Queen’s Crossing

Come for the Past... Go for the Future

Amarillo, Texas
Can the past catalyze a better future? Is it possible for education to be entertaining? What if commerce & philanthropy could reach a sustainable balance?

The answers are at QUEEN’S CROSSING…

- Santa Fe Locomotive Development Museum
  - Based on the Larry E. Brasher book
  - Tightly focused collection
- Texas Railroad Academy
- Paseo Amarillo
  - Hotel, dining, & retail complex
- Campground / RV Park
- Railroad safety themed children’s play area
- Full size & scale demonstration railroads
- Activities to suit a variety of visitors
  - Overnight – 2 million every year!
  - Day trips
  - Periodic weekend themed events
  - Special exhibitions
  - Multi-year educational programs
- Unique financial strategies to assure
  - Long-term locomotive preservation
  - Availability of educational programs
- Named for “Texas” type steam locomotive # 5000
  - Known as the “Madame Queen”
  - Technology test bed for the Santa Fe Railway

Near I40 & Downtown
Amarillo, TX
USA
Some 60 years have past since steam locomotives all but vanished from the rails of North America. Yet even today, young children who never experienced them as an integral part of daily life are still drawn to this most human of machines. It is this timeless fascination that is at the heart of Queen's Crossing.

The Santa Fe Railway is the stuff of legend; a world where luxurious passenger trains travelling to exotic old west destinations were populated by glamorous celebrities pulled by steam locomotives which themselves achieved legendary status.

Beyond the attraction of the machines, are the fascinating stories of the people who designed, built, ran, and interacted with them. To those, we intend to write new chapters: true tales of connections from one generation to the next; futures made brighter by the learning of enduring skills.

Memories Carved in Steam, Steel and SMILES

Santa Fe Locomotive Development Museum
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- Hub & Spoke layout
- Entry area
  - Ticketing, gift shop & an eatery
  - Space reminiscent of large vintage station
- Hallway to a central "hub"
  - Circular floor of the hub will depict the Santa Fe "cross" logo
- Themed Exhibition Spaces
  - Baldwin Locomotive Works
  - The Work Shop
  - Dawn of the Diesel
  - Railroads into the Future
  - Purcell Hall – special exhibit space
- Displays tightly integrate the humans stories behind the technology
- Support areas
  - Classrooms, offices, restrooms, store rooms, crew locker rooms, etc.
- Operated by a team of professional staff & trained volunteers
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Memories Carved in Steam, Steel and SMILES
Beyond the attraction of the machines are the fascinating stories of the people who designed, built, ran, & rode behind them. To those, we intend to write new chapters: true tales of connections from one generation to the next; futures made brighter as enduring skills are learned.

- **Theater queue – “Pre-show”**
  - Includes some smaller artifacts
  - Recreation of a drafting office
  - Full-sized replica of an early Santa Fe 4-4-0
  - Music circa 1880 helps set the mood
  - Some interactive exhibits

- **Theater space**
  - Intimately sized with stadium seating
  - Architectural cues depict locomotive workshop

- **Scene**
  - A typical muggy summer day in Philadelphia
    - Localized small increase in humidity & temperature adds to the realism
  - An afternoon thunderstorm pelts on the metal roof of the shop building as the guests take their seats
Science & history come alive at Queen’s Crossing.

- Show outline
  - Theater darkens & main stage area fills with steam.
  - Lightening flashes & a strong thunderclap shakes the theater.
  - The steam clears revealing the 4-4-0 on stage with an actor portraying Samuel Vauclain.
  - After opening dialog, cut to side stage “office” receiving word that the Santa Fe needs more powerful locomotives.
  - 4-4-0 moves off darkened main stage back to its display area in the queue.
  - As the main stage lights up again, Samuel begins to explain the physics of compound locomotives interlaced with historical touch points while interacting with 3D holographic images of some of the key locomotives from the early days of the Santa Fe.
  - Samuel falls asleep atop his sketches...the theater darkens & one end of the stage fills with a wall of steam...a low rumble is felt along with a distant whistle...this grows louder until: a full-sized replica of a Prairie mallet bursts through the wall of steam & into the room filling the entire stage length with locomotive...
  - As the steam clears, the guests exit past the locomotive & out into the rest of the museum...
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A typical locomotive heavy repair facility.

- Tracks on 25’ centers
  - Steam locomotives
  - Diesel locomotives
  - Inspection pits under specific tracks
- Main entry from “Hub” frames front of Madame Queen at far end of hall
- Music circa 1930s - 1940s sets the mood
- Restoration work takes place behind portable hockey rink type walls allowing visitors to observe
- Restoration crews access locomotives via inspection pits from a service area below
- Work area walls can be removed & tracks covered up to allow visitors safe, up-close viewing of locomotives
- Transfer table allows locomotives to move outside & connect into the demonstration railroad
  - Smoke hoods provide ventilation

The Work Shop
Main Display Hall & Restoration Facility
This area resembles a typical erecting hall where heavy repairs were done on the steam locomotives (e.g. Albuquerque shops), although this one is long enough to accommodate engines and tenders. The entry to this hall from the "hub" is arranged to frame the front of one locomotive—when not on the road, this will be the Madame Queen. Big Band music from the 1940s sets the mood for this location. This hall will feature the working locomotives in the fleet and possibly a full-sized model or two to depict the "big three". On display will be the Queen with a 5011 class 2-10-4 nearby (5021?), a 2900 or 3776 class 4-8-4 (2925?) with a replica of 3751 next to it depicted in its original 1927 appearance, and 3450 (acquired from the RLHS in Pomona, CA?) displayed next to a replica of 3460 in streamlined "Blue Goose" trim. The shop will be wide enough so that restoration and maintenance work can be undertaken behind portable glass walls allowing "large" numbers of visitors to watch. A transfer table or yard tracks outside the back of the hall allows the operable locomotives to move outside once steamed up inside and connect into the mainline for running excursions. The work areas are arranged so that the volunteer restoration crews can access the locomotives without needing to enter the visitor space i.e. from a service area below. The work areas can be removed and covered up to allow visitors closer viewing of locomotives without the danger of grease spills, etc.
Work on Locomotives Tied to Educational Program Curriculum

Differences show Technical Progress

Economies of Scale due to Similarities
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Dawn of the Diesel

Railroads into the Future
There was much cooperation between EMD & the Santa Fe during the development of the first Diesels. Today, EMD continues to innovate as part of the Progress Rail division of Caterpillar.

- **Dawn of the Diesel**
  - Restored F7 locomotive display
  - Early Diesel artifacts & hands-on exhibits
  - Half-section replica of the “One-Spot Twins”
    - Front unit depicts external features
    - Rear unit is an engine room cut-away which doubles as a stage. An actor plays the role of Lawrence J. Brasher, who describes his cross-country trip on the One-Spot Twins in 1936
  - Display may be expanded into Work Shop depending on availability of historic diesels

- **Railroads into the Future**
  - EMD SD70 MAC locomotive display
  - EMD Prime Mover line up: 567, 645, 710
  - New locomotive technology displays
  - Interactive “design your own locomotive” kiosk
  - Displays of modern locomotive design tools e.g. CAD system, engine test cell, etc.
  - Track & signaling exhibits
  - Locomotive simulators
Building skills & self-esteem…

- **Texas Railroad Academy**
  - Certified Engineer & Conductor program
  - Railcar & locomotive repair
    - In cooperation with Progress Rail
  - Maintenance-of-Way skills
    - In cooperation with AREMA
  - Standard Gauge Demonstration Railroad
    - Approx. 30 miles
    - Includes yard, hills, tunnel, bridges, etc.
    - Track for up to 79 MPH operation
    - Mainline connection
  - Grades 5 to 12 Youth program
    - Construction, maintenance, & operation of 15" gauge track, locomotives & rolling stock
    - Class projects work toward having every major Santa Fe steam locomotive class represented in operable, scale form
    - Curriculum matched to state teaching standards
    - Skills build from simple hand tools to machining to welding
    - Simple projects & operation of the 15” gauge equipment build to training & work on the full sized locomotives
    - Adult mentorship
Building skills & self-esteem…

- Texas Railroad Academy
  - Certified Engineer & Conductor program
  - Railcar & locomotive repair
    - In cooperation with Progress Rail
  - Maintenance-of-Way skills
    - In cooperation with AREMA
  - Standard Gauge Demonstration Railroad
    - Approx. 15 miles
    - Includes yard, hills, tunnel, bridges, etc.
    - Track for up to 40 MPH operation
    - Mainline connection
  - Grades 5 to 12 Youth program
    - Construction, maintenance, & operation of 15" gauge track, locomotives & rolling stock
    - Class projects work toward having every major Santa Fe steam locomotive class represented in operable, scale form
    - Curriculum matched to state teaching standards
    - Skills build from simple hand tools to machining to welding
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Community Partnership
With multiple operable steam locomotives, Queen’s Crossing can travel, helping to unite communities through education, service, & living history fun.

- **Field Trip Train**
  - Short train with cars doubling as classrooms
  - Includes modern locomotive from host railroad
  - Community service day pre-arrival event
    - Trash pick-up, tree plantings, etc.
    - In conjunction with local service clubs, scouts, Boys & Girls Club, etc.
  - Monday to Friday children’s programs
    - State standards based curriculum
    - Math, Science, & History modules
    - Modern Railroads & Safety activities
    - Available during & after school hours
  - Weekend community rail festival
    - Railroad safety
    - Vendors
    - Railroad career fair
    - Local historical groups
  - In cooperation with host railroad
  - Opportunity to team with other train groups to expand program reach & equipment display

**Community Partnership Program**
Queen’s Crossing will be big enough to be sustainable, but small enough to be manageable.

- Project Planning - RAPS, Wolfgang Fengler
  - Fundraising - RAPS, Sam Teague
  - Feasibility study - AECOM, John Robinett
  - Facility design - FBT Architects, Michael Dickson
  - Exhibit design – Hettema Group, Phil Hettema
  - Exhibit build-out - TWT Group, Frank Weigand
  - Historian - RAPS, Larry Brasher
  - Texas Railroad Academy - RAPS, Clem Harris
  - Demonstration Railroads - RAPS, Matt Casford

- Phase 1A: Museum
  - Kick-off major fundraising efforts
  - Establish locomotive endowment fund
  - Negotiate for major artifacts
  - 100% funding for # 5000 operational restoration
    - Relocate # 5000 to Progress Rail
    - Abatement of # 5000
  - Develop key partnerships & exhibit sponsorships
  - 100% funding for artifact relocation
    - Abatement as needed
    - Shipping
    - Stabilization
  - Grand Opening

- Phase 2B: Paseo Amarillo
  - Choose development partner
  - Down select site:
    - land + easement = approx. 50 acres
  - Construction of museum & paseo
    - Includes some yard trackage

- Phase 2B: Paseo Amarillo
  - Construct remaining facilities
  - Complete demonstration railroads

- Phase 1B: Paseo Amarillo
  - Establish Texas Railroad Academy
  - Acquire diesel locomotives for Work Shop
Thank You!

Photo Credits: Steve Crise, Clem Harris, Richard Scholz Archives - H.L. Broadbelt Collection of Baldwin negatives, SFRH&MS / Stan Kistler Collection, Aaron Teague, Evan Werkema,
Amtrak Ahead?
Change is in the air for Amtrak’s Southwest Chief. Many observers expect a route change in the next year or so that would bring passenger train service back to Amarillo.

- **Amarillo Gateway**
  - A new Amtrak station will be needed
    - Original station no longer available
    - Incorporate new station into Queen’s Crossing satellite facility
    - Would include some retail space
    - Use initially to promote “coming attraction” of Queen’s Crossing
  - Opportunity to connect with downtown
    - Use Queen’s Crossing architecture
    - Visitor Center
    - RAPS volunteers can participate in Amtrak’s station host program
    - Passenger train “teaser” exhibit
    - Queen’s Crossing direct bus shuttle
  - Private railroad car storage tracks
    - Additional revenue stream
    - Attractive to owners
      - Centrally located in US
      - Easy to switch on/off Amtrak trains
    - Baseline fleet for operations

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**Amarillo Gateway**

- Amtrak Station
- Visitor Center
- Passenger Train Exhibit
- Private Car Storage
Hybrid non-profit - commercial enterprise designed to provide long-term sustainable funding for the museum & academy. Budget subject to revision pending AECOM analysis.

- **RAPS Prioritized Preliminary Budget**
  - $5M – RAPS initial locomotive endowment
    - $1M per locomotive
  - $100K – Relocation of #5000 to Progress Rail
  - $2M – Operational Restoration for #5000
  - $2M – Acquisition of major artifacts
  - $1M – Movement of acquired artifacts
  - $100K – Abatement of acquired artifacts

- **Development Partner Preliminary Budget**
  - $2M – Land acquisition
  - $2M – Construction of circa 1927 replica 3751
  - $2M – Construction of Prairie mallet replica
  - $1M – Construction of 4-4-0 replica
  - $2M – Additional replica if needed
  - $30M – Museum building & other exhibits
  - $105M – Paseo Amarillo construction

- **Established Donation Sources**
  - Partial Relocation Costs for #5000
    - Daniel King
  - Abatement for #5000
    - P&W Abatement
    - APEX Technical Services
  - Restoration facilities for #5000
    - Progress Rail - Amarillo

- **Preferred Partners**
  - BNSF Railway
    - Employee donation matching
  - BNSF Foundation
  - Caterpillar / Progress Rail / EMD
  - Development Company