City of Milford

CITY COUNCIL AGENDA

Monday, March 25, 2019

Joseph Ronnie Rogers Council Chambers
Milford City Hall, 201 South Walnut Street, Milford, Delaware

6:30 P.M.
WORKSHOP

Southeast Milford Transportation Improvement District Plan

7:00 P.M.
PUBLIC HEARINGS

ORDINANCE 2019-09
Shawnee Farm LLC for a Conditional Use to allow a Planned Unit Development to be known as Cypress Hall (Residential) consisting of 546 dwelling units (162 single-family detached units, 96 townhouse units and 288 multi-family units) on 91.69 +/- acres in an R3 zone. Property is located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection, Milford, Delaware. Present Use: Vacant/Proposed Use: Residential Subdivision.
Tax Parcels 1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00

ORDINANCE 2019-10
Shawnee Farm LLC for an Amended Preliminary Major Subdivision (Phase I Only) to be known as "Cypress Hall" (Residential) consisting of 384 dwelling units (96 townhouse units and 288 multi-family units) on 41.47 +/- acres in an R3 zone. Property is located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection, Milford, Delaware.
Tax Parcels 1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00

COUNCIL MEETING

Call to Order - Mayor Archie Campbell

Invocation

Pledge of Allegiance

Recognition
Jefferson Award/Lead360 Local Project Presentation

Proclamation 2019-06/National Service Day
*ICMA Fellow Evan Miller

Communication & Correspondence

Unfinished Business
Authorization/Downtown Development District Boundary/Expansion

New Business
Authorization/AT&T Water Tower Lease
Bid Award/Shawnee Acres Pump Station Replacement
Bid Award/Sidewalk Replacement Project

EXECUTIVE SESSION

Motion to Recess into Executive Session
Pursuant to 29 Del. C. §10004(b)(9) Personnel Matter

Return to Open Session
Employee Evaluation

Adjournment

All items, other than those on a Workshop Session Agenda, are subject to a potential vote.

SUPPORTING DOCUMENTS MUST BE SUBMITTED TO THE CITY CLERK IN ELECTRONIC FORMAT NO LATER THAN ONE WEEK PRIOR TO MEETING; NO PAPER DOCUMENTS WILL BE ACCEPTED OR DISTRIBUTED AFTER PACKET HAS BEEN POSTED ON THE CITY OF MILFORD WEBSITE.

℗ *Public Comment, up to three minutes per person, will be accepted.*

013119 022119 022819 031119 031319
032119 Item Removed
*032219 Added

Southeast Milford Transportation Improvement District (TID)

Presented to
City of Milford Town Council

March 25, 2019

What is a Transportation Improvement District (TID) ?

- A geographic area defined for the purpose of securing required improvements to transportation facilities in that area.
- A place where land use and transportation is planned in detail in advance, such that development consistent with that planning pays a readily determined fee, instead of conducting a Traffic Impact Study and making or funding off-site improvements.
- Purpose is to better provide the transportation improvements needed to support land development in locations identified as appropriate for development in local Comprehensive Plans.

Why Create a Transportation Improvement District (TID) ?

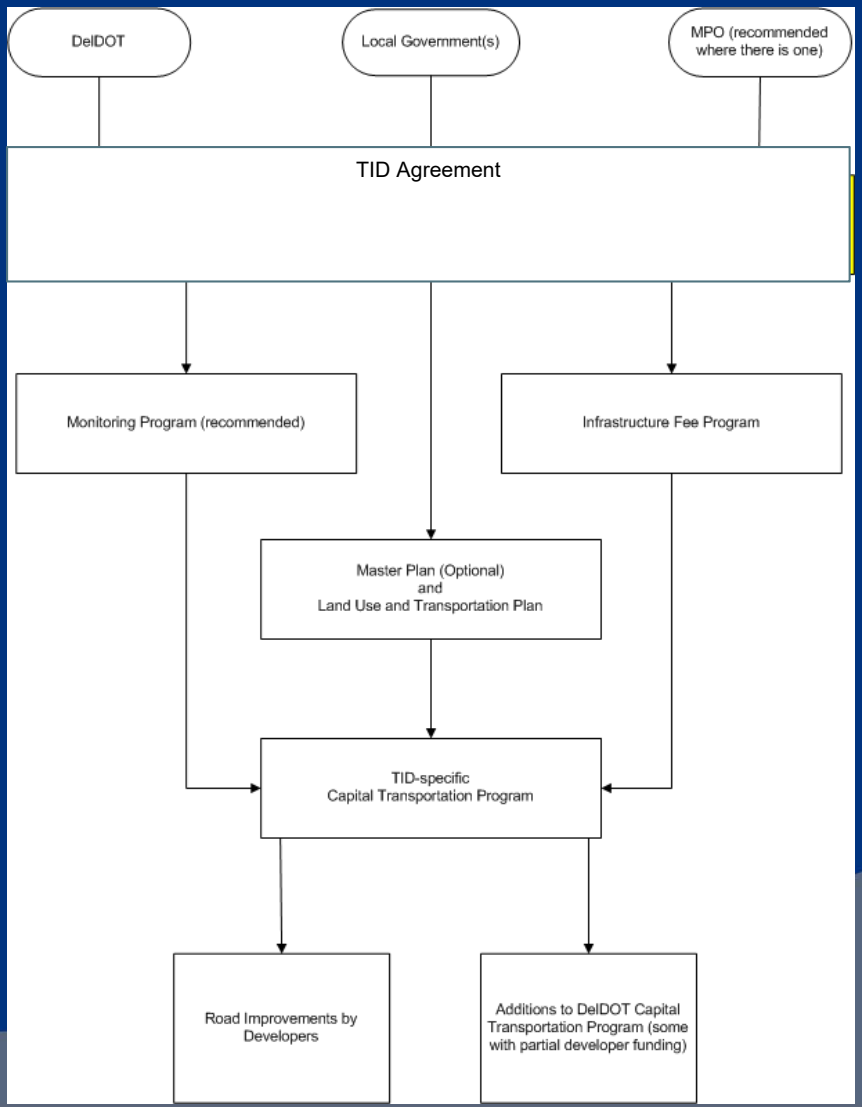
- Comprehensive Infrastructure Planning
- TID Projects Advance in DelDOT's CTP
- TID Fees Stay Local
- Equitable Treatment of Competing Developers
- Known Costs for Developers
- Expedited Development Reviews

Characteristics of a Good TID

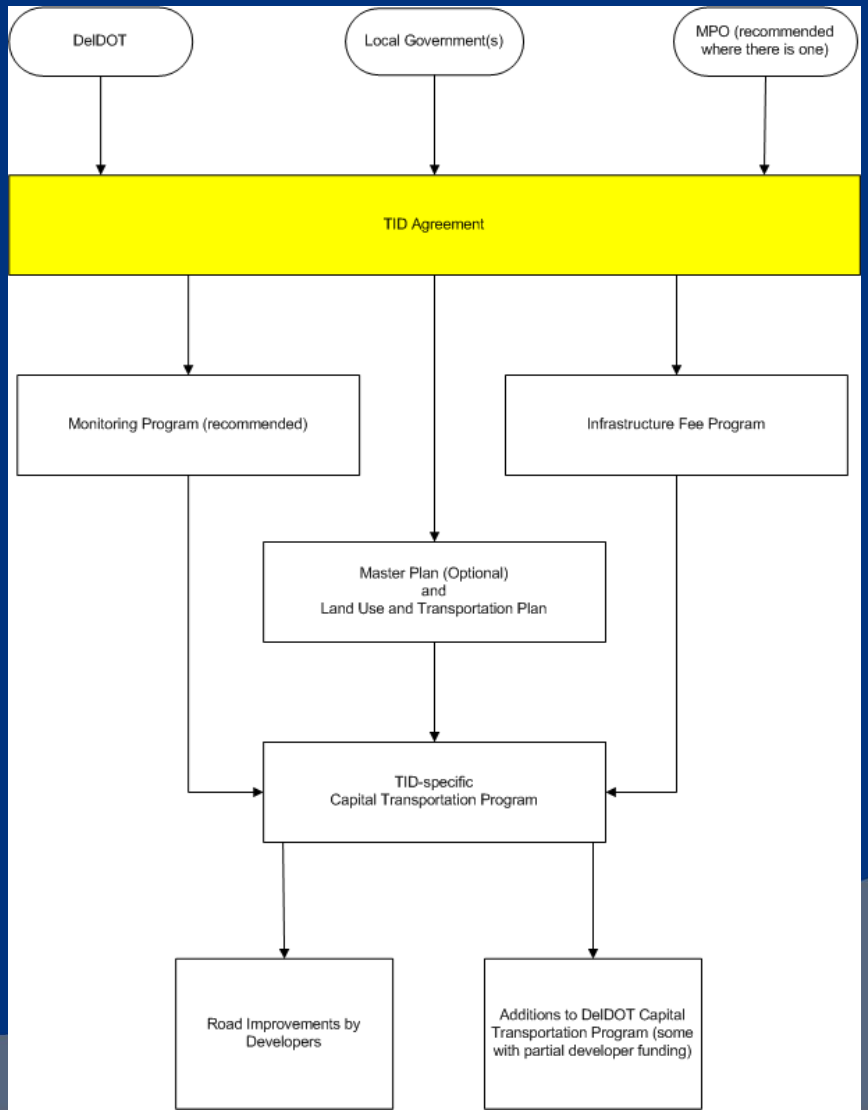
- Located in State Strategies Level 1, 2 or 3 areas
- Locations identified for planned growth in Comprehensive Plans
- Several parcels likely to be proposed for development or re-development
- Not too big, not too small
  - Henlopen TID 24 sq miles
  - Southern New Castle County TID 19 sq miles
  - **SE Milford TID** **9 sq miles**
  - Dover US 13/Bay Road Corridor TID 8 sq miles
  - Westown and Eastown TIDs 4 sq miles
- Natural boundaries, not roads, where possible

How does a TID work?

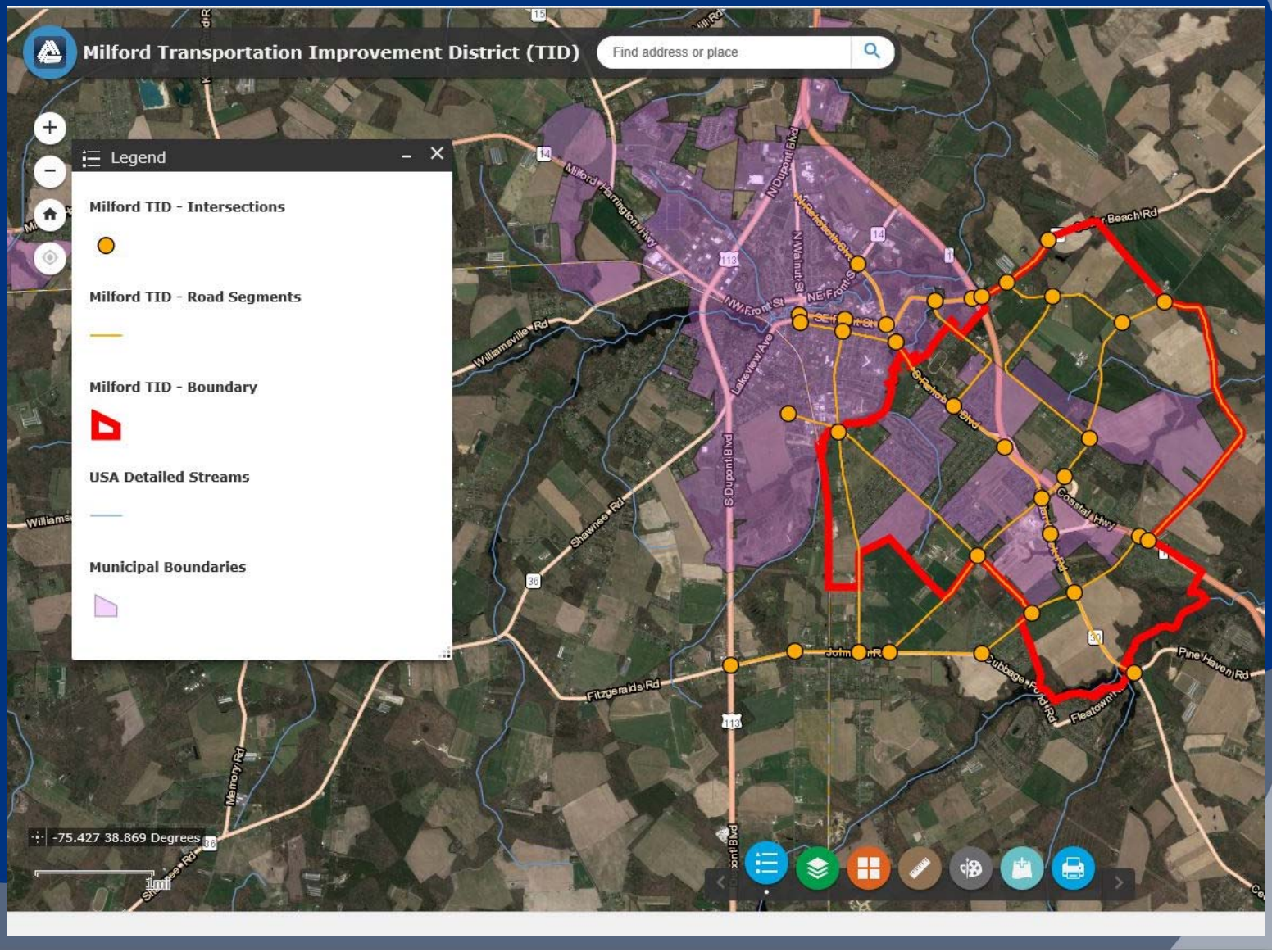
A TID starts with an agreement, a “TID Agreement”, which is why I am here tonight.



Southeast Milford TID Agreement



Southeast Milford TID
Initial boundaries and 2045 Horizon Year

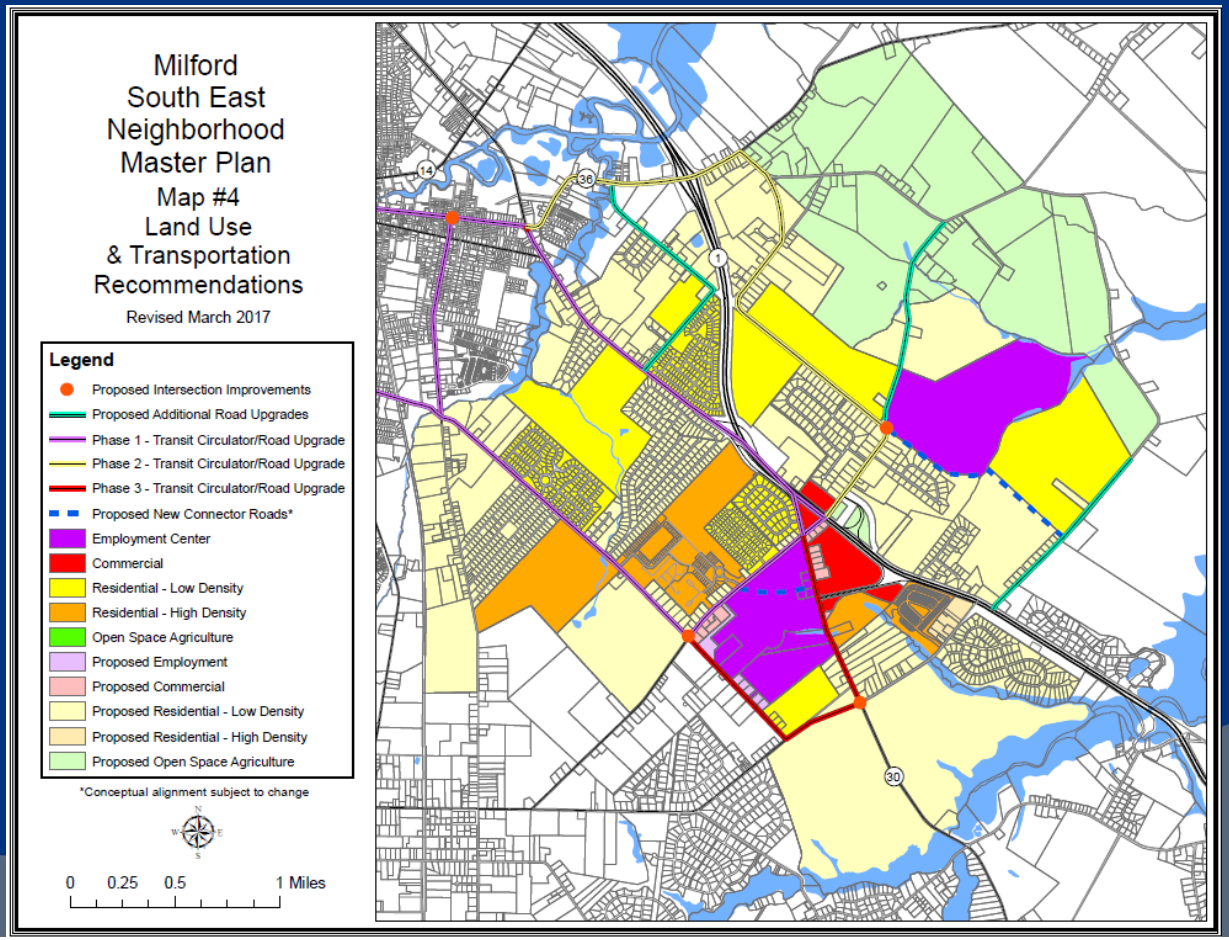


Southeast Milford TID
Roles and Responsibilities

- Commitments from DelDOT
  - Compile existing conditions report on transportation network, to inform LUTP and TID-CTP (completed)
  - Forecast traffic, based on future land use plan, on the study area road network for 2045 Target Horizon Year
  - Identify locations that need improvements to meet service standards in 2045
  - Provide concept plans for needed improvements
  - Compile land use forecast, traffic forecast, and needed improvements into Land Use and Transportation Plan (LUTP), for City review and approval

Southeast Milford TID
Roles and Responsibilities

- Commitments from DelDOT
  - Forecast traffic, based on future land use plan, on the study area road network for 2045 Target Horizon Year



Southeast Milford TID
Roles and Responsibilities

- Commitments from DelDOT (continued)
  - Identify a set of specific, buildable projects to implement needed improvements
  - Develop cost estimates for projects and update as needed, typically annually
  - Submit this TID-CTP for City review and approval
  - Give priority to TID-CTP projects in development of our CTP
  - Assist Milford with determinations of development consistency with the Land Use and Transportation Plan

Southeast Milford TID
Roles and Responsibilities

- Commitments from DelDOT
  - Require Traffic Impact Study for developments determined inconsistent with Land Use plan and that generate sufficient traffic
  - Require that manner and extent of participation be documented on record subdivision or land development plan
  - Assist Milford with review and approval of rights-of-way, design, and/or construction by developments in lieu of TID fee payments.

Southeast Milford TID
Roles and Responsibilities

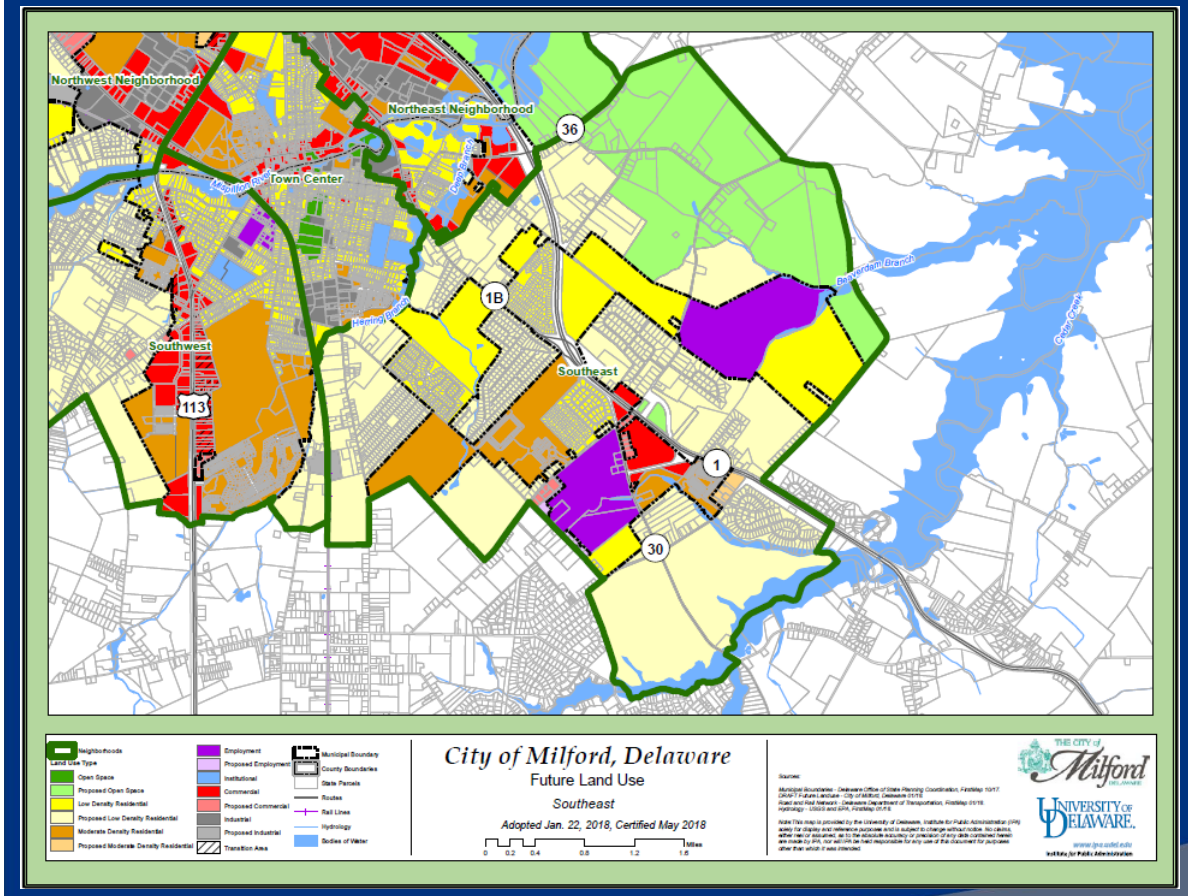
- Commitments from DelDOT
  - Determine value of rights-of-way dedications beyond what is required in Development Coordination Manual for credit against TID fees owed
  - Review and approve bids received for developer design/construction of improvements in lieu of fee payment
  - Develop the Infrastructure Fee Program, based on average weekday evening peak hour trip generation, for City review and approval (and update whenever LUTP changes)
  - Monitor traffic volumes and provide annual report on recommendations for implementation

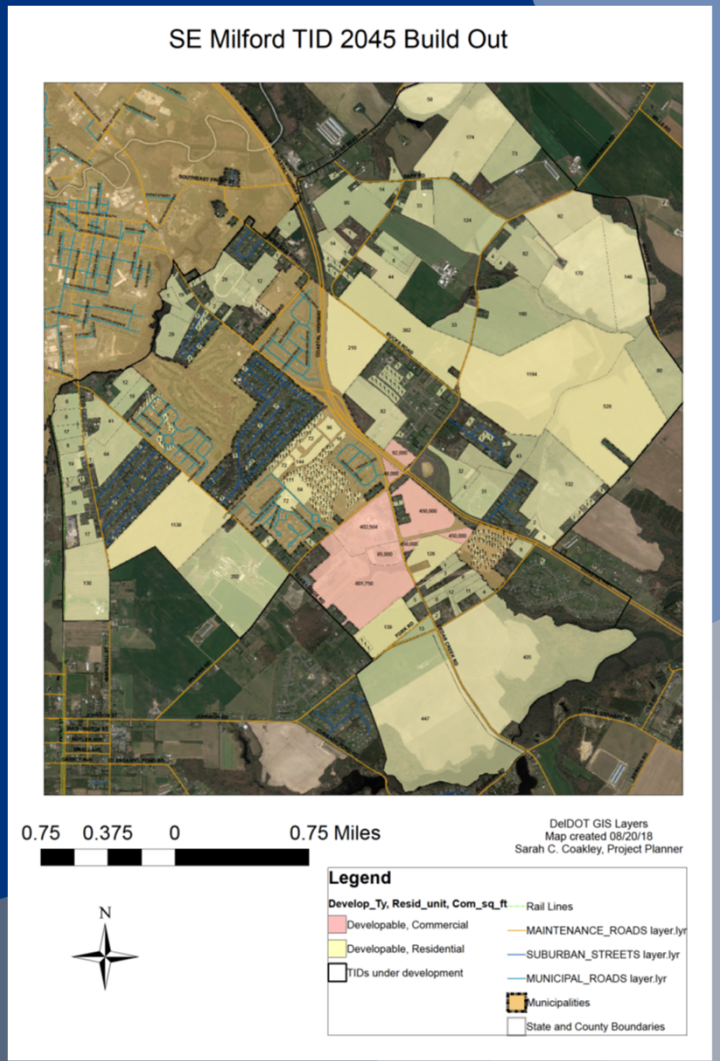
Southeast Milford TID
Roles and Responsibilities

- City of Milford commitments
  - Re-evaluate TID boundaries, horizon year, service standards, and LUTP when updating Comprehensive Plan
  - Supply DelDOT with a parcel-level land use forecast (staff completed based on Comprehensive Plan for city parcels and existing zoning for county parcels)
  - Review and approve the Land Use and Transportation Plan
  - Review and approve the TID Capital Transportation Program
  - Review and approve the Infrastructure Fee Program
  - Annually recommend TID-CTP projects for DelDOT's CTP.

Southeast Milford TID
Roles and Responsibilities

- City of Milford commitments
  - Supply DelDOT with a parcel-level land use forecast





Southeast Milford TID
Roles and Responsibilities

- City of Milford commitments (continued)
  - Assist DelDOT with determinations of development consistency with the Land Use and Transportation Plan
  - Require development participation and document manner and extent of participation on record subdivision or land development plan
  - Collect TID fees prior to issuance of a building permit and hold in account established for only TID payments.
  - Assist DelDOT with review and approval of rights-of-way, design, and/or construction by developments in lieu of TID fee payments.

Southeast Milford TID
Roles and Responsibilities

- City of Milford commitments (continued)
  - Audit developer payments to contractors for developer design/construction in lieu of fee
  - Make requests of DelDOT for specific information in monitoring reports
  - Publicize and host TID-related public meetings (at minimum, for approvals of LUTP, TID-CTP, and Infrastructure Fee Program)

Southeast Milford TID
Service Standards

- Level of Service: measure of intersection control delay

Signalized Intersections		
Control Delay (sec/veh)	Volume-to-Capacity Ratio ≤ 1.0	Volume-to-Capacity Ratio > 1.0
≤ 10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

Unsignalized Intersections		
Control Delay (sec/veh)	Volume-to-Capacity Ratio ≤ 1.0	Volume-to-Capacity Ratio > 1.0
≤ 10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

Southeast Milford TID
Service Standards

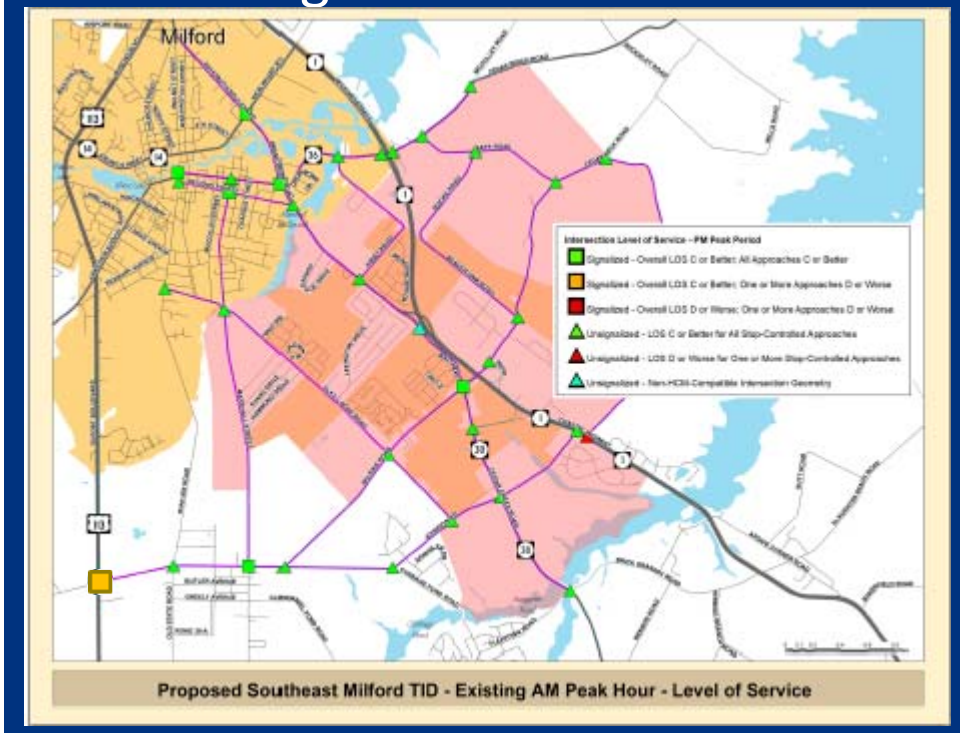
- Level of Service: Aspirational
  - Overall LOS for weekday morning and evening peak hours at Signalized, Roundabout, and All-way Stop-controlled intersections: D (specific approaches/movements may be E or F)
  - LOS for weekday morning and evening peak hours at Two-way Stop-controlled intersections: D for left turns from major street. Minor street approaches/movements may be E or F.
  - Aim for D for minor street stop-controlled approaches, but agree on specific remedies

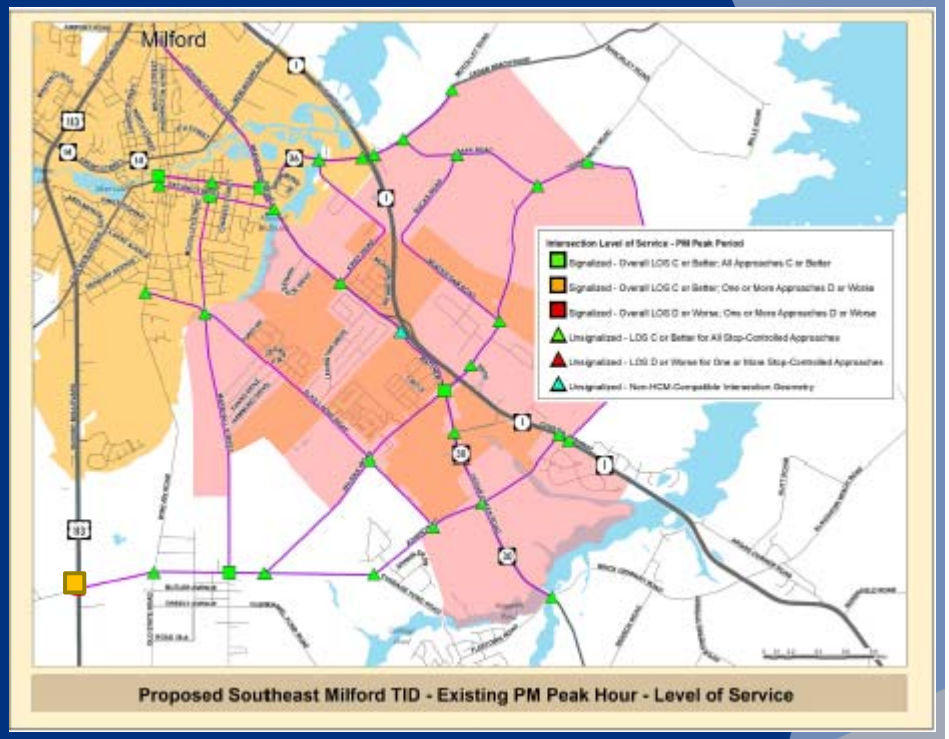
Southeast Milford TID
Service Standards

- Level of Service: Aspirational
  - 95th percentile queue lengths should not exceed available turning lane lengths
  - Through movements should not queue through adjacent intersections
  - Facilities to be analyzed are all at-grade intersections of one or more State-Maintained roads with other State-maintained roads; rail lines; City-maintained streets, excluding alleys; and Commercial or institutional driveways served by traffic signals

Southeast Milford TID
Service Standards

- Existing Level of Service

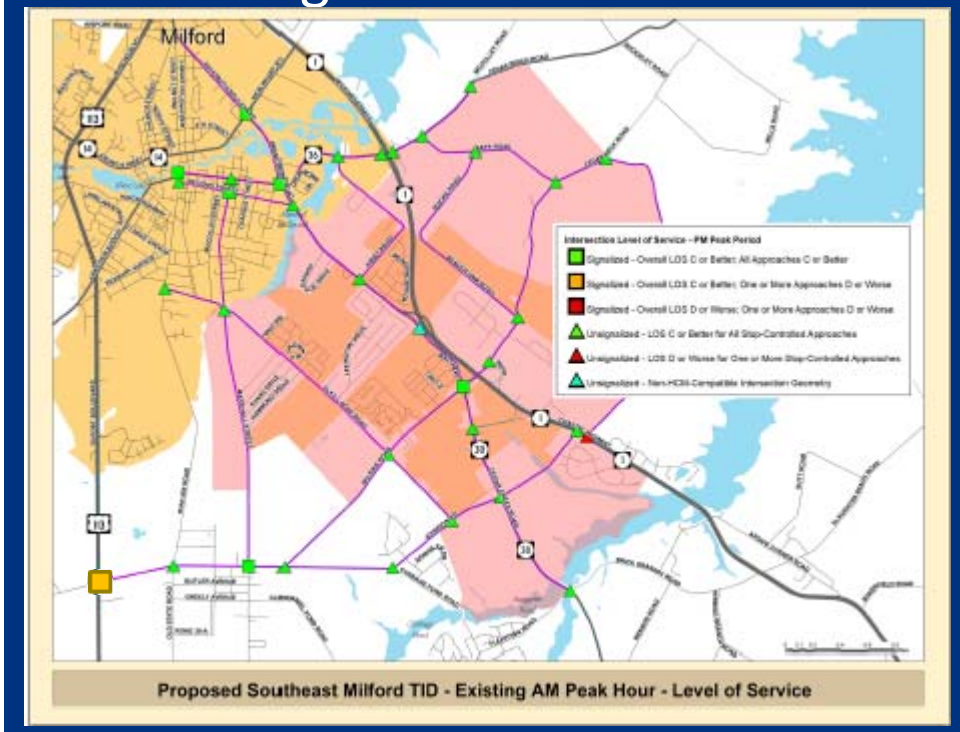




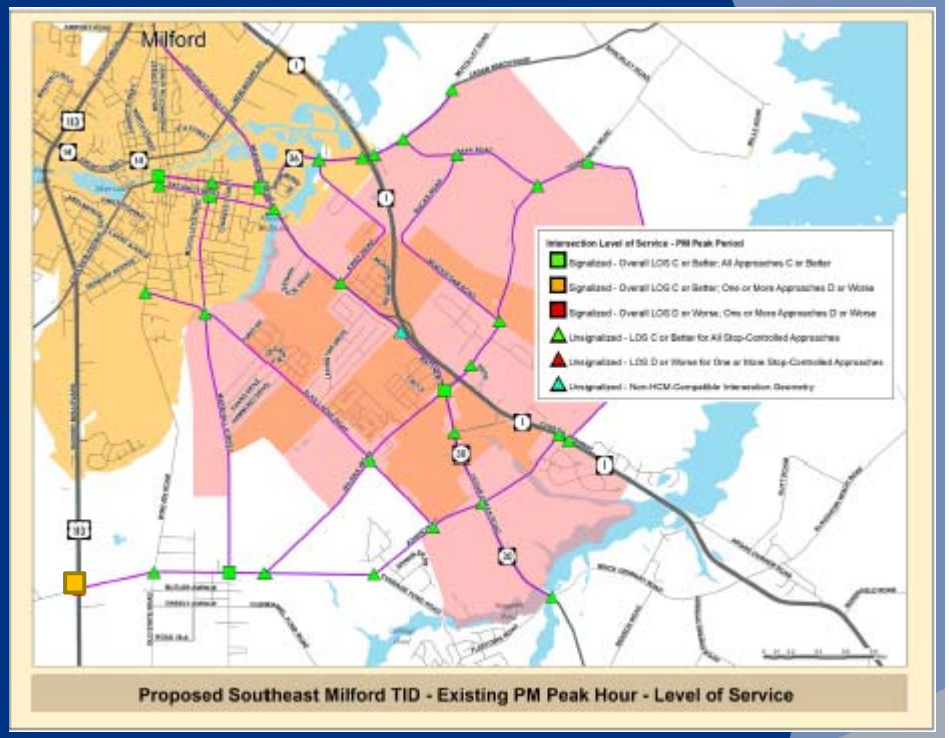
- US 113 & Fitzgeralds Rd/Johnson Rd
  - Overall intersection LOS = C (AM & PM)
  - Fitzgeralds Rd and Johnson Rd approaches LOS E & F (AM) LOS E & E (PM)
  - Limited geometric capacity and limited green time due to US 113 green time demands

Southeast Milford TID
Service Standards

- Existing Level of Service



Proposed Southeast Milford TID - Existing AM Peak Hour - Level of Service



Proposed Southeast Milford TID - Existing PM Peak Hour - Level of Service

- SR 1 & Sharps Rd
  - Sharps Rd approach LOS D (AM)
  - Limited geometric capacity and limited gaps on SR 1 due to high traffic volumes and median cross-over requirement to access southbound SR 1

Southeast Milford TID
Service Standards

- Geometric Standards
  - Use of posted speed limits is assumed
  - DelDOT will consider potential reduction of speed limits
    - Cedar Creek Rd, from Cedar Creek north, to 35 mph
    - Wilkins Rd/Cedar Neck Rd, from SR1 overpass to Elks Lodge Rd stop sign, to 35 mph
    - Elks Lodge Rd, from Wilkins Rd to Marshall St, to 35 mph
  - DelDOT Functional Classification Map, design standards, and Complete Streets Policy are assumed
  - Minimum lane widths for State-Maintained Roads
    - 11-foot through lanes
    - 10-foot turning lanes (12-foot for two-way left turn lanes, 15-foot for a right turn lane if a 5-foot bicycle lane is included)
    - 5-foot shoulders on local roads
    - 8-foot shoulders on collector and minor arterial roads
    - 10-foot shoulders on principal arterial roads

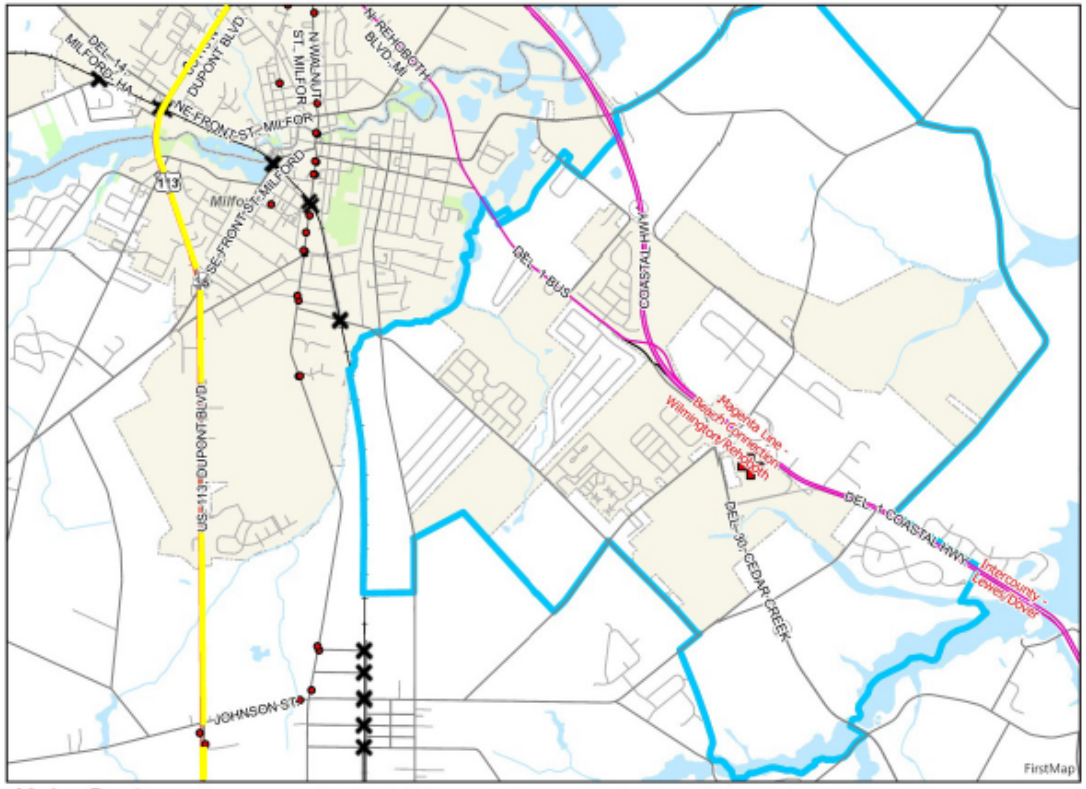
Southeast Milford TID
Service Standards

- Access and Intersection Control
  - DelDOT's Development Coordination Manual applies to access on State-maintained roads
  - Subdivision streets in City will be built to City standards and for private or municipal maintenance
  - Crash data, the Delaware Manual on Uniform Traffic Control Devices, and other criteria as adopted by DelDOT will be used for intersection control evaluation and design
  - Roundabouts shall be considered first as a means of intersection control, along with safety, capacity, and rights-of-way/property impacts.

Southeast Milford TID
Service Standards

- Fixed Route Transit
  - Existing DART First State bus service is assumed to continue.
  - Addition of new stops and the amenities required at each stop shall be at the discretion of the Delaware Transit Corporation based on the goals and objectives of Milford's SE Master Plan.

Figure 10. TID Study Area – Public Transit Facilities



Major Routes
- Interstate
- State
- United States

Milford TID Boundary
- TID Boundary
- Park and Pool
- Bus Stops
- Bus Routes

Railroads
- Railroad Crossing
- Rail Lines
- Roads

BaseMap/DE_Basemap
- Public Protected Lands
- Municipalities
- New Medical Center

0 0.25 0.5 1 1.5 2 Miles

N W E S DelDOT Regional Systems Planning

Southeast Milford TID
Service Standards

- Aesthetic Standards
  - With the possible exception of Scenic Byways, plain bituminous pavement with Portland cement concrete curbs and sidewalks, galvanized steel signal poles and streetlight heads, grass or concrete medians and grass or bituminous-paved shoulders are assumed.

Southeast Milford TID
Service Standards

- Delaware Byways
  - If a road is designated by DelDOT as part of a Scenic Byway and there is a Corridor Management Plan, and/or a Master Plan, for that Byway, the Plan(s) shall govern the implementation of these standards with respect to that road.

Delaware
BAYSHORE
BYWAY

Bayshore Initiative Area

- The Delaware Bayshore Byway
- Discovery Zones
- Other Routes
- Historic Lewes Byway
- Cape May Lewes Ferry
- Bayshore Outline



Southeast Milford TID
Service Standards

- In the following locations, inadequate drainage is known to exist and shall be addressed as part of this effort:
  - Wilkins Road between Elks Lodge Road and Cedar Creek Road

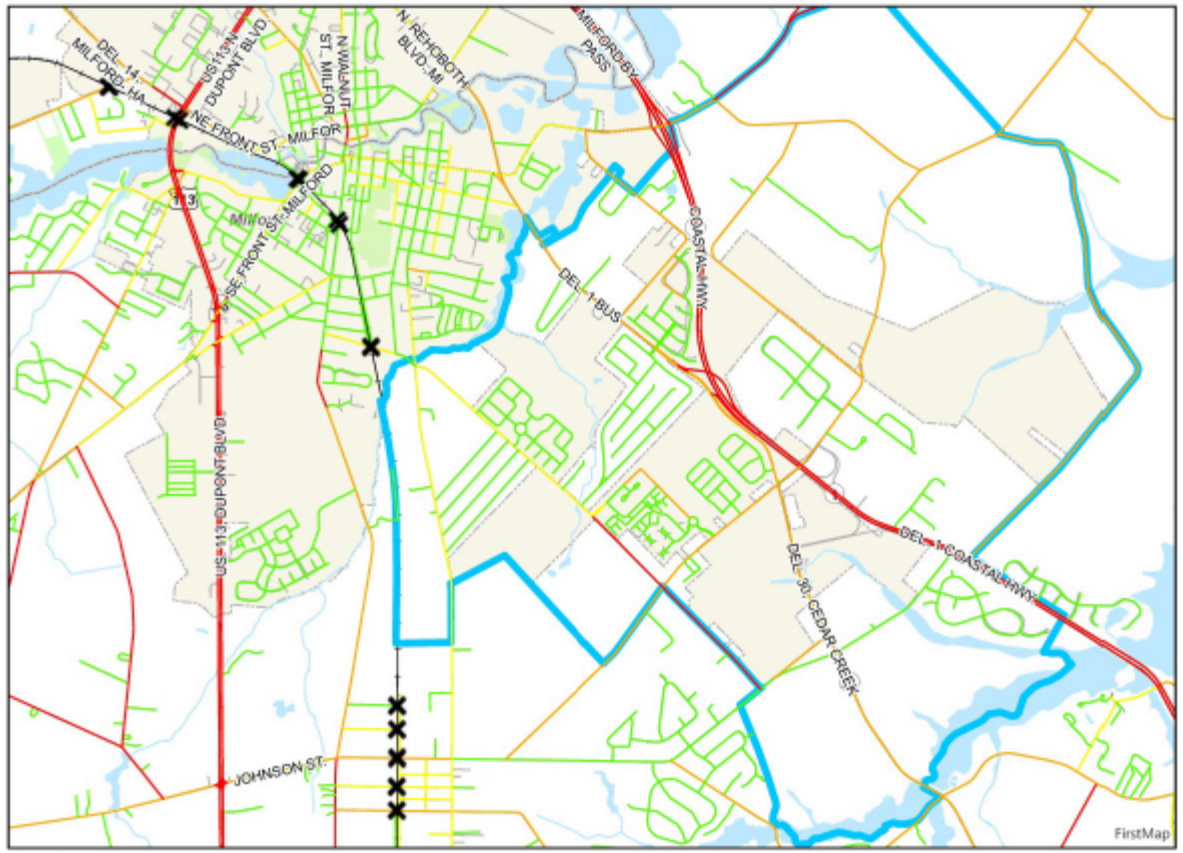
Southeast Milford TID
Service Standards

- Pedestrian and Bicycle Facilities
  - The City's Bicycle and Pedestrian Master Plan should be referenced when making design decisions related to bike and pedestrian facilities.
  - Existing and proposed pedestrian crossing treatments (at intersections and/or mid-block) should be evaluated and designed using national and local research. Preferred design is to incorporate a median refuge island to create a two-stage crossing.

Southeast Milford TID
Service Standards

- Pedestrian and Bicycle Facilities

Figure 7. TID Study Area - Bicycle Level of Traffic Stress (LTS)



Major Routes
- Interstate
- State
- United States
- Rail Lines

BaseMap/DE_Basemap
- Municipalities
- Public Protected Lands

Milford TID Boundary
- TID Boundary

Railroads
- Railroad Crossing

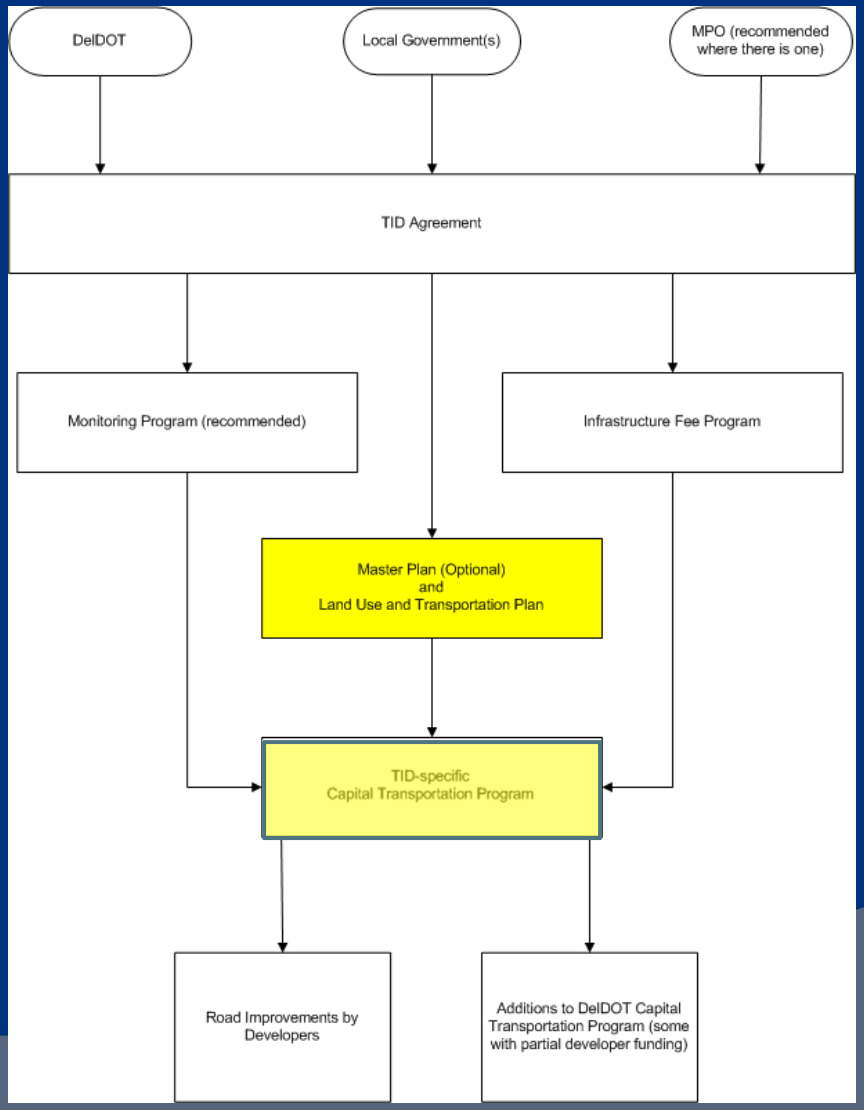
Bicycle LTS
Level of Traffic Stress

- 1 - Safe for children to use; Usually completely separated from auto traffic
- 2 - Tolerated by most mainstream adult populations of cyclists; Roads with low volume and low speed auto traffic
- 3 - Tolerated by riders who are enthused and confident; Heavy traffic with separated bike facility
- 4 – Only tolerated by strong and fearless riders; Cyclists must interact with high volumes or speeds of auto traffic

Southeast Milford TID
Service Standards

- Pedestrian and Bicycle Facilities Proposed
  - Shared use path extended along south side of Wilkins Rd from Bayhealth property to Elks Lodge Rd
  - Shared use path along Elks Lodge Rd from Wilkins Rd to Marshall St
  - Shared use path along Cedar Neck Rd and Bucks Rd for any new development, connecting Cedar Creek Rd and Route 36
  - Existing bike lane in shoulder of northbound Cedar Creek Rd/S. Rehoboth Blvd. that ends abruptly at the SR1 flyover to S Rehoboth Blvd

Southeast Milford TID Next Steps



Questions?

- Please contact:
  - Sarah Coakley, AICP
    Sarah.coakley@delaware.gov
    (302) 760-2236

PUBLIC WORKS FACILITY
180 Vickers Drive
Milford, DE 19963
www.cityofmilford.com

THE CITY of Milford DELAWARE

PLANNING DEPARTMENT
Planning, Economic Development,
Enforcement, and Inspections Office
O 302.424.8396 | F 302.424.3559

DATA SHEET FOR CYPRESS HALL - RESIDENTIAL

Development Advisory Committee: March 1, 2019

Planning Commission Meeting: March 19, 2019

Application Number / Name	:	18-011 / Cypress Hall Residential
Applicant	:	Shawnee Farm, LLC 105 Foulk Road Wilmington, DE 19803
Owner	:	Same
Application Type	:	Planned Unit Development & Revised Preliminary Major Subdivision & Site Plan
Comprehensive Plan Designation	:	Moderate Density Residential
Zoning District	:	R-3
Present Use	:	Vacant
Proposed Use	:	Planned Unit Development
Area and Location	:	91.69 +/- acres of land located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection.
Property Identification Numbers	:	1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00

ENC: Staff Analysis Report
Exhibit A - Location & Zoning Map
Exhibit B - Preliminary Major Subdivision & Site Plans

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180 Vickers Drive
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THE CITY of Milford DELAWARE

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STAFF ANALYSIS REPORT
March 4, 2019

Application Number / Name	:	18-011 / Cypress Hall - Residential
Application Type	:	Preliminary Major Subdivision, Preliminary Site Plan & Planned Unit Development
Comprehensive Plan Designation	:	Moderate Density Residential
Zoning District	:	R-3
Present Use	:	Vacant
Proposed Use	:	Planned Unit Development
Property Identification Numbers	:	1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00
Area and Location	:	91.69 +/- acres of land located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection.

I. BACKGROUND INFORMATION:

- City Council granted Final Major Subdivision for Cypress Hall - Phase I on June 22, 2009. The current record plan consists of 96 townhouses and 288 garden apartments, for a total of 384 total units. A copy of the public hearing minutes and the current record drawings are included in the packet for review.

- The applicant proposes to revise the site plan for the garden apartment area by reducing the number of parking spaces required from 2.5 spaces per unit to 2 spaces per unit and increasing the number of units per building from 12 to 24. Instead of applying for a variance from the Board of Adjustment, the applicant is seeking permission to deviate from Chapter 230 through the Planned Unit Development review process. An analysis of the PUD request is outlined in Section II of the staff report.

- Deviations from Chapter 230 Zoning and Chapter 200 are specifically listed in a table and notes titled “deviation from R3 Zoning Code” on the PUD sheet.

- The development includes a clubhouse and pool within the multi-family area.

- The applicant is seeking conditional use approval for the Planned Unit Development with the specific requested deviations. The applicant is also seeking Preliminary Major Subdivision approval for Phase I along with Preliminary Site Plan approval for the multi-family area.

II. STAFF ANALYSIS:

Based on the information presented, the City of Milford Code and the Comprehensive Plan, staff submits the following regarding the request for a Planned Unit Development and revised Preliminary Major Subdivision and Site Plan approval:

- Evaluation based on "Criteria for Planned Unit Residential Development" as provided in Chapter 230-48.1

  Permitted Uses. Uses, accessory uses and signs permitted in any residential district shall be permitted in accordance with the additional requirement and provisions of the article.

  The proposed single-family detached, townhouse and multi-family housing uses are permitted within the City's residential districts and meet this requirement.

  Minimum requirements, area and width. In a planned unit residential development, minimum lot area and width may be less than that required by the district regulations, except that no single-family lot shall be less than 4,000 square feet in area nor less than 40 feet in width. The width of the lot shall be between lot lines at the front building setback line as determined by the Planning Commission.

  The proposed subdivision meets the minimum standards for lot area and lot width outlined under Chapter 230 for R-3 Garden Apartment and Townhouse District. Lot requirements are listed in the data column on the PUD sheet for each unit type.

  Density. A planned unit residential development is not intended to increase density, but to allow flexibility in the design of the number of dwelling units permitted. If a parcel or parcels have more than one zoning classification, the total permitted density may be located throughout the parcel or parcels. The total permitted density shall be determined by dividing the net development area by the minimum lot area per dwelling unit required by the zoning district in which the land is located. Net development area shall be determined by subtracting 25% of the gross area. Gross area shall not include any wetlands, floodway or similar area not suitable for building as determined by the Planning Commission.

  The data column on the PUD sheet shows the density calculation. The total site contains 91.69 acres, which has a 68.77 net developable area. 546 dwelling units divided by 68.77 acres equals a project density of 7.94 dwelling units per acre.

  Other requirements. Off-street parking, parking beneath buildings, front, side and rear setbacks, landscaping and buffering, lot coverage, number of units per building and building separation shall be as determined by the Planning Commission. Maximum height shall not exceed 48 feet and four stories maximum.

  The applicant is seeking the following deviations from Chapter 230 and Chapter 200 which are outlined on the PUD sheet and are to be approved by the Planning Commission and City Council;

- Reduction in the parking requirement for the multi-family area from 2.5 parking spaces per unit to 2.0 parking spaces per unit.
- Increase the number of units per multi-family building from 12 to 24.
- Reduce the pavement width for the single-family detached area as shown on the provided plan from 25 feet to 22 feet in width.
- Reduce the pavement width for the townhouse and apartment area as shown on the provided plan from 30 feet to 28 feet in width.
- For single-family detached lots, allow one of the road frontages to be considered the side yard setback instead of requiring two front yard setbacks as shown on the provided plan.

Neighborhood Commercial.

No neighborhood commercial is proposed since the project is adjacent to a major commercial area.

A minimum of 400 square feet per unit shall be designated as open space subject to the recreational use. Recreational use requirement – 50% of the required open space shall be set aside for recreation use.

With a total of 546 dwelling units, the project requires 5.01 acres of open space of which 2.5 acres must be designated recreational open space. The development provides 23.75 acres of open space of which 2.5 acres are designated as recreational open space. The proposed recreational open space includes a community clubhouse, pool area and picnic areas.

- During plan review, staff requested a wooded buffer of at least 50' be provided along the southern boundary shared with the DSWA transfer station, similar to the buffer provided for the area adjacent to the Milford Grain facility on Shawnee Road. The buffer area would remain wooded and be part of the subdivision open space to avoid noise, odor and dust complaints from potential residents. A walking path or trail could be provided within the buffer area from the shared use path on Route 113 to western limits of the proposed single-family detached area. This could connect to the proposed subdivision streets and provide future connection to the vacant land to the west. Staff recommends the Planning Commission and City Council consider making this a condition of the Conditional Use PUD approval.

- The required pavement sections are outlined in the plan review comments dated February 15, 2019, which were acknowledged by the applicant and shown on sheet GR-1.

- The applicant has provided the requested road interconnection with the farm to the west, along with water and sewer stubs for future development to this parcel.

- Lexus Drive from Geyer Avenue to the commercial shopping center to the north will be constructed as part of Phase 1-2b.

- The westernmost interconnection with the commercial shopping center on Willis Drive has been removed to avoid this being used by delivery trucks and heavier vehicles leaving the shopping center. A pedestrian and bicycle path will remain to allow residents to walk or bike to the commercial area.

- The following comments must be addressed prior to Final Major Subdivision and Site Plan approval;
    - Obtain approvals or no objection letters from DelDOT, State Fire Marshal's Office, Sussex Conservation District, DNREC WPCC and DHSS;
    - Address remaining Preliminary Major Subdivision and Site Plan review comments (copy of which is included in the packet) from the Planning Department;
    - Address conditions imposed by the Planning Commission and City Council as part of the PUD approval;
    - Obtain final approval of engineering plans from the City Engineer; and
    - Address additional department and agency comments outlined in Section III.

III. AGENCY & DEPARTMENT COMMENTS:

- **Office of State Planning Coordination**
  Contact: David Edgell – 302-739-3090

- **DelDOT**
  No comments provided.

- **Delaware Health and Social Services – Division of Public Health**
  Contact: William J. Milliken, Jr. – 302-741-8646
  No comments provided.

- **Department of Natural Resources and Environmental Control (DNREC), Division of Water, Surface Water Discharges Section (SWDS)**
  Contact: Bryan Ashby – 302-739-9946
  No comments provided.

- **Sussex Conservation District**
  Contact: Jessica Watson – 302-856-2105
  No comments provided.

- **Delaware State Fire Marshal's Office**
  Contact: Duane T. Fox – 302-856-5298
  See attached comments.

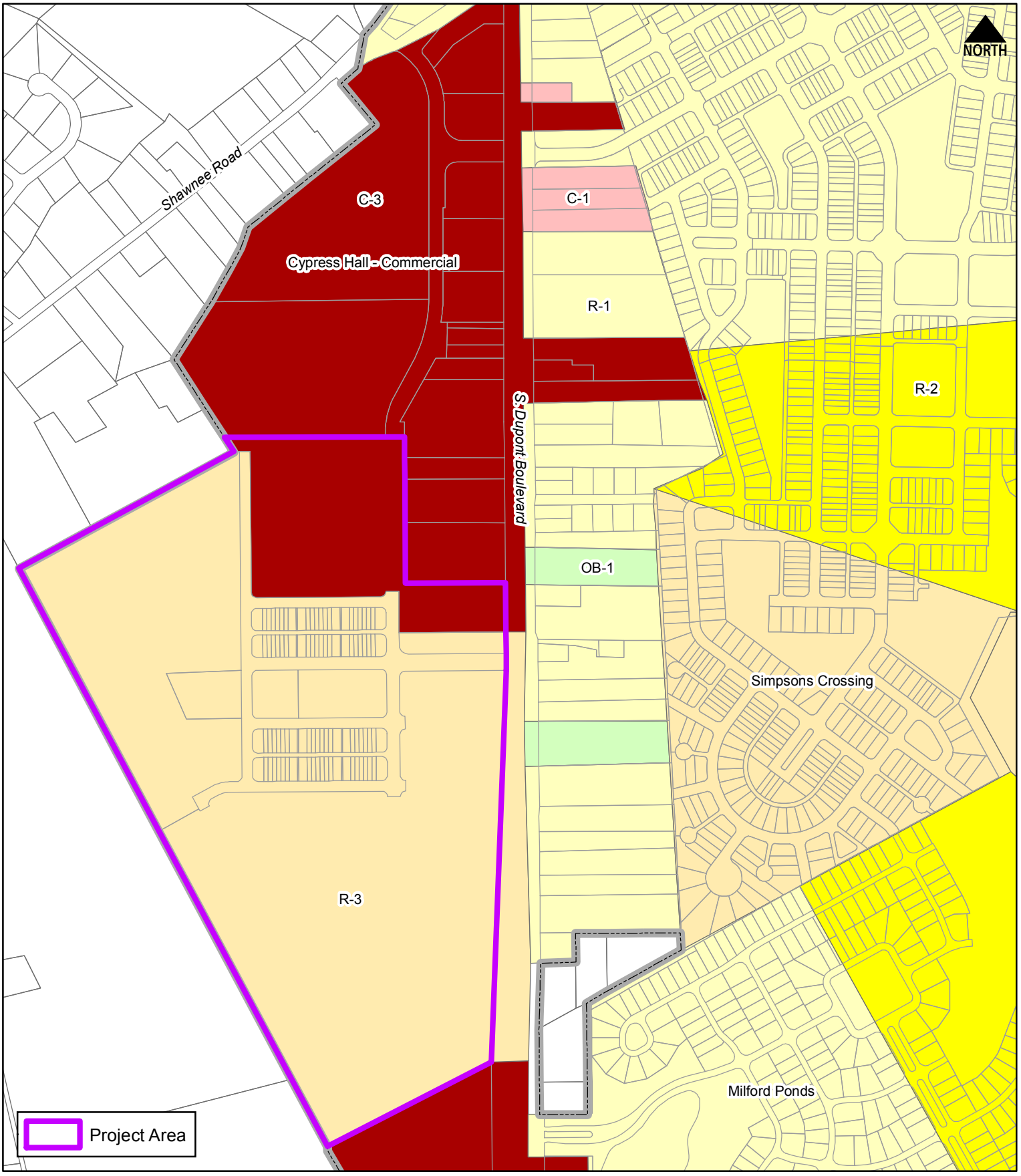
- **Carlisle Fire Company**
  No comments provided.

- **City of Milford Public Works Department, City Engineer**
  Contact: Erik Retzlaff, P.E. – 302-422-1110
  See attached Preliminary Major Subdivision and Site Plan review comments.

- **City of Milford Parks and Recreation Department**
  No comments provided.

- **City of Milford Police Department**
  No comments provided.

- **Milford School District**
  No comments provided.



THE CITY of Milford DELAWARE

Scale: Feet
0 300 600

Drawn by: WRP

Date: 02/14/19

Filepath: RevisedPreliminary_CypressHallResidential.mxd

Title:

Revised Planned Unit Development
Preliminary Major Subdivision and Site Plan

Cypress Hall - Residential

Location & Zoning Map

DATA COLUMN

TAX MAP ID	:1-30-03.00-261.01
EXISTING ZONING	:R-3
PROPOSED USE	:PLANNED UNIT DEVELOPMENT
TOTAL SITE AREA	:91.69 AC
NET DEVELOPMENT AREA	:68.77 AC
PROPOSED SINGLE FAMILY LOTS	:162
PROPOSED NUMBER OF TOWNHOUSES UNITS	:96
PROPOSED NUMBER OF MULTI-FAMILY UNITS	
ONE BEDROOM (TYPE C BLDG)	:60 UNITS (5 BUILDINGS)
TWO BEDROOM (TYPE A BLDG)	:180 UNITS (15 BUILDINGS)
THREE BEDROOM (TYPE B BLDG)	:48 UNITS (4 BUILDINGS)
TOTAL	:288 GARDEN APARTMENTS
TOTAL DWELLING UNITS PROVIDED	:546
TOTAL DENSITY (546 DU ÷ 68.77 AC)	:7.94 DU/AC

R-3 ZONING REQUIREMENTS SINGLE FAMILY

MINIMUM LOT SIZE ALLOWED	:7,500 S.F.
MINIMUM LOT WIDTH	:60
FRONT YARD SETBACK	:30
SIDE YARD SETBACK	:8
REAR YARD SETBACK	:15
MAXIMUM LOT COVERAGE	:45%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT

R-3 ZONING REQUIREMENTS TOWNHOUSES

MINIMUM LOT SIZE ALLOWED	:2,000 S.F.
MINIMUM LOT WIDTH	:20'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	: 8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:60%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT
MAXIMUM DENSITY	:12 DU PER AC

R-3 ZONING REQUIREMENTS GARDEN APARTMENTS

MINIMUM LOT SIZE ALLOWED	:2,500 S.F.
MINIMUM LOT WIDTH	:50'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	:8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:20%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT
MAXIMUM DENSITY	:16 DU PER AC
MINIMUM PROJECT SIZE	:1 AC
TOTAL OPEN SPACE REQUIRED	:400 S.F. x 546 UNITS = 218,400 S.F. (5.01 AC.)
TOTAL OPEN SPACE PROVIDED	:1,034,783 S.F. (23.75 AC.)
RECREATIONAL SPACE REQUIRED	: 109,200 S.F. (2.50 AC.)
RECREATIONAL SPACE PROVIDED	: 78,365 S.F. (1.80 AC.) CLUBHOUSE POOL AREA + 30,492 S.F. (0.70 AC.) PICNIC AREA 108,857 S.F. (2.50 AC.) TOTAL
TOTAL AMOUNT OF STORMWATER	:8.44±AC
TOTAL AMOUNT OF PROPOSED RIGHT-OF-WAY	:17.8±AC
TOTAL AREA OF LOTS	:38.22±AC
CLUBHOUSE SPACES REQUIRED	:5200 S.F. ÷ 150 = 35 SPACES
PARKING SPACES REQUIRED	:2.5 SPACES/UNIT + 35 CLUBHOUSE SPACES = 995 SPACES
PARKING SPACES PROVIDED	:618 MULTI-FAMILY + 240 TOWNHOUSE + 35 CLUBHOUSE = 893 SPACE
SEWER PROVIDER	:CITY OF MILFORD
WATER PROVIDER	:CITY OF MILFORD
ELECTRIC PROVIDER	:CITY OF MILFORD
WETLANDS	:NONE ARE PRESENT ON SITE
SOURCE WATER PROTECTION AREAS	:NONE ARE PRESENT ON SITE
FLOOD ZONE	:ZONE X AREA OF MINIMAL FLOOD HAZARD PANEL 10005C00391 EFF. 01/06/2005
FIRE DISTRICT	:CARLISLE
SCHOOL DISTRICT	:MILFORD
ELECTION DISTRICT	:2ND
PERMANENT MONUMENTS FOUND	:16
PERMANENT MONUMENTS PLACED	:14
HORIZONTAL DATUM	: NAD83
VERTICAL DATUM	: NAVD88

OWNERS/DEVELOPERS
SHAWNEE FARM LLC
105 FOULK RD.
WILMINGTON, DELAWARE 19803
(302) 422-0945

ENGINEER/SURVEYOR
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVENUE
MILFORD, DELAWARE 19963
(302) 424-1441

R-3 GARDEN APARTMENT AND TOWNHOUSE DISTRICT						
REQUIREMENTS	SINGLE FAMILY DWELLINGS		GARDEN OR LOW RISE APARTMENTS		TOWNHOUSES OR ROW DWELLINGS	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
MAX DWELLING UNIT PER BUILDING	1	1	12	24	≥ 3 AND ≤8	8
PARKING SPACES	2.5 PER DU	2.5 PER DU	720	618	2.5 PER DU	2.5 PER DU
PUBLIC ROAD WIDTH	25'	22'	30'	28'	30'	28'

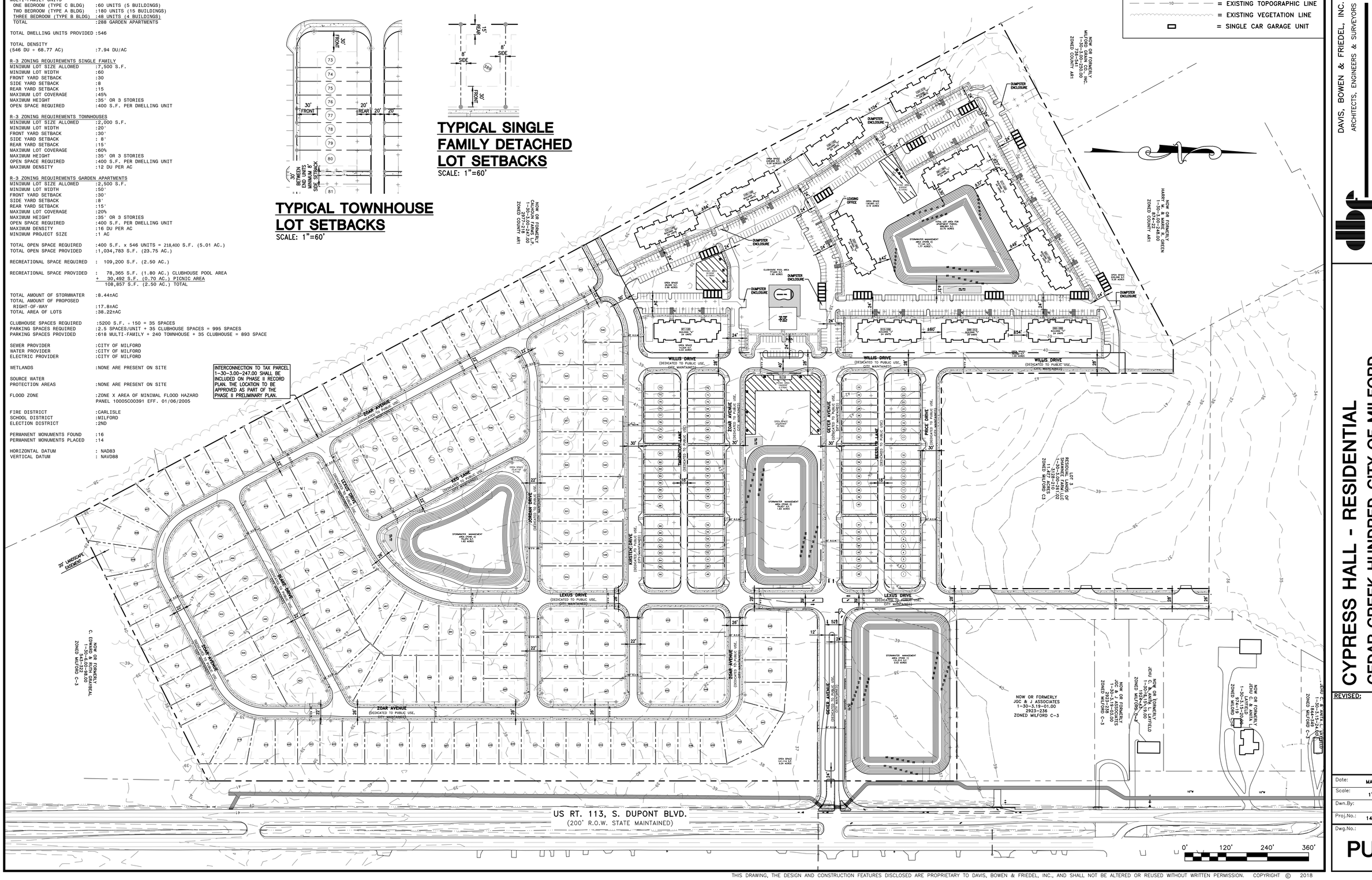
DEVIATION FROM R3 ZONING CODE
1. FOR SINGLE FAMILY CORNER LOTS ALLOW ONE EDGE OF THE CORNER TO USE A SIDE BUILDING SETBACK RATHER THAN TWO FRONT SETBACKS
2. MULTI-FAMILY PARKING REQUIREMENT REDUCED FROM 2.5 SPACES PER DWELLING UNIT TO 2 SPACES PER DWELLING UNIT.
3. PUBLIC ROAD WIDTHS FOR SINGLE FAMILY DWELLINGS ARE 22' RATHER THAN 25'.
4. PUBLIC ROAD WIDTHS FOR APARTMENTS AND TOWNHOUSES CAN BE 28' RATHER THAN 30'.

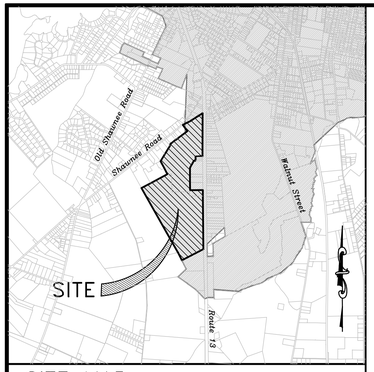
NOTE:
THIS PLAN IS NOT A RECORD DRAWING AND THE PLAN DOES NOT REPRESENT A PRELIMINARY OR FINAL APPROVAL OF ANY SUBDIVISION OR SITE PLAN.

LEGEND:
- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = SINGLE CAR GARAGE UNIT

TYPICAL TOWNHOUSE LOT SETBACKS
SCALE: 1"=60'

TYPICAL SINGLE FAMILY DETACHED LOT SETBACKS
SCALE: 1"=60'


INTERCONNECTION TO TAX PARCEL 1-30-3.00-247.00 SHALL BE INCLUDED ON PHASE II RECORD PLAN. THE LOCATION TO BE APPROVED AS PART OF THE PHASE II PRELIMINARY PLAN.
NOW OR FORMERLY SHAWNEE FARM LLC 1-30-3.00-247.00 ZONED COUNTY AR1
NOW OR FORMERLY MILFORD GRAIN CO., INC. 1-30-3.00-245.00 ZONED COUNTY AR1
NOW OR FORMERLY HARRY KOW OR FORMERLY 1-30-3.00-246.00 ZONED COUNTY AR1
NOW OR FORMERLY C. EDWARD & RUTH GRAYBEAL 1-30-3.00-245.00 545-322 ZONED MILFORD C-3
NOW OR FORMERLY JGC & J ASSOCIATES 1-30-3.19-01.00 2923-236 ZONED MILFORD C-3
NOW OR FORMERLY JGC & J ASSOCIATES 1-30-3.19-01.00 2923-236 ZONED MILFORD C-3
NOW OR FORMERLY JEHU C. & ANITA L. LAYFIELD 1-30-3.19-02.00 1923-43 ZONED MILFORD C-3
NOW OR FORMERLY JEHU C. & ANITA L. LAYFIELD 1-30-3.19-02.00 974-15 ZONED MILFORD C-3
NOW OR FORMERLY JEHU C. & ANITA L. LAYFIELD 1-30-3.19-24.00 1944-348 ZONED MILFORD C-3
RESIDUAL LANDS OF SHAWNEE FARM LLC 1-30-3.00-247.00 1328-210 ZONED MILFORD C-3
ZOAR AVENUE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
KIRK LANE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
CLEVES DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
JORDAN DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
KIRSTEN DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
THORNTON LANE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
WILLIS DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
GEYER AVENUE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
PRICE DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
RESSE LANE (DEDICATED TO PUBLIC USE)
LEXUS DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
20' LANDSCAPE EASEMENT
LEASING OFFICE
CLUBHOUSE POOL AREA
DUMPSTER ENCLOSURE
BUILDING "A" 24 UNITS
BUILDING "B" 24 UNITS
BUILDING "C" 24 UNITS
BUILDING "D" 24 UNITS
BUILDING "E" 24 UNITS
BUILDING "F" 24 UNITS
BUILDING "G" 24 UNITS
BUILDING "H" 24 UNITS
BUILDING "I" 24 UNITS
BUILDING "J" 24 UNITS
BUILDING "K" 24 UNITS
BUILDING "L" 24 UNITS
BUILDING "M" 24 UNITS
BUILDING "N" 24 UNITS
BUILDING "O" 24 UNITS
BUILDING "P" 24 UNITS
BUILDING "Q" 24 UNITS
BUILDING "R" 24 UNITS
BUILDING "S" 24 UNITS
BUILDING "T" 24 UNITS
BUILDING "U" 24 UNITS
BUILDING "V" 24 UNITS
BUILDING "W" 24 UNITS
BUILDING "X" 24 UNITS
BUILDING "Y" 24 UNITS
BUILDING "Z" 24 UNITS
STORMWATER MANAGEMENT AREA ZONE 10 1.82 ACRES
STORMWATER MANAGEMENT AREA ZONE 11 3.92 ACRES
OPEN SPACE 1.80 ACRES
OPEN SPACE 0.70 ACRES
OPEN SPACE 3.19 ACRES
OPEN SPACE 2.50 ACRES
OPEN SPACE 1.82 ACRES
OPEN SPACE 1.97 ACRES
OPEN SPACE 2.50 ACRES
OPEN SPACE 2.50 ACRES
OPEN SPACE 2.50



SITE MAP SCALE: 1"=1/2 Miles

DATA COLUMN

LOT 1 - COMMERCIAL

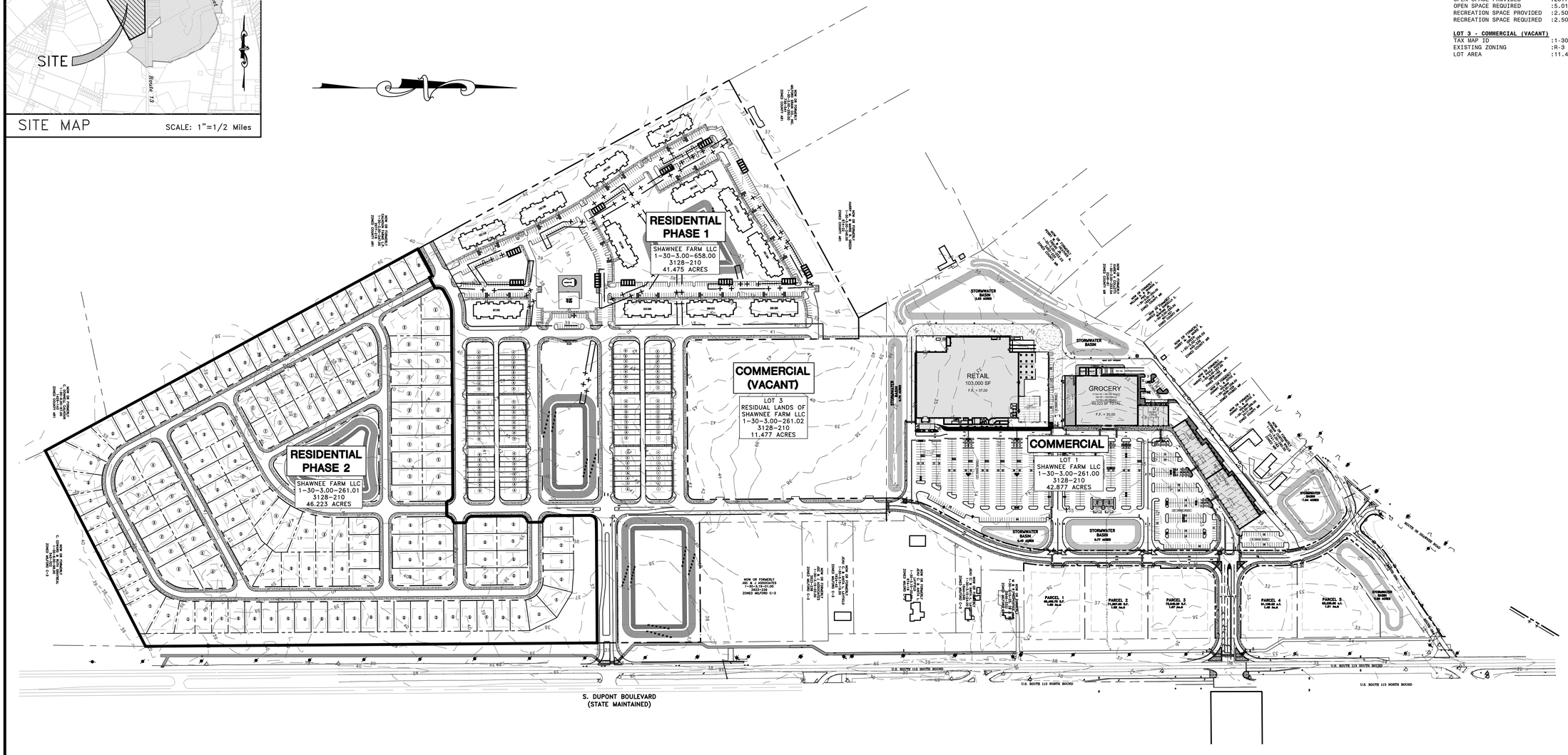
TAX MAP ID	:1-30-3.00-261.00
EXISTING ZONING	:C-3
PROPOSED USE	:COMMERCIAL
TOTAL LOT AREA	:42.878±AC
TOTAL RETAIL AREA	:30.819±AC
TOTAL COMMERCIAL AREA	:8.209±AC
TOTAL PARKING	:1,025 SPACES

LOT 2 - RESIDENTIAL

TAX MAP ID	:1-30-03.00-261.01
EXISTING ZONING	:R-3
PROPOSED USE	:MIXED USE RESIDENTIAL
TOTAL LOT AREA	:87.698±AC
TOTAL UNITS PROVIDED	:546
TOTAL UNITS ALLOWED	:603
OPEN SPACE PROVIDED	:23.75±AC
OPEN SPACE REQUIRED	:5.01 AC
RECREATION SPACE PROVIDED	:2.50 AC
RECREATION SPACE REQUIRED	:2.50 AC

LOT 3 - COMMERCIAL (VACANT)

TAX MAP ID	:1-30-03.00-261.02
EXISTING ZONING	:R-3
LOT AREA	:11.477±AC



0' 200' 400' 600'

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

CYPRESS HALL DEVELOPMENT
CITY OF MILFORD, CEDAR CREEK HUNDRED
SUSSEX COUNTY, DELAWARE

OVERVIEW PLAN

Date:	MAY 2018
Scale:	1" = 200'
Dwn.By:	ADM
Proj.No.:	1423A004
Dwg.No.:	OV

P:\1423\1423A001\A\DESIGN\OVERALL DEVELOPMENT.dwg Feb 19, 2019 - 1:53pm mcka

THIS DRAWING, THE DESIGN AND CONSTRUCTION FEATURES DISCLOSED ARE PROPRIETARY TO DAVIS, BOWEN & FRIEDEL, INC., AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT © 2018

CYPRESS HALL - RESIDENTIAL

PHASE 1

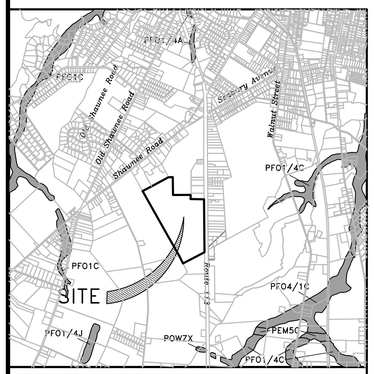
CONSTRUCTION DOCUMENTS

CITY OF MILFORD, SUSSEX COUNTY, DELAWARE

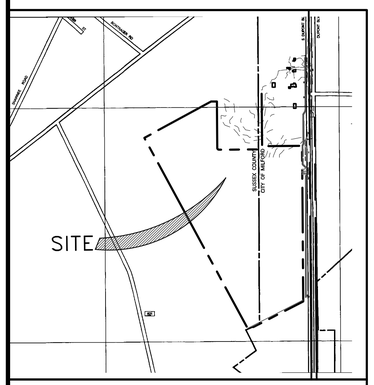
DBF PROJECT NO. 1423A004

JUNE, 2017

REVISED: FEBRUARY, 2019

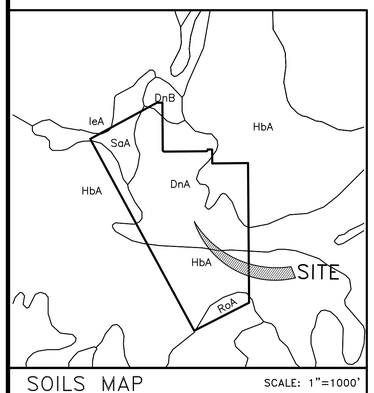


N.W.I. MAP SCALE: 1" = 2000'



FEMA FLOOD MAP SCALE: 1" = 1000'

MAP #10005C0039J DATED: JANUARY 6, 2005



SOILS MAP SCALE: 1"=1000'

DnA = DOWNER LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: B
DnB = DOWNER LOAMY SAND, 2 TO 5 PERCENT SLOPES HSG: B
HbA = HAMBROOK SANDY LOAM, 0 TO 2 PERCENT SLOPES HSG: B
IeA = INGLESIDE LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: B
RoA = ROSEDALE LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: A
SaA = SASSAFRAS SANDY LOAM, 0 TO 2 PERCENT SLOPES HSG: B

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TAX MAP ID	:1-30-03.00-261.01
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PROPOSED USE	:PLANNED UNIT DEVELOPMENT
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NET DEVELOPMENT AREA	:68.77 AC
PROPOSED SINGLE FAMILY LOTS	:162
PROPOSED NUMBER OF TOWNHOUSES UNITS	:96
PROPOSED NUMBER OF MULTI-FAMILY UNITS	
ONE BEDROOM (TYPE C BLDG)	:60 UNITS (5 BUILDINGS)
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THREE BEDROOM (TYPE B BLDG)	:48 UNITS (4 BUILDINGS)
TOTAL	:288 GARDEN APARTMENTS
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TOTAL DENSITY (546 DU ÷ 68.77 AC)	:7.94 DU/AC

R-3 ZONING REQUIREMENTS SINGLE FAMILY

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MAXIMUM LOT COVERAGE	:45%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT

R-3 ZONING REQUIREMENTS TOWNHOUSES

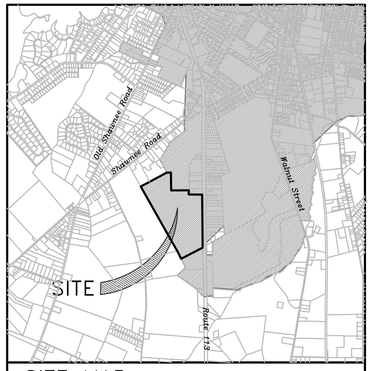
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MAXIMUM LOT COVERAGE	:60%
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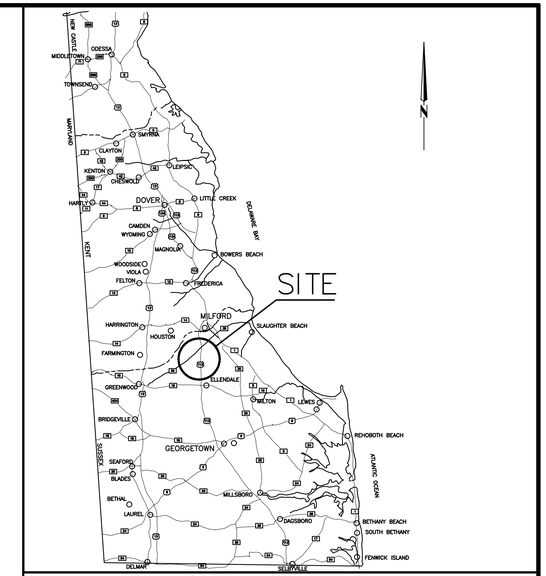


SITE MAP SCALE: 1" = 2000'

INDEX OF DRAWINGS

1	TITLE SHEET
2	TOPOGRAPHIC SURVEY
3	SOIL BORING PLAN
4	KEY MAP
5-12	ROAD PLAN & PROFILES
13-14	INTERSECTION PLANS & PAVEMENT SECTIONS
GR 1-6	GRADING & DRAINAGE PLANS
SWM 1-5	STORMWATER MANAGEMENT PLAN & PROFILES
PHASE	PHASE PLAN
E&S 1-8	EROSION & SEDIMENT CONTROL PLANS
U 1-6	UTILITY PLANS
SWR 1-2	SEWER PROFILES
WC 1	WATER CROSSINGS
ENT 1-7	ENTRANCE PLANS
R 1-7	RECORD PLANS
SITE	SITE PLAN
DETAILS	SITE DETAILS
L-1	LANDSCAPE PLAN

R-3 GARDEN APARTMENT AND TOWNHOUSE DISTRICT						
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LOCATION MAP SCALE: 1'=26,400±'

GENERAL NOTES

1. BOUNDARY & TOPOGRAPHIC SURVEYS BY DAVIS, BOWEN, & FRIEDEL, INC.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SEDIMENT AND STORMWATER CONTROLS DURING CONSTRUCTION.
3. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
4. BUILDING CONSTRUCTION TO BE MASONRY AND/OR WOOD CONSTRUCTION.
5. THE SITE IS NOT LOCATED WITHIN A FEMA DESIGNATED FLOODPLAIN AS SHOWN PER FEMA FLOOD MAPS PANEL FM10SC0039J, DATED JANUARY 6, 2005.
6. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MATERIAL AND WORKMANSHIP SHALL CONFORM TO ALL STATE OF DELAWARE, SUSSEX COUNTY, AND CITY OF MILFORD STANDARDS AND SPECIFICATIONS.
7. MISS UTILITY SHALL BE NOTIFIED THREE(3) CONSECUTIVE WORKING DAYS PRIOR TO ANY EXCAVATION, AT 1-800-282-8555.
8. ALL SIGNING FOR MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN "TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS",(LATEST EDITION).
9. DESIGN, FABRICATION, AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE "GUIDE FOR FABRICATION AND INSTALLATION OF TRAFFIC CONTROL DEVICES".
10. THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, MODIFY OR DELETE ANY EROSION OR SEDIMENT CONTROL MEASURES AS IT DEEMS NECESSARY.
11. SANITARY SEWER AND WATER SERVICE WILL BE MAINTAINED BY THE CITY OF MILFORD UPON COMPLETION AND ACCEPTANCE BY THE CITY IN ACCORDANCE WITH ALL CITY SPECIFICATIONS.
12. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION AND DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS, ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION FOR STRUCTURES AND UTILITY LINES, ON AND OFF SITE, MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
13. DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
14. THE DEVELOPER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE ONSITE STORMWATER MANAGEMENT FACILITIES DURING DEVELOPMENT & THE HOMEOWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR ALL MAINTENANCE FOLLOWING THE COMPLETION OF DEVELOPMENT.
15. DEVELOPER SHALL INSTALL ONSITE LIGHTING TO ILLUMINATE STREETS, PARKING AREAS, AND WALKWAYS, IN ACCORDANCE WITH CITY REGULATIONS. THE HOMEOWNERS ASSOCIATION WILL BE RESPONSIBLE FOR ALL MAINTENANCE TO THE SIDEWALKS THROUGHOUT THE DEVELOPMENT.
16. PHASES 2 WILL BE SUBMITTED UNDER SEPARATE CONSTRUCTION DOCUMENTS, AND SHALL NOT BE CONSTRUCTED FROM THIS SUBMISSION.
17. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL APPRAISE AND COORDINATE ALL PHASES OF CONSTRUCTION:

DAVIS, BOWEN & FRIEDEL, INC.	(302) 424-1441
DELAWARE DEPARTMENT OF TRANSPORTATION	(302) 760-2272
SUSSEX CONSERVATION DISTRICT	(302) 856-2105
CITY OF MILFORD	(302) 422-6616
SHAWNEE FARM, LLC 105 FOULK RD. WILMINGTON, DELAWARE 19803	(302) 242-1787

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441
EASTON, MARYLAND (410) 770-4744

CONTACTS

OWNER / DEVELOPER:
SHAWNEE FARM, LLC.
105 FOULK RD.
WILMINGTON, DE 19803
PH: 302-242-1787

ENGINEER:
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVE.
MILFORD, DE 19963
PH: 302-424-1441

APPROVED BY:

CITY ENGINEER DATE
CITY OF MILFORD
MILFORD, DELAWARE 19963

ENGINEER'S STATEMENT

I, HEREBY CERTIFY THAT THIS PLAN AS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

RING W. LARDNER, P.E. DATE
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVE.
MILFORD, DELAWARE, 19963

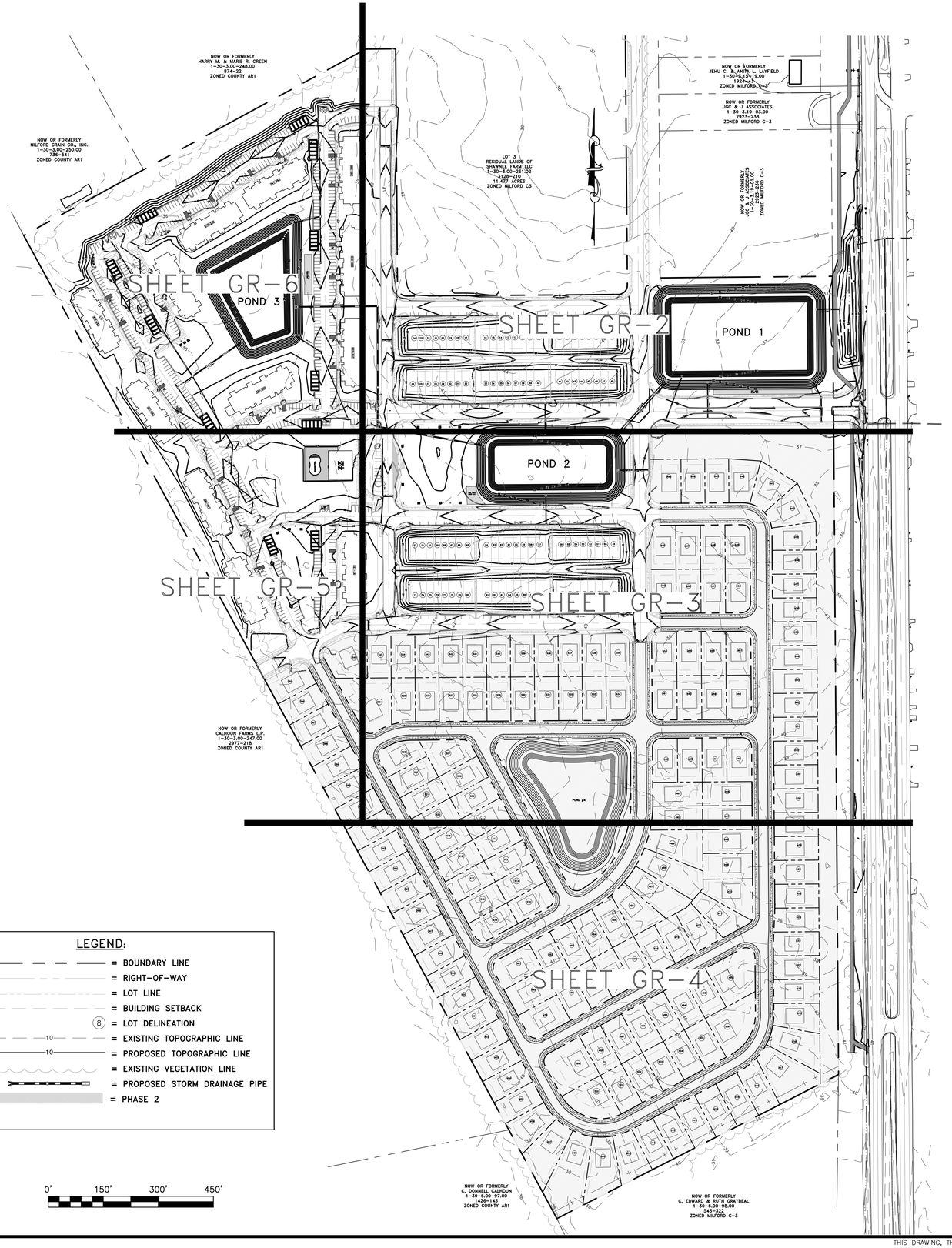
RESPONSIBLE PERSONNEL STATEMENT

I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (i.e. BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE KENT CONSERVATION DISTRICT THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

SHAWNEE FARM, LLC. DATE
105 FOULK RD.
WILMINGTON, DE 19803

SUSSEX CONSERVATION DISTRICT

P:\1423\1423A001A\DESIGN\1423A001-TITLE.dwg Feb 19, 2019 - 1:49pm micka



LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- 10 = PROPOSED TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PROPOSED STORM DRAINAGE PIPE
- = PHASE 2

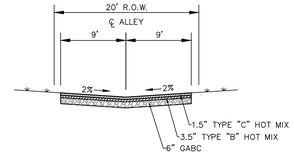
0' 150' 300' 450'

*NOTE:

6" GABC – WILLIS DRIVE AND LEXIS DRIVE SOUTH OF GEYER AVE. AND ZOAR AVE. AND KIRSTEN DRIVE

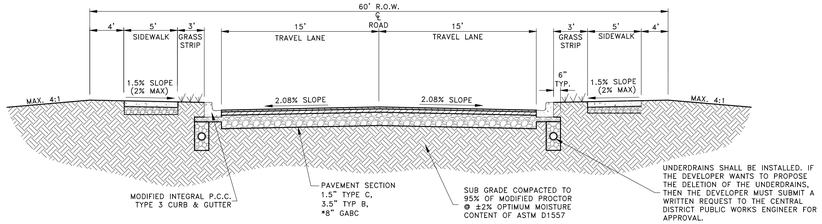
8" GABC – WILLIS DRIVE AND LEXIS DRIVE NORTH OF GEYER AVE. AND GEYER AVE. AND PRICE DRIVE

GEYER AVENUE FROM US ROUTE 113 THROUGH THE LEXUS DRIVE INTERSECTION SHOULD MEET THE PAVEMENT SECTION REQUIRED BY DELDOT FOR THE ENTRANCE.



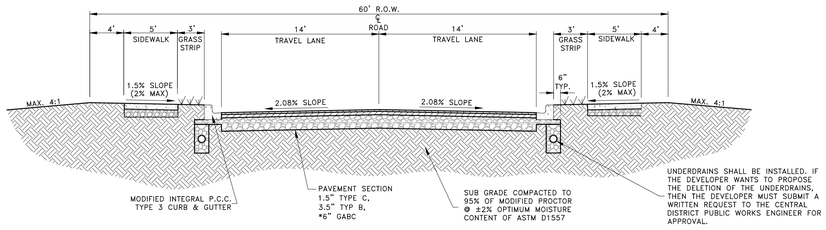
ALLEY FOR TOWNHOUSES

SCALE: NOT TO SCALE



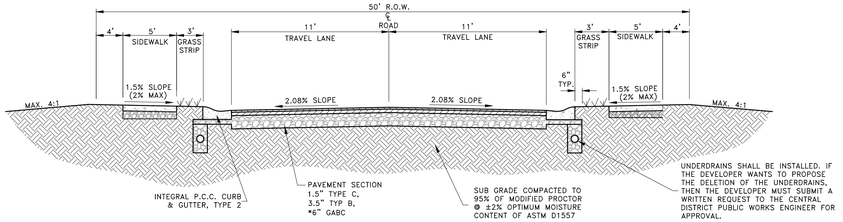
MINOR STREETS FOR TOWNHOUSES & APARTMENTS

SCALE: NOT TO SCALE



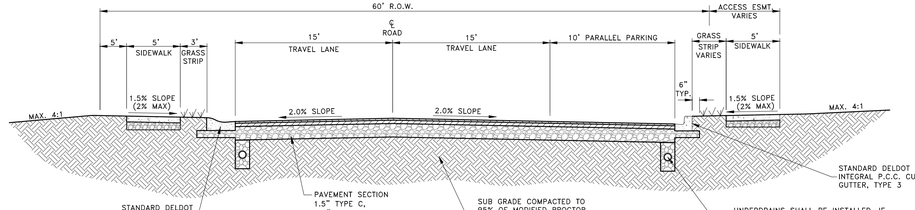
COLLECTOR STREETS (LEXUS DRIVE & WILLIS DRIVE)

SCALE: NOT TO SCALE



MINOR STREETS FOR SINGLE FAMILY RESIDENCES

SCALE: NOT TO SCALE



RESIDENTIAL STREET WITH PARALLEL PARKING

SCALE: NOT TO SCALE

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

GRADING OVERVIEW

REVISED:
11-29-18

Date:	OCTOBER 2018
Scale:	1" = 150'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	GR-1

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MATCH LINE (SEE SHEET GR-6)

MATCH LINE (SEE SHEET GR-3)

LOT 3
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.00
3128-210
16.102 ACRES

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.15-19.00
1924-43
ZONED MILFORD C-3

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-03.00
2923-238
ZONED MILFORD C-3

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-01.00
2923-236
ZONED MILFORD C-3

POND 1

MSA AREA
3,194 C.F.

LEGEND:

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- = EXISTING VEGETATION LINE
- = PROPOSED STORM DRAINAGE PIPE
- = PHASE 2

0' 50' 100' 150'

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ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

GRADING PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: DJR
Proj.No.: 1423A004
Dwg.No.: GR-2

MATCH LINE (SEE SHEET GR-5)



MATCH LINE (SEE SHEET GR-4)

MATCH LINE (SEE SHEET GR-2)

0' 50' 100' 150'

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GR-3

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn-By: DJR
Proj.No.: 14234004
Dwg.No.:

REVISED:
11-29-18

CYPRESS HALL - RESIDENTIAL

CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

GRADING PLAN

MATCH LINE (SEE SHEET GR-5)

MATCH LINE (SEE SHEET GR-3)



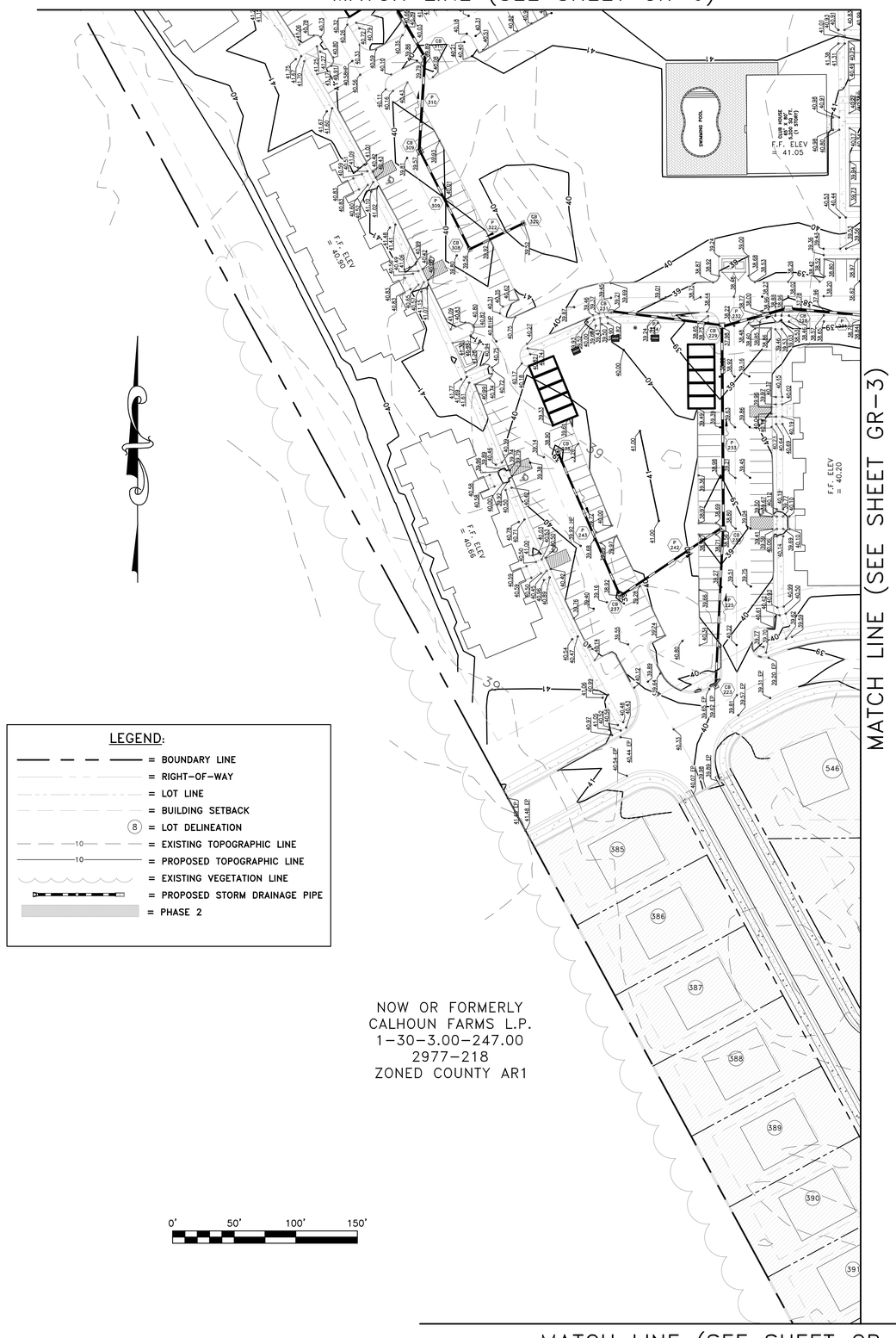
DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

GRADING PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1" = 50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	GR-4

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LEGEND:

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- = PROPOSED STORM DRAINAGE PIPE
- = PHASE 2

0' 50' 100' 150'

PIPE SCHEDULE

LABEL	FROM	TO	SIZE/TYPE	CLASS	LENGTH (ft.)	Slope %	INV. IN	INV. OUT
P-100	CB-100	O-1	30" HDPE	N-12	41	0.07%	34.03	34.00
P-101	MH-100	CB-100	24" HDPE	N-12	35	0.09%	34.06	34.03
P-102	CB-101	MH-100	24" HDPE	N-12	42	0.12%	34.11	34.06
P-103	CB-102	CB-101	24" HDPE	N-12	222	0.10%	34.34	34.11
P-104	CB-103	CB-102	24" HDPE	N-12	140	0.10%	34.48	34.34
P-105	CB-104	CB-103	24" HDPE	N-12	192	0.10%	34.68	34.48
P-106	MH-101	CB-104	24" HDPE	N-12	49	0.10%	34.73	34.68
P-107	CB-105	MH-101	18" HDPE	N-12	47	0.11%	34.78	34.73
P-108	CB-106	CB-105	18" HDPE	N-12	126	0.10%	34.91	34.78
P-109	CB-107	CB-106	18" HDPE	N-12	294	0.12%	35.27	34.91
P-110	CB-108	CB-107	15" HDPE	N-12	25	0.12%	35.30	35.27
P-111	CB-109	CB-108	15" HDPE	N-12	132	0.20%	35.56	35.30
P-112	CB-110	MH-101	15" HDPE	N-12	62	0.13%	34.82	34.74
P-113	CB-111	CB-110	15" HDPE	N-12	57	0.12%	34.89	34.82
P-114	CB-112	CB-111	15" HDPE	N-12	41	0.22%	34.98	34.89
P-115	CB-113	CB-110	15" HDPE	N-12	25	0.12%	34.85	34.82
P-116	CB-114	CB-111	15" HDPE	N-12	150	0.20%	35.19	34.89
P-117	CB-115	MH-100	15" HDPE	N-12	46	0.22%	34.16	34.06
P-118	CB-116	MH-100	18" HDPE	N-12	78	0.21%	34.22	34.06
P-119	CB-117	CB-116	15" HDPE	N-12	41	0.22%	34.31	34.22
P-120	CB-118	CB-117	15" HDPE	N-12	92	0.25%	34.54	34.31
P-121	CB-119	CB-117	15" HDPE	N-12	150	0.20%	34.61	34.31
P-122	CB-120	O-2	15" RCP	III	40	0.25%	34.10	34.00
P-123	CB-121	CB-120	15" RCP	III	54	0.15%	34.18	34.10
P-124	CB-122	O-3	15" RCP	III	50	0.18%	34.09	34.00
P-125	CB-123	CB-122	15" RCP	III	66	0.15%	34.19	34.09
P-126	OS-100	O-7	30" RCP	IV	64	0.09%	34.00	33.94
P-127	FE-100	MH-102	30" RCP	III	193	0.08%	33.48	33.32
P-128	FE-101	MH-102	18" RCP	III	97	3.26%	36.48	33.32
P-129	O.P.	O.P.	15" RCP	III	31	0.13%	39.17	39.13
P-130	O.P.	O.P.	15" RCP	III	47	1.23%	35.58	35.00
P-131	CB-125	CB-124	15" RCP	III	202	0.05%	33.20	33.10
P-132	CB-124	EXCB-113B	15" RCP	III	300	0.05%	33.10	32.95
P-200	CB-200	O-9	15" HDPE	N-12	45	0.31%	34.14	34.00
P-201	CB-201	CB-200	15" HDPE	N-12	40	0.20%	34.22	34.14
P-202	CB-202	O-10	18" HDPE	N-12	85	0.25%	34.21	34.00
P-203	CB-203	CB-202	15" HDPE	N-12	230	0.20%	34.67	34.21
P-204	CB-204	CB-203	15" HDPE	N-12	132	0.20%	34.94	34.67
P-205	CB-205	CB-202	15" HDPE	N-12	192	0.20%	34.60	34.21
P-206	CB-206	O-11	36" HDPE	N-12	80	0.05%	34.04	34.00
P-207	CB-207	CB-206	36" HDPE	N-12	192	0.04%	34.13	34.05
P-208	CB-208	CB-207	36" HDPE	N-12	55	0.05%	34.16	34.13
P-209	CB-209	CB-208	36" HDPE	N-12	96	0.04%	34.20	34.16
P-210	CB-210	CB-209	36" HDPE	N-12	95	0.04%	34.24	34.20
P-211	MH-200	CB-210	36" HDPE	N-12	30	0.07%	34.26	34.24
P-212	CB-211	MH-200	29" x 45" RCP	III	74	0.05%	34.30	34.26
P-213	CB-212	CB-211	15" HDPE	N-12	28	0.21%	34.39	34.33
P-214	CB-213	CB-209	15" HDPE	N-12	149	0.20%	34.50	34.20
P-215	CB-214	MH-200	15" HDPE	N-12	42	0.21%	34.35	34.26
P-216	CB-215	CB-214	15" HDPE	N-12	192	0.20%	34.74	34.35
P-217	CB-216	CB-215	15" HDPE	N-12	170	0.20%	35.08	34.74
P-218	CB-217	CB-206	36" HDPE	N-12	169	0.04%	34.11	34.04
P-219	CB-218	CB-217	29" x 45" RCP	III	192	0.04%	34.19	34.11
P-220	CB-219	CB-218	29" x 45" RCP	III	49	0.06%	34.22	34.19
P-221	CB-220	CB-219	30" HDPE	N-12	109	0.16%	34.39	34.22
P-222	CB-221	CB-220	30" HDPE	N-12	96	0.05%	34.44	34.39
P-223	MH-201	CB-221	30" HDPE	N-12	29	0.07%	34.46	34.44
P-224	CB-222	MH-201	24" x 38" RCP	III	75	0.05%	34.50	34.46
P-225	CB-223	CB-230	15" HDPE	N-12	127	0.35%	35.78	35.34
P-226			----	DELETED	----			
P-227	CB-224	CB-220	15" HDPE	N-12	149	0.20%	34.69	34.39
P-228	CB-225	MH-201	15" HDPE	N-12	48	0.21%	34.56	34.46
P-229	CB-226	CB-222	15" HDPE	N-12	30	0.17%	35.30	35.25
P-230	CB-227	CB-219	24" HDPE	N-12	40	0.13%	34.27	34.22
P-231	CB-228	CB-227	19" x 30" RCP	III	107	0.10%	34.38	34.27
P-232	CB-229	CB-228	19" x 30" RCP	III	53	0.32%	34.60	34.43
P-233	CB-230	CB-229	14" x 23" RCP	III	162	0.40%	35.24	34.60
P-234	CB-231	CB-229	15" HDPE	N-12	88	1.83%	36.21	34.60
P-235	CB-232	CB-227	18" HDPE	N-12	72	0.12%	34.36	34.27
P-236	CB-233	CB-232	15" HDPE	N-12	52	0.21%	34.47	34.36
P-237	CB-234	CB-233	15" HDPE	N-12	101	0.21%	34.68	34.47
P-238	CB-235	CB-232	15" HDPE	N-12	28	0.18%	34.41	34.36
P-239	CB-236	CB-233	15" HDPE	N-12	5	0.40%	34.49	34.47
P-240	FE-200	O-4	30" HDPE	N-12	208	0.00%	34.00	34.00
P-241	FE-201	O-5	30" HDPE	N-12	208	0.00%	34.00	34.00
P-242	CB-237	CB-230	15" HDPE	N-12	98	0.26%	35.59	35.34
P-243	CB-238	CB-237	15" HDPE	N-12	125	0.26%	36.01	35.69
P-300	CB-300	CB-301	15" HDPE	N-12	210	0.35%	36.47	35.74
P-301	CB-301	CB-302	18" HDPE	N-12	152	0.36%	35.64	35.10
P-302	CB-302	CB-303	18" HDPE	N-12	133	0.35%	35.00	34.53
P-303	CB-303	MH-301	24" HDPE	N-12	123	0.17%	34.43	34.22
P-304	CB-304	MH-301	15" HDPE	N-12	123	0.26%	35.46	35.14
P-305	MH-301	O-13	24" HDPE	N-12	71	0.24%	34.17	34.00
P-306	CB-305	CB-306	15" HDPE	N-12	129	0.84%	36.42	35.33
P-307	CB-306	CB-307	15" HDPE	N-12	192	0.35%	35.23	34.55
P-308	CB-307	O-14	18" HDPE	N-12	81	0.56%	34.45	34.00
P-309	CB-308	CB-309	15" HDPE	N-12	88	0.26%	36.30	36.07
P-310	CB-309	CB-310	18" HDPE	N-12	77	0.26%	35.97	35.77
P-311	CB-310	MH-300	24" HDPE	N-12	216	0.33%	35.67	34.95
P-312	CB-311	CB-312	15" HDPE	N-12	101	0.36%	36.75	36.39
P-313	CB-312	MH-300	15" HDPE	N-12	50	0.36%	36.29	36.11
P-314	CB-313	CB-314	15" HDPE	N-12	78	0.26%	35.35	35.15
P-315	CB-314	CB-315	18" HDPE	N-12	78	0.26%	35.05	34.85
P-316	CB-315	CB-316	24" HDPE	N-12	78	0.15%	34.55	34.43
P-317	CB-316	MH-300	24" HDPE	N-12	183	0.15%	34.43	34.15
P-318	CB-317	CB-319	15" HDPE	N-12	79	0.27%	35.75	35.54
P-319	CB-318	CB-319	15" HDPE	N-12	79	0.27%	35.75	35.54
P-320	CB-319	CB-315	18" HDPE	N-12	50	0.88%	35.44	35.00
P-321	MH-300	O-15	30" HDPE	N-12	161	0.09%	34.15	34.00
P-322	CB-320	CB-308	15" HDPE	N-12	47	0.26%	36.52	36.40
P-323	FE-300	MH-302	36" HDPE	N-12	225	0.00%	34.00	34.00
P-324	MH-302	MH-303	36" HDPE	N-12	221	0.00%	34.00	34.00
P-325	MH-303	MH-304	36" HDPE	N-12	107	0.00%	34.00	34.00
P-326	MH-304	O-12	36" HDPE	N-12	297	0.00%	34.00	34.00
P-400	MH-400	O-6	36" RCP	III	30	0.07%	34.02	34.00
P-500	MH-500	O-19	42" RCP	III	127	0.05%	32.06	32.00

STRUCTURES SCHEDULE

LABEL	DESCRIPTION			T.G. EL.	INVERT ELEVATION			
	BOX SIZE	BOX TOP	GRATE		IN	IN	IN	OUT
CB-100	48" x 30"	Type B	Type 3	40.86	-----	-----	34.03	34.03
CB-101	72" x 48"	Type B	Type 3	41.25	-----	-----	34.11	34.11
CB-102	72" x 48"	Type B	Type 3	42.27	-----	-----	34.34	34.34
CB-103	72" x 48"	Type B	Type 3	40.73	-----	-----	34.48	34.48
CB-104	72" x 48"	Type B	Type 3	39.27	-----	-----	34.68	34.68
CB-105	72" x 48"	Type B	Type 3	39.43	-----	-----	34.78	34.78
CB-106	48" x 30"	Type B	Type 3	40.29	-----	-----	34.91	34.91
CB-107	72" x 24"	Type B	Type 3	38.51	-----	-----	35.27	35.27
CB-108	72" x 24"	Type B	Type 3	38.51	-----	-----	35.30	35.30
CB-109	34" x 24"	Type B	Type 3	38.91	-----	-----	-----	35.56
CB-110	72" x 24"	Type B	Type 3	38.56	-----	34.82	34.82	34.82
CB-111	34" x 24"	Type A	Type 3	39.30	-----	34.89	34.89	34.89
CB-112	34" x 24"	Type B	Type 3	39.19	-----	-----	-----	34.98
CB-113	72" x 24"	Type B	Type 3	38.62	-----	-----	-----	34.85
CB-114	34" x 24"	Type A	Type 3	40.52	-----	-----	-----	35.19
CB-115	48" x 30"	Type B	Type 3	41.18	-----	-----	-----	34.16
CB-116	48" x 30"	Type B	Type 3	40.26	-----	-----	34.22	34.22
CB-117	34" x 24"	Type A	Type 3	40.49	-----	34.31	34.31	34.31
CB-118	34" x 24"	Type B	Type 3	39.28	-----	-----	-----	34.54
CB-119	34" x 24"	Type A	Type 3	41.82	-----	-----	-----	34.61
CB-120	72" x 24"	Type B	Type 3	37.25	-----	-----	34.10	34.10
CB-121	72" x 24"	Type B	Type 3	37.57	-----	-----	-----	34.18
CB-122	72" x 24"	Type B	Type 3	37.03	-----	-----	34.09	34.09
CB-123	72" x 24"	Type B	Type 3	37.11	-----	-----	-----	34.19
CB-124	34"x18"	Type A	Type 3	36.48	-----	-----	33.10	33.10
CB-200	72" x 24"	Type B	Type 3	37.85	-----	-----	34.14	34.14
CB-201	72" x 24"	Type B	Type 3	37.67	-----	-----	-----	34.22
CB-202	72" x 24"	Type B	Type 3	40.57	-----	34.21	34.21	34.21
CB-203	34" x 24"	Type B	Type 3	41.45	-----	-----	34.67	34.67
CB-204	72" x 24"	Type B	Type 3	40.24	-----	-----	-----	34.94
CB-205	72" x 24"	Type B	Type 3	39.09	-----	-----	-----	34.60
CB-206	72" x 48"	Type B	Type 3	40.75	-----	34.04	34.05	34.04
CB-207	72" x 72"	Type B	Type 3	39.04	-----	-----	34.13	34.13
CB-208	66" x 66"	Type B	Type 3	39.28	-----	-----	34.16	34.16
CB-209	66" x 48"	Type A	Type 3	40.59	-----	34.20	34.20	34.20
CB-210	66" x 48"	Type B	Type 3	39.74	-----	-----	34.24	34.24
CB-211	72" x 72"	Type B	Type 3	38.78	-----	-----	34.33	34.30
CB-212	72" x 24"	Type B	Type 3	38.79	-----	-----	-----	34.39
CB-213	34" x 24"	Type A	Type 3	41.75	-----	-----	-----	34.50
CB-214	72" x 24"	Type B	Type 3	39.54	-----	-----	34.35	34.35
CB-215	72" x 24"	Type B	Type 3	41.10	-----	-----	34.74	34.74
CB-216	72" x 24"	Type B	Type 3	40.41	-----	-----	-----	35.08
CB-217	72" x 72"	Type B	Type 3	40.36	-----	-----	34.11	34.11
CB-218	72" x 72"	Type B	Type 3	38.93	-----	-----	34.19	34.19
CB-219	72" x 72"	Type B	Type 3	39.02	-----	34.22	34.22	34.22
CB-220	48" x 48"	Type A	Type 3	40.07	-----	34.39	34.39	34.39
CB-221	48" x 48"	Type B	Type 3	39.07	-----	-----	34.44	34.44
CB-222	72" x 72"	Type B	Type 3	38.56	-----	35.25	34.50	34.50
CB-223	34" x 24"	Type B	Type 3	39.60	-----	-----	-----	35.78
CB-224	34" x 24"	Type A	Type 3	41.20	-----	-----	-----	34.69
CB-225	72" x 24"	Type B	Type 3	38.99	-----	-----	-----	34.56
CB-226	72" x 24"	Type B	Type 3	38.50	-----	-----	-----	35.30
CB-227	72" x 72"	Type B	Type 3	38.66	-----	34.27	34.27	34.27
CB-228	72" x 48"	Type A	Type 3	37.78	-----	-----	34.38	34.38
CB-229	48" x 48"	Type B	Type 3	37.98	-----	34.60	34.60	34.60
CB-230	48" x48"	Type A	Type 3	38.56	-----	-----	35.34	35.24
CB-231	34" x 24"	Type B	Type 3	39.21	-----	-----	-----	36.21
CB-232	72" x 48"	Type B	Type 3	38.41	-----	34.36	34.36	34.36
CB-233	34" x 24"	Type B	Type 3	38.60	-----	34.47	34.47	34.47
CB-234	34" x 24"	Type B	Type 3	39.49	-----	-----	-----	34.68
CB-235	72" x 24"	Type B	Type 3	38.41	-----	-----	-----	34.41
CB-236	34" x 24"	Type B	Type 3	38.74	-----	-----	-----	34.49
CB-237	34" x 24"	Type A	Type 3	38.92	-----	-----	35.69	35.59
CB-238	34" x 24"	Type A	Type 3	38.90	-----	-----	-----	36.01
CB-300	34" x 24"	Type A	Type 3	39.47	-----	-----	-----	36.47
CB-301	48" x 30"	Type A	Type 3	39.44	-----	-----	35.74	35.64
CB-302	48" x 30"	Type B	Type 3	39.66	-----	-----	35.10	35.00
CB-303	48" x 48"	Type A	Type 3	38.53	-----	-----	34.53	34.43
CB-304	34" x 24"	Type A	Type 3	38.46	-----	-----	-----	35.46
CB-305	34" x 24"	Type A	Type 3	39.42	-----	-----	-----	36.42
CB-306	72" x 24"	Type B	Type 3	38.33	-----	-----	35.33	35.23
CB-307	48" x 30"	Type A	Type 3	38.32	-----	-----	34.55	34.45
CB-308	34" x 24"	Type A	Type 3	39.56	-----	-----	36.40	36.30
CB-309	48" x 48"	Type A	Type 3	39.57	-----	-----	36.07	35.97
CB-310	48" x 30"	Type A	Type 3	39.79	-----	-----	35.77	35.67
CB-311	34" x 24"	Type A	Type 3	39.75	-----	-----	-----	36.75
CB-312	34" x 24"	Type A	Type 3	38.99	-----	-----	36.39	36.29
CB-313	34" x 24"	Type A	Type 3	38.23	-----	-----	-----	35.35
CB-314	48" x 30"	Type A	Type 3	38.21	-----	-----	35.15	35.05
CB-315	48" x 48"	Type A	Type 3	38.21	-----	35.00	34.85	34.55
CB-316	48" x 30"	Type A	Type 3	38.21	-----	-----	34.43	34.43
CB-317	34" x 24"	Type A	Type 3	38.75	-----	-----	-----	35.75
CB-318	34" x 24"	Type A	Type 3	38.76	-----	-----	-----	35.75
CB-319	34" x 24"	Type A	Type 3	38.76	-----	35.54	35.54	35.44
CB-320	34" x 24"	Type A	Type 3	39.52	-----	-----	-----	36.52
FE-100	-----	-----	-----	38.00	-----	-----	-----	33.41
FE-101	-----	-----	-----	38.25	-----	-----	-----	36.48
FE-200	-----	-----	-----	39.00	-----	-----	-----	34.00
FE-201	-----	-----	-----	39.00	-----	-----	-----	34.00
FE-300	-----	-----	-----	39.00	-----	-----	-----	34.00
MH-100	ROUND	-----	-----	41.13	34.06	34.06	34.06	34.06
MH-101	ROUND	-----	-----	39.11	-----	34.74	34.73	34.73
MH-102	ROUND	-----	-----	38.39	-----	33.32	33.32	33.22
MH-200	ROUND	-----	-----	39.86	-----	34.26	34.26	34.26
MH-201	ROUND	-----	-----	39.37	-----	34.46	34.46	34.46
MH-202			----	DELETED	----			
MH-203	ROUND	-----	-----	40.15	-----	-----	34.39	34.39
MH-300	ROUND	-----	-----	39.71	36.11	34.95	34.15	34.15
MH-301	ROUND	-----	-----	39.48	-----	35.14	34.22	34.17
MH-302	ROUND	-----	-----	39.62	-----	-----	34.00	34.00
MH-303	ROUND	-----	-----	39.95	-----	-----	34.00	34.00
MH-304	ROUND	-----	-----	40.00	-----	-----	34.00	34.00
MH-400	ROUND	-----	-----	40.00	-----	-----	-----	34.02
MH-500	ROUND	-----	-----	38.87	-----	-----	-----	32.06
O-1	-----	-----	-----	39.00	-----	-----	-----	34.00
O-2	-----	-----	-----	39.00	-----	-----	-----	34.00
O-3	-----	-----	-----	39.00	-----	-----	-----	34.00
O-4	-----	-----	-----	39.00	-----	-----	-----	34.00
O-5	-----	-----	-----	39.00	-----	-----	-----	34.00
O-6	-----	-----	-----	39.00	-----	-----	-----	34.00
O-7	-----	-----	-----	38.00	-----	-----	-----	33.94
O-8	-----	-----	-----	38.00	-----	-----	-----	33.94
O-9	-----	-----	-----	39.00	-----	-----	-----	34.00
O-10	-----	-----	-----	39.00	-----	-----	-----	34.00
O-11	-----	-----	-----	39.00	-----	-----	-----	34.00
O-12	-----	-----	-----	39.00	-----	-----	-----	34.00
O-13	-----	-----	-----	39.00	-----	-----	-----	34.00
O-14	-----	-----	-----	39.00	-----	-----	-----	34.00
O-15	-----	-----	-----	39.00	-----	-----	-----	34.00
O-16			----	DELETED	----			
O-17			----	DELETED	----			
O-18			----	DELETED	----			
O-19	-----	-----	-----	39.00	-----	-----	-----	32.00

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CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

GRADING PLAN

REVISED:
11-29-18

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: DJR
Proj.No.: 1423A004
Dwg.No.: GR-5

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NOW OR FORMERLY
HARRY M. & MARIE R. GREEN
1-30-3.00-248.00
874-22
ZONED COUNTY AR1

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

POND 3

MATCH LINE (SEE SHEET GR-2)

MATCH LINE (SEE SHEET GR-5)

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = PROPOSED TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PROPOSED STORM DRAINAGE PIPE
- = PHASE 2

0' 50' 100' 150'

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GRADING PLAN

CYPRESS HALL - RESIDENTIAL

CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date:	JUNE, 2017
Scale:	1" = 50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	GR-6

LEGEND:

= BOUNDARY LINE
= RIGHT-OF-WAY
= LOT LINE
= BUILDING SETBACK
(8) = LOT DELINEATION
10 = EXISTING TOPOGRAPHIC LINE
10 = PROPOSED TOPOGRAPHIC LINE
= EXISTING VEGETATION LINE
= PROPOSED STORM DRAINAGE PIPE
= PHASE 2

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

SWIMMING POOL

CLUB HOUSE
65' X 80'
5,200 SQ FT.
(1 STORY)

WSA AREA
2,206 C.F.

0' 50' 100' 150'

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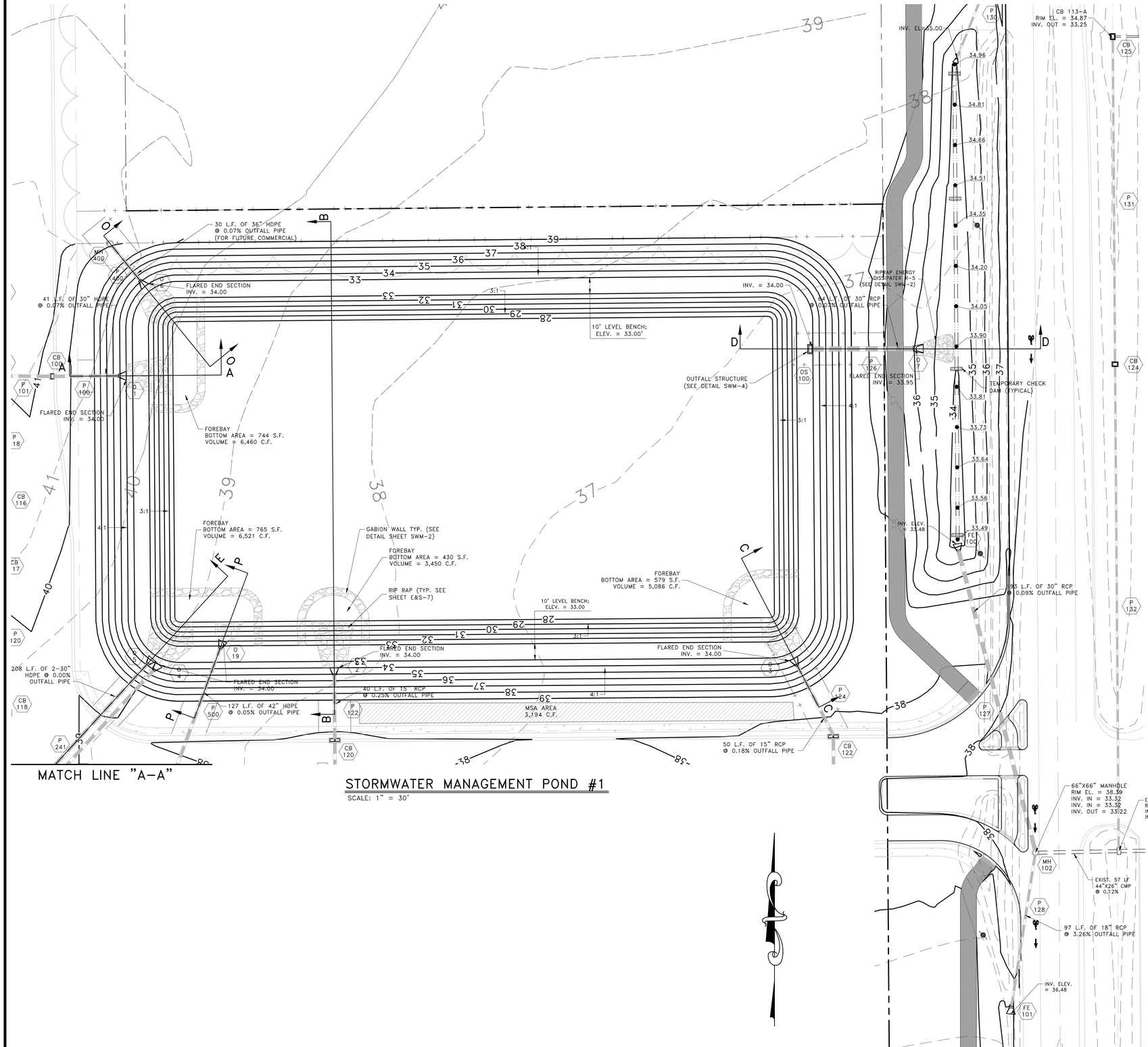
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GRADING PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date:	JUNE, 2017
Scale:	1" = 50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	GR-7



MATCH LINE "A-A"

STORMWATER MANAGEMENT POND #1

SCALE: 1" = 30'

DELDOT POND CONSTRUCTION NOTES

CONSTRUCTION SEQUENCE

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER SEDIMENT CONTROLS AS SHOWN.
4. CLEAR AND GRUB REMAINING AREA FOR POND CONSTRUCTION.
5. CONSTRUCT PARTIAL EMBANKMENT AND CUTOFF CORE (IF ANY) AS NEEDED TO INSTALL THE POND OUTLET STRUCTURE. CONSTRUCT POND OUTLET STRUCTURE AND RIPRAP ENERGY DISSIPATOR AT END OF PRINCIPLE SPILLWAY. DE-WATER WORK AREA AS NEEDED IN ACCORDANCE WITH SECTION 110.13 AND USE SUMP PIT FOR PUMPING. ATTACH A SKIMMER DEWATERING DEVICE TO POND OUTLET STRUCTURE.
6. EXCAVATE THE POND AND COMPLETE THE EMBANKMENT, EMERGENCY SPILLWAY AND BASIN TO LINES, GRADES AND DETAILS SHOWN IN THE CONSTRUCTION PLANS. OVER-EXCAVATE POND BOTTOM AS SHOWN FOR SEDIMENT STORAGE DURING CONSTRUCTION. DURING EXCAVATION, THE CONTRACTOR SHALL SALVAGE AND STOCKPILE SOILS CLASSIFIED AS CH, CL, CH AND OM PER THE UNIFIED SOIL CLASSIFICATION SYSTEM TO BE USED TO CONSTRUCT THE FOUNDATION CUTOFF (IF ANY) AND EMBANKMENT.
7. STABILIZE ALL BARE AREAS.
8. STABILIZE POND USING PERMANENT SEED-WET GROUND TO 1' ABOVE NORMAL POOL AND PERMANENT SEED-DRY GROUND ABOVE THAT. MULCH TO BE SOIL RETENTION BLANKET MULCH TYPE 3.

MAINTENANCE OF POND AS A SEDIMENT BASIN

1. THE CONTRACTOR SHALL INSPECT THE BASIN IMMEDIATELY AFTER EVERY RAIN AND MAKE REPAIRS AS NEEDED.
2. CONTRACTOR SHALL CLEARLY MARK THE CLEAN OUT ELEVATION ON A STAKE DRIVEN INTO THE GROUND AT A LOCATION CLEARLY VISIBLE FROM THE EMBANKMENT. SEDIMENT REMOVED FROM THE BASIN SHALL BE DISPOSED OF AT A LOCATION APPROVED BY THE ENGINEER.

CONVERSION TO PERMANENT STORMWATER MANAGEMENT POND

1. CONVERT THE BASIN INTO THE PERMANENT STORMWATER MANAGEMENT POND AFTER ALL AREAS DRAINING TO THE POND HAVE BEEN PERMANENTLY STABILIZED AND THE ENGINEER HAS APPROVED THE CONVERSION.
2. REMOVE EXCESS ACCUMULATED SEDIMENT, IF ANY, ABOVE THE DESIGNED POND BOTTOM SHOWN IN THE PLAN AND DISPOSE SEDIMENT AT THE LOCATION APPROVED BY THE ENGINEER.
3. STABILIZE ALL BARE AREAS. REMOVE EROSION AND SEDIMENT CONTROL MEASURES AND DEACTIVATE THE SKIMMER DEWATERING DEVICE.

*NOTE: COMPLETED SWM POND CONSTRUCTION CHECKLIST AND AS-BUILT PLANS WILL BE PROVIDED, UPON THE COMPLETION OF CONSTRUCTION, TO DELDOT STORMWATER ENGINEER FOR APPROVAL

POND 1 DESIGN SUMMARY

DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEV.	STORAGE VOLUME
NORMAL POOL	------	------	34.00	491,939 CF
1 YEAR (RPv)	21.25 CFS	0.86 CFS	35.08	116,106 CF
10 YEAR (Cv)	54.67 CFS	1.48 CFS	36.70	301,345 CF
100 YEAR (Fv)	122.02 CFS	30.01 CFS	38.61	538,170 CF

NOTE:

THE DEVELOPER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE ONSITE WELLS TO ENSURE THE STORMWATER MANAGEMENT FACILITIES MAINTAIN THE DESIGNED PERMANENT POOL LEVEL DURING CONSTRUCTION AND FOR LONG TERM MAINTENANCE UNTIL CONSTRUCTION IS COMPLETE. AT THE TIME, RESPONSIBILITY FOR LONG TERM MAINTENANCE OF THE WELLS SHALL BE ASSUMED BY THE HOMEOWNER'S ASSOCIATION. IF A HOMEOWNER'S ASSOCIATION IS NOT FORMED THEN THE OWNER IS TO PROVIDE LONG TERM MAINTENANCE FOR THE WELLS.

0' 30' 60' 90'

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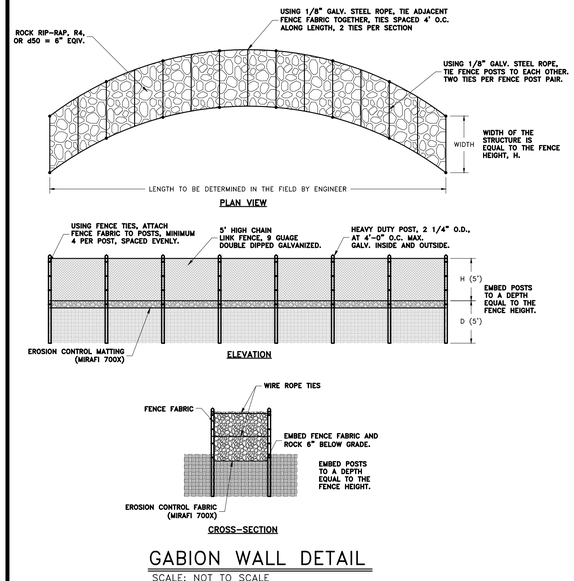
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SWM PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date:	JUNE, 2017
Scale:	1" = 30'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	SWM-1

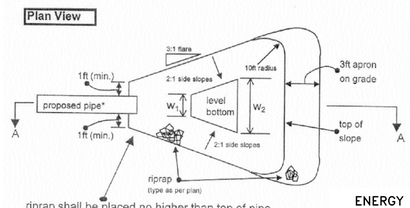


GABION WALL DETAIL

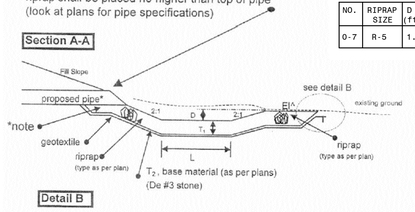
SCALE: NOT TO SCALE

Pipe Energy Dissipater Detail (n.t.s.)

Section - Permanent Installation



riprap shall be placed no higher than top of pipe (look at plans for pipe specifications)



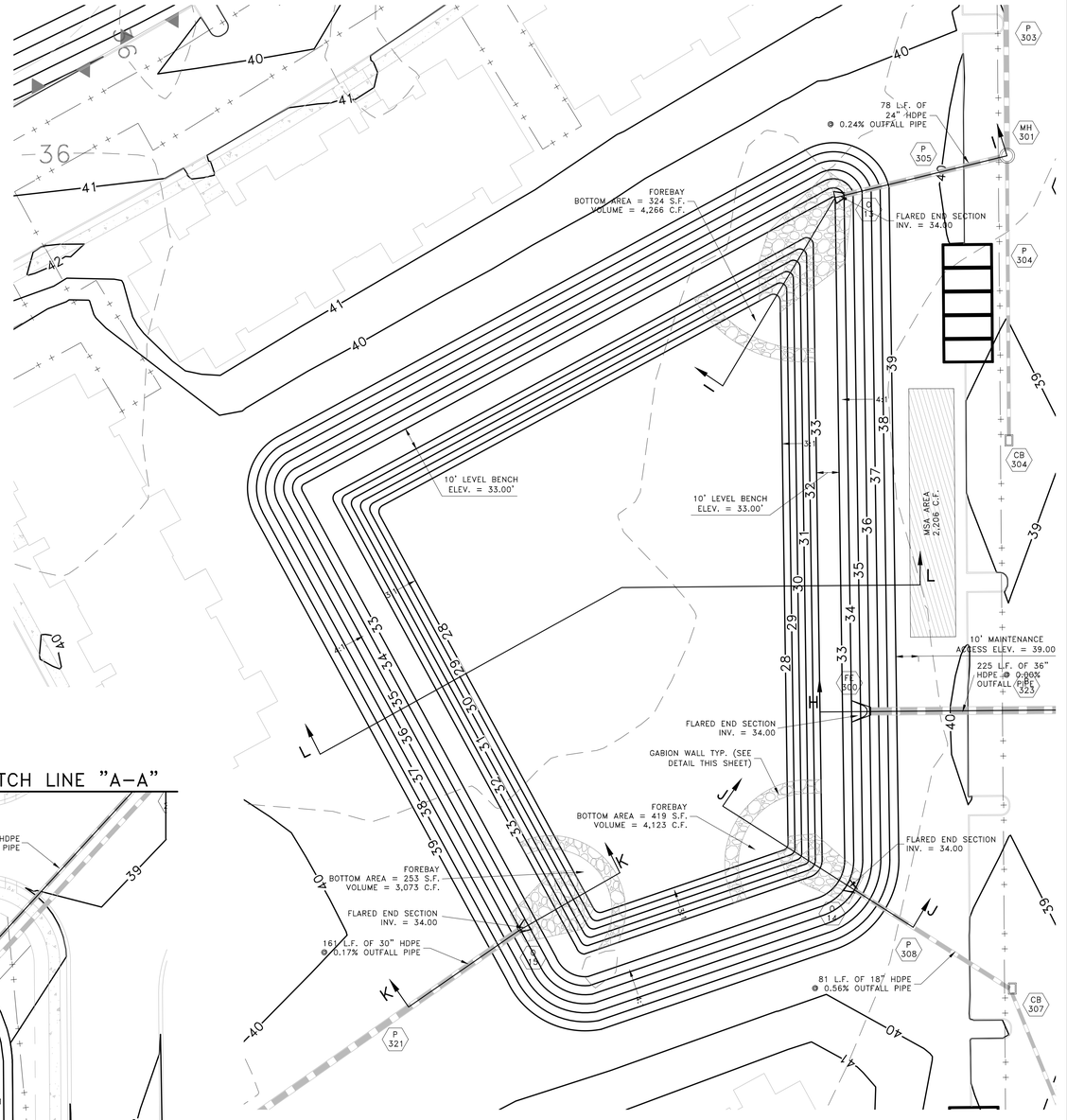
* Place riprap before placing pipe.
*Choke riprap with DE No. 3 stone under pipe.
^ Elevation should not be higher than pipe invert.

ENERGY DISSIPATER SCHEDULE

NO.	RIPRAP SIZE	D (ft)	T1 (ft)	T2 (ft)	W1 (ft)	W2 (ft)	L (ft)	EL (ft)
0-7	R-5	1.8	1.0	0.17	2.3	8.1	8.3	33.8

POND 2 DESIGN SUMMARY

DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEV.	STORAGE VOLUME
NORMAL POOL	-----	-----	34.00	251,691 CF
1 YEAR (RPv)	8.20 CFS	0.78 CFS	35.09	66,138 CF
10 YEAR (Cv)	23.00 CFS	2.22 CFS	36.70	173,683 CF
100 YEAR (Fv)	63.82 CFS	10.90 CFS	38.66	318,349 CF



STORMWATER MANAGEMENT POND #2

SCALE: 1" = 30'

STORMWATER MANAGEMENT POND #3

SCALE: 1" = 30'

POND 3 DESIGN SUMMARY

DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEV.	STORAGE VOLUME
NORMAL POOL	-----	-----	34.00	241,043 CF
1 YEAR (RPv)	15.48 CFS	0.75 CFS	35.09	63,647 CF
10 YEAR (Cv)	37.85 CFS	4.40 CFS	36.44	149,502 CF
100 YEAR (Fv)	75.78 CFS	13.49 CFS	38.39	286,921 CF

0' 30' 60' 90'

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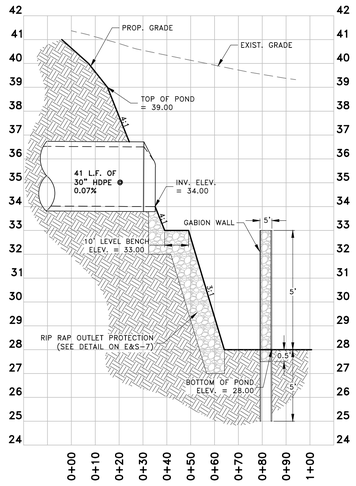
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SWM PLAN

REVISED:
11-29-18

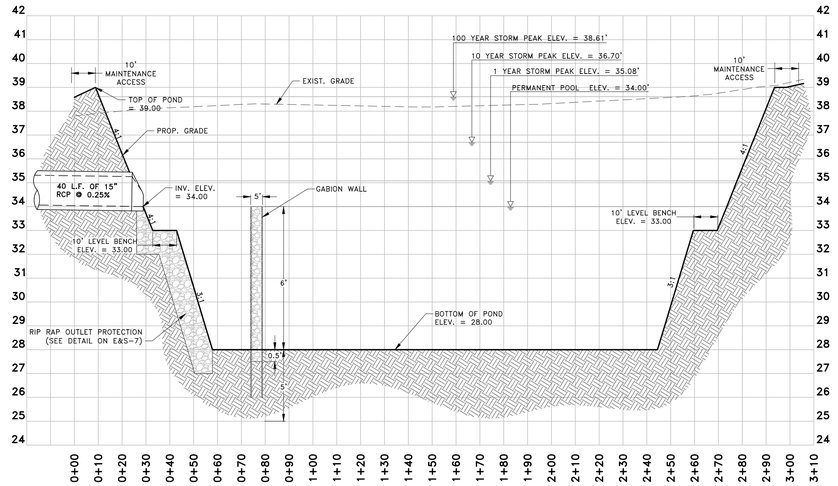
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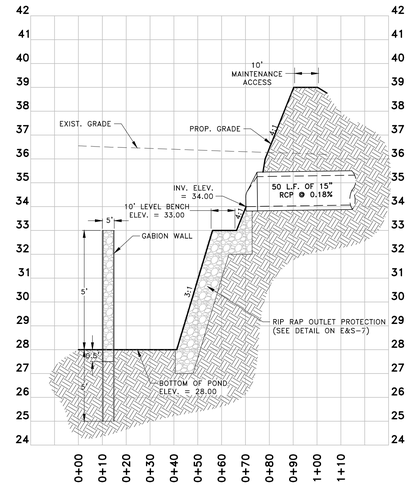
SWM POND #1 PROFILE A-A

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



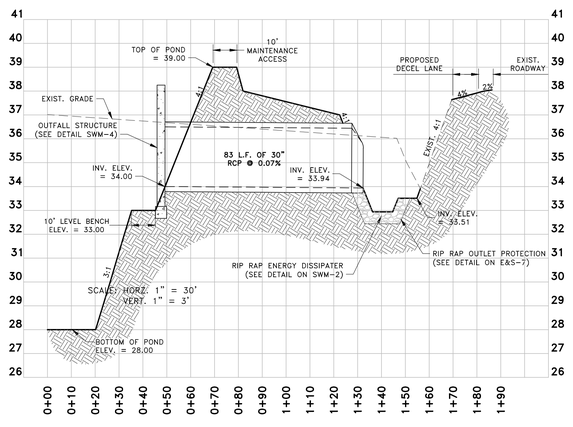
SWM POND #1 PROFILE B-B

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

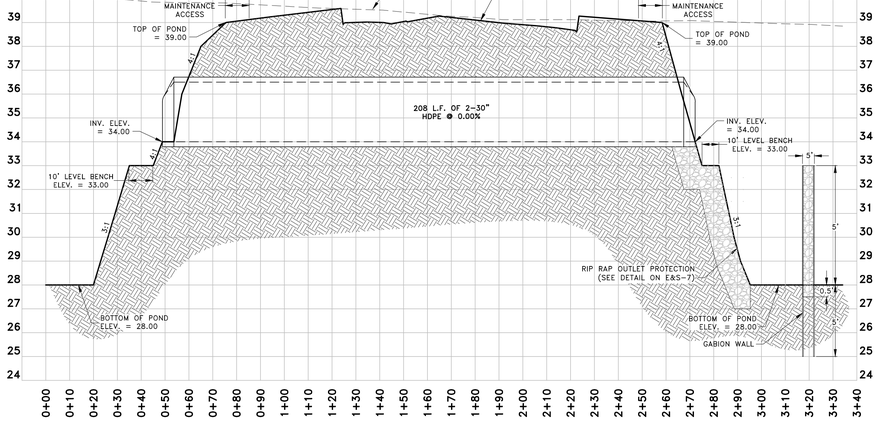


SWM POND #1 PROFILE C-C

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

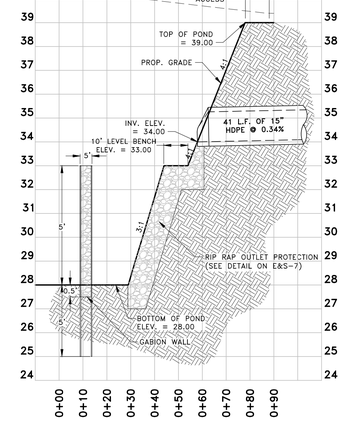


SWM POND #1 PROFILE D-D



SWM POND #2 & #1 PROFILE E-E

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



SWM POND #2 PROFILE F-F

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

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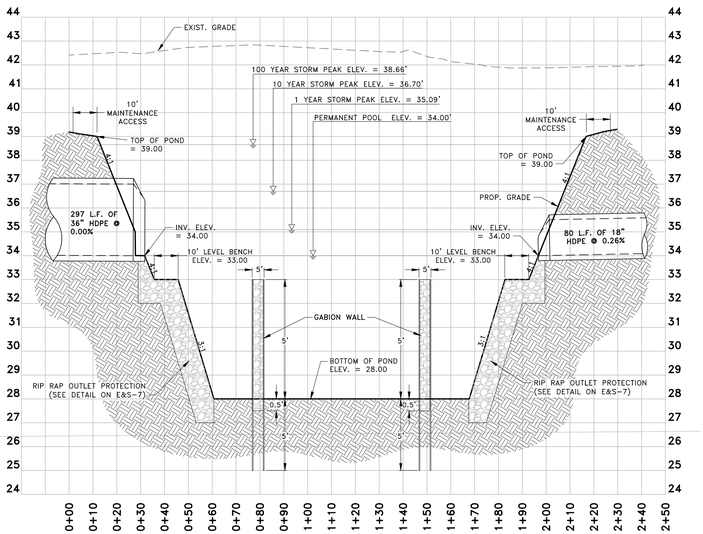
CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

SWM PROFILES

REVISED:
11-29-18

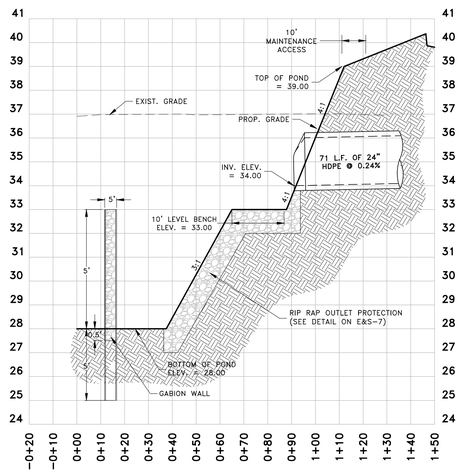
Date:	JUNE, 2017
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	SWM-3

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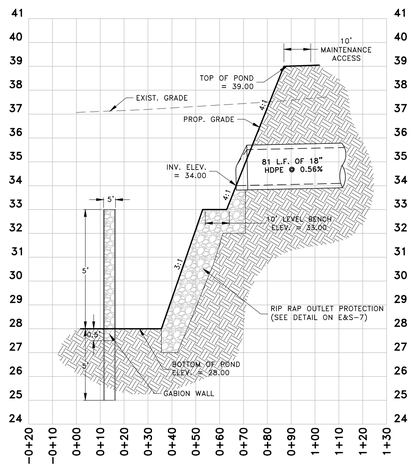
SWM POND #2 PROFILE G–G

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



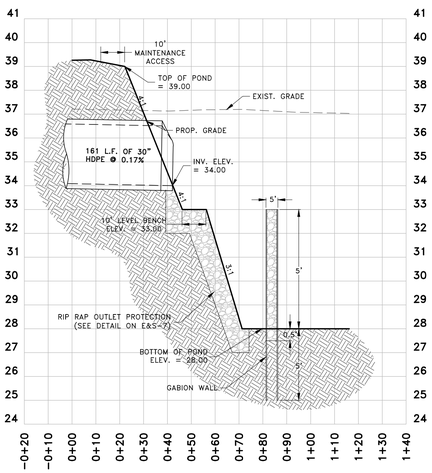
SWM POND #3 PROFILE I–I

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



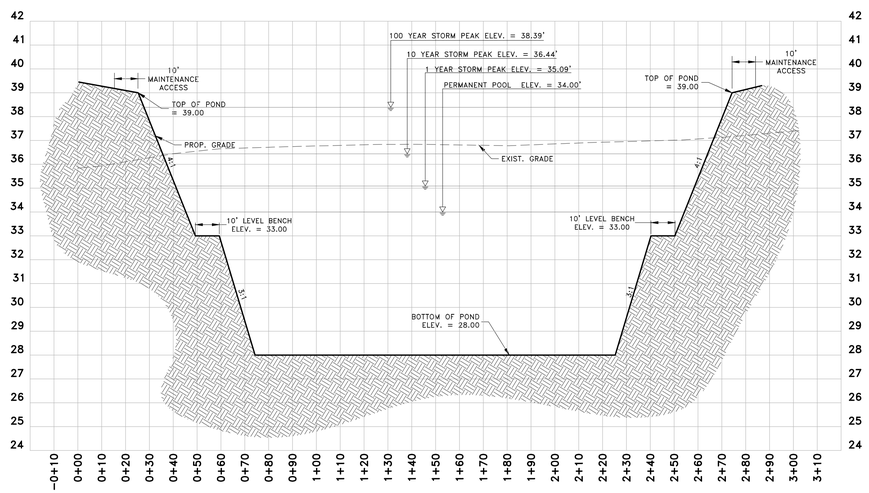
SWM POND #3 PROFILE J–J

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



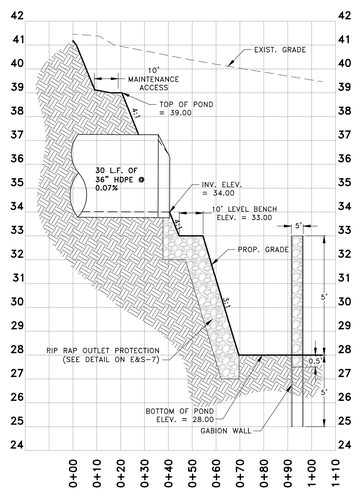
SWM POND #3 PROFILE K–K

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



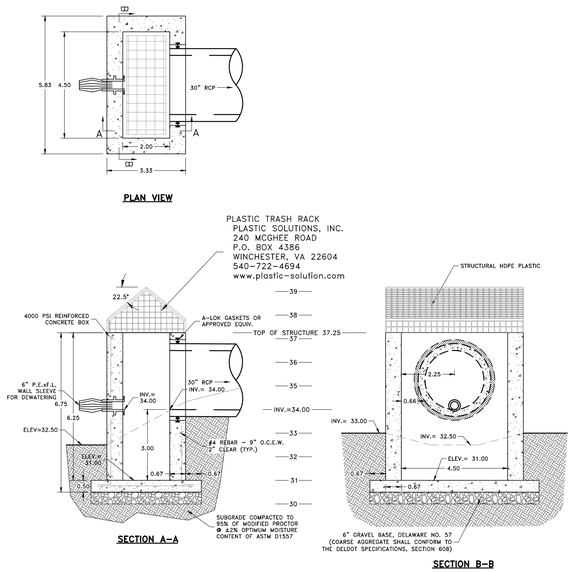
SWM POND #3 PROFILE L–L

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



SWM POND #1 PROFILE O–O

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



POND 1 OUTFALL STRUCTURE DETAIL

NOT TO SCALE

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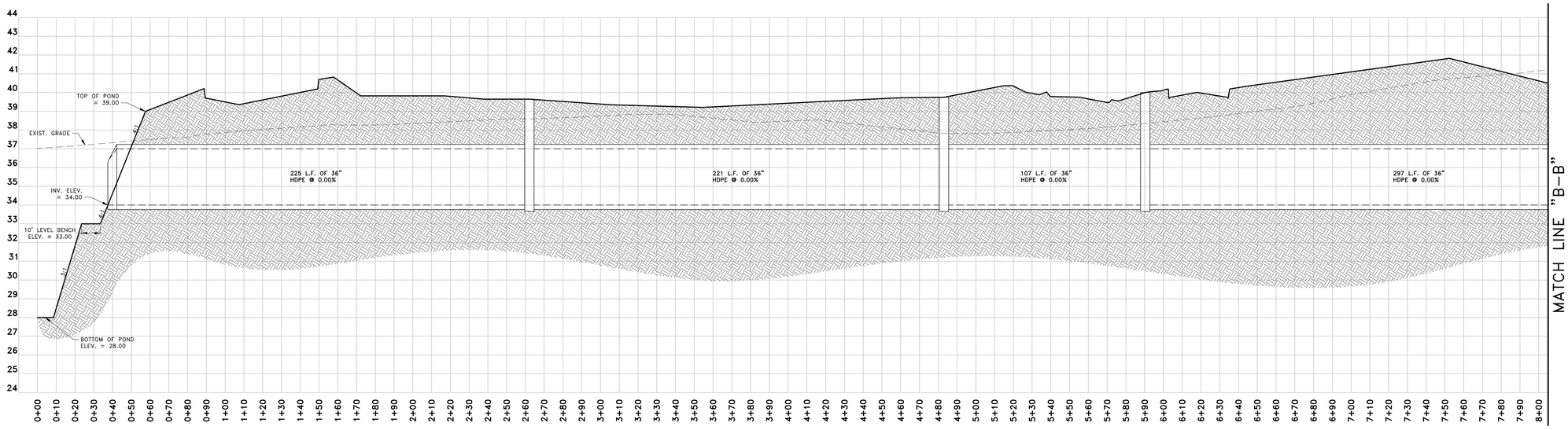
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SWM PROFILES

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SUSSEX COUNTY, DELAWARE

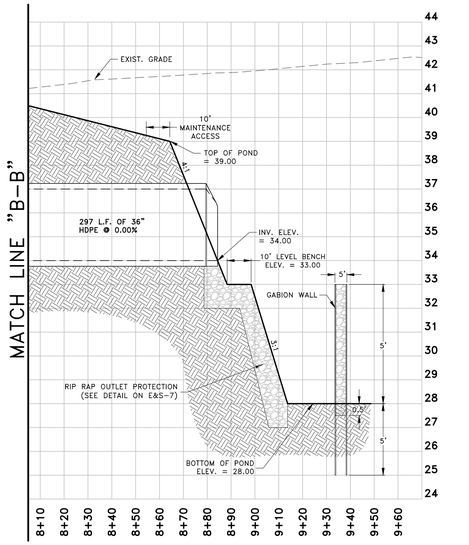
REVISED:
11-29-18

Date:	JUNE, 2017
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	SWM-4



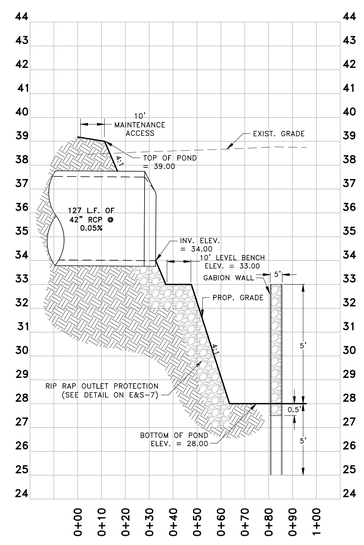
SWM POND #3 & #2 PROFILE H-H

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



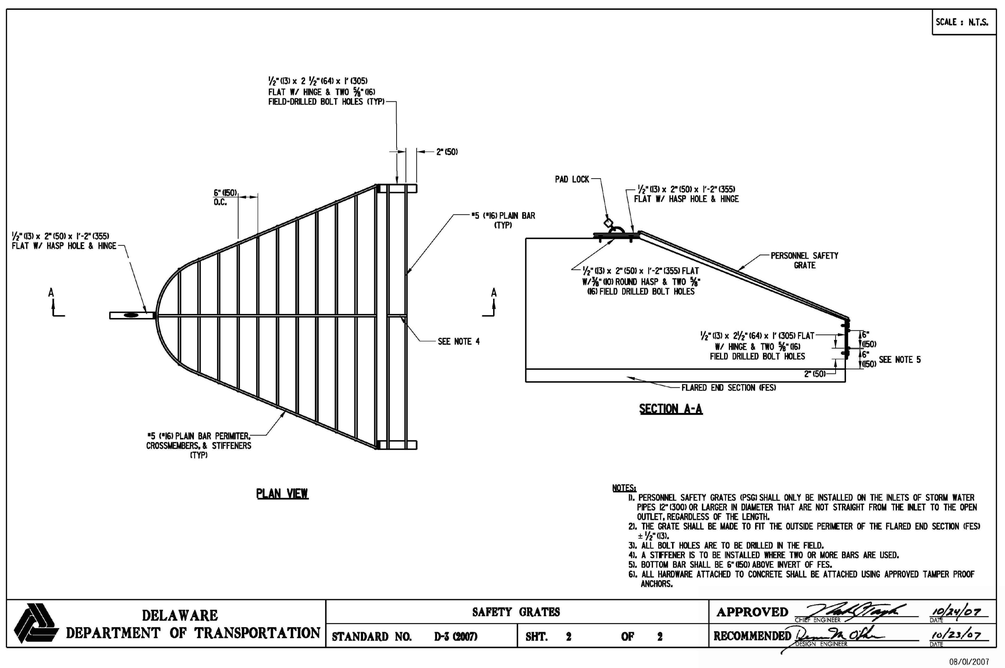
SWM POND #3 & #2 PROFILE H-H CONT'D

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



SWM POND #1 PROFILE P-P

SCALE: HORZ. 1" = 30'
VERT. 1" = 3'



PERSONNEL SAFETY GRATE DETAIL

SCALE: NOT TO SCALE

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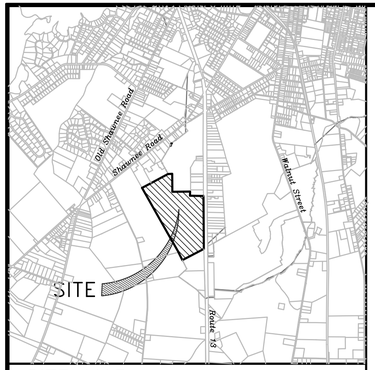
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SWM PROFILES

REVISED:
11-29-18

Date:	JUNE, 2017
Scale:	AS NOTED
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Proj.No.:	1423A004
Dwg.No.:	

SWM-5



SITE MAP SCALE: 1"=1/2 Miles

PHASE 1-1 = 2 ACRES ±
ENTRANCE

PHASE 1-2a = 14.7 ACRES ±
TOWNHOMES
TOTAL UNITS = 48

PHASE 1-2b = 8.7 ACRES ±
TOWNHOMES & CONNECTION ROAD
TOTAL UNITS = 48

PHASE 1-3 = 20 ACRES ±
MULTI-FAMILY BUILDINGS
TOTAL UNITS = 288

FUTURE PHASE TO BE SUBMITTED
SEPARATELY = 46 ACRES ±

NOW OR FORMERLY
SHAWNEE FARM, LLC
1-30-3.00-250.00
736-141
ZONED COUNTY AR1

NOW OR FORMERLY
HARRY M. & MARIE R. GREEN
1-30-3.00-246.00
874-22
ZONED COUNTY AR1

NOW OR FORMERLY
SHAWNEE FARM, LLC
1-30-3.00-247.00
977-218
ZONED COUNTY AR1

RESIDUAL LANDS OF
SHAWNEE FARM, LLC
1-30-3.00-261.02
3128-210
17.17 ACRES
ZONED MILFORD C3

LOT 3
SHAWNEE FARM, LLC
1-30-3.00-261.00
3128-210
42.877 ACRES

LOT 1
SHAWNEE FARM, LLC
1-30-3.00-261.00
3128-210
42.877 ACRES

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-01.00
2923-236
ZONED MILFORD C-3

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-02.00
2923-236
ZONED MILFORD C-3

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.19-19.00
974-19
ZONED MILFORD C-3

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.19-20.00
974-19
ZONED MILFORD C-3

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.15-24.00
1844-349
ZONED MILFORD C-3

NOW OR FORMERLY
M & R PROPERTIES, LLC
1-30-3.15-25.00 & 30
1844-349
ZONED MILFORD C-3

0' 100' 200' 300'

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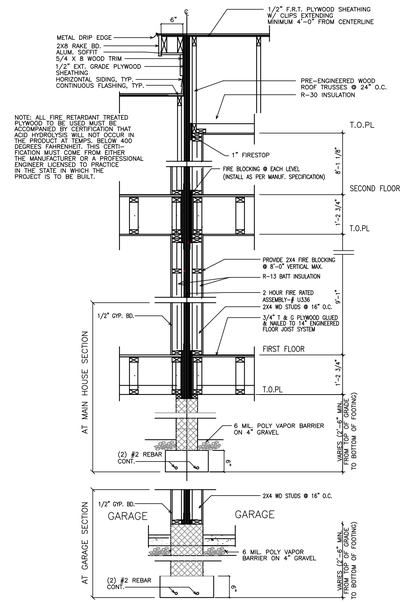
PHASING PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JUNE, 2017
Scale:	1" = 100'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	

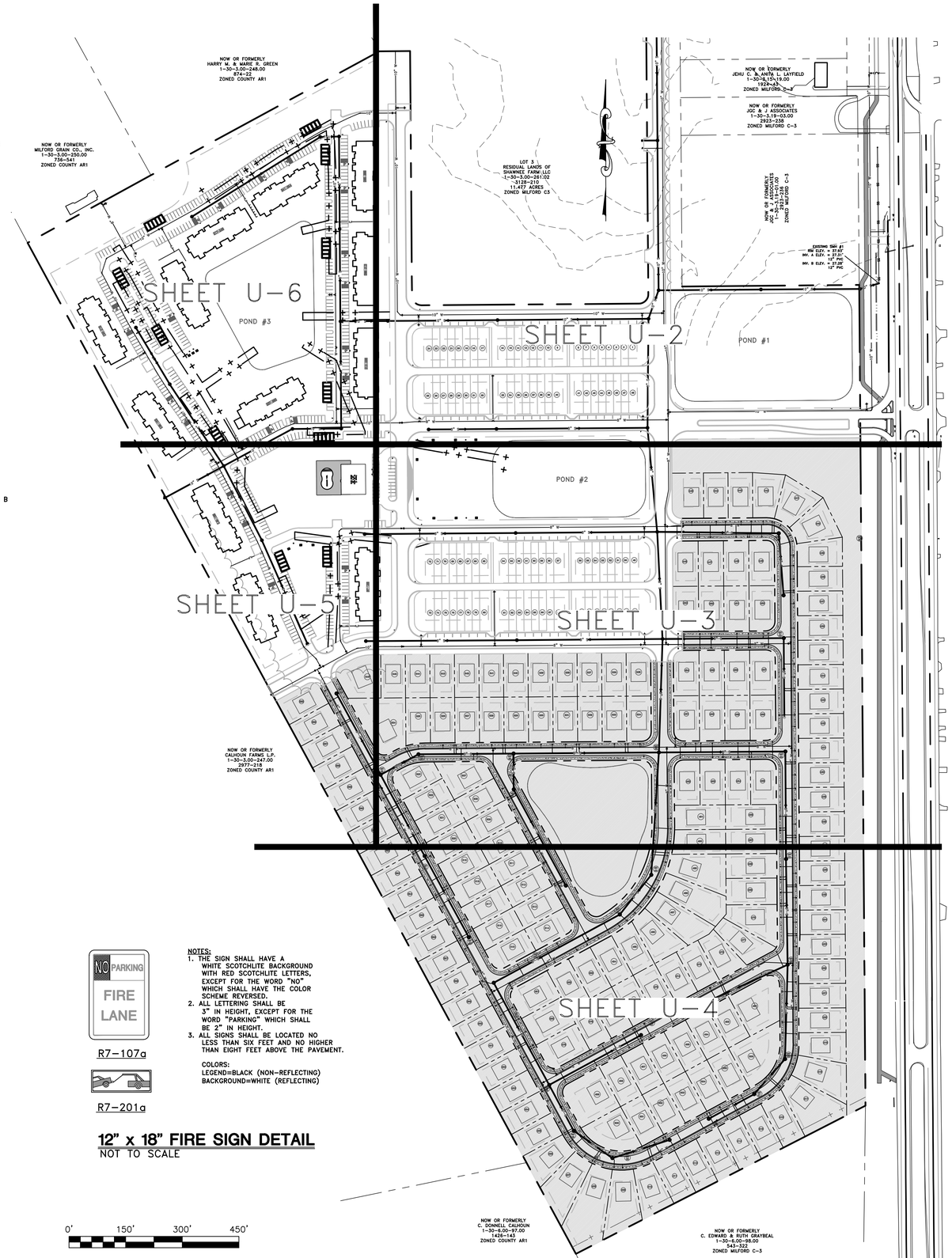
PHASE

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2HR FIRE SEPARATION WALL

NOTE: 2 HOUR RATED WALL ASSEMBLY PER 4.L. # U366 CONFIGURATION B



UTILITY NOTES:

1. WATER SUPPLY BY CITY OF MILFORD. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF MILFORD STANDARDS AND SPECIFICATIONS.
2. DISINFECTION REQUIREMENTS SHALL MEET STANDARDS AND SPECIFICATIONS OF THE DELAWARE DEPARTMENT OF HEALTH AND SOCIAL SERVICES OR EQUIVALENT TO THE AMERICAN WATER WORKS ASSOCIATION STANDARDS C60-08.
3. ALL WATER MAINS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM SANITARY SEWER AND SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18 INCHES AT CROSSINGS.
4. ALL PVC MAINS SHALL HAVE A MINIMUM COVER OF 3.5 FEET.
5. THE ENTIRE WATER DISTRIBUTION SYSTEM MUST BE IN COMPLIANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE STATE DIVISION OF PUBLIC HEALTH.
6. THE CONTRACTOR SHALL ADJUST WATER LINE LOCATION AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
7. THE CONTRACTOR SHALL PROVIDE BUTTRESSES FOR ALL HORIZONTAL AND VERTICAL BENDS AS REQUIRED PER STANDARDS AND SPECIFICATIONS OF THE CITY OF MILFORD.
8. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
9. WATER, SEWER AND STORMDRAIN DETAILS SHALL BE PER CITY OF MILFORD STANDARDS. www.cityofmilford.com
10. GRAVITY SEWER MAINS SHALL BE SDR-35 PVC UNLESS OTHERWISE NOTED ON THE PLANS. GRAVITY SEWER FITTINGS SHALL BE MINIMUM SDR-26 PVC.

FIRE PROTECTION NOTES:

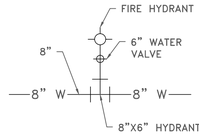
1. PROPOSED APARTMENT BUILDINGS WILL BE FULLY PROTECTED BY AUTOMATIC SPRINKLERS IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS AND NFPA 13. TOWNHOUSE BUILDINGS WILL NOT BE SPRINKLERED BUT WILL CONTAIN WALL SEPARATION BETWEEN UNITS ACCORDING TO DETAIL FOUND ON THIS SHEET.
2. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
3. PROPOSED BUILDINGS SHALL HAVE STANDPIPES INSTALLED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS AND NFPA 14.
4. ALL PROPOSED BUILDINGS REQUIRE A LOCK BOX WITH A KEY. CONTRACTOR TO CONTACT LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON BUILDINGS.
5. ALL PROPOSED BUILDINGS REQUIRE A 2 HOUR FIRE WALL RATING IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
6. PROPOSED BUILDING CONSTRUCTION IS NFPA TYPE V, 3 STORY WOOD FRAME TOWNHOUSES AND 3 STORY WOOD FRAME APARTMENT.
7. NATURAL GAS SUPPLIER: CHESAPEAKE UTILITIES CORP.

NOTES:
1. THE SIGN SHALL HAVE A WHITE SCOTCHLITE BACKGROUND WITH RED SCOTCHLITE LETTERS, EXCEPT FOR THE WORD "NO" WHICH SHALL HAVE THE COLOR SCHEME REVERSED.
2. ALL LETTERING SHALL BE 3" IN HEIGHT, EXCEPT FOR THE WORD "PARKING" WHICH SHALL BE 2" IN HEIGHT.
3. ALL SIGNS SHALL BE LOCATED NO LESS THAN SIX FEET AND NO HIGHER THAN EIGHT FEET ABOVE THE PAVEMENT.

COLORS:
LEGEND=BLACK (NON-REFLECTING)
BACKGROUND=WHITE (REFLECTING)

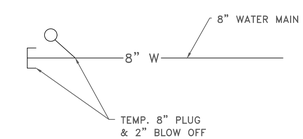
12" x 18" FIRE SIGN DETAIL

NOT TO SCALE



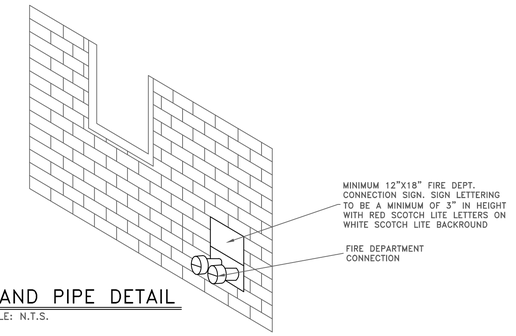
TYPICAL FIRE HYDRANT

SCALE: N.T.S



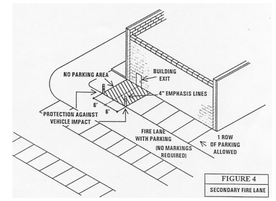
TEMPORARY END PLUG

SCALE: N.T.S.



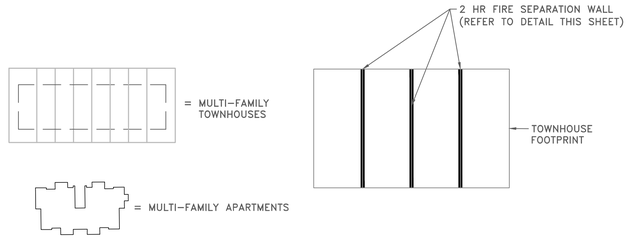
STAND PIPE DETAIL

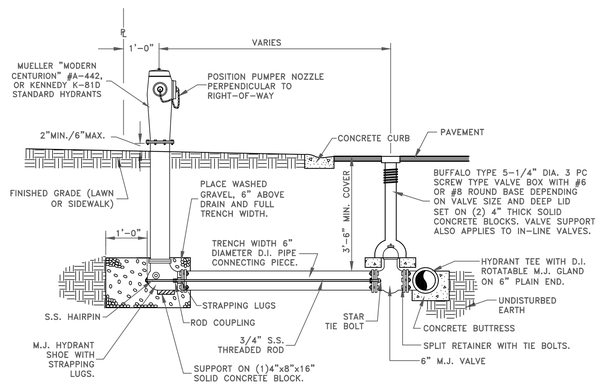
SCALE: N.T.S.



EXIT PORCH PAINTING DETAIL

SCALE: N.T.S.





FIRE HYDRANT DETAIL

SCALE: N.T.S.

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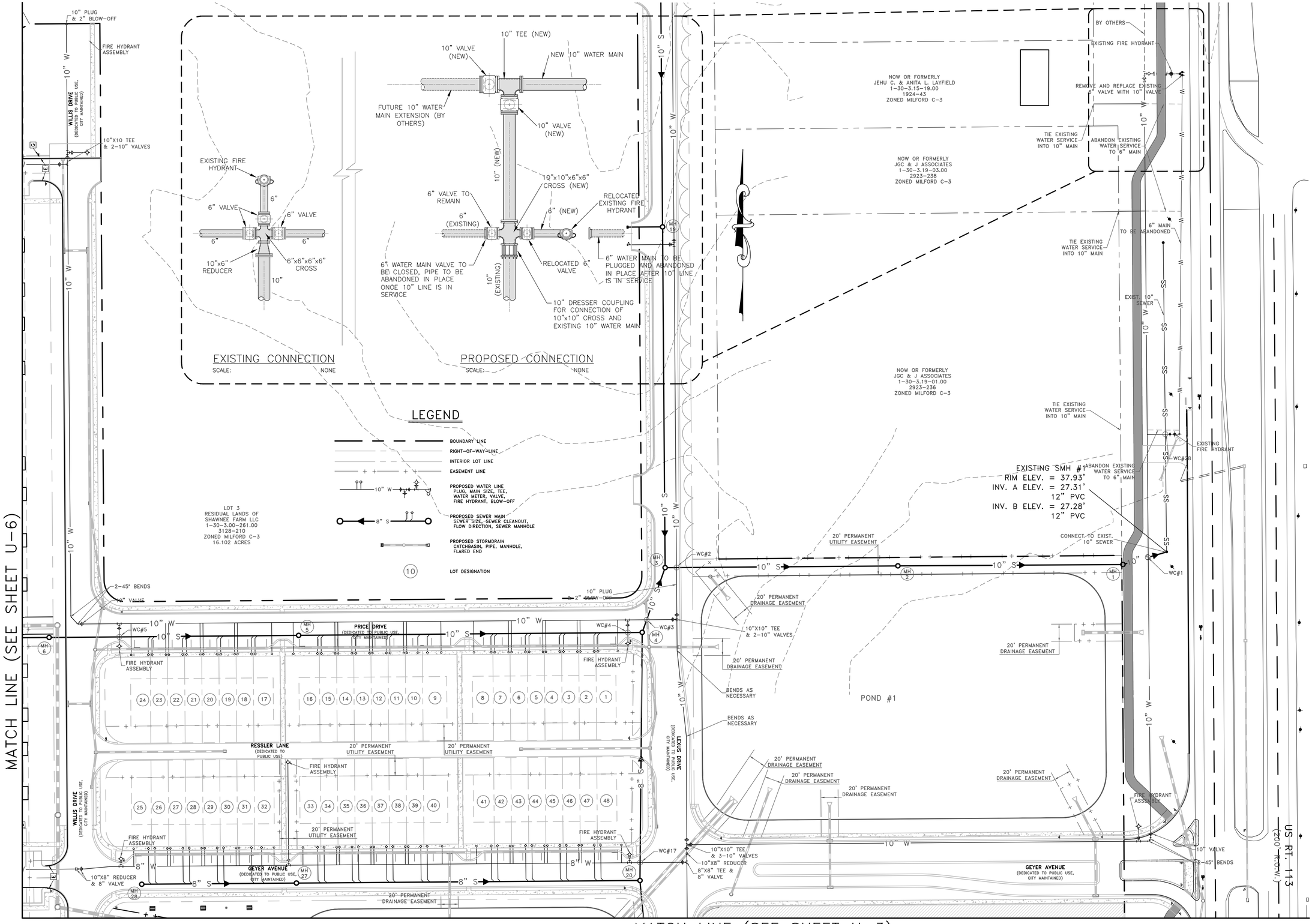
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SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date:	OCTOBER 2018
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	U-1

UTILITY OVERVIEW PLAN

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SUSSEX COUNTY, DELAWARE

UTILITY PLAN

REVISED:
11-29-18

Date:	OCTOBER 2018
Scale:	1" = 50'
Dwn.By:	AKB
Proj.No.:	1423A004
Dwg.No.:	U-2

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MATCH LINE (SEE SHEET U-2)

MATCH LINE (SEE SHEET U-5)

MATCH LINE (SEE SHEET U-4)

POND #2

20' PERMANENT DRAINAGE EASEMENT

PERMANENT UTILITY EASEMENT

MSA AREA 1,650 S.F.

10"X8" REDUCER & 8" VALVE

ZOAR AVENUE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)

LEXUS DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)

WILLIS DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)

THORNTON LANE (DEDICATED TO PUBLIC USE)

KIRSTEN DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)

20' PERMANENT UTILITY EASEMENT

10' PERMANENT UTILITY EASEMENT

PERMANENT DRAINAGE EASEMENT WIDTH VARIES

FIRE HYDRANT ASSEMBLY

BENDS AS NECESSARY

8"X8" TEE & 2-8" VALVES

8" CAP & 2" BLOW OFF

8" CAP

8"VALVE

10"X8" REDUCER & 10" VALVE

MH 20 · MH 21 · MH 22 · MH 23 · MH 25 · MH 35 · MH 36 · MH 37 · MH 38

WC#18 · WC#19 · WC#20 · WC#21 · WC#22 · WC#23 · WC#24 · WC#26 · WC#27

US RT. 113 (200' R.O.W.)

0' 50' 100' 150'

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UTILITY PLAN

CYPRESS HALL - RESIDENTIAL

CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: AKB
Proj.No.: 1423A004
Dwg.No.:

U-3

MATCH LINE (SEE SHEET U-3)



LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY-LINE
- INTERIOR LOT LINE
- EASEMENT LINE
- 12" W — PROPOSED WATER LINE PLUG, MAIN SIZE, TEE, WATER METER, VALVE, FIRE HYDRANT, BLOW-OFF
- 8" S — PROPOSED SEWER MAIN SEWER SIZE, SEWER CLEANOUT, FLOW DIRECTION, SEWER MANHOLE
- PROPOSED STORMDRAIN CATCHBASIN, PIPE, MANHOLE, FLARED END
- (10) LOT DESIGNATION

NOW OR FORMERLY
C. DONNELL CALHOUN
1-30-6.00-97.00
1426-143
ZONED COUNTY AR1

NOW OR FORMERLY
C. EDWARD & RUTH GRAYBEAL
1-30-6.00-98.00
543-322

0' 50' 100' 150'

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UTILITY PLAN

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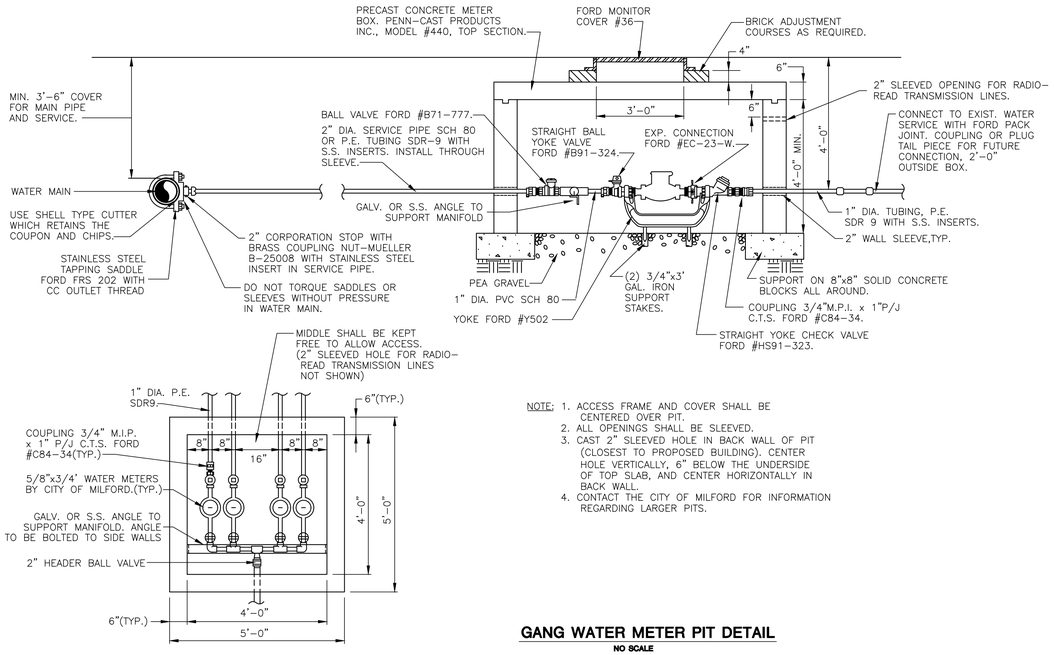
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1" = 50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	U-4

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LEGEND

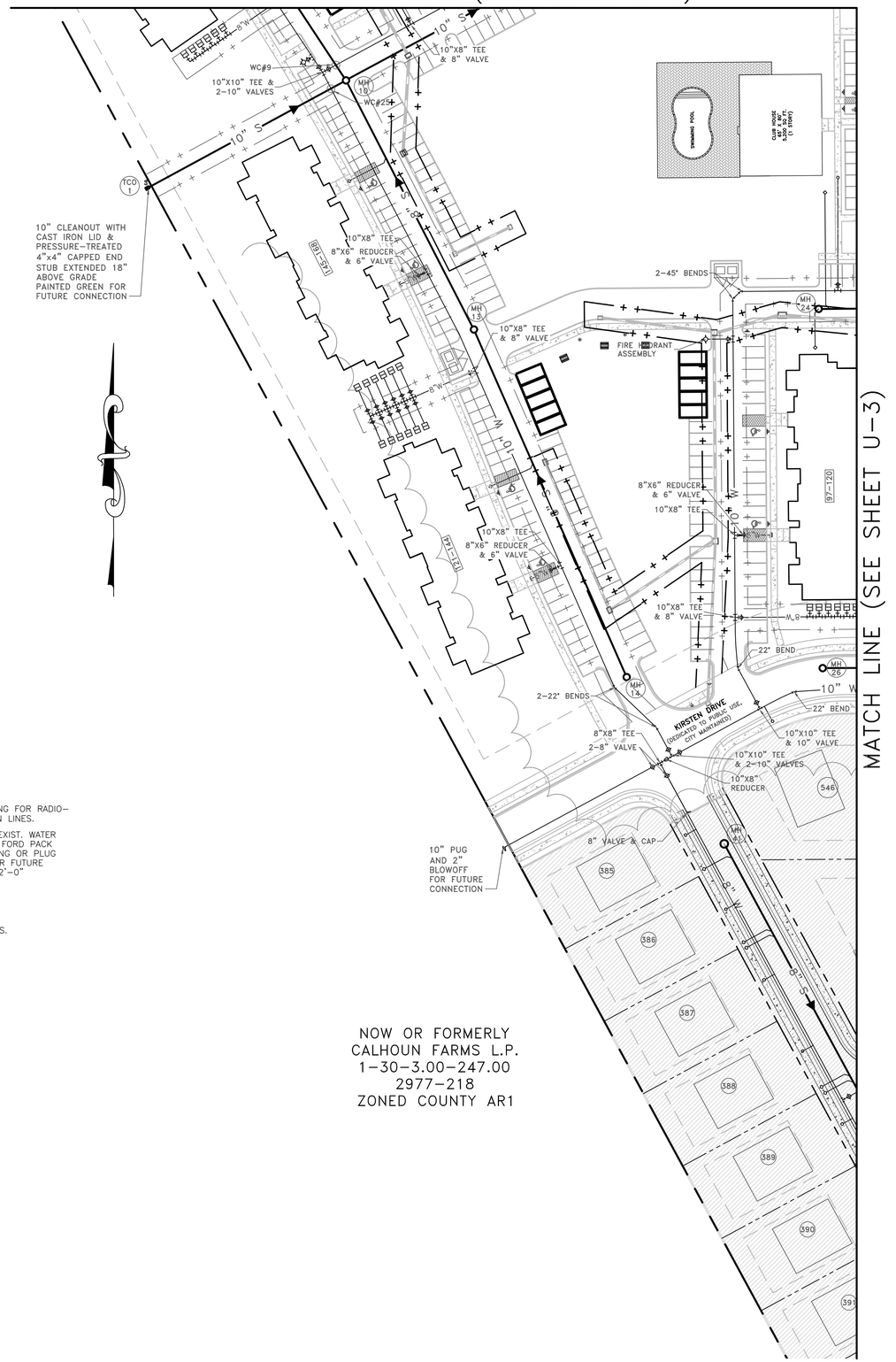
- BOUNDARY LINE
- RIGHT-OF-WAY-LINE
- INTERIOR LOT LINE
- EASEMENT LINE
- 12" W — PROPOSED WATER LINE PLUG, MAIN SIZE, TEE, WATER METER, VALVE, FIRE HYDRANT, BLOW-OFF
- 8" S — PROPOSED SEWER MAIN SEWER SIZE, SEWER CLEANOUT, FLOW DIRECTION, SEWER MANHOLE
- PROPOSED STORMDRAIN CATCHBASIN, PIPE, MANHOLE, FLARED END
- (10) LOT DESIGNATION



NOTE: 1. ACCESS FRAME AND COVER SHALL BE CENTERED OVER PIT.
2. ALL OPENINGS SHALL BE SLEEVED.
3. CAST 2" SLEEVED HOLE IN BACK WALL OF PIT (CLOSEST TO PROPOSED BUILDING). CENTER HOLE VERTICALLY, 6" BELOW THE UNDERSIDE OF TOP SLAB, AND CENTER HORIZONTALLY IN BACK WALL.
4. CONTACT THE CITY OF MILFORD FOR INFORMATION REGARDING LARGER PITS.

GANG WATER METER PIT DETAIL
NO SCALE

MATCH LINE (SEE SHEET U-6)



NOW OR FORMERLY
CALHOUN FARMS L.P.
1-30-3.00-247.00
2977-218
ZONED COUNTY AR1

0' 50' 100' 150'

DAVIS, BOWEN & FRIEDEL, INC.
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MILFORD, DELAWARE (302) 424-1441

UTILITY PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: AKB
Proj.No.: 1423A004
Dwg.No.:

U-5

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NOW OR FORMERLY
HARRY M. & MARIE R. GREEN
1-30-3.00-248.00
874-22
ZONED COUNTY AR1

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

POND #3

MATCH LINE (SEE SHEET U-2)

MATCH LINE (SEE SHEET U-5)

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY-LINE
- INTERIOR LOT LINE
- EASEMENT LINE
- 12" W — PROPOSED WATER LINE PLUG, MAIN SIZE, TEE, WATER METER, VALVE, FIRE HYDRANT, BLOW-OFF
- 8" S — PROPOSED SEWER MAIN SEWER SIZE, SEWER CLEANOUT, FLOW DIRECTION, SEWER MANHOLE
- PROPOSED STORMDRAIN CATCHBASIN, PIPE, MANHOLE, FLARED END
- (10) LOT DESIGNATION

0' 50' 100' 150'

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UTILITY PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: AKB
Proj.No.: 1423A004
Dwg.No.: U-6

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LEGEND:

A = PROPOSED FIRE HYDRANT ASSEMBLY – SEE DETAIL SHEET U-1
B = GANG METER PIT – SEE DETAIL SHEET U-5
C = FIRE DEPARTMENT CONNECTION
D = 10"x10" TEE WITH 10"x6" REDUCER
E = PROPOSED PAINTED YELLOW CURB
F = PROPOSED 4" YELLOW DEMARCATION LINE
G = PROPOSED "NO PARKING – FIRE LANE" SIGN

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

POND #3

WSA AREA
2.824 C.F.

SWIMMING POOL

CLUB HOUSE
65' X 80'
5,200 SQ FT.
(1 STORY)

KRISTEN DRIVE
(DEDICATED TO PUBLIC USE,
CITY TO MAINTAINED)

WILLIS DRIVE
(DEDICATED TO PUBLIC USE,
CITY MAINTAINED)

WILLIS DRIVE
(DEDICATED TO PUBLIC USE,
CITY MAINTAINED)

0' 50' 100' 150'

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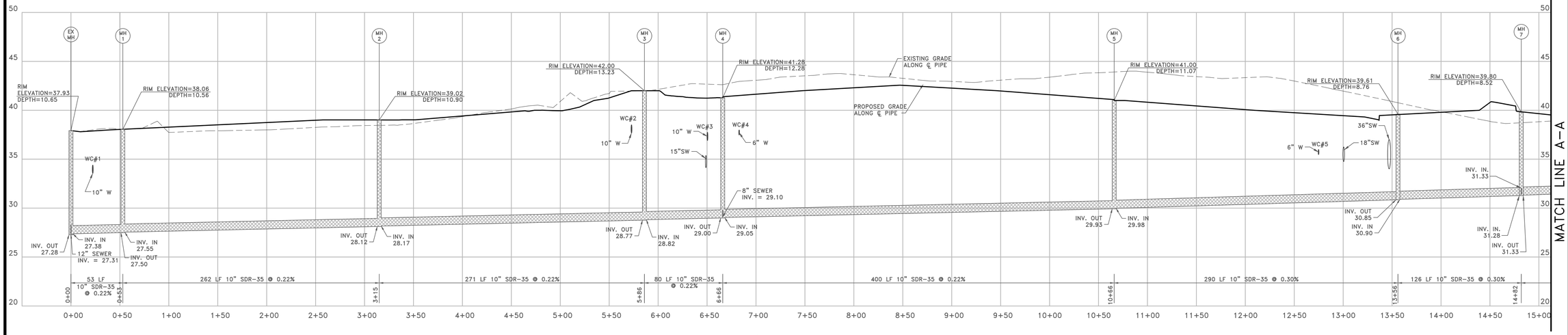
FIRE PROTECTION PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

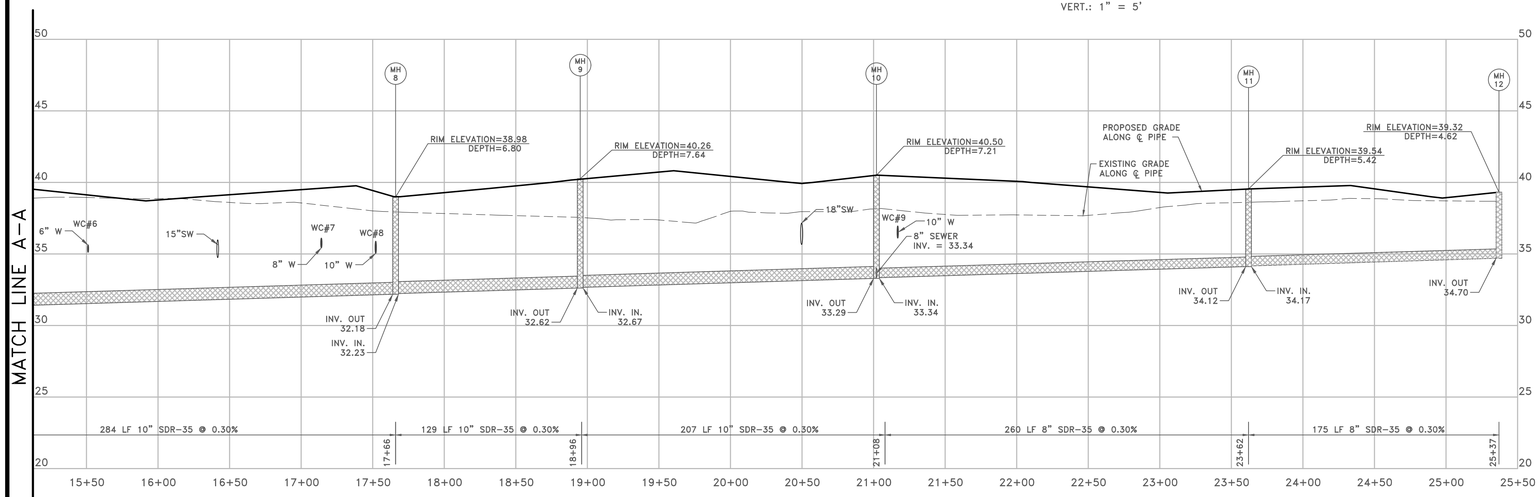
Date: OCTOBER 2018
Scale: 1" = 50'
Dwn.By: DJR
Proj.No.: 1423A004
Dwg.No.:

U-7



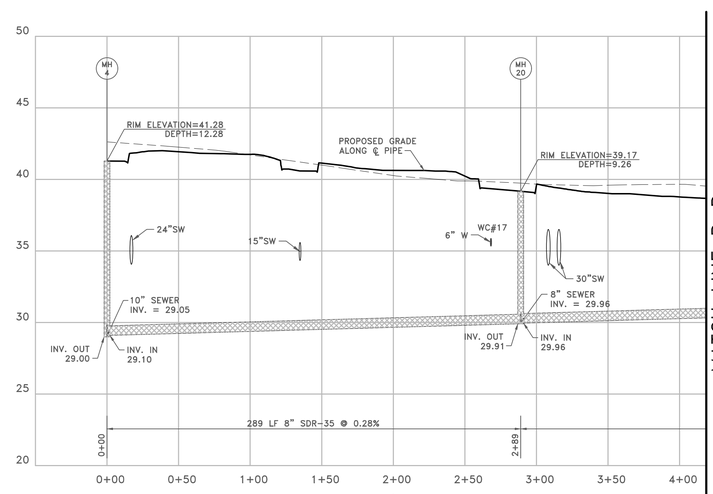
EX-MH / MH-13 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



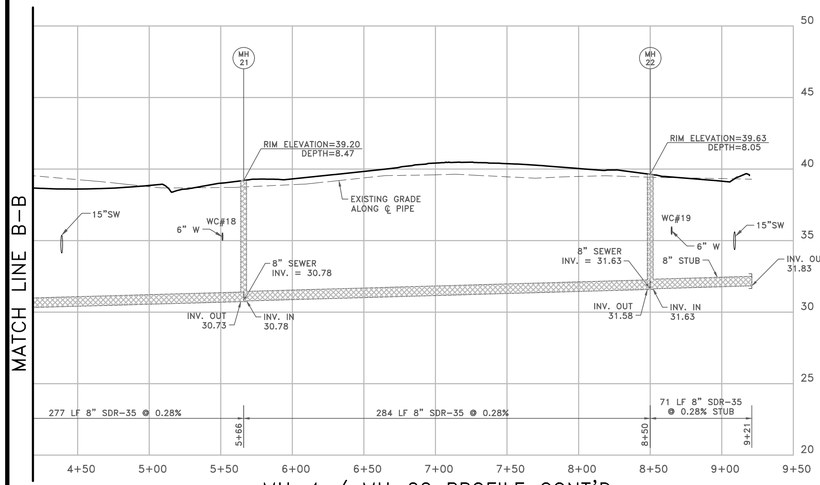
EX-MH / MH-13 PROFILE CONT'D.

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



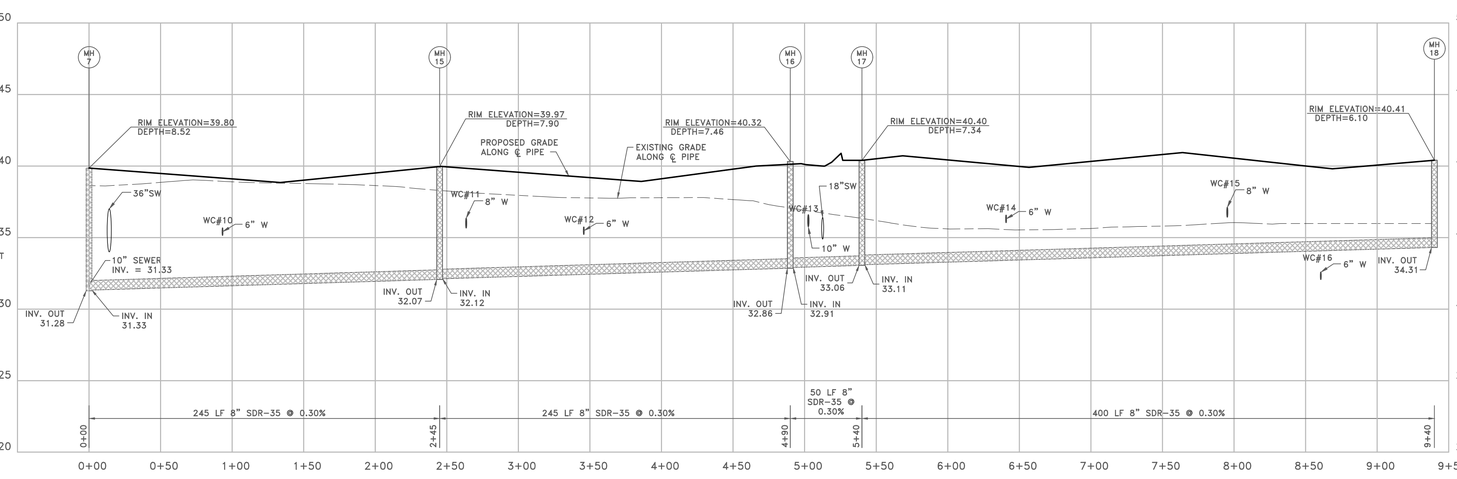
MH-4 / MH-22 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



MH-4 / MH-22 PROFILE CONT'D.

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



MH-6 / MH-18 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

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SEWER PROFILES

CYPRESS HALL - RESIDENTIAL

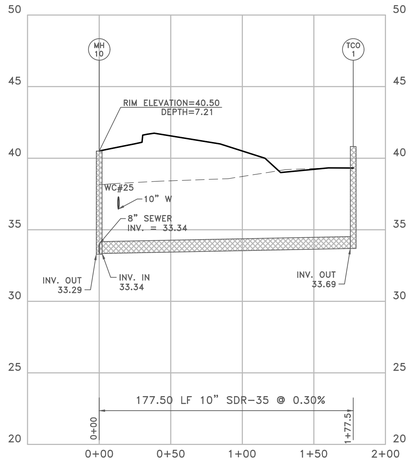
CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

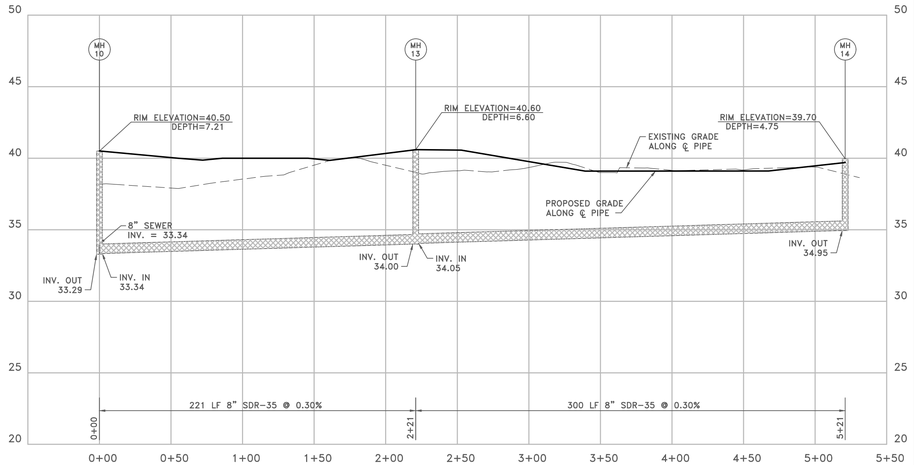
Date:	JUNE, 2017
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	SWR-1

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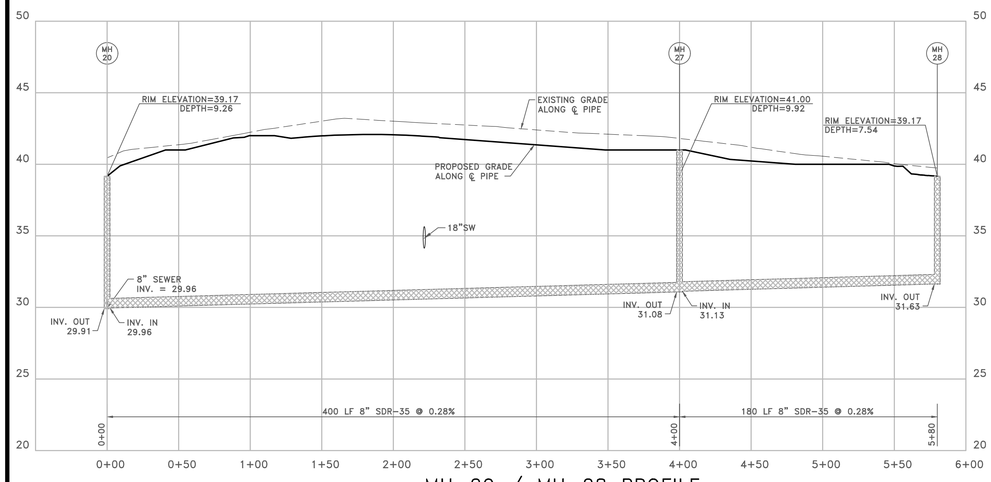
MH-10 / TCO-1 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



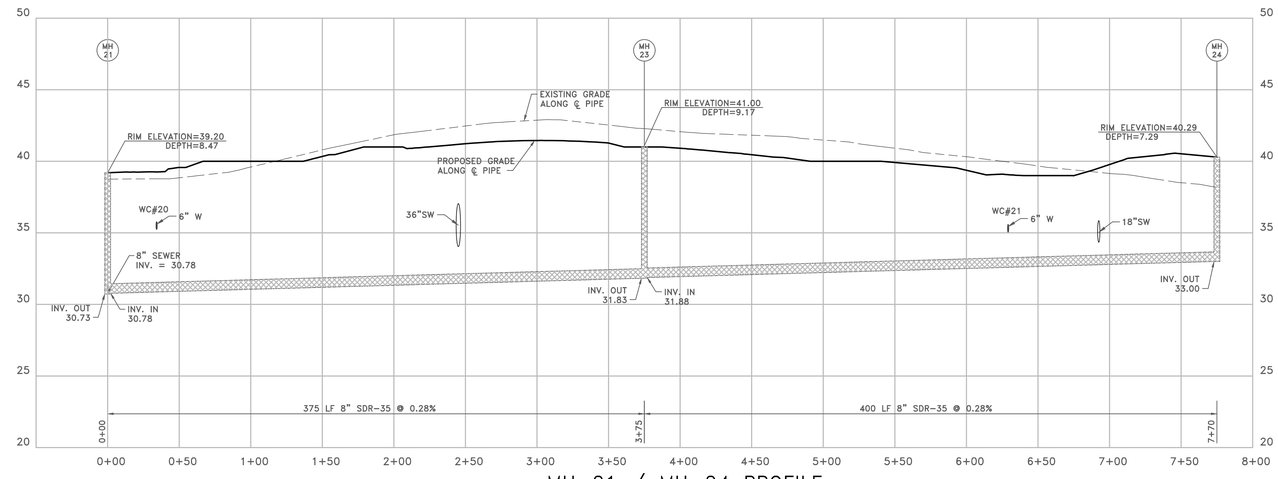
MH-10 / MH-14 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



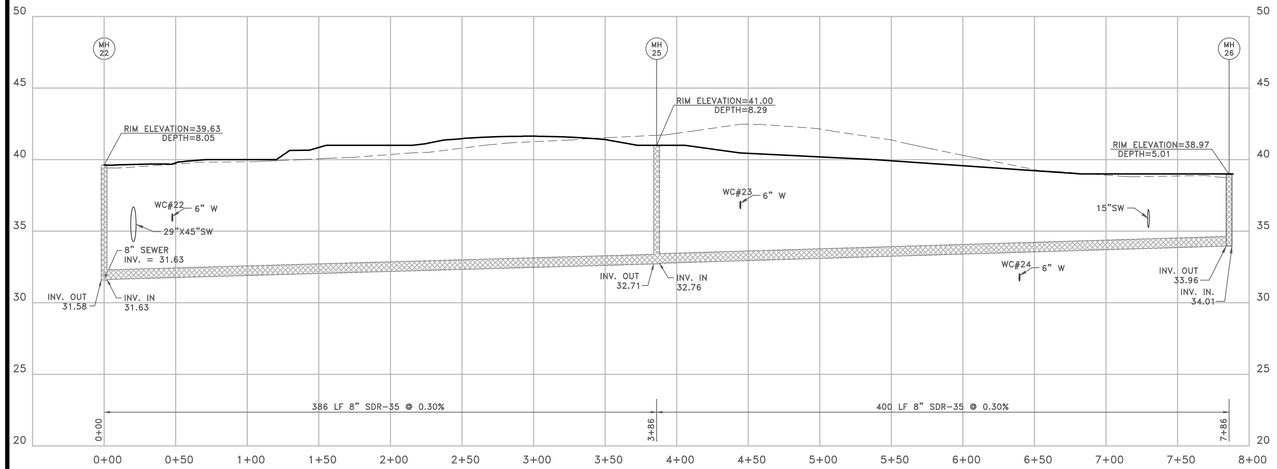
MH-20 / MH-28 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



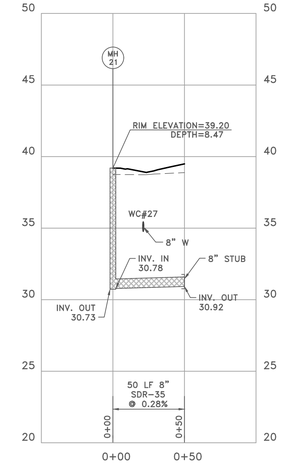
MH-21 / MH-24 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



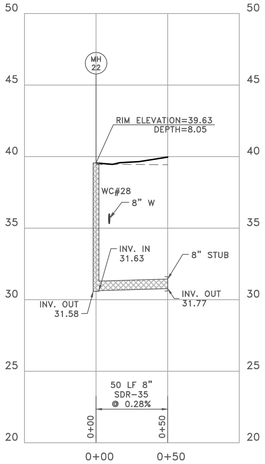
MH-22 / MH-26 PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



MH-21 / STUB PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



MH-22 / STUB PROFILE

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

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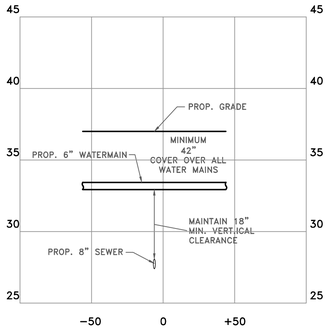
CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

SEWER PROFILES

REVISED:
11-29-18

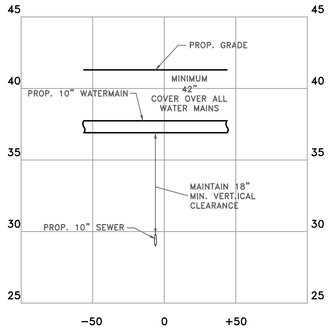
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Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	SWR-2

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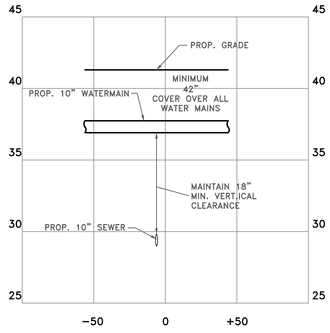
WATER CROSSING #1

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



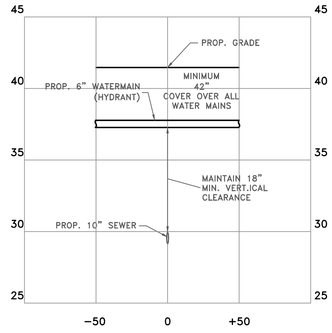
WATER CROSSING #2

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



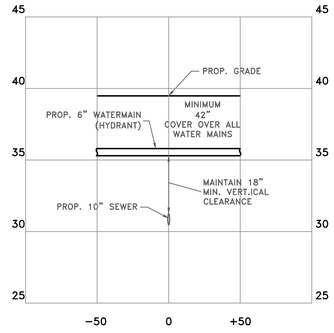
WATER CROSSING #3

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



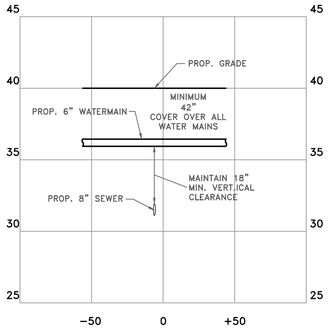
WATER CROSSING #4

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



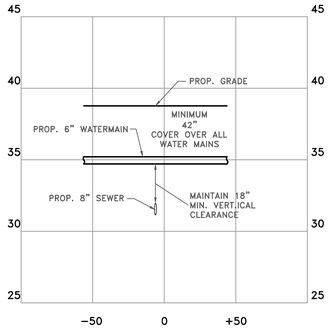
WATER CROSSING #5

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



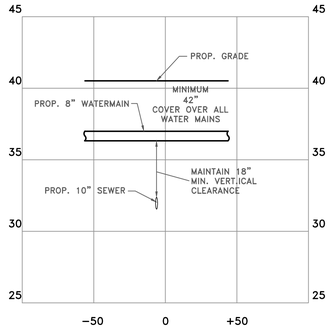
WATER CROSSING #6

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



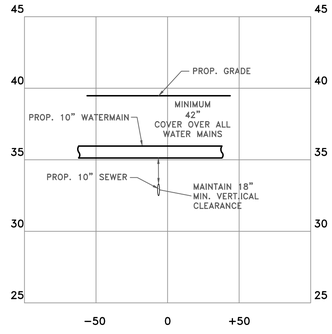
WATER CROSSING #7

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



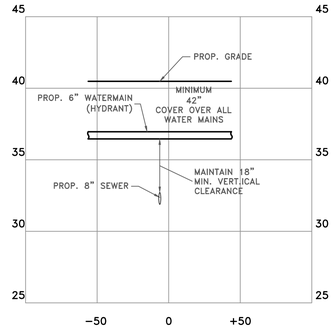
WATER CROSSING #8

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



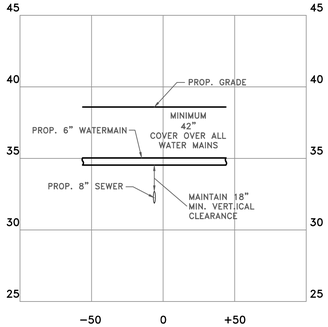
WATER CROSSING #9

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



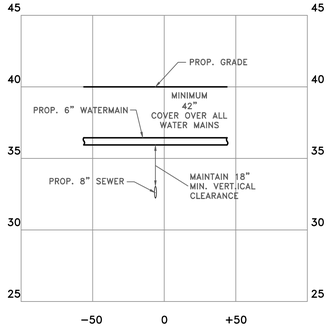
WATER CROSSING #10

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



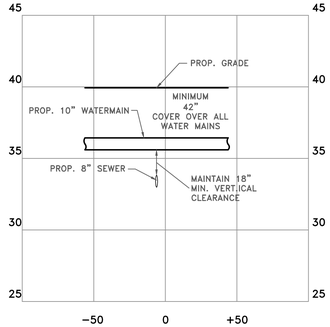
WATER CROSSING #11

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



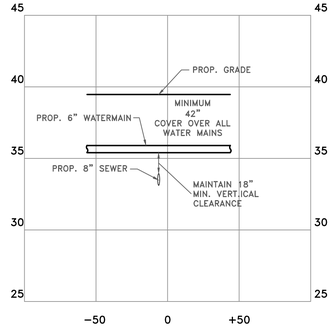
WATER CROSSING #12

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



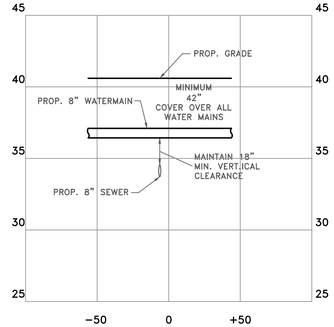
WATER CROSSING #13

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



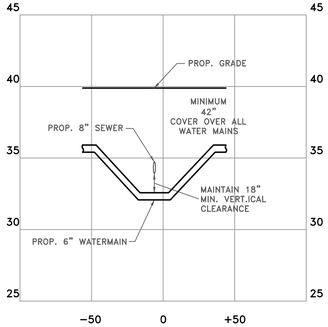
WATER CROSSING #14

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



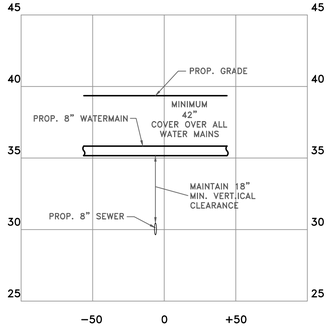
WATER CROSSING #15

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



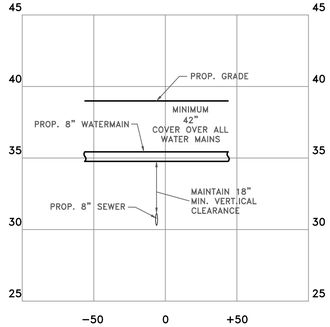
WATER CROSSING #16

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



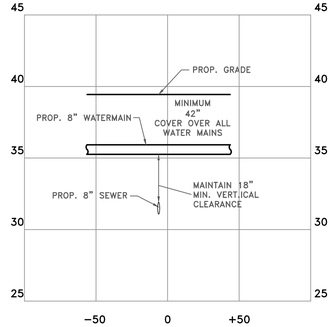
WATER CROSSING #17

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



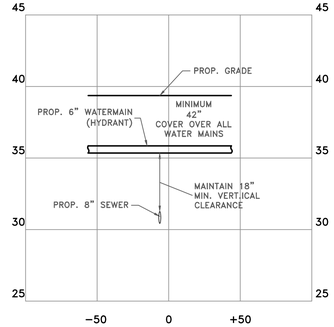
WATER CROSSING #18

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



WATER CROSSING #19

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



WATER CROSSING #20

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

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WATER CROSSINGS

CYPRESS HALL - RESIDENTIAL

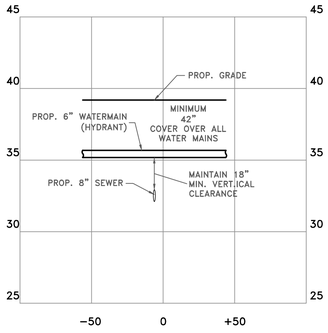
CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

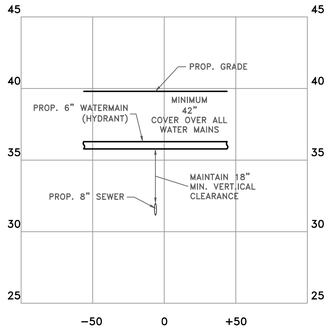
Date:	JUNE, 2017
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	WC-1

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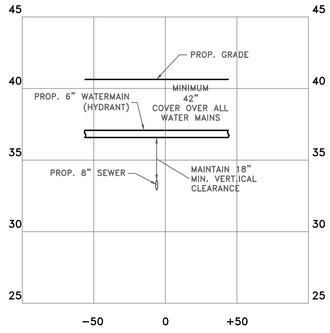
WATER CROSSING #21

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



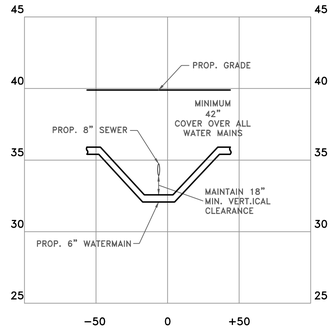
WATER CROSSING #22

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



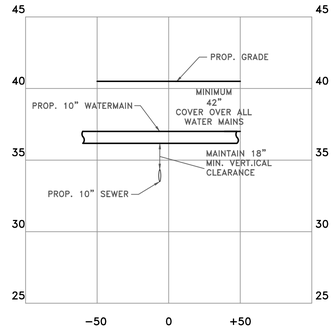
WATER CROSSING #23

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



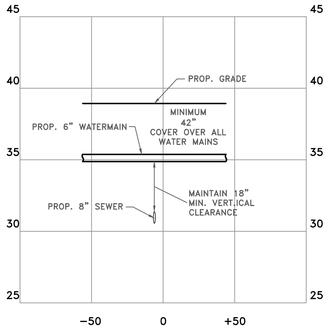
WATER CROSSING #24

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



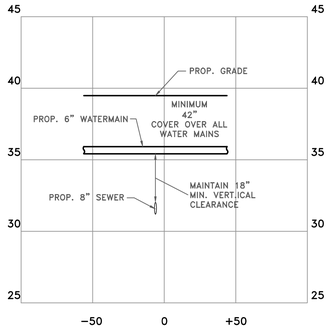
WATER CROSSING #25

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



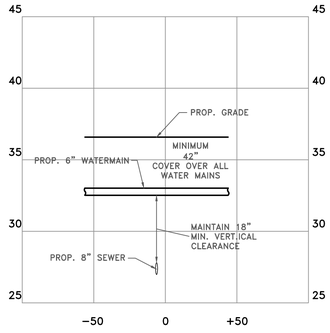
WATER CROSSING #26

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



WATER CROSSING #27

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'



WATER CROSSING #28

SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5'

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

WATER CROSSINGS

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

REVISED:
11-29-18

Date:	AUGUST, 2017
Scale:	AS NOTED
Dwn.By:	AKB
Proj.No.:	1423A004
Dwg.No.:	WC-2

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CYPRESS HALL - RESIDENTIAL

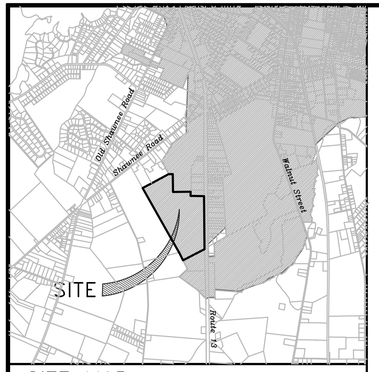
PHASE 1

RECORD PLAN

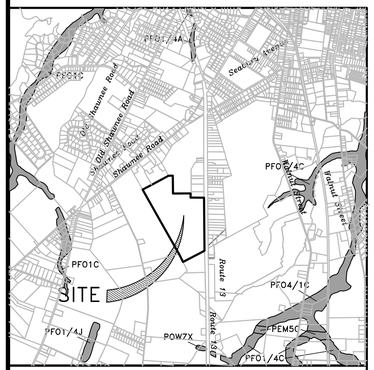
CITY OF MILFORD, SUSSEX COUNTY, DELAWARE

DBF PROJECT NO. 1423A004 FEBRUARY 2019

REQUIREMENTS	R-3 GARDEN APARTMENT AND TOWNHOUSE DISTRICT					
	SINGLE FAMILY DWELLINGS		GARDEN OR LOW RISE APARTMENTS		TOWNHOUSES OR ROW DWELLINGS	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
MAX DWELLING UNIT PER BUILDING	1	1	12	24	≥ 3 AND ≤8	8
PARKING SPACES	2.5 PER DU	2.5 PER DU	720	618	2.5 PER DU	2.5 PER DU
PUBLIC ROAD WIDTH	25'	22'	30'	28'	30'	28'



SITE MAP SCALE: 1" = 2000'



N.W.I. MAP SCALE: 1" = 2000'

CITY MANAGER – ERIC NORENBERG

DATE: _____ SIGNATURE: _____

CITY ENGINEER – ERIK RETZLAFF

DATE: _____ SIGNATURE: _____

DELDOT TIS REQUIREMENTS

1. THE SOUTHERN SITE ACCESS ONTO US ROUTE 113 SHOULD BE ALIGNED WITH THE EXISTING US ROUTE 113 CROSSOVER AND SHOULD INCLUDE ISLANDS TO PHYSICALLY PROHIBIT LEFT-TURNING AND THROUGH TRAFFIC OUT OF THE SITE. SOUTHBOUND RIGHT-TURNING TRAFFIC ON US ROUTE 113, NORTHBOUND LEFT-TURNING TRAFFIC ON US ROUTE 113, AND EASTBOUND RIGHT-TURNING TRAFFIC FROM THE SITE SHOULD BE ALLOWED.
2. THE RESIDENTIAL SECTION OF THE SITE SHOULD INCLUDE ONE OR MORE STUB STREETS TO CONNECT TO POTENTIAL FUTURE DEVELOPMENT TO THE WEST OF THE SITE.
3. THE FOLLOWING BICYCLE, PEDESTRIAN, AND TRANSIT IMPROVEMENTS SHOULD BE IMPLEMENTED:
   a. ADA COMPLIANT SIDEWALKS SET BACK A MINIMUM OF THREE-FEET FROM THE CURB ALONG THE SITE FRONTAGE AND CONNECTING TO ANY EXISTING SIDEWALKS ON ADJOINING PROPERTIES SHOULD BE INSTALLED.
   b. ADA COMPLIANT CURB RAMPS AND CROSSWALK SHOULD BE CONSIDERED AT THE SITE ENTRANCE.
   c. INTERNAL SIDEWALKS TO PROMOTE WALKING AS A VIABLE TRANSPORTATION ALTERNATIVE SHOULD BE INSTALLED, INCLUDING SIDEWALKS CONNECTING THIS DEVELOPMENT TO ADJACENT DEVELOPMENTS.

OWNERS CERTIFICATION

I, SHAWNEE FARM LLC, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT ALL STREETS SHOWN HEREON AND NOT HERETOFORE DEDICATED ARE HEREBY DEDICATED TO THE PUBLIC USE AND THAT ALL PROPOSED MONUMENTS AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED, AND THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DATE:_____SIGNATURE _____

LOUIS CAPANO
SHAWNEE FARM LLC
MANAGING PARTNER

ENGINEERS CERTIFICATION

I, RING W. LARDNER, P.E. HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DATE:_____ SIGNATURE _____

RING W. LARDNER, P.E.

DATA COLUMN

TAX MAP ID	:1-30-03.00-261.01
EXISTING ZONING	:R-3
PROPOSED USE	:PLANNED UNIT DEVELOPMENT
TOTAL SITE AREA	:91.69 AC
NET DEVELOPMENT AREA	:68.77 AC
PROPOSED SINGLE FAMILY LOTS	:162
PROPOSED NUMBER OF TOWNHOUSES UNITS	:96
PROPOSED NUMBER OF MULTI-FAMILY UNITS	
ONE BEDROOM (TYPE C BLDG)	:60 UNITS (5 BUILDINGS)
TWO BEDROOM (TYPE A BLDG)	:180 UNITS (15 BUILDINGS)
THREE BEDROOM (TYPE B BLDG)	:48 UNITS (4 BUILDINGS)
TOTAL	:288 GARDEN APARTMENTS
TOTAL DWELLING UNITS PROVIDED	:546
TOTAL DENSITY (546 DU ÷ 68.77 AC)	:7.94 DU/AC

R-3 ZONING REQUIREMENTS SINGLE FAMILY

MINIMUM LOT SIZE ALLOWED	:7,500 S.F.
MINIMUM LOT WIDTH	:60'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	:8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:45%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT

R-3 ZONING REQUIREMENTS TOWNHOUSES

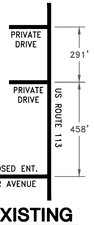
MINIMUM LOT SIZE ALLOWED	:2,000 S.F.
MINIMUM LOT WIDTH	:20'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	: 8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:60%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT
MAXIMUM DENSITY	:12 DU PER AC

R-3 ZONING REQUIREMENTS GARDEN APARTMENTS

MINIMUM LOT SIZE ALLOWED	:2,500 S.F.
MINIMUM LOT WIDTH	:50'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	:8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:20%
MAXIMUM HEIGHT	:35' OR 3 STORIES
OPEN SPACE REQUIRED	:400 S.F. PER DWELLING UNIT
MAXIMUM DENSITY	:16 DU PER AC
MINIMUM PROJECT SIZE	:1 AC
TOTAL OPEN SPACE REQUIRED	:400 S.F. x 546 UNITS = 218,400 S.F. (5.01 AC.)
TOTAL OPEN SPACE PROVIDED	:1,034,783 S.F. (23.75 AC.)
RECREATIONAL SPACE REQUIRED	: 109,200 S.F. (2.50 AC.)
RECREATIONAL SPACE PROVIDED	: 78,365 S.F. (1.80 AC.) CLUBHOUSE POOL AREA + 30,492 S.F. (0.70 AC.) PICNIC AREA 108,857 S.F. (2.50 AC.) TOTAL
TOTAL AMOUNT OF STORMWATER	:8.44±AC
TOTAL AMOUNT OF PROPOSED RIGHT-OF-WAY	:17.8±AC
TOTAL AREA OF LOTS	:38.22±AC
CLUBHOUSE SPACES REQUIRED	:5200 S.F. ÷ 150 = 35 SPACES
PARKING SPACES REQUIRED	:2.5 SPACES/UNIT + 35 CLUBHOUSE SPACES = 995 SPACES
PARKING SPACES PROVIDED	:618 MULTI-FAMILY + 240 TOWNHOUSE + 35 CLUBHOUSE = 89:
SEWER PROVIDER	:CITY OF MILFORD
WATER PROVIDER	:CITY OF MILFORD
ELECTRIC PROVIDER	:CITY OF MILFORD
WETLANDS	:NONE ARE PRESENT ON SITE
SOURCE WATER PROTECTION AREAS	:NONE ARE PRESENT ON SITE
FLOOD ZONE	:ZONE X AREA OF MINIMAL FLOOD HAZARD PANEL 10005C00391 EFF. 01/06/2005
FIRE DISTRICT	:CARLISLE
SCHOOL DISTRICT	:MILFORD
ELECTION DISTRICT	:2ND
PERMANENT MONUMENTS FOUND	:16
PERMANENT MONUMENTS PLACED	:14
HORIZONTAL DATUM	: NAD83
VERTICAL DATUM	: NAVD88

OWNERS/DEVELOPERS
SHAWNEE FARM LLC
105 FOULK RD.
WILMINGTON, DELAWARE 19803
(302) 422-0945

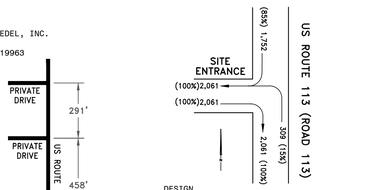
ENGINEER/SURVEYOR
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVENUE
MILFORD, DELAWARE 19963
(302) 424-1441



EXISTING DRIVEWAYS DETAIL
SCALE: NOT TO SCALE

DELAWARE TRAFFIC SUMMARY 2007

US ROUTE 113 (ROAD 113)
AADT – CURRENT – 18,333
SPEED – POSTED – 55 MPH
TRAFFIC PATTERN GROUP – 2

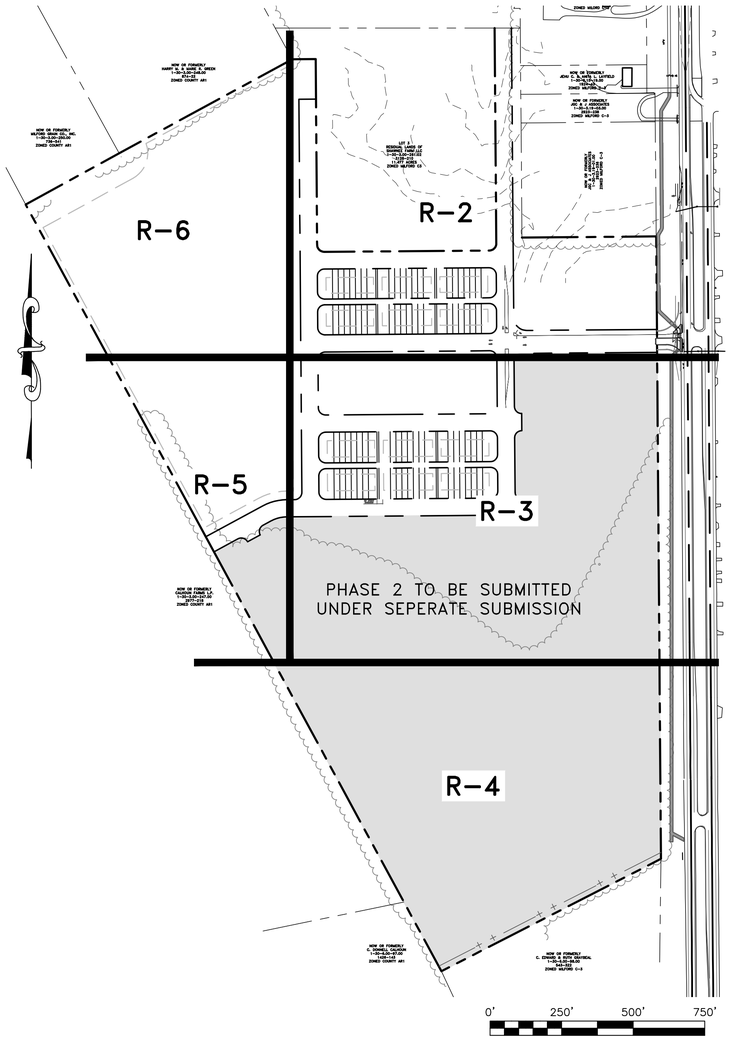


DESIGN

TYPE OF DEV.	ITE CODE	UNITS	ADT
SINGLE-FAMILY HOUSES	210	162	1,621
APARTMENTS	220	288	1,881
TOWNHOUSES	230	96	620
		546	4,122

NOTES: TRIP GENERATION BASED ON ITE TRIP GENERATION REPORT 7TH EDITION

TRAFFIC DIAGRAM
NO SCALE



GENERAL NOTES

1. THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE INSPECTION.
2. "THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, MODIFY, OR DELETE ANY EROSION AND SEDIMENT CONTROL MEASURES AS THEY DEEM NECESSARY."
3. THIS SITE IS NOT IMPACTED BY THE 100 YEAR FLOOD PLAIN AS DELINEATED ON FEMA MAP PANEL#10050C0039J DATED: JANUARY 6, 2005.
4. THIS SITE IS NOT IMPACTED BY WETLANDS PER THE DELINEATION PERFORMED BY:
   ENVIRONMENTAL RESOURCES, INC.
   62 NORTH DUPONT HIGHWAY
   P.O. BOX 169
   SELBYVILLE, DE 19975
5. ACCESS TO ALL LOTS WILL BE FROM INTERNAL STREETS ONLY.
6. NO REVISION MAY BE MADE TO PHASE 1 WITHOUT THE WRITTEN CONSENT OF SEVENTY-FIVE PERCENT (75%) OF THE LOT OWNERS OF THE RECORDED PHASE 1 PLAT AND THE LOT OWNERS OF THE ADJACENT LOTS TO THE REVISION.
7. NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED FOR ANY LOT WITHIN THIS DEVELOPMENT UNTIL ALL REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED, CONSTRUCTED OR PLACED FOR THE LOT WHICH THE CERTIFICATE OF OCCUPANCY IS TO BE ISSUED IN A MANNER ACCEPTABLE TO THE CITY AND THE STATE, OR UNTIL THE DEVELOPER FILES A PERFORMANCE BOND OF OTHER GUARANTEE WITH THE CITY FOR ANY UNCOMPLETED PUBLIC OR PRIVATE STREET OR OTHER IMPROVEMENT.
8. NO "CERTIFICATE OF OCCUPANCY" PERMIT WILL BE ISSUED FOR ANY LOT WITHIN THE DEVELOPMENT UNTIL THE STREETS SIGNS HAVE BEEN INSTALLED FOR THE ENTRANCE TO THE DEVELOPMENT AND FOR THE STREETS LEADING TO THE LOT WHICH THE "CERTIFICATE OF OCCUPANCY" IS TO BE ISSUED.
9. ALL FIRE LANES, FIRE HYDRANTS, EXITS, STANDPIPES, AND SPRINKLER CONNECTIONS WILL BE MARKED IN ACCORDANCE WITH STATE FIRE MARSHAL REGULATIONS.
10. THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE, AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS, AND NIGHTTIME FARM OPERATIONS. THE USE AND THE ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES OR ACTIVITIES.
11. PROPOSED OPEN SPACE TO BE OWNED AND MAINTAINED BY THE COMMUNITY HOMEOWNERS ASSOCIATION.
12. ALL REQUIRED LANDSCAPE BUFFERS SHALL BE PLANTED AND ALL ACTIVE RECREATION AMENITIES INSTALLED PRIOR TO ISSUANCE OF 50% OF THE CERTIFICATES OF OCCUPANCY, AND MAINTAINED BY THE DEVELOPER UNTIL 75% OF THE CERTIFICATES OF OCCUPANCY HAVE BEEN ISSUED. THE LANDSCAPE BUFFER AREA AND ANY OTHER LANDSCAPE PLAN DEPICTED ON THE RECORD PLAN SHALL BE MAINTAINED IN PERPETUITY BY THE HOMEOWNERS' ASSOCIATION OR MAINTENANCE CORPORATION. THESE DEED RESTRICTIONS SHALL RUN WITH THE LAND AND MAY NOT BE VACATED BY THE HOMEOWNERS' ASSOCIATION OR THE MAINTENANCE CORPORATION.
13. THE DEVELOPER WILL BE RESPONSIBLE FOR MAINTENANCE OF SEDIMENT & STORMWATER CONTROLS DURING CONSTRUCTION AND FOR LONG TERM MAINTENANCE OF STORMWATER CONTROLS UNTIL CONSTRUCTION IS COMPLETE. AT THE TIME, RESPONSIBILITY FOR LONG TERM MAINTENANCE OF STORMWATER CONTROLS SHALL BE ASSUMED BY THE HOMEOWNER'S ASSOCIATION. IF A HOMEOWNER'S ASSOCIATION IS NOT FORMED THEN THE OWNER IS TO PROVIDE LONG TERM MAINTENANCE FOR THE SITE.
14. FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR PART WITHIN 50 FEET OF THE BOUNDARY OF AN AGRICULTURAL PRESERVATION DISTRICT, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE AGRICULTURAL PRESERVATION DISTRICT.
15. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MATERIALS AND WORKMANSHIP SHALL CONFORM TO ALL STATE OF DELAWARE, SUSSEX COUNTY, AND CITY OF MILFORD STANDARDS AND SPECIFICATIONS.
16. SANITARY SEWER AND WATER SERVICE WILL BE MAINTAINED BY THE CITY OF MILFORD UPON COMPLETION OF PHASE 1 AND ACCEPTANCE BY THE CITY IN ACCORDANCE WITH ALL CITY SPECIFICATIONS.
17. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION AND DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS, ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION FOR STRUCTURES AND UTILITY LINES, ON AND OFF SITE, MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
18. DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
19. THE DEVELOPER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE ONSITE STORMWATER MANAGEMENT FACILITIES DURING DEVELOPMENT & THE HOMEOWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR ALL MAINTENANCE FOLLOWING THE COMPLETION OF DEVELOPMENT.
20. DEVELOPER SHALL INSTALL ONSITE LIGHTING TO ILLUMINATE STREETS, PARKING AREAS, AND WALKWAYS, IN ACCORDANCE WITH CITY REGULATIONS.
21. THE HOMEOWNERS ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SIDEWALKS THROUGHOUT THE DEVELOPMENT.
22. MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555
23. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTORS EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (SEE NOTE #22).
24. THE DEVELOPER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE ONSITE WELLS TO ENSURE THE STORMWATER MANAGEMENT FACILITIES MAINTAIN THE DESIGNED PERMANENT POOL LEVEL DURING CONSTRUCTION AND FOR LONG TERM MAINTENANCE UNTIL CONSTRUCTION IS COMPLETE. AT THE TIME, RESPONSIBILITY FOR LONG TERM MAINTENANCE OF THE WELLS SHALL BE ASSUMED BY THE HOMEOWNER'S ASSOCIATION. IF A HOMEOWNER'S ASSOCIATION IS NOT FORMED THEN THE OWNER IS TO PROVIDE LONG TERM MAINTENANCE FOR THE WELLS.

DELDOT NOTES

1. NO LANDSCAPING SHALL BE ALLOWED WITHIN R/W UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL (DCM).
2. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
3. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
4. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S "SHARED-USE PATH AND/OR SIDEWALK TERMINATION POLICY".
5. SUBDIVISION STREETS CONSTRUCTED WITHIN THE LIMITS OF THE RIGHT-OF-WAY DEDICATED TO PUBLIC USE SHOWN ON THIS PLAN ARE TO BE MAINTAINED BY THE CITY OF MILFORD FOLLOWING THE COMPLETION OF THE STREETS BY THE DEVELOPER TO THE SATISFACTION OF THE CITY. THE CITY ASSUMES NO MAINTENANCE RESPONSIBILITIES WITHIN THE DEDICATED STREET RIGHT-OF-WAY UNTIL THE STREETS HAVE BEEN ACCEPTED BY THE CITY.
6. MAINTENANCE OF THE SHARED USE PATH, WHICH SHALL BE CONSTRUCTED IN CONJUNCTION WITH OR RELATION TO THIS SUBDIVISION, BUT SHALL BE LOCATED WITHIN THE LIMITS OF THE EXISTING RIGHT-OF-WAY, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE MULTI-MODAL PATH.
7. ALL LOTS SHALL HAVE ACCESS FROM THE INTERNAL SUBDIVISION STREET.
8. DRIVEWAYS WILL NOT BE PERMITTED TO BE PLACED AT CATCH BASIN LOCATIONS.
9. LOTS WILL BE PERMITTED TO HAVE ACCESS POINTS THAT COMPLY WITH THE DEVELOPMENT COORDINATION MANUAL (DCM) SPACING REQUIREMENTS OF CHAPTER 1 AND LIMITATIONS ON NUMBER OF ACCESS POINTS ESTABLISHED IN DCM CHAPTER 7. HORSESHOE DRIVEWAYS AND SECONDARY ENTRANCES REQUIRE ADDITIONAL DELDOT REVIEW AND SEPARATE PERMITTING, RESTRICTIONS AS DESCRIBED IN THE DCM CHAPTER 7 MAY PROHIBIT SOME SECONDARY ENTRANCE REQUESTS FROM BEING GRANTED.
10. TO MINIMIZE RUTTING AND EROSION OF THE ROADSIDE DUE TO ON-STREET PARKING, DRIVEWAY AND BUILDING LAYOUTS MUST BE CONFIGURED TO ALLOW FOR VEHICLES TO BE STORED IN THE DRIVEWAY BEYOND THE RIGHT-OF-WAY, WITHOUT INTERFERING WITH SIDEWALK ACCESS AND CLEARANCE.
11. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
13. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS ON THE DEDICATED SUBDIVISION STREET RIGHT-OF-WAY IN ACCORDANCE WITH SECTION 3.2.4.1 OF THE DEVELOPMENT COORDINATION MANUAL, AND THE REQUIREMENTS OF THE LAND USE AGENCY. RIGHT-OF-WAY MONUMENTS SHALL BE PLACED ALONG THE RIGHT-OF-WAY LINES, AT A MINIMUM ON ONE SIDE OF THE STREET AT EVERY CHANGE IN HORIZONTAL ALIGNMENT TO PROVIDE A PERMANENT REFERENCE FOR THE RE-ESTABLISHING THE CENTERLINE AND RIGHT-OF-WAY LINE.
14. THIS COMMERCIAL PARCEL HAS DIRECT FRONTAGE ALONG U.S. ROUTE 113, WHICH HAS A FUNCTIONAL CLASSIFICATION OF PRINCIPLE ARTERIAL/FREEWAY/INTERSTATE AS DEFINED BY THE STATE OF DELAWARE'S DEPARTMENT OF TRANSPORTATION. PER SECTION 3.6.1 OF THE DELDOT DEVELOPMENT COORDINATION MANUAL (DCM): IT IS THE DEVELOPER'S RESPONSIBILITY TO EVALUATE NOISE LEVELS AND THEIR IMPACTS ON PROPOSED DEVELOPMENT, FOR PROJECTS ADJACENT TO EXISTING TRANSPORTATION FACILITIES WITH THIS FUNCTIONAL CLASSIFICATION. ROADWAYS WITH THIS CLASSIFICATION CAN BE EXPECTED TO GENERATE HIGH LEVELS OF ROAD AND TRAFFIC RELATED NOISE, SIMILAR TO WHAT CAN BE EXPECTED IN URBAN AREAS. A DETAILED NOISE ANALYSIS PER DCM 3.6 IS TYPICALLY RECOMMENDED TO HELP GAUGE THE ACTUAL IMPACTS THAT ROADWAY RELATED NOISE MAY HAVE ON VARIOUS POTENTIAL LAND-USES (SUCH AS THOSE DESCRIBED IN DCM FIGURE 3.6.3-A: NOISE ABATEMENT CRITERIA). WITH THE INCLUSION OF THIS NOTE, THE DEVELOPER IS ACKNOWLEDGING THAT THE PROPOSED SITE AND/OR BUILDING LOCATION CAN BE EXPECTED TO EXCEED THE SPECIFIC MAXIMUM NOISE LEVELS FOR CERTAIN COMMERCIAL AND NON-RESIDENTIAL USES AS SHOWN IN DCM FIGURE 3.6.3-A. THE DEVELOPER'S WAIVER OF THE NOISE ANALYSIS AND REVIEW OF POTENTIAL NOISE MITIGATION MEASURES ARE SUPPORTED BY THE INFEASIBILITY OF APPLYING NOISE MITIGATION MEASURES, BASED ON ENGINEERING CONSIDERATIONS AND FACTORS THAT WOULD LIMIT THE ABILITY TO ACHIEVE SUBSTANTIAL NOISE REDUCTION, RELATED TO THE COMMERCIAL USE OF THE SITE AND/OR BUILDINGS. THIS WAIVER ACKNOWLEDGES THAT THE DECIBEL LEVEL FOR THIS PARCEL MAY EXCEED THE APPLICABLE LIMITS FOR SOME CURRENT OR FUTURE PROPOSED USES. THE USE OF THIS NOTE SIGNIFIES THE SUBDIVISION ENGINEER'S CONCURRENCE WITH WAIVING THE DEVELOPER'S COMPLETION OF A DETAILED NOISE STUDY AND SUBSEQUENT REVIEW OF RESULTING NOISE ABATEMENT FINDINGS OR MITIGATION MEASURES. ANY FUTURE COMPLAINTS RELATING TO EXISTING OR FUTURE NOISE LEVELS IMPACTING PROPOSED USES ON THIS SITE AND ALONG THIS EXISTING TRANSPORTATION FACILITY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR LAND OWNER OR BOTH.
15. MAINTENANCE OF THE RIPRAP ENERGY DISSIPATER, WHICH SHALL BE CONSTRUCTED IN CONJUNCTION WITH OR RELATION TO THIS SUBDIVISION, BUT SHALL BE LOCATED WITHIN THE LIMITS OF THE EXISTING RIGHT-OF-WAY, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH.
16. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE RIPRAP ENERGY DISSIPATER.
17. A NOISE STUDY WAS DEEMED NOT REQUIRED BY DELDOT DUE TO THE CLOSEST RESIDENTIAL UNIT BEING APPROXIMATELY 600+ FEET AWAY FROM THE NEAREST TRAVEL LANE ON RT. 113.

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

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MILFORD, DELAWARE (302) 424-1441

MATCH LINE (SEE SHEET R-6)

MATCH LINE (SEE SHEET R-3)

LEGEND:

= BOUNDARY LINE
= RIGHT-OF-WAY
= LOT LINE
= BUILDING SETBACK
(8) = LOT DELINEATION
10 = EXISTING TOPOGRAPHIC LINE
= EXISTING VEGETATION LINE
= PHASE 2

LOT 3
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.02
3128-210
11.477 ACRES
ZONED MILFORD C3

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.15-19.00
1924-43
ZONED MILFORD C-3

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-03.00
2923-238
ZONED MILFORD C-3

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-01.00
2923-236
ZONED MILFORD C-3

EASEMENT LINE TABLE

LINE	BEARING	DISTANCE
L1	N 89°34'00" E	22.45'
L2	S 27°27'05" E	60.18'
L3	S 62°32'55" W	20.00'
L4	N 27°27'05" W	70.38'
L5	S 89°45'28" W	55.68'
L6	S 00°14'32" E	19.92'
L7	N 89°45'28" E	55.74'
L8	N 00°26'00" W	19.92'

S 89°34'00" W 26.82'
55.00'
139.61'
N 00°26'00" W 648.77'
60.00'
S 89°34'00" W
508.97'
N 90°00'00" W 766.45'
89.64'
S 00°27'27" E 752.41'
S 00°43'30" E 100.20'
100.27'
S 00°24'41" E 400.37'
10"W
N 89°29'12" E 469.28'
S 00°26'00" E 225.11'
79.78'
100.00'
24.06'
N 89°34'00" E 457.00'
S 00°26'00" E 279.47'
N 00°26'00" W 1318.77'
S 00°26'00" E 795.40'
N 89°34'00" E 576.00'
N 89°34'00" E 575.00'
S 89°34'00" W 575.00'
S 89°34'00" W 575.00'
S 89°34'00" W 575.00'
N 00°26'00" W 54.00'
N 00°26'00" W 135.00'
60' R.O.W.
80' R.O.W.
20' R.O.W.
60' R.O.W.
80' R.O.W.
60' R.O.W.
PROPERTY LINE TO BE ABANDONED PER THIS PLAT
PROPERTY LINE TO BE ABANDONED PER THIS PLAT
SEE SHEET R-7
SEE SHEET R-7
30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK
30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK
30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK
30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK
30' SETBACK
20' SETBACK
60' PASSIVE OPEN SPACE 0.00 S.F. 0.00 ACRES
PASSIVE OPEN SPACE 12,985 S.F. ±1.22 ACRES
20' PERMANENT UTILITY EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAN
PERMANENT UTILITY EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAT
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20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT, SEE GENERAL NOTE 13 & 24 ON R-1 FOR MAINTENANCE RESPONSIBILITY
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20' PERMANENT UTILITY EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAT
20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT
STORMWATER MANAGEMENT AREA (POND 1) 131,510 S.F. 3.02 ACRES
MSA AREA 3,754 C.F.
WILLIS DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
RESSLER LANE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
PRICE DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
LEHIGH DRIVE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
GEYER AVENUE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
GEYER AVENUE (DEDICATED TO PUBLIC USE, CITY MAINTAINED)
US RT. 113, S. DUPONT BLVD. (200' R.O.W. STATE MAINTAINED)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
A1 A2 A3 A4
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15
L1 L2 L3 L4 L5 L6 L7 L8
0 50 100 150'

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MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date: OCTOBER 2018
Scale: 1"=50'
Dwn.By: DJR
Proj.No.: 1423A004
Dwg.No.: R-2

MATCH LINE (SEE SHEET R-2)

N 89°34'00" E 575.00'

20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

PERMANENT UTILITY EASEMENT, WIDTH VARIES, IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAT

ACTIVE OPEN SPACE
48,226 S.F.
1.11 ACRES

POND AREA TO BE MAINTAINED BY HOA

STORMWATER MANAGEMENT AREA (POND 2)
79,827 S.F.
1.83 ACRES

PASSIVE OPEN SPACE
92,888 S.F.
2.13 ACRES

20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

MSA AREA
1,650 C.F.

N 00°28'00" W 920.41'

N 00°28'00" W 760.91'

N 00°29'00" W 170.00'

60' R.O.W.

LEXUS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

N 89°34'00" E 457.00'

N 89°34'00" E 575.00'

PERMANENT DRAINAGE EASEMENT, WIDTH VARIES, IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK

ZOAR AVENUE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK

PERMANENT DRAINAGE EASEMENT, WIDTH VARIES, IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT

SEE SHEET R-7

60' R.O.W.

S 89°34'00" W 575.00'

S 00°26'00" E 60.00'

N 00°28'00" W 57.50'

30' SETBACK

20' PERMANENT UTILITY EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAT

72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49

PARKING SPACES 10' X 20'

20' SETBACK

20' R.O.W.

THORNTON LANE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

S 89°34'00" W 575.00'

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

LEXUS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

N 00°26'00" W 190.00'

S 00°26'00" E 50.00'

20' PERMANENT UTILITY EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AS PER THIS PLAT

73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96

20' UTILITY EASEMENT

SEE SHEET R-7

30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK

KIRSTEN DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

30' BUILDING SEPARATION, MINIMUM 8' SIDE SETBACK

N 89°34'00" E 712.48'

60.00'
S 89°34'00" W

LOT 2
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.01
3128-210
46.223 ACRES

PHASE 2 TO BE SUBMITTED
UNDER SEPARATE SUBMISSION

S 00°26'00" E 2174.93'

1769.82'

US RT. 113, S. DUPONT BLVD.
(200' R.O.W. STATE MAINTAINED)

MATCH LINE (SEE SHEET R-5)

MATCH LINE (SEE SHEET R-4)

0' 50' 100' 150'

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MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-3

MATCH LINE (SEE SHEET R-5)

MATCH LINE (SEE SHEET R-3)

LOT 2
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.01
3128-210
46.223 ACRES

PHASE 2 TO BE SUBMITTED
UNDER SEPARATE SUBMISSION

1666.97'

US RT. 113, S. DUPONT BLVD.
(200' R.O.W. STATE MAINTAINED)

S 62°53'18" W 861.67'

20' LANDSCAPE EASEMENT

NOW OR FORMERLY
C. DONNELL CALHOUN
1-30-6.00-97.00
1426-143
ZONED COUNTY AR1

NOW OR FORMERLY
C. EDWARD & RUTH GRAYBEAL
1-30-6.00-98.00
543-322
ZONED MILFORD C-3

LEGEND:
- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

0' 50' 100' 150'

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RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-4

CURVE DATA

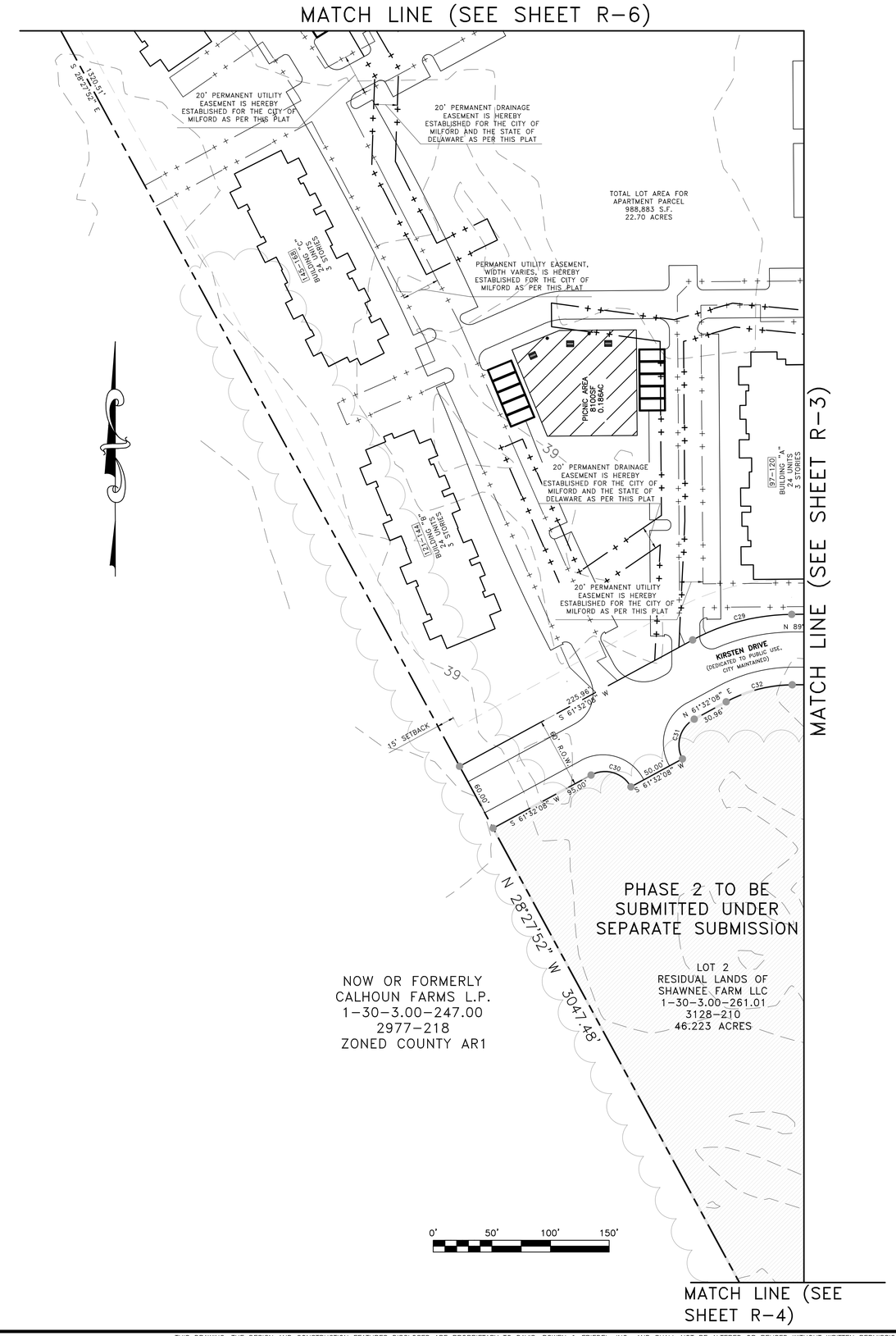
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	70.69'	45.00'	90°00'00"	N 45°26'00" W	63.64'
C2	39.28'	25.00'	90°01'21"	N 44°33'19" E	35.36'
C7	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C8	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C9	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C10	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C11	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C12	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C13	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C14	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C15	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C16	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C17	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C18	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C19	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C20	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C21	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C22	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C23	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C24	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C25	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C26	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C27	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C28	39.27'	25.00'	90°00'00"	S 44°34'00" W	35.36'
C29	88.06'	180.00'	28°01'52"	S 75°13'04" W	87.19'
C30	39.27'	25.00'	90°00'00"	S 73°27'53" E	35.36'
C31	39.27'	25.00'	90°00'00"	N 16°32'07" E	35.36'
C32	58.71'	120.00'	28°01'52"	N 75°13'04" E	58.12'
C33	39.27'	25.00'	90°00'00"	S 45°26'00" E	35.36'
C34	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C35	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C36	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'
C37	39.27'	25.00'	90°00'00"	N 45°26'00" W	35.36'
C38	39.27'	25.00'	90°00'00"	N 44°34'00" E	35.36'

LINE DATA

LINE	BEARING	DISTANCE
L1	N 61°32'08" E	16.00'
L2	N 61°32'08" E	10.91'
L3	N 28°27'52" W	2.99'
L4	N 89°34'00" E	14.54'
L5	N 40°30'56" E	9.15'
L6	N 40°30'56" E	13.00'

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2



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RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-5

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NOW OR FORMERLY
HARRY M. & MARIE R. GREEN
1-30-3.00-248.00
874-22
ZONED COUNTY AR1

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

N 61°30'07" E 688.23'

N 61°15'18" E 372.54'

15' SETBACK

100' LANDSCAPE BUFFER

PERMANENT UTILITY EASEMENT, WIDTH VARIES, IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND AS PER THIS PLAT

20' PERMANENT UTILITY EASEMENT, IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND AS PER THIS PLAT

20' PERMANENT DRAINAGE EASEMENT IS HEREBY ESTABLISHED FOR THE CITY OF MILFORD AND THE STATE OF DELAWARE AS PER THIS PLAT, SEE GENERAL NOTE 13 & 24 ON R-1 FOR MAINTENANCE RESPONSIBILITY

[241-264] BUILDING "G" 24 UNITS 3 STORIES

[265-288] BUILDING "H" 24 UNITS 3 STORIES

[217-240] BUILDING "F" 24 UNITS 3 STORIES

[289-312] BUILDING "I" 24 UNITS 3 STORIES

[193-216] BUILDING "E" 24 UNITS 3 STORIES

[169-192] BUILDING "D" 24 UNITS 3 STORIES

[145-168] BUILDING "C" 24 UNITS 3 STORIES

[313-336] BUILDING "J" 24 UNITS 3 STORIES

[337-360] BUILDING "K" 24 UNITS 3 STORIES

TOTAL LOT AREA FOR APARTMENT PARCEL
988,883 S.F.
22.70 ACRES

STORMWATER MANAGEMENT AREA (POND 4)
77,143 S.F.
1.77 ACRES

PICNIC AREA
10,000 S.F.
0.145AC

MATCH LINE (SEE SHEET R-2)

MATCH LINE (SEE SHEET R-5)

LEGEND:

- BOUNDARY LINE
- RIGHT-OF-WAY
- LOT LINE
- BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- EXISTING VEGETATION LINE
- PHASE 2

0' 50' 100' 150'

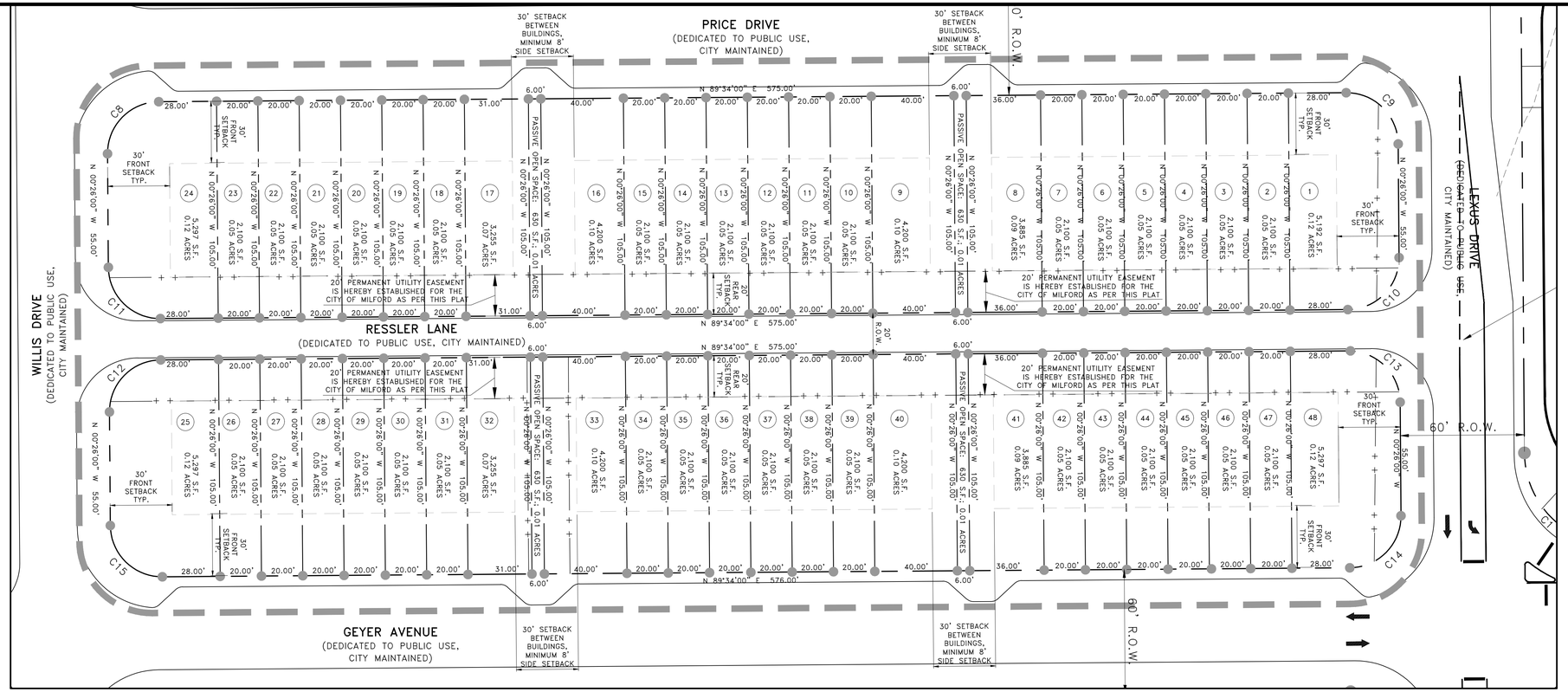
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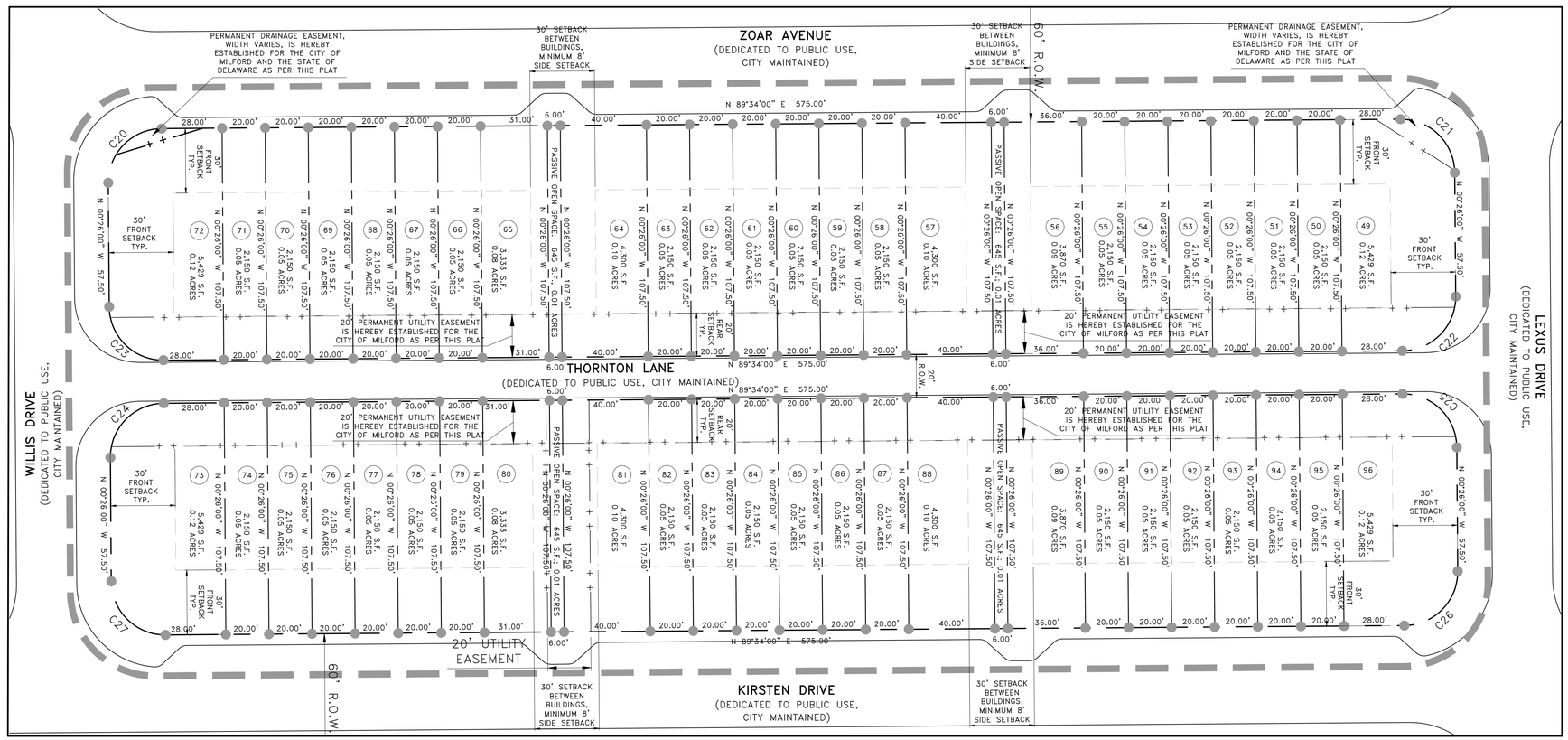
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ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-6





LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

0' 30' 60' 90'

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1"=30'
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-7

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LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2
- = SINGLE CAR GARAGE UNIT

[A] = 5' POURED CONCRETE SIDEWALK – SEE DETAIL SHEET
[B] = HANDICAP RAMP – SEE DETAIL SHEET
[C] = PEDESTRIAN CROSSWALK – SEE DETAIL SHEET
[D] = MODIFIED I.P.C.C. CURB & GUTTER, TYPE 3, SHEET DETAIL SHEET
[E] = MODIFIED P.C.C. CURB, TYPE 3, SEE DETAIL SHEET
[F] = DUMPSTER & DUMPSTER ENCLOSURE, SEE DETAIL SHEET
[G] = STOP SIGN – SEE DETAIL SHEET
[H] = HANDICAP PARKING ONLY SIGN – SEE DETAIL SHEET
[I] = SHELTERED SCHOOL BUS STOP
(24) = # OF PARKING SPACES

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

N 61°15'18" E 372.54'

N 61°30'07" E 688.23'

15' SETBACK

100' LANDSCAPE BUFFER

SETBACK LINE

104'

103'

65'

42'

55'

30'

31'

R100'

OPEN SPACE
229,298 S.F.
5.26 ACRES

OPEN SPACE
28,582 S.F.
0.66 ACRES

OPEN SPACE
78,366 S.F.
1.80 ACRES

OPEN SPACE
138,883 S.F.
3.19 ACRES

OPEN SPACE
14,324 S.F.
0.33 ACRES

OPEN SPACE
45,840 S.F.
1.05 ACRES

STORMWATER MANAGEMENT
AREA (POND 4)
77,143 S.F.
1.77 ACRES

PICNIC AREA
6300SF
0.145AC

PICNIC AREA
8100SF
0.186AC

SWIMMING POOL

CLUB HOUSE
65' x 80'
5,200 SQ FT.
(1 STORY)

GARAGE
10.5' x 20'

MSA AREA
2,206 C.F.

97-120
BUILDING "A"
24 UNITS
3 STORIES

121-144
BUILDING "B"
24 UNITS
3 STORIES

145-168
BUILDING "C"
24 UNITS
3 STORIES

169-192
BUILDING "D"
24 UNITS
3 STORIES

193-216
BUILDING "E"
24 UNITS
3 STORIES

217-240
BUILDING "F"
24 UNITS
3 STORIES

241-264
BUILDING "G"
24 UNITS
3 STORIES

265-288
BUILDING "H"
24 UNITS
3 STORIES

289-312
BUILDING "I"
24 UNITS
3 STORIES

313-336
BUILDING "J"
24 UNITS
3 STORIES

337-360
BUILDING "K"
24 UNITS
3 STORIES

361-384
BUILDING "L"
24 UNITS
3 STORIES

KRISTEN DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

0' 50' 100' 150'

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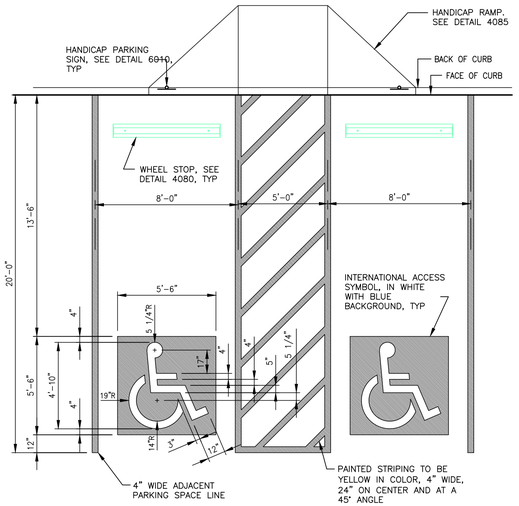
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MILFORD, DELAWARE (302) 424-1441

SITE PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	1" = 50'
Dwn.By:	ADM
Proj.No.:	1423A004
Dwg.No.:	R-8

P:\1423\1423A001\A\DESIGN\1423A004-RECORD PLAN.dwg Feb 19, 2019 - 1:53pm mcka

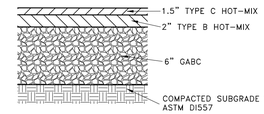


NON-VAN ACCESSIBLE HANDICAP PARKING LAYOUT - AT CURB

NOT TO SCALE

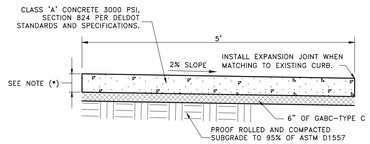
NON-VAN ACCESSIBLE HANDICAP PARKING SIGNAGE - AT CURB

NOT TO SCALE



MULTI-FAMILY PARKING LOT PAVEMENT SECTION DETAIL

NOT TO SCALE

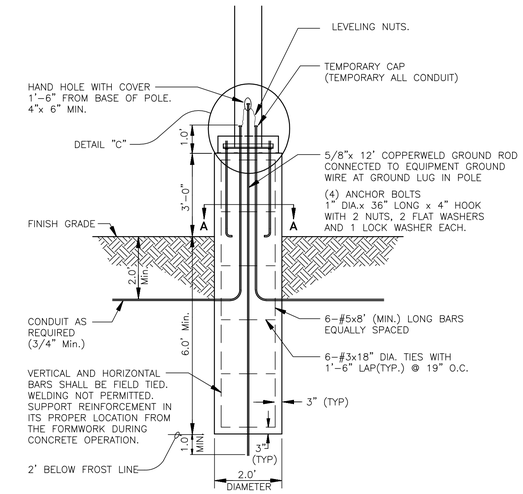


* - STANDARD SIDEWALK SHALL BE 4" THICK, FOR DEPRESSED AND TRANSITION AREAS, THE SIDEWALK SHALL BE 6" THICK.

NOTES:
1. MARK IN 4' SQUARES, USE PREMOLDED EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 16'.
2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER DELDOT SPECIFICATIONS.

SIDEWALK DETAIL

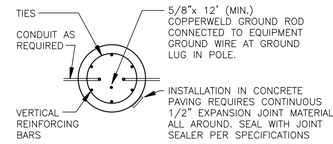
SCALE: NOT TO SCALE



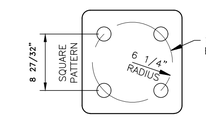
TYPICAL LIGHTING POLE BASE DETAIL

SCALE: NOT TO SCALE

NOTES:
1. 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
4. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
5. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSF.
6. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF, UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
7. EXPOSED CONCRETE SHALL BE PAINTED TRAFFIC YELLOW.
8. DETAIL FOR 39' POLE WITH MAX. FIXTURE EPA 4.6 SQ.FT.
9. ALL 39' POLES TO BE MOUNTED ON CONCRETE PEDESTALS 3' ABOVE GRADE, FOR A TOTAL MOUNTING HEIGHT OF 42'
10. MOUNT LIGHT FIXTURES AT 60° PER BRACKET MARKS.
11. SUPPORT PIPE: 2" INSIDE DIAMETER, 7'-0" LONG.
12. SUPPORT BRACKET TO BE 2"x2"x1/8" ANGLES CENTERED ON PIPE. RE: #2
13. DRILL 11/32" DIA MOUNTING HOLES 1" FROM EACH END, CENTERED ON ANGLE.
14. ROUTE POWER UP THROUGH POLE, INTO 2" PIPE AND TO FIXTURES AT EACH END.
15. PAINT FIXTURE ASSEMBLY, INCLUDING CONDUIT, BLUE.
16. HARDWARE FOUND IN J-BOX:
    (8) SELF-TAPPING BOLTS
    (8) SS FLAT WASHERS
    (3) BLUE WIRE NUTS
    (6) 3/4" DRILL SCREWS
    (2) TWO HOLE STRAPS
    (1) 3/4" CHASE NIPPLE

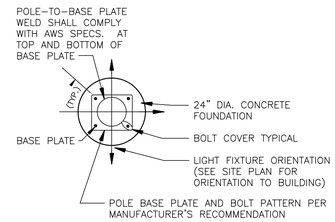


SECTION A-A



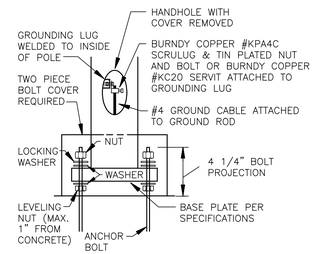
TYPICAL ANCHOR BOLT SPACING

SCALE: NOT TO SCALE



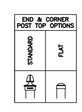
SECTION A-A

SCALE: NOT TO SCALE



DETAIL "C"

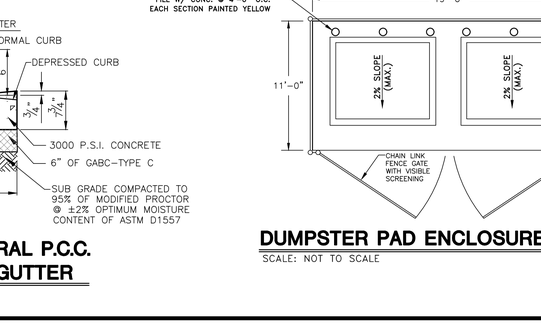
SCALE: NOT TO SCALE



STRIPING OF CROSSWALK SHALL BE THERMO

PEDESTRIAN CROSSWALK DETAIL

SCALE: NOT TO SCALE



NOM HEIGHT (H)
6'-0" [1829MM]
7'-0" [2134MM]
8'-0" [2438MM]
9'-0" [2743MM]
10'-0" [3048MM]
11'-0" [3353MM]
12'-0" [3658MM]

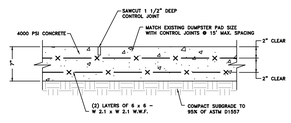
OPENING (F/F)
8'-0" [2438MM]
10'-0" [3048MM]
12'-0" [3658MM]
14'-0" [4267MM]
16'-0" [4877MM]

TYPICAL DOUBLE SWING GATE

SQUARE (OR ROUND) END POSTS, WITHOUT BARBED WIRE

10' GATE DETAIL

SCALE: NOT TO SCALE

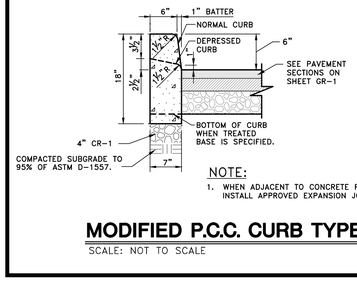


DUMPSTER PAD DETAIL

SCALE: NOT TO SCALE

DUMPSTER PAD ENCLOSURE DETAIL

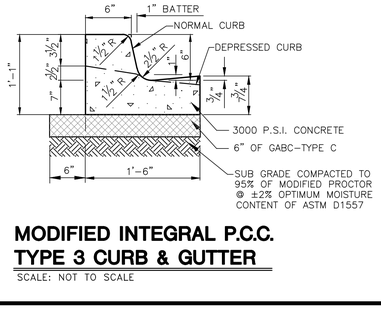
SCALE: NOT TO SCALE



NOTE:
1. WHEN ADJACENT TO CONCRETE PAVEMENT, INSTALL APPROVED EXPANSION JOINT.

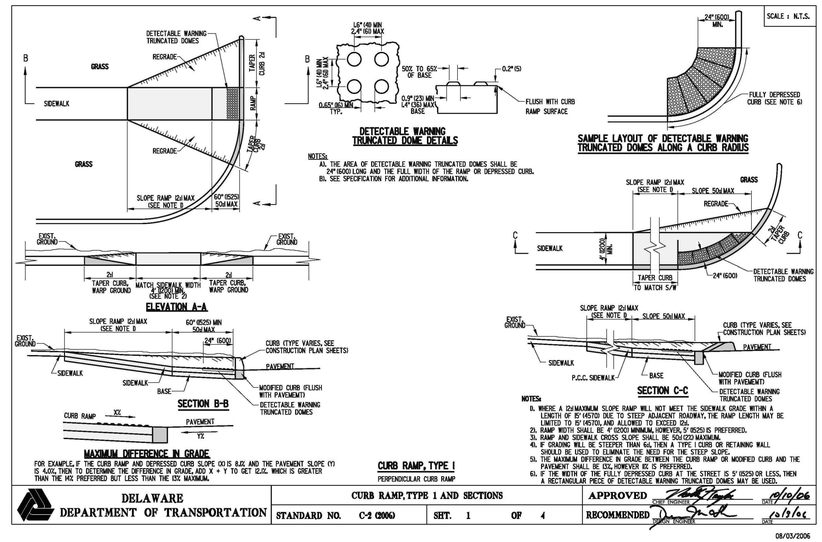
MODIFIED P.C.C. CURB TYPE 3

SCALE: NOT TO SCALE



MODIFIED INTEGRAL P.C.C. TYPE 3 CURB & GUTTER

SCALE: NOT TO SCALE



DELAWARE DEPARTMENT OF TRANSPORTATION	CURB RAMP, TYPE 1 AND SECTIONS				APPROVED	DATE
	STANDARD NO. C-2 (2006)	SHT. 1	OF 4		RECOMMENDED	DATE

CURB RAMP, TYPE 1
PERPENDICULAR CURB RAMP

08/03/2006

DAVIS, BOWEN & FRIEDEL, INC.
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MILFORD, DELAWARE (302) 424-1441

SITE DETAILS

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	OCTOBER 2018
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A004
Dwg.No.:	R-9

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City of Milford, Delaware
Development Advisory Committee

Comment Sheet

****

DATE OF REVIEW: February 19, 2019

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **Duane T. Fox, CFPS, CFPE, CFI, Asst. Chief Technical Services**
Dennett E. Pridgeon, CFPS, CFPE, CFI, Sr. Fire Protection Specialist
Jefferson L. Cerri, CFI, Sr. Fire Protection Specialist
Joseph Moran, CFI, Sr. Fire Protection Specialist
Desiree B. McCall, CFI, Sr. Fire Protection Specialist

AGENCY PHONE NUMBERS: **302-856-5298, Fax: 302-856-5800**

RE: CYPRESS HALL (18-011)

The reasons and conditions applied to this project and their sources are itemized below:

****

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
   - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Apartment and Townhouses)
   - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
   - All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
   - Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
   - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
   - Show Fire Lanes and Sign Detail as shown in DSFPR
   - For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**
   - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from duPont Blvd must be constructed so fire department apparatus may negotiate it.
   - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
   - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
   - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
   - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
   - Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes**:
   - Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
   - Proposed Use
   - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
   - Square footage of each structure (Total of all Floors)
   - National Fire Protection Association (NFPA) Construction Type
   - Maximum Height of Buildings (including number of stories)
   - Townhouse 2-hr separation wall details shall be shown on site plans
   - Note indicating if building is to be sprinklered
   - Name of Water Provider
   - Letter from Water Provider approving the system layout
   - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
   - Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE

PUBLIC WORKS FACILITY
180 Vickers Drive
Milford, DE 19963
www.cityofmilford.com

THE CITY of Milford DELAWARE

PLANNING DEPARTMENT
Planning, Economic Development,
Enforcement, and Inspections Office
O 302.424.8396 | F 302.424.3559

February 15, 2019

Ring Lardner, P.E.
Davis, Bowen & Friedel
1 Park Avenue
Milford, DE 19963

RE: Application Number: 18-011
Application Name: Cypress Hall Residential
Application Type: Planned Unit Development, Preliminary Subdivision & Site Plan
Tax Parcel Number(s): 1-30-3.00-261.01, 261.02, 1-30-3.00-562.00 thru 659.00

Mr. Lardner,

The City of Milford received revised plans on February 8, 2019 and has reviewed the above referenced Planned Unit Development, Preliminary Major Subdivision and Preliminary Site Plan application known as Cypress Hall Residential and provide the following comments;

PAGE NO.	COMMENT NO.	PROJECT REVIEW COMMENTS	
		Planned Unit Development	
General	1	Water, sewer and electric utility feasibility and capacity will need to be evaluated for Phase II (162 single-family detached units) of the project prior to submitting Phase II for Preliminary Major Subdivision review.	Acknowledged.
PUD	2	Change the title of the sheet to PUD Master Plan.	Addressed.
	3	Remove the metes and bounds descriptions from the PUD Master Plan to eliminate possible confusion with an official record plan. Add a note to the plan stating "This plan is not a record drawing and the plan does not represent a preliminary or final approval of any subdivision or site plan."	Addressed.
	4	Data Column: Change the proposed use to Planned Unit Development.	Addressed.
	5	Provide a separate PUD table with the code requirements for Single-family detached, Townhouses and Garden Apartments within the R-3 zoning district along with the provided/actual statistics. The table should include any deviation from the City Code, including Chapter 200 or Chapter 230, which may include the front, side and rear	Addressed. Deviations from Chapter 230 and Chapter 200 will be reviewed by City Council to

		setbacks, lot areas, lot width, lot coverage, building height, parking, open space, right-of-way width, pavement width, etc. The table should include the open space calculation based on the criteria found in Chapter 230-48.1 Planned Unit Development. Any requirements not specifically requested by the applicant in writing must be adhered to even if it is illustrated differently on the PUD plan, preliminary record plans, or preliminary construction plans.	determine if they will be allowed.
	5A	Remove the reference to density within the Single-family Dwelling regulations. The city does not provide a specific du/acre value for SFDs.	Addressed.
	5B	Within the R-3 Garden Apartments data, state the minimum project size is 1 acre.	Addressed
	5C	Change the required and provided parking for both the Single-family detached and Townhouse to 2.5 parking spaces per dwelling unit.	Addressed
	5D	Update the required and provided parking for the Multi-family area to reflect the total number of parking spaces, not the spaces per dwelling unit.	Addressed
	5E	Include a parking calculation in the data column for the clubhouse, with the number of spaces required and provided. These spaces should not be accounted for in the multi-family area calculation.	Addressed
	6	When calculating the open space requirement, note that Open Space is defined in Chapter 230 as the following; *OPEN SPACE — Areas of land within residential subdivisions or developments including planned unit developments that are available to all residents and/or the public and which have the purpose to provide active and/or passive recreational opportunities, maintain land in a predominantly undeveloped and natural state including lands used for:* *(1)Community gardens;* *(2)Promotion of conservation and protection of wildlife;* *(3)Perpetual conservation easements;* *(4)Parks, plazas, walkways, and trails;* *(5)Buffers or forested areas; and or* *(6)Recreational uses as defined herein.* *Open space shall not include areas of land for the following unless otherwise approved by Council:*	Addressed.

		(1)Wetlands or storm water management facilities; *(2)Drainage easements;* *(3)Flagpole areas, including a 20-foot radius around the flagpole;* *(4)Medians (unless designed as a park);* *(5)Signage areas;* *(6)Landscaping in parking areas;* *(7)Predominantly impervious surfaces such as streets and parking lots;* *(8)Required front, side, or rear yards;* *(9)Any land included within designated lot lines; and or* *(10)Utility facilities for uses such as sewer, water, gas or electric.* Ensure that the open space calculation provided in the new PUD table is consistent with Chapter 230-48.1(G) which states the development must have "a minimum of 400 square feet per unit shall be designated as open space subject to the recreational use. Recreational use requirement - 50% of the required open space shall be set aside for recreational use." Please note that dedicated stormwater management areas do not count towards the total open space provided.	
	7	Recreation is defined in Chapter 230 as the following; *RECREATIONAL USES — Areas of land within residential subdivisions or developments including planned unit developments which have the purpose to provide active recreational opportunities that are available to all residents of the community and/or the public including lands used for:* *(1)Indoor club houses;* *(2)Swimming pools and pool houses;* *(3)Tennis courts;* *(4)Basketball courts;* *(5)Athletic fields;* *(6)Picnic areas with tables;* *(7)Ponds for recreational use (boat, fishing or swimming);* *(8)Playgrounds; and* *(9)Bike or multi-model trails.* Please list and show the recreational amenities provided in the PUD to meet the recreational open space	Addressed. Please note that the type of recreational uses shall be reviewed and approved by the Planning Commission and City Council.

		requirements set forth in Chapter 230-48.1. List the square footage for the community building.	
	8	Data Column: Provide the density calculation for the site as outlined in Chapter 230-48.1(C). The density provided in the data column is not consistent with Chapter 230-48.1 nor does it seem to relate to the total acreage of the site divided by the number of units (546 du/87.69 acre = 6.22 du/acre).	Addressed.
	9	Data Column: Provide the source and date of the site survey. Provide the horizontal datum and list the project benchmark. Show the benchmark on the plan.	Addressed.
	10	Data Column: Provide the phone numbers for the applicant and the engineer.	Addressed.
	11	Data Column: Add a statement regarding the absence or presence of wetlands.	Addressed.
	12	Data Column: Add a statement regarding the absence or presence of source water protection areas.	Addressed.
	13	Data Column: Indicate whether or not the site is impacted by the 100-year floodplain.	Addressed.
	14	Provide an interconnection to tax parcel number 1-30-3.00-247.00 at the west end of Kirsten Drive.	Addressed.
	15	Provide an interconnection to tax parcel number 1-30-3.00-247.00 at the location of proposed Lot 399 in Phase II, or if the parcel arrangement is changed during the resubmission as a result of these review comments, at a location to create a four-way intersection.	Comment Withdrawn by the City.
	16	Provide a greater buffer distance in the form of wooded open space between lots 408 through 417 and the existing DSWA solid waste transfer station to reduce impact on future residents.	Comment Remains. The proposed lot arrangement, buffers and deviations from the code should be determined by City Council for the entire project as part of the PUD review. Staff recommends at least a 50' wooded buffer along the entire property line shared with the DSWA facility. The developer could incorporate a wooded walking

			path extending from the multi-modal path along Route 113 and reconnecting to the sidewalk system within the neighborhood.
	17	Chapter 230-43(D)(2) states "on a corner lot, each story or part of a building, exclusive of cornices, uncovered steps and uncovered porches, shall be set back from the side street line in the same distance as the required setback from the front street line as required in that district." Please update corner lots to reflect two front yard setbacks.	Addressed. Deviation requested.
	18	Label the pavement width for each street and alley in order for the City to review the proposed development layout against street design requirements found in Chapter 200 Subdivision of Land. Upon initial review, the street widths are not compliant with Chapter 200.	Addressed. However, please note that your response to this plan review comment dated January 4, 2019 states that Willis Drive and Lexus Drive provide 30' between face of curbs. This is not consistent with what is shown on the record plans and PUD plan. City Council will review the request to deviate from Chapter 200 and reduce the pavement widths for public streets from 25' to 22' in the areas with single-family detached dwellings and from 30' to 28' for areas with townhouses and apartments.
	19	It appears that the stormwater pond just north of the	Addressed.

		main entrance to the residential section is located on multiple parcels. Please adjust the parcel lines in either direction to fully encompass the pond on a single parcel.	
	20	The City recommends including the open space area west of Lot 445 into the lot area of Lot 445, otherwise, the homeowners association would be mowing a thin strip of land between the private lot and the roadway.	Addressed.
	21	Label the typical setbacks for at least one single-family detached lot and one townhouse lot for reference. Note that townhouse end units must be at least 30' apart, and end units must have a setback of at least 30' between the building and any abutting street.	Addressed.
	22	Note that the minimum distance between multi-family buildings is 25'. Ensure that the proposed apartment buildings meet this standard.	Addressed.
	23	Label the zoning designation for Parcel 1-30-3.00-261.02.	Addressed.
	24	Phase I of the project should include the construction of Lexus Drive in its entirety to provide vehicular access between the residential and commercial developments. Additional right-of-way should be dedicated as part of Phase I.	Partially Addressed. The City requests that the southern 48 townhouses be included in Phase 1-2b along with the Lexus Drive interconnection with the Cypress Hall Commercial Site. Adjust the phasing plan accordingly.
	25	The City recommends removing the vehicular connectivity along Willis Drive beyond the northern entrance to the multi-family parcel. We are concerned that delivery trucks and other traffic coming from the shopping center will utilize the subdivision to exit to Route 113 southbound via Willis Drive instead of Lexus Drive. If the interconnection is removed, pedestrian connectivity should remain and be extended across Lot 3 to the commercial site as part of Phase I.	Addressed.
	26	Principal access to the residual lands Lot 3 should be via Lexus Drive with secondary access along Willis Drive. The City would like to avoid access along Price Drive to Lot 3.	Acknowledged.
	26A	Label S. Dupont Boulevard as State Maintained.	Addressed.
	26B	List the City of Milford as the electric provider.	Addressed.
		Preliminary Major Subdivision – Record Plan & Site	

		Plan – Phase I	
General	27	Update record plan set based on the comments for the PUD review above.	Comment Remains
	27A	Include the PUD table on the title sheet for recordation.	Addressed.
	27B	Provide City Manager and City Engineer approval blocks.	Addressed.
	28	The pavement cross-sections are not consistent with Chapter 200-5(14). The proposed right-of-way widths and pavement widths should be adjusted to match Chapter 200 or the deviation from this requirement should be noted on the PUD Master Plan sheet and the Record Plan title sheet within the PUD table. If the applicant is requesting a variance from Chapter 200, the dimensions provided in the pavement cross-section on Sheet R-5 are not consistent with the pavement widths shown throughout the subdivision. For example, the north end of Lexus Drive shown on sheet R-2 is dimensioned as a 60' right-of-way but provides a 22' wide pavement width. The provided detail on sheet R-5 indicates this should be 32' in width.	Addressed. City Council will review the request to deviate from Chapter 200 and reduce the pavement widths for public streets from 25' to 22' in the areas with single-family detached dwellings and from 30' to 28' for areas with townhouses and apartments.
	28A	The entire extent of Lexus Drive does not appear within the Record Plan set.	Addressed.
	28B	Road extents are shown on R-2 but not other sheets.	Addressed.
R-2	29	Label the zoning for Parcel 1-30-3.00-261.02 as C-3.	Addressed.
	30	Label the typical setbacks for the townhouse units.	Addressed.
	31	Label the alley as City Maintained.	Addressed.
	31A	Square off Lexus Drive so there is a consistent right-of-way width along the entire stretch from Geyer Avenue north to the connection to the existing commercial center. City recommends deeding excess property to the east to those lots fronting US Route 113, if possible.	Addressed.
R-3	32	Label the typical setbacks for the townhouse units.	Addressed.
	33	Label the alley as City Maintained.	Addressed.
R-5	33a	The pavement sections provided must meet the requirements of Chapter 200 as stated in Comment #28 above. In addition, pavement thicknesses should be denoted on the sheet based on City Construction Standards and DelDOT Standards. City Engineer recommends the following; • Geyer Avenue from US Route 113 through Lexus Drive, meet the pavement thickness requirements for the entrance as approved by DelDOT.	Partially Addressed. Geyer Avenue from US Route 113 through the Lexus Drive intersection should meet the pavement section required by DelDOT for the entrance. With regards to the other

		• For all 30' wide roads, 1.5" Type C, 3.5" Type B and 8" GABC. This includes all roads surrounding the townhouse and apartment areas, and Lexus Drive from Geyer Avenue heading north to the Commercial Center. • For all 25', 26' and 28' wide roads, 1.5" Type C, 3.5" Type B and 6" GABC. • Add a pavement section for the proposed alleyways showing a concave drainage design with 1.5" Type C, 3.5" Type B and 6" GABC.	streets, the City requests an asterisk (*) be placed next to the GABC references on the pavement sections and an asterisk (*) placed next to the note referencing the required GABC depth on Sheet GR-1.
R-6	34	Please clarify the maintenance responsibility for stormwater management infrastructure within the dedicated easement labels by referencing the associated general note on the title sheet.	Addressed.
	34a	Show the proposed pond fill well locations on the final construction plans and note that piping for irrigation will not be allowed within the City's right-of-way.	Addressed.
	35	Change the label for the 100' setback to 100' landscaped buffer to be consistent with previous plan sheets. Provide a radius for the landscaped buffer heading east to maintain 100' from parcel 1-30-3.00-250.00.	Addressed.
	36	Show the water easement dedicated to the City of Milford for the water main extending to parcel 1-30-3.00-250.00.	Addressed.
R-7	37	Label the typical setbacks for the townhouse units.	Addressed.
	38	Label the alley as City Maintained.	Addressed.
R-8	39	Add the proposed garages to the legend.	Addressed.
	40	The legend indicates item "I" as dedicated area for recycling facilities. This does not appear to be identified on the plan.	Addressed.
	41	Ensure there are adequate solid waste dumpsters for the proposed number of apartment units. Currently, there appears to be one dumpster per 24 apartment units for most buildings which does not appear to be sufficient.	Acknowledged.
	42	Coordinate with Milford Post Office for service locations. If requested, provide a location for centralized mailboxes on the site plan for the apartment area and the remainder of the subdivision.	Acknowledged.
	43	Show the sheltered bus stop footprint and provide approval from the Milford School District regarding its location.	Acknowledged.
	44	Dimension the provided setbacks and landscape buffers shown on the Site Plan. The landscape buffer area	Addressed.

		between parcel 1-30-3.00-250.00 and the site should extend on a radius heading east.	
	45	Label the number of stories for each building.	Addressed.
	46	Provide the correct number of parking spaces for the following locations; a) Directly across from Building "H", should be 9 instead of 8. b) Directly infront of Building "H", should be 9 instead of 12.	Addressed.
	47	Fix the ADA parking space detail to meet current federal regulations.	Addressed.
	48	Building "L" appears very close to the top of bank for the stormwater management pond. Please dimension the distance between the building and the pond for review.	Addressed.
	48a	There does not appear to be enough ADA spaces denoted on the plan. It appears that one of the two spaces in front of each building has been removed or turned off. Update the site plan to address minimum ADA requirements of 2 spaces per building.	Addressed.
R-9	48b	Parking lot typical pavement section detail should be a minimum 1.5" Type C, 2" Type B and 6" GABC.	Addressed.
	48c	Modified PCC Curb Type 3 should reference pavement sections provided on Sheet R-5.	Addressed.
		Preliminary Construction Plans	
General	49	Update the site plan based on comments for the PUD above.	Addressed.
	50	Move the SITE sheet to the record plans since this will be recorded to replace the previously recorded documents.	Addressed.
	51	Provide site plans for the entire subdivision for review showing pavement widths, travel lanes, stop conditions, directional arrows, on-street parking (dimensioned), building footprints (including garages), driveways, sidewalks, curb ramps, crosswalks. The provided utility plans do not provide adequate information to perform a full preliminary review.	Addressed.
	51a	On Sheet GR-1, update pavement sections per comments for Sheet R-5.	Partially Addressed. See comment 33a.
	52	Provide water and utility access to the adjacent farm to the west. For water mains, a valve shall be placed at the tee or cross location and pipe shall be extended outside of the paved area and capped for future connection. For sewer, the associated gravity sewer piping shall be extended from the manhole beyond the paved section and capped for future connection.	Addressed.

	52a	The proposed 10" gravity sewer interceptor should be constructed at maximum depth and minimum slope and stubbed to the adjacent parcel to the west, between multi-family buildings C & D. The 10" pipe should be constructed fully to the property line with the placement of a 10" cleanout with cast iron lid. A pressure-treated 4" x 4" shall be installed at the capped end of the stub, adjacent to the 10" cleanout, extended 18" above grade and painted GREEN to denote its location for future connection.	Addressed.
	52b	A proposed 10" water main shall be installed and capped to the edge of Kirsten Drive for future connection to the adjacent parcel to the west.	Addressed.
	52c	On Sheet U-5, the gang water meter pit detail should be updated to show a maximum of 4 meters per pit. Update plan to provide additional gang pits accordingly.	Addressed
	53	Coordinate the revised Electric Infrastructure layout with Rick Carmean, Electric Superintendent, 302-422-1110.	Acknowledged.
	54	Final approval will need approval letters or letters of no objection from DelDOT, Office of Drinking Water, Sussex Conservation District, State Fire Marshal's Office and the City Engineer	Acknowledged.
	55	Please note that the City has only performed a preliminary review of the construction plans for general compliance with City Construction Standards. A full in-depth review of the construction plans must be performed by the City Engineer during the final major subdivision and site plan process. The final construction plans must comply with all City Code and Construction Standard requirements, except for waivers that were specifically requested by the applicant in writing and approved by City Council.	

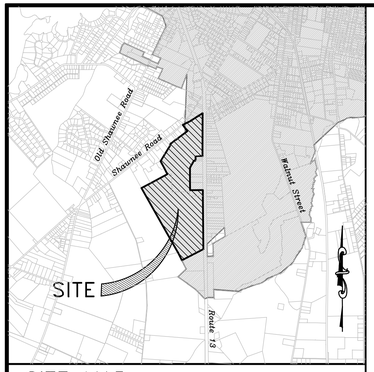
Please revise and resubmit for review. These comments must be addressed and additional items must be submitted for review before the application can be scheduled for Planning Commission review. Feel free to contact me at 302-424-8396 should you have any questions.

Sincerely,

William R. Pierce II

Rob Pierce
Planning & Development Director

cc: Erik Retzlaff, P.E. – City Engineer



SITE MAP SCALE: 1"=1/2 Miles

DATA COLUMN

LOT 1 - COMMERCIAL

TAX MAP ID	:1-30-3.00-261.00
EXISTING ZONING	:C-3
PROPOSED USE	:COMMERCIAL
TOTAL LOT AREA	:42.878±AC
TOTAL RETAIL AREA	:30.819±AC
TOTAL COMMERCIAL AREA	:8.209±AC
TOTAL PARKING	:1,025 SPACES

LOT 2 - RESIDENTIAL

TAX MAP ID	:1-30-03.00-261.01
EXISTING ZONING	:R-3
PROPOSED USE	:MIXED USE RESIDENTIAL
TOTAL LOT AREA	:87.698±AC
TOTAL UNITS PROVIDED	:546
TOTAL UNITS ALLOWED	:603
OPEN SPACE PROVIDED	:23.75±AC
OPEN SPACE REQUIRED	:5.01 AC
RECREATION SPACE PROVIDED	:2.50 AC
RECREATION SPACE REQUIRED	:2.50 AC

LOT 3 - COMMERCIAL (VACANT)

TAX MAP ID	:1-30-03.00-261.02
EXISTING ZONING	:R-3
LOT AREA	:11.477±AC

RESIDENTIAL PHASE 1
SHAWNEE FARM LLC
1-30-3.00-658.00
3128-210
41.475 ACRES

COMMERCIAL (VACANT)
LOT 3
RESIDUAL LANDS OF SHAWNEE FARM LLC
1-30-3.00-261.02
3128-210
11.477 ACRES

30' WIDE PAVED WIDTH WITH 6" GABC BASE

30' WIDE PAVED WIDTH WITH 8" GABC BASE

RESIDENTIAL PHASE 2
SHAWNEE FARM LLC
1-30-3.00-261.01
3128-210
46.223 ACRES

COMMERCIAL
LOT 1
SHAWNEE FARM LLC
1-30-3.00-261.00
3128-210
42.877 ACRES

RETAIL
103,000 SF
F.F. = 37.00

GROCERY
49,223 SF TOTAL
F.F. = 35.00

STORMWATER BASIN
5.45 ACRES

STORMWATER BASIN
5.77 ACRES

STORMWATER BASIN
1.44 ACRES

STORMWATER BASIN
1.50 ACRES

PARCEL 1
61,466.00 s.f.
1.69 Ac.±

PARCEL 2
71,402.00 s.f.
1.63 Ac.±

PARCEL 3
71,402.00 s.f.
1.67 Ac.±

PARCEL 4
61,466.00 s.f.
1.41 Ac.±

PARCEL 5
66,000.00 s.f.
1.51 Ac.±

NOW OR FORMERLY JVC & J ASSOCIATES 1-30-3.19-01.00 3625-238 ZONED MILFORD C-3

S. DUPONT BOULEVARD (STATE MAINTAINED)

U.S. ROUTE 113 SOUTH BOUND

U.S. ROUTE 113 NORTH BOUND

0' 200' 400' 600'

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

CYPRESS HALL DEVELOPMENT
CITY OF MILFORD, CEDAR CREEK HUNDRED
SUSSEX COUNTY, DELAWARE

OVERVIEW PLAN

Date:	MAY 2018
Scale:	1" = 200'
Dwn.By:	ADM
Proj.No.:	1423A004
Dwg.No.:	OV

P:\1423\1423A001A\DESIGN\OVERALL DEVELOPMENT.dwg Oct 18, 2018 - 2:52pm mcka

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DAVIS BOWEN & FRIEDEL, INC.

ARCHITECTS ENGINEERS SURVEYORS

Michael R. Wigley, AIA, LEED AP
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA
Jason P. Loar, P.E.
Ring W. Lardner, P.E.

February 19, 2019

City of Milford
Planning Department
180 Vickers Drive
Milford, DE 19963

Attn: Mr. Rob Pierce
Planning & Development Director

RE: Application Number: 18-011
Application Name: Cypress Hall Residential
Application Type: Planned Unit Development,
Preliminary Subdivision & Site Plan
Tax Parcel Number(s): 1-30-3.00-261.01, 261.02, 1-30-3.00-562.00 thru 659.00
DBF # 1423A004

Dear Mr. Pierce,

In response to your most recent comment letter dated February 15, 2019, we offer the following responses.

Planned Unit Development

PUD

16. Provide a greater buffer distance in the form of wooded open space between lots 408 through 417 and the existing DSWA solid waste transfer station to reduce impact on future residents. Comment Remains. The proposed lot arrangement, buffers and deviations from the code should be determined by City Council for the entire project as part of the PUD review. Staff recommends at least a 50' wooded buffer along the entire property line shared with the DSWA facility. The developer could incorporate a wooded walking path extending from the multi-modal path along Route 113 and reconnecting to the sidewalk system within the neighborhood.
We acknowledge that the comment remains and look forward to discussing the common boundary line with the Planning and Zoning Commission and City Council and understand that City Council has the final determination regarding the proposed lot arrangement, buffers and deviations.

24. Phase I of the project should include the construction of Lexus Drive in its entirety to provide vehicular access between the residential and commercial developments. Additional right-of-way should be dedicated as part of Phase I. Partially Addressed. The City requests that the southern 48 townhouses be included in Phase 1-2b along with the Lexus Drive interconnection with the Cypress Hall Commercial Site. Adjust the phasing plan accordingly.
The phasing has been revised as requested.

General

27. Update record plan set based on the comments for the PUD review above. Comment Remains
The record plan has been updated per the above comments.

R-5

33a. The pavement sections provided must meet the requirements of Chapter 200 as stated in Comment #28 above. In addition, pavement thicknesses should be denoted on the sheet based on City Construction Standards and DelDOT Standards. City Engineer recommends the following;

- Geyer Avenue from US Route 113 through Lexus Drive, meet the pavement thickness requirements for the entrance as approved by DelDOT.
- For all 30' wide roads, 1.5" Type C, 3.5" Type B and 8" GABC. This includes all roads surrounding the townhouse and apartment areas, and Lexus Drive from Geyer Avenue heading north to the Commercial Center.
- For all 25', 26' and 28' wide roads, 1.5" Type C, 3.5" Type B and 6" GABC.
- Add a pavement section for the proposed alleyways showing a concave drainage design with 1.5" Type C, 3.5" Type B and 6" GABC.

Partially Addressed. Geyer Avenue from US Route 113 through the Lexus Drive intersection should meet the pavement section required by DelDOT for the entrance. With regards to the other streets, the City requests an asterisk (*) be placed next to the GABC references on the pavement sections and an asterisk (*) placed next to the note referencing the required GABC depth on Sheet GR-1.
The note has been revised as requested.

Preliminary Construction Plans

General

49. Update the site plan based on comments for the PUD above. Comment Remains.
The site plan has been updated per our responses.

51a. On Sheet GR-1, update pavement sections per comments for Sheet R-5. Comment remains. See comment 33a.
The sections have been updated as requested.

Should you have any questions or need additional information, please call.

Sincerely,
Davis, Bowen & Friedel, Inc.



Timothy M. Metzner, R.L.A.
Associate

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§ 200-3. - Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

ALLEY — A service roadway providing a secondary means of public access to abutting property and not intended for general traffic circulation.

COMMISSION — The Planning Commission of the City of Milford, Delaware.

OPEN SPACE — Areas of land within residential subdivisions or developments including planned unit developments that are available to all residents and or the public and which have the purpose to provide active and/or passive recreational opportunities, maintain land in a predominantly undeveloped and natural state including lands used for:

(1) Community gardens;

(2) Promotion of conservation and protection of wildlife;

(3) Perpetual conservation easements;

(4) Parks, plazas, walkways, sidewalks and trails;

(5) Buffers or forested areas; or

(6) For recreational uses as defined herein.

Open space shall not include areas of land for the following unless otherwise approved by Council:

(1) Wetlands or stormwater management facilities;

(2) Drainage easements;

(3) Flagpole areas;

(4) Medians (unless designed as a park);

(5) Signage areas;

(6) Landscaping in parking areas;

(7) Predominantly impervious surfaces such as streets and parking lots;

(8) Required front, side, or rear yards;

(9) Any land included within designated lot lines; or

(10) Utility facilities for uses such as sewer, water, gas or electric.

PLAT — The final drawing on which the subdivision plan is presented to the City Council for approval and which is submitted to the County Recorder of Deeds for recording.

PROPERTY OWNERS' ASSOCIATION — An association established by the subdivider as a non-stock corporation to provide for the perpetual maintenance of the common property in the subdivision.

RECREATIONAL USE — Areas of land within residential subdivisions or developments including planned unit developments which have the purpose to provide active recreational opportunities that are available to all residents of the community and/or the public including lands used for:

(1) Indoor club houses;

(2) Swimming pools and pool houses;

(3) Tennis courts;

(4) Basketball courts;

(5) Athletic fields;

(6) Picnic areas with tables;

(7) Ponds for recreational use (boat, fishing or swimming);

(8) Playgrounds; and

(9) Bike or multi-model trails.

RIGHT-OF-WAY — A strip of land acquired by reservation, dedication, forced dedication, prescription, or condemnation and intended to be occupied by a road, crosswalk, railroad, electric transmission lines, gas pipelines, and water line, sanitary storm sewer, and other similar uses.

ROADWAY — The paved portion of the street primarily used for vehicular traffic.

A. ARTERIAL STREET and HIGHWAY — A street primarily used for fast and/or heavy traffic.

B. COLLECTOR STREET — A street carrying traffic from minor streets to arterial streets and highways, including the principal traffic and entrance streets of a residential development.

C. MINOR STREET — A street primarily used for access to the abutting properties.

D. MARGINAL ACCESS STREET — A minor street paralleling and adjacent to an arterial street or highway and providing access to abutting properties and protection from through traffic.

E. DEAD-END STREET or CUL-DE-SAC — A street closed at one end and having only one connection with any other street.

F. HALF STREET — A street paralleling the boundary of a subdivision and lying partly in an abutting tract.

STANDARD SPECIFICATIONS FOR INSTALLATION OF UTILITY CONSTRUCTION PROJECTS AND SUBDIVISION PAVEMENT DESIGN — The current specifications regulating subdivision design and construction as adopted by the City.

STREET — All land between property lines, whether designated as a street, highway, throughway, thoroughfare, avenue, boulevard, road, parkway, right-of-way lane, place, court or any similar term.

SUBDIVIDER — Any person, firm, corporation, partnership or association or duly authorized agent who or which shall apply to the Commission for approval of the layout of any subdivision.

SUBDIVISION — The division or redivision of any tract of land into two or more lots or parcels for immediate or future sale or for building development.

SUBDIVISION, MINOR — Any subdivision fronting on an existing street, not involving any new street or road, not involving the extension of any municipal water or wastewater mains, not adversely affecting the development of the remainder of the parcel or adjoining property, and not in conflict with any provision or portion of the development plan, Official Map, Chapter 230, Zoning, or this chapter; limited to five lots.

SUPERBLOCK — An oversize residential block wherein private open spaces, closed to automobile traffic, are provided for the common use of all residents in the block.

§ 200-4. - Application procedure.

A. Preliminary approval.

(1) A preliminary plan and documents, as specified by the Planning Department, shall be prepared by the subdivider and submitted in accordance with the submission schedule as determined by the City Planner, along with the appropriate fees, as specified in § 230-57.

(2) The Development Advisory Committee (DAC) shall review the application and plan. Comments from the DAC must be addressed via either submitting revised plans and/or necessary

documents or via a narrative submitted to the City Planner. Upon confirmation by the City Planner that all DAC issues have been addressed satisfactorily, the application will then be scheduled to be heard by the Planning Commission.

(3) The Planning Commission shall review the application and provide either a recommendation of preliminary approval with or without conditions, a recommendation of denial, or table the application. Upon a recommendation of approval with or without conditions or recommendation of denial, the application shall be scheduled to be heard by the City Council.

(4) City Council shall grant preliminarily approval of the application with or without conditions, deny the application, or table the application.

(5) Preliminary approval from City Council shall be void after one year, unless an extension is requested by the owner and approved by City Council prior to the expiration.

§ 200-5. - General requirements and design standards.

The following shall be deemed to be minimum requirements and may be varied or waived by the Commission only under circumstances set forth in § 200-6:

A. Streets.

(1) The layout, character, extent, width, grade and location of proposed streets shall be established with due regard to:

(a) Public convenience and safety.

(b) Proposed uses of the land to be served by said streets.

(c) Proper relation and connection with and continuation and projection of streets in the adjacent areas, whether these streets are existing or proposed in another subdivision in a neighborhood plan, in the development plan or in the Official Map, as approved or adopted by the Commission.

(d) Topography and other land features.

(2) The layout of proposed streets shall furthermore be arranged in a manner acceptable to the Commission and City Council.

(3) Minor streets shall be laid out so as to discourage their use by through traffic.

(4) Where a subdivision abuts or contains an existing or proposed arterial street, limited-access highway or railroad, the City Council may require marginal access or service streets, reverse frontage with screen planting contained in a nonaccess reservation along the rear property line and deep lots with rear service alleys or other treatment, such as parks, which may be necessary for the protection of residential properties and for separation of through and local traffic, with due regard for the requirements of future approach grades and grade separations.

(5) Where a tract of land is subdivided into lots substantially larger than the minimum size required in the zoning district in which a subdivision is located, the Commission may require that streets and lots be laid out so as to permit future resubdivision in accordance with the requirements of this chapter.

(6) Reserve strips controlling access to streets shall be prohibited except where the control and disposal of land comprising such strips has been placed in the governing body under conditions approved by the City Council such as provided in Subsection A(4) above.

(7) Certain proposed streets may be required to be extended to the boundary line of the subdivision to provide access to tracts which may be subdivided in the future. Wherever necessary, when a street is carried to the boundary line of the subdivision, the City Council may require a temporary turnaround improved to the satisfaction of the City Engineer and of the size specified in Subsection A(16) below at the stub end.

(8) The creation of dead-end or loop streets and superblocks will be encouraged wherever the City Council finds that such layout will not interfere with traffic convenience and safety. The City Council shall determine the number of connections of streets in the proposed subdivision with existing streets. At least two such connections shall be provided, except where a proposed subdivision only contains one dead-end street.

(9) Street jogs shall be prohibited. Street intersections, where center lines do not meet, shall have center-line offsets of 150 feet or more.

(10) A tangent at least 100 feet long shall be introduced between reverse curves on arterial and collector streets and may be required on all other streets.

(11) Street right-of-way lines deflecting from each other at any point shall be connected with a curve, the radius of which for the inner right-of-way lines shall not be less than 750 feet on arterial streets, 300 feet on collector streets and 100 feet on minor streets. The outer right-of-way line shall be parallel to said inner right-of-way line.

(12) Streets shall be laid out so as to intersect as nearly as possible at right angles. The inner right-of-way line of a street intersecting another street at an angle of less than 90° shall be tangent to and follow a curve with a minimum radius of 150 feet centered on the nearest right-of-way line of the intersecting street. The outer right-of-way line shall be parallel to said inner right-of-way line.

(13) Street right-of-way lines at intersections shall be connected with a curve, the radius of which shall be 25 feet.

(14) Right-of-way widths.

(a) Street right-of-way widths shall be as shown on the Official Map or development plan, and, if not shown thereon, said widths for the various street types between face of curb or edge of road shall not be less than as follows:

Street Type (feet)	Right-of-Way Roadway (feet)	
Arterial	80 to 110	As required by DelDOT
Collector	60	28
Minor, for townhouses and apartments	60	30
Minor, for other residences	50	25
Dead-end	50	22
Marginal access	30	16
*Alley	20	12

Note:
* If utilities are present in an alley, the City reserves the right to modify the minimum right-of-way and roadway widths.

(b) Subdivisions utilizing open swale drainage shall have a ten-foot drainage easement along the front of each property to accommodate the back slope of the drainage swales.

(15) Half streets shall be prohibited except where essential to the reasonable development of a subdivision in conformity with the requirements of this chapter and where the Commission finds that it shall be practicable to require the dedication of the other half when the abutting property is subdivided. Wherever an approved half street shall be adjacent to a subdivision, the other half of the street shall be platted within said subdivision.

(16) Dead-end streets, designed to be so permanently, shall not be longer than 400 feet and shall be provided at the closed end with a turnaround having an outside roadway diameter of 76 feet and a street right-of-way diameter of 100 feet.

(17) Street names.

(a) Street names shall be selected so as not to duplicate or be confused with the names of existing streets. Street names shall be subject to the approval of the Commission. It is recommended that all new streets shall be named in the following manner:

General direction	Long	Short (under 1,000 feet)
North and south	Streets	Places
East and west	Avenues	Courts
Diagonal	Roads	Ways
Curving	Drives	Lanes or Circles

(b) Arterial streets shall be named "boulevards."

(18) Street grades shall not exceed 5%.

(19) Street grades shall be not less than 0.5% wherever feasible.

(20) Changes in street grades shall be connected by vertical curves of suitable length.

(21) The width of streets adjacent to areas designed, proposed or zoned for nonresidential use shall be increased by such amount as may be deemed necessary by the Commission to assure the free flow of through traffic without interference by parked or parking cars and to provide adequate and safe parking space.

(22) All required roads shall be constructed in accordance with the standard specifications as issued by the City Engineer.

B. Sidewalks and curbs.

(1) Sidewalks shall be required in all subdivisions on both sides of the street. Sidewalks shall have the following widths:

(a) In residential subdivisions: four feet unless otherwise specified.

(b) In commercial and industrial subdivisions: from the curb to property lines unless otherwise specified.

(2) Curbs or drainage swales conveying stormwater shall be required in all subdivisions.

(3) All required sidewalks shall be constructed in accordance with standard specifications as issued by the City Engineer.

C. Easements. Where a subdivision is traversed by a watercourse, drainageway, channel, pipe or stream, there shall be provided a stormwater easement or drainage right-of-way of such width as will be adequate for the purpose, in accordance with requirements specified by the City Engineer. Parallel streets or parkways may be required in relation thereto.

D. Blocks.

(1) The lengths, widths and shapes of blocks shall be determined with due regard to:

(a) The provision of building sites suitable to the needs of the type of use contemplated.

(b) Zoning requirements as to lot sizes and dimensions.

(c) The control, safety and convenience of pedestrian and vehicular traffic.

(d) The characteristics of topography.

(2) Block length shall not exceed 1,200 feet.

(3) Block widths shall be not less than 275 feet nor more than 450 feet and shall be planned to provide two rows of lots.

(4) Pedestrian walkways other than in streets may be required where deemed essential to provide for circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities. Said walkways shall be not less than four feet wide.

(5) Alleys shall be provided if required by the City Engineer.

E. Lots.

(1) Lot width, depth, shape and orientation and the building setback lines shall be appropriate for the location of the subdivision, for the type of development and for the use contemplated.

(2) Lot sizes shall conform to the requirements of Chapter 230, Zoning.

(3) Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to comply with the off-street parking and loading requirements contained in Chapter 230, Zoning.

(4) Corner lots shall have sufficient width to provide an adequate building site within all the yard requirements. Corner lots shall have two front yard setbacks fronting each street, one side yard setback, and one rear yard setback.

(5) All lots in a subdivision shall have frontage on a public street.

(6) Double-frontage lots shall be avoided. Reverse-frontage lots shall be provided where necessary for protection of residential properties from through traffic and adverse nonresidential uses, for separation of through and local traffic and to overcome difficulties of topography or other specific conditions. Screen planting and a fence or wall shall be provided along the rear property line within an easement 10 feet or more in width, across which there shall be no right of access.

(7) Side lot lines shall be at right angles or radial to street lines.

(8) No lots shall be platted on land subject to flooding for residential or any other use where danger to life or property or an aggravation of flood hazard may result. Such land should be set aside for uses which would not be endangered by periodic or occasional inundations.

(9) No lots shall be platted within 25 feet of land under the jurisdiction of the U.S. Army Corps of Engineers.

F. Parks, playgrounds, open spaces, school sites and natural features.

(1) Parks and playgrounds. Where a proposed park or playground is located in whole or in part in a subdivision, the Commission may require the dedication or reservation of such area within the subdivision, in those cases in which the Commission deems such requirements to be reasonable.

(2) Open spaces. Where deemed essential by the Commission and City Planner, upon consideration of the particular type of development proposed in the subdivision, and especially in large-scale developments, the Commission or City Planner may require the dedication or reservation of sites of a character, extent and location suitable to the needs created by such development for playgrounds or parks. The Commission shall not require that more than 10% of the gross area of the open space of the subdivision to be so dedicated or reserved unless otherwise specified by the Zoning Code. [2] In case of a conflict, the requirement of the Zoning Code prevails. The Commission shall give due credit for the provision of open spaces reserved for the common use of all property owners within the proposed subdivision by covenants in the deeds. Generally, the minimum area of contiguous open space acceptable for dedication for public use shall be at least three acres and preferably five acres. Open spaces with a lesser area may be approved by the Commission whenever it deems that the difference between the area offered and three acres may be made up in connection with the future subdivision of adjacent land or added to an existing recreation area.

(3) School sites or sites for other public uses. The Commission may also require a subdivider to set aside such area as it may deem to be required for a school or other public use. Upon failure of the proper authorities to purchase such site within one year after the date of the approval of the plat, the subdivider, upon application to the Commission and approval of such application, shall be relieved of the responsibility of reserving such land for public purposes.

(4) Preservation of natural features. The Commission may require the preservation of all natural features which add value to residential developments and to the community, such as large trees or groves, watercourses and historic spots and similar irreplaceable assets. In no case shall a tree over 12 inches in diameter measured three feet from the base be removed without prior approval by the City Arborist.

G. General grading. No final slope on the property shall exceed the normal angle of repose of the soil of said slope as determined by the City Engineer, except where said slope consists of a natural rock formation or is supported by a retaining wall or equivalent of a design acceptable to the City Engineer.

H. Improvements.

(1) In major subdivisions the following improvements are required:

(a) Paved streets.

(b) Street signs.

(c) Curbs and gutters, or roadside swales. Curbs shall be required as per standard specifications to stabilize intersections, entrances, and parking areas, and where they are necessary for the conveyance of stormwater and protecting road surfaces and driveway surfaces from vehicular traffic.

(d) Sidewalks.

(e) Streetlighting.

(f) Shade trees. Shade trees 150 feet on center each side of the road shall be located so as not to interfere with utilities or sidewalks and shall be of the types recommended by the City Arborist.

(g) Topsoil protection. No topsoil shall be removed from the site or used as spoil. Topsoil moved during the course of construction shall be redistributed so as to provide at least six inches of cover to all areas of the subdivision and shall be stabilized by seeding or planting.

(h) Monuments. Monuments shall be of the type, size and shape required by the City Engineer.

(i) Water mains, culverts, storm sewers and sanitary sewers.

[1] All water installations shall be looped; all sewer and storm sewer systems shall be extended at minimum slope, maximum depth, and connected with an approved method and shall be adequate to handle all present and probable future development.

[2] All of the above-listed improvements shall be subject to inspection and approval by the City Engineer, who shall be notified by the subdivider at least 24 hours prior to the start of construction. No underground installation shall be covered until inspected and approved.

[3] Utility easements shall be required to be granted and recorded by the subdivider to allow extension of utilities to neighboring properties.

(j) Swales. Conveyance of stormwater is permitted by open drainage systems where appropriate for environmental and engineering integrity and design. Such systems shall be separated from the edge of road to the top of bank by a minimum five-foot shoulder. The depth of such systems shall not exceed two feet below crown of road. The side slope shall be a maximum of 4:1. The bottom of the system shall have a minimum width of two feet. The system slope shall be such that the maximum velocity does not exceed two feet per second. The system has to be designed in such a way as to incorporate driveway and crossroad drainage pipes; such systems shall be restored with topsoil and sod. Temporary check dams shall be placed in intervals not to exceed 300 feet.

(k) Headwalls. Storm drainage pipes which are part of an open swale drainage system shall be terminated with a headwall in accordance with standard specifications.

(2) The developer shall complete all utilities and street improvements not specifically waived by the Commission in accordance with standard specifications as issued by the City Engineer and with any additional requirements specified by the Commission. Construction drawings shall be submitted in a form satisfactory to the City Engineer.

(3) When the Commission or the City Engineer, due to planning considerations extraneous to the subdivision, requires a standard of improvements higher than that which is sufficient to serve the subdivision, the amount of the bond to be posted shall be deemed to be satisfactory if it adequately covers the cost of improvements which would be normally required.

(4) The developer shall pay the review and inspection fees as set forth in Chapter 230, Zoning, § 230-57, Planning, Zoning and Engineering Fees. The cost for each segment or phase of the development shall be paid prior to commencement of utility construction.

§ 200-6. - Variances and waivers.

Applicants may request, at the time of application submission, the varying or waiving of requirements of Chapter 200, and the Planning Commission may, at its discretion, recommend to City Council the varying or waiving of said requirements and request conditions that substantially secure the objectives of the requirements so waived. Upon the findings of the City Council that, due to special conditions peculiar to a subdivision or a site, certain requirements of these regulations are inappropriate or that strict compliance with said requirements may cause extraordinary and unnecessary hardships, the City Council may vary or waive said requirements, provided that such variance or waiver shall not be detrimental to the public health, safety or general welfare or have the effect of nullifying the intent and purpose of the Official Map, Chapter 230, Zoning, the Development Plan or this chapter. In varying or waiving certain requirements,

the City Council may specify such conditions at will, in its judgment, secure substantially the objectives of the requirements so varied or waived.

§ 230-11. - R-3 Garden Apartment and Townhouse District.

In an R-3 District no building or premises shall be used and no building shall be erected or altered which is arranged, intended or designed to be used except for one or more of the following uses and complying with the requirements so indicated.

A. Purpose. The purpose of the R-3 District is to provide for the orderly development of existing and proposed medium- to high-density residential areas where adequate public facilities exist. The district will permit development of garden-type apartments as well as townhouses that will yield high densities in selected areas, multifamily dwellings and a variety of housing types.

B. Permitted uses. Permitted uses for the R-3 District shall be as follows:

(1) All uses permitted in an R-2 District and subject to its area regulations, unless otherwise indicated in this section as provided below:

(a) Single-family and two-family dwellings shall be subject to the following area regulations:

[1] Minimum lot area shall be 7,500 square feet.

[2] Maximum building coverage shall be 45%.

[3] Minimum lot width shall be 60 feet.

[4] Height of buildings shall not exceed three stories or 35 feet.

[5] Minimum building setback line shall be 30 feet.

[6] Side yards shall be provided as follows: each lot shall have at least two side yards eight feet in width, except semidetached structures, which shall have at least one side yard per lot eight feet in width.

[7] Minimum rear yard setback shall be 15 feet. For corner lots the rear yard setback may be reduced 20% in depth to allow for skewing of a residential dwelling on the lot.

[8] Decks, subject to the following requirements:

[a] The deck cannot be located in the front yard.

[b] A minimum distance of 10 feet must be maintained from the deck to the rear property line.

(2) Garden or low-rise apartments, subject to site plan review and the following requirements:

(a) The number of dwelling units per acre shall not exceed 16.

(b) Building coverage shall be a maximum of 20% for any lot developed for garden apartments.

(c) The maximum number of dwelling units per building shall be 12.

(d) Distance between buildings or groups of buildings shall be as follows: each building or group of buildings shall be at least 25 feet from any other building or group of buildings.

(e) Minimum lot width on any public street shall be at least 50 feet.

(f) Minimum lot size shall be one acre for garden apartment properties or complexes, with a minimum of 2,500 square feet of lot area for each dwelling unit.

(g) A minimum of 400 square feet per unit shall be designated as open space subject to the following recreational use requirements in Subsection B(2)(h) herein.

(h) Recreational use requirement. 50% of the required open space shall be set aside for recreational uses. This requirement only applies to subdivisions or developments with 15 or more lots or units.

(3) Townhouses or row dwellings, subject to site plan review and the following requirements:

(a) The number of dwelling units per group shall not exceed eight nor be fewer than three.

(b) The number of dwelling units per acre shall not exceed 12.

(c) Maximum building coverage shall be 60%.

(d) No group of townhouses shall be closer than 60 feet as to facing walls and 30 feet as to end walls from any other group of such dwellings nor closer than 60 feet from any boundary line of a designated townhouse area of which the group is a part.

(e) There shall be within any contiguous group of townhouses at least three different architectural plans having substantially different designs and building materials. In addition, no more than three continuous townhouses shall have the same front setback, and the variations in front setback shall be at least four feet.

(f) The minimum width of any side yard abutting a street, driveway or parking area within the townhouse area shall not be less than 30 feet.

(g) Height of buildings shall not exceed three stories or 35 feet.

(h) Alleys in the rear of townhouse groups are required for access to units by owners and to facilitate City services, trash collection, meter reading and parking.

(i) Minimum lot size shall be one acre for townhouse projects or complexes, with a minimum of 2,000 square feet of lot area for each dwelling unit.

(j) A minimum of 400 square feet per unit shall be designated as open space subject to the recreational use requirements in Subsection B(3)(k) herein.

(k) Recreational use requirement. 50% of the required open space shall be set aside for recreational uses. This requirement only applies to subdivisions or developments with 15 or more lots or units. [2]

C. Conditional uses subject to special regulations. The following uses may be permitted with the approval of a conditional use permit by the Milford City Council in accordance with the provisions of Article IX of this chapter:

(1) Rooming or boarding houses.

(2) Business offices for administrative purposes only.

(3) Professional offices (nonresident).

(4) Medical clinics.

(5) Sanatoriums or nursing homes.

(6) Mobile home parks, subject to conformance with the following requirements and subject to site plan review:

(a) The total area to be developed as a mobile home park shall be at least 20 acres.

(b) The maximum density shall not exceed eight units per acre.

(c) Mobile home parks with more than 25 units shall provide at least 5,000 square feet or 400 square feet per lot of open space. At least 10% of the open space shall be developed as a recreational area.

(d) Landscape screening shall be required along all property lines. The screening shall be accomplished with an evergreen hedge, shrubs or trees. The screen shall be located not less than five feet from the property line.

(e) Common sidewalks four feet in width shall be required where pedestrian traffic is located. Individual sidewalks 2 1/2 feet wide shall connect each mobile home unit to the common walk.

(f) Off-street parking shall be provided on the basis of two spaces per lot. All parking areas shall be located not more than 400 feet from the mobile home unit. There shall be no on-street parking.

(g) Signs.

[1] An identification sign may be set up at the park entrance. This sign may be illuminated and shall have a street setback of 15 feet. It may have a maximum height of 20 feet and may not exceed 20 square feet of area on either side.

[2] Unilluminated traffic direction signs may also be erected. These signs shall have a street and property setback of 15 feet. They shall be no more than four square feet in area or two feet in height.

(h) Streets shall be required from abutting public streets to individual lots. The streets shall be designed to minimize congestion and traffic hazards and must be built to the street and storm drainage specifications of Chapter 200, Subdivision of Land, of this Code. No more than two streets shall intersect at one point.

(i) Minimum requirements for mobile home lots.

[1] Lot area shall be 5,000 square feet per mobile home.

[2] Width shall be 40 feet.

[3] Public street setback shall be 50 feet.

[4] Mobile home park setback shall be 35 feet.

[5] Mobile home street or parking area setback shall be 30 feet.

[6] Distance from other mobile homes and buildings shall be 25 feet.

[7] One patio shall be required per unit, 10 feet by 40 feet paved.

[8] Landscaping shall be one tree per lot.

[9] Mobile homes must meet the requirements of the Federal Manufacturer Housing Construction and Safety Standard Act of 1974.

[10] The entire lot occupied by a mobile home park shall be maintained in single ownership throughout the entire life of the mobile home park.

(7) Art or specialty shops/galleries. The following items shall be reviewed for conformance during the site plan review hearing by the Planning Commission:

(a) The residence shall remain as the predominant feature of the site.

(b) The shop or gallery shall occupy only 40% of the residence.

(c) Public parking shall be available, with the determination of said parking requirements being made by the Planning Commission during the site plan review hearing. These determinations and recommendations must be done in conjunction with any state regulations concerning traffic control within the given site area.

(d) The Fire Marshal review must be applied for and recommendations made by the agency must be presented two weeks prior to the hearing date. All requests or recommendations shall be adhered to.

(8) Planned unit residential development.

ARTICLE IV - Off-Street Parking and Loading

B. Use standards. All uses permitted in this chapter shall be subject to the following minimum off-street parking requirements in addition to any special requirements as indicated in each zoning district.

Types and Uses	**Required Off-Street Parking Spaces**
Retail stores and shops, all types, supermarkets, retail food stores and undertakers	1 per 200 square feet of floor area used or designed for sales on the ground floor, plus 1 per 300 square feet of floor area used or designed for sales on all other floors, plus 1 for each 2 employees
New and used car and boat sales, mobile dwelling unit sales, truck and trailer sales, outdoor equipment and machinery sales, commercial nurseries and auctions	4 per salesperson, plus 1 per per 2 employees during the period of greatest employment
Personal service establishments, laundromats and dry cleaning	1 per 200 square feet of gross floor area
Banks and other financial institutions	1 per 200 square feet of gross floor area, plus 1 for each employee
Business, governmental and professional offices	1 per 100 square feet of gross floor area
Medical and dental offices or clinics	From 1 per 100 square feet gross floor space for medical and dental offices or clinics to 1 per 150 square feet of gross floor area for medical and dental offices or clinics
Hospitals	1 for each bed of planned patient capacity, plus 1 per 3 employees or the shift of greatest employment
Sanatorium or nursing home	1 for every 4 beds
Churches and other places of worship	1 per 5 seats
Indoor and commercial outdoor recreation	1 for each 150 square feet of gross floor, building or ground area devoted to such use or 1 per 4 seats of facilities available for patron use, whichever is applicable to the

	facility
Restaurants, taverns and similar uses	1 per 3 seating accommodations, plus 1 per 2 employees on the shift of greatest employment
Dwelling, one-family detached, semidetached or mobile home	2 1/2 per dwelling unit
Dwelling, townhouse, garden apartment or multifamily dwelling	2 1/2 per dwelling unit
Rooming and boarding house or converted unit	1 per rented unit
Museum, art gallery and similar use	1 per 4 seats in rooms for public assembly or for each 150 square feet of gross floor area for use by the public, whichever is greater, plus 1 for each 2 employees on the shift of greatest employment
Public library	1 per 400 square feet of gross floor area for public use, plus 1 per 2 employees on the shift of greatest employment
Fire station	25
Auditorium, stadium, assembly hall, gymnasium, theater (excluding drive-in) and community or recreation center	1 per 4 fixed seats in the largest assembly room area or for each 40 square feet of floor area available for the accommodation of movable seats in the largest assembly room, or 1 per 150 square feet of gross floor area, whichever is applicable to the facility
Social club and fraternal, social service, union and civic organization building	1 per adult attendant, plus 1 per 100 square feet gross floor area devoted to such uses
Public or private school	3 per room used for administrative offices, plus 1 per room used for class instruction, plus 1 for each 5 seats in the auditorium and other places of assembly or facility available to the public
Industrial, manufacturing or wholesaling establishment	1 per 2 employees on the shift of the greatest employment, plus 1 per 200 square feet of floor area devoted to sales

Hotel and motel	1 for each guest room plus 1 for each 3 employees

ARTICLE V - Landscape Screening

§ 230-22. - District requirements.

A. Residential districts.

(1) In any R-1, R-2, R-3 and R-8 District, a landscape screen and/or fence or wall a minimum of six feet in height shall be planted and/or erected to separate any permitted nonresidential use from any existing residential use on a contiguous lot. Such landscape screen and/or fence or wall may extend into the lot setback, side yard and rear yard.

(2) In any R-3 or R-8 District, for any lot developed for garden apartments or townhouses, a landscape screen and/or fence or wall a minimum of six feet in height shall be planted or erected to separate any contiguous lot developed as a single-family detached or semidetached residential dwelling on any contiguous lot zoned R-1 or R-2. Such landscape screen and/or fence or wall may extend into the lot setback, side yard and rear yard.

B. Commercial districts. In any C-1, C-2 or C-3 District, a fifteen-foot buffer area shall be provided within which a landscape screen and/or fence or wall a minimum of six feet in height shall be planted or erected to separate any permitted use from any contiguous lot zoned R-1, R-2, R-3 and R-8 or any contiguous lot developed or approved for development for any residential use. Such landscape screen may extend into the lot setback, side yard or rear yard.

C. Institutional, Industrial and Office Building/Complex Districts: H-1, I-1, I-1, OB-1 and OC-1.

(1) Each use established in these districts shall set aside at least 20 feet in width immediately adjacent to any street upon which the lot has frontage, and extending for the full frontage of the lot, for purposes of providing for proper site distance and buffering from the public road. Within such area, the owner shall establish and maintain a planting of grass and/or horticultural ground cover. Other landscape materials may be incorporated, provided that there is no obstruction to vision, other than a tree trunk, in the area between two feet and seven feet above ground level. No use shall be made of this buffer area other than for a single driveway to provide access to the use for each 100 feet of frontage upon a public road. Such driveway shall not exceed 32 feet in width.

(2) Parking areas may be located in any hard area but shall not be closer than 15 feet to any street line or property line.

D. Limited Industrial District. At the boundary line between an I-1 District and any R-1, R-2, R-3 or R-8 District or any lot developed or approved for development for residential use, there shall be a 50-foot buffer area which shall include a landscape screen and/or fence or wall a minimum of six feet in height. Such landscape screen may extend into the lot setback, side yard or rear yard.

§ 230-48.1. - Criteria for planned unit residential development.

A. Permitted uses. Uses, accessory uses and signs permitted in any residential district shall be permitted in accordance with the additional requirement and provisions of the article.

B. Minimum requirements, area and width. In a planned unit residential development, minimum lot area and width may be less than that required by the district regulations, except that no single-family lot shall be less than 4,000 square feet in area nor less than 40 feet in width. The width of the lot shall be between lot lines at the front building setback line as determined by the Planning Commission.

C. Density. A planned unit residential development is not intended to increase density, but to allow flexibility in the design of the number of dwelling units permitted. If a parcel or parcels have more than one zoning classification, the total permitted density may be located throughout the parcel or

parcels. The total permitted density shall be determined by dividing the net development area by the minimum lot area per dwelling unit required by the zoning district in which the land is located. Net development area shall be determined by subtracting 25% of the gross area. Gross area shall not include any wetlands, floodway or similar area not suitable for building as determined by the Planning Commission.

D. Other requirements. Off-street parking, parking beneath buildings, front, side and rear setbacks, landscaping and buffering, lot coverage, number of units per building and building separation shall be as determined by the Planning Commission. Maximum height shall not exceed 48 feet and four stories maximum.

E. A planned unit residential development shall be subject to the same review procedures as for a major subdivision as provided in Chapter 200, Subdivision of Land.

F. Neighborhood commercial.

(1) Permitted neighborhood commercial uses. The following neighborhood commercial uses are permitted in a planned unit development:

(a) Retail goods and services.

(b) Child-care center (care for fewer than 24 children).

(c) Food services (grocery/convenience: cafe, coffee shop, but no facility with fuel distribution).

(d) Medical and dental offices, clinics, and laboratories.

(e) Professional and administrative offices.

(f) Repair services, conducted entirely within the building. (Auto repair and similar uses are not permitted.)

(g) Mixed use building (residential, including rentals, with other permitted use).

(h) Laundromats or dry cleaners.

(i) Art, music, or photography studio.

(j) Personnel service (barbershop, salons, video rental, fitness center and similar uses).

(k) Allowable uses (e.g., swimming pools, clubhouse and associated sport and exercise areas, tennis courts).

(2) Floor area standards. Up to 25% of the total acreage within the planned unit development may be available for nonresidential uses including neighborhood commercial, nursing home and hospice care, professional and small business office use, similar uses, but excluding areas reserved for clubhouse, pool, HOA offices and other development amenities. For neighborhood commercial, the maximum interior floor area shall not exceed 6,500 square feet total for any one use on one neighborhood commercial site without a variance.

(3) Hours of operation. Except for the swimming pool, clubhouse and associated sport or exercise areas, neighborhood commercial land uses shall be limited to the following hours of operation 6:00 a.m. to 9:00 p.m.

(4) Storage. Except for plants and garden supplies, overnight storage is not permitted.

(5) Parking. Parking spaces for the commercial space shall be determined in accordance with the overall planned unit development submission but in no event shall be less than 50% of the spaces required for standard commercial space.

(6) Control. Ownership of the land and buildings comprising the commercial space may be by individuals, corporations or partnership either in fee simple or as a condominium with limited common area control and shall be subject to the rules and regulations contained in the commercial area tenants association and covenants and restrictions. All commercial tenants

shall pay dues and assessments to said association for management and upkeep of the common areas.

(7) Density. The overall density otherwise permitted under planned unit development shall be reduced at the rate of one dwelling unit per 3,000 square feet of commercial floor space.

G. A minimum of 400 square feet per unit shall be designated as open space subject to the recreational use. Recreational use requirement - 50% of the required open space shall be set aside for recreational use.

§ 230-52. - Review procedure.

A. Preliminary approval.

(1) A preliminary plan and documents, as specified by the Planning Department, shall be prepared by the applicant and submitted in accordance with the submission schedule as determined by the City Planner, along with the appropriate fees, as specified in § 230-57.

(2) The Development Advisory Committee (DAC) shall review the application and plan. Comments from the DAC must be addressed via either submitting revised plans and/or necessary documents or via a narrative submitted to the City Planner. Upon confirmation by the City Planner that all DAC issues have been addressed satisfactorily, the application will then be scheduled to be heard by the Planning Commission.

(3) The Planning Commission shall review the application and shall approve the application with or without conditions, deny the application, or table the application.

(4) Preliminary approval from the Planning Commission shall be void after one year, unless an extension is requested by the owner and approved for good cause by the Planning Commission prior to the expiration.

B. Final approval.

(1) A final plat and documents, as specified by the Planning Department, shall be prepared by the applicant and submitted in accordance with the submission schedule as determined by City Planner, along with the appropriate fees, as specified in § 230-57.

(2) The Development Advisory Committee (DAC) shall review the application and plan. Comments from the DAC must be addressed via either submitting revised plans and/or necessary documents or via a narrative submitted to the City Planner. The final plan shall also be reviewed by the City Planner for confirmation that the application is designed in accordance with all subdivision, zoning and other land use regulations of the City. The final plan shall also be reviewed by the City Engineer for confirmation that the application is designed consistent with the preliminary plan, if applicable, and in accordance with the construction standards and specifications of the City. Upon confirmation by the City Planner and City Engineer that all issues have been addressed satisfactorily, the application will be scheduled to be heard by the Planning Commission.

(3) The Planning Commission shall review the application and shall approve the application with or without conditions, deny the application, or table the application.

(4) Prior to receiving final site plan approval, the City Engineer shall provide a copy of the signed subdivision agreement to the City Planner.

(5) Within 90 days of final approval from Planning Commission, the applicant shall record the plat at the County Recorder of Deeds office and provide the City Planner a receipt of the recordation including the deed book and page number. Prior to recording the plat, five copies of the plat must be submitted to the City Planner for stamping and signing. Three sets will be returned to the applicant.

(6) Upon recordation of the plat, the applicant shall provide the Land Data Manager of the City a mylar copy of the plat including the deed book and page printed thereon.

(7) Failure to record the plat within 90 days of Planning Commission approval will result in the approval being voided.

C. The site plan review by the Planning Commission shall be limited to those proposed developments enumerated by this chapter and to those proposed developments that require a site plan review as determined by the City Planner. No other site plans shall be considered by the Planning Commission for review.

MILFORD CITY COUNCIL
MINUTES OF MEETING
September 24, 2007

A Public Hearing was held before Milford City Council on Monday, September 24, 2007 in the Council Chambers at Milford City Hall, 201 South Walnut Street, Milford, Delaware to take final action on the Revised Development Plan of the following applicant:

Davis, Bowen and Friedel, Incorporated on behalf of Shawnee Farm LLC for a Revision to the Preliminary Major Subdivision of 87.23 +/- acres into 546 lots on the west side of U.S. Route 113, southwest of State Route 36 and southwest of Seabury Avenue Extended, Milford, Delaware to be known as Cypress Hall. Tax Map 1-30-3.00-261.01. Present Use Agricultural; Proposed Use Residential Development.

PRESIDING: Honorable Mayor Joseph R. Rogers

IN ATTENDANCE: Councilpersons Irvin Ambrose, John Kramlich, John Workman, Clifford Crouch, Owen Brooks, Jr., Douglas Morrow, James Starling, Sr. and Katrina Wilson

STAFF: City Manager Richard Carmean, Police Chief Keith Hudson and City Clerk/Recorder Terri Hudson

City Solicitor Timothy Willard

Mayor Rogers called the Public Hearing to order at 7:43 p.m.

Engineer Tim Metzner of Davis, Bowen and Friedel, Incorporated presented the application stating they are asking for approval of the revised preliminary subdivision plan. Council originally granted preliminary approval in November of 2005. The site is zoned R-3 with mixed residential use; the area is 86.56 acres and will consist of 162 single family homes, 97 town homes and 288 multi-family units for a total of 546 units which is less than the original design of 567 units.

Mr. Metzner advised the multi-family units are broken down into three types of three-story buildings. Eight type A buildings consist of one and two bedroom units; eight type B buildings have two bedrooms; eight type C buildings will consist of two and three bedroom units for a total of 24 multi-family buildings.

The difference between the original and revised plan is a minor subdivision of the entire parcel to allow more area for commercial property. This reduced the total residential area, which increased the average residential density from the original design of 5.06 units per acre to the proposed 6.31 units per acre. The multi-family area will have a clubhouse and pool. It will also overlook a large pond in the open area. A rendering was presented showing the proposed multi-family buildings.

The wooded area to the south of the project, where the single family units are located, will try to be preserved. All streets and utilities will be designed to city standards.

No one from the public spoke for or against the application.

Mr. Carmean advised that several changes were made in response to concerns heard at the planning commission meeting.

Planning Commission Chairman Randy Marvel then advised that at their first meeting in August, representatives from Milford Grain and of the Elliott family were in attendance. Their concern was the proximity of the apartment condo units to their property line which was 50 feet. At the following meeting in September, they had flipped the parking and the buildings so the buildings are now 180 feet away from the property line. Though Milford Grain had requested a buffer of 150 feet, one building is actually 180 feet and the other is 220 feet. The buffer is made up of a wooded area and the balance is parking.

The commission was still concerned about the area near the granary because it is very close to the property line and was grandfathered into the county. It was agreed to make the area along the granary approximately 100 feet of vegetated growth and parking spaces.

When their final subdivision plan is submitted, a landscaping plan will be included. Chairman Marvel confirmed that all planning commission requests had been accommodated.

Mr. Metzner then pointed out the changes on the plot.

The city manager advised that the city planner was in agreement with granaries' concerns and is comfortable with the changes that made. This has allowed for a larger commercial component which will better suit the needs of the community.

There are no definite plans for the commercial area though some larger retail stores have expressed an interest.

Mr. Metzner advised that all zoning requirements have been met as well as the concerns from the public and the planning commission.

Mr. Kramlich moved for approval of the preliminary subdivision plan as presented, seconded by Mr. Workman. Motion carried by unanimous roll call vote.

With no further business, the Public Hearing adjourned at 7:55 p.m.

Respectfully submitted,

Terri K. Hudson, CMC
City Clerk/Recorder

MILFORD CITY COUNCIL
MINUTES OF MEETING
June 22, 2009

The Milford City Council held Public Hearings on Monday, June 22, 2009 in the Joseph Ronnie Rogers Council Chambers at Milford City Hall, 201 South Walnut Street, Milford, Delaware.

PRESIDING: Honorable Mayor Daniel Marabello

IN ATTENDANCE: Councilpersons Steve Johnson, Michael Spillane, John Workman, Jason Adkins, Owen Brooks, Jr., James Starling, Sr. and Katrina Wilson

ALSO: City Manager David Baird, Police Chief Keith Hudson and City Clerk/Recorder Terri Hudson

In recognition of the dedication and naming of the Council Chambers prior to this hearing, Former City of Milford Mayor Rogers opened the Public Hearing to order at 7:11 p.m. at the request of Mayor Marabello.

City Council of the City of Milford then held a hearing to take public comment and make a final determination on the following matter:

Donald M. Fisher on behalf of Fisher Sales & Services, Incorporated for a Conditional Use to allow Indoor Recreational Activities and Daycare at 107 N.E. Front Street. C-2 District; Area of Petition .428 +/- Acres.
Tax Map MD-16-183.10-03-70.00
Adoption of Ordinance 2009-8

City Planner Gary Norris advised that he met with Mr. Fisher a couple of months ago and reviewed the intended use for the former Milford Boys and Girls Club. At that time, it was determined that no conditional use had been filed for the use by the Boys and Girls Club. As a result, he suggested Mr. Fisher submit a conditional use application outlining the proposed uses.

The application was then reviewed by the planning commission who recommended approval by a vote of 6-0.

Donald Fisher of 502 Crestview Drive presented the application. He provided a brief history of the building advising it was originally built in 1950 by his father. The family business, Fisher Appliance and Furniture, operated out of the facility until 1993. A couple of years later, the Boys and Girls Club was housed there until the first of this year when they moved to their new facility on Airport Road. The building has been brought up to code with modifications suitable for recreation purposes.

Mr. Fisher reported it will also be used on Sunday morning for church services to be shared by Pastor Jonathan Dukes and a Hispanic Minister. In the interim, it will be available for community uses. He added there is nothing concrete for the daycare at this point and are considering other options.

When asked if anyone from the public wished to comment, no one responded. The mayor then closed the floor to public comment.

Ms. Wilson advised she has spoken with Pastor Dukes and supports his plans to work with at-risk children which she feels will be a great benefit to the community as a whole.

Mr. Starling moved to approve the conditional use and adopt Ordinance 2009-8 as presented, seconded by Mr. Brooks. Motion carried by unanimous roll call vote.

Mr. Workman asked that if the daycare does not work out, any additional projects coincide with the zoning and/or conditional use as approved. Mr. Fisher agreed he would comply.

City Council of the City of Milford then held a hearing to take public comment and make a final determination on the following matter:

Davis, Bowen and Friedel, Incorporated on behalf of Shawnee Farm LLC
Final Approval of Phase I of the Major Subdivision to be known as Cypress Hall
Southwest side of Route 113, 4,000 feet south of Shawnee Road/Route 36.
Tax Map No. 1-30-3.00-261.01; Area 86.56 +/- Acres; R-3 District

City Planner Norris advised the request is for a final approval of the subdivision of 384 units comprised of townhouses and apartments (exclusive of single family homes at this time). The planning commission recommended approval of the application by the Mayor and City Council with the following recommendations:

1. The City Planner be provided verification of open space calculation, verifying 40% open space has been provided. (Mr. Norris verified the open space requirement meets the previous requirement as noted in the subdivision code which was approved by City Solicitor Tim Willard.)
2. A sheltered bus stop be provided on site.
3. A copy of the Homeowners Association documents are provided to the City Planner.

Representing the application, Tim Metzner of Davis, Bowen and Friedel, Incorporated stated they are proposing a 384 unit mixed use residential development. This application applies to Phase I of the residential development. Phase II will be submitted at a later date and includes 162 single family units for a grand total of 546 units.

He advised the development has one access point off US Route 113 south of Route 36. The plans have been approved by all required agencies.

Mr. Metzner noted the preliminary plan was approved by council on September 24, 2007 with an extension was granted by council on September 23, 2008. At this time, they are requesting final approval of Phase I.

Mr. Workman said that based on the conditions recommended by the Planning Commission, at what point will it be turned over to the homeowners association (HOA). Mr. Metzner explained this is only the development of Phase I and the total development consists of 546 units. The homeowners association will take over Phase I at this point.

Mr. Spillane then asked if Phase I will be completely built out before Phase II is started; Mr. Metzner explained that will depend on the market as there are no definite plans in place for Phase II at this point in time. He said odds are they will proceed with the approvals and designs of Phase II prior to Phase I being completed in full. He anticipates Phase II beginning before Phase I is completed in its entirety.

It was confirmed that an agricultural notice was included on the plat as General Note #10. City Solicitor Willard referenced the proximity to the grain elevator which was an issue at the planning commission hearing.

He then asked if there is a note referencing the maintenance of the common area by the developer before it is turned over to the homeowners association. Mr. Metzner stated a standard note was added stating it is to be maintained by the developer until 75% of the certificate of occupancies are issued at which time it will be turned over to the HOA. Mr. Metzner explained that upon 75% of all lots being sold, the developer shall convey all amenities, common areas and similar items to the Property/Homeowners Association which is the norm throughout Kent and Sussex counties.

Solicitor Willard advised that he has also seen some developers wait until 90% of the lots are sold. He added that the idea is to promote self governance and from a financial aspect, the developer has an incentive to turn it over because of the costs that are incurred. Mr. Metzner agrees noting that until that a majority of the properties are sold, it is very difficult for the homeowners to handle the maintenance responsibilities. Most developers feel that at such reasonable time, the homeowners are able to support themselves.

Mr. Adkins questioned the final buffer zone for Milford Grain Company; Mr. Metzner explained a vegetated 150 feet buffer zone is shown on the landscape plan. He referred to the existing hedgerow as well as the added plantings up to the property line that does not contain existing vegetation.

Mr. Baird verified that a performance bond is required in the amount of 125% on the public portions of the project. He explained that anything dedicated to the city will be required to be bonded and must be provided before the notice to proceed to construction is issued by the city.

When asked if that is presently in the code, Mr. Baird explained there have been various amounts over the years the 125% is was is on the table for this development.

Mr. Spillane stated that because the 125% has not been adopted, he suggests the city use the state requirement of 145% or 150%. Mr. Baird explained the percentage varies depending on the agency involved; DelDOT has different requirements and the counties have different numbers in addition to each municipality in the state. He feels that with the competitiveness, 125% is very appropriate in today's market.

Mr. Spillane recommends we wait until the ordinance is adopted before this is approved. Mr. Baird said if the project is approved, the 125% will be an added requirement. If the project is deferred and council takes action to increase the amount, the larger amount could apply.

Mr. Metzner then advised that his client has agreed to pay the 125% bond and recommends that any changes be added as a condition. Should council decide to increase the percentage at a future date, his client would be receptive to that change. At this point, the developer does not wish to have the project held up for that reason. He noted that with the state of the economy, construction companies are anxiously waiting for the work and emphasized the need to proceed.

Mr. Spillane asked if the new legislation specifying the bond requirement will be passed soon; Mr. Baird stated it will but agrees with Mr. Metzner's suggestion that a condition be applied to the approval.

The mayor then opened the floor to public comment.

Paul Goldstein of 15 West Thrush Drive, Meadows at Shawnee said the project is a great one and he has no problem with its approval. He feels council should not take a position on the homeowners association portion because it is a disservice to those buying the houses. He feels it says people are unable to control the homeowners association in the beginning which is foolishness because they are adults, have bought the homes and should have full control. To wait for 75% could take many years. The city does not have a program in place and he feels council should give the conditional approval and have the builder agree that any future changes in the homeowners association protection be incorporated. In that way, there is no misunderstanding later when they say they were given approval to do anything they want. If there is 500 properties and six houses, those six property owners should have control. If they spend 'x' amount of money, all 500 of them should pay because that is how it is supposed to be. He said be fair to the people buying these houses. He feels it is very unfair for the city to approve this without knowing what it is giving to the people. This council should be proactive to help the citizens.

No further public comments were received and the Mayor closed this portion of the public comment period.

Mr. Metzner explained that the HOA documents must be recorded when the plans are recorded. Therefore, the homeowners receive an official copy at settlement. He reiterated the benefit of having the developer maintain control over the HOA until a predetermined number of lots are sold is to prevent the financial and legal responsibility of the development being placed on the first few homeowners.

He added that the current city code does not require council to approve the HOA documents. The planning commission requested a copy of the HOA documents only be provided to the planner prior to recordation. The developer is having the HOA documents recorded with the plan even though that is not required in the code. Presently, their attorneys are preparing that paperwork.

Mayor Marabello stated that may not be true in the future.

Mr. Workman feels that council can only require what is on the books currently. If some new legislation is later adopted, only those subdivisions approved following that adoption will be impacted. He then asked if council can make this

retroactive; City Solicitor Willard said no because they are bound by the law in place at the time they applied for the subdivision. Though he is unsure of what rules the real estate agencies have, he feels they must provide the homeowners association information beforehand. At settlement, the attorney is required to do a title search and give notice of the restricted covenants and details of the homeowners association. They are then required to inform their clients of the terms. He feels the concept has worked because it is in the developers and homeowners' best interest.

It was confirmed by Mr. Metzner the plat included in the packet was final. Mr. Spillane confirmed that is not ready to be recorded because of the work being done by the attorney on the HOA documents. Mr. Metzner feels it will be completed within a very short period of time and could possibly be recorded within the next two weeks.

Mr. Spillane stated he prefers the approval to be postponed until the HOA documents are completed.

Mr. Starling pointed out the application is complete and they are asking for final approval. It appears they have done more than was asked. Mr. Workman agrees reiterating that council needs to vote on the laws that are on the books today. The homeowners association ordinance will be addressed later though there is no guarantee of when it will be passed. He added that all approvals were received and it appears to be ready to proceed.

Mr. Starling moved for final approval of Phase I Cypress Hall Major Subdivision with the following conditions:

*The City Planner be provided verification of open space calculation, verifying 40% open space has been provided.
*A sheltered bus stop be provided on site.
*A copy of the Home Owners Association documents be provided to the City Planner

Motion seconded by Ms. Wilson. Motion carried by the following 5-2 vote:

Yes-Workman, Adkins, Brooks, Starling, Wilson
No-Johnson, Spillane

Mr. Johnson said he is voting no to see what the city will need as far as a homeowners association and where we suggest they go with that.

Mr. Spillane votes no stating we are going to talk about some things involving the HOA and thinks we should wait.

Mr. Workman said the developer has provided the complete application, has been very upfront when asked questions and has complied with the recommendations of the planning commission. Though the documents are still being prepared, he feels they will be provided and votes yes.

Mr. Brooks said he votes yes and agrees with Mr. Workman that it is necessary to vote on what was in place at the time the application was submitted and presented to council, not what may occur in the future as Mr. Willard has advised.

Mr. Starling is voting yes because the application has been submitted with everything required. He feels council needs to vote on what is on the books today. Everything presented is intact with what was required.

Ms. Wilson votes yes noting all the reasons those council members voting yes have stated.

With no further business, Mayor Marabello declared the Public Hearings adjourned at 7:49 p.m.

Respectfully submitted,

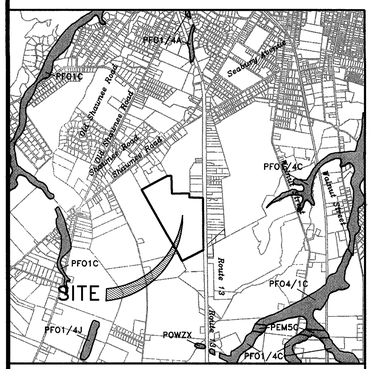
Terri K. Hudson

Terri K. Hudson, CMC
City Clerk/Recorder

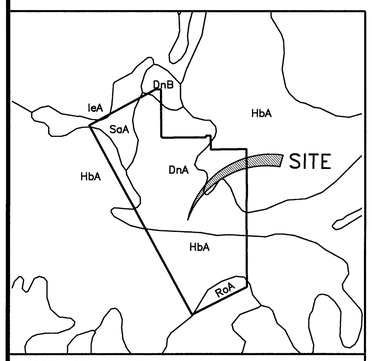
CYPRESS HALL - RESIDENTIAL
PHASE 1
RECORD PLAN
CITY OF MILFORD, SUSSEX COUNTY, DELAWARE
DBF PROJECT NO. 1423A001 JULY, 2007



SITE MAP SCALE: 1" = 2000'



N.W.I. MAP SCALE: 1" = 2000'



SOILS MAP SCALE: 1" = 2000'

DnA = DOWNER LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: B
DnB = DOWNER LOAMY SAND, 2 TO 6 PERCENT SLOPES HSG: B
HbA = HAMBROOK SANDY LOAM, 0 TO 2 PERCENT SLOPES HSG: B
IeA = INGLESIDE LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: B
RoA = ROSEDALE LOAMY SAND, 0 TO 2 PERCENT SLOPES HSG: A
SaA = SASSAFRAS SANDY LOAM, 0 TO 2 PERCENT SLOPES HSG: B

DATA COLUMN

TAX MAP ID	:1-30-03.00-261.01
EXISTING ZONING	:R-3
PROPOSED USE	:MIXED USE RESIDENTIAL
TOTAL SITE AREA (BEFORE RECORDATION)	:86.56±AC
TOTAL SITE AREA (AFTER RECORDATION)	:87.698±AC
TOTAL SITE AREA PHASE 1	:41.475±AC
TOTAL SITE AREA PHASE 2	:46.223±AC
PROPOSED NUMBER OF TOWNHOUSES UNITS	:96
PROPOSED NUMBER OF MULTI-FAMILY UNITS	
ONE BEDROOM (TYPE C BLDG)	:60 UNITS (5 BUILDINGS)
TWO BEDROOM (TYPE A BLDG)	:180 UNITS (15 BUILDINGS)
THREE BEDROOM (TYPE B BLDG)	:48 UNITS (4 BUILDINGS)
TOTAL	:288 GARDEN APARTMENTS
TOTAL UNITS	:384

R-3 ZONING REQUIREMENTS TOWNHOUSES

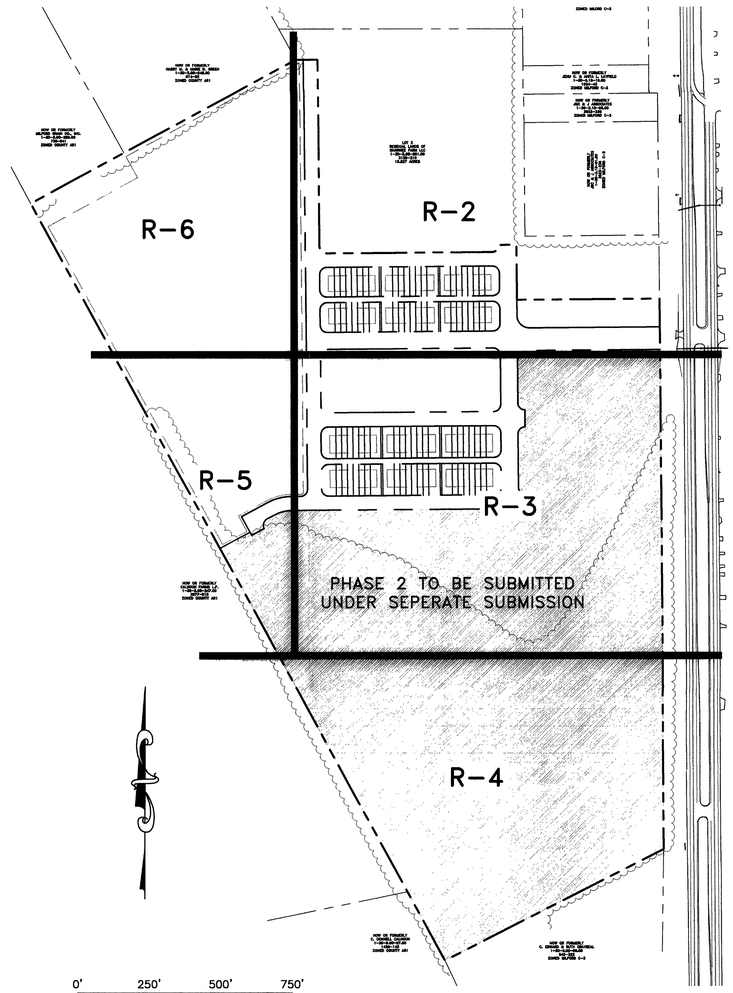
MINIMUM LOT SIZE ALLOWED	:2,000 S.F.
MINIMUM LOT WIDTH	:20'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	: 8'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:60%
MAXIMUM HEIGHT	:35' OR 3 STORIES

R-3 ZONING REQUIREMENTS GARDEN APARTMENTS

MINIMUM LOT SIZE ALLOWED	:2,500 S.F.
MINIMUM LOT WIDTH	:50'
FRONT YARD SETBACK	:30'
SIDE YARD SETBACK	:12.5'
REAR YARD SETBACK	:15'
MAXIMUM LOT COVERAGE	:20%
MAXIMUM HEIGHT	:35' OR 3 STORIES
TOTAL REQUIRED OPEN SPACE	:16.59±AC (40%)
TOTAL PROVIDED OPEN SPACE	:17.525±AC (42%)
PASSIVE OPEN SPACE	:14.99±AC
ACTIVE OPEN SPACE	:2.53±AC
TOTAL AMOUNT OF STORMWATER	:6.82±AC
TOTAL AMOUNT OF PROPOSED RIGHT-OF-WAY	:8.16±AC
TOTAL AREA OF LOTS	:28 82±AC
AVERAGE DENSITY OF LOTS	:4.44 UNITS/ACRE
MINIMUM LOT SIZE	:2,100± S.F.
MAXIMUM LOT SIZE	:988,883 S.F.
PARKING SPACES REQUIRED	:2.5 SPACES/UNIT + 16 CLUBHOUSE SPACES = 736 SPACES
PARKING SPACES PROVIDED	:729 SPACES +16 CLUBHOUSE SPACES = 745 SPACES
PROPOSED SEWER	:CITY OF MILFORD
PROPOSED WATER	:CITY OF MILFORD
FIRE DISTRICT	:CARLISLE
SCHOOL DISTRICT	:MILFORD
ELECTION DISTRICT	:2ND
PERMANENT MONUMENTS FOUND	:16
PERMANENT MONUMENTS PLACED	:14
VERTICAL DATUM	:NAVD 88

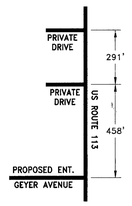
OWNERS/DEVELOPERS
SHAWNEE FARM LLC
48 GOOSE BRIAR LANE
MILFORD, DELAWARE 19963

ENGINEER/SURVEYOR
DAVIS, BOWEN & FRIEDEL, INC.
23 NORTH WALNUT STREET
MILFORD, DELAWARE 19963



GENERAL NOTES

1) THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE INSPECTION.
2) "THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, MODIFY, OR DELETE ANY EROSION AND SEDIMENT CONTROL MEASURES AS THEY DEEM NECESSARY."
3) THIS SITE IS NOT IMPACTED BY THE 100 YEAR FLOOD PLAIN AS DELINEATED ON FEMA MAP PANEL# 10050C0039J DATED: JANUARY 6, 2005.
4) THIS SITE IS NOT IMPACTED BY WETLANDS PER THE DELINEATION PERFORMED BY: ENVIRONMENTAL RESOURCES, INC. 62 NORTH DUPONT HIGHWAY P.O. BOX 169 SELBYVILLE, DE 19975
5) ACCESS TO ALL LOTS WILL BE FROM INTERNAL STREETS ONLY.
6) NO REVISION MAY BE MADE TO PHASE 1 WITHOUT THE WRITTEN CONSENT OF SEVENTY-FIVE PERCENT (75%) OF THE LOT OWNERS OF THE RECORDED PHASE 1 PLAT AND THE LOT OWNERS OF THE ADJACENT LOTS TO THE REVISION.
7) NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED FOR ANY LOT WITHIN THIS DEVELOPMENT UNTIL ALL REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED, CONSTRUCTED OR PLACED FOR THE LOT WHICH THE CERTIFICATE OF OCCUPANCY IS TO BE ISSUED IN A MANNER ACCEPTABLE TO THE CITY AND THE STATE, OR UNTIL THE DEVELOPER FILES A PERFORMANCE BOND OF OTHER GUARANTEE WITH THE CITY FOR ANY UNCOMPLETED PUBLIC OR PRIVATE STREET OR OTHER IMPROVEMENT.
8) NO "CERTIFICATE OF OCCUPANCY" PERMIT WILL BE ISSUED FOR ANY LOT WITHIN THE DEVELOPMENT UNTIL THE STREETS SIGNS HAVE BEEN INSTALLED FOR THE ENTRANCE TO THE DEVELOPMENT AND FOR THE STREETS LEADING TO THE LOT WHICH THE "CERTIFICATE OF OCCUPANCY" IS TO BE ISSUED.
9) ALL FIRE LANES, FIRE HYDRANTS, EXITS, STANDPIPES, AND SPRINKLER CONNECTIONS WILL BE MARKED IN ACCORDANCE WITH STATE FIRE MARSHAL REGULATIONS.
10) THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE, AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS, AND NIGHTTIME FARM OPERATIONS. THE USE AND THE ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES OR ACTIVITIES.
11) SUBDIVISION STREETS CONSTRUCTED WITHIN THE LIMITS OF THE RIGHT-OF-WAY DEDICATED TO PUBLIC USE SHOWN ON THIS PLAN ARE TO BE MAINTAINED BY THE CITY OF MILFORD FOLLOWING THE COMPLETION OF THE STREETS BY THE DEVELOPER TO THE SATISFACTION OF THE CITY. THE CITY ASSUMES NO MAINTENANCE RESPONSIBILITIES WITHIN THE DEDICATED STREET RIGHT-OF-WAY UNTIL THE STREETS HAVE BEEN ACCEPTED BY THE CITY.
12) PROPOSED OPEN SPACE TO BE OWNED AND MAINTAINED BY THE COMMUNITY HOMEOWNERS ASSOCIATION.
13) ALL REQUIRED LANDSCAPE BUFFERS SHALL BE PLANTED AND ALL ACTIVE RECREATION AMENITIES INSTALLED PRIOR TO ISSUANCE OF 50% OF THE CERTIFICATES OF OCCUPANCY, AND MAINTAINED BY THE DEVELOPER UNTIL 75% OF THE CERTIFICATES OF OCCUPANCY HAVE BEEN ISSUED. THE LANDSCAPE BUFFER AREA AND ANY OTHER LANDSCAPE PLAN DEPICTED ON THE RECORD PLAN SHALL BE MAINTAINED IN PERPETUITY BY THE HOMEOWNERS' ASSOCIATION OR MAINTENANCE CORPORATION. THESE DEED RESTRICTIONS SHALL RUN WITH THE LAND AND MAY NOT BE VACATED BY THE HOMEOWNERS' ASSOCIATION OR THE MAINTENANCE CORPORATION.
14) THE DEVELOPER WILL BE RESPONSIBLE FOR MAINTENANCE OF SEDIMENT & STORMWATER CONTROLS DURING CONSTRUCTION AND FOR LONG TERM MAINTENANCE OF STORMWATER CONTROLS UNTIL CONSTRUCTION IS COMPLETE. AT THE TIME, RESPONSIBILITY FOR LONG TERM MAINTENANCE OF STORMWATER CONTROLS SHALL BE ASSUMED BY THE HOMEOWNER'S ASSOCIATION. IF A HOMEOWNER'S ASSOCIATION IS NOT FORMED THEN THE OWNER IS TO PROVIDE LONG TERM MAINTENANCE FOR THE SITE.
15) FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR PART WITHIN 50 FEET OF THE BOUNDARY OF AN AGRICULTURAL PRESERVATION DISTRICT, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE AGRICULTURAL PRESERVATION DISTRICT.
16) ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MATERIALS AND WORKMANSHIP SHALL CONFORM TO ALL STATE OF DELAWARE, SUSSEX COUNTY, AND CITY OF MILFORD STANDARDS AND SPECIFICATIONS.
17) SANITARY SEWER AND WATER SERVICE WILL BE MAINTAINED BY THE CITY OF MILFORD UPON COMPLETION OF PHASE 1 AND ACCEPTANCE BY THE CITY IN ACCORDANCE WITH ALL CITY SPECIFICATIONS.
18) DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION AND DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS, ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION FOR STRUCTURES AND UTILITY LINES, ON AND OFF SITE, MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
19) DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
20) THE DEVELOPER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE ONSITE STORMWATER MANAGEMENT FACILITIES DURING DEVELOPMENT & THE HOMEOWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR ALL MAINTENANCE FOLLOWING THE COMPLETION OF DEVELOPMENT.
21) DEVELOPER SHALL INSTALL ONSITE LIGHTING TO ILLUMINATE STREETS, PARKING AREAS, AND WALKWAYS, IN ACCORDANCE WITH CITY REGULATIONS.
22) THE HOMEOWNERS ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SIDEWALKS THROUGHOUT THE DEVELOPMENT.
22) MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555
23) EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTORS EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (SEE NOTE #22).
24) THE DEVELOPER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE ONSITE WELLS TO ENSURE THE STORMWATER MANAGEMENT FACILITIES MAINTAIN THE DESIGNED PERMANENT POOL LEVEL DURING CONSTRUCTION AND FOR LONG TERM MAINTENANCE UNTIL CONSTRUCTION IS COMPLETE. AT THE TIME, RESPONSIBILITY FOR LONG TERM MAINTENANCE OF THE WELLS SHALL BE ASSUMED BY THE HOMEOWNER'S ASSOCIATION. IF A HOMEOWNER'S ASSOCIATION IS NOT FORMED THEN THE OWNER IS TO PROVIDE LONG TERM MAINTENANCE FOR THE WELLS.
25) MAINTENANCE OF THE MULTI-MODAL PATH, WHICH SHALL BE CONSTRUCTED IN CONJUNCTION WITH OR RELATION TO THIS SUBDIVISION, BUT SHALL BE LOCATED WITHIN THE LIMITS OF THE EXISTING RIGHT-OF-WAY, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE MULTI-MODAL PATH.
26) MAINTENANCE OF THE RIPRAP ENERGY DISSIPATER, WHICH SHALL BE CONSTRUCTED IN CONJUNCTION WITH OR RELATION TO THIS SUBDIVISION, BUT SHALL BE LOCATED WITHIN THE LIMITS OF THE EXISTING RIGHT-OF-WAY, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH. THE STATE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE RIPRAP ENERGY DISSIPATER.

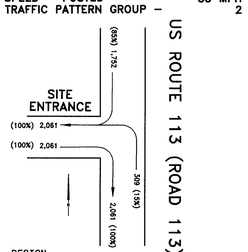


EXISTING DRIVEWAYS DETAIL
SCALE: NOT TO SCALE

35942
BK: 136 PG: 89

DELAWARE TRAFFIC SUMMARY 2007

US ROUTE 113 (ROAD 113)
AADT - CURRENT - 18,333
SPEED - POSTED - 55 MPH
TRAFFIC PATTERN GROUP - 2



DESIGN	ITE CODE	UNITS	ADT
TYPE OF DEV.			
SINGLE-FAMILY HOUSES	210	162	1,621
APARTMENTS	220	288	1,881
TOWNHOUSES	230	96	620
		546	4,122

NOTES: TRIP GENERATION BASED ON ITE TRIP GENERATION REPORT 7TH EDITION

TRAFFIC DIAGRAM
NO SCALE

"THIS PLATTED AREA IS NOT WITHIN THE JURISDICTION OF THE COUNTY PLANNING AND ZONING COMMISSION. 9.18.09 GA" (9 Sheets)

CITY OF MILFORD APPROVED PLANNING DEPT.

LEGEND:
- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

OWNERS CERTIFICATION

I, SHAWNEE FARM LLC, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT ALL STREETS SHOWN HEREON AND NOT HERETOFORE DEDICATED ARE HEREBY DEDICATED TO THE PUBLIC USE AND THAT ALL PROPOSED MONUMENTS AND MARKERS SHOWN HEREON WILL BE SET AT THE LOCATION INDICATED, AND THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DATE: 9/1/09 SIGNATURE _____
BRUCE GEYER
SHAWNEE FARM LLC
MANAGING PARTNER

ENGINEERS CERTIFICATION

I, RANDY B. DUPLECHAIN HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DATE: 9/9/09 SIGNATURE _____
RANDY B. DUPLECHAIN, P.E.

RANDY B. DUPLECHAIN REGISTERED No. 8059 PROFESSIONAL ENGINEER DELAWARE

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

MATCH LINE (SEE SHEET R-6)

S 89°34'00" W 76.82'
26.82 50.00

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

N 00°26'00" W 683.77'
N 00°26'00" W 658.77'

LOT 3
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.00
3128-210
15.827 ACRES

LEGEND:
= BOUNDARY LINE
= RIGHT-OF-WAY
= LOT LINE
= BUILDING SETBACK
(B) = LOT DELINEATION
= EXISTING TOPOGRAPHIC LINE
= EXISTING VEGETATION LINE
= PHASE 2

NOW OR FORMERLY
JEHU C. & ANITA L. LAYFIELD
1-30-3.15-19.00
1924-43
ZONED MILFORD C-3

S 00°26'57" E 100.20'

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-03.00
2923-238
ZONED MILFORD C-3

S 00°43'30" E 100.27'

EASEMENT LINE TABLE

LINE	BEARING	DISTANCE
L1	N 89°34'00" E	22.45'
L2	S 27°27'05" E	60.18'
L3	S 62°32'55" W	20.00'
L4	N 27°27'05" W	70.38'
L5	S 89°45'28" W	55.68'
L6	S 00°14'32" E	19.92'
L7	N 89°45'28" E	55.74'
L8	N 00°26'00" W	19.92'

BK: 136 PG: 90

NOW OR FORMERLY
JGC & J ASSOCIATES
1-30-3.19-01.00
2923-236
ZONED MILFORD C-3

S 00°24'41" E 400.37'

50' R.O.W.

20' PERMANENT UTILITY EASEMENT

PROPERTY LINE TO BE ABANDONED PER THIS PLAT

S 89°34'00" W 630.00'

N 89°34'00" E 580.00'

PRICE DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

SEE SHEET R-7

PERMANENT UTILITY EASEMENT

20' PERMANENT UTILITY EASEMENT

PASSIVE OPEN SPACE
6,000 S.F.
0.01 ACRES

SAND STILL DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

RESSLER LANE
(DEDICATED TO PUBLIC USE)

S 89°34'00" W 580.00'

20' R.O.W.

60' R.O.W.

SEE SHEET R-7

GEYER AVENUE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

20' PERMANENT DRAINAGE EASEMENT

N 89°34'00" E 580.00'

50' R.O.W.

N 89°29'12" E 469.28'

20' PERMANENT UTILITY EASEMENT

20' PERMANENT DRAINAGE EASEMENT

N 89°34'00" E 60.00'

S 00°26'00" E 225.11'

79.78'

L5 L8 L6 L7

STORMWATER MANAGEMENT AREA (POND 1)
131,510 S.F.
3.02 ACRES

S 00°26'00" E 195.00'

S 00°26'00" E 252.00'

LAYFIELD DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

PROPERTY LINE TO BE ABANDONED PER THIS PLAT

S 89°34'00" W 500.00'

570.00'

PASSIVE OPEN SPACE
49,603 S.F.
1.14 ACRES

L3 L4 L2 L1

100.00'

24.06'

N 89°34'00" E 457.00'

20' PERMANENT DRAINAGE EASEMENT

GEYER AVENUE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

80' R.O.W.

80.00'

US RT. 113
(200' R.O.W.)

MATCH LINE (SEE SHEET R-3)

0' 50' 100' 150'

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DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-2

MATCH LINE (SEE SHEET R-2)

ACTIVE OPEN SPACE
48,226 S.F.
1.11 ACRES

20' PERMANENT DRAINAGE EASEMENT

STORMWATER MANAGEMENT AREA (POND 2)
79,827 S.F.
1.83 ACRES

PASSIVE OPEN SPACE
92,988 S.F.
2.13 ACRES

PERMANENT UTILITY EASEMENT WIDTH VARIES

20' PERMANENT DRAINAGE EASEMENT

LEXUS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

N 00°26'00" W 1750.00'

50' R.O.W.

60' R.O.W.

N 89°34'00" E 580.00'

ZOAR AVENUE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

SEE SHEET R-7

S 89°34'00" W 580.00'

PERMANENT DRAINAGE EASEMENT WIDTH VARIES

20' PERMANENT UTILITY EASEMENT

THORNTON LANE
(DEDICATED TO PUBLIC USE)

20' R.O.W.

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

KIRSTEN DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

N 89°34'00" E 712.48'

60.00'
S 89°34'00" W

S 00°26'00" E 2174.93'

US RT. 113
(200' R.O.W.)

LOT 2
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.01
3128-210
46.223 ACRES

PHASE 2 TO BE SUBMITTED
UNDER SEPARATE SUBMISSION

MATCH LINE (SEE SHEET R-5)

MATCH LINE (SEE SHEET R-4)

BK: 136 PG: 91

0' 50' 100' 150'

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MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-3

BK: 136 PG: 92

MATCH LINE (SEE SHEET R-5)

MATCH LINE (SEE SHEET R-3)

LOT 2
RESIDUAL LANDS OF
SHAWNEE FARM LLC
1-30-3.00-261.01
3128-210
46.223± ACRES

PHASE 2 TO BE SUBMITTED
UNDER SEPARATE SUBMISSION

US RT. 113
(200' R.O.W.)

1659.60'

S 62°53'18" W 861.67'

NOW OR FORMERLY
C. DONNELL CALHOUN
1-30-6.00-97.00
1426-143
ZONED COUNTY AR1

NOW OR FORMERLY
C. EDWARD & RUTH GRAYBEAL
1-30-6.00-98.00
543-322
ZONED MILFORD C-3

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

0' 50' 100' 150'

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MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL

CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-4

CURVE DATA

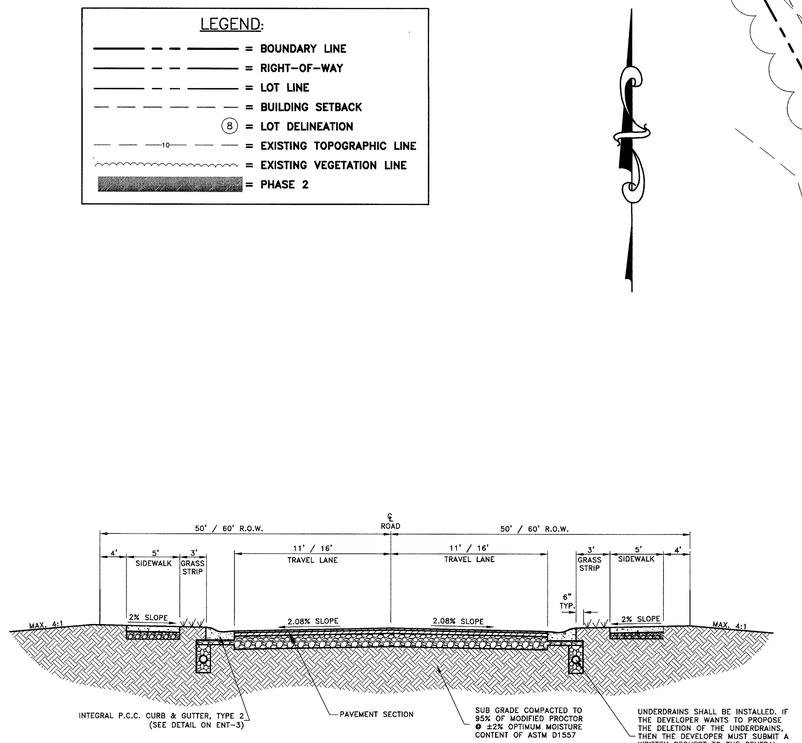
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C3	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C4	43.00'	67.54'	60.81'	S 45°26'00" E	90°00'00"
C5	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C6	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C7	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C8	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C9	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C10	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C11	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C12	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C13	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C14	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C15	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C16	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C17	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C18	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C19	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C20	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C21	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C22	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C23	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C24	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C25	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C26	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C27	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C27A	25.00'	32.51'	30.27'	N 37°41'22" W	74°30'44"
C27B	25.00'	6.76'	6.74'	N 82°41'22" W	15°29'16"
C28	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C29	20.00'	31.42'	28.28'	N 45°26'00" W	90°00'00"
C30	80.00'	125.66'	113.14'	N 45°26'00" W	90°00'00"
C30A	80.00'	20.57'	20.51'	S 83°04'05" E	14°43'50"
C30B	80.00'	47.21'	46.53'	S 58°47'48" E	33°48'45"
C30C	80.00'	47.14'	46.46'	S 25°00'37" E	33°45'37"
C30D	80.00'	10.75'	10.74'	S 04°16'54" E	07°41'48"
C31	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C32	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C33	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C34	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C35	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C36	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C37	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C38	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C39	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C40	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C41	25.00'	27.04'	25.74'	N 30°33'04" E	61°58'08"
C41A	25.00'	14.57'	14.36'	N 44°50'25" E	33°23'26"
C41B	25.00'	12.47'	12.34'	N 13°51'21" E	28°34'42"
C42	25.00'	51.50'	42.87'	N 59°26'56" W	118°01'52"
C43	175.00'	189.27'	180.18'	N 30°33'04" E	61°58'08"
C43A	175.00'	55.22'	54.99'	N 52°29'45" E	18°04'45"
C43B	175.00'	46.53'	46.39'	N 35°50'21" E	15°14'03"
C43C	175.00'	55.49'	55.26'	N 19°08'19" E	18°10'01"
C43D	175.00'	32.04'	31.99'	N 04°48'39" E	10°29'19"
C44	125.00'	135.20'	128.70'	N 30°33'04" E	61°58'08"
C45	125.00'	196.35'	176.78'	N 73°27'52" W	90°00'00"
C45A	125.00'	5.00'	5.00'	N 29°36'39" W	02°17'33"
C45B	125.00'	186.35'	169.56'	N 73°27'52" W	85°24'54"
C45C	125.00'	5.00'	5.00'	N 62°40'54" E	02°17'33"
C46	175.00'	274.89'	247.49'	N 73°27'52" W	90°00'00"
C46A	175.00'	52.94'	52.74'	N 37°07'50" W	17°19'56"
C46B	175.00'	55.49'	55.26'	N 54°52'49" W	18°10'01"
C46C	175.00'	55.49'	55.26'	N 73°02'50" W	18°10'01"
C46D	175.00'	55.49'	55.26'	N 88°47'09" E	18°10'01"
C46E	175.00'	55.49'	55.26'	N 70°37'08" E	18°10'01"
C47	25.00'	39.27'	35.36'	N 16°32'08" E	90°00'00"
C48	25.00'	39.27'	35.36'	N 73°27'52" W	90°00'00"
C49	25.00'	39.27'	35.36'	N 16°32'08" E	90°00'00"
C50	25.00'	39.27'	35.36'	N 73°27'52" W	90°00'00"
C51	25.00'	39.27'	35.36'	N 16°32'08" E	90°00'00"
C52	25.00'	39.93'	35.82'	N 74°13'15" W	91°30'46"
C53	270.00'	284.89'	271.86'	N 29°47'41" E	60°27'22"
C54	330.00'	356.92'	339.77'	N 30°33'04" E	61°58'08"
C54A	330.00'	6.47'	6.47'	N 60°58'26" E	01°07'23"
C54B	330.00'	65.57'	65.46'	N 54°43'12" E	11°23'04"
C54C	330.00'	48.91'	48.87'	N 44°46'54" E	08°29'32"
C54D	330.00'	55.00'	54.94'	N 35°45'40" E	09°32'57"
C54E	330.00'	55.00'	54.94'	N 26°12'42" E	09°32'57"
C54F	330.00'	50.94'	50.89'	N 17°00'54" E	08°50'38"
C54G	330.00'	65.64'	65.54'	N 06°53'41" E	11°23'50"
C54H	330.00'	9.38'	9.38'	N 00°22'52" E	01°37'46"
C55	25.00'	39.27'	35.36'	N 45°26'00" W	90°00'00"
C56	25.00'	51.50'	42.87'	N 30°33'04" E	118°01'52"
C57	25.00'	27.04'	25.74'	N 59°26'56" W	61°58'08"
C58	125.00'	61.15'	60.55'	N 75°33'04" E	28°01'52"
C59	25.00'	39.27'	35.36'	N 16°32'08" E	90°00'00"
C60	25.00'	39.27'	35.36'	N 73°27'52" W	90°00'00"
C61	25.00'	39.27'	35.36'	N 16°32'08" E	90°00'00"
C62	25.00'	39.27'	35.36'	N 73°27'52" W	90°00'00"
C63	175.00'	85.62'	84.76'	N 75°33'04" E	28°01'52"
C64	125.00'	61.15'	60.55'	N 75°33'04" E	28°01'52"
C65	25.00'	39.27'	35.36'	N 44°34'00" E	90°00'00"
C66	175.00'	85.62'	84.76'	N 75°33'04" E	28°01'52"
C66A	175.00'	34.43'	34.37'	N 67°10'17" E	11°16'19"
C66B	175.00'	51.19'	51.01'	N 81°11'13" E	16°45'33"

LINE DATA

LINE	BEARING	DISTANCE
L1	N 61°32'08" E	16.00'
L2	N 61°32'08" E	10.91'
L3	N 28°27'52" W	2.99'
L4	N 89°34'00" E	14.54'
L5	N 40°30'56" E	9.15'
L6	N 40°30'56" E	13.00'

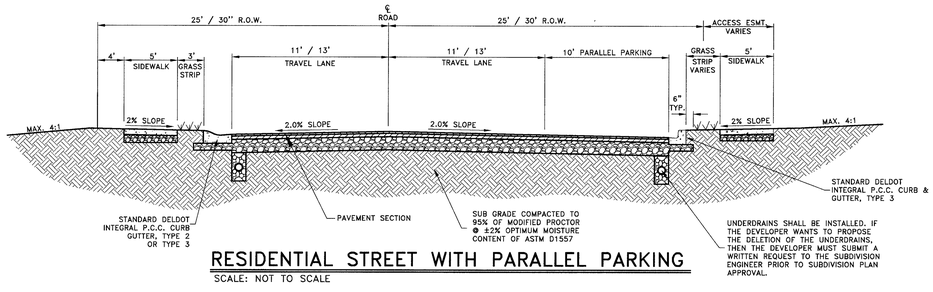
LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- 10 = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2



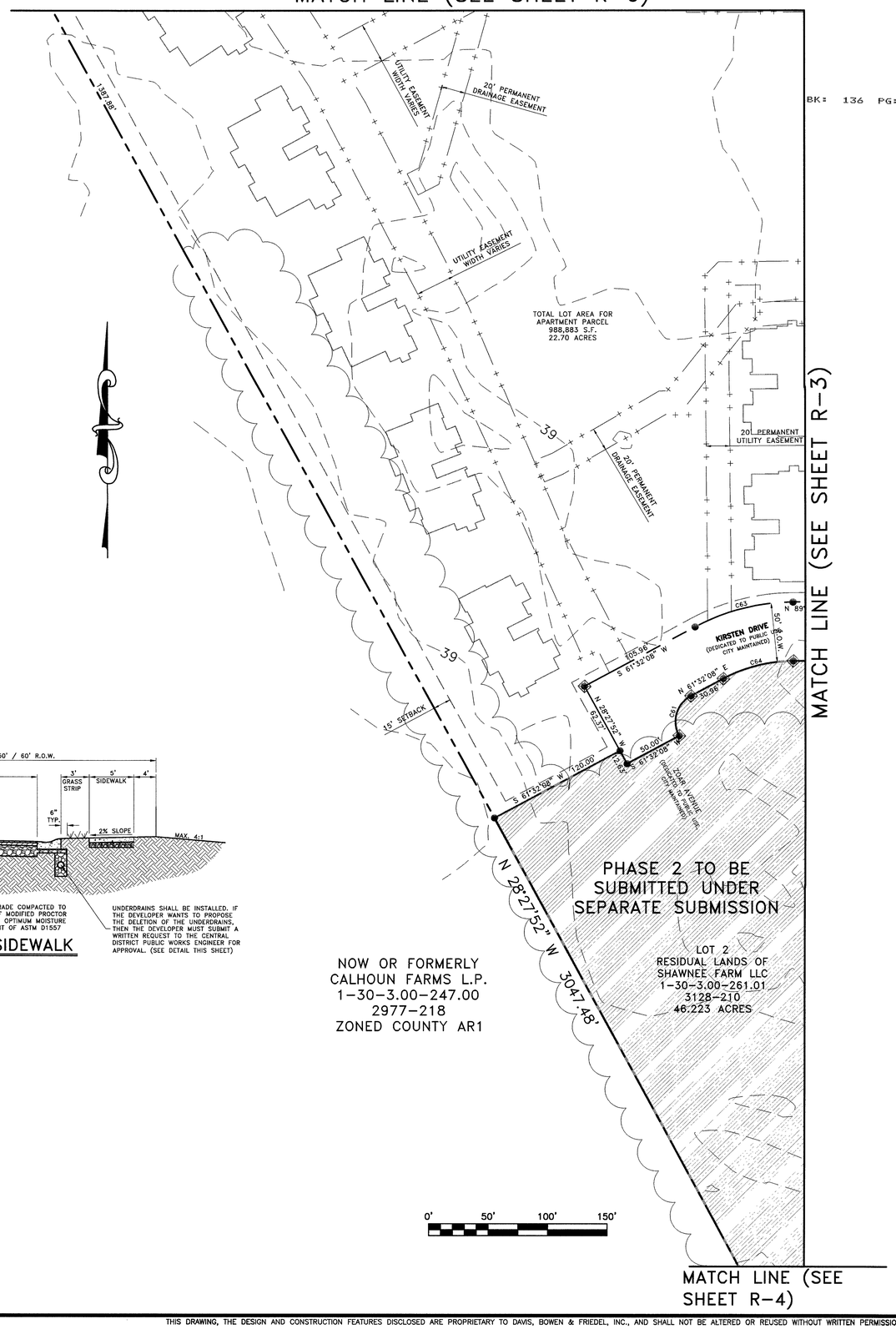
RESIDENTIAL STREET WITH SIDEWALK

SCALE: NOT TO SCALE



RESIDENTIAL STREET WITH PARALLEL PARKING

SCALE: NOT TO SCALE



DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
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MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-5

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BK: 136 PG: 94

NOW OR FORMERLY
HARRY M. & MARIE R. GREEN
1-30-3.00-248.00
874-22
ZONED COUNTY AR1

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

N 61°30'07" E 688.23'

N 61°15'18" E 372.54'

15' SETBACK

100' SETBACK

15' SETBACK

20' PERMANENT DRAINAGE EASEMENT

UTILITY EASEMENT WIDTH VARIES

TOTAL LOT AREA FOR APARTMENT PARCEL
988,883 S.F.
22.70 ACRES

STORMWATER MANAGEMENT AREA (POND 4)
77,143 S.F.
1.77 ACRES

MATCH LINE (SEE SHEET R-2)

MATCH LINE (SEE SHEET R-5)

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

0' 50' 100' 150'

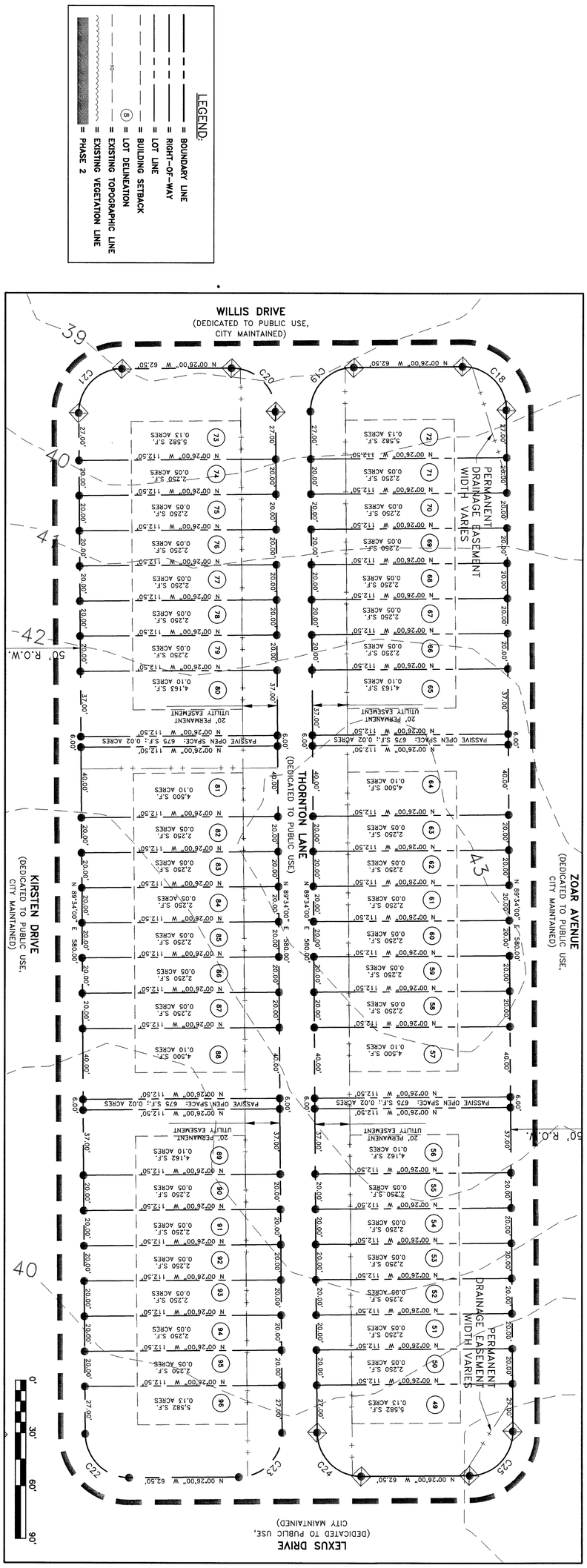
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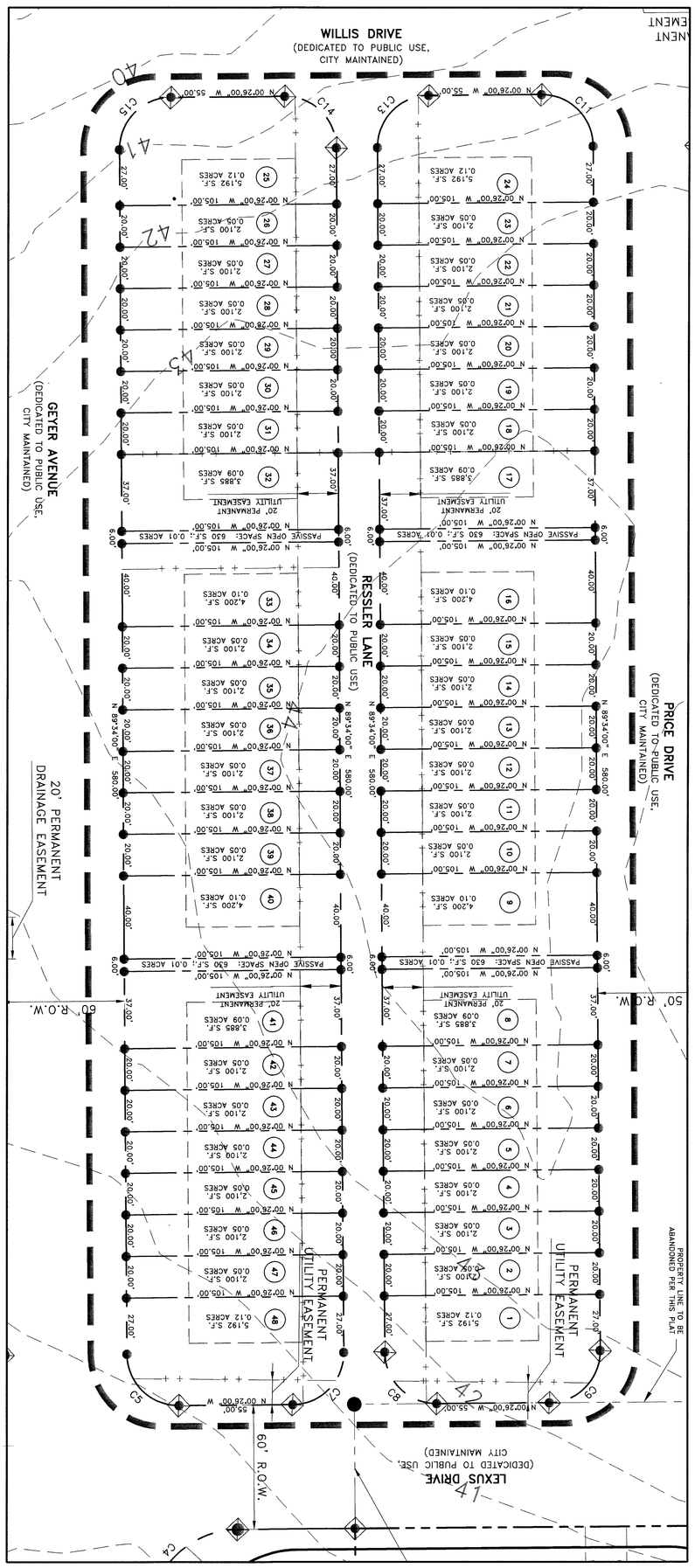
DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1"=50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-6





Bk: 136 Pg: 95

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CYPRESS HALL - RESIDENTIAL

CEDAR CREEK HUNDRED, CITY OF MILFORD

SUSSEX COUNTY, DELAWARE

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN

Date:	JULY, 2007
Scale:	1"=30'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	R-7

LEGEND:

- = BOUNDARY LINE
- = RIGHT-OF-WAY
- = LOT LINE
- = BUILDING SETBACK
- (8) = LOT DELINEATION
- = EXISTING TOPOGRAPHIC LINE
- = EXISTING VEGETATION LINE
- = PHASE 2

[A] = 5' POURED CONCRETE SIDEWALK – SEE DETAIL SHEET
[B] = HANDICAP RAMP – SEE DETAIL SHEET
[C] = PEDESTRIAN CROSSWALK – SEE DETAIL SHEET
[D] = MODIFIED I.P.C.C. CURB & GUTTER, TYPE 3, SHEET DETAIL SHEET
[E] = MODIFIED P.C.C. CURB, TYPE 3, SEE DETAIL SHEET
[F] = DUMPSTER & DUMPSTER ENCLOSURE, SEE DETAIL SHEET
[G] = STOP SIGN – SEE DETAIL SHEET
[H] = HANDICAP PARKING ONLY SIGN – SEE DETAIL SHEET
[I] = DEDICATED AREA FOR RECYCLING FACILITIES
[J] = SHELTERED SCHOOL BUS STOP
(24) = # OF PARKING SPACES

NOW OR FORMERLY
MILFORD GRAIN CO., INC.
1-30-3.00-250.00
736-541
ZONED COUNTY AR1

N 61°15'18" E 372.54'

N 61°30'07" E 688.23'

LANDSCAPE BUFFER AREA

SETBACK LINE

SETBACK LINE

PASSIVE OPEN SPACE
225,572 S.F.
5.18 ACRES

PASSIVE OPEN SPACE
174,697 S.F.
4.01 ACRES

STORMWATER MANAGEMENT
AREA (POND 4)
77,143 S.F.
1.77 ACRES

PASSIVE OPEN SPACE
3,626 S.F.
0.08 ACRES

ACTIVE OPEN SPACE
66,344.9 S.F.
1.52 ACRES

PASSIVE OPEN SPACE
20,742 S.F.
0.48 ACRES

PASSIVE OPEN SPACE
62,648 S.F.
1.44 ACRES

PASSIVE OPEN SPACE
225,572 S.F.
5.18 ACRES

SWIMMING POOL

CLUB HOUSE
2,400 SQ FT.
(2 STORY)

BUILDING "A"
12 UNITS
(TYPE A)
121–132

BUILDING "B"
12 UNITS
(TYPE B)
133–144

BUILDING "C"
12 UNITS
(TYPE C)
145–156

BUILDING "D"
12 UNITS
(TYPE C)
157–168

BUILDING "E"
12 UNITS
(TYPE C)
169–180

BUILDING "F"
12 UNITS
(TYPE A)
181–192

BUILDING "G"
12 UNITS
(TYPE A)
193–204

BUILDING "H"
12 UNITS
(TYPE A)
205–216

BUILDING "I"
12 UNITS
(TYPE A)
217–228

BUILDING "J"
12 UNITS
(TYPE C)
229–240

BUILDING "K"
12 UNITS
(TYPE B)
241–252

BUILDING "L"
12 UNITS
(TYPE A)
253–264

BUILDING "M"
12 UNITS
(TYPE A)
265–276

BUILDING "N"
12 UNITS
(TYPE B)
277–288

BUILDING "O"
12 UNITS
(TYPE A)
289–300

BUILDING "P"
12 UNITS
(TYPE A)
301–312

BUILDING "Q"
12 UNITS
(TYPE C)
313–324

BUILDING "R"
12 UNITS
(TYPE A)
325–336

BUILDING "S"
12 UNITS
(TYPE C)
337–348

BUILDING "T"
12 UNITS
(TYPE A)
349–360

BUILDING "U"
12 UNITS
(TYPE B)
361–372

BUILDING "V"
12 UNITS
(TYPE A)
373–384

BUILDING "W"
12 UNITS
(TYPE A)
97–108

BUILDING "X"
12 UNITS
(TYPE A)
109–120

KRISTEN DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

WILLIS DRIVE
(DEDICATED TO PUBLIC USE, CITY MAINTAINED)

BK: 136 PG: 96

0' 50' 100' 150'

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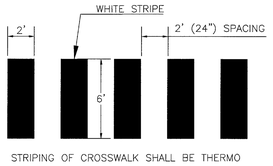
DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

SITE PLAN

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

Date:	JULY, 2007
Scale:	1" = 50'
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	

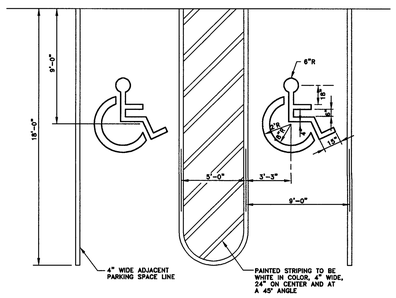
SITE



STRIPING OF CROSSWALK SHALL BE THERMO

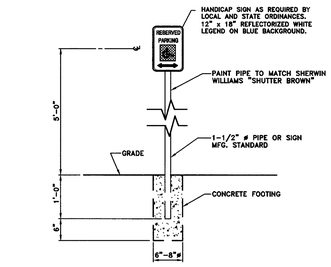
PEDESTRIAN CROSSWALK DETAIL

SCALE: NOT TO SCALE



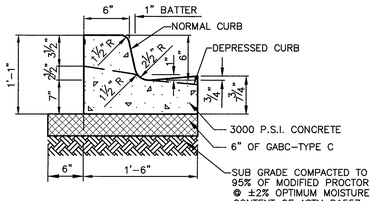
HANDICAP PARKING DETAIL

SCALE: NOT TO SCALE



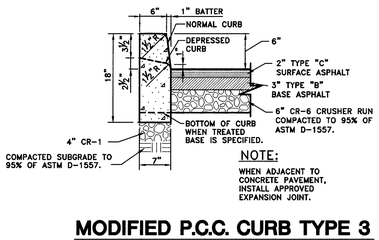
HANDICAP PARKING SIGN

SCALE: NOT TO SCALE



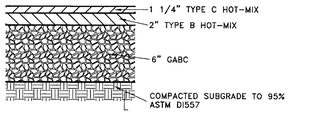
MODIFIED INTEGRAL P.C.C. TYPE 3 CURB & GUTTER

SCALE: NOT TO SCALE



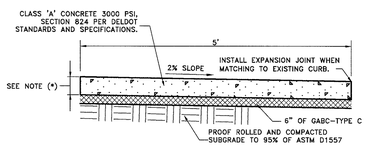
MODIFIED P.C.C. CURB TYPE 3

SCALE: NOT TO SCALE



TYPICAL PAVEMENT SECTION DETAIL

SCALE: NOT TO SCALE

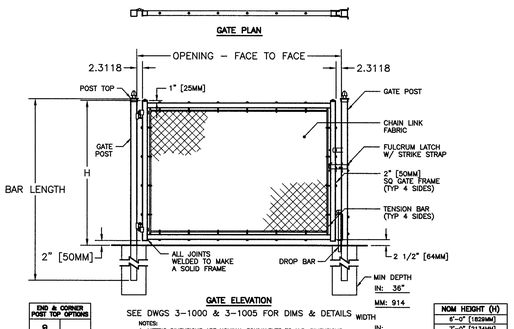


* - STANDARD SIDEWALK SHALL BE 4" THICK, FOR DEPRESSED AND TRANSITION AREAS, THE SIDEWALK SHALL BE 6" THICK.

NOTES:
1. MARK IN 4' SQUARES, USE PREMOLDED EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 16'.
2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER DELDOT SPECIFICATIONS.

SIDEWALK DETAIL

SCALE: NOT TO SCALE



END & CORNER POST TOP OPTIONS	
STANDARD	FLAT

WIDTH	
IN:	
MM:	

NOM HEIGHT (H)
6'-0" (1829MM)
7'-0" (2134MM)
8'-0" (2438MM)
9'-0" (2743MM)
10'-0" (3048MM)
11'-0" (3353MM)
12'-0" (3658MM)

OPENING (F/F)
8'-0" (2438MM)
10'-0" (3048MM)
12'-0" (3658MM)
14'-0" (4267MM)
16'-0" (4877MM)

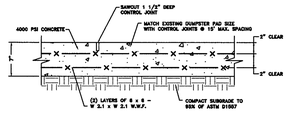
NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH.
4. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.

SEE DWGS 3-1000 & 3-1005 FOR DIMS & DETAILS

TYPICAL DOUBLE SWING GATE
SQUARE (OR ROUND) END POSTS, WITHOUT BARBED WIRE

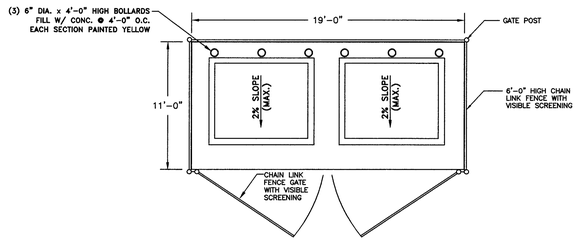
10' GATE DETAIL

SCALE: NOT TO SCALE



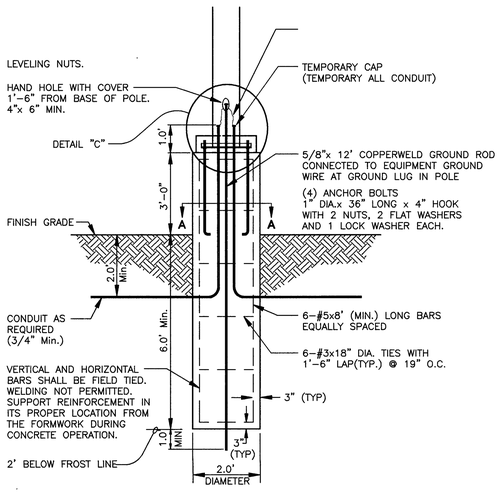
DUMPSTER PAD DETAIL

SCALE: NOT TO SCALE



DUMPSTER PAD ENCLOSURE DETAIL

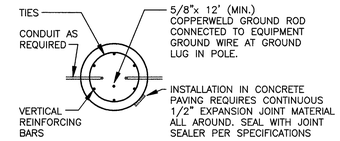
SCALE: NOT TO SCALE



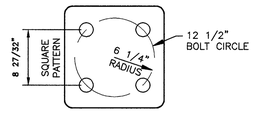
TYPICAL LIGHTING POLE BASE DETAIL

SCALE: NOT TO SCALE

NOTES:
1. 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
4. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
5. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSF.
6. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF, UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
7. EXPOSED CONCRETE SHALL BE PAINTED TRAFFIC YELLOW.
8. DETAIL FOR 39' POLE WITH MAX. FIXTURE EPA 4.6 SQ.FT.
9. ALL 39' POLES TO BE MOUNTED ON CONCRETE PEDESTALS 3' ABOVE GRADE, FOR A TOTAL MOUNTING HEIGHT OF 42' .
10. MOUNT LIGHT FIXTURES AT 60° PER BRACKET MARKS.
11. SUPPORT PIPE: 2" INSIDE DIAMETER, 7'-0" LONG.
12. SUPPORT BRACKET TO BE 2"x2"x1/8" ANGLES CENTERED ON PIPE. RE: #2
13. DRILL 11/32" DIA MOUNTING HOLES 1" FROM EACH END, CENTERED ON ANGLE.
14. ROUTE POWER UP THROUGH POLE, INTO 2" PIPE AND TO FIXTURES AT EACH END.
15. PAINT FIXTURE ASSEMBLY, INCLUDING CONDUIT, BLUE.
16. HARDWARE FOUND IN J-BOX:
    (8) SELF-TAPPING BOLTS
    (8) SS FLAT WASHERS
    (3) BLUE WIRE NUTS
    (6) 3/4" DRILL SCREWS
    (2) TWO HOLE STRAPS
    (1) 3/4" CHASE NIPPLE

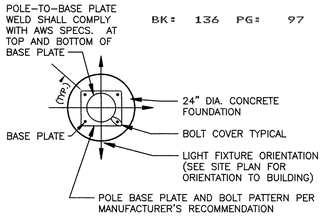


SECTION A-A



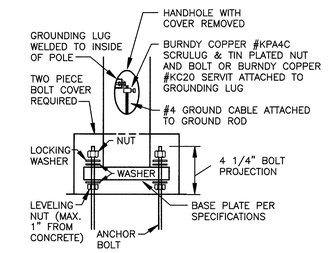
TYPICAL ANCHOR BOLT SPACING

SCALE: NOT TO SCALE



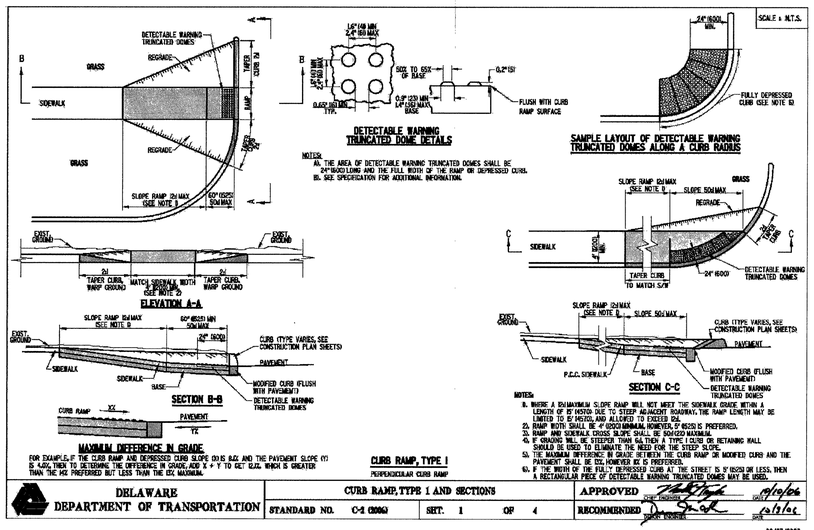
SECTION A-A

SCALE: NOT TO SCALE



DETAIL "C"

SCALE: NOT TO SCALE



NOTES:
1. THE AREA OF DETECTABLE WARNING TRUNCATED DOMES SHALL BE 24" (600) LONG AND THE FULL WIDTH OF THE RAMP OR DEPRESSED CURB.
2. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.

NOTES:
A. WHERE A EXAMINATION SLOPE RAMP WILL NOT MEET THE SIDEWALK GRADE WITHIN A LENGTH OF 15' (4570) DUE TO STEEP ADJACENT ROADWAY, THE RAMP LENGTH MAY BE LIMITED TO 5' (1620), AND ALLOWED TO EXCEED 12#.
2. RAMP WIDTH SHALL BE 4' (1220) MINIMUM, HOWEVER, 5' (1525) IS PREFERRED.
3. RAMP AND SIDEWALK CROSS SLOPE SHALL BE 50#(120) MAXIMUM.
4. IF GRADING WILL BE STEEPER THAN 6#, THEN A TYPE I (SLOPE OR RETAINING WALL SHOULD BE USED TO ELIMINATE THE NEED FOR THE STEEP SLOPE.
5. THE MAXIMUM DIFFERENCE IN GRADE BETWEEN THE CURB RAMP OR MODIFIED CURB AND THE PAVEMENT SHALL BE 13#, HOWEVER 8# IS PREFERRED.
6. IF THE WIDTH OF THE FULLY DEPRESSED CURB AT THE STREET IS 5' (1525) OR LESS, THEN A RECTANGULAR PIECE OF DETECTABLE WARNING TRUNCATED DOMES MAY BE USED.

DELAWARE DEPARTMENT OF TRANSPORTATION	CURB RAMP, TYPE I AND SECTIONS			APPROVED	10/10/06
	STANDARD NO. C-2 (2006)	SHT. 1 OF 4		RECOMMENDED	10/5/06

08/03/2006

Recorder of Deeds
John F. Brady
Sep 21,2009 11:16A
Sussex County
Doc. Surcharge Paid

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

CYPRESS HALL - RESIDENTIAL
CEDAR CREEK HUNDRED, CITY OF MILFORD
SUSSEX COUNTY, DELAWARE

SITE DETAILS

Date:	JULY, 2007
Scale:	AS NOTED
Dwn.By:	DJR
Proj.No.:	1423A001
Dwg.No.:	

DETAILS

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CITY OF MILFORD
NOTICE OF PUBLIC HEARINGS*

NOTICE IS HEREBY GIVEN the City of Milford Planning Commission will hold a Public Hearing on the following ordinance on Tuesday, March 19, 2019.

A FINAL REVIEW AND PUBLIC HEARING is scheduled before Milford City Council on Monday, March 25, 2019.

All persons interested in this application are encouraged to attend. The public hearings will begin at 7:00 p.m. on the said dates in the Milford City Hall Council Chambers, 201 South Walnut Street, Milford, DE 19963.

ORDINANCE 2019-09

An Ordinance for a Conditional Use to allow a Planned Unit Development to be known as Cypress Hall (Residential) consisting of 546 dwelling units (162 single-family detached units, 96 townhouse units and 288 multi-family units) on 91.69 +/- acres in an R3 zone located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection, Milford, Delaware. Tax Parcels 1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00.

Section 1.
Whereas, City Council granted Final Major Subdivision for Cypress Hall- Phase I on June 22, 2009; and

Whereas, the applicant, Shawnee Farm, LLC, proposes to revise the plan for the garden apartment area; and

Whereas, in lieu of applying for a variance from the Board of Adjustment, the applicant is seeking permission to deviate from Chapter 230 through the Planned Unit Development review process; and

Whereas, this notice, as required by the City's Zoning Code, has been published in the Milford Beacon and mailed to property owners within 200 feet of subject parcel(s); and

Whereas, the Planning Commission and the City Council has each conducted Public Hearings on the conditional use application to allow a Planned Unit Development, wherein public comment was requested and considered.

NOW, THERFORE, THE CITY OF MILFORD HEREBY ORDAINS:

City Council grants Shawnee Farm LLC a Conditional Use to allow a Planned Unit Development, to be known as Cypress Hall, consisting of 546 dwelling units (162 single-family detached units, 96 townhouse units and 288 multi-family units) on 91.69 +/- acres in an R3 zone and affixes any conditions it determines will tend to safeguard the public health, convenience and general welfare in the City.

Section 2. Dates
City Council Introduction: March 11, 2019
Planning Commission Public Hearing: March 19, 2019
City Council Public Hearing: March 25, 2019
Effective (Projected): April 4, 2019

CITY OF MILFORD
NOTICE OF PUBLIC HEARINGS*

NOTICE IS HEREBY GIVEN the City of Milford Planning Commission will hold a Public Hearing on the following ordinance on Tuesday, March 19, 2019.

A FINAL REVIEW AND PUBLIC HEARING is scheduled before Milford City Council on Monday, March 25, 2019.

All persons interested in this application are encouraged to attend. The public hearings will begin at 7:00 p.m. on the said dates in the Milford City Hall Council Chambers, 201 South Walnut Street, Milford, DE 19963.

ORDINANCE 2019-10

An Ordinance approving an Amendment to the Preliminary Major Subdivision/Residential, Phase I, commonly referred to as Cypress Hall, located on the west side of Route 113 approximately 3,100 feet south of the Shawnee Road intersection, Milford, Delaware.
Tax Parcels 1-30-3.00-261.01, 1-30-3.00-562.00 thru 659.00

Section 1.
Whereas, City Council granted Final Major Subdivision for Cypress Hall- Phase I on June 22, 2009; and

Whereas, the current record plan consists of 96 townhouses and 288 garden apartments, for a total of 384 units; and

Whereas, the applicant, Shawnee Farm, LLC, proposes to revise the plan for the garden apartment area by reducing the number of required parking spaces required from 2.5 spaces to 2 spaces per unit and increasing the number of units per building from 12 to 24; and

Whereas, at the time of submission, applicants may request the varying or waiving of requirements of Chapter 200, and the Planning Commission may recommend to City Council the varying or waiving of said requirements and request conditions that substantially secure the objectives of the requirements so waived; and

Whereas, the applicant is seeking Preliminary Major Subdivision approval for Phase I along with Preliminary Site Plan approval for the multi-family area; and*

Whereas, this notice, as required by the City's Zoning Code, has been published in the Milford Beacon and mailed to property owners within 200 feet of subject parcel(s); and

Whereas, the Planning Commission and the City Council has each conducted Public Hearings on the application for the Amended Preliminary Major Subdivision/Residential Phase I, wherein public comment was received and considered on the Application.

NOW, THERFORE, THE CITY OF MILFORD HEREBY ORDAINS:

A revision to the Final Major Subdivision Plan Phase I is hereby granted, as specified in the motion granted by a majority vote of City Council.

Section 2. Dates
City Council Introduction: March 11, 2019
Planning Commission Public Hearing: March 19, 2019
City Council Public Hearing: March 25, 2019
Effective (Projected): April 4, 2019

**Planning Commission Review Only*

THE CITY of Milford DELAWARE

Please join us in celebrating Milford's LEAD360 participants.



Multiplying Good, formerly the Jefferson Awards Foundation, and Mayor Archie Campbell invite you to a celebration of service and the selection of the Mayor's Top Project

---

Recipients include Jessica Donovan, BSA Scout Troop #116, Milford High School JDG, Girl Scout Troop #352, Harrington Sunshine 4-H Club, Chipman Middle School JDG, Milford Central Academy and Delaware 4H Foundation

When: Monday, March 25th at 7:00 pm

Where: City Hall, 201 S. Walnut Street, Milford, DE 19963

Please RSVP with the number of individuals attending to delaware@multiplyinggood.org by March 18th

MULTIPLYINGGOOD
THE POWER OF SERVICE TO OTHERS

---------- Forwarded message ----------
From: "**Rachel Ratkowski**" <ratkowski.rachel@gmail.com>
Date: Wed, Jan 30, 2019 at 1:48 PM -0500
Subject: National Service Recognition Day
To: "Mayor Shupe" <Mayor@milford-de.gov>
Cc: "Mom" <greenenancy@yahoo.com>

Dear Mayor Campbell,

We ask you to show your support for National Service by proclaiming April 2 as National Service Recognition Day.

As you may be aware, Delaware has a rich history of hosting National Service Members who serve in many non-profits throughout Sussex County and Milford. This year over 100 Delaware AmeriCorps members serve vital functions in organizations that mentor our children like Summer Learning Collaboration, Boys and Girls Clubs, YMCAs and schools. Foster Grandparents serve all year long providing wisdom and a hand up to future generations. Teach for America teachers serve in our schools. Veterans have joined with AmeriCorps to ensure our State Parks are strong. Other Members work with homeless, with hospice patients and Habitat for Humanity uses AmeriCorps to help build houses.

National Service provides a vital framework for giving back and enhancing our communities. We ask you to show your support for these amazing individuals by proclaiming April 2 as National Service Recognition Day.

Please email me if you are willing to share in our celebration with a proclamation, and suggest a date when we can have a representative of the State Office of Volunteerism and an AmeriCorps Member to receive it.

More information can be found at https://www.nationalservice.gov/serve/Recognitionday or https://volunteer.delaware.gov/state-office-of-volunteerism-

If you have any questions, please do not hesitate to contact me or the Delaware State Office of Volunteerism.

Rachel Ratkowski
National Service Consultant
GermaineLIFE
302 442 4738
Ratkowski.Rachel@gmail.com

City of Milford

PROCLAMATION 2019-06

NATIONAL SERVICE DAY-APRIL 2, 2019

WHEREAS, service to others is a hallmark of the American character, and central to how we meet our challenges; and

WHEREAS, the City of Milford is increasingly turning to national service and volunteerism as a cost-effective strategy to meet their needs; and

WHEREAS, AmeriCorps and Senior Corps participants address the most pressing challenges facing our communities, from educating students for the jobs of the 21st century, to fighting the opioid epidemic, to responding to natural disasters, to supporting veterans and military families; and

WHEREAS, national service expands economic opportunity by creating more sustainable, resilient communities and providing education, career skills, and leadership abilities for those who serve; and

WHEREAS, AmeriCorps and Senior Corps participants serve in more than 50,000 locations across the country, including Sussex County, bolstering the civic, neighborhood, and faith-based organizations that are so vital to our economic and social wellbeing; and

WHEREAS, national service participants increase the impact of the organizations they serve, both through their direct service and by managing millions of additional volunteers; and

WHEREAS, national service represents a unique public private partnership that invests in community solutions and leverages nonfederal resources to strengthen community impact and increase the return on taxpayer dollars; and

WHEREAS, national service participants demonstrate commitment, dedication, and patriotism by making an intensive commitment to service, a commitment that remains with them in their future endeavors; and

WHEREAS, the Corporation for National and Community Service shares a priority with local leaders nationwide to engage citizens, improve lives, and strengthen communities; and join with the National League of Cities, the National Association of Counties, Cities of Service, and local leaders across the country for National Service Recognition Day on April 2, 2019.

NOW, THEREFORE, I, Arthur J. Campbell, Mayor of the City of Milford, Delaware, do hereby proclaim April 2, 2019, as National Service Recognition Day in the City of Milford and encourage all residents to recognize the positive impact of national service in our community, to thank those who serve; and to find ways to give back to their communities need.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Milford to be affixed hereto this 25th day of March 2019.

_____
Mayor Arthur Campbell

Attest: _____
City Clerk Teresa K. Hudson

SCAT

Town of Bethany Beach
Town of Bethel
Town of Blades
Town of Bridgeville
Town of Dagsboro
Town of Delmar
Town of Dewey Beach
Town of Ellendale
Town of Fenwick Island
Town of Frankford
Town of Georgetown
Town of Greenwood
Town of Henlopen Acres
Town of Laurel
City of Lewes
City of Milford
Town of Millsboro
Town of Millville
Town of Milton
Town of Ocean View
City of Rehoboth Beach
City of Seaford
Town of Selbyville
Town of Slaughter Beach
Town of South Bethany
Sussex County Council

Sussex County Association of Towns

20 W Fourth Street, Blades, Delaware 19973

S.C.A.T. Dinner for Wednesday, April 10, 2019

LOCATION: Just Hooked Restaurant
1500 Coastal Highway
Fenwick Island, DE 19944

TIME: 6:00 pm - Social (cash bar)
6:30 pm - Dinner

HOST: Town of Millville

SPEAKER: Ken Bock, CEO of CHEER

COST: $35.00 per person

MENU: Chicken Breast – Prosciutto cream
Salmon – Lemon caper sauce
Truffled Potatoes
Grilled Asparagus
Caesar Salad
Freshly Baked Breads
French Toast Bread Pudding

PLEASE RSVP TO CHRISTINE NO LATER THAN 03/26/19.

For those bringing guests, please make checks payable to:
Town of Millville

-----Original Message-----
From: Suzanne Lennard <suzanne.lennard@livablecities.org>
Sent: Thursday, March 21, 2019 5:40 PM
To: Hudson, Terri <thudson@milford-de.gov>

Subject: A Healthy City for ALL – Register before May 1 to save!

Dear Mayor and Council,

We are very excited by the extraordinarily high quality of the award winners, keynote speakers and presenters as we put together the program for the 56th IMCL Conference on A Healthy City for ALL– you will be too!

We are dealing with one of the most important challenges of our time – how to overcome growing inequality to make our cities healthy for ALL How do we make walkability, bikeability, public transit, community, nature and healthy food accessible to poor neighborhoods that suffer the greatest health problems? Our best achievements light the way.

The program will be fun too, with receptions, tours, mobile workshops, conference luncheon, discussion dinner/awards ceremony, and lots of opportunity for socializing at the coffee breaks, and intense discussion and dialogue in the discussion sessions and workshops.

I urge you to join this unique international conference in Portland, OR, June 17-21, 2019 to share solutions and join the effort to ensure A Healthy City for ALL! See you there!

For more information, contact me, or see: http://www.livablecities.org/conferences/56th-conference-portland

With best regards,

Suzanne H. Crowhurst Lennard, Ph.D.(Arch.) Director, International Making Cities Livable Conference
Suzanne.Lennard@LivableCities.org

PUBLIC WORKS FACILITY
180 Vickers Drive
Milford, DE 19963
www.cityofmilford.com

THE CITY of Milford DELAWARE

PLANNING DEPARTMENT
Planning, Economic Development,
Enforcement, and Inspections Office
O 302.424.8396 | F 302.424.3559

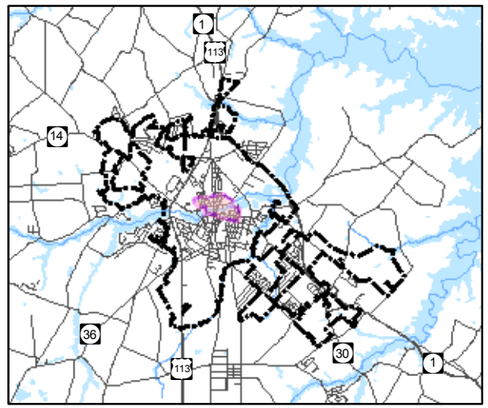
TO: Mayor and City Council
FROM: Rob Pierce, Planning & Development Director
DATE: March 25, 2019
RE: Downtown Development District – 2019 Expansion

In January 2019, the State of Delaware, Office of State Planning Coordination (OSPC) issued updated Downtown Development District (DDD) program guidelines which increased the local district acreage for municipalities with populations between 9,000 to 30,000 persons from 170 acres to 185 acres. The City of Milford DDD area currently includes 169 +/- acres of land; therefore, the City has the opportunity to expand the DDD area by 15 acres. Areas adjacent to the District were analyzed for low income populations, high vacancy rates, available vacant land, property maintenance violations and blighted structures. Enclosed are exhibits showing properties adjacent to the DDD area and building permits issued since 2017, code violations issued since 2017, rental properties and vacant land for your review. The City also received requests from owners of the properties shown in attached Exhibit E to be included in any future expansion. After analyzing the above exhibits, staff has prepared two extension options for consideration.

Option 1 includes land adjacent to the northwest portion of the District and includes parcels north of NW Fifth Street between Truitt Avenue and North Street. Within this area, there are 91 tax parcels containing approximately 19 vacant lots, and the character of the neighborhood is older single-family detached and semi-detached dwellings. These properties area are zoned R-3 Garden Apartment and Townhouse District and would permit by-right single-family detached, semi-detached, townhouse and apartment units. This area has had 12 building permits issued since 2017, 32 properties with code violations since 2017 and contains 16 registered rental properties. The proposed expansion area is located within Milford's Opportunity Zone and is in close proximity to planned investments through the Delaware State Housing Authority (DSHA) Strong Neighborhood Housing Fund (SNHF) program. This area contains two vacant properties that requested to be considered for the DDD expansion for the construction of new residential dwellings.

Option 2 includes land along S. Washington Street between SE Second Street and Ball Park Lane, including those lots north of the Little League fields and Parks & Recreation administrative building. Within this area, there are 76 tax parcels containing approximately 4 vacant lots, and the character of the neighborhood is older single-family detached dwellings. These properties are primarily zoned R-2 Residential District which permits single-family detached dwellings by-right and semi-detached by conditional use. There is also a small cluster of C-1 parcels that contain single-family detached dwellings and a few parcels zoned C-2 Central Business District which contain residential and institutional uses. This area has had 16 building permits issued since 2017, 41 properties with code violations since 2017 and contains 7 registered rental properties. First Presbyterian Church had submitted a request to be included in the district in the past.

Staff is seeking a recommendation from City Council on which area should be submitted to the Cabinet Committee on State Planning Issues for review. Upon approval from the CCSPI, the boundary amendment would be presented again to City Council for official adoption.



City of Milford
Downtown Development District

2019 District Expansion

Code Violations Since 2017

Exhibit A

NORTH

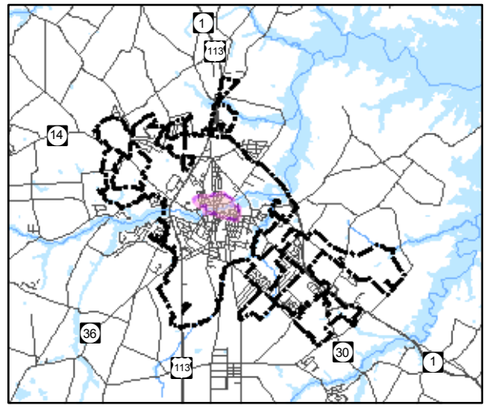
Existing Downtown Development District Boundary

Code Violations Since 2017

0 500 1,000 Feet

Date: 3/19/2019 User Name: RPierce
2019_DDD_CE

THE CITY of Milford DELAWARE



City of Milford
Downtown Development District

2019 District Expansion

Building Permits Since 2017

Exhibit B

NORTH

Existing Downtown Development District Boundary

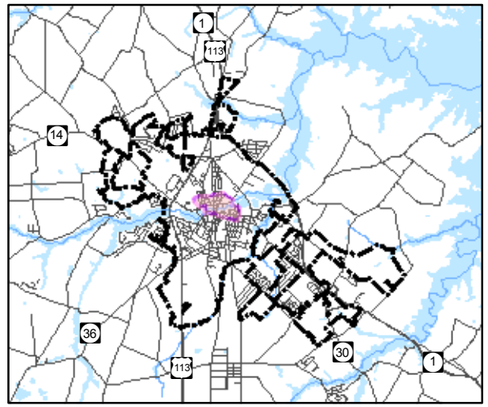
Building Permits Since 2017

0 500 1,000 Feet

Date: 3/19/2019 User Name: RPierce
2019_DDD_BP

THE CITY of Milford DELAWARE

Rehoboth Boulevard
N. Walnut Street
N. Washington Street
NE Fifth Street
Pierce Street
NE Fourth Street
West Street
N. Church Street
NW Fifth Street
NW Fourth Street
Truitt Avenue
North Street
NW Third Street
NE Second Street
East Street
NW Second Street
NE Front Street
NW Front Street
Mispillion River
Park Avenue
Fisher Avenue
Columbia Street
Marshall Street
Charles Street
SW Front Street
SE Front Street
Causey Avenue
Carlisle Lane
McColley Street
SE Second Street
Silver Lake
Church Street
S. Walnut Street
S. Washington
Franklin Street
Maple Avenue



City of Milford
Downtown Development District

2019 District Expansion

Vacant Land

Exhibit C

NORTH

Existing Downtown Development District Boundary

Vacant Land

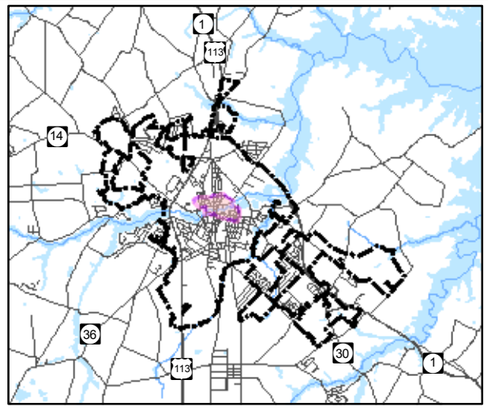
Feet

0 500 1,000

Date: 3/19/2019 User Name: RPierce
2019_DDD_VacantLand

THE CITY of Milford DELAWARE

Rehoboth Boulevard
N. Walnut Street
N. Washington Street
NE Fifth Street
Pierce Street
West Street
N. Church Street
NW Fifth Street
NE Fourth Street
NW Fourth Street
Truitt Avenue
North Street
NW Third Street
NE Second Street
East Street
NW Second Street
NE Front Street
NW Front Street
Mispillion River
Park Avenue
Fisher Avenue
Charles Street
Columbia Street
Marshall Street
SW Front Street
SE Front Street
Causey Avenue
Carlisle Lane
McColley Street
SE Second Street
Silver Lake
Church Street
S. Walnut Street
S. Washington
Franklin Street
Maple Avenue



City of Milford
Downtown Development District

2019 District Expansion

2019 Registered Rental Properties

Exhibit D

NORTH

Existing Downtown Development District Boundary

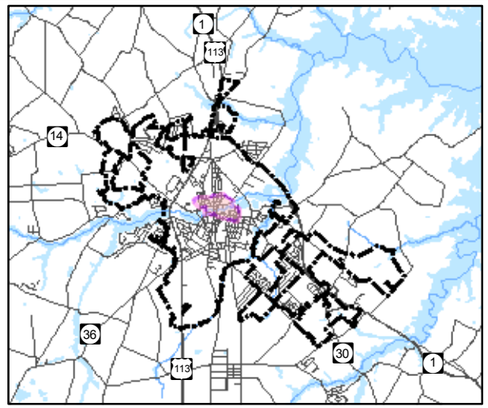
2019 Registered Rentals

0 500 1,000 Feet

Date: 3/19/2019 User Name: RPierce
2019_DDD_Rentals

THE CITY of Milford DELAWARE

Rehoboth Boulevard
N. Walnut Street
N. Washington Street
NE Fifth Street
Pierce Street
West Street
N. Church Street
NW Fifth Street
NE Fourth Street
NW Fourth Street
Truitt Avenue
North Street
NW Third Street
NE Second Street
East Street
NW Second Street
NE Front Street
NW Front Street
Mispillion River
Park Avenue
Fisher Avenue
Charles Street
Columbia Street
Marshal Street
SW Front Street
SE Front Street
Causey Avenue
Carlisle Lane
McColley Street
SE Second Street
Silver Lake
Church Street
S. Walnut Street
S. Washington
Franklin Street
Maple Avenue



City of Milford
Downtown Development District

2019 District Expansion

Extension Requests

Exhibit E

NORTH

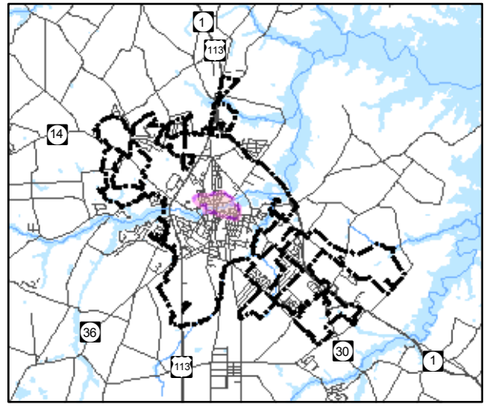
Existing Downtown Development District Boundary

Requested to be Included in DDD Area

0 500 1,000 Feet

Date: 3/19/2019 User Name: RPierce
2019_DDD_Requests





City of Milford
Downtown Development District

2019 District Expansion

Aerial Map

Exhibit 1a

NORTH

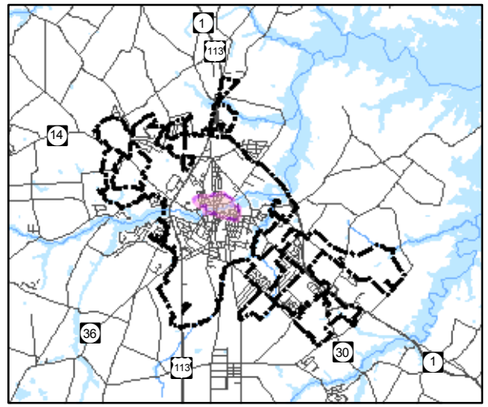
Existing Downtown Development District Boundary

Possible Expansion #1 - 15 Acres

91 - Parcels
19 - Vacant Lots
32 - Properties with Code Violations Since 2017
16 - 2019 Registered Rental Properties
12 - Building Permits Issued Since 2017

0 400 800 Feet

Date: 3/19/2019 User Name: RPierce
2019_DDD_Aerial_Option1



City of Milford
Downtown Development District

2019 District Expansion

Aerial Map

Exhibit 1b

NORTH

Existing Downtown Development District Boundary

Possible Expansion #2 - 14.4 Acres

77 - Parcels
5 - Vacant Lots
41 - Properties with Code Violations
Since 2017
7 - 2019 Registered Rental Properties
16 - Building Permits Issued
Since 2017

Feet
0 400 800

Date: 3/19/2019 User Name: RPierce
2019_DDD_Aerial_Option2

Cell Tower Agreement

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS ENGINEERS SURVEYORS

Michael R. Wigley, AIA, LEED AP
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA
Jason P. Loar, P.E.
Ring W. Lardner, P.E.

ADDENDUM NO. 3

SHAWNEE ACRES PUMP STATION
REPLACEMENT PROJECT
CITY OF MILFORD
SUSSEX/KENT COUNTY, DELAWARE
DBF #052A180
March 4, 2019

The following revisions are hereby made part of the Contract Documents. Unaltered provisions of the Bidding Documents shall remain in effect. Unless specified otherwise, material and work required by this Addendum shall conform to the requirements of the original Bidding Documents.

Failure to acknowledge receipt of this Addendum on the Bid Form may subject the bidder to disqualification.

This Addendum (7 pages), attachments (25 pages), and plans sheets (17 pages) total 49 pages.

GENERAL

1. **The bid date has been moved to Thursday, March 14, 2019 at 3:30 PM at City Hall. Bids are due at City Hall to the attention of the City Clerk's Office.**

2. Notice to Proceed will not be issued until all long lead equipment submittals have been approved including but no limited to pumps, generator, odor control unit, and air burst unit.

PLANS

1. **Due to an updated design, a full set of plans are being re-issued; below is a summary of changes. Contractors shall review the plans for detailed changes.**

2. **Sheet 1**
   a. Removal of existing bypass connection
   b. Removal of asphalt

3. **Sheet 2**
   a. Reduction in size of wet well
   b. Shifting of building
   c. Inclusion of 12-inch plug valve
   d. Mill and overlay along with additional placement of asphalt
   e. Revised bypass connection
   f. Inclusion of doghouse manhole (contingency item)
   g. Clarification to salvage existing pump station to City

4. **Sheet 3 and 4**

a. Inclusion of one (1) electric hoist and two (2) pedestal bases
    i. Thern Commander Series 2000, Model 5PT20-E2
    ii. Electric winch, Model 4WP2-K
    iii. Pedestal base, Model 5BP20
    iv. ¼" 304 stainless steel wire rope, 60 feet in length, Part WS25-60NS
    v. Base installation hardware, Part AN62A-6S
    vi. Rotational Ball Bearing and Lock, Part 5PT20BRG
    vii. Headache Ball, Part HB10-25-38
    viii. Or approved equal
b. Relocation of vent and exhaust fan
c. Modification in hatch sizes and models
d. Reorientation of valving in valve vault including new bypass connection and pressure isolating ring
e. Inclusion of one (1) pressure isolating ring, transmitter, and gauge
    i. Pressure isolating ring, Onyx Valve Company Series PSR in C-configuration
    ii. Pressure gauge with 4 ½" dial, 0-60 psi, Ashcroft or Wika
    iii. Pressure transmitter shall be rated IP68 and intrinsically safe with ½" male NPT nose cap, lighting protection, and aneroid bellows, 0-70 psi, KPSI Model 720
    iv. Or approved equal
f. Removal of Tideflex check valve and replaced with "Flap Valve with Chain"
    i. Flap valve shall be Neenah Foundry R-5040 Series with chain extending to hook located in the wet well opening
    ii. Or approved equal

5. **Sheet 5**
    a. Removal chain link fence details and replaced with vinyl fence detail
        i. Fence shall be 6' High vinyl fence, Model V300, with 14' wide double gate, 48" drop rods (Part DRAS48) and extra strong hinges (Part IESH) as manufactured by Illusions Vinyl
        ii. Or approved equal
    b. Updated equipment pad detail
    c. Inclusion of submersible pressure transducer assembly detail
    d. Inclusion of precast concrete manhole detail
    e. Inclusion of doghouse manhole detail
    f. Inclusion of pavement detail

6. **Sheet 6**
    a. Modificaiton in building exterior
    b. Inclusion of flow switch (not shown, see electrical sheets) for odor control system
        i. Install an FCI FLT93 Flow Switch on the Odor Control discharge pipe within the building
        ii. Or approved equal

7. **Sheet 7**
    a. New sheet providing additional detail on rehabilitation of existing wet well.

8. **Sheet 8** Previous Sheet 7, Erosion and Sediment Control details (no changes)

9. **Sheet S1**
    a. Updated structural sheet

b. Modification in hatch sizes and openings
c. Relocation of vent and exhaust fan

10. **Sheet E01**
    a. A light pole with receptacle was added.
    b. Conduit and wiring were extended to new light pole from the electrical equipment enclosure.
    c. Circuits were added for an electric unit heater and for odor control exhaust fans in the odor control building.
    d. An additional conduit was added from the electrical enclosure to the generator.
    e. Drawing Note 3 was modified and a note was added.
    f. Junction boxes JBX-1 and JBX-2 were relocated.
    g. A grounding note was added.

11. **Sheet E02**
    a. Modified single line diagram.
    b. The VFDs for Pump #1 and Pump #2 were replaced with enclosed soft starts and forward and reverse contactors and current transformers were added for each pump circuit.
    c. A 200A-3P main circuit breaker was added.
    d. One spare 80A breaker was removed.
    e. AIC ratings were added to the main circuit breaker.
    f. Circuits were added to the 'MPZ' schedule for the electric cabinet heater and odor control exhaust fans.
    g. Conduits to the generator were modified to be 1".
    h. VFD cable was removed from the single line.

12. **Sheet E03**
    a. Circuits were added from the electrical equipment enclosure to the odor control building for the electric unit heater and the odor control exhaust fans.
    b. One circuit was added to the new light pole.
    c. Class I, Division 2 area was modified to constant ventilation.
    d. Wet well fan was modified to Exhaust Fan EF-4 and relocated.
    e. A flexible duct connection was added.
    f. A pipe mounted pressure transducer was added in in the valve vault with conduit and signal cable.
    g. Hatch contacts were added to the wet well with conduit and cables.
    h. Junction boxes JBX-1 and JBX-2 were relocated and conduits were rerouted.
    i. The junction box detail was modified.
    j. Notes were added.

13. **Sheet E04**
    a. The electrical cabinet enclosure details were modified.
    b. Two pump VFDs were removed and enclosed soft starts were added.
    c. The power section of the elevation detail was modified.
    d. Conduits in control section were modified and circuits from 'MPZ' to the odor control building were added.
    e. A conduit to the wet well exhaust fan EF-4 starter was added.
    f. The new light pole detail was added.
    g. A switch was added in the control section for the new pole mounted light.
    h. The fan cycle timer was removed from the control section of the electrical enclosure.

i. Junction boxes JBX-1 and JBX-2 were removed from the electrical cabinet enclosure details.
j. The paperless chart recorder was removed.
k. The pump controller was removed and an OIT was added to the pump control panel detail.
l. The legend and equipment list were modified.
m. Notes were added.

14. **Sheet E05**
    a. The pump controller wiring diagram was modified for connection to a soft starter in lieu of a VFD and to incorporate the Deragger system.
    b. The VFD wiring diagram was modified for soft starter wiring.
    c. The 'MPZ' panel schedule was relocated to E-02.
    d. The EF-1 and EF-2 wiring diagrams were modified and the EF-3 and EF-4 wiring diagrams were added.
    e. NFPA detail was removed.
    f. Backup control diagram was added.

15. **Sheet E06**
    a. The pump control panel diagram was modified to incorporate the Deragger module.
    b. The Pump #1 and Pump #2 VFDs were removed and the Pump #1 and Pump #2 soft starters were added with their associated forward and reverse contactors.
    c. Interconnections to RTU were modified to connect to the RTU via the pump control panel.
    d. Conduits to the odor control building, to junction boxes JBX-1 and JBX-2, and to the generator were modified to be 1".
    e. Connections were added for the added pressure transducer and EF-4 starter.
    f. A discrete input for the odor control system exhaust flow switch was added.
    g. The paperless chart recorder was removed.
    h. OIT was added.

16. **Sheet E07**
    a. Exhaust fan EF-2 and associated notes were modified.
    b. An electric cabinet heater ECH-1, exhaust fan EF-1 and starter, exhaust fan EF-3, a thermostat, FRP ductwork and vents were added.
    c. Circuits for ECH-1, EF-1, and EF-3 were added.
    d. HVAC notes were added.
    e. Odor control system exhaust flow switch with signal wiring was added.

SPECIFICATIONS

1. **Section C-410 EJCDC Bid Form for Construction Contracts**
   Delete Page 3 and replace with the attached Page 3

2. **Section 01025 Measurement and Payment**
   Add Section 2.13 Bid Item for Doghouse Manhole (Bid Item No. 13) as follows:
   A. The unit price bid for furnishing and installing manhole shall include and cover the furnishing of all labor, materials, and equipment necessary for the construction of the new manholes complete, including all diameters of precast concrete structures, poured-in-place base, frame, cover, excavation, saw cut and removal of existing paving (as required), removal and disposal of unsuitable excavated material not utilized for refill, backfill, compacting, sheeting, shoring and bracing, dewatering and proper disposal of

water, steps, brick bench, gravel bedding, waterproofing, miscellaneous concrete, connection of pipes to manhole including any additional fittings, pipe, and other materials necessary to make connections, manhole inflow protectors, manhole frame adjustment to final grade, temporary and permanent restoration of pavement (as required), soil stabilization and all incidental work.

B. No measurement will be made for this item.

C. Payment will be made at the appropriate unit price bid for each manhole installed regardless of depth, type, and size.

3. **Section 02830 Fences and Gates**
Delete this section

4. **Section 01520 Bypass Pumping System**
Section 1.4 Bypass System
   a. Revise Section 1.4, A to the following:
      i. A. The temporary bypass system shall consist of two (2) pumps. One (1) electric driven "primary" pump and one (1) diesel driven "backup" pump.
   b. Revise Section 1.4, C as follows:
   c. Delete "…lag bypass pumpset and…" and "…both…"

Section 2.1 Rental Pumps
   a. Revise Section 2.1, B to the following:
      i. Delete "The pumps shall be diesel powered." and replace with "The pumps shall be electric and diesel powered.
   b. Revise Section 2.1, C to the following:
      i. Revise first sentence to "Pumps shall be electric and diesel…"

5. **Section 02050 Demolition**
Section 1.3 Definitions
   a. Revise Section 1.3, B, 1 to the following:
      i. 1. Existing suction lift pumps, motors, and ventilation system.

6. **Section 11060 Process Piping, Valves, and Fittings**
Section 2.2 Air Cushioned Swing Check Valve
   a. Delete Section 2.2, E and replace with the following:
      i. E. The valve shall be supplied with an single outside lever and adjustable counterweight to initiate valve closure. Final closure shall be dampened by means of a single, external hydraulic shock absorber directly mounted to the valve body on machine pads. The amount of cushioning shall be easily adjustable. Oil chambers requiring pre-charging with pressurized air or gas, or a gas-charged oil reservoir are not acceptable.
   b. Delete Section 2.2, G and replace with the following:
      i. G. The valve shall be GA Industries, Inc. Figure 250-DOC or approved equal.

7. **Section 11060 Process Piping, Valves, and Fittings**
Section 2.5 Flap Valve
   a. Delete text "Tide Flex" and replace with "Neenah Foundry R-5040 Series with chain extending to hook located in the wet well opening".

8. **Section 11060 Process Piping, Valves, and Fittings**
Add Section 2.11 Plug Valves as follows:

Section 2.11 Plug Valves

D. Valves shall be of the non-lubricated eccentric type with an elastomer covering all seating surfaces. The elastomer shall be suitable for the service intended. Flanged valves shall be manufactured in accordance with ANSI B16.1 Class 125 including facing, drilling and flange thickness. Mechanical joint ends shall be in compliance with AWWA/ANSI C-111-92. Ports shall be round on sizes 2"-12" and rectangular port design on valves 14" and larger. All valves shall be capable of being "pigged" with a soft pig when required.
E. Valve bodies shall be of ASTM A-126 Class B cast iron in accordance with AWWA C-517-09 Section 4.3.3.1. Valves 3" and larger shall be furnished with a welded-in overlay seat of 1/8" thick of not less than 99% nickel in accordance with AWWA C-517-09 Section 4.3.3.4. Sprayed, plated or screwed-in seats are not acceptable.
F. Plugs shall be of ASTM A-536-Grade 65-45-12 for all sizes in compliance with AWWA C-517 Section 4.3.3.2. The plugs shall be of one-piece solid construction with PTFE thrust bearings on the upper and lower bearing journals to reduce torque and prevent dirt and grit from entering the bearing and seal area.
G. Valves shall be furnished with replaceable sleeve type bearings conforming to AWWA C-517-09 Section 4.3.3.6. Bearings shall be of sintered, oil impregnated stainless steel.
H. Valve shaft seals shall be of the "U" cup type in accordance with AWWA C-517-09 Section 4.4.7. Seals shall be self-adjusting and repackable without removing the bonnet from the valve.
I. Wrench operated valves 2"-8" shall be capable of being converted to worm gear or automated operation without removing the bonnet or plug from the valve. All wrench operated valves shall be equipped with a 2" square nut for use with removeable levers or extended" T" handles. All other valves shall be equipped with handwheels.
J. Worm gear operators, where required, shall be of the heavy-duty construction with the ductile iron quadrant supported on the top and bottom by oil impregnated bronze bearings. The worm gear and shaft shall be manufactured of hardened steel and run on high efficiency roller bearings. All worm gear operators shall be sized for bi-directional shutoff at the valves design pressure rating.
K. Valves shall be designed and manufactured to shut off bubble tight at 175 psi for valves 2"-12" and 150 psi for valves 14" and larger. Each valve shall be given a hydrostatic and seat test with the test results being certified when required by the customer. Certified copies of Proof-of-Design test reports shall be furnished as outlined in AWWA C-517-09 Section 5.2.2 when requested.
L. All buried plug valves shall be Milliken® Millcentric® Series 600F and all other plug valves shall be Milliken® Millcentric® Series 601F.

9. **Section 16269 Enclosed Variable Frequency Drives**
Delete this section

10. **Section 16420 Enclosed Controllers**
Add the attached section.

11. **Section 16960 Instrumentation, Controls & SCADA**

Delete the existing section and replace with the attached.

END OF ADDENDUM NO. 3

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	
2.	By-Pass Pumping Operations	--	LS	1	--	
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100		
7.	Furnish and Place No. 57 Stone	--	CY	100		
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50		
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200		
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200		
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100		
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1		

Total Base Bid using specified materials and equipment: (Items 1 through 13)

_____ **Dollars ($_____)**

***Contingencies shall be used only if and as directed by the Engineer.**

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SECTION 16420

ENCLOSED CONTROLLERS (ADDENDUM 3)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes the following enclosed controllers rated 600 V and less:

1. Reduced voltage soft starter.

B. CPT: Control power transformer.

C. MCCB: Molded-case circuit breaker.

D. MCP: Motor circuit protector.

E. N.C.: Normally closed.

F. N.O.: Normally open.

G. OCPD: Overcurrent protective device.

1.3 SUBMITTALS

A. Product Data: For each type of enclosed controller. Include manufacturer's technical data on features, performance, electrical characteristics, ratings, and enclosure types and finishes.

B. Shop Drawings: For each enclosed controller. Include dimensioned plans, elevations, sections, details, and required clearances and service spaces around controller enclosures.

1. Show tabulations of the following:

a. Each installed unit's type and details.
b. Factory-installed devices.
c. Nameplate legends.
d. Short-circuit current rating of integrated unit.
e. Listed and labeled for integrated short-circuit current (withstand) rating of OCPDs in combination controllers by an NRTL acceptable to authorities having jurisdiction.

f. Features, characteristics, ratings, and factory settings of individual OCPDs in combination controllers.

2. Wiring Diagrams: For power, signal, and control wiring.

C. Field quality-control reports.

D. Operation and Maintenance Data: For enclosed controllers to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Operation and Maintenance Data," include the following:

1. Routine maintenance requirements for enclosed controllers and installed components.
2. Manufacturer's written instructions for testing and adjusting circuit breaker and MCP trip settings.
3. Manufacturer's written instructions for setting field-adjustable overload relays.
4. Load-Current and Overload-Relay Heater List: Compile after motors have been installed, and arrange to demonstrate that selection of heaters suits actual motor nameplate full-load currents.
5. Load-Current and List of Settings of Adjustable Overload Relays: Compile after motors have been installed, and arrange to demonstrate that switch settings for motor running overload protection suit actual motors to be protected.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store enclosed controllers indoors in clean, dry space with uniform temperature to prevent condensation. Protect enclosed controllers from exposure to dirt, fumes, water, corrosive substances, and physical damage.

1.6 COORDINATION

A. Coordinate layout and installation of enclosed controllers with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

1.7 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Control Power Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than two of each size and type.

2. Indicating Lights: Two of each type and color installed.
3. Auxiliary Contacts: Furnish one spare for each size and type of magnetic controller installed.
4. Power Contacts: Furnish three spares for each size and type of magnetic contactor installed.

PART 2 - PRODUCTS

2.1 Reduced Voltage Soft Start Controllers

A. General Requirements for Reduced-Voltage Solid-State Controllers: Comply with UL 508.

B. Reduced-Voltage Solid-State Controllers: An integrated unit with power SCRs, heat sink, microprocessor logic board, door-mounted digital display and keypad, and overload relay.

C. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Eaton Electrical Inc.
2. Rockwell Automation Allen-Bradley
3. Square D; a brand of Schneider Electric
4. Approved equal.

D. Configuration: Standard duty.

E. Starting Mode: current limit.

F. Stopping Mode: Coast to stop or adjustable torque deceleration.

G. Logic Board: Identical for all ampere ratings and voltage classes, with environmental protective coating.

H. Shorting (Bypass) Contactor: Operates automatically when full voltage is applied to motor, and bypasses the SCRs. Solid-state controller protective features shall remain active when the shorting contactor is in the bypass mode.

I. Adjustable acceleration-rate control using voltage or current ramp, and adjustable starting torque control with up to 400 percent current limitation for 20 seconds.

J. Keypad, front accessible with provisions for mounting on front of control panel; for programming the controller parameters, functions, and features; shall be manufacturer's standard and include not less than the following functions:

1. Adjusting motor full-load amperes, as a percentage of the controller's rating.
2. Adjusting current limitation on starting, as a percentage of the motor full-load current rating.
3. Adjusting linear acceleration and deceleration ramps, in seconds.
4. Initial torque, as a percentage of the nominal motor torque.
5. Adjusting torque limit, as a percentage of the nominal motor torque.
6. Adjusting maximum start time, in seconds.

7. Adjusting voltage boost, as a percentage of the nominal supply voltage.
8. Selecting stopping mode, and adjusting parameters.
9. Selecting motor thermal overload protection class between 5 and 30.
10. Activating and de-activating protection modes.
11. Selecting or activating communication modes.

K. Optional Features:

1. General Requirements for Control Circuit and Pilot Devices: NEMA ICS 5; factory installed in controller enclosure cover unless otherwise indicated.
2. Additional field-assignable Form C contacts, as indicated, for alarm outputs.
3. Surge suppressors in solid-state power circuits providing three-phase protection against damage from supply voltage surges 10 percent or more above nominal line voltage.
4. Solid-State Overload Relay:

    a. Switch or dial selectable for motor running overload protection.
    b. Sensors in each phase.
    c. Class 10/20 selectable tripping characteristic selected to protect motor against voltage and current unbalance and single phasing.
    d. Class II ground-fault protection, with start and run delays to prevent nuisance trip on starting.

5. N.O., isolated overload alarm contact.
6. N.C., N.O. auxiliary contact(s).
7. Push Buttons, Pilot Lights and Selector Switches: Heavy-duty, 30mm, oil-tight type.

    a. Pilot Lights: LED types; colors as indicated.
        1) Running – Green
        2) Automatic – Amber
        3) Fault – Red
    b. Selector Switches: Rotary type.
    c. External overload reset push button.

2.2 Full Voltage Reversing Contactors

A. General Requirements for Full-Voltage Contactors: Comply with UL 508 standard.

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work included, but are not limited to, the following:

1. Square D; a brand of Schneider Electric.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Approved equal.

2.3 ENCLOSURES

A. Enclosed Controllers: NEMA ICS 6, to comply with environmental conditions at installed location.

1. Dry and Clean Indoor Locations: Type 1.
2. Outdoor Locations: Type 4X.
3. Wet or Damp Indoor Locations: Type 4X .
4. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: Type 12.
5. Hazardous Areas: NEMA Type 7/9, UL Listed for Area Classification.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and surfaces to receive enclosed controllers, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Wall-Mounted Controllers: Install enclosed controllers on walls with tops at uniform height unless otherwise indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall. For controllers not at walls, provide freestanding racks complying with Division 16 Section "Hangers and Supports for Electrical Systems."

B. Install fuses in control circuits if not factory installed.

C. Install heaters in thermal overload relays. Select heaters based on actual nameplate full-load amperes after motors have been installed.

D. Comply with NECA 1.

3.3 IDENTIFICATION

A. Identify enclosed controllers, components, and control wiring. Comply with requirements for identification specified in Division 16 Section "Electrical Identification."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved nameplate.
3. Label each enclosure-mounted control and pilot device.

3.4 CONTROL WIRING INSTALLATION

A. Install wiring between enclosed controllers and remote devices.

B. Bundle, train, and support wiring in enclosures.

C. Connect selector switches and other automatic-control selection devices where applicable.

1. Connect selector switches to bypass only those manual- and automatic-control devices that have no safety functions when switch is in manual-control position, unless indicated otherwise.
2. Connect selector switches with enclosed-controller circuit in both manual and automatic positions for safety-type control devices such as low- and high-pressure cutouts, high-temperature cutouts, and motor overload protectors, unless indicated otherwise.

3.5 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Inspect controllers, wiring, components, connections, and equipment installation. Test and adjust controllers, components, and equipment.
2. Test insulation resistance for each enclosed-controller element, component, connecting motor supply, feeder, and control circuits.
3. Test continuity of each circuit.
4. Verify that voltages at controller locations are within plus or minus 10 percent of motor nameplate rated voltages. If outside this range for any motor, notify Owner before starting the motor(s).
5. Test each motor for proper phase rotation.
6. Perform each electrical test and visual and mechanical inspection stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
7. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
8. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

B. Enclosed controllers will be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports including a certified report that identifies enclosed controllers. Include notation of deficiencies detected, remedial action taken and observations after remedial action.

END OF SECTION 16420

SECTION 16960

INSTRUMENTATION, CONTROLS & SCADA (ADDENDUM 3)

PART 1 - GENERAL

1.01 SCOPE

A. Install and program a sewage pump control panel (PCP), with all associated hardware and software. The Controller shall support the core system operation and alarm annunciation for the pumping station.

B. Description of Work

1. Provide all labor, material and necessary equipment to install instrumentation and control systems, and be responsible for the satisfactory operation of the entire system as specified herein and as shown on the drawings.
2. Work includes supplying erecting, testing and placing in operation the system specified.
3. The system shall include

    a. Measuring elements and transmitters
    b. Interconnections
    c. Pump Control Panel
    d. Main Distribution and Motor Control Panel
    e. All such accessories as may be required to provide the functions specified

4. Provide and connect all wiring to and from every electrical device furnished under this Section including 120 volt power wiring and all instrumentation and control wiring. All wiring shall be in accordance with Section 16120, CONDUCTORS AND CABLES with exceptions as required herein.

    a. Instrumentation and Control Wiring noted within this Specification Section includes:
        1) Circuits used to carry analog signals
        2) Circuits used to start and stop equipment
        3) Circuits used to key a control function or serve as an interlock
        4) Circuits used to indicate equipment operating status
        5) Circuits used to actuate alarms

5. All piping, manual shut-off valves, and mounting hardware (e.g. nuts, bolts, washers, pipe stands, or cinch anchors) associated with connecting or mounting the instrumentation, as herein specified, shall be provided and connected. All differential pressure transmitters and sensors shall be furnished with 3 valve manifolds, of material compatible with the process fluids.

C. Not included in scope.

1. The SCADA panel will be provided by the City of Milford.

1.02 PERFORMANCE

A. Contractor

1. The Contractor shall be responsible for the complete supply and installation of process instrumentation and control systems furnished by a single company regularly engaged in the manufacture of process instrumentation systems.
2. Functional system data is described herein and is augmented by accompanying product specifications. All elements shall be provided as shown and/or required. Additional elements such as power supplies, current repeaters, and other such elements as may be required to complete the system shall be provided even though not shown.
3. All material shall be new, free from defects, and of the quality specified or shown. Each type of material shall be of the same manufacturer throughout the work. All material shall be the product of established, reputable manufacturers normally engaged in the production of the particular item being furnished.

B. Instrumentation Supplier

1. All instrumentation equipment, panels, sensors, transmitters and other system components shall be supplied by one instrumentation manufacturer who shall be responsible for total system design, integration and functioning of the system and all components, including those items manufactured by others but furnished by the instrumentation supplier.
2. The instrumentation supplier must have the proven skill, experience, ability, facilities, and qualified personnel necessary to successfully, timely and properly complete the involved work. During the bid evaluation period, the Engineer shall generally evaluate any proposed instrumentation supplier to consider his ability to satisfy the foregoing requirements.
3. The instrumentation supplier must assign sufficient qualified personnel to the project to assure the timely and proper completion of the work. Full, continuous, and detailed supervision of the work will be required.

C. Equipment Requirements

1. The product Specifications include description of instrumentation items used in systems. In certain instances, this description is followed by at least one (1) brand name (and/or model number) and an "or equal" provision. Each product submitted under the "or equal" provision shall be reviewed by the Engineer who shall decide whether it is acceptable as an equal.
2. In conducting such a review, the Engineer shall consider the comparability of the specifically named products with the "or equal" products, including specifically their relative performances. Such review shall be based both on the product individually and its interrelationship with all other aspects of the instrumentation system.

1.03 SUBMITTALS

A. Shop drawings shall include interconnection and loop diagrams to insure completeness and compatibility of the system components intended to be furnished.

1. Provide evidence of coordination with the supplier of control equipment supplied by other vendors and contractors prior to Shop Drawing submission.

B. Shop drawings and working drawings for assembled control panels shall include the following:

1. Front Panel Layout, drawn to scale.
2. Back Panel Layout, drawn to scale.
3. Schematic Wiring Diagrams.
4. Terminal Identification Number.
5. Instrumentation Loop Diagrams.

6. Point-to-Point Interconnection Diagrams.
7. Front panel mounted device and name plate schedules.
8. Catalog Cutsheets for all control panel components.
9. A bill of material, with all components cross-referenced to the panel layout drawings, schematic diagrams and catalog cutsheets.

C. For each existing control panel modified under this Contract, provide a copy of the existing panel documentation with work to be performed under this Contract clearly indicated.

1. Where no existing control panel documentation is in existence, provide new drawings documenting the existing front panel, back panel and wiring diagrams of the existing panel.
2. Modification drawings shall be prepared in a neat and workman like manner, suitable for use as a replacement for the original drawings in the plant's record documentation and O&M manuals.

D. A functional description of the logic programming shall be provided for Engineering review. The functional description shall form the basis of the Controller program and shall include the main algorithm along with details of the logic states required to implement the control description contained in this specification. Restating the control section of this specification shall not be acceptable.

E. Local Operator Interface Terminal Graphic layout drawings shall be provided for review by the Engineer. The Supplier may submit preliminary drawings for general arrangement review prior to submittal of a detailed layout drawing. The detailed layout drawing submittal shall also include colors.

F. A complete set of as-built panel wiring diagrams shall be supplied and stored on a door mounted pocket provided in the panel. Any changes incurred during installation and start-up shall be documented and a resubmittal made to replace the original set.

G. Full documentation shall be furnished in duplicate to the Engineer at completion of startup and operator training. The documentation shall include

1. All controller PID final settings.
2. PLC program listing. The listing shall include segments of the previously submitted functional description inserted as comments in the ladder logic program where appropriate.
3. Supervisory computer control programs including: screen printouts, data base listings, script printouts and screen listings.
4. Instrument calibration sheets
5. All adjusting and programming procedures.

H. Submit complete bound manuals for all hardware and software components, all manuals shall be assembled into 3 ring binders. Disk copies of all programs shall be included.

1.04 EQUIPMENT MANUFACTURER'S SERVICE REPRESENTATIVE

A. Installation Assistance

1. Provide the services of a qualified factory engineer to supervise the installation, to test and make any adjustments required, and to place the completed system in operation.

B. System Operation Training

1. The Contractor shall have the instrumentation supplier provide a factory trained engineer to instruct the Owner's operating personnel in the use, operation, care, and maintenance of the process control instrumentation.
2. The training shall be conducted on-site and be presented in a manner to impart thorough understanding of the systems and equipment provided.
3. The training shall be given to the plant personnel designated by the Owner that shall be responsible for the plant operation during each work shift. The personnel shall sign a certificate presented by the Contractor that they have been trained on the plant equipment and they thoroughly understand the operation, care and maintenance of the equipment.
4. When the Owner is ready to have his personnel trained, the Contractor will be so notified by the Engineer. The Contractor will then ensure that the manufacturer's representatives are available on-site to conduct the required training.

    a. Provide for three (3) eight (8) hour working days total to instruct Plant Operators for the equipment supplied. The Owner will require the Contractor to integrate such training with the overall plant training program developed by the Owner and Engineer.
    b. An additional three (3) trips not less than one (1) day per trip shall be provided for operation assistance of the equipment supplied.

1.05 WARRANTY

A. The warranty shall provide (a)

1. A minimum of next-day, on-site service for emergency failures.
2. Replacement of the defective component within one week, if repairs cannot be completed within that time.
3. A five-day response time, on-site service, is required for non-critical failures.

B. This warranty shall cover a period of one year from the date of final acceptance of the project.

PART 2 - PRODUCTS

2.01 MISCELLANEOUS COMPONENTS

A. Pilot Type Indicating Lights

1. Type

    a. Heavy duty oiltight type, which utilizes a LED 7 lumen lamp.

2. Functional/Performance

    a. Units shall be provided with voltage lamps suitable for the voltage supplied.
    b. Lamps shall be replaceable from the front of the unit.

3. Physical

    a. Lens color shall be as indicated on the instrument device schedule. Lens shall be approximately 1-1/4-in in diameter.
    b. Provide legend faceplates engraved to indicate the required function of each device.

c. Units shall be rated NEMA 13 for indoor panels. Units located outdoors or indicated to be weatherproof shall be rated NEMA 4X.

4. Manufacturers: Square D, Allen Bradley, or Microswitch, or approved equal.

B. Selector Switch and Pushbutton Operators

1. Type

a. Operators shall be 30 mm heavy-duty oiltight type with stackable contact blocks.

2. 2. Functional/Performance

a. Provide contact arrangement and switching action as required for the control system specified.

3. Physical

a. For 120 Vac service provide contacts rated 10 Amps at 120 Vac, for 24 VDC service provide silver sliding contacts rated 5 Amps at 125 VDC, for electronic (millivolt/ milliamp) switching provide contacts rated lamp at 28 VDC.
b. Pushbuttons shall have flush type operators. Selector switches shall have knob or wing lever operators.
c. Units shall be rated NEMA 13 for indoor service. Units located outdoors or indicated to be weatherproof shall be rated NEMA 4X.
d. Provide legend plates denoting switch/pushbutton position/ function.
e. Provide padlock attachments for outdoor selector switches and pushbuttons and where indicated otherwise. Padlock attachments for stop pushbuttons shall hold button in the depressed position.

4. Options/Accessories Required

a. Provide lock-out-pushbuttons, key-operators, etc, as indicated on the instrument device schedule.
b. Provide make-before-break bridging contacts where required.
c. Provide operators in Type 304 stainless steel enclosures.

5. Manufacturers: Square D, Allen Bradley, or Microswitch, or approved equal.

C. Industrial Relays and Time Delays

1. Type

a. Industrial heavy duty NEMA rated relays.

2. Functional/Performance

a. Contact arrangement/function shall be as required to meet the specified control function specified.
b. Standard contacts shall be rated 10 Amps continuous at 600 Volts. Master contacts (when required) shall be rated 20 Amps continuous at 600 Volts.
c. Relays shall be provided with convertible contact blocks.

d. Pneumatic time delay relays shall be used on time delays less than 180 seconds and shall be adjustable.
e. Solid state time delay relays shall be used on time delays between 180 seconds and one-hour.

3. Options/Accessories Required

a. Provide all mounting rails, etc, that are required.

4. Manufacturers: Square D Class 8501, Type X or equal Allen-Bradley or Cutler-Hammer, or approved equal.

D. General Purpose Relays and Time Delays

1. Type

a. Units shall be of the general purpose NEMA rated plug-in type.

2. Functional/Performance

a. Coil voltage shall match supply voltage.
b. Contact arrangement/function shall be as required to meet the specified control function.
c. Mechanical life expectancy shall be in excess of 10 million.
d. Duty cycle shall be rated for continuous operation.
e. Units shall be provided with integral indicating light to indicate if relay is energized.
f. Solid state time delays shall be provided with polarity protection (DC units) and transient protection.
g. Time delay units shall be adjustable and available in ranges from .1 second to 4.5 hours.

3. Physical

a. For 120 VAC service provide contacts rated 10 Amps at 120 VAC, for 24 VDC service provide contacts rated 5 Amps at 28 VDC, for electronic (milliamp/millivolt) switching applicator provide gold plated contacts rated for electronic service.
b. Relays shall be provided with dust and moisture resistant covers.

4. Options/Accessories Required

a. Provide mounting sockets with pressure type terminal blocks rated 300 Volt and 10 Amps.
b. Provide mounting rails/holders as required.

5. Manufacturers: Square D, Allen-Bradley, Cutler-Hammer or Potter & Brumfield, or approved equal.

E. Power Relays

1. Type: Electromagnetically operated and held type, single and double pole and single and double throw as indicated.
2. Contacts: 30 ampere rated at 300V resistive load and a horsepower rating of 1.5.
3. Coil: Continuous duty rated.
4. Operating Voltage: 120 VAC, 60 Hz unless indicated otherwise.

5. Manufacturer: Square “D” Class 8501, Type C or equal Allen Bradley, or approved equal.

2.02 INSTRUMENTS

A. Instrumentation and control valves shall conform to the data sheet specifications. Brand names and model numbers are included to indicate the quality and type of instruments required to perform the desired functions.

B. Door Limit Switches

1. Door limit switches shall be microswitch type with roller contacts, suitable for use in wet environments and threaded conduit raceway connections. Square D XCKL type compace general duty limit switch, NEMA 4 enclosure, ¾” NPT conduit entry, 10A/300VAC contact rating. Rod plunger type head with SPDT, 1NO, 1NC snap configuration.
2. Door limit switches installed in hazardous areas shall be FM approved for installation in the Classification and Division as indicated on the drawings.

C. Submersible Level Transducer and Transmitters (For Raw Water Clear Well Level)

1. Submersible level transducer

a. Material: 316 Stainless Steel
b. Electrical: Input 15 – 45 VDC Output: 4 – 20 mADC/digital
c. Electrical Connection: Attached four wire 20GA shielded cable
d. Ranges: 0-16 feet
e. Temperature Limits: -40 – 248 degrees F
f. Accuracy: +/- 0.1%
g. Diameter: 1.25 inch
h. Weight: 8 oz.
i. Submersible Level Transducer shall be Sigma Controls, Inc. model 6000MP series
j. Submersible Level Transducer shall be supplied with a loop power display by Precision Digital Corporation model PD660.

D. Submersible Pressure Transducer (For Station Discharge Pressure)

1. Submersible pressure transducer

a. Material: 316 Stainless Steel
b. Electrical: Input 15 – 45 VDC Output: 4 – 20 mADC/digital
c. Electrical Connection: Attached four wire 22 AWG shielded cable
d. Submersible Pressure Transducer shall be KPSI Model 720 series

E. Flow Switch (Odor Control System Exhuast Duct)

1. Flow switch

a. Material: 316L Stainless Steel
b. Electrical: Universal AC/DC input
c. Electrical Connection: 1 inch female NPT
d. Flow Switch shall be FCI Model FLT93 series

2.03 CONTROL PANEL – COMMON FEATURES

A. The control panels shall be enclosed in a NEMA 12 wall mounted enclosure sized as required for mounting of all associated components as indicated on the project drawings.

B. Wiring:

1. All internal panel wiring shall be neatly placed in plastic wireways. All exposed bundles shall be neatly tied. Signal wiring shall be run in separate wireways from 120 Volt control and power wiring to insure acceptable noise levels for all instrumentation. Minimum lateral separation shall be six (6) inches between power and control wireways and single wireways. Intrinsic safe wiring and components shall be separated from non-IS wiring and components as required by the NEC.
2. All interconnecting wiring, except for electronic circuits, shall have 600 Volt insulation and rated for not less than 90 degrees C.
3. Power distribution wiring on the line side of fuses shall be 12 AWG minimum. Control wiring on the secondary side of fuses shall be 14 AWG minimum. Electronic analog circuits shall utilize 16 AWG shielded, twisted pair, cable insulated for not less than 300 Volts.
4. Power and low voltage DC wiring systems shall be routed in separate wireways. Crossing of different system wires shall be at right angles. Different system wires routed parallel to each other shall be separated by at least 12-in. Different wiring systems shall terminate on separate terminal blocks. Wiring troughs shall not be filled to more than 60 percent visible fill.
5. All wiring shall terminate in a master terminal board, rigid type and numbered. The master terminal board shall have a minimum of 25 percent spares. Terminal blocks shall be separated into groups. (Power, AC control, DC signal, alarm, and graphic). Terminal blocks shall be barrier type with the appropriate voltage rating (600 Volts minimum). They shall be the raised channel mounted type. Wire connectors shall be the hook fork type with non-insulated barrel for crimp type compression connection to the wire. Wire and tube markers shall be the sleeve type with heat impressed letters and numbers. Direct interlock wiring between equipment will not be allowed. Only one side of a terminal block row shall be used for internal wiring. The field wiring side of the terminal shall not be within 6-in of the side panel or adjacent terminal.
6. All wiring to hand switches and the like which are live circuits independent of the panel's circuit breaker protection shall be clearly identified as such.
7. All wiring shall be clearly tagged and color-coded. All tag numbers and color- coding shall correspond to the panel wiring diagrams and loop drawings. All power wiring, control wiring, grounding and DC wiring shall utilize different color insulation for each wiring system used.

    a. Wire colors shall be as follows:
        1) 120VAC Hot - Black
        2) 120VAC Controlled - Red
        3) Neutral/Return - White
        4) Ground - Green
        5) DC Voltage - Blue

C. Each control loop or system circuit shall be individually protected by a fuse or breaker. All protecting devices shall be clearly labeled and located for ease of maintenance.

D. Provide surge protectors on all incoming power supplies and 15A 125V duplex receptacle in each panel.

E. Control power to individual components requiring 120V power shall be wire with individual circuit breaker protection.

F. Provide terminal lugs and a panel mounted power disconnect for connection of 120V 1PH input power.

G. Single circuit fusible terminal blocks, along with appropriately sized fuses, shall provide connection for all field instruments and devices. Instrument and low power output terminal blocks shall be Allen-Bradley 1492-H6 terminal block or approved equal.

H. 24VDC power supplies sized to power all loop powered instruments shall be provided.

I. A final as-built drawing, encapsulated in Mylar, shall be attached to the inside surface of the outer door. A list of all legends shall be included.

J. Intrinsically Safe Interface components related to the level transducer shall be provided and installed.

K. Lightning/Surge Protection

1. Lightning/Surge protection shall be provided to protect the electronic instruments from induced surges propagating along the signal and power supply lines. The protection systems shall be such that the protective level shall not interfere with normal operation, but shall be lower than the instrument surge withstand level and be maintenance free and self-restoring. Protectors on intrinsically safe circuits shall be suitable for such use. Ground wires for all surge protectors shall be connected to a good earth ground and where practical each ground wire run individually and insulated from each other. These protectors shall be mounted within the instrument enclosure, control cabinet or a separate NEMA 12 junction box coupled to the enclosure. The units shall be Phoenix Contact MCR Plugtrab Series protectors or the equal manufactured by Joslyn, or approved equal.
2. Power Supply - Protection of all 120 VAC instrument power supply lines shall be provided. Cabinet(s)/panel(s) and groups of field instruments regardless of location (indoor or outdoor), shall be protected by isolation transformers and surge suppressors. An individual gas tube surge suppressors shall protect each field instrument.

2.04 PUMP CONTROL PANEL (PCP)

A. Pump Controller

1. In order to minimize training requirements, provide a uniform look and feel, and provide better support and administration, the City of Milford has standardized on a single Control System manufacturer for the Water System. Therefore, no substitutes will be accepted for the specified products.
2. The Remote Termianl Units shall be an Schneider Electric SCADAPack 574 with power supplies and expansion modules as required.
3. The contractor shall furnish RTUs- Remote Telemetry Units (also called PLCs) and associated components manufactured by Schneider Electric as specified herein. This specification is based on Schneider Electric (formally Control Microsystems) SCADAPacks and accessories.
4. Contractor shall provide a complete and functioning control system, including power supplies, special cables, memory devices, and all necessary hardware and other appurtenant equipment as required to meet the functional requirements described herein and indicated on the design drawings.
5. The RTUs shall have provisions for future expansion
6. Each RTU shall be provided with 10 percent spare inputs and outputs of each type used wired to terminal strips. Each panel shall have the additional space to add 25 percent more input/output.

7. The remote telemetry units and input/output hardware shall be housed in a control panel.
8. Expansion Modules shall be provided where shown, specified, or required to meet the I/O requirements, including the requirements for spares.
9. RTU Components

    a. General:
        1) The SCADA controller shall be an intelligent, modular unit, capable of both data acquisition and local data processing. It shall monitor and control local equipment in a stand alone mode as well as being an intelligent node in a distributed system. It shall be based on multiprocessor architecture, in which a co-processor is used for handling on-board input/output channels. To facilitate initial installation, maintenance and future expansion, all external input/output modules shall connect to the basic controller using a high speed internal bus.
        2) The SCADA controller shall be configured and programmed with standard programming languages such as Relay Ladder Logic (RLL), function blocks, as well as supporting the IEC 61131 programming environment. Programs shall be developed and downloaded either directly to the controller using a standard RS-232 interface cable, or remotely through the communication network media such as phone lines, Ethernet, dedicated lines, cellular or wireless radios.
        3) The controller shall be supplied with the number and type of input/output modules and communication ports as indicated elsewhere in the specifications. Future expansion may be made by simply plugging in additional input/output modules to the I/O bus.

10. SCADA controller hardware specifications: The controller shall include the following:

    a. Easily associate Modbus, DNP3, or both protocols to database objects and variables.
    b. DNP3 Routing & Modbus Store and Forward facilitate communications bridge functionality using either protocol.
    c. Tagged Object Database
    d. Microsft Excel Export & Import of Database objects
        1) Create external templates for reuse and manipulation of configurations.
    e. Based on Unity Pro Software with 5-language support for IEC 61131-3
        1) Code segment and function block export and import for code sharing between Schneider Electric Modicon PLCS and SCADAPack RTUs.
    f. Remote Maintenance
        1) Update firemware, load/update logic, load configurations, and view diagnostics remotely or locally with RemoteConnect software.
        2) Manage and configure multiple devices such as HART instruments, actuators, variable frequency drives (VFDs) and other devices using plug-in DTMs for FDT2 for FDT1.2 within RemoteConnect software
    g. Remote Ready Hardware
        1) 12…24 VDC Input Power with input voltage monitor
        2) Wide Operating Temperature -40 … 70 °C
        3) Conformal Coated circuit boards
    h. RemoteConnect Software
        1) Locally through any of communication ports (Default: USB port).
        2) Remotely through serial or TCP/IP networks and modems
    i. Device Management
        1) Upgrade of SCADAPack firmware
        2) Upgrade of I/O expansion module firmware
        3) HART Device configuration and data monitoring via vendor supplied plug in DTMs.
    j. Logic Development

1) Use compiled run-time code for fast execution.
2) Import and export logic code segments for use in other SCADAPack projects or sharing with Modicon PLCs
3) Perform online debugging and logic modifications from the x 70 Logic Editor.

k. Diagnostics
1) View System information and status from object browsers within RemoteConnect software.
2) View advanced diagnostics using the Telnet command line interface including built-in protocol analyzers for DNP3 and Modbus.

l. Processor
1) SPEAr 1380 32-bit dual-core Cortex A9 Microcontroller, 500 MHz

m. Memory
1) 128 MB NAND FLASH, 128 MB DDR RAM

n. Event Logging Capacity
1) Up to 40,000 time-stamped DNP3 events

o. Database Capacity
1) Typical maximum 15,000 objects, max number of logic connected objects is 6000

p. Modbus Master: Up to 80 simultaneous Modbus TCP client connections.

q. Modbus Slave: Up to 20 Modbus TCP server connections

r. File System Storage: Internal: 70 MB usable; External; 32 GB

s. Communications: Serial 1, Serial 2
1) RS-232 port, 8-pin modular RJ45 jack, +5 VDC power controls, hardware handshaking, maximum baud rate 115,200 bps

t. Communications: Serial 3, Serial 4
1) Configurable as: RS-232 or RS-485 two wire, half duplex, maximum baud rate 115,200 bps
2) 8-pin modular RJ45 Jack

u. Serial Protocols
1) DNP3 level 4 slave/master and peer-to-peer, Modbus RTU slave/master

v. Logic Control
1) RemoteConnect software

w. IO Terminations
1) Plug – in Terminal Blocks

x. Warranty: 3 years on parts and labor.

y. Power Supply: 12-30 VDC, 6.5 W

z. Digital Inputs: 16

aa. Analog Inputs: 8

bb. Analog Outputs: 2

cc. Digital Outputs: 10, dry-contact or solid state relays (Form A)

dd. Controller shall be SCADAPack 574, TBUP574 series with Analog Output option.

ee. Expansion Modules to be provided to accept all IO as shown on contract drawings.

11. Operator Interface Terminal:

a. Memory: 128 MB

b. Serial Ports: 1 x DE9P COM1: RS-232, COM2: RS-485

c. Ehternet: 1 x 10/100 Base-T

d. Display Type: 7” TFT LCD

e. Size: 5.98 x 3.58 inches

f. Contrast Ratio: 500:1

g. Type: 4 wire resistive touch

h. Input Voltage: 10.5-28.0 VDC

i. Input Current: 500 mA @ 24VDC
j. Enclosure: Plastic, Charcoal Grey
k. Software: EZware Plus
l. Operator Interface Terminal shall be Maple Systems, 7" touchscreen, P/N: HMI5070B, or approved equal.

12. Mechanical Design:

    a. The controller shall be DIN rail mounted with screw clamp for vibration resistance. Front access to all controls, indicators, lithium battery, communication ports and power supply shall be provided. Communication ports shall be standard RS-232, Terminal block and/or RJ45, to allow easy access using standard cables. No proprietary communication cables shall be allowed.
    b. All boards shall be coated with conformal coating, for protection against humidity and corrosion.
    c. All system components must be constructed of corrosion resistant zinc plated steel with removable metal covers.

13. Environment:

    a. The controller shall operate over an ambient temperature range of -40°F to 158°F, (-40°C to 70°C) with a relative humidity 5% to 95%, non-condensing.

14. Certifications and Standards:

    a. All inputs and outputs (except the serial communication ports) must survive ANSI/IEEE C37.90 surge withstand capability (SWC) tests without damage.
    b. The controller must be certified for electrical safety as non-incendive electrical equipment for use in Class1, Division 2 Groups A, B, C and D hazardous locations.

15. Communication Protocol:

    a. The RTU shall support the industry standard DNP3 protocol, as well as DNP/TCP and DNP/UDP for Ethernet communication, with the following minimum features:
        1) DNP3 Level 2 conformant with most features from Level 3 (refer to the Device Profile for additional information)
        2) Local and remote configurations via DNP3 and file transfer
        3) Peer-Peer communications
        4) Routing-serial-serial, serial-Ethernet communications
        5) Issue controller commands remotely (file, application, event management, diagnostic capture, etc.)
        6) Reporting to up to 3 independent DNP3 Masters
        7) Proprietary protocols will not be allowed.
    b. The controller shall be able to receive information from other sites and retransmit the message to another site, using the same communication port.
    c. The controller shall allow flexible communication algorithms on all communications ports. Any of the ports can act as a Level 2 or 3 Master, Level 1 Slave or Level 3 mimic at any time during the execution of the application program.
    d. The controller shall be capable of storing up to 20,000 DNP3 events. There shall be No user scripting required to generate or send events.
    e. Time-stamped events can be selectively generated per digital point and per analog point alarm limit.

f. Individual alarm limits on analog points can selectively generate DNP3 unsolicited reports.
g. The RTU shall support the industry standard Modbus protocol, as well as Modbus/TCP and UDP for Ethernet communication, with the following minimum features:
    1) Allows up to 65,535 stations in one system.
    2) Ability to transfer complete programs and data over the communication network.
    3) Support high data security techniques such as Cyclic Redundancy Check CRC16. Proprietary protocols will not be allowed.
h. The controller shall be able to receive information from other sites and retransmit the message to another site, using the same communication port.
i. The controller shall allow flexible communication algorithms on all communication ports. Any of the ports can act as Master, Slave or Store-and-Forward at any time during the execution of the application program.
j. The RTU shall be able to function as an interconnection point between different communication systems such as radio, leased lines, and radios with different frequencies.
k. The RTU shall be able to send broadcasting messages to a number of locations.
l. The RTU shall be able to perform report-by-exception (event driven communications) under the control of the application program.
m. The RTU shall be capable of supporting both DNP3 and Modbus concurrently on the same communications ports.
n. The RTU shall support programming of custom protocols for data interchange on any of the communications ports.
o. Each communication port shall be configurable with a unique station number when used with the standard protocol.
p. Any port running the standard communications protocol shall allow for programming via local or remote communications.

16. Network Protocols

    a. Ethernet Network protocols shall consist of IP, ARP, TCP, TFTP, UDP and ICMP.

17. Other Protocols

    a. Rockwell (Allen Bradley) DF1 Protocol Half / Full Duplex modes BCC/CRC error check modes.

18. Operating System:

    a. The software shall be based on a multi-tasking executive system optimized for a real-time environment.

19. Programming Software:

    a. The programming software shall allow downloading of Relay Ladder Logic and/or standard C++ programs from within one package. The software shall allow the user to develop and download the application and system configuration over the communication network via radios, Ethernet, leased and dial-up lines.
    b. The RTU shall allow Ladder and C++ applications to run concurrently. Any failure in the Ladder application shall not affect other applications running under C++.
    c. The Relay Ladder Logic shall include the following functions:
        1) PID feedback control.
        2) Data logging function with time & data

3) Modem dialing and control.
4) Timers, counters, mathematical functions, memory functions.
5) Standard Ladder Logic functions such as coils and contacts.
6) Boolean logic functions.
7) Bit transfer functions.
8) Block transfer functions.
9) Scaling function
10) Totalizing function
11) Flow function

d. On-line monitoring of Relay Ladder Logic power flow shall be included to facilitate start-up and debugging of programs.
e. Relay Ladder Logic program shall be up to 12K words in size, with no fixed limit on the number of networks.
f. The programming software shall support on-line monitoring and forcing of any register in the protocol database when utilizing the built-in protocol. Forcing shall write a value to the register and prevent modification of the register content by the communication protocol or the application software. A global command to remove all forcing must be included. In addition to forcing, the software shall be capable of writing a value to any register in the protocol database but continue to allow the protocol or application software to modify the contents of the register.
g. The controller shall be capable of processing up to 32 PID loops with individual execution time bases from 0.1 to 25.5 seconds.
h. Standard C++ tools shall support the following functions:
1) Database functions.
2) Modem dial-up functions.
3) PID functions.
4) System functions.
5) Protocol functions.
i. When downloading C++ programs, the communication message size must be configurable to a minimum of 26 bytes and a maximum of 256 bytes.
j. The software communication settings must allow configurable number of retries in addition to message time-out of up to 99 seconds.
k. The unit must also support IEC 61131-3 programming using Sequential Function Chart (SFC), Functional Block Diagram (FBD), Ladder Diagram (LD), Structured Text (ST), Instruction List (IL), Flow Chart (FC) languages using a separate programming tools.

20. Data Logging functionality

a. The Controller shall support Data Logging via Removable USB Mass Storage devices which include:
1) USB Flash Memory Stick
2) USB External Hard Drive
b. There shall be three Operating Modes to choose from…
1) Datalog Memory Expansion
2) Reduced power mode for Solar Applications
3) Walk-up SCADA
c. Log to USB Mass Storage
1) USB mass storage device remains connected to controller
2) Multiple data logs may be configured to write data to USB storage (Data is buffered to non-volatile RAM and written once per minute.)
3) At some point in time when the USB storage device is removed, the data continues to be logged, but is stored to internal non-volatile memory.

4) When a USB storage device is re-inserted the buffered data is copied to the USB storage device.

d. Solar Application Log to Mass Storage, Minimum On-Time Requirement: large storage capacity but at minimum power.
   1) Data logs are configured to write to the USB storage device as specified the previous mode. However USB host port is normally kept powered OFF to reduce power consumption.
   2) While the host port is powered down USB storage is not accessible. Data shall be buffered to internal non-colatile RAM. At defined intervals the USB host is powered up for a fixed amount of time. When this happens, the USB storage device is recognized and the data logs are written to the USB storage device.
   3) The USB storage device shall be able to be exchanged and taken to a PC where the data can be imported from the USB storage device.

e. Log Internally with Transfer to USB Mass Storage
   1) One or more data logs are configured to write data to the Controllers internal file system with the auto transfer feature enabled.
   2) When a USB mass storage device is inserted, the data logs are automatically transferred to the USB storage device.
   3) The USB storage device is removed from the controller and connected to a PC, which then imports the log files from the USB storage device.

f. Update frequency shall be selectable by the user and can vary from .1 seconds to 999 months.

g. Configuration of the data log function shall be made through the ladder logic programming software or IEC61131-3 programming software.

h. Logs must have the capability of being triggered by timers or process events.

21. Warranty:

    a. The manufacturer shall warrant the hardware specified above against all defects in material and workmanship for a period of three years.

22. RTU shall be a Control Microsystems SCADAPack model number 574 PAC. Provide one copy of the programming software.

B. Backup Float Control

1. A separately fused circuit shall be provided for the backup float level control system. The backup circuit shall include two float switches complete with intrinsic safety barriers, relay timers and other components required for control of the two sewage pumps independent of the pump controller.

   a. On Actuation of the High-High Level ball float the first pump shall start and second pump shall start after a 10 second (adjustable) delay. Both pumps shall be run at full speed.
   b. When the Wet Well Level drops to the Low-Low Level float, both pumps shall stop.
   c. The backup float switch control circuit shall maintain pump control until it is reset by an operator pressing a Backup Float Control Reset pushbutton on the door of the Pump Control Panel.

2. Operation of the High-High Level ball float shall illuminate a Backup Float Controls Enabled pilot light on the door of the Pump Control Panel and signal a Pump Controller Trouble alarm.

3. Floats

a. Contact System shall be a Microswitch with a minimum of 2x10^7 operations
b. Output shall be dry contact with max load rating of (AC: 250V @16A or DC:220V@.5A or 24V@16A)
c. The operating temperature shall be between -20 to 60 degrees F
d. The Cable shall be made highly flexible oil resistant material and having adequate tensile strength.
e. The float housing material shall be made of Polypropylene
f. All floats shall be provide with counter weights
g. Float Switch shall be a MJK model 7030 or approved equal.

C. Deragger

1. A Deragger device, the Deragger II, shall be fitted to each pump to provide realtime anti-ragging protection. Upon detection of rags, the Deragger will stop and reverse the pump. This device will also provide power monitoring and protection. The device shall be the Deragger II.

PART 3 - EXECUTION

3.01 CONTROL PANELS

A. Install all components as described in the specifications and drawings.

B. Program the Sewage Pump Controller for operational control.

C. Test the control panels for complete proper operation. Simulate all operating and alarm conditions.

D. Start-up shall be performed with the control panel vendor’s representative present.

E. Routine preventative maintenance suggested or required by the manufacturer for the system shall be performer until satisfactory completion of the final operational demonstration test, as specified herein.

3.02 EQUIPMENT CONTROL WIRING

A. Provide all wiring, conduit, and final connections for the interlock and control wiring of all equipment.

B. Verify functionality of Intrinsically Safe Interface circuits.

3.03 TESTING

A. After installation of all Pump Control Panel components is complete, the completed system shall be tested by the contractor according to an all-inclusive prepared test script. If any deficiencies are encountered during testing, the deficiencies need to be resolved and the system retested, starting from the beginning of the test script. Testing needs to include, but is not limited to, satisfactorily demonstrating the following:

1. Test the communications between the Controller and Autodialer. Verify proper functioning of the communications and immunity to outside electrical noise interference.

2. Test the display configurations, verifying the correct display of values, and correct operation of all controls.
3. Test all Controller input devices to verify operability and calibration.

B. At the end of successful testing, a copy of the test script, including the collected data, shall be presented to the Owner in a binder.

3.04 TRAINING

A. The system supplier shall provide and/or arrange for training of Owner's personnel at the job site. Training shall be scheduled for one session, which is to consist of a minimum of two (2) hours of instruction.

END OF SECTION

BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Milford, City Hall, 201 South Walnut Street, Milford, Delaware 19963

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
#1	1/28/19
#2	2/18/19
#3	3/4/19

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance

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of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	65,000.00
2.	By-Pass Pumping Operations	--	LS	1	--	35,000.00
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	712,000.00
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	200,000.00
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	288,000.00
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	35.00	3,500.00
7.	Furnish and Place No. 57 Stone	--	CY	100	40.00	4,000.00
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	175.00	8,750.00
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	25.00	5,000.00
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	50.00	1,000.00
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	55.00	5,500.00
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1	22,000.00	22,000.00

Total Base Bid using specified materials and equipment: (Items 1 through 13)

one million three hundred eighty nine thousand seven hundred fifty dollars & zero cents **Dollars ($** 1,389,750.00 **)**

***Contingencies shall be used only if and as directed by the Engineer.**

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5.02 All equipment, material, labor, and other associated costs necessary for completion of work as indicated in the drawings and specifications are to be included in one of the above items.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1989012293 or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

J. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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Kuhn Construction Company 052A180

By:
[Signature] William J. Kuhn III

[Printed name] William J. Kuhn IIII

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] M. Lawrence Kuhn

[Printed name] M. Lawrence Kuhn

Title: Secretary / Treasurer

Submittal Date: 2/22/19

Address for giving notices:

PO Box 1419

Hockessin, DE 19707

Telephone Number: 302-239-4344

Fax Number: 302-239-2816

Contact Name and e-mail address: Bill Kuhn

wkuhniii@kuhnconstr.com

Bidder's License No.: 1989012293
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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1.01 This Bid is submitted to:

City of Milford, City Hall, 201 South Walnut Street, Milford, Delaware 19963

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

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3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
1	1-28-2019
2	2-18-2019
3	3-4-2019

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance

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of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

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3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	$75,000
2.	By-Pass Pumping Operations	--	LS	1	--	$150,000
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	$730,000
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	$225,000
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	$280,800
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	$40	$4,000
7.	Furnish and Place No. 57 Stone	--	CY	100	$55	$5,500
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	$150	$7,500
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	$15	$3,000
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	$20	$4,000
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	$25	$2,500
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1	$15,000	$15,000

Total Base Bid using specified materials and equipment: (Items 1 through 13)

One Million Five Hundred Forty-Two Thousand Three Hundred **Dollars ($** 1,542,300.00 **)**

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ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

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A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1989030363 or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

J. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

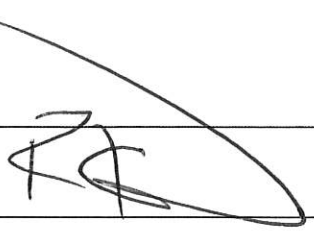
ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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By:
[Signature] 

[Printed name] R. KELLER HOPKINS, PRESIDENT HOPKINS CONSTRUCTION, INC.

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] Whitney Wright

[Printed name] WHITNEY WRIGHT

Title: PROJECT MANAGER

Submittal Date: 3/14/2019

Address for giving notices:

18904 MARANATHA WAY, UNIT 1

BRIDGEVILLE, DE 19933

Telephone Number: (302) 337-3366

Fax Number: (302) 337-8315

Contact Name and e-mail address: R. KELLER HOPKINS

keller@hopkins-inc.com

Bidder's License No.: 1989030363
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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EJCDC® C-410, Bid Form for Construction Contracts.
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1.01 This Bid is submitted to:

City of Milford, City Hall, 201 South Walnut Street, Milford, Delaware 19963

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

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Addendum No.	Addendum, Date
#1	1/28/2019
#2	2/18/2019
#3	3/4/2019

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C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

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F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

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ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

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2.	By-Pass Pumping Operations	--	LS	1	--	73,000
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	846,000
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	150,000
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	323,000
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	50	5,000
7.	Furnish and Place No. 57 Stone	--	CY	100	70	7,000
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	200	10,000
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	60	12,000
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	80	16,000
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	100	10,000
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1	20,000	20,000

Total Base Bid using specified materials and equipment: (Items 1 through 13)

One Million Five Hundred Forty Seven Thousand and no/100 **Dollars ($** 1,547,000 **)**

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BIDDER: *[Indicate correct name of bidding entity]*

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M2 Construction LLC 052A180

By:
[Signature]

[Printed name] Andrew T. Mattson
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Alex McManimen

Title: President

Submittal Date: 3/14/2019

Address for giving notices:

901 Stony Battery Road

Landisville, PA 17538

Telephone Number: 7173058801

Fax Number: 7178236979

Contact Name and e-mail address: Andrew T. Mattson

andrew@m2constructionllc.com

Bidder's License No.: 2013102602
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	70,000.00
2.	By-Pass Pumping Operations	--	LS	1	--	120,000.00
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	810,000.00
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	120,000.00
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	300,000.00
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	40.00	4000.00
7.	Furnish and Place No. 57 Stone	--	CY	100	60.00	6000.00
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	150.00	7500.00
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	10.00	2000.00
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	15.00	3000.00
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	25.00	2500.00
12.	Electrical Allowance	--	LS	1	--	$40,000

Total Base Bid using specified materials and equipment: (Items 1 through 12)

One Million Four Hundred and Eighty Thousand **Dollars ($** 1,480,000.00 **)**

***Contingencies shall be used only if and as directed by the Engineer.**

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5.02 All equipment, material, labor, and other associated costs necessary for completion of work as indicated in the drawings and specifications are to be included in one of the above items.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 19951110 92 or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

J. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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By:
[Signature] James J. Julian

[Printed name] James J. Julian
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] Susan E. Juestlam

[Printed name] James J. Julian

Title: President

Submittal Date: 2/1/19

Address for giving notices:

100 Julian Lane

Bear, DE 19701

Telephone Number: 302-836-0414

Fax Number: 302-836-4275

Contact Name and e-mail address: James J. Julian

jjjulian@jjid.com

Bidder's License No.: DE 1995111092
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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CITY OF MILFORD

SHAWNEE ACRES PUMP STATION REPLACEMENT

Contract: 052A180
Bid Date: March 14, 2019

BID RESULTS

	Item No. & Description	Size/ Depth	Unit	Est. Qty	KUHN CONSTRUCTION		HOPKINS CONSTRUCTION, INC.		M2 CONSTRUCTION, LLC		JJID, INC.[1]	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	Mobilization, Bonds, Insurance and Demobilization (5%)	--	1	LS	$65,000.00	$65,000.00	$75,000.00	$75,000.00	$55,000.00	$55,000.00	$70,000.00	$70,000.00
2	By-Pass Pumping Operations	--	1	LS	$35,000.00	$35,000.00	$150,000.00	$150,000.00	$73,000.00	$73,000.00	$120,000.00	$120,000.00
3	Sewage Pump Station and Valve Vault	--	1	LS	$712,000.00	$712,000.00	$730,000.00	$730,000.00	$846,000.00	$846,000.00	$810,000.00	$810,000.00
4	Furnish and Install Building with Pulsed Air Mixing and Air Supply System, and Odor Control System	--	1	LS	$200,000.00	$200,000.00	$225,000.00	$225,000.00	$150,000.00	$150,000.00	$120,000.00	$120,000.00
5	Demolish , Furnish, and Install Electrical Components	--	1	LS	$288,000.00	$288,000.00	$280,800.00	$280,800.00	$303,000.00	$303,000.00	$300,000.00	$300,000.00
	CONTIGENCY ITEMS											
6	Furnish and Place Select Fill from Off-Site Source	--	100	CY	$35.00	$3,500.00	$40.00	$4,000.00	$50.00	$5,000.00	$40.00	$4,000.00
7	Furnish and Place No. 57 Stone	--	100	CY	$40.00	$4,000.00	$55.00	$5,500.00	$70.00	$7,000.00	$60.00	$6,000.00
8	Furnish and Place 4,000 PSI Concrete	--	50	CY	$175.00	$8,750.00	$150.00	$7,500.00	$200.00	$10,000.00	$150.00	$7,500.00
9	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	200	SF	$25.00	$5,000.00	$15.00	$3,000.00	$60.00	$12,000.00	$10.00	$2,000.00
10	Miscellaneous Concrete Repair (Wetted Areas - Underlayment)	--	200	SF	$50.00	$10,000.00	$20.00	$4,000.00	$80.00	$16,000.00	$15.00	$3,000.00
11	Miscellaneous Concrete Repair (Wetted Areas - Epoxy Filler)	--	100	SF	$55.00	$5,500.00	$25.00	$2,500.00	$100.00	$10,000.00	$25.00	$2,500.00
12	Electrical Allowance	--	1	LS	---	$40,000.00	---	$40,000.00	---	$40,000.00	---	$40,000.00
13	Doghouse Manhole	--	1	EA	$22,000.00	$22,000.00	$15,000.00	$15,000.00	$20,000.00	$20,000.00	$0.00	$0.00
	TOTAL BID (ITEMS 1 - 13)					**$1,398,750.00**		**$1,542,300.00**		**$1,547,000.00**		**$1,485,000.00**

Indicates calculation error

(1) Contractor did not acknowdlege Addendum No. 3

DAVIS BOWEN & FRIEDEL, INC.

ARCHITECTS ENGINEERS SURVEYORS

Michael R. Wigley, AIA, LEED AP
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA
Jason P. Loar, P.E.
Ring W. Lardner, P.E.

March 21, 2019

City of Milford
Public Works Facility
180 Vickers Drive
Milford, Delaware 19963

ATTN: Mr. Mark Whitfield
Public Works Director

Re: Shawnee Acres Pump Station Replacement Project
City of Milford
Sussex/Kent County, Delaware
Bid Award Recommendation
DBF# 052A180

Dear Mr. Whitfield:

On Thursday, March 14, 2019 at City Hall, the bids for the above referenced project were received and opened. On behalf of the City we have evaluated the bids and the associated documentation submitted by each of the General Contractors to confirm such documentation is in order. For City review, please find enclosed a tabulation of all of the bids received.

Based on our review of the bids, we recommend that the Contract be awarded to the apparent low bidder Kuhn Construction Company of Hockessin, Delaware with a total base bid of $1,398,750. This recommended bid is within the City's proposed budget for this project.

For City review and approval, please find attached one (1) copy of the bid tabulation, one (1) copy of each bid form received, and the recommended General Contractor's bid bond; these copies are for the City's records. If Council is in agreement with our recommendation, the formal award of the Contract should be made contingent upon the funding agency, the United States Department of Agriculture-Rural Development (USDA-RD), approval of the bid process. A second copy of these documents, and any additional documents required, will be submitted directly to the City's Attorney upon the vote by City Council to award this project. At which time a copy of the attorney's letter and a letter of concurrence to our recommendation from the City will be forwarded to USDA-RD, along with copies of the bid documentation, for approval. Should you have any questions, comments, concerns, or would like to discuss this further, please feel free to call at your convenience.

Sincerely,
DAVIS, BOWEN AND FRIEDEL, INC.

Jason P. Loar, P.E.
Principal

JPL
P:\MILFORD\052A180 Shawnee Acres Pump Station\Bidding\Award Recommendation.docx

cc: Eric Norenberg, City Manager – City of Milford

EJCDC

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
KUHN CONSTRUCTION COMPANY
P.O. Box 1419, 787 Valley Road
Hockessin, DE 19707

SURETY *(Name, and Address of Principal Place of Business)*:
LIBERTY MUTUAL INSURANCE COMPANY
1001 4th Avenue, Suite 1700
Seattle, WA 98154

OWNER *(Name and Address)*: City of Milford, 201 South Walnut Street, Milford, Delaware 19963

BID

Bid Due Date: February 1, 2019

Description *(Project Name— Include Location)*: Shawnee Acres Pump Station Replacement
Contract No. 052A180

BOND

Bond Number: N/A

Date: February 1, 2019

Penal sum Ten Percent of the Base Bid Plus the Total Amount of All Additive Alternates ----- $ 10%
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
KUHN CONSTRUCTION COMPANY (Seal)	LIBERTY MUTUAL INSURANCE COMPANY (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: Signature	By: Signature (Attach Power of Attorney)
WILLIAM J. KUHN III	Elizabeth P. Cervini
Print Name	Print Name
PRESIDENT	Attorney-in-Fact
Title	Title
Attest: Signature	Witness: ~~Attest~~: Signature
Title VICE PRESIDENT	Title John Evans, Surety Analyst

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8196842- 019008**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Jonathan F. Black; Stephanie S. Helmig; Joyce M. Houghton; Matthew J. Rosenberg; Denise M. Bruno; Julia R. Burnet; Elizabeth P. Cervini; Christine M. Hrusovsky; David A. Johnson; Harry C. Rosenberg; David C. Rosenberg

all of the city of Wayne state of PA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 14th day of September, 2018.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 14th day of September, 2018 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 1st day of February, 2019.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

PUBLIC WORKS DEPARTMENT
180 Vickers Drive
Milford, DE 19963

THE CITY of Milford DELAWARE

PHONE 302.422.1110
FAX 302.422.1117
www.cityofmilford.com

To: Eric Norenberg, City Manager
From: Mark A. Whitfield, Public Works Director
Subject: Shawnee Acre Sewage Pump Station Replacement Project Bid Award
Date: March 22, 2019

Attached for Council's consideration is a recommendation from Jason Loar, PE, of Davis, Bowen and Friedel recommending a bid award for the replacement of the Shawnee Acre Sewage Pump Station Replacement Project. The project is necessitated due to the projected increased flow from the new Southeast Regional Pump Station, which serves the new Bayhealth Sussex Campus as well as several proposed developments. Additionally, the existing pump station has experienced numerous maintenance issues over the past several years, due to the type of pump used.

The project will be funded through a USDA Loan/Grant. The award must also be approved by the USDA. The project budget for the construction project was $1,432,925.

Recommendation: I recommend Council award the bid for the Shawnee Acre Pump Station Replacement Project to Kuhn Construction Company of Hockessin, DE, the lowest, responsible bidder in the amount of $1,398,750 with funding through the USDA Loan/Grant.

ESTIMATED PROJECT COST BREAKDOWN
SANITARY SEWER SYSTEM IMPROVEMENTS
CITY OF MILFORD
May 2018

Available Funding	AMOUNT
USDA-RD Loan - 40 years @ 2.375%	$ 600,000.00
USDA-RD Grant	$ 1,000,000.00
City of Milford (Sewer Reserves)	$ 400,000.00
USDA-RD Loan - 40 years @ 2.125%	$ 1,000,000.00
USDA-RD Grant	$ 1,000,000.00
Total	$ 4,000,000.00

Expenditures	AMOUNT
Fisher Avenue Pump Station Rehabilitation (complete)	
Construction	
Pump Station Bypass Connnection - Kuhn Construction[1]	$ 27,454.00
Pump Station Rehabilitation - M2 Construction	$ 885,268.29
Fisher Aveune Pumps, Motors, and Shafts[1]	$ 86,618.00
Legal and Administration	$ 10,000.00
Engineering Fees	$ 189,260.34
Contingency (0%)	$ -
Sub-Total (project complete)	$ 1,198,600.63
Shawnee Acres Pump Station Replacement	
Construction (estimated)	$ 1,432,925.00
Legal and Administration	$ 10,000.00
Engineering Fees (Design & Const. Mgmt)	$ 188,350.00
Contingency (10%)	$ 163,127.50
Sub-Total	$ 1,794,402.50
NW/NE Sewer Rehabilitation	
Construction (estimated)	$ 1,160,027.20
Legal and Administration	$ 10,000.00
Engineering Fees (CCTV, Design & Const. Mgmt)	$ 239,353.89
Contingency (10%)	$ 140,938.11
Sub-Total	$ 1,550,319.20
Total Project Costs[2]	**$ 4,543,322.33**

(1) Denotes expenditures coming from City Sewer Reserves
(2) Excess of $4,000,000 will be from Sewer Reserves or other City source

DAVIS BOWEN & FRIEDEL, INC.

ARCHITECTS ENGINEERS SURVEYORS

Michael R. Wigley, AIA, LEED AP
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA
Jason P. Loar, P.E.
Ring W. Lardner, P.E.

March 21, 2019

City of Milford
Public Works Facility
180 Vickers Drive
Milford, Delaware 19963

ATTN: Mr. Mark Whitfield
Public Works Director

Re: Shawnee Acres Pump Station Replacement Project
City of Milford
Sussex/Kent County, Delaware
Bid Award Recommendation
DBF# 052A180

Dear Mr. Whitfield:

On Thursday, March 14, 2019 at City Hall, the bids for the above referenced project were received and opened. On behalf of the City we have evaluated the bids and the associated documentation submitted by each of the General Contractors to confirm such documentation is in order. For City review, please find enclosed a tabulation of all of the bids received.

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Sincerely,
DAVIS, BOWEN AND FRIEDEL, INC.

Jason P. Loar, P.E.
Principal

JPL
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cc: Eric Norenberg, City Manager – City of Milford

CITY OF MILFORD

SHAWNEE ACRES PUMP STATION REPLACEMENT

Contract: 052A180
Bid Date: March 14, 2019

BID RESULTS

	Item No. & Description	Size/ Depth	Unit	Est. Qty	KUHN CONSTRUCTION		HOPKINS CONSTRUCTION, INC.		M2 CONSTRUCTION, LLC		JJID, INC.[1]	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	Mobilization, Bonds, Insurance and Demobilization (5%)	--	1	LS	$65,000.00	$65,000.00	$75,000.00	$75,000.00	$55,000.00	$55,000.00	$70,000.00	$70,000.00
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4	Furnish and Install Building with Pulsed Air Mixing and Air Supply System, and Odor Control System	--	1	LS	$200,000.00	$200,000.00	$225,000.00	$225,000.00	$150,000.00	$150,000.00	$120,000.00	$120,000.00
5	Demolish , Furnish, and Install Electrical Components	--	1	LS	$288,000.00	$288,000.00	$280,800.00	$280,800.00	$303,000.00	$303,000.00	$300,000.00	$300,000.00
	CONTIGENCY ITEMS											
6	Furnish and Place Select Fill from Off-Site Source	--	100	CY	$35.00	$3,500.00	$40.00	$4,000.00	$50.00	$5,000.00	$40.00	$4,000.00
7	Furnish and Place No. 57 Stone	--	100	CY	$40.00	$4,000.00	$55.00	$5,500.00	$70.00	$7,000.00	$60.00	$6,000.00
8	Furnish and Place 4,000 PSI Concrete	--	50	CY	$175.00	$8,750.00	$150.00	$7,500.00	$200.00	$10,000.00	$150.00	$7,500.00
9	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	200	SF	$25.00	$5,000.00	$15.00	$3,000.00	$60.00	$12,000.00	$10.00	$2,000.00
10	Miscellaneous Concrete Repair (Wetted Areas - Underlayment)	--	200	SF	$50.00	$10,000.00	$20.00	$4,000.00	$80.00	$16,000.00	$15.00	$3,000.00
11	Miscellaneous Concrete Repair (Wetted Areas - Epoxy Filler)	--	100	SF	$55.00	$5,500.00	$25.00	$2,500.00	$100.00	$10,000.00	$25.00	$2,500.00
12	Electrical Allowance	--	1	LS	---	$40,000.00	---	$40,000.00	---	$40,000.00	---	$40,000.00
13	Doghouse Manhole	--	1	EA	$22,000.00	$22,000.00	$15,000.00	$15,000.00	$20,000.00	$20,000.00	$0.00	$0.00
	TOTAL BID (ITEMS 1 - 13)					$1,398,750.00		$1,542,300.00		$1,547,000.00		$1,485,000.00

Indicates calculation error

(1) Contractor did not acknowdlege Addendum No. 3

5.02 All equipment, material, labor, and other associated costs necessary for completion of work as indicated in the drawings and specifications are to be included in one of the above items.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

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A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1995111092 or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

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ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

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Addendum No.	Addendum, Date
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B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

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F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

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ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	65,000.00
2.	By-Pass Pumping Operations	--	LS	1	--	35,000.00
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	712,000.00
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	200,000.00
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	288,000.00
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	35.00	3,500.00
7.	Furnish and Place No. 57 Stone	--	CY	100	40.00	4,000.00
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	175.00	8,750.00
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	25.00	5,000.00
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	50.00	1,000.00
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	55.00	5,500.00
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1	22,000.00	22,000.00

Total Base Bid using specified materials and equipment: (Items 1 through 13)

one million three hundred eighty nine thousand seven hundred fifty dollars & zero cents **Dollars ($** 1,389,750.00 **)**

***Contingencies shall be used only if and as directed by the Engineer.**

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5.02 All equipment, material, labor, and other associated costs necessary for completion of work as indicated in the drawings and specifications are to be included in one of the above items.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

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B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1989012293 or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

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ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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Kuhn Construction Company 052A180

By:
[Signature] William J. Kuhn III

[Printed name] William J. Kuhn IIII

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] M Lawrence Kuhn

[Printed name] M. Lawrence Kuhn

Title: Secretary / Treasurer

Submittal Date: 2/22/19

Address for giving notices:

PO Box 1419

Hockessin, DE 19707

Telephone Number: 302-239-4344

Fax Number: 302-239-2816

Contact Name and e-mail address: Bill Kuhn

wkuhniii@kuhnconstr.com

Bidder's License No.: 1989012293
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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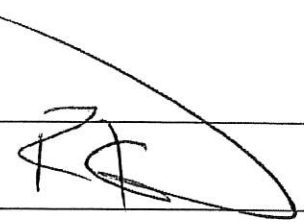
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BIDDER: *[Indicate correct name of bidding entity]*

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052A180

By:
[Signature] 

[Printed name] R. KELLER HOPKINS, PRESIDENT HOPKINS CONSTRUCTION, INC.

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] Whitney Wright

[Printed name] WHITNEY WRIGHT

Title: PROJECT MANAGER

Submittal Date: 3/14/2019

Address for giving notices:

18904 MARANATHA WAY, UNIT 1

BRIDGEVILLE, DE 19933

Telephone Number: (302) 337-3366

Fax Number: (302) 337-8315

Contact Name and e-mail address: R. KELLER HOPKINS

keller@hopkins-inc.com

Bidder's License No.: 1989030363
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	55,000
2.	By-Pass Pumping Operations	--	LS	1	--	73,000
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	846,000
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	150,000
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	303,000
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	50	5,000
7.	Furnish and Place No. 57 Stone	--	CY	100	70	7,000
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	200	10,000
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	60	12,000
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	80	16,000
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	100	10,000
12.	Electrical Allowance	--	LS	1	--	$40,000
13.	Doghouse Manhole	--	EA	1	20,000	20,000

Total Base Bid using specified materials and equipment: (Items 1 through 13)

One Million Five Hundred Forty Seven Thousand Dollars ($ 1,547,000)

***Contingencies shall be used only if and as directed by the Engineer.**

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5.02 All equipment, material, labor, and other associated costs necessary for completion of work as indicated in the drawings and specifications are to be included in one of the above items.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: [redacted] or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;

G. Required Bidder Qualification Statement with supporting data;

H. If Bid amount exceeds $10,000, signed Compliance Statement (RD-400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

I. If Bid amount exceeds $25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier covered Transactions (AD-1048); and

J. If Bid amount exceeds $100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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M2 Construction LLC 052A180

By:
[Signature]

[Printed name] Andrew T. Mattson
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Alex McManimen

Title: President

Submittal Date: 3/14/2019

Address for giving notices:

901 Stony Battery Road

Landisville, PA 17538

Telephone Number: 7173058801

Fax Number: 7178236979

Contact Name and e-mail address: Andrew T. Mattson

andrew@m2constructionllc.com

Bidder's License No.: 2013102602
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

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BID FORM

SHAWNEE ACRES PUMP STATION REPLACEMENT

SUSSEX/KENT COUNTY, DELAWARE

Project Number 052A0180

May 2018

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Milford, City Hall, 201 South Walnut Street, Milford, Delaware 19963

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
#1	1/28/19
#2	2/18/19

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance

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of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

ITEM NO.	DESCRIPTION OF WORK	SIZE OR DEPTH	UNIT	EST QTY	UNIT PRICE	TOTAL PRICE
1.	Mobilization, Bonds, Insurance, and Demobilization (maximum 5% of Base Bid)	--	LS	1	--	70,000.00
2.	By-Pass Pumping Operations	--	LS	1	--	120,000.00
3.	Sewage Pump Station and Valve Vault	--	LS	1	--	810,000.00
4.	Furnish and Install Building with Pulsed Air Mixing and Air Supply System and Odor Control System	--	LS	1	--	120,000.00
5.	Demolish, Furnish, and Install Electrical Components	--	LS	1	--	300,000.00
Contingency Items (if and as directed by Engineer)						
6.	Furnish and Place Select Fill from Off-Site Source	--	CY	100	40.00	4000.00
7.	Furnish and Place No. 57 Stone	--	CY	100	60.00	6000.00
8.	Furnish and Place 4,000 PSI Concrete	--	CY	50	150.00	7500.00
9.	Miscellaneous Concrete Repair (Non-Wetted Areas)	--	SF	200	10.00	2000.00
10.	Miscellaneous Concrete Repair (Wetted Areas-Underlayment)	--	SF	200	15.00	3000.00
11.	Miscellaneous Concrete Repair (Wetted Areas-Epoxy Filler)	--	SF	100	25.00	2500.00
12.	Electrical Allowance	--	LS	1	--	$40,000

Total Base Bid using specified materials and equipment: (Items 1 through 12)

One Million Four Hundred and Eighty Thousand **Dollars ($** 1,480,000.00 **)**

***Contingencies shall be used only if and as directed by the Engineer.**

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This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8196842- 019008**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Jonathan F. Black; Stephanie S. Helmig; Joyce M. Houghton; Matthew J. Rosenberg; Denise M. Bruno; Julia R. Burnet; Elizabeth P. Cervini; Christine M. Hrusovsky; David A. Johnson; Harry C. Rosenberg; David C. Rosenberg

all of the city of Wayne state of PA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 14th day of September, 2018.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 14th day of September, 2018 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 1st day of February, 2019.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

EJCDC

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
KUHN CONSTRUCTION COMPANY
P.O. Box 1419, 787 Valley Road
Hockessin, DE 19707

SURETY *(Name, and Address of Principal Place of Business)*:
LIBERTY MUTUAL INSURANCE COMPANY
1001 4th Avenue, Suite 1700
Seattle, WA 98154

OWNER *(Name and Address)*: City of Milford, 201 South Walnut Street, Milford, Delaware 19963

BID

Bid Due Date: February 1, 2019

Description *(Project Name— Include Location)*: Shawnee Acres Pump Station Replacement
Contract No. 052A180

BOND

Bond Number: N/A

Date: February 1, 2019

Penal sum Ten Percent of the Base Bid Plus the Total Amount of All Additive Alternates —— $ 10%
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
KUHN CONSTRUCTION COMPANY (Seal)	LIBERTY MUTUAL INSURANCE COMPANY (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: [signature]	By: [signature]
Signature	Signature (Attach Power of Attorney)
WILLIAM J KUHN III	Elizabeth P. Cervini
Print Name	Print Name
PRESIDENT	Attorney-in-Fact
Title	Title
Attest: [signature]	Witness:
Signature	Attest: [signature]
Title VICE PRESIDENT	Signature
	Title John Evans, Surety Analyst

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

ESTIMATED PROJECT COST BREAKDOWN
SANITARY SEWER SYSTEM IMPROVEMENTS
CITY OF MILFORD
March 2019

Available Funding	AMOUNT
USDA-RD Loan - 40 years @ 2.375%	$ 600,000.00
USDA-RD Grant	$ 1,000,000.00
City of Milford (Sewer Reserves)	$ 400,000.00
USDA-RD Loan - 40 years @ 2.125%	$ 1,000,000.00
USDA-RD Grant	$ 1,000,000.00
Total	$ 4,000,000.00

Expenditures	AMOUNT
Fisher Avenue Pump Station Rehabilitation (complete)	
Construction	
Pump Station Bypass Connnection - Kuhn Construction[1]	$ 27,454.00
Pump Station Rehabilitation - M2 Construction	$ 885,268.29
Fisher Aveune Pumps, Motors, and Shafts[1]	$ 86,618.00
Legal and Administration	$ 10,000.00
Engineering Fees	$ 189,260.34
Contingency (0%)	$ -
Sub-Total (project complete)	$ 1,198,600.63
Shawnee Acres Pump Station Replacement	
Construction (per bid)	$ 1,398,750.00
Legal and Administration	$ 10,000.00
Engineering Fees (Design & Const. Mgmt)	$ 188,350.00
Contingency (10%)	$ 159,710.00
Sub-Total	$ 1,756,810.00
NW/NE Sewer Rehabilitation	
Construction (estimated)	$ 1,160,027.20
Legal and Administration	$ 10,000.00
Engineering Fees (CCTV, Design & Const. Mgmt)	$ 239,353.89
Contingency (10%)	$ 140,938.11
Sub-Total	$ 1,550,319.20
Total Project Costs[2]	**$ 4,505,729.83**

(1) Denotes expenditures coming from City Sewer Reserves
(2) Excess of $4,000,000 will be from Sewer Reserves or other City source

ESTIMATED PROJECT COST BREAKDOWN
SANITARY SEWER SYSTEM IMPROVEMENTS
CITY OF MILFORD
March 2019

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USDA-RD Loan - 40 years @ 2.375%	$ 600,000.00
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Client	CITY OF MILFORD	Phone	(302) 424-5140
Address	201 S. Walnut St. Terri Hudson MILFORD, DE 19963	EMail Fax	fargo@milford-de.gov
AD #	318219	Requested By	CITY OF MILFORD
Account#	114467		
Class	5500	PO #	PO# SR18-00020 CE
Start Date	02/18/19	Created By	JLEVY
End Date	02/22/19	Creation Date	02/15/2019
Run Dates	4	Dimensions	3 X 6.153
Pubs	Delaware State News, Newszap	**Price**	**$237.76**
Order #	318219		
Sales Rep	Janet Levy	Phone	(302) 741-8273
		EMail	jlevy@newszap.com
		Fax	(302) 741-8215

SECTION 00020

INVITATION TO BIDDERS

The City of Milford is seeking responsible contracting firms for the completion of construction improvements as part of their **SIDEWALK REPAIR PROJECT–YEAR 1, CONTRACT NO. 2019-ST-001.** The scope of WORK on the proposed project includes the demolition, removal and replacement of a potential maximum of approximately 50,000 SF of sidewalk and associated work.

Sealed BIDS, in duplication, for the general construction of the **SIDEWALK REPAIR PROJECT–YEAR 1, CONTRACT NO. 2019-ST-001**, will be received by the City of Milford at Milford City Hall, 201 S. Walnut Street, Milford, Delaware 19963, until **2:00 P.M. LOCAL TIME ON MARCH 7, 2019.**

BIDS will be opened publicly and read aloud in the Council Chambers at Milford City Hall at the time designated in this notice. The main purpose of the BID opening is to reveal the name(s) of the BIDDER(S), and not to serve as a forum for determining the low BIDDER(S). Any BIDS not in the possession of the City of Milford after that time will be returned unopened. It is the responsibility of the BIDDER to ensure their BID is received prior to the closing date and time.

ENVELOPES MUST BE CLEARLY MARKED "SIDEWALK REPAIR PROJECT–YEAR 1, CONTRACT NO. 2019-ST-001, BID OPENING MARCH 7, 2019, 2:00 P.M." AND SENT TO THE **"ATTENTION OF THE CITY CLERK'S OFFICE"**. No faxed or electronic BIDS will be accepted.

The CONTRACT DOCUMENTS may be examined and/or obtained at the City of Milford Public Works Facility, 180 Vickers Drive, Milford, Delaware 19963, upon payment of $20.00 for each set, non-refundable. Checks should be made payable to the City of Milford.

Responsible BIDDERS will be required to provide BID SECURITY in the amount of 10% of the bid sum. The successful bidder must post PERFORMANCE and PAYMENT BONDS equal to 100% of the contract price upon execution of the CONTRACT.

An OPTIONAL Pre-BID Meeting will be held at **2:00 PM, FEBRUARY 28, 2019** at the City of Milford Public Works Facility, 180 Vickers Drive, Milford, Delaware 19963.

The City reserves the right, as the interest of the City of Milford may appear, to reject any and all BIDS, to waive any informality or irregularity in the BIDS received, to accept or reject any items of any BID, and to adjust the estimated quantities listed at their sole discretion.

CITY OF MILFORD
By: Eric Norenberg
City Manager

318219 DSN 2/18,22/2019

Bid Tabulation

Contract No: 2019-St-001
Project: Sidewalk Repair Project-Year 1
Section: 00300

Bid Opening: March 7, 2009 @ 2:00 pm

Addenda: No. 1, March 6, 2019
Section: 00300R1

Bid Opening: March 14, 2019 @ 2:00 pm

Bidder	Addendum 1 Acknowledgement	Item No/Price	Subcontractors List Provided	Supplies List Provided	Security Provided
F&N Vazquez Concrete LLC	Yes	1A $15.00 1B $13.00 1C $11.00 1D $9.00 2A $18.00 2B $16.00 2C $14.00 2D 12.00	Yes	Yes	No
Diamond Materials LLC	Yes	1A $17.95 1B $15.70 1C $13.55 1D $12.95 2A $18.95 2B $16.90 2C $15.80 2D $15.75	Yes	Yes	Yes

Christine R. Crouch, CMC
Deputy City Clerk

PUBLIC WORKS DEPARTMENT
180 Vickers Drive
Milford, DE 19963

THE CITY of Milford DELAWARE

PHONE 302.422.1110
FAX 302.422.1117
www.cityofmilford.com

To: Eric Norenberg, City Manager
From: Mark A. Whitfield, Public Works Director
Subject: Bid Award – Sidewalk Repair Project – Year 1
Date: March 21, 2019

As part of the Sidewalk Repair program implemented by the City in 2017, bids were solicited for cost of replacement of sidewalk, should property owners elect to have the City repair, or if property owners fail to repair the sidewalks within the 90-day period. Additionally, the City is responsible for the repair of sidewalks where there are water meter pits, utility poles, street signs, hydrants, street tree roots, and sewer cleanouts, and the bid includes these sidewalks as well.

The bids provide a range based on the quantity of sidewalks repaired. The more sidewalks completed under the contract, the less expensive the square foot price. Additionally, separate prices for 4" thick sidewalk and 6" thick sidewalk (at driveways) were obtained.

Bids for the project were opened on March 14. Two bids were received, however one bidder failed to submit a bid surety, and therefore was disqualified.

Based on the lowest responsible bid, the replacement of sidewalks under the City's responsibility would be as follows:

	at $17.95/sf	at $15.70/sf	at $13.55/sf	at $12.95/sf
Water	$37,246	$32,577	$28,116	$26,871
Electric	$16,155	$14,130	$12,195	$11,655
Sewer	$ 897	$ 785	$ 678	$ 648
Streets	$29,617	$25,905	$22,358	$21,368

Costs to property owners for a single sidewalk block (approximately 25 s.f) would be as follows:

Price	Cost for 1 block
$17.95/sf	$448.75
$15.70/sf	$392.50
$13.55/sf	$338.75
$12.95/sf	$323.75

Recommendation: Staff recommends City Council award the Sidewalk Replacement Project-Year 1 to Diamond Materials of Newport, DE, at a not-to-exceed price of $660,537.50

SECTION 00300

BID FORM

Proposal of DIAMOND MATERIALS LLC (hereafter called "BIDDER"), organized and existing under the laws of the State of DELAWARE doing business as LIMITED LIABILITY COMPANY *(Insert "a corporation", "a partnership", or "an individual" as applicable)* to the City of Milford (hereinafter called "OWNER").

In compliance with the INVITATION TO BIDDERS, BIDDER hereby proposes to perform all WORK for the **SIDEWALK REPAIR PROJECT-YEAR 1, CONTRACT NO. 2019-ST-001**, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth herein, and at the prices stated below.

By submission of this BID, each BIDDER certifies that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this CONTRACT on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within **120 CONSECUTIVE CALENDAR DAYS** thereafter. BIDDER further agrees to pay, as liquidated damages, an amount of **$500.00 PER CALENDAR DAY** as defined in the GENERAL CONDITIONS.

BIDDER acknowledges receipt of the following ADDENDA:

#1 MARCH 6, 2019

BIDDER'S ACKNOWLEDGEMENT OF CITY'S ABILITY TO ADJUST QUANTITIES	INITIAL BELOW
BIDDER acknowledges the estimated quantities listed below may be increased or decreased at the sole discretion of the City.	JBC

This BID includes sales tax and all other applicable taxes and fees. BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

ITEM NO. & DESCRIPTION		UNIT	SIZE OR DEPTH	EST. MINIMUM QTY.	EST. MAXIMUM QTY.	UNIT PRICE
1A	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	3,500	7,499	17.95
1B	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	7,500	14,999	15.70
1C	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	15,000	29,999	13.55
1D	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	30,000	46,750	12.95
2A	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	100	499	18.95
2B	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	500	999	16.90
2C	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	1,000	1,999	15.80
2D	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	2,000	3,500	15.75

SUBCONTRACTOR and SUPPLIER LIST

In accordance with Title 29, Chapter 69, §6962 (d) (10) b. of the Delaware Code, the following SUBCONTRACTOR and SUPPLIER listing must accompany the BID submittal. The name and address (City and State only) of all major material SUPPLIERS and SUBCONTRACTORS must be listed for each category where the BIDDER intends to use a SUPPLIER or SUBCONTRACTOR to perform that category of WORK. In order to provide full disclosure and acceptance of the BID by the OWNER, it is required that BIDDERS list themselves as being the SUBCONTRACTOR or SUPPLIER for all categories where he/she is qualified and intends to perform such WORK.

SUBCONTRACTORS				
	CATEGORY	COMPANY NAME	ADDRESS (CITY, STATE)	DBE (Y/N)
1.	CONCRETE	DIAMOND MATERIALS LLC	242 N. JAMES ST. NEWPORT, DE	N
2.				
3.				
4.				
5.				

SUPPLIERS				
	CATEGORY	COMPANY NAME	ADDRESS (CITY, STATE)	DBE (Y/N)
1.	CONCRETE	ATLANTIC CONCRETE	812 NE FRONT ST ERT MILFORD, DE 19963	N
2.				
3.				
4.				
5.				

BIDDER Please Note:

The OWNER reserves the right to accept or reject any or all BIDS. The OWNER may elect to delete some or all portions of any BID item, shown above and described in the CONTRACT DOCUMENTS, or accept any or all alternate BID items, in any order, such that the best interests of the OWNER are served.

By submission of this BID, BIDDER certifies that: (1) he is licensed, or has initiated the license application, as required by Title 30, Chapter 25, §2502 of the Delaware Code; (2) he has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this submitted proposal; and (3) he comprehends the bidding requirements set forth in the CONTRACT DOCUMENTS and herein and is thoroughly familiar with the provisions of the CONTRACT DOCUMENTS.

BIDDER agrees that this BID shall be good and may not be withdrawn for a period of **one-hundred eighty (180) days** after the scheduled closing time for receiving BIDS. Upon receipt of written notice of the acceptance of this BID, BIDDER will execute the formal CONTRACT, attached to said notice, within twenty (20) days and deliver a Surety BOND or BONDS as required by the INFORMATION FOR BIDDER.

The BID security attached in the sum of $ 10% , representing ten percent (10%) of the total Project BID, is to become the property of the OWNER in the event the CONTRACT and BONDS are not executed within the time above set forth, as liquidated damages for the delay and additional time expense to the OWNER caused thereby.

Respectfully submitted:

Signature

3/12/2019
Date

VP Project Mgmt
Title

242 N. James St.
Address

DE # 1996105266
License Number (If applicable)

Suite 102
Newport, DE 19804
Address (cont'd)

Seal - (if bid is by a corporation)

END OF SECTION

SECTION 00370

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the Undersigned, Diamond Materials, LLC, as PRINCIPAL, and Liberty Mutual Insurance Company, as SURETY, are hereby held and firmly bound unto the City of Milford, as OWNER, the penal sum of Ten percent (10%) of the total amount of the Bid, ($ 10%) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this 14th day of March, 2019.

The condition of the above obligation is such that whereas the PRINCIPAL has submitted to the City of Milford a certain BID, attached hereto and hereby made a part hereof to enter into a CONTRACT in writing, for the **SIDEWALK REPAIR PROJECT-YEAR 1, CONTRACT NO. 2019-ST-001**.

NOW, THEREFORE,

A. If said BID shall be rejected, or

B. If said BID shall be accepted and the PRINCIPAL shall execute and deliver a CONTRACT in the form of CONTRACT attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said CONTRACT, and for the payment of all persons performing labor and furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the SURETY for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said SURETY does hereby waive notice of any extension.

In WITNESS WHEREOF, the PRINCIPAL and the SURETY have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above. SURETY executing BONDS shall be a licensed agent in the State of Delaware.

Diamond Materials, LLC

_____ (L.S.)

Principal

Liberty Mutual Insurance Company

Surety

By: _____

Linda Dozier, Attorney-in-Fact

IMPORTANT – SURETY companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

END OF SECTION



THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.
This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 8098907

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint,
Kevin P. Adams; Patrick Bucalo; Kevin Connelly; Linda Dozier; Michael J. Mitchell; Martin J. Purcell

all of the city of Philadelphia, state of PA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of May, 2018.

The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 16th day of May, 2018, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 14 day of March, 2019.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

LMS_12873_022017

Liberty Mutual SURETY

LIBERTY MUTUAL INSURANCE COMPANY

FINANCIAL STATEMENT — DECEMBER 31, 2017

Assets

Cash and Bank Deposits	$370,003,299
*Bonds — U.S Government	1,331,664,975
*Other Bonds	11,127,053,004
*Stocks	16,367,850,688
Real Estate	272,895,626
Agents' Balances or Uncollected Premiums	5,258,657,823
Accrued Interest and Rents	100,341,596
Other Admitted Assets	11,192,287,530
Total Admitted Assets	**$46,020,754,541**

Liabilities

Unearned Premiums		$7,503,154,587
Reserve for Claims and Claims Expense		19,658,731,454
Funds Held Under Reinsurance Treaties		224,693,828
Reserve for Dividends to Policyholders		967,520
Additional Statutory Reserve		52,491,027
Reserve for Commissions, Taxes and Other Liabilities		4,049,392,852
Total		**$31,489,431,268**
Special Surplus Funds	$176,230,822	
Capital Stock	10,000,000	
Paid in Surplus	9,484,316,385	
Unassigned Surplus	4,860,776,066	
Surplus to Policyholders		**14,531,323,273**
Total Liabilities and Surplus		**$46,020,754,541**

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS

* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2017, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 16th day of March, 2018.

T A Mikolajewski

Assistant Secretary

SECTION 00300

BID FORM

Proposal of F3N Vazquez Concrete LLC (hereafter called "BIDDER"), organized and existing under the laws of the State of Delaware doing business as F3N Vazquez Concrete LLC *(Insert "a corporation", "a partnership", or "an individual" as applicable)* to the City of Milford (hereinafter called "OWNER").

In compliance with the INVITATION TO BIDDERS, BIDDER hereby proposes to perform all WORK for the **SIDEWALK REPAIR PROJECT-YEAR 1, CONTRACT NO. 2019-ST-001**, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth herein, and at the prices stated below.

By submission of this BID, each BIDDER certifies that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this CONTRACT on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within **120 CONSECUTIVE CALENDAR DAYS** thereafter. BIDDER further agrees to pay, as liquidated damages, an amount of **$500.00 PER CALENDAR DAY** as defined in the GENERAL CONDITIONS.

BIDDER acknowledges receipt of the following ADDENDA:

Addendum NO.1

BIDDER'S ACKNOWLEDGEMENT OF CITY'S ABILITY TO ADJUST QUANTITIES	INITIAL BELOW
BIDDER acknowledges the estimated quantities listed below may be increased or decreased at the sole discretion of the City.	F.V

This BID includes sales tax and all other applicable taxes and fees. BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

ITEM NO. & DESCRIPTION		UNIT	SIZE OR DEPTH	EST. MINIMUM QTY.	EST. MAXIMUM QTY.	UNIT PRICE
1A	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	3,500	7,499	$15.00
1B	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	7,500	14,999	$13.00
1C	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	15,000	29,999	$11.00
1D	Remove & Replace Existing **4"** Concrete Sidewalk and Other Appurtenant Work	SF	4"	30,000	46,750	$9.00
2A	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	100	499	$18.00
2B	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	500	999	$16.00
2C	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	1,000	1,999	$14.00
2D	Remove & Replace Existing **6"** Concrete Sidewalk and Other Appurtenant Work	SF	6"	2,000	3,500	$12.00

SUBCONTRACTOR and SUPPLIER LIST

In accordance with Title 29, Chapter 69, §6962 (d) (10) b. of the Delaware Code, the following SUBCONTRACTOR and SUPPLIER listing must accompany the BID submittal. The name and address (City and State only) of all major material SUPPLIERS and SUBCONTRACTORS must be listed for each category where the BIDDER intends to use a SUPPLIER or SUBCONTRACTOR to perform that category of WORK. In order to provide full disclosure and acceptance of the BID by the OWNER, it is required that BIDDERS list themselves as being the SUBCONTRACTOR or SUPPLIER for all categories where he/she is qualified and intends to perform such WORK.

SUBCONTRACTORS				
	CATEGORY	COMPANY NAME	ADDRESS (CITY, STATE)	DBE (Y/N)
1.	Concrete Work	F3N Vazquez Concrete LLC	Lincoln, DE	
2.				
3.				
4.				
5.				

SUPPLIERS				
	CATEGORY	COMPANY NAME	ADDRESS (CITY, STATE)	DBE (Y/N)
1.	Concrete Product	Atlantic Concrete	Milford, DE	
2.	Concrete Product	Parker Block Concrete	Millsboro, DE	
3.				
4.				
5.				

BIDDER Please Note:

The OWNER reserves the right to accept or reject any or all BIDS. The OWNER may elect to delete some or all portions of any BID item, shown above and described in the CONTRACT DOCUMENTS, or accept any or all alternate BID items, in any order, such that the best interests of the OWNER are served.

By submission of this BID, BIDDER certifies that: (1) he is licensed, or has initiated the license application, as required by Title 30, Chapter 25, §2502 of the Delaware Code; (2) he has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this submitted proposal; and (3) he comprehends the bidding requirements set forth in the CONTRACT DOCUMENTS and herein and is thoroughly familiar with the provisions of the CONTRACT DOCUMENTS.

BIDDER agrees that this BID shall be good and may not be withdrawn for a period of **one-hundred eighty (180) days** after the scheduled closing time for receiving BIDS. Upon receipt of written notice of the acceptance of this BID, BIDDER will execute the formal CONTRACT, attached to said notice, within twenty (20) days and deliver a Surety BOND or BONDS as required by the INFORMATION FOR BIDDER.

The BID security attached in the sum of $_____, representing ten percent (10%) of the total Project BID, is to become the property of the OWNER in the event the CONTRACT and BONDS are not executed within the time above set forth, as liquidated damages for the delay and additional time expense to the OWNER caused thereby.

Respectfully submitted:

Signature	3-11-19 Date
Owner Title	18577 Sherman Ave. Address
20106001213 License Number (If applicable)	Lincoln, DE 19960 Address (cont'd)

Seal - (if bid is by a corporation)

END OF SECTION

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
03/12/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Linda J Sharp	
Pfister Insurance, Inc. 625 S. Dupont Hwy., Suite 101 PO Box 756 Dover DE 19903	PHONE (A/C, No, Ext): (302) 674-3100	FAX (A/C, No): (302) 678-8259
	E-MAIL ADDRESS: linda@pfisterins.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
F & N Vazquez Concrete LLC 18578 Sherman Ave Lincoln DE 19960	INSURER A : Westfield Group	24112
	INSURER B : National Grange Mutual / Main Street America	14788
	INSURER C : Technology Ins Co / AmTrust	42376
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 18-19 Revised Limits **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			CWP3831506	04/09/2018	04/09/2019	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 1,000,000 $ 500,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			B1U1372R	04/09/2018	04/09/2019	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) [ ]	$ 1,000,000 $ $ $ $
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE [ ]	$ $ $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [Y] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		TWC3709881	04/09/2018	04/09/2019	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 500,000 $ 500,000 $ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

City of Milford
City Hall
201 S Walnut Street
Milford DE 19963

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Linda J. Sharp

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LICENSE NO. 2010601213 DORBL

POST CONSPICUOUSLY

STATE OF DELAWARE
DIVISION OF REVENUE

VALID
01/01/18 - 12/31/20
NOT TRANSFERABLE

DLN: 17 95270 02

BUSINESS CODE GROUP CODE 331

LICENSED ACTIVITY CONTRACTOR-RESIDENT

DATE ISSUED: 11/02/17

LICENSE FEE: $ 225.00

VALIDATED

2020

BUSINESS LICENSE

MAILING ADDRESS

F & N VAZQUEZ CONCRETE LLC
18578 SHERMAN AVE
LINCOLN DE 19960-3163

BUSINESS LOCATION

F & N VAZQUEZ CONCRETE LLC
18578 SHERMAN AVE
LINCOLN DE 19960-3163

IS HEREBY LICENSED TO PRACTICE, CONDUCT OR ENGAGE IN THE OCCUPATION OR BUSINESS ACTIVITY INDICATED ABOVE IN ACCORDANCE WITH THE LICENSE APPLICATION DULY FILED PURSUANT TO TITLE 30, DEL CODE.

JENNIFER R. HUDSON
DIRECTOR OF REVENUE

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

F&N Vazquez Concrete, LLC

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☑ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ S

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

18577 Sherman Ave

6 City, state, and ZIP code

Lincoln, DE 19960

Requester's name and address (optional)

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			-			-				

or

Employer identification number

2	7	-	2	0	2	9	8	6	3

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ [signature] Date ▶ 2019

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*