

**Drainage Reports**

**Abbreviated Water & Sewer Need Reports**

**Water Study**

**Wastewater Study**

**Stormwater Waiver Application**

**WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS  
PRELIMINARY BASIN OF DESIGN REPORT  
FOR  
STERLING CONDOMINIUMS AT SILVERLEAF**

Revised: November 3, 2016  
September 9, 2016, 2016  
Job # 16TNHC102

*Prepared For:* **The New Home Company**  
6730 N. Scottsdale Rd.  
Scottsdale, Arizona 85253

*Submitted To:* **City of Scottsdale**  
Water Resources Division  
9379 East San Salvador Drive  
Scottsdale, AZ 85258

*Prepared By:* **Land Development Team, LLC**  
Gordon Wark, P.E.  
3420 E. Shea Boulevard  
Suite 156  
Phoenix, Arizona 85028  
Phone: (602)396-5702  
Fax: (602) 396-5701

**Accepted For:**  
**City of Scottsdale**  
**Water Resources Department**  
**9379 E. San Salvador**  
**Scottsdale, Arizona**

By: Ronald O/L  
Date: 12/12/16



EXPIRES 12-31-2016



November 3, 2016

Water Resources Division  
City of Scottsdale  
9379 East San Salvador Drive  
Scottsdale, AZ 85258

Re: Sterling Condominiums at Silverleaf  
Water Distribution and Wastewater Collection System, Preliminary Basis of Design Report

Sterling Condominiums at Silverleaf is a proposed multi-family residential development, located east of Thompson Peak Parkway and north of the Union Hills Road alignment. This site was originally platted by Sterling Residences with an overall density of 212 condominium units. A partnership of The New Home Company and DMB Associates, Inc are now proposing a similar condominium plans but with only 72 condominium units. Plate 1 provides a vicinity map for the site.

The existing water system surrounding the site will be utilized to provide the supply of potable water and fire suppression for the site. One section of existing water line will be abandoned and re-routed along with a water line extension to connect the existing water line on Legacy Boulevard and 101<sup>st</sup> Street. The attached Plate 2 indicates the water line to be abandoned, the re-routing and water line extension. Plate 2 also indicates existing water stubs that will be either be abandoned or incorporated as fire service lines and new domestic and fire services for the buildings. The total water demand for the site will be approximately 16,900 gallons per day.

Wastewater generated from the project will be conveyed through a network of existing 8-inch gravity sewer lines. A private sewer service (6") will be extended from an existing sewer manhole to provide service to the proposed pool with associated rest room facilities as well as the proposed guard gate which will also have a restroom. Plate 2 provides the location of this proposed private service line. Plate 2 also indicates existing sewer stubs that will be used and those that will be abandoned. The projected wastewater generation for the project site is 10,500 gallons per day.

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Please see Appendix A for sewer demand calculations and the proposed private sewer service capacity calculations for the proposed sewer service line connecting to the existing sewers. The spreadsheet shows the proposed sewer service slope at building code minimum of 2%, projected peak flow rate, and pipe flow capacity for these connecting pipes.

Please contact us if you have any questions.

Sincerely,

**Land Development Team, LLC.**



Gordon Wark, P.E.



EXPIRES 12-31-2016

**APPENDIX A**  
**WASEWATER FLOW AND PIPE CAPACITY ANALYSIS**



**Total Estimated Flow Calculations**

Project: *Sterling Condominiums at Silverleaf* Project Number: 16THNC102  
 Location: Scottsdale Project Engineer: Gordon Wark, P.E.  
 Date: November 3, 2016  
 References:

**Multi-Family Residential**

FROM SEWER NODE	TO SEWER NODE	LAND USE	DWELLING UNITS	Population (2.0 persons per unit)	ADF/ Person (GPD)	ADF SUB-TOTAL (GPD)	ADF TOTAL (GPD)	PEAKING FACTOR	TOTAL ADF (GPD)	PEAK Day FLOW (GPD)
CO #1	CO #2	Guard Gatehouse	1	1.5	100	150	150	4.00	150	600
CO #2	CO #3						150	4.00	150	600
CO #3	CO #4	Pool rest rooms	2	2	150	300	450	4.00	450	1,800
CO #4 to Exist. MH							450	4.00	450	1,800



### Estimated Pipe Capacities

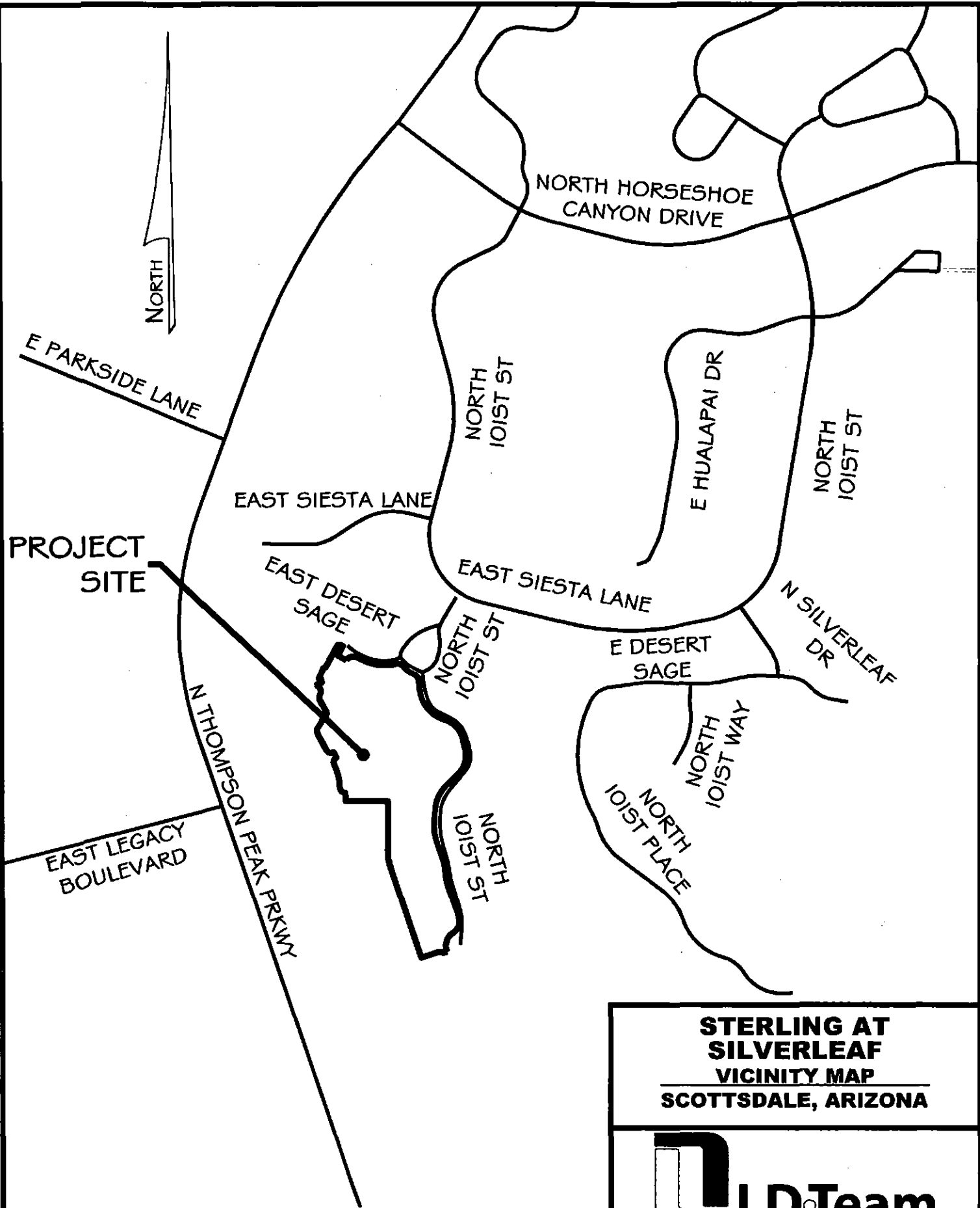
Project: *Sterling Condominiums at Silverleaf*  
 Location: Scottsdale  
 Date: November 3, 2016  
 References: 0

Project Number: 16THNC102  
 Project Engineer: Gordon Wark, P.E.

FROM NODE	TO NODE	PIPE SIZE (IN)	PEAK FLOW (GPD)	DESIGN PIPE SLOPE (FT / FT)	FULL FLOW VELOCITY, V <sub>0</sub> (FPS)	PARTIAL FLOW VELOCITY, V <sub>1</sub> (FPS)	PIPE CAPACITY (GPD)	SURPLUS CAPACITY (GPD)	d / D Ratio
CO #1	CO #2	6	600	0.0200	4.0	0.65	513,857	513,257	0.02
CO #2	CO #3	6	600	0.0200	4.0	0.65	513,857	513,257	0.02
CO #3	CO #4	6	1,800	0.0200	4.0	0.93	513,857	512,057	0.04
0	0	6	1,800	0.0200	4.0	0.93	513,857	512,057	0.04

**PLATE 1  
VICINITY MAP**





**STERLING AT  
SILVERLEAF  
VICINITY MAP  
SCOTTSDALE, ARIZONA**



3420 East Shea Blvd, Suite 156 • Phoenix, Arizona 85028  
Ph 602-396-5700 • Fax 602-396-5701 • www.LD-Team.com

**PLATE 2**  
**WATER AND SEWER FACILITIES**

