## KEY DELIVERABLES

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Quantify Renewal Needs</strong></td>
<td>- Created Life Cycle Profiles for major building components and systems;</td>
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<td><strong>Multi-Year Capital Plan</strong></td>
<td>- Forecast how capital needs will grow in both the short and long term (5-year &amp; 30-year plan) as the buildings continue to age;</td>
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<tr>
<td><strong>Evaluate Building Performance</strong></td>
<td>- Calculated building performance using industry standard metrics to evaluate overall building risk and continued asset sustainability;</td>
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<td><strong>Risk Mitigation</strong></td>
<td>- Developed Cost by Discipline, Unfunded Liability, &amp; Facility Condition Index (FCI) profiles for the portfolio;</td>
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<td><strong>Asset Sustainability Target</strong></td>
<td>- Introduced Asset Sustainability targets, as a measure of FCI, to demonstrate funding required for effective management of resources</td>
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• The American Society of Civil Engineers (ASCE) has quantified the annual funding gap for Public School’s across the Nation at $38 billion. It cites a “lack of comprehensive data” as a key component to that shortfall:  

• “…governments have been plagued by a lack of comprehensive data on public school infrastructure as they seek to fund, plan, construct, and maintain quality school facilities”

HILLIARD SCHOOLS

U.S. PUBLIC SCHOOLS EARN A D+

The American Society of Civil Engineers (ASCE) publish an annual Infrastructure Report Card. The 2017 report graded the nation’s public school buildings’ condition as D+, with 24 percent of the structure rated as being in fair to poor condition. Excerpts off from the report state the following interesting statistics. 

Every school day, nearly 50 million K-12 students and 6 million adults occupy close to 100,000 public school buildings on an estimated two million acres of land. While state and local governments make significant investment in public K-12 schools infrastructure and schools play important civic, educational, and public safety roles in communities, the nation continues to underinvest in school facilities, leaving an estimated $38 billion annual gap. As a result, 24 percent of public school buildings were rated as being in fair or poor condition. While there have been a number of insightful reports in recent years, state and local governments are plagued by a lack of comprehensive data on public school infrastructure as they seek to fund, plan, construct, and maintain quality school facilities.

Student enrollment is projected to increase by 3 percent by 2025—rising from just more than 50 million to 51.4 million students. State and local governments face a constant challenge to keep up with operations and maintenance and the need for new construction, in addition to accommodating improved health and safety standards, stronger accessibility requirements, and new technology. School funding varies widely by state. Five states pay for nearly all of their school districts’ capital costs, 12 states provide no direct support for districts for capital construction responsibilities, and in the remaining 33 states, the levels of support vary greatly. The federal government contributes little to no funding for the nation’s K-12 educational facilities.

To read the section of the report that focuses on public school structures, visit www.infrastructurereportcard.org/cat-item/schools/.

— Source: American Society of Civil Engineers (ASCE), 2017 Infrastructure Report Card
ASG ASSETPLANNER™ APPROACH

Disparate data:
- Excel Spreadsheets
- PDF’s
- Institutional Knowledge
- Drawings / Schedules

Basic Asset Details:
- Age
- Size
- No. of floors
- Functional use
- Site Address

Template Validation:
- Incorporation of detailed datasets
- Knowledge transfer
- On-Site Condition Assessments

Benefits:
- Rapid data development process
- Institutional knowledge transfer
- Single data repository
- Dynamic dashboards for entire portfolio
Buildings are more expensive to maintain as they age, and the risk of failure increases as building systems near their “end of life”

Average Facility Age: 30 years (1989)
Total Facility Size: 2.35 million SF
Current Replacement Value: $563 million
After a series of Quality Control steps, Hilliard’s portfolio is uniquely configured within the AssetPlanner™ software platform. Condition data is live, rolling up to the dynamic Executive level dashboard for views by School and other groupings.
AssetPlanner™: Executive Dashboard

The following view shows both the Groupings (by Facility Type) and the School View – in this case, Hilliard Darby High School.
Life cycle renewal costs for the major building elements have been established to determine the Capital Renewal budget requirements over the next 30 years.

2019 Deferred Backlog: $30M

$1.1M average annual funding
PROJECTED TOTAL LIABILITY

The total liability represents the cumulative renewal needs of the portfolio based on the findings and results obtained during life cycle modeling & analysis.

2019 Liability: $30M (Deferred Backlog)

2047 Liability: $423M

Unfunded Liability Impacts
Years 2019 - 2048

$500M

$400M

$300M

$200M

$100M

(as of 2019-02-20 09:59:04)
PROJECTED UNFUNDED LIABILITY

Cumulative lifecycle renewal costs (top line) and the **annual capital funding allocation** (purple area) **of $1.1 M per year**.
FACILITY CONDITION INDEX (FCI)

The FCI is an industry standard index used to track condition performance of facilities and capital/asset portfolios. The FCI provides a consistent measurement of condition for a single building, group of buildings, or total portfolio.

Standard metric to identify and quantify Risk

\[ FCI = \frac{\text{Renewal and Repair Costs}}{\text{Replacement Cost}} \]

- **GOOD Range:** FCI (0% - 5%)
- **FAIR Range:** FCI (5% - 10%)
- **POOR Range:** FCI (10% - 30%)
- **CRITICAL Range:** FCI (> 30%)
Establishing an Asset Sustainability Target of 10% (Fair) will “sustain” the assets at an acceptable level of risk.

- 2019 FCI = 5.3%
- 2019 (Funded) FCI = 3.9%
- Average Annual Funding: $1.1 M per year
ASSET SUSTAINABILITY TARGET

Establishing an Asset Sustainability Target of 10% (Fair) will “sustain” the assets at an acceptable level of risk. This will require $367 Million over the next 30 years.

Additional Funding of $334M required over next 30 years.

2019 FCI = 5.3%

With funding, in 3 years FCI migrates to Poor by 2022

With funding, FCI migrates to Critical by 2031

Average Annual Funding: $1.1 M per year

Additional Funding of $334M required over next 30 years

Asset Sustainability Target: 10% FCI
HILLIARD CITY SCHOOLS

EXECUTIVE SUMMARY

PORTFOLIO LEVEL FINDINGS

- 2.34M SF; 30 Buildings
- $563M CRV
- $30M Backlog; 5.3% FCI “Fair” (2019)
- $423M Unfunded Liability (2048)
- FCI Migrates to “Critical” in 2029 (Unfunded)
- $367M Funding Requirement (Over 30 years)
THANK YOU

Your Trusted Sustainability Partner
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