McCandless Development Project
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Environmental
The existing site had two major environmental concerns: soil contamination and water quality. An EDR report and water quality tests were collected for the site. A Phase I Environmental Site Assessment was conducted and soil contamination was found on site. We recommend to the Town of McCandless and potential oil company to achieve a score of “good”. It was concluded that the subject site contamination from a past oil company activity. The nearest creek was tested using the Allegheny watershed group and received an overall water quality score of “fair.”

Project Description
There are a number of parcels in the town of McCandless, north of Pittsburgh, that are underdeveloped. Currently, the 50 acre property is occupied by a movie theater, a vacant building, and a Trader Horn. The residents of the town are interested in a redevelopment of this land, preferably under a unified owner. In order to determine the feasibility of a redevelopment project, we first studied the existing site from an environmental, hydrological, geotechnical, transportation, and land development point of view. We then designed two conceptual plans of the site, and evaluated their impacts in each respect. After our data collection and analysis, we determined a recommendation for the town of McCandless.

Conceptual Design Plans

In order to quantify the value of each plan, we used the Allegheny County Assessment site to compare similar sized buildings for each use. We determined an average value per square footage of retail and office space, and an average value per dwelling unit for residential. Because of the increased density of the Capacity Plan, it is more economically attractive for developers to use the Capacity Plan.

Capacity Plan

Due Diligence Results
• Alluvial clay and silt soil composition
• Conemaugh Bedrock Group: thin layers of sandstones, shales, red beds, and thin limestone and coal
• Variable water table elevation 980’-970’
• No risk of Mine Subsidence

Conemaugh

In order to escape the flood water, the buildings must be raised to base level elevation of 1002’ by either structural means (stilts/columns) or using fill and aggregate.

Traffic Analysis

The two major intersections that provide access to the site were analyzed under current and future conditions. The analyses resulted in an overall delay experienced at the intersection and a corresponding, overall letter grade. These results could then be compared.

Hydrological
Flooding is not only an issue for our site, but for the watershed as a whole. Resolving the flooding issue for our site would require us to resolve the flooding issue for the entire watershed. Such a solution would be extremely expensive, and ultimately, we have recommended to mitigate the flooding issue through our development design.

Zoning Requirements
On December 16, 2013, Ordinance No. 1433 was passed and applies specifically to this site. The two development plans described abide by the requirements of the ordinance and zoning by representing a mixed use development in a unified manner, including a transportation impact study to assess the effects of development on the current traffic conditions.

Capacity Plan: Seeks to maximize the development on the site with respect to density, maximum building footprints, and gross building area as defined by Ordinance No. 1433
Incentive Plan: Seeks to take advantage of Section 1335.06 of Ordinance No.1433, requiring 24 acres of FEMA flood plain for Conservation Easement and incorporating a Park and Ride consisting of 300 parking spaces.

Geotechnical

In order to escape the flood water, the buildings must be raised to base level elevation of 1002’ by either structural means (stilts/columns) or using fill and aggregate.

Project Incentive

Plan

Material Type

Volume (cy)

Cost per Cubic Yard

Cost (\$)

Capacity
Fill dirt/#57 stone
44,700/60,630
1.00/1.45
5.00/7.36

Incentive
Fill dirt/#57 stone
63,690/79,587
1.00/1.45
32.96/49.62