

TRAPEZOIDAL CHANNEL ANALYSIS  
NORMAL DEPTH COMPUTATION

March 25, 2014

PROGRAM INPUT DATA	
DESCRIPTION	VALUE
Flow Rate (cfs)	6.37
Channel Bottom Slope (ft/ft)	0.024
Manning's Roughness Coefficient (n-value)	0.027
Channel Left Side Slope (horizontal/vertical)	5.0
Channel Right Side Slope (horizontal/vertical)	5.0
Channel Bottom Width (ft)	3.0

COMPUTATION RESULTS	
DESCRIPTION	VALUE
Normal Depth (ft)	0.37
Flow Velocity (fps)	3.52
Froude Number	1.197
Velocity Head (ft)	0.19
Energy Head (ft)	0.56
Cross-Sectional Area of Flow (sq ft)	1.81
Top Width of Flow (ft)	6.72

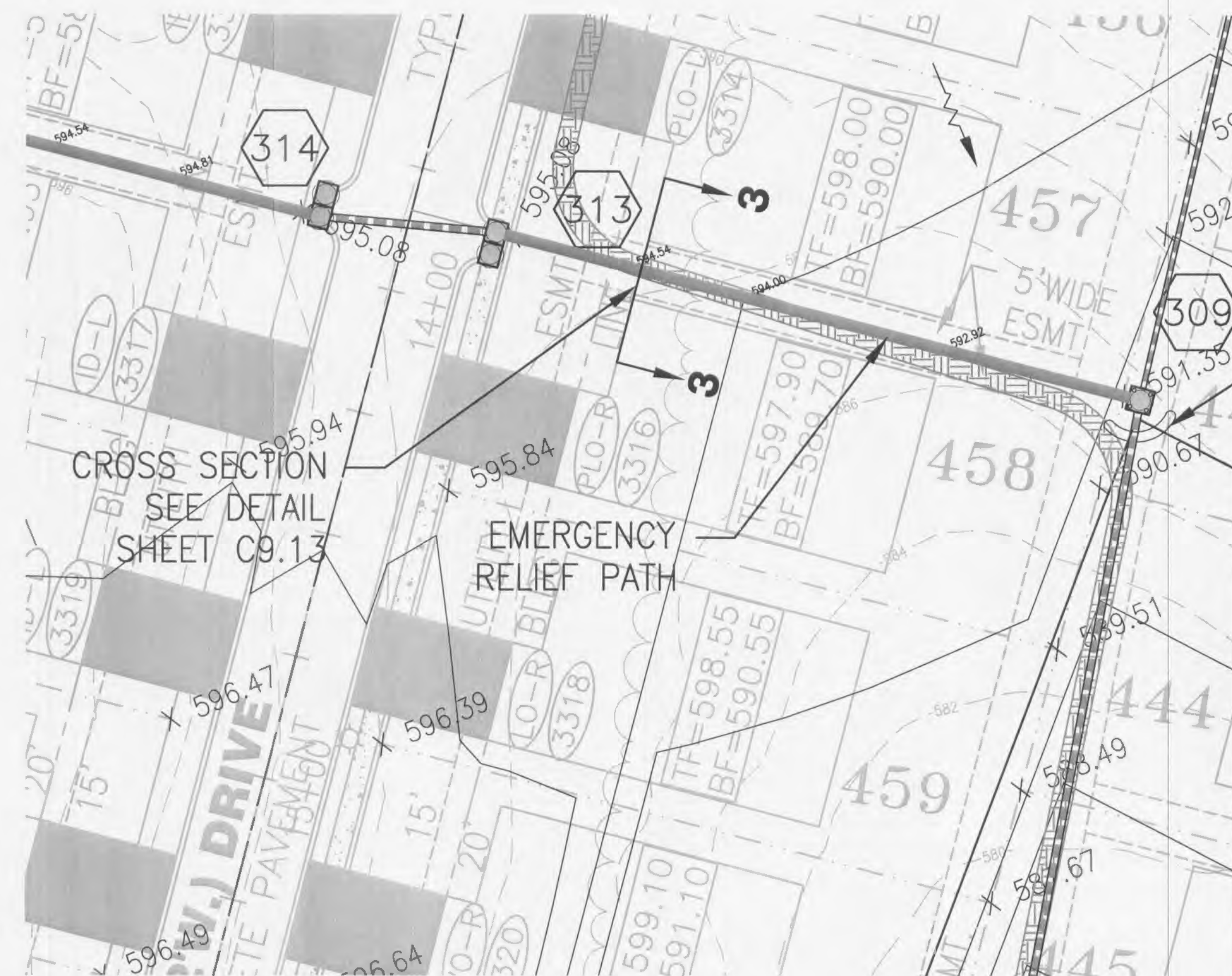
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Dodson & Associates, Inc., 5629 FM 1960 West, Suite 314, Houston, TX 77069  
Phone: (281)440-3787, Fax: (281)440-4742, Email: software@dodson-hydro.com  
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**6 CHANNEL ANALYSIS LOTS 457-458**  
SCALE: N.T.S. REF. DWG.



NOTE: WINDOW WELLS  
MAY BE REQUIRED.

**5 EMERGENCY SPILLWAY DETAIL**  
SCALE: N.T.S. REF. DWG.



**4 EMERGENCY SPILLWAY**  
SCALE: 1"=20' REF. DWG.

TRAPEZOIDAL CHANNEL ANALYSIS  
NORMAL DEPTH COMPUTATION

March 25, 2014

PROGRAM INPUT DATA	
DESCRIPTION	VALUE
Flow Rate (cfs)	3.63
Channel Bottom Slope (ft/ft)	0.01
Manning's Roughness Coefficient (n-value)	0.027
Channel Left Side Slope (horizontal/vertical)	5.0
Channel Right Side Slope (horizontal/vertical)	5.0
Channel Bottom Width (ft)	3.0

COMPUTATION RESULTS	
DESCRIPTION	VALUE
Normal Depth (ft)	0.35
Flow Velocity (fps)	2.19
Froude Number	0.766
Velocity Head (ft)	0.07
Energy Head (ft)	0.42
Cross-Sectional Area of Flow (sq ft)	1.65
Top Width of Flow (ft)	6.49

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**2 CHANNEL ANALYSIS LOTS 479-480**  
SCALE: N.T.S. REF. DWG.



**2 EMERGENCY SPILLWAY DETAIL**  
SCALE: N.T.S. REF. DWG.



**1 EMERGENCY SPILLWAY**  
SCALE: 1"=20' REF. DWG.

NO.	REVISION DESCRIPTION	DATE
3	CITY COMMENTS	5/27/14
2	CITY COMMENTS	3/27/14
1	CITY COMMENTS	3/27/14

DEVELOPER/OWNER:  
**PULTE GROUP**  
1707 CHESTERFIELD AIRPORT RD. SITE 120  
CHESTERFIELD, MO 63005  
PHONE: (636) 537-7129

CIVIL ENGINEERS  
JOHN F. HARBARGER  
REGISTERED PROFESSIONAL ENGINEER  
NO. 001185  
E-29716  
DATE: 5/27/14

PRESTON WOODS  
PHASE 7  
IMPROVEMENT PLANS  
PRESTON WOODS LANE  
O'FALLON, MO 63366  
**EMERGENCY SPILLWAY**

+ ST. CHARLES  
1320 S. Fifth Street  
Suite 307  
St. Charles, MO 63033  
636.972.7508 (cell)  
**COLE**  
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE  
Cole & Associates, Inc.

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DRAWN BY: MTS  
CHECKED BY: JFH  
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