LOUDOUN VIRGINIA
ECONOMIC DEVELOPMENT

Children's Science Center Charrette Summary Notes

Charette Date: Friday, November 14, 2014

Summary Published: March 2015

Loudoun County Department of Economic Development

Table of Contents

Introduction

The Children's Science Center (CSC) plans to construct a museum in the future Kincora development to be its permanent home. Kincora is located on land adjacent and southwest to the junction of Route 7 and Route 28 in Eastern Loudoun on a 424-acre site, and will be a vibrant mixed-use community next to Broad Run and a large expanse of open space. The preservation and enjoyment of nature has been considered from the early stages of planning for Kincora, and landowners Mike Scott and Dan Coughlan went to great lengths to ensure the protection of the heron rookery - home to about sixty nests a year, and only one like it in Loudoun County.

Since 2010, CSC has operated the popular mobile Museum Without Walls for children all over the Greater Washington area. In support of finding a permanent home for CSC in Loudoun County, at the April 16, 2014 Board Business Meeting the Loudoun County Board of Supervisors passed a motion to provide a $250,000 grant to the CSC consisting of building fee waivers and cash to go towards operating costs in the first and second years that the museum is open. The Board recognizes the benefits that the CSC will bring to Loudoun County, including the economic impact of visitor spending, providing education and inspiration to children and cultivating their interest in STEM.

During the fall of 2014, Nene Spivy, the executive director of the CSC, approached the Design Cabinet for assistance in site planning and phasing for CSC's development at Kincora. A Design Cabinet Charrette was held at the offices of Carpathia Hosting on Friday, November 14, 2014 from 8am to 11am. Carpathia Hosting is directly across from the Kincora site, and the Design Cabinet met in a 5th-floor conference room offering birds-eye views of the future location.

Attendees sought to address key questions regarding CSC's development. The questions included:

- How does Children's Science Center (CSC) collocate on its site with a planned Performing Arts Center to bring the greatest value for both entities?
- How does CSC physically connect to the Broad Run corridor?
- How is CSC seen from transportation access points?
- How does CSC's program grow in phases?

ROLE OF THE DESIGN CABINET

The Loudoun County Design Cabinet fills an important niche in supporting the planning and development activity occurring in Loudoun, with members volunteering time and energy to projects having a substantial public benefit. The work of the Design Cabinet aims to help reinforce Loudoun's sense of place, identity, and community, as well as encourage the highest quality physical environment through the use of urban, architectural, landscape, and ecological design. To assist the Department of Economic Development, the Cabinet provides a forum for discussion and advice on design related issues, projects, and opportunities from its volunteer group of design professionals.

CHARRETTE ATTENDEES

Design Cabinet members attending: Al Hansen, Al Gooden, Bob Harr, Kevin Rudisueli, Mark Thomas, Martha Semmes, Zac Lette, and Dave Bowers

Stakeholders from CSC and Kincora: Nene Spivy, Mike Scott, Thomas Dinneny, Trish Mayhew, Dan Coughlan, Jill McNabb, and Tanya La Force

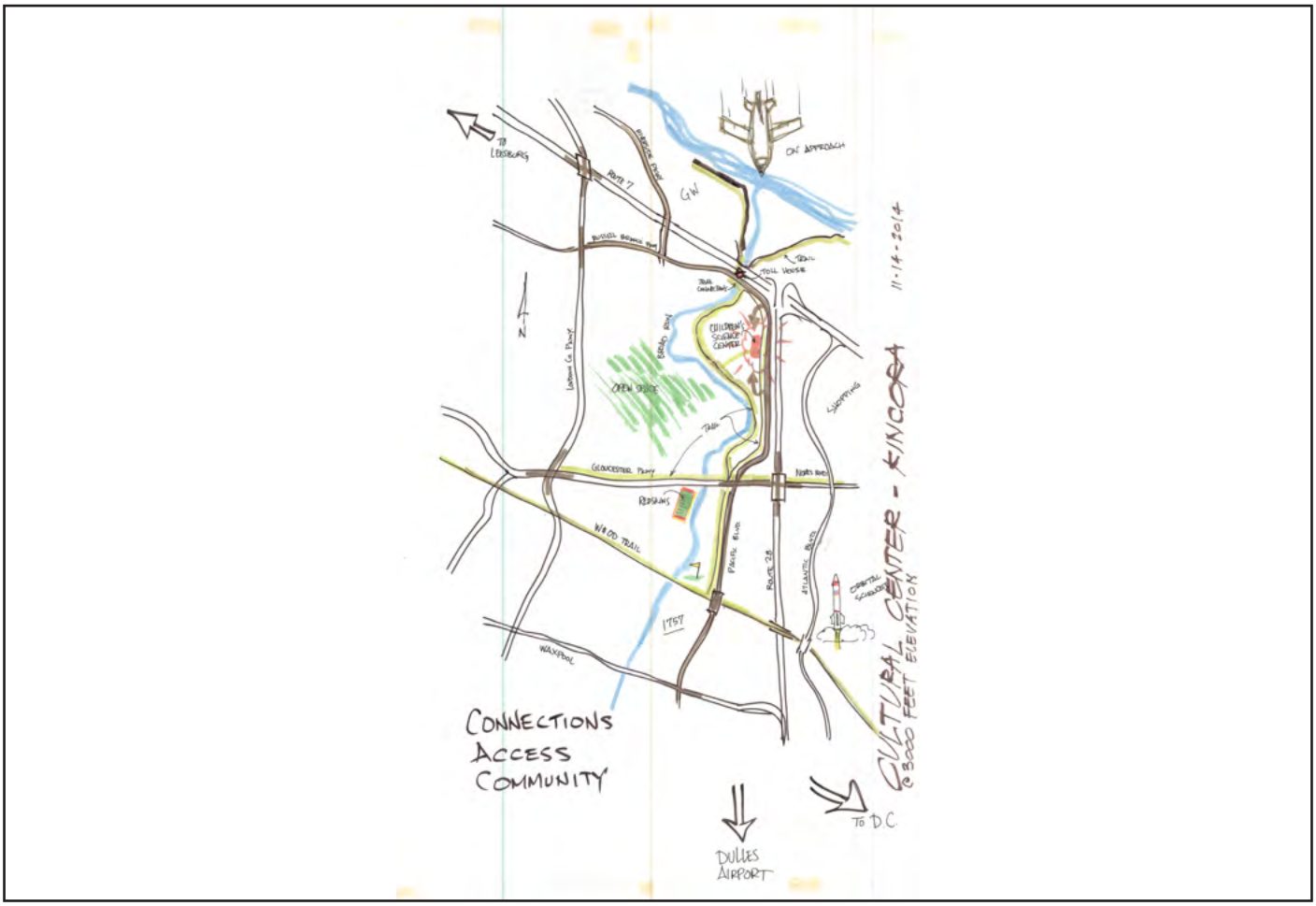
Economic Development Staff: Miguel Salinas, Katie McConnell, Alex Gonski, and Kona Gallagher

Group One: Context and Connections

Group One focused on the context and connections of CSC to the surrounding community and assets located in Northeast Loudoun. Items discussed included:

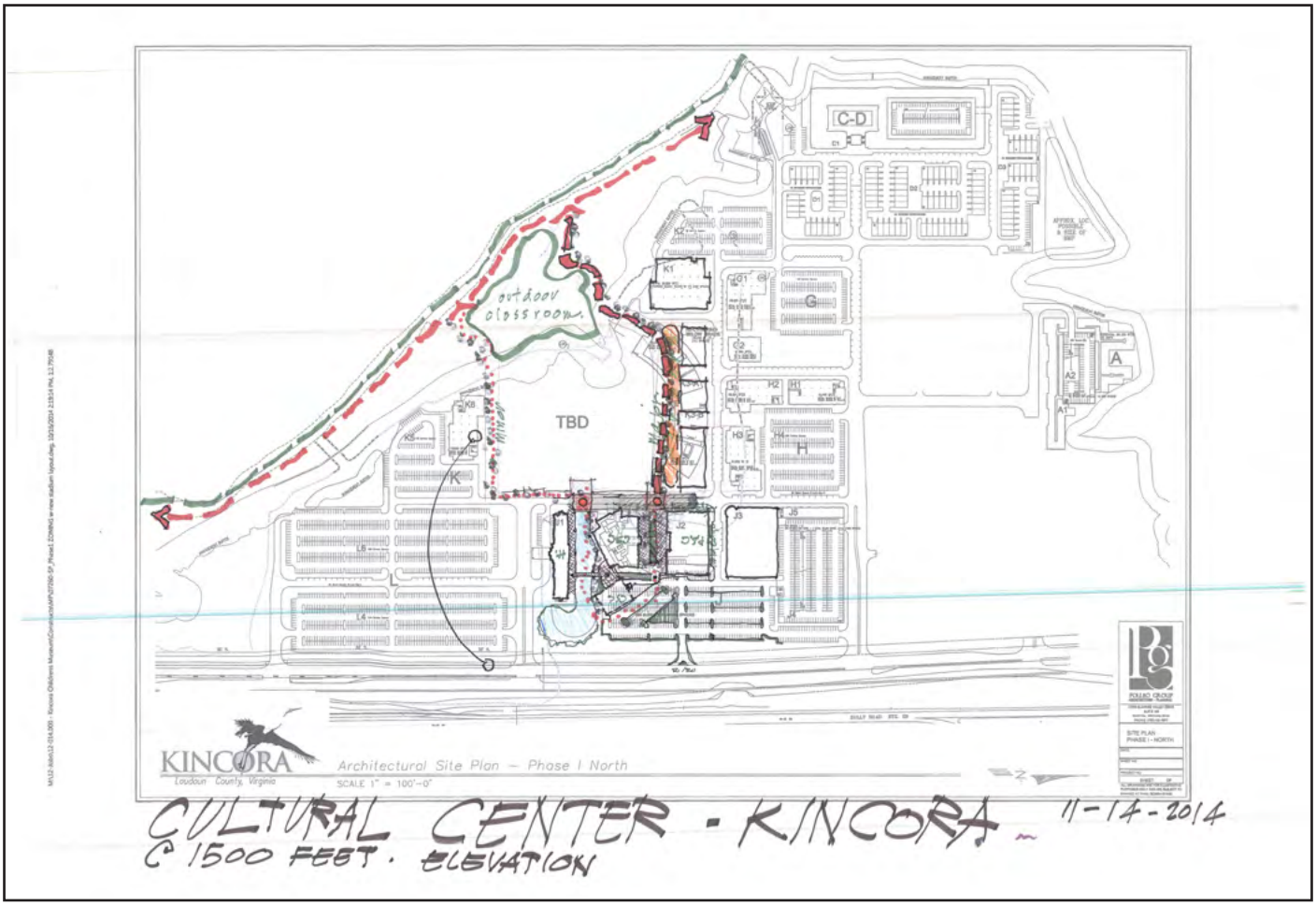
- Kincora and CSC are at a nexus of many connections:
  - Kincora is visible to passengers flying into Dulles; consideration should be given to what the site will look like from the air.
  - Kincora is next to Broad Run, which flows into the Potomac River just to the north.
  - The Potomac Heritage Trail crosses Broad Run on the other side of Route 7, just to the north of the site.
  - The Broad Run linear trail will link to the Potomac Heritage Trail across Route 7.
  - The historic Broad Run Bridge and Toll House present the site's long history of being next to a transportation route – Leesburg Turnpike, today State Route 7. A planned trailhead at the historic site can connect Kincora visitors to the Potomac Heritage Trail and Broad Run linear trail.
  - Visitors arrive at the CSC via Russell Branch and Route 28/Nokes, but not from Route 7.
  - There are a lot of STEM-related businesses, organizations, and natural features nearby that relate to CSC and provide inspiration and potential for exhibits related to STEM education, including:
    - Orbital Sciences/Places where space vehicles are created
    - GWU Campus
    - Loudoun Water
    - HHMI
  - In summary, CSC being at Kincora strategically locates it at a place with excellent multimodal connections - today, and even more so for the decades ahead.

Drawing by Group One:



Group Two: Site Planning

Drawing by Group Two:



Group Two focused on site planning for CSC. Participants note that it's key to get the design's "bones" to work together so their total sum together is greater than the sum of the separate parts.

Pedestrian Connections

- It is Important to establish pedestrian connections to Broad Run from CSC. These connections should be well-defined and communicate ideas related to nature, science, technology, and sustainable development.
- Two linear pedestrian connections are drawn to connect to Broad Run. They would run along the outside edges of the Kincora Town Center with use still to be determined; the connection on the north side would be major, and south side would be minor.
- A section of the north side major pedestrian connection could function as a linear plaza/public space. The space drawn in pumpkin orange along part of the north connection to Broad Run would work well as a venue for small public events and non-permanent uses, such as a farmer's market. The buildings would need to be set back from the walkway to activate the space, encourage people to gather and potentially enjoy it as a "third place" to socialize.

Paver Street

- The long and open street, at the south side of the TBD space, could use strategies to slow down people who are arriving or passing on that road. Making it a pavers street with an architectural element would discourage cars from going there, or at least slowing their movement. The ordering of the space and elimination of curb and gutter can also provide a sense that the space is for pedestrians first; the design of this street is not focused on moving cars. This focus on pedestrians helps to activate the space. Similar strategies are used at Reston Town Center (especially Fountain Square) and National Harbor.
- Buses could be routed to the street for transit rider drop-off.

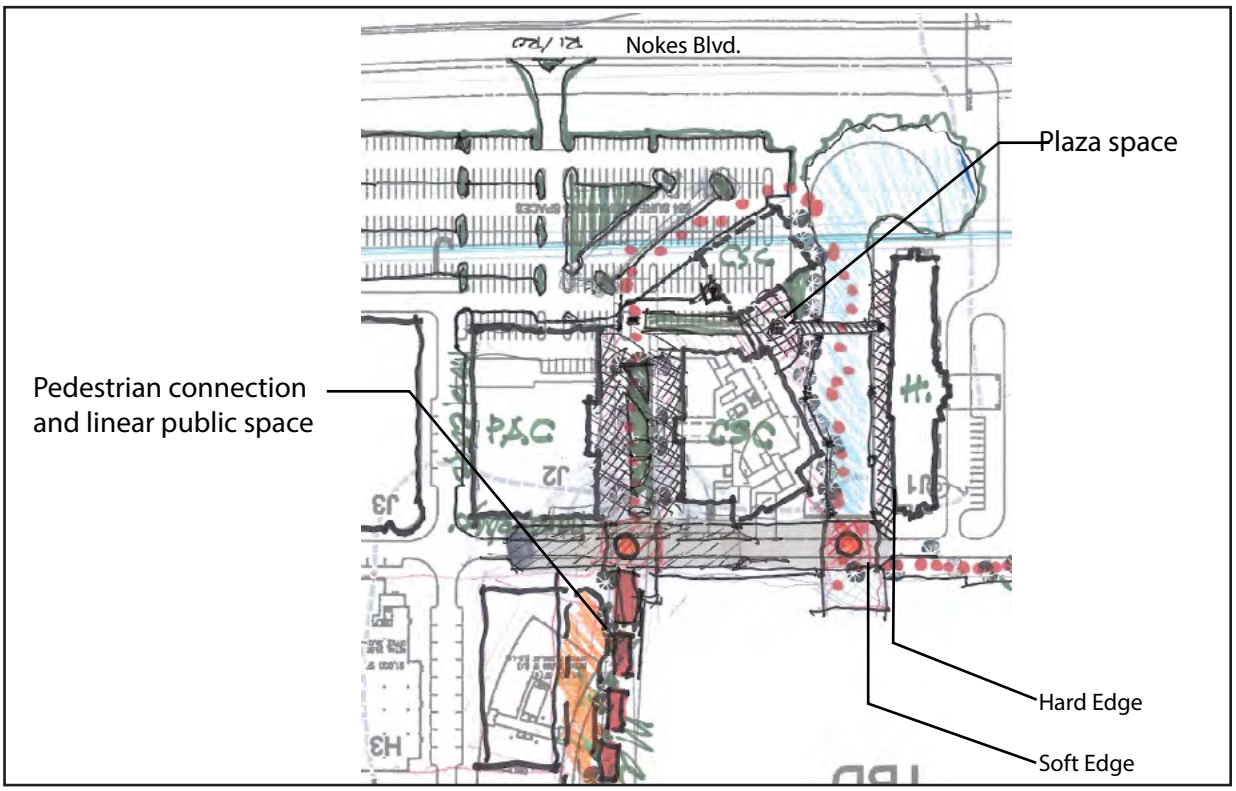
Urban Plaza

- As pedestrians enter the urban plaza, which is just south of CSC and on the north side of the hotel, the layout of the plaza draws them in and allows them to go right, left, or straight. There would be strong linking elements that connect the plaza to the STEM themes of CSC. These elements will bring the design together and call attention to other elements out in the plaza, which all work together to communicate the themes for the design. These elements would include sculptural elements that act as landmarks and therefore make it possible to tell someone to "meet me by the science tower" or "meet me under the tail of the whale" and such.
- To phase the building of CSC, there could be an expansion pod with elements linking it back to the hotel. On the hotel side of the plaza space there would be a hard edge with a bulkhead wall along with a water feature, with a hard edge promenade like the Carroll Creek Park in Frederick, Maryland. The other side of the water element is more of a natural soft-edged pond.
- The configuration of the Performing Arts Center and CSC should be switched. The Performing Arts Center does better at the corner spot because of the straight walls, which work with the hard edge at the street. CSC is better suited for being next to the natural/biomorphic soft edges of the water element.
- Parking would need to be reworked, but this switch should work fine with connecting to the minor and major pedestrian ways.
- The bridge over the water element could be like the Washingtonian Center in Gaithersburg. At sunrise and the sunset, the building will throw a lot of shadow, which makes the water element better suited for that space than trees or shrubs.
- The right in and right out for the parking lot flushes traffic back to Nokes – the primary road for accessing the CSC.

Outdoor Classroom

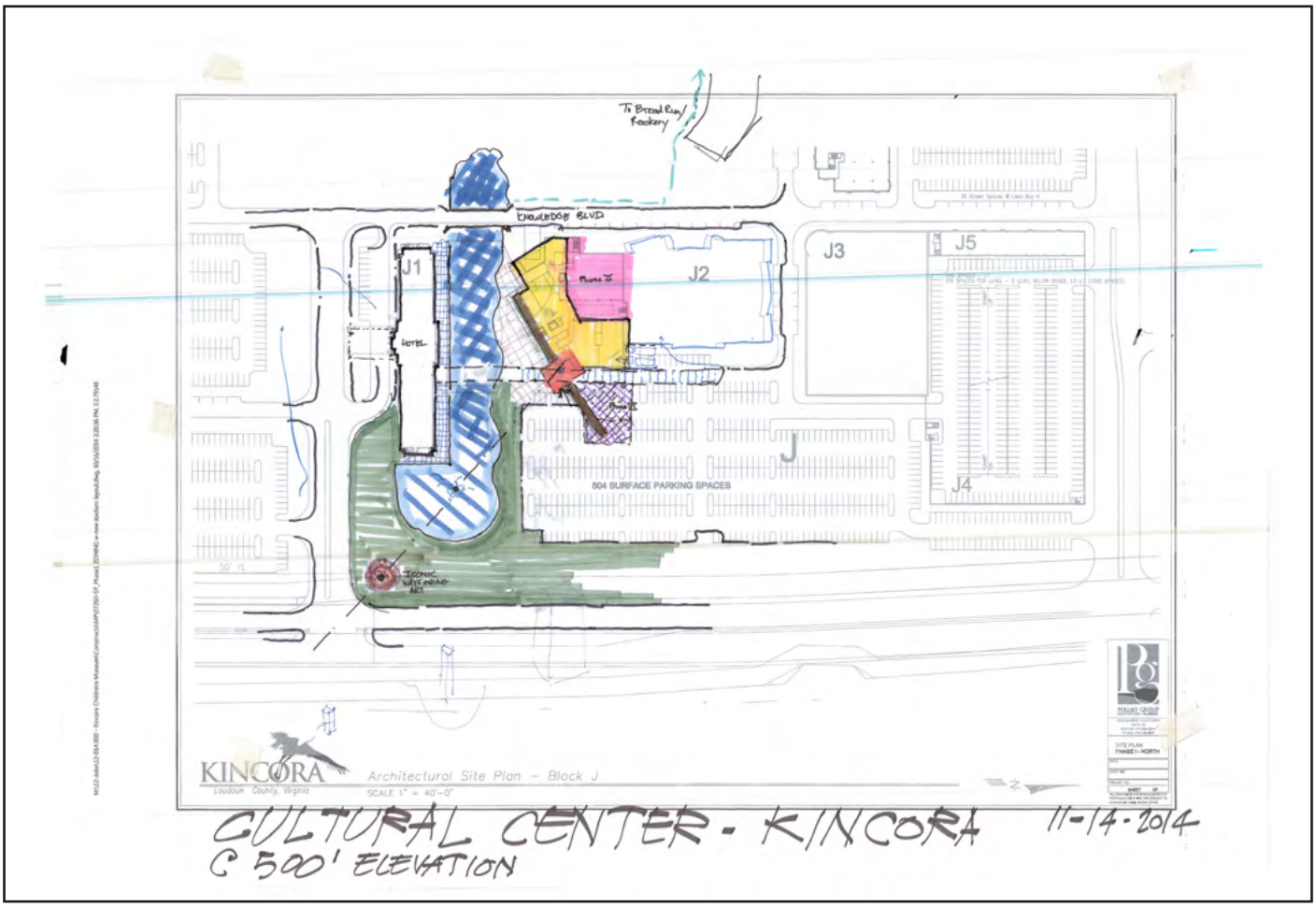
- The outdoor classroom would be located in the open space along Broad Run, directly across from a large area of natural open space.
- This location would be at a natural spot between the major and the minor pedestrian pathways, and the north-south pathway along Broad Run.
- In summary, CSC being located in the midst of other development at Kincora makes it especially important to consider how the nearby spaces could be designed to both activate the space and connect it to other nearby locations that relate to STEM, the nature and history of the site, and other places of interest for families, especially children. The ideas discussed for the plaza, paver street, and pedestrian connections out to Broad Run and the outdoor classroom respond to these considerations.

Drawing by Group Two Close-up:



Group Three: Site Planning

Drawing by Group Three:

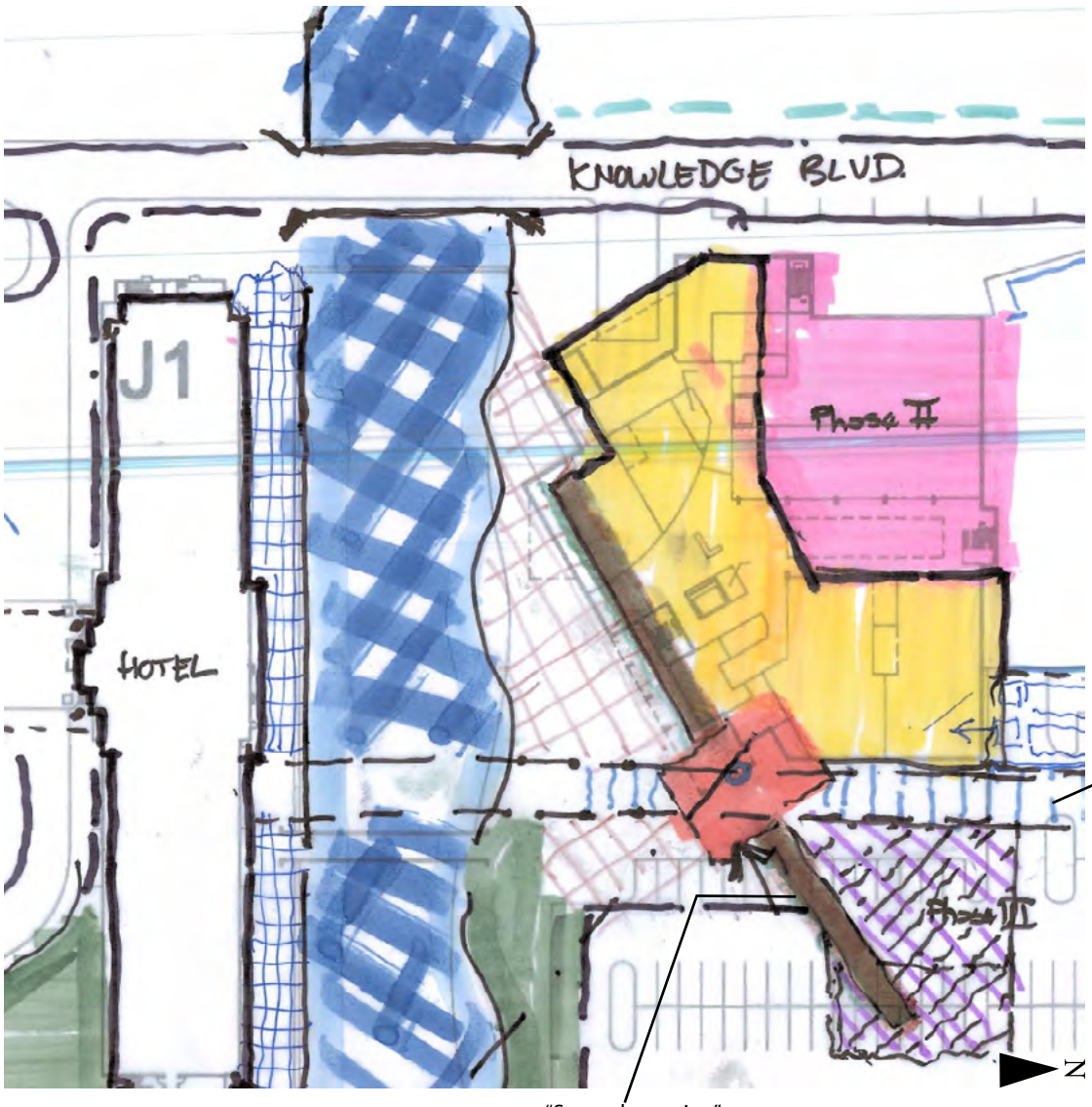


Group Three focused on site planning. Their designs include the following elements:

- Use a canal water feature to establish a visual cue and connection from CSC to Broad Run.
  - The pedestrian connection approaching the hotel from the north would look like a bridge, but not actually have open space hollowed out underneath - utilities would need to be routed through that spot.
  - There could be a hard surface with a granite wall going down to the water on the side of the hotel, with a plaza hardscape leading up to the hotel. This would create a hard edge on the side of the canal with the hotel. On the side with CSC there would be more of a soft edge.
- There could be a covered walking space like a loggia leading up the bridge and hotel as one approaches from the north. This linear element would be a primary spine through the site and transition from the loggia to a covered internal walkway.
- There could be an atrium connecting the performing arts center and CSC, and the linear connection between them would be a secondary spine through the site.
- The area marked Phase II (see next page for close-up) could be a public space initially. It could be used as a temporary dynamic exhibit space, perhaps a "living exhibit" while CSC is being built.
- The parking areas should be environmentally friendly.
- There could be sponsorship opportunities for different exhibits or features at the museum – consider all the companies in the area with work related to STEM. Perhaps there could be exhibits or cafes or art sponsored by Orbital Sciences, HHMI, Raytheon, etc.
- The design could communicate the essence of STEM using natural materials and biophilic principles of design. This is different from the way STEM typically has been communicated in the past, where design elements have had more of a technological futurist style; instead, CSC could incorporate the STEM connections in its design with nature. The diagonal secondary spine could have a green wall.
- Progressive, linking visual elements could move the eye from features in the line of sight up to CSC, and be anchored by iconic wayfinding elements.

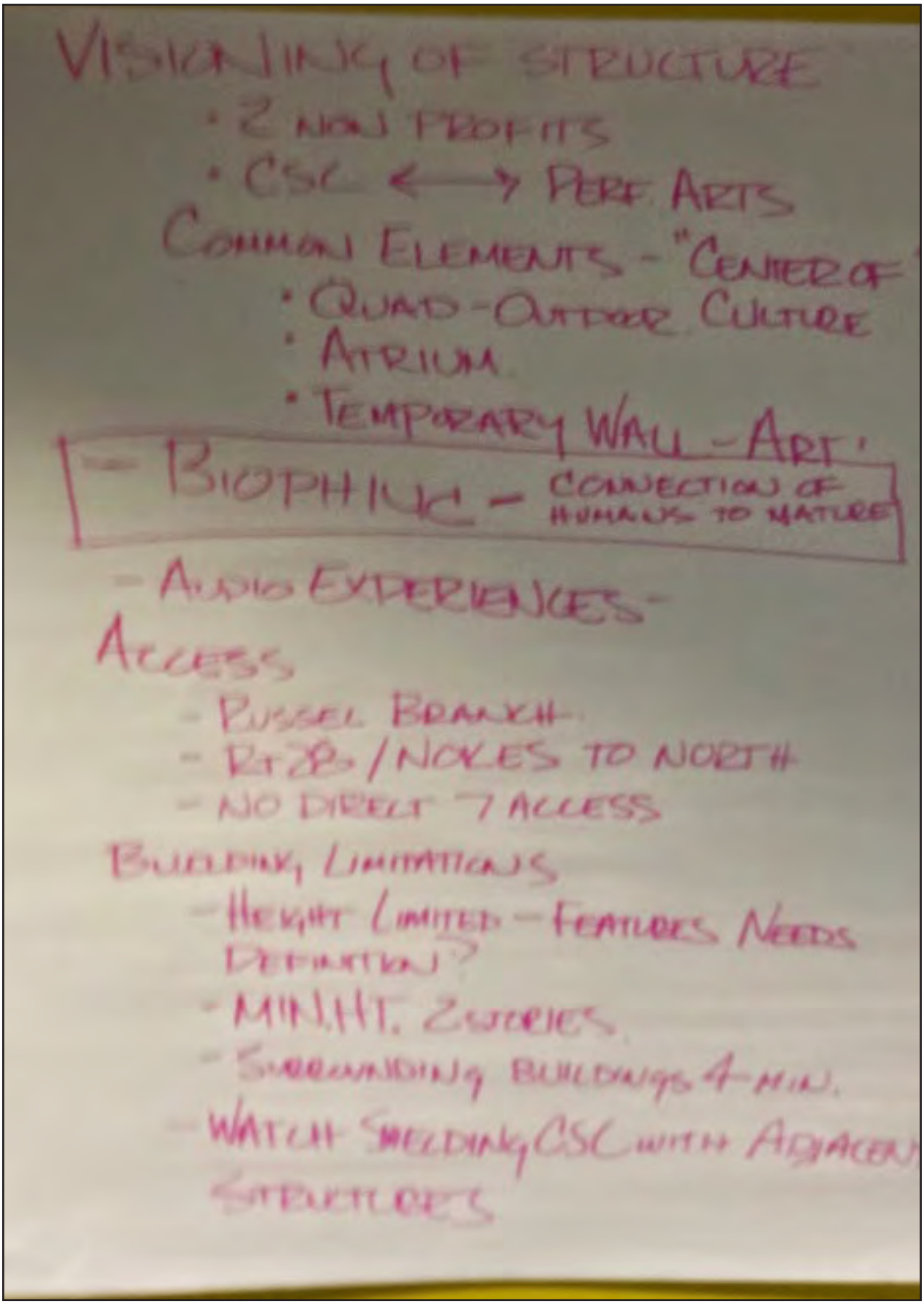
- Wayfinding could be kinetic, seasonal, and designed to tie in with the nature and sciences theme.
- There could be a science park or learning park in the area to the east of the canal that helps tie the elements of the space together to make it about learning.
- During discussion of Group Three's design, two additional topics were raised:
  - There are concerns about costs associated with the number of floors and physical layout of the museum and its future additions. The number of floors would impact overall building costs, but you can't really say that more floors with the same amount of floor space is necessarily more expensive – it really depends on the specifics for how the space is laid out.
  - There is a concern that the buildings for Phase 2 and 3 could cast shadows on inner areas of the CSC building or pedestrian areas. The minimum building height in the development is 2 stories; care should be taken to keep the CSC from having light and visibility shielded by the surrounding buildings.
- In summary, the design for the area just outside CSC could incorporate many biophilic elements, including water, movement, seasonality, and native plants that add interest for the visitor and tie into themes related to CSC.

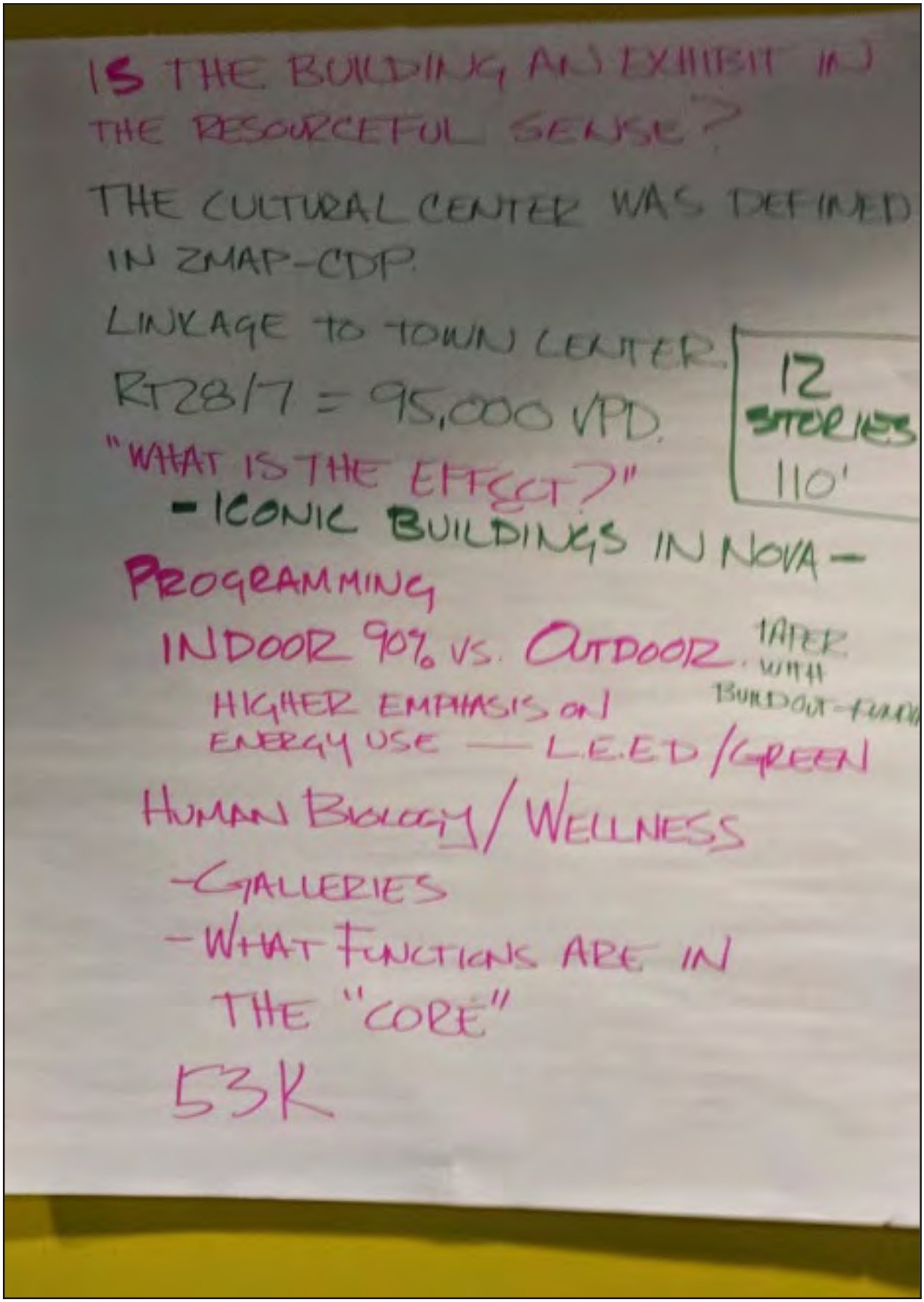
Drawing by Group Three Close-up:

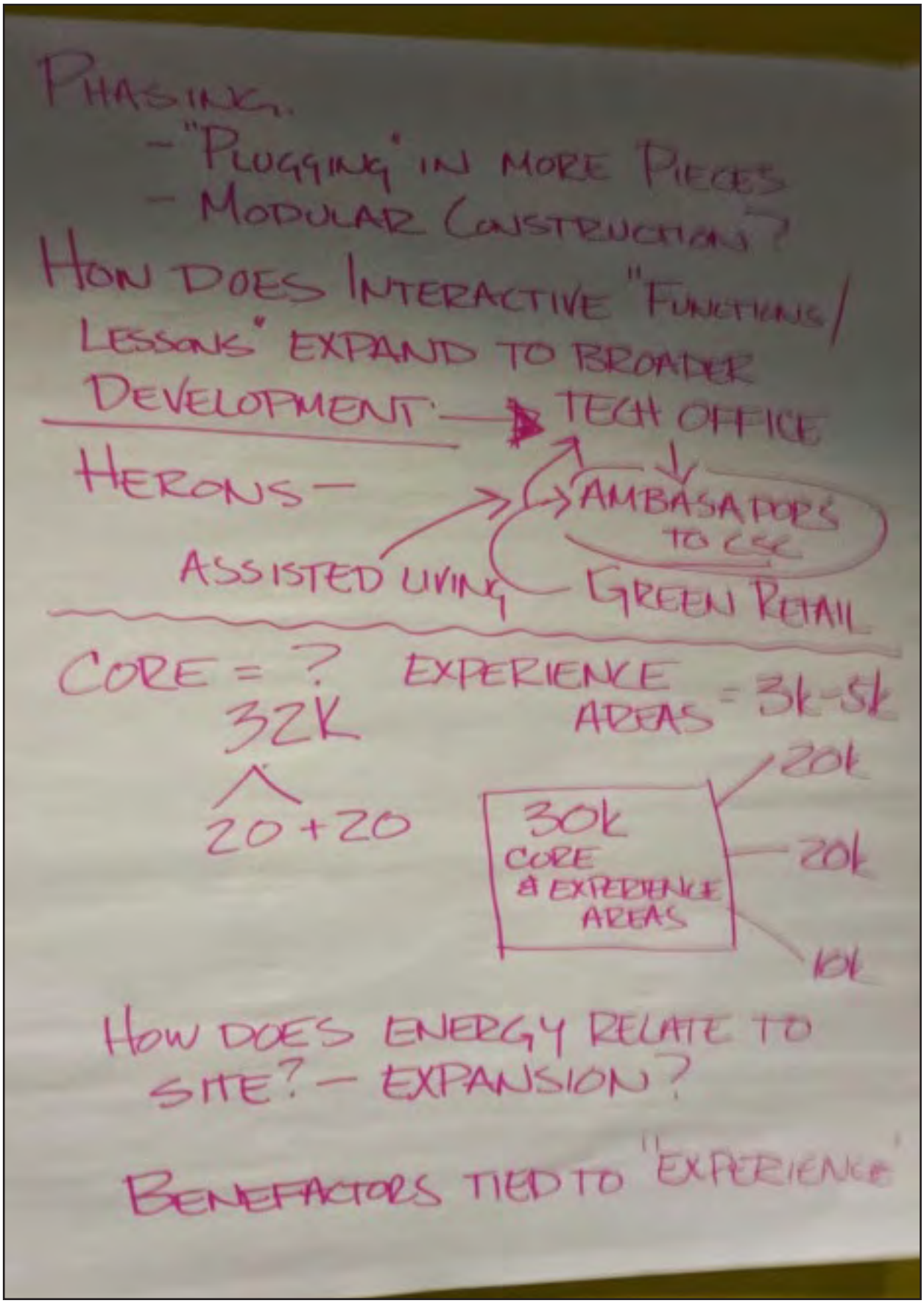


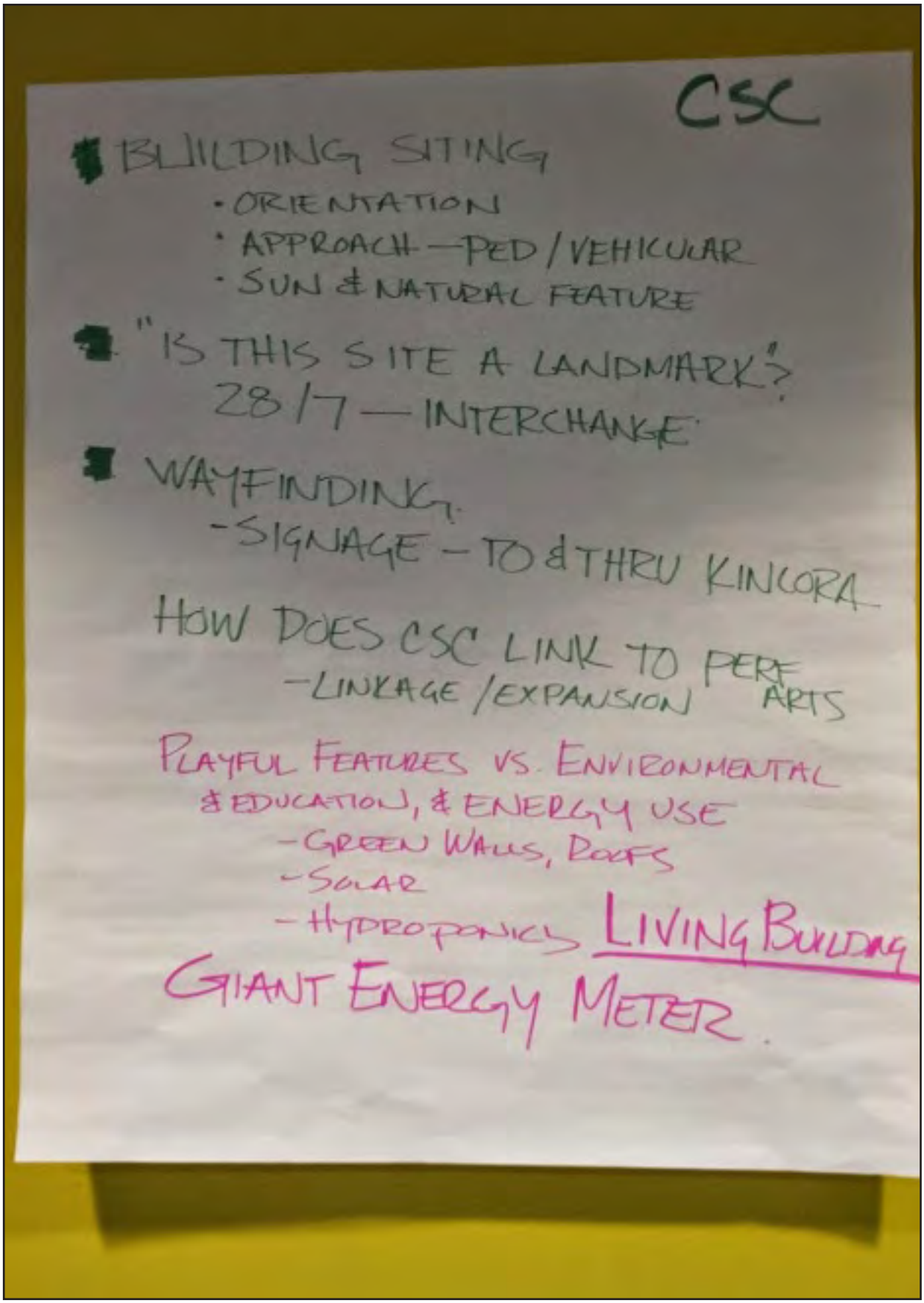
Summary

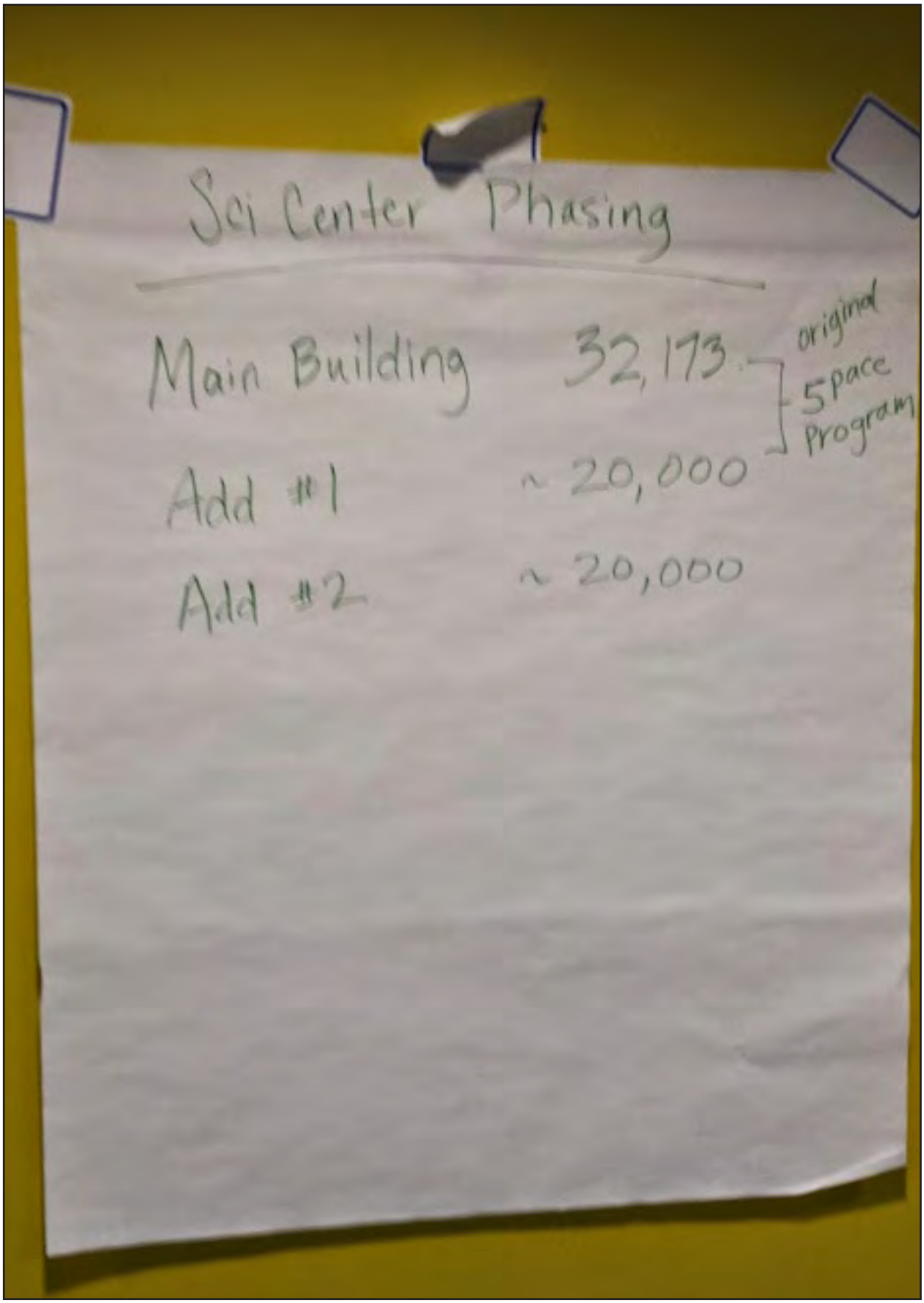
NOTES TAKEN AT THE CHARRETTE:




IS THE BUILDING AN EXHIBIT IN THE RESOURCEFUL SENSE?
THE CULTURAL CENTER WAS DEFINED IN ZMAP-CDP.
LINKAGE TO TOWN CENTER.
RT28/7 = 95,000 VPD.
"WHAT IS THE EFFECT?"
- ICONIC BUILDINGS IN NOVA -
12 STORIES
110'
PROGRAMMING
INDOOR 90% VS. OUTDOOR.
HIGHER EMPHASIS on ENERGY USE — L.E.E.D / GREEN
HUMAN BIOLOGY / WELLNESS
-GALLERIES
-WHAT FUNCTIONS ARE IN THE "CORE"
53K

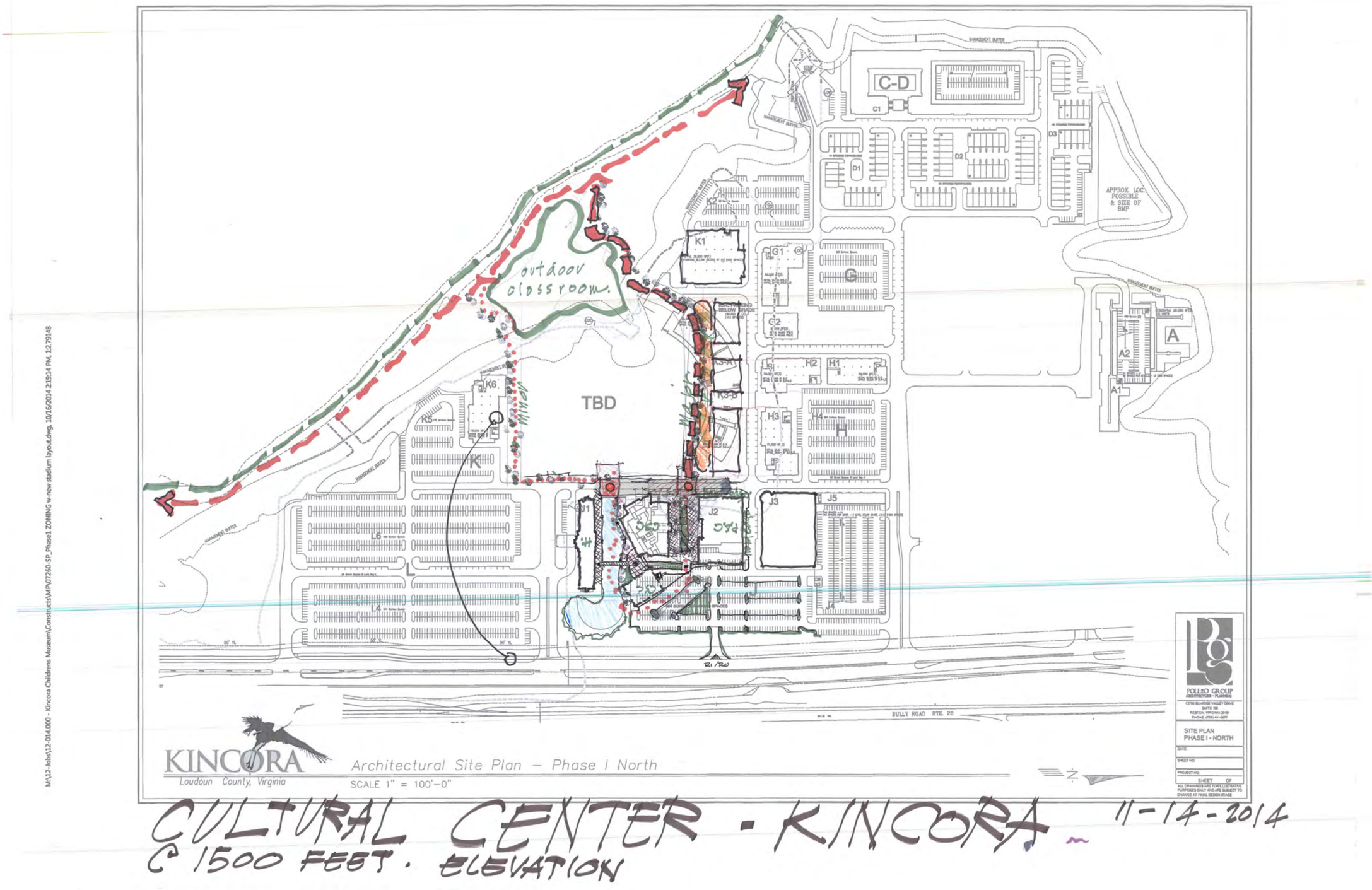

PHASING
- "PLUGGING" IN MORE PIECES
- MODULAR CONSTRUCTION?
HOW DOES INTERACTIVE "FUNCTIONS/LESSONS" EXPAND TO BROADER DEVELOPMENT
TECH OFFICE
HERONS
AMBASADORS TO CSC
ASSISTED LIVING
GREEN RETAIL
CORE = ? 32K
20+20
EXPERIENCE AREAS = 3k-5k
30k CORE & EXPERIENCE AREAS
20k
20k
10k
HOW DOES ENERGY RELATE TO SITE? - EXPANSION?
BENEFACTORS TIED TO "EXPERIENCE"


CSC
BUILDING SITING
• ORIENTATION
• APPROACH — PED / VEHICULAR
• SUN & NATURAL FEATURE
"IS THIS SITE A LANDMARK?
28/7 — INTERCHANGE
WAYFINDING
- SIGNAGE - TO & THRU KINCORA
HOW DOES CSC LINK TO PERF ARTS
- LINKAGE / EXPANSION
PLAYFUL FEATURES VS. ENVIRONMENTAL & EDUCATION, & ENERGY USE
- GREEN WALLS, ROOFS
- SOLAR
- HYDROPONICS
LIVING BUILDING
GIANT ENERGY METER


Sci Center Phasing
Main Building 32,173
Add #1 ~ 20,000
Add #2 ~ 20,000
original 5pace Program

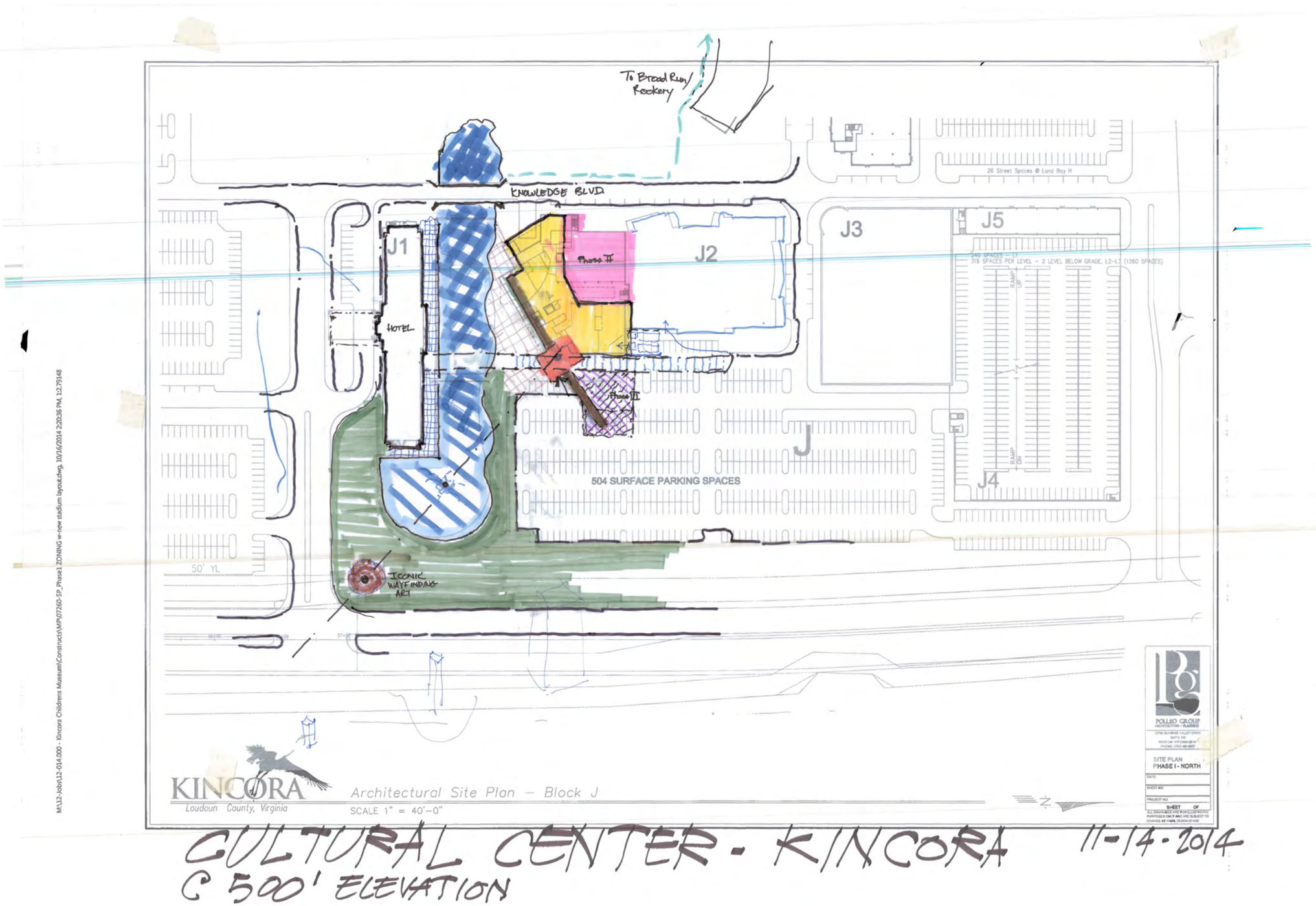
GROUP ONE DRAWING:

GROUP TWO DRAWING:



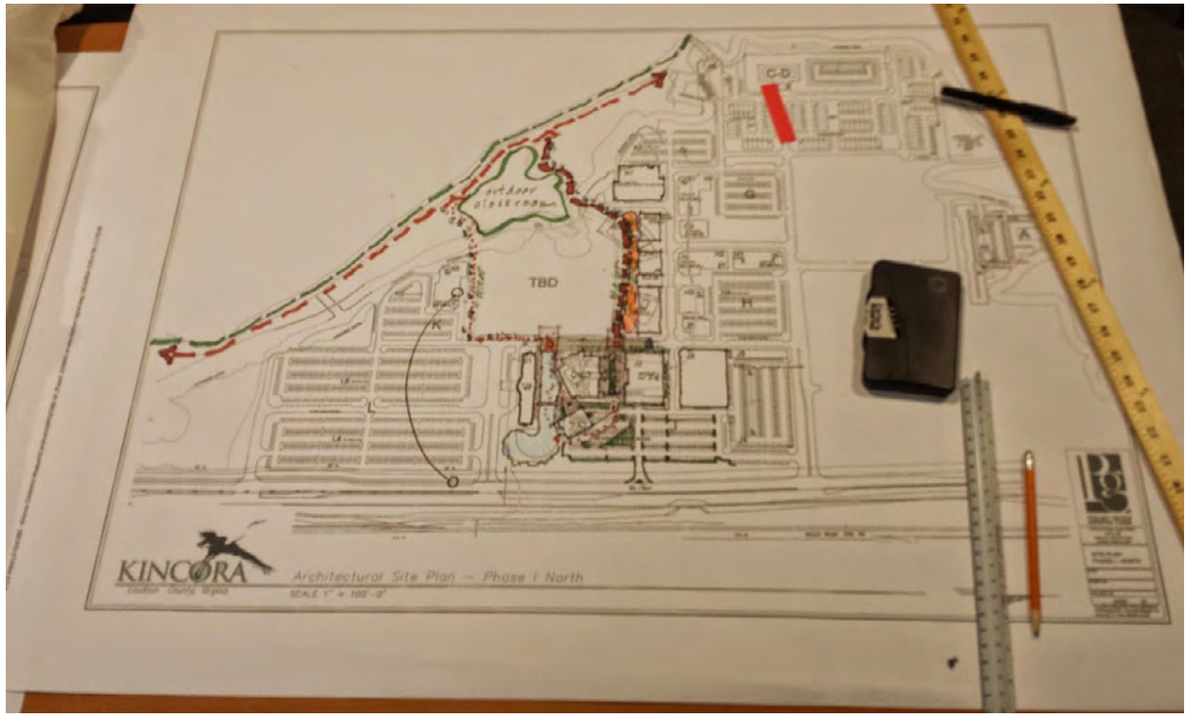
CULTURAL CENTER - KINCORA 11-14-2014
@ 1500 FEET. ELEVATION

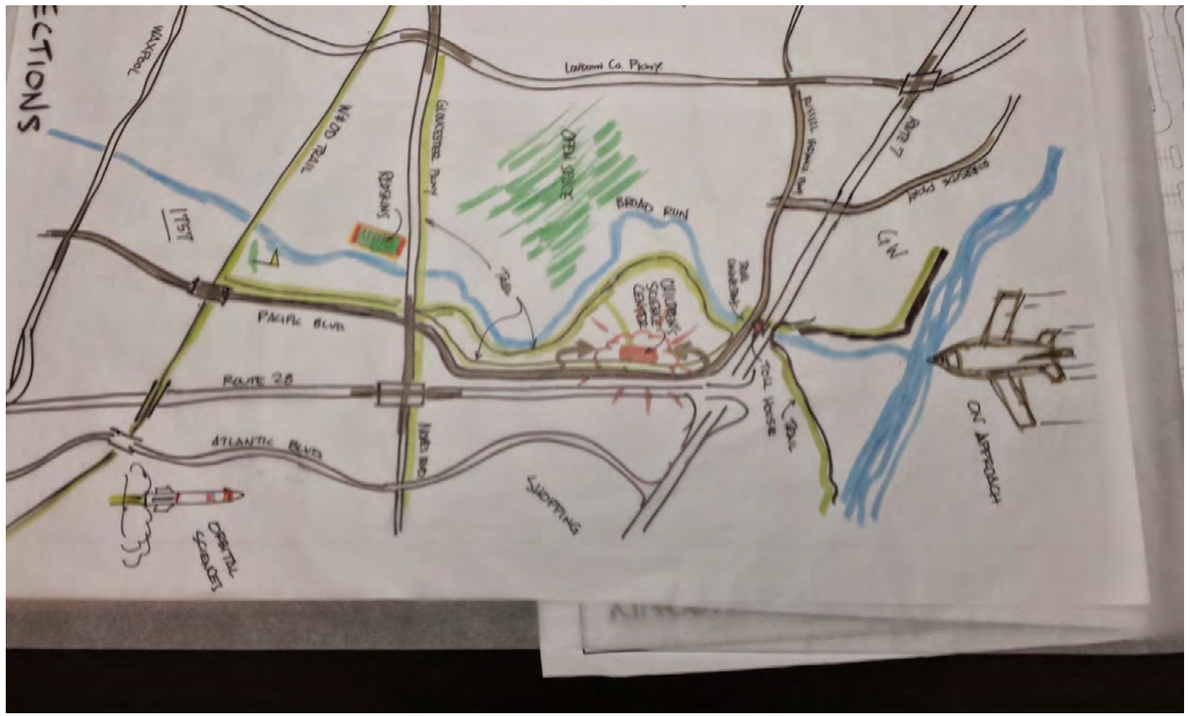
GROUP THREE DRAWING:



CULTURAL CENTER - KINCORA 11-14-2014
C 500' ELEVATION

ADDITIONAL DOCUMENTATION OF THE EVENT:


TBD
KINCORA
Architectural Site Plan – Phase I North


ECTIONS
Loudoun Co. Pkwy
Potomac Trail
Gloucester Pkwy
Open Space
Broad Run
Pacific Blvd
Route 28
Atlantic Blvd
Shopping
Toll House
Dental Clinic