, ceilings)
- MRc3 – Materials Reuse [2]
  - Use salvaged, refurbished or reused materials for 5% of total materials value (by cost)





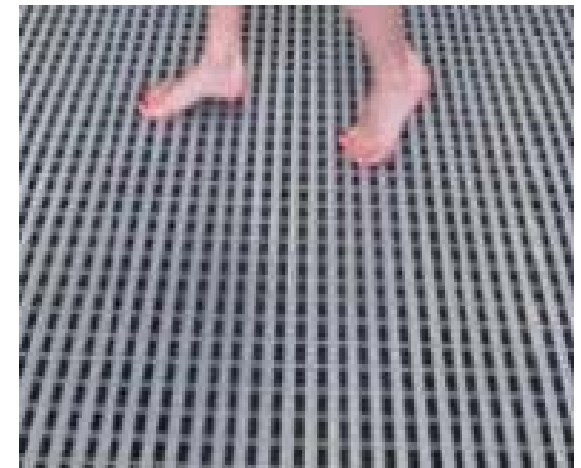
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## LEED Strategies

LEED CREDIT ASSESSMENT

### ASSESSMENT OF 'NO' CREDITS

- MRc6 – Rapidly Renewable Materials [1]
  - Use rapidly renewable materials for 2.5% of total materials value (by cost)
  
- IEQc5 – Indoor Chemical & Pollutant Source Control [1]
  - 10' long entryway systems at regularly used entrances
  - Sufficient exhaust of hazardous gases & chemicals (garages, housekeeping & laundry areas, science labs, prep rooms, art rooms, copy/print rooms)
    - Negative pressure
    - Self-closing doors
    - Deck-to-deck partitions or hard ceiling
    - Exhaust rate 0.5 cfm, no air recirculation
    - Pressure differential to surrounding spaces
  - New MERV 13 air filters prior to occupancy
  - Containers for hazardous liquid waste disposal





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## LEED Strategies

### LEED CREDIT ASSESSMENT

#### ASSESSMENT OF 'NO' CREDITS

- IEQc7.1 – Thermal Comfort – Design [1]
  - Thermal comfort bubble compromised at shoulder seasons (May, September) with outside air temperatures  $> 60^{\circ}$  F - no cooling at Gyms, Vocational, Athletic spaces [ASHRAE 55-2004]
- IEQc7.2 – Thermal Comfort – Verification [1]
  - Achieve IEQc7.1
  - Thermal Comfort Survey of building occupants 6-18 months after occupancy
  - Agree to develop plan for corrective action if  $> 20\%$  unsatisfied with thermal comfort in building





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## LEED Strategies

### LEED CREDIT ASSESSMENT

#### ASSESSMENT OF 'NO' CREDITS

- IEQc8.2 – Daylight & Views – Views [1]
  - Direct line-of-sight to outdoors via glazing between 30"-90" AFF for 90% of regularly occupied spaces
- IEQc10 – Mold Prevention [1]
  - Achieve IEQc3.1 – Construction IAQMP – During Construction
  - Achieve IEQc7.1 – Thermal Comfort - Design
  - Achieve IEQc7.2 – Thermal Comfort - Verification
  - Provide HVAC systems & controls to limit RH to 60% during all load conditions, occupied & non-occupied
  - Develop & Implement ongoing IAQMP





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## LEED Strategies

LEED CREDIT ASSESSMENT

### ASSESSMENT OF 'MAYBE' CREDITS

- SSc7.1 – Heat Island Effect – Non-Roof (+1)
- SSc8 – Light Pollution Reduction (+1)
- WEc1 – Water Efficient Landscaping (+2)
- **WEc3 – Water Use Reduction [move to 'NO']**
- EAc1 – Optimize Energy Performance (+1-2)
- EAc2 – On-Site Renewable Energy (+1-7)
- EAc6 – Green Power (+2)
- MRc4 – Recycled Content – 20% Materials Cost (+1)
- MRc5 – Regional Materials – 10% Materials Cost (+1)
- IEQc8.1 – Daylight & Views – Daylight – 75% CR (+1)
- IEQc9 – Enhanced Acoustical Performance (+1)



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## LEED Strategies

### SUSTAINABLE SITES (SS)

#### SSc7.1 – Heat Island Effect – Non-Roof [C: + 1 pt]

- 50% of Site Hardscape shaded or SRI > 29
- **Materials Testing for SRI Values**
  - **Accredited Materials Testing Laboratory (7)**
    - Architectural Testing (Fresno, CA)  
\$350 per material / \$200 report fee
  - **Solar Reflectance Index (SRI) (ASTM E1980-01)** – material’s ability to reject solar heat
  - **Emissivity (ASTM C1371)** – ratio of radiation emitted by a surface compared to black body at same temperature
  - **Solar Reflectance (Albedo) (ASTM C1549)** – ability of material to reflect sunlight
- **Cool Roof Rating Council (CRRC)**  
[www.coolroofs.org](http://www.coolroofs.org)

TOTAL SITE AREA: 574,943 SF  
BUILDING FOOTPRINT: 73,862 SF  
OPEN SPACE: 197,233 SF  
TOTAL HARDSCAPE: 303,548 SF

#### HARDSCAPE BREAKDOWN

SYNTHETIC TURF: 91,965 SF  
ASPHALT: 49,479 SF

- NORTH: 24,751 SF
- SOUTHEAST: 8,237 SF
- SERVICE YARD: 6,042 SF
- TRACK – SOUTH D: 7,685 SF
- TRACK – NORTH D: 2,764 SF

SYNTHETIC TRACK: 49,562 SF  
CONCRETE: 66,885 SF  
CRUSHER/COBBLE: 43,641 SF  
ALUMINUM: 1,746 SF  
SAND: 270 SF



# sustainability

## LEED Strategies

### SUSTAINABLE SITES (SS)

#### HARDSCAPE - OPTION A (52.74%)

##### NON-QUALIFYING:

- SYNTHETIC TURF
- ASPHALT
  - N & SE PARKING AREAS
  - SERVICE YARD
  - TRACK - N & S D SECTIONS
- SAND

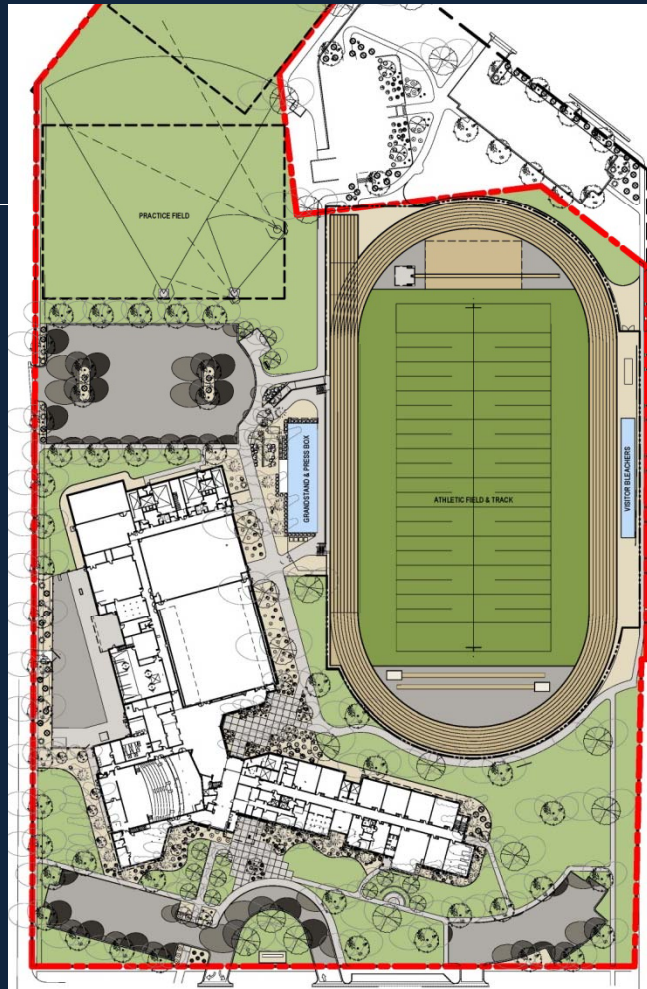
##### QUALIFYING (No Shading):

- NEW CONCRETE
- COBBLE/CRUSHER FINES\*
- SYNTHETIC TRACK\*/\*\*

#### \*REQUIRES MATERIAL TESTING

#### \*\*SYNTHETIC TRACK SURFACE

- Availability
- Cost Premium
- 'Worn' or Dirty Appearance



#### HARDSCAPE - OPTION B (50.66%)

##### NON-QUALIFYING:

- SYNTHETIC TURF
- ASPHALT
  - SE PARKING AREA
- SYNTHETIC TRACK

##### QUALIFYING (No Shading):

- NEW CONCRETE
  - NORTH PARKING
  - SOUTH PARKING + DROP
  - SERVICE YARD
  - TRACK - N & S D SECTIONS
- COBBLE/CRUSHER FINES\*
- ALUMINUM GRANDSTANDS\*
- SAND\*



# sustainability

## LEED Strategies

### SUSTAINABLE SITES (SS)

#### SSc8 – Light Pollution Reduction [D: + 1 pt]

- **Work with Musco Lighting to resolve light trespass at East & Northeast property boundaries**
- **Submit CIR for GBCI Review**
  - Light trespass affects public property, State Street & Salida Middle School
  - Sports Field lighting used on limited basis
  - Auto shut-off at 11:00 pm

- **CREDIT INTERPRETATION REQUEST/RULING (CIR)**
  - Applicable only to 1 project
  - \$220 / Credit
  - 3-4 Week Turnaround
  - Reviewed by GBCI
  - Not Published





# sustainability

## LEED Strategies

SUSTAINABLE SITES (SS)

### WEc1 – Water Efficient Landscaping [D: + 2 pts]

- Convert Athletic Field to natural turf in lieu of synthetic turf
- Substitute more drought tolerant grass species for areas of Dryland Grass & Athletic Field Turf (not recommended by Landscape Architect):
  - Substitute species do not tolerate ‘wet feet’ for application at base of raingardens
  - Substitute species do not hold up as well to foot traffic (athletic fields used every day in Summer & Fall)





# sustainability

## LEED Strategies

### ENERGY & ATMOSPHERE (EA)

#### **EAc1 – Optimize Energy Performance [D: +1-2 pts]**

- Energy Modeling Update by BGCE

#### **EAc2 – On-Site Renewable Energy [D: +1-7 pts]**

- Provide % of Building's Annual Energy Cost in Renewable Energy
- 1% (1); 3% (2); 5% (3); 7% (4); 9% (5); 11% (6); 13% (7)
- Building's Annual Energy Cost ~ \$100,000

#### **EAc6 – Green Power [C: +2 pts]**

- 2-year Contract to purchase RECs for 35% of Building's Annual Electrical Consumption
- Building's Annual Electrical Consumption ~681,000 kWh (35% = 238,350 kWh)
- Xcel Energy – Windsource for Business
  - \$2.16 / 100kWh blocks with 1-year or 3-year commitment (~\$5,150 for 35% Elec Consumption)
  - Submit online application to enroll

#### ON-SITE RENEWABLE ENERGY

- Photovoltaic Systems
- Wind Energy Systems
- Solar Thermal Systems
- Biofuel-based Electrical Systems

#### CENTER FOR RESOURCE SOLUTIONS, GREEN-E PRODUCT CERTIFICATION REQUIREMENTS

<http://www.green-e.org>

#### XCEL ENERGY WINDSOURCE

<http://www.xcelenergy.com>



# sustainability

## LEED Strategies

### MATERIALS & RESOURCES (MR)

#### **MRc4 – Recycled Content [C: +1 pt]**

- Contractor to evaluate materials cost & feasibility to reach 20% or 30% (EP) thresholds
  - Concrete – fly ash
  - Steel – concrete reinforcement, rebar, masonry ties, structural framing, exterior roof & wall panels, flashings, studs, floor & roof deck, railings, stairs, roof hatches, HM frames, HM doors, ceiling grids, lockers, toilet accessories, fencing, etc.
  - Sheathing – gypsum or fiberglass based
  - Finishes – carpet, ceiling tiles, tile, rubber flooring & wall base
  - Plastics – paneling, fabrications (resinous panel), vapor retarders & barriers
  - Insulation
  - PVC membrane

- Exclusive of MEP & Specialty Equipment (elevator)
- Steel Default Recycled Content = 25% post-consumer





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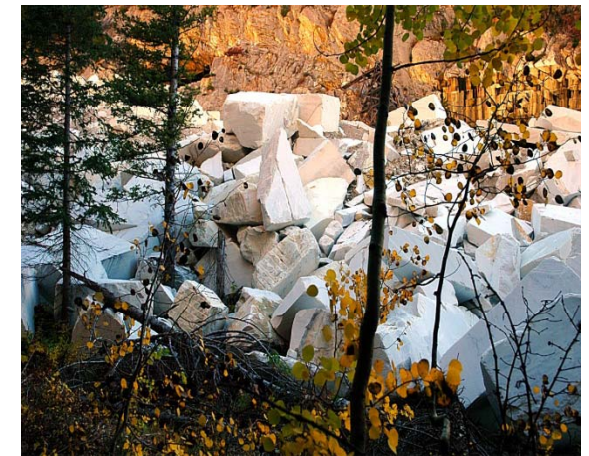
## LEED Strategies

### MATERIALS & RESOURCES (MR)

#### **MRc5 – Regional Materials [C: +1 pt]**

- Materials manufactured & extracted/harvested within 500 miles of project site
- Contractor to evaluate materials cost & feasibility to reach 10% threshold
  - Asphalt
  - Concrete – precast & cast-in-place
  - Masonry – brick & CMU, grout
  - Gypsum Sheathing
  - Landscaping Materials – MSE block, cobble, boulders, crusher fines
  - Sand
  - Plantings

- Exclusive of MEP & Specialty Equipment (elevator)
- If only a fraction of product qualifies, that % (by weight) can contribute to regional value





# sustainability

## LEED Strategies

### IEQc8.1 – Daylight & Views – Daylight [D: +1 pt]

- Explore toplighting at spaces not meeting 75%

### INDOOR ENVIRONMENTAL QUALITY (IEQ)

#### CR SPACES NOT MEETING 75%:

- Wood Shop A136 (2,022 SF)
- Drafting Room B100 (715 SF)
- Classroom B105 (595 SF)
- Auto Shop B109 (2,236 SF)
- Choir/Band C115 (1,379 SF)
- Art D134 (1,213 SF)
- Science D207, D211 & D212 (2,835 SF)





# sustainability

## LEED Strategies

### INDOOR ENVIRONMENTAL QUALITY (IEQ)

#### **IEQc9 – Enhanced Acoustical Performance [D: +1 pt]**

- Verify background noise levels < 40 dBA at HVAC systems in classrooms & core learning spaces
- Complete acoustical partition requirements to meet ANSI S12.60-2002 STC requirements
  - Provide thresholds, door sweeps & seals





# sustainability

## LEED Strategies

### LEED CREDIT ASSESSMENT

### LEED GOLD STRATEGIES [19 points available]

- SSc7.1 – Heat Island Effect – Non-Roof (+1)
- SSc8 – Light Pollution Reduction (+1)
- WEc1 – Water Efficient Landscaping (+2)
- EAc1 – Optimize Energy Performance (+1-2)
- EAc2 – On-Site Renewable Energy (+1-7)
- EAc6 – Green Power (+2)
- MRc4 – Recycled Content – 20% Materials Cost (+1)
- MRc5 – Regional Materials – 10% Materials Cost (+1)
- IEQc8.1 – Daylight & Views – Daylight – 75% CR (+1)
- IEQc9 – Enhanced Acoustical Performance (+1)

### LEED CERTIFICATION LEVELS

- Certified: 40-49 points
- Silver: 50-59 points
- Gold: 60-79 points
- Platinum: 80+ points (100)

### 05/30/12 LEED Scorecard Review

- 54 YES
- 17 MAYBE
- 41 NO





# sustainability

## LEED Submittal Process & Schedule

### DESIGN REVIEW APPLICATION

- Design Preliminary Application – 04/20/12
- GBCI Review Comments – 05/18/12
- ~~Design Final Application – due 06/22/12 (06/15/12)~~
- GBCI Final Review – 07/16/12
- Design Application Decision – 08/20/12

### CONSTRUCTION REVIEW APPLICATION

- Construction Preliminary Application – 09/28/12
- GBCI Review Comments – 11/02/12
- Construction Final Application – 12/07/12
- GBCI Final Review – 01/01/13
- Construction Application Decision – 02/05/13

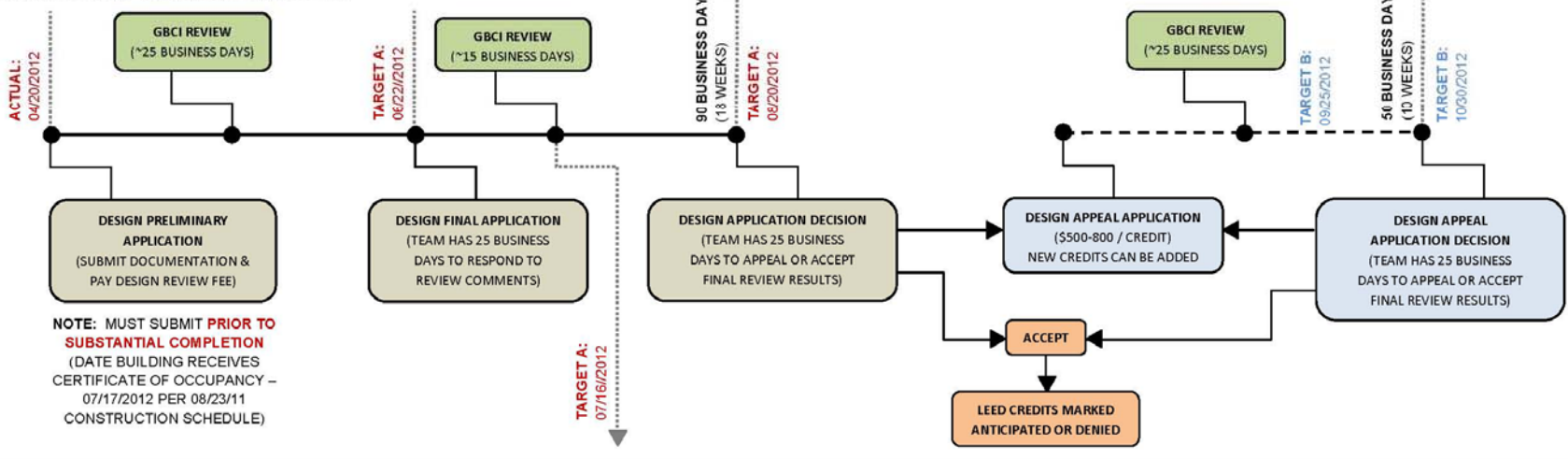
### FORMAL INQUIRIES:

- **CREDIT INTERPRETATION REQUEST/RULING (CIR)**
  - Applicable only to 1 project
  - \$220 / Credit
  - 3-4 Week Turnaround
  - Reviewed by GBCI
  - Not Published
- **LEED INTERPRETATIONS**
  - Applicable to multiple projects
  - \$180 / Credit
  - 3-6 Month Turnaround
  - Review by USGBC
  - Published in online database

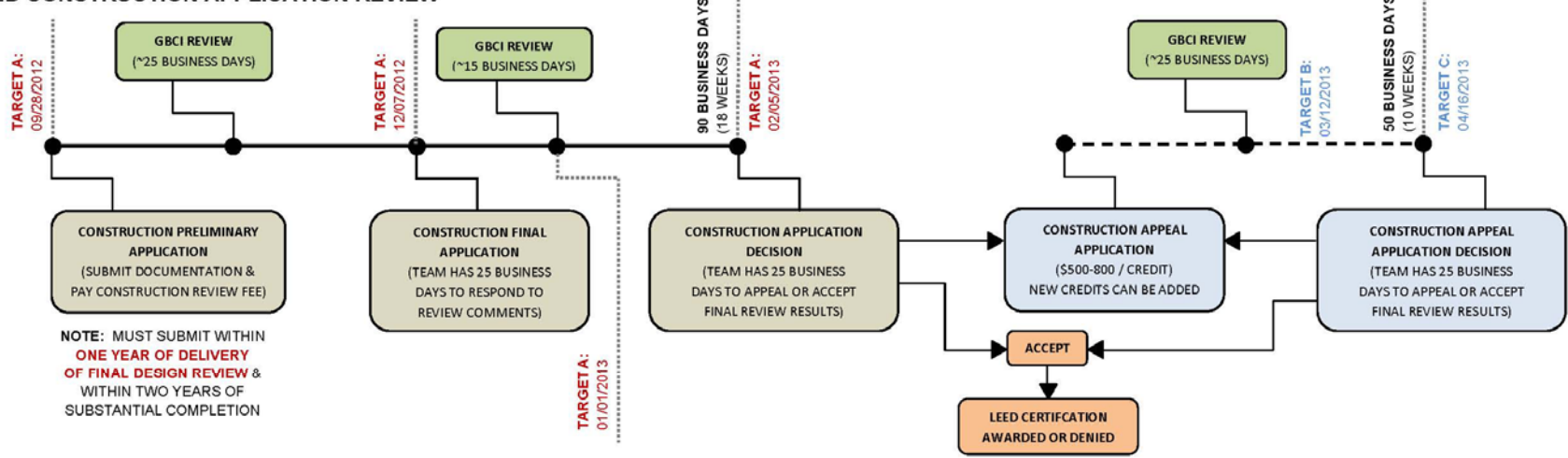
### APPEALS

- Complex Credits = \$800 / Credit (EAp1, EAp2, EAc1, EQp1)
- Other Credits = \$500 / Credit

### LEED DESIGN APPLICATION REVIEW



### LEED CONSTRUCTION APPLICATION REVIEW



## LEED CERTIFICATION PROCESS

- Design Final Application – 06/22/12 (DT: 06/15/12)
- GBCI Final Review Results – 07/16/12
- Design Application Decision – 08/20/12





# sustainability

## Owner Follow-Up

### **IDc1.1 – EB: O&M, MRc2.2 – Sustainable Purchasing - Furniture [D]**

- BG to verify sustainable criteria of new furniture & product costs (40% threshold)

### **IDc1.3 – EB: O&M, IEQp3 & IEQc3 – Green Cleaning Policy [D]**

- Scope of District Sustainability Policy
- Develop & Implement Green Cleaning Policy
- Owner Signature – verify implementation

### **IDc1.4 – EB: O&M, IEQc3.6 – Green Cleaning – Indoor Integrated Pest Management [D]**

- Scope of District Sustainability Policy
- Develop & Implement Indoor Integrated Pest Management (IPM) Plan
- Verify cleaning products meet IEQc3.3
- Owner Signature – verify implementation

#### **GREEN CLEANING POLICY:**

- Standard Operating Procedures
- Sustainable Products (Green Seal)
- Sustainable Equipment (CRI)
- Chemical Handling & Storage
- Staff Training

#### **PEST MANAGEMENT PLAN:**

- Use of least-toxic pesticides
- Communications strategy



# sustainability

## Owner Follow-Up

### IDc3 – School as a Teaching Tool [D]

- Curriculum Development (by project team & school staff)
  - Implementation within 10 months of LEED Certification
  - Must meet local or state curriculum standards
  - Provide 10+ hours of classroom instruction per year per full-time student
- School Administrative Body – documentation indicating review & approval

### SCHOOL AS A TEACHING TOOL

- Explore Relationship between human ecology, natural ecology and the building
  - Science
  - Building Trades
  - Student Newspaper
- Scales of Sustainability
  - Community – site selection, density, connectivity, redevelopment, infrastructure, shared spaces
  - Site – access, stormwater management, development
  - Building – design, materials, envelope efficiencies, energy systems, environmental quality



# question & answer

## CONTACT INFORMATION

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