
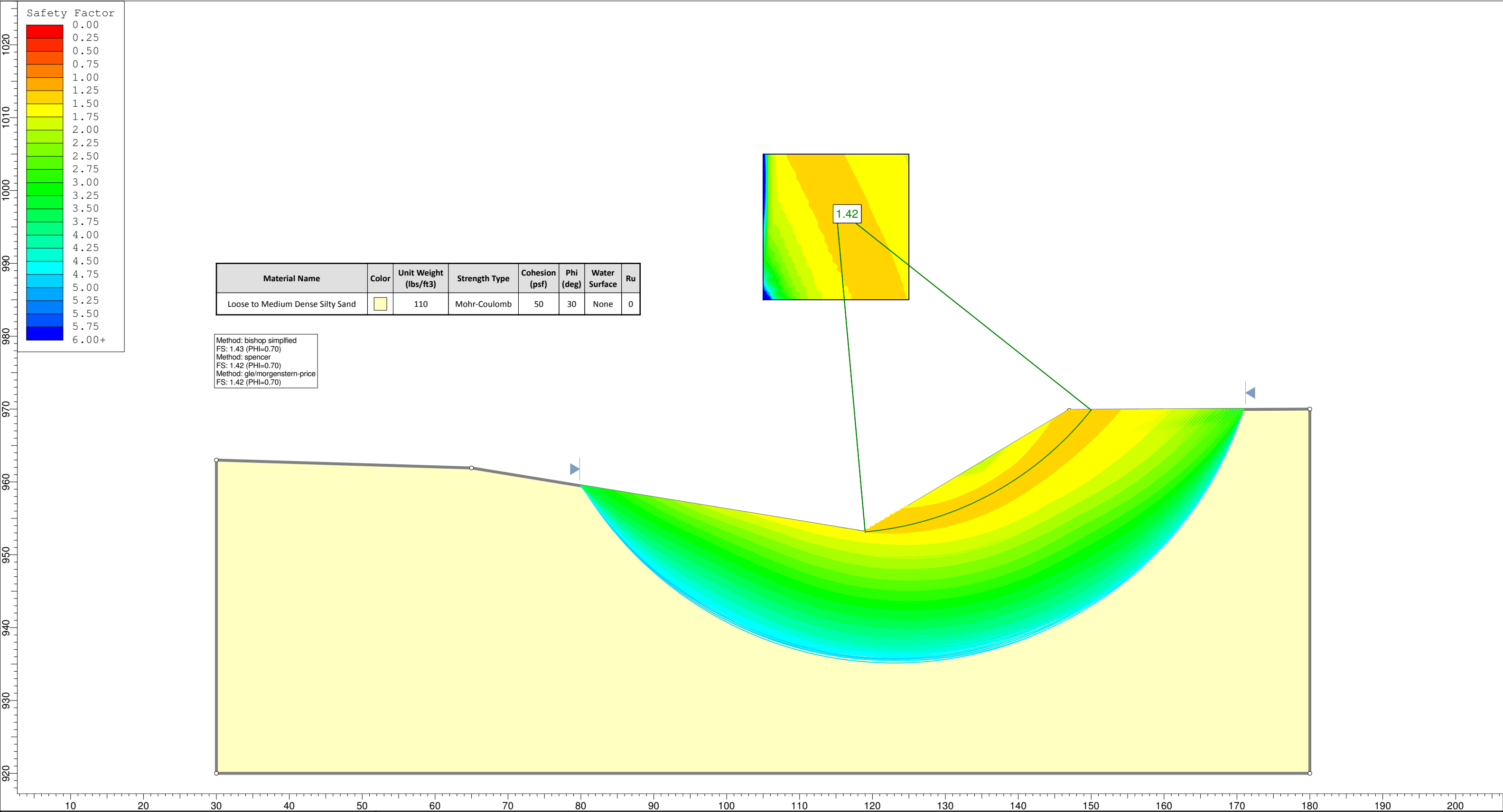


Method: bishop simplified
FS: 2.50 (PHI=0.40)
Method: spencer
FS: 2.50 (PHI=0.40)
Method: gle/morgenstern-price
FS: 2.50 (PHI=0.40)

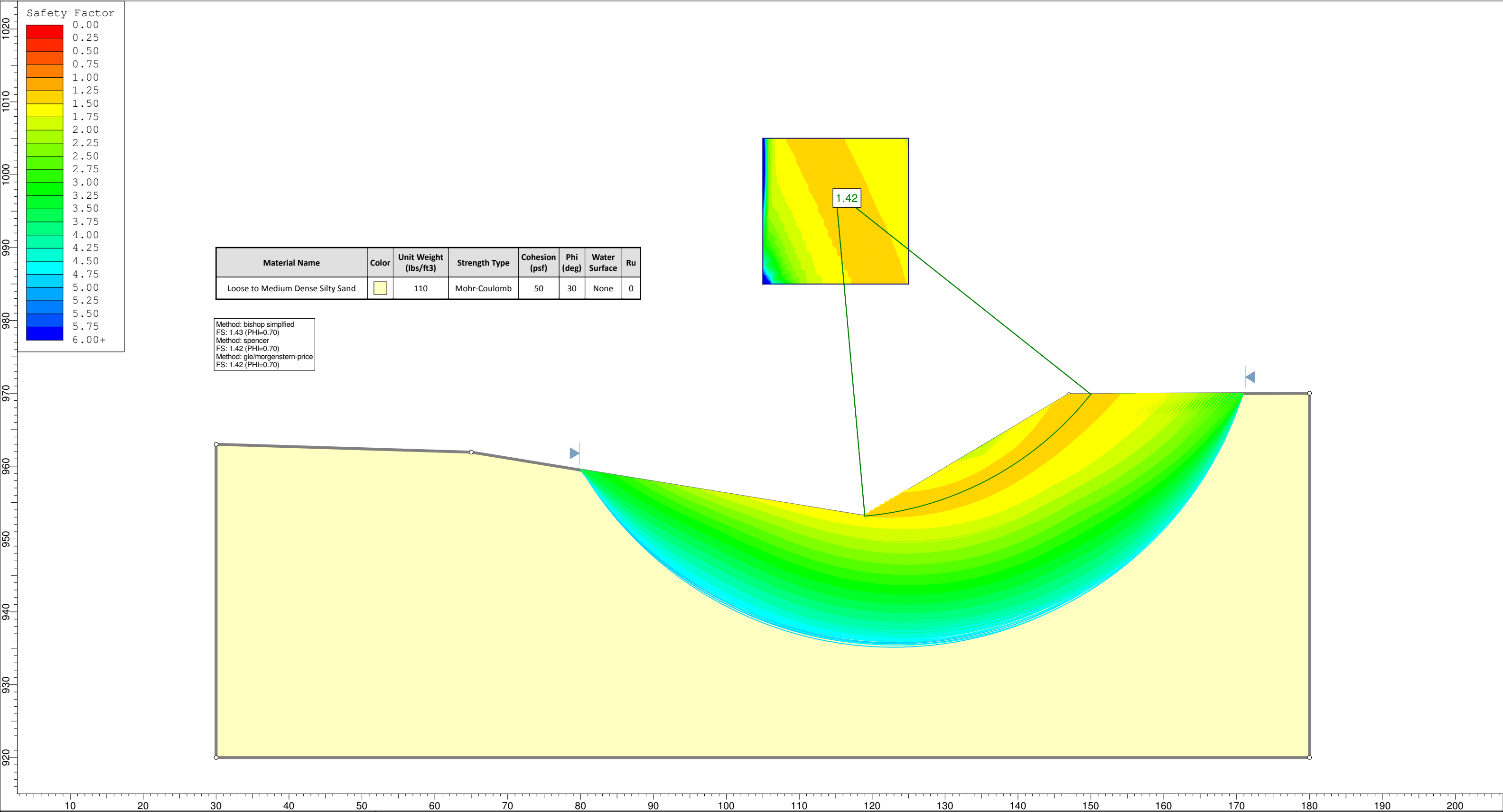
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Medium Dense Silty Sand		120	Mohr-Coulomb	50	32	Water Surface	
PWR		137	Mohr-Coulomb	400	40	Water Surface	

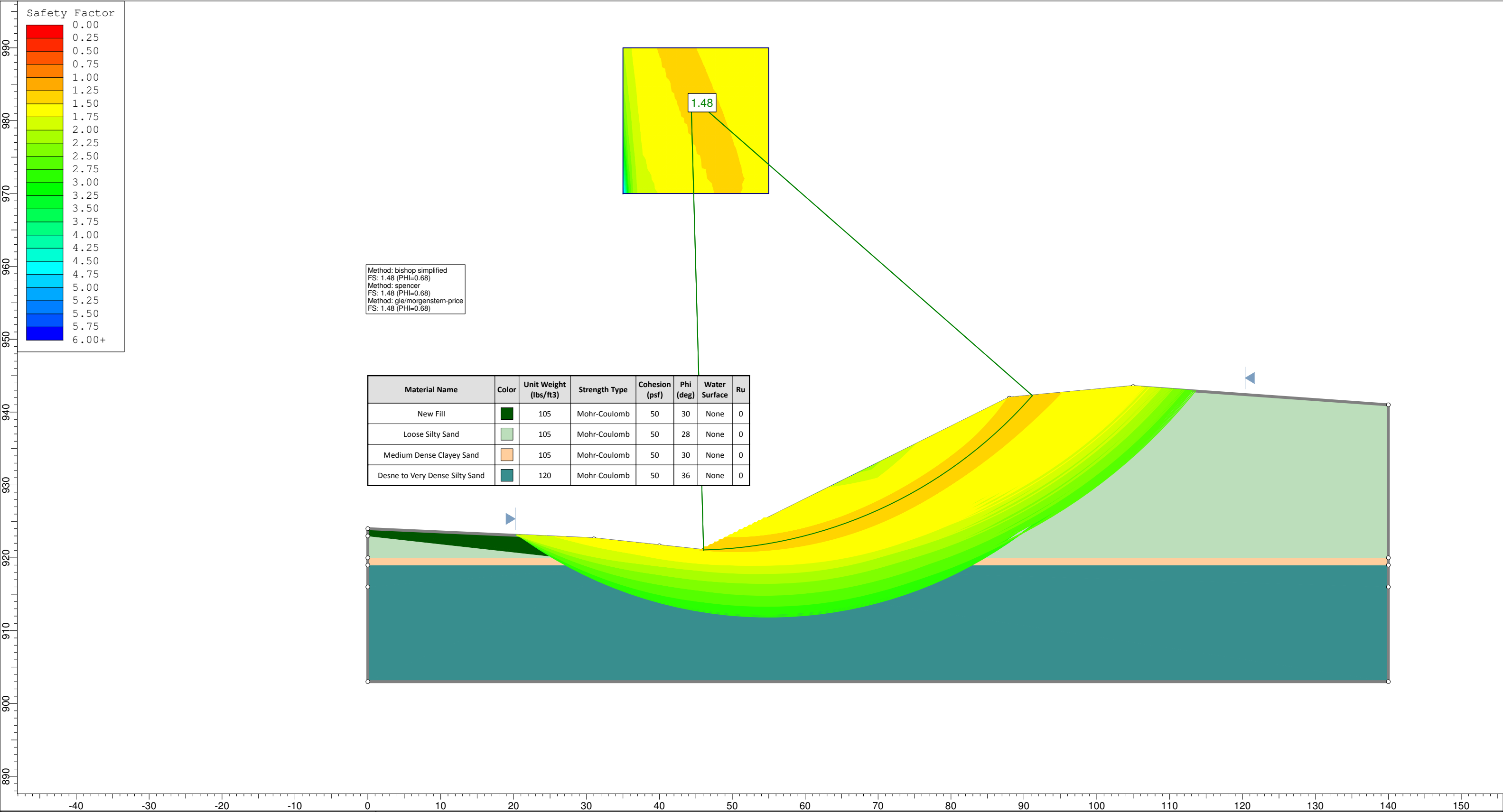
 <small>SLIDEINTERPRET 6.035</small>	Project					I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283				
	Analysis Description					Roadway - I-85 - Station 205+00- ESA				
	Drawn By		CLB		Scale	1:200	Company		ECS Carolinas LLP	
	Date		09/11/2015		File Name		Roadway - I-85 - Sta 205+00 Cut - ESA.slim			

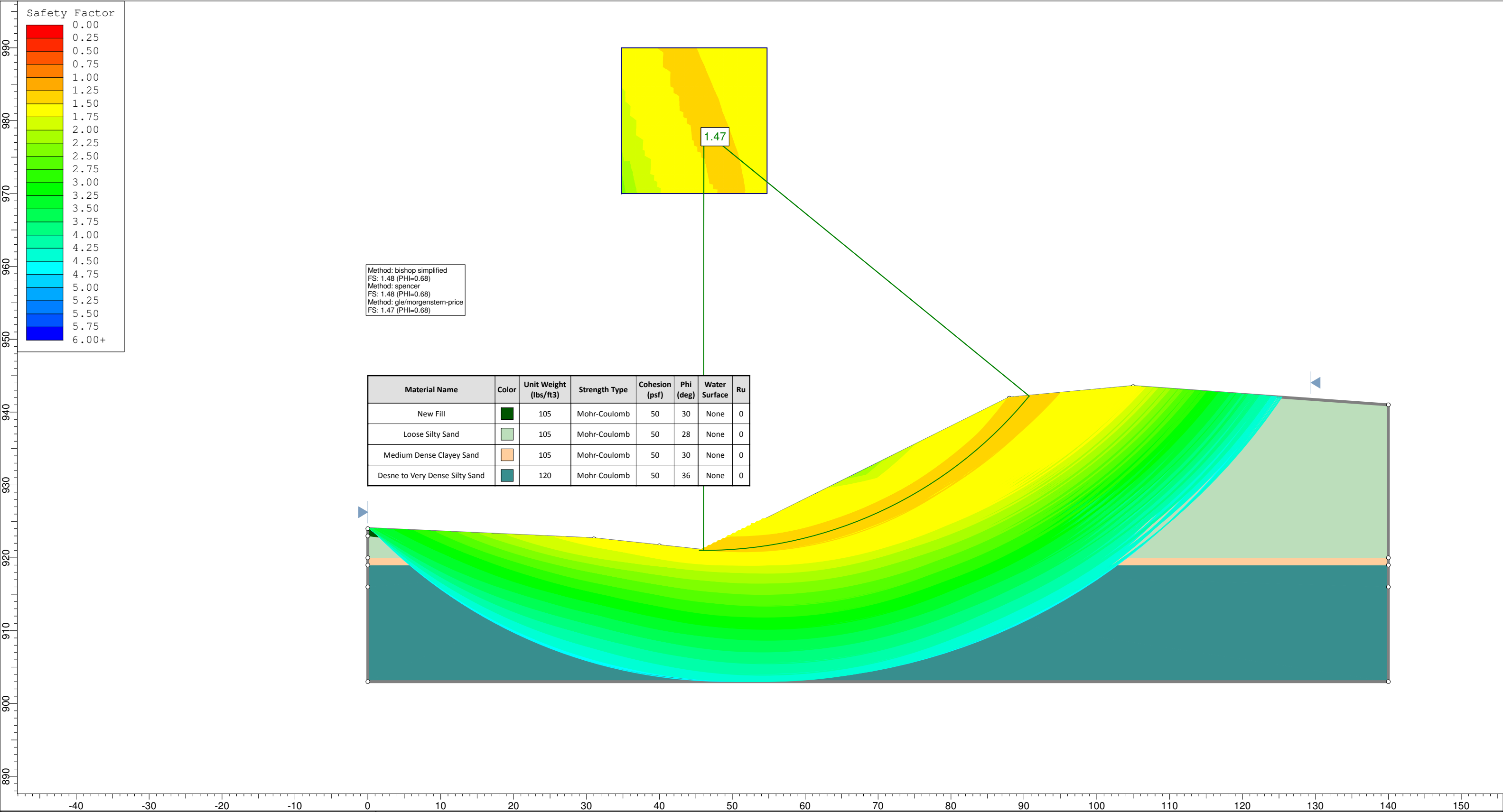


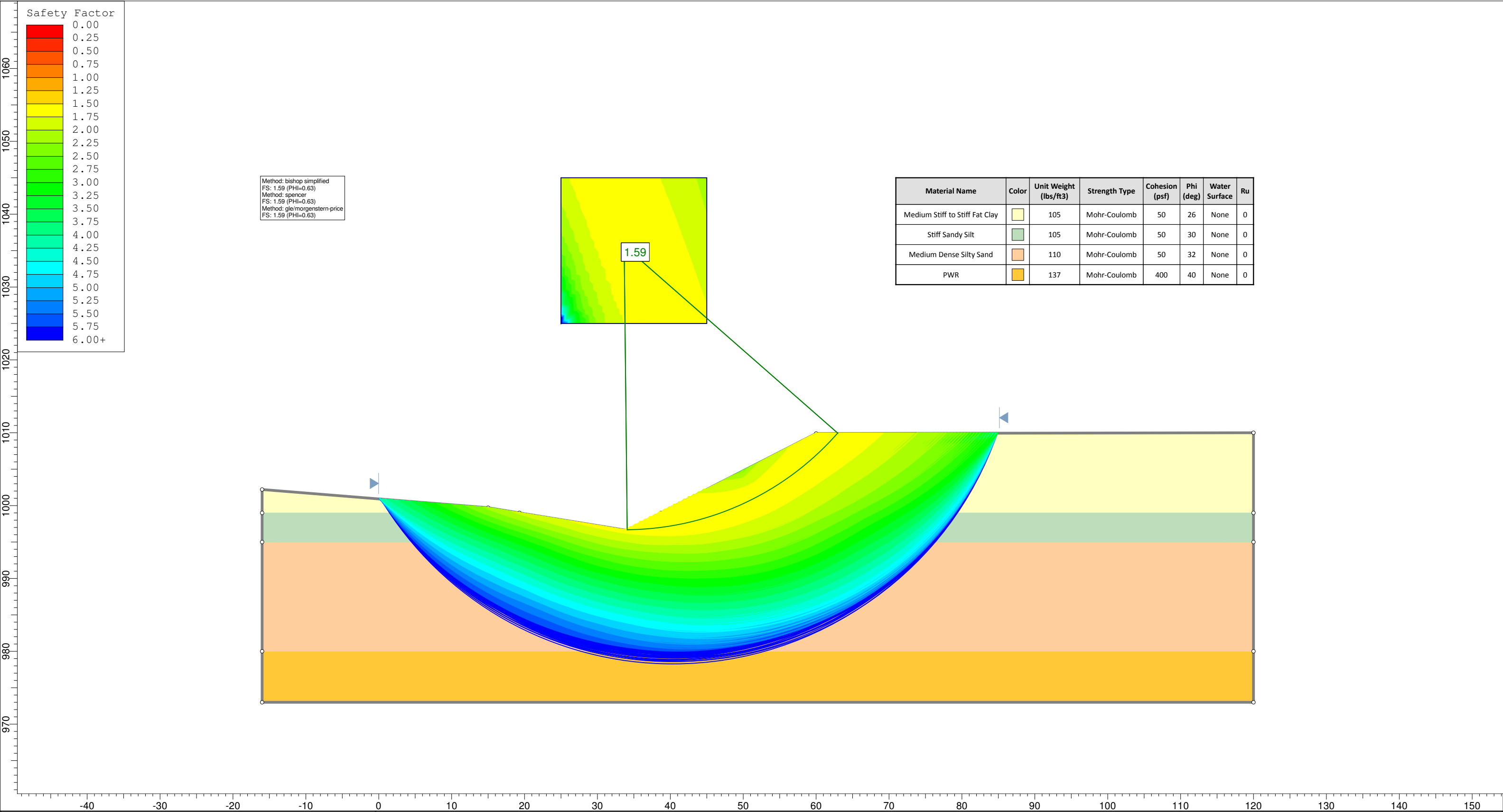
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Loose to Medium Dense Silty Sand		110	Mohr-Coulomb	50	30	None	0

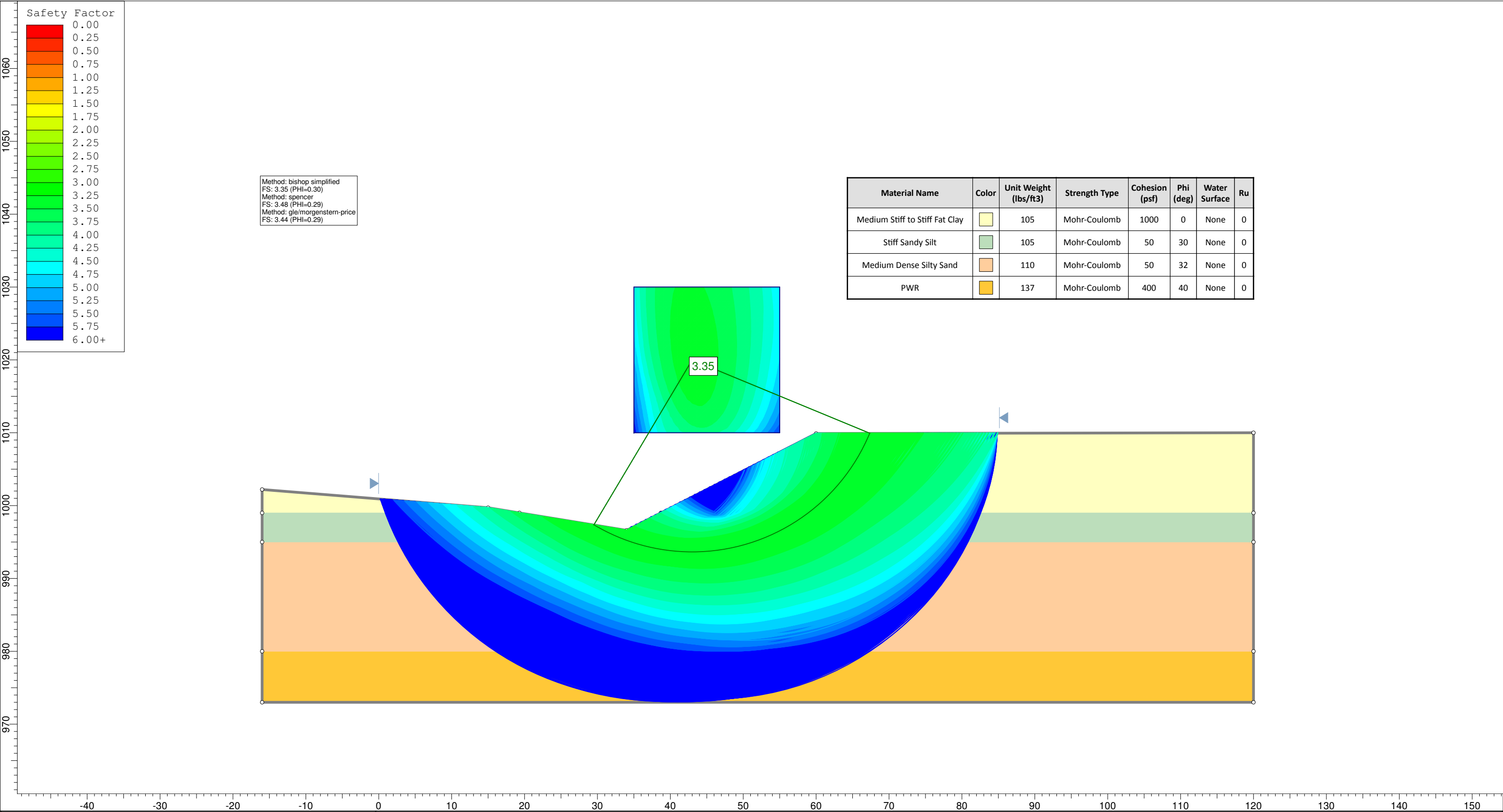
Method: bishop simplified
FS: 1.43 (PHI=0.70)
Method: spencer
FS: 1.42 (PHI=0.70)
Method: gle/morgenstern-price
FS: 1.42 (PHI=0.70)

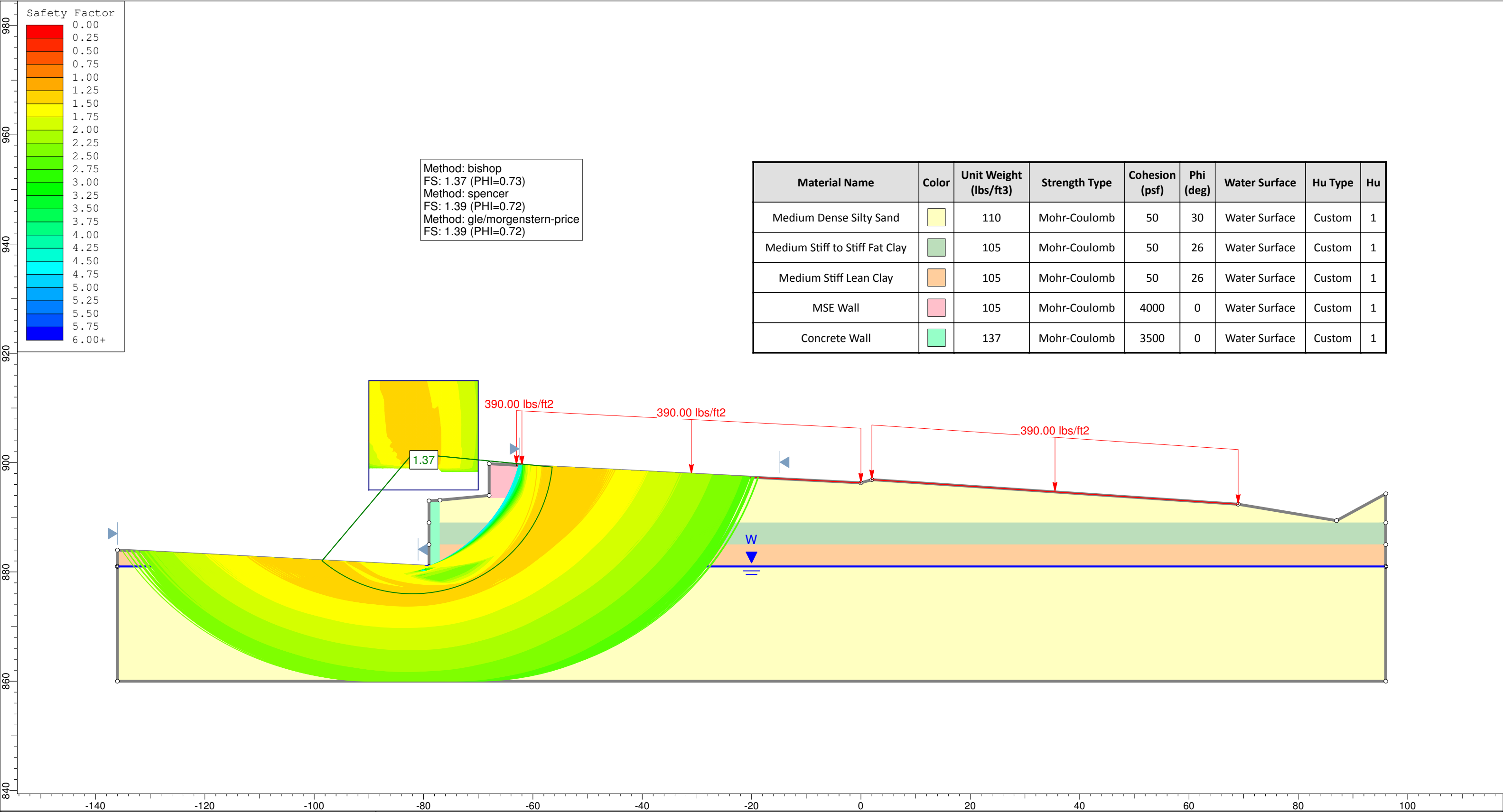


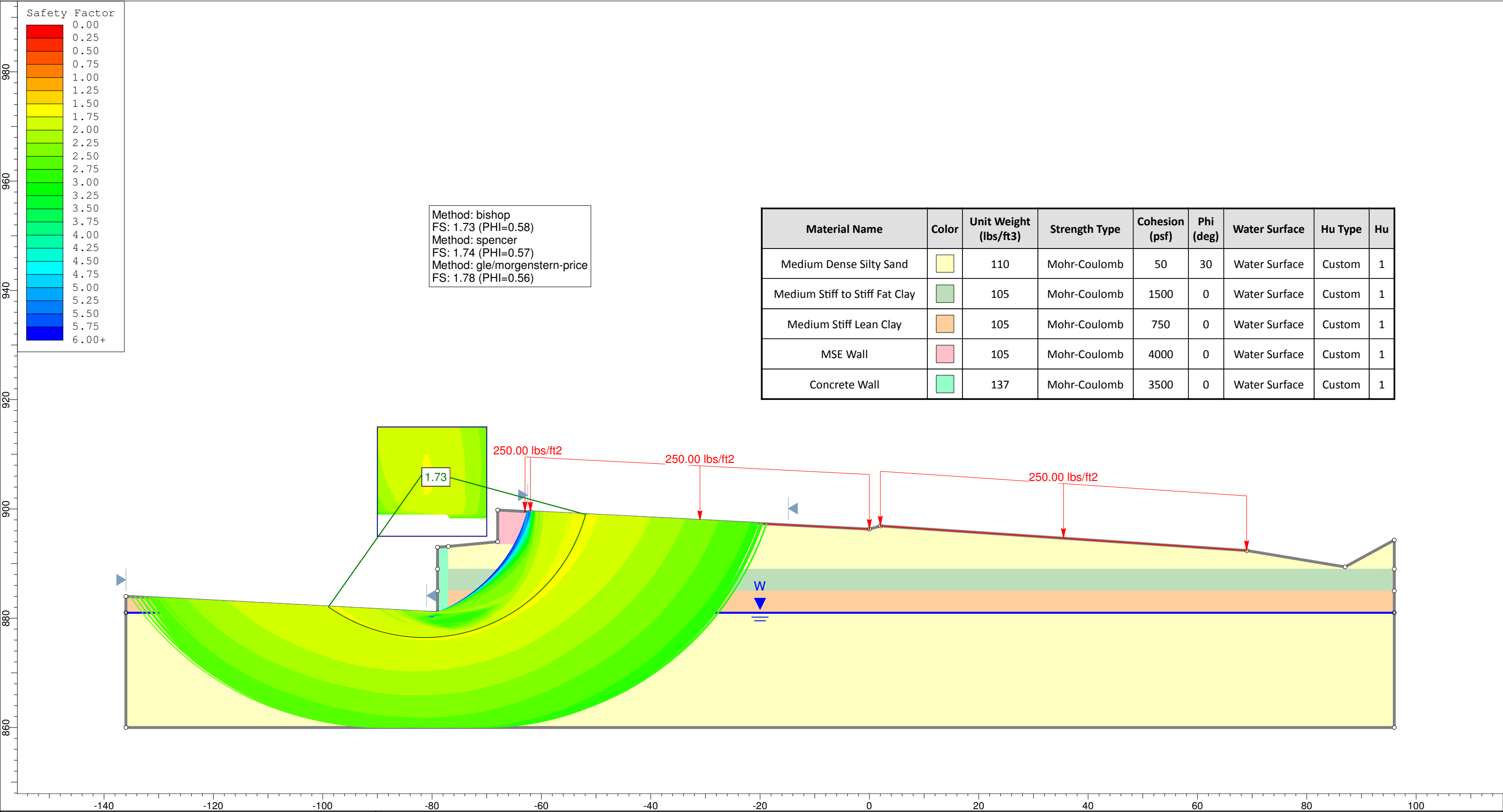


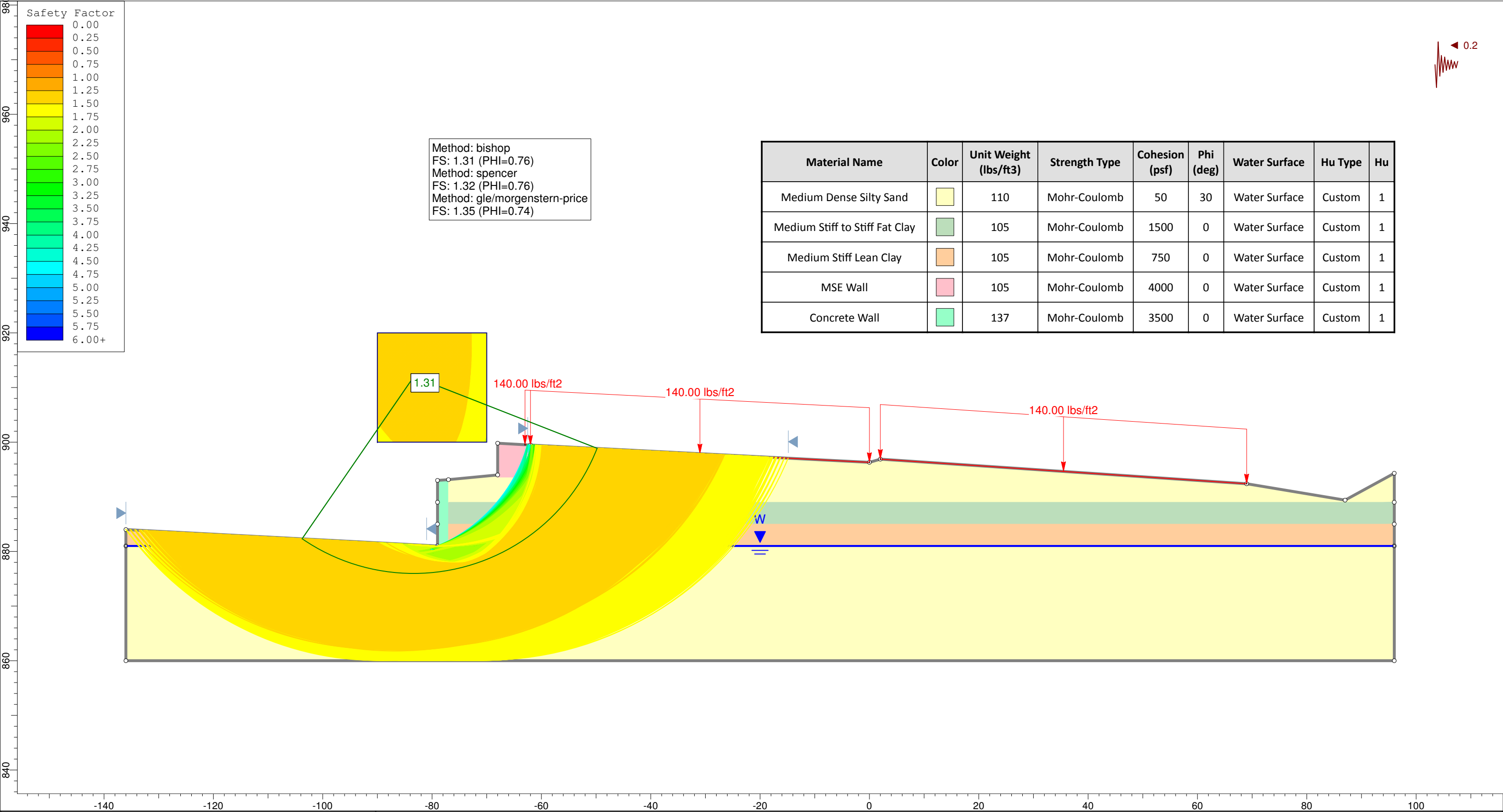


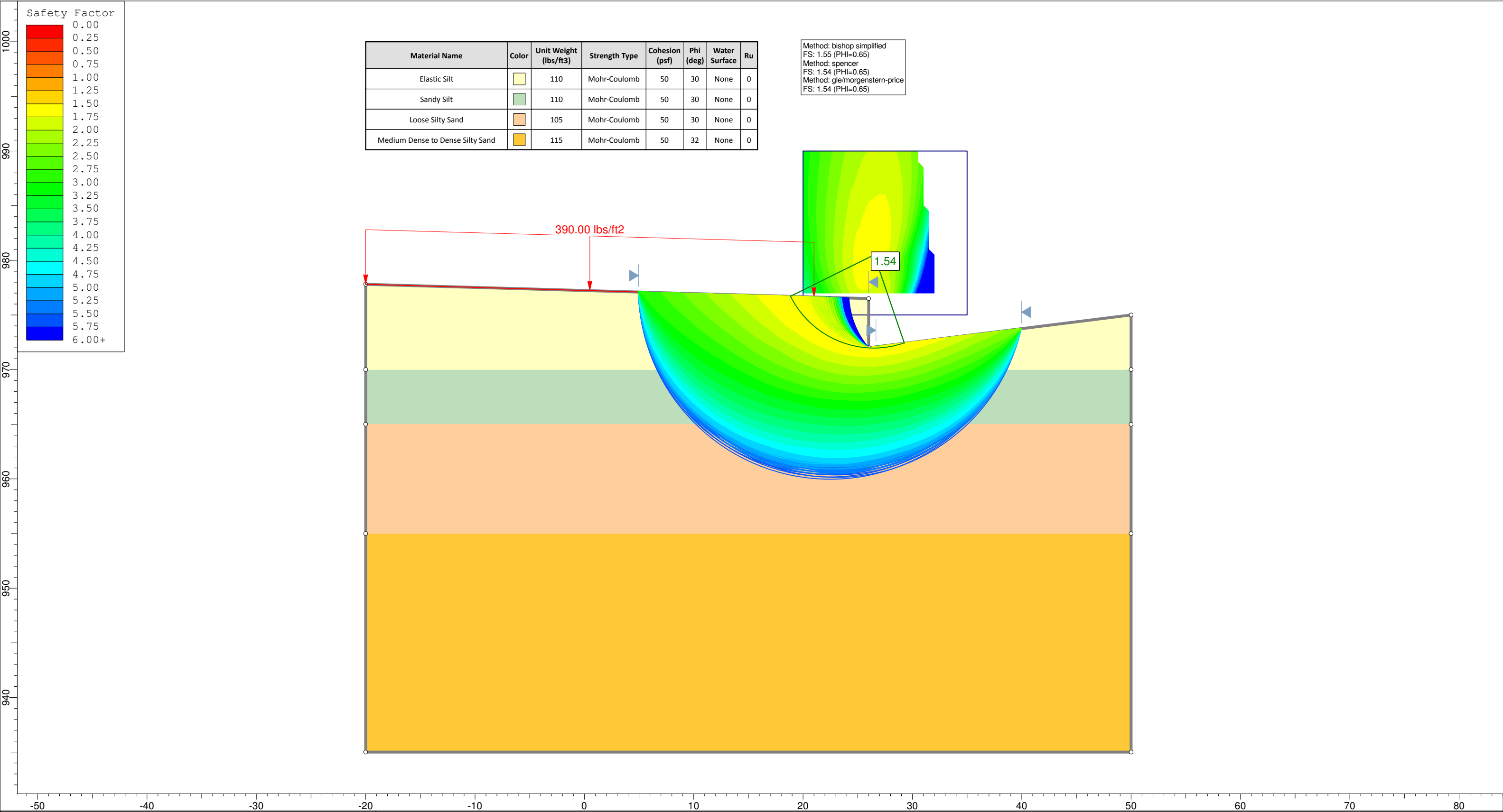






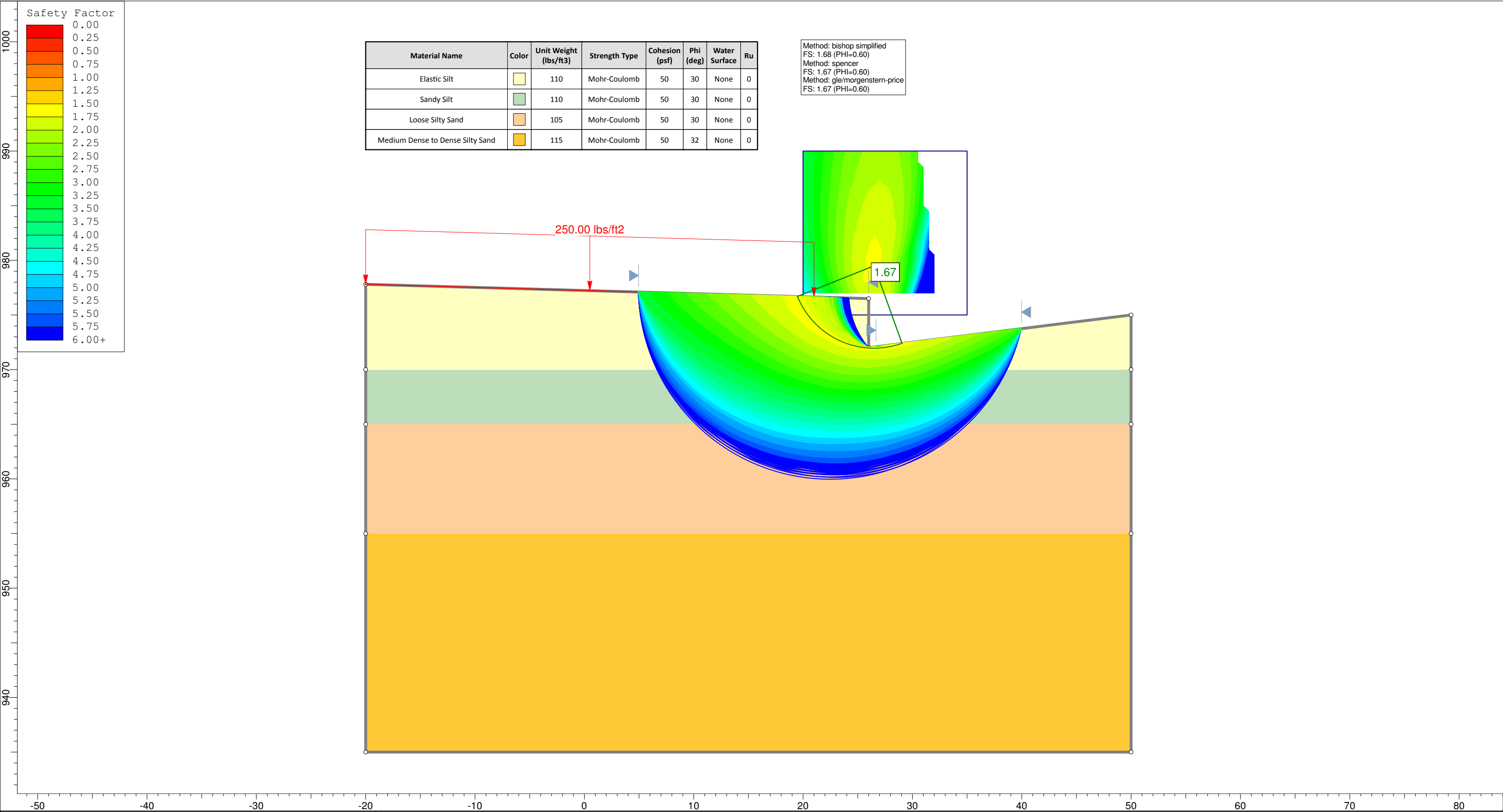


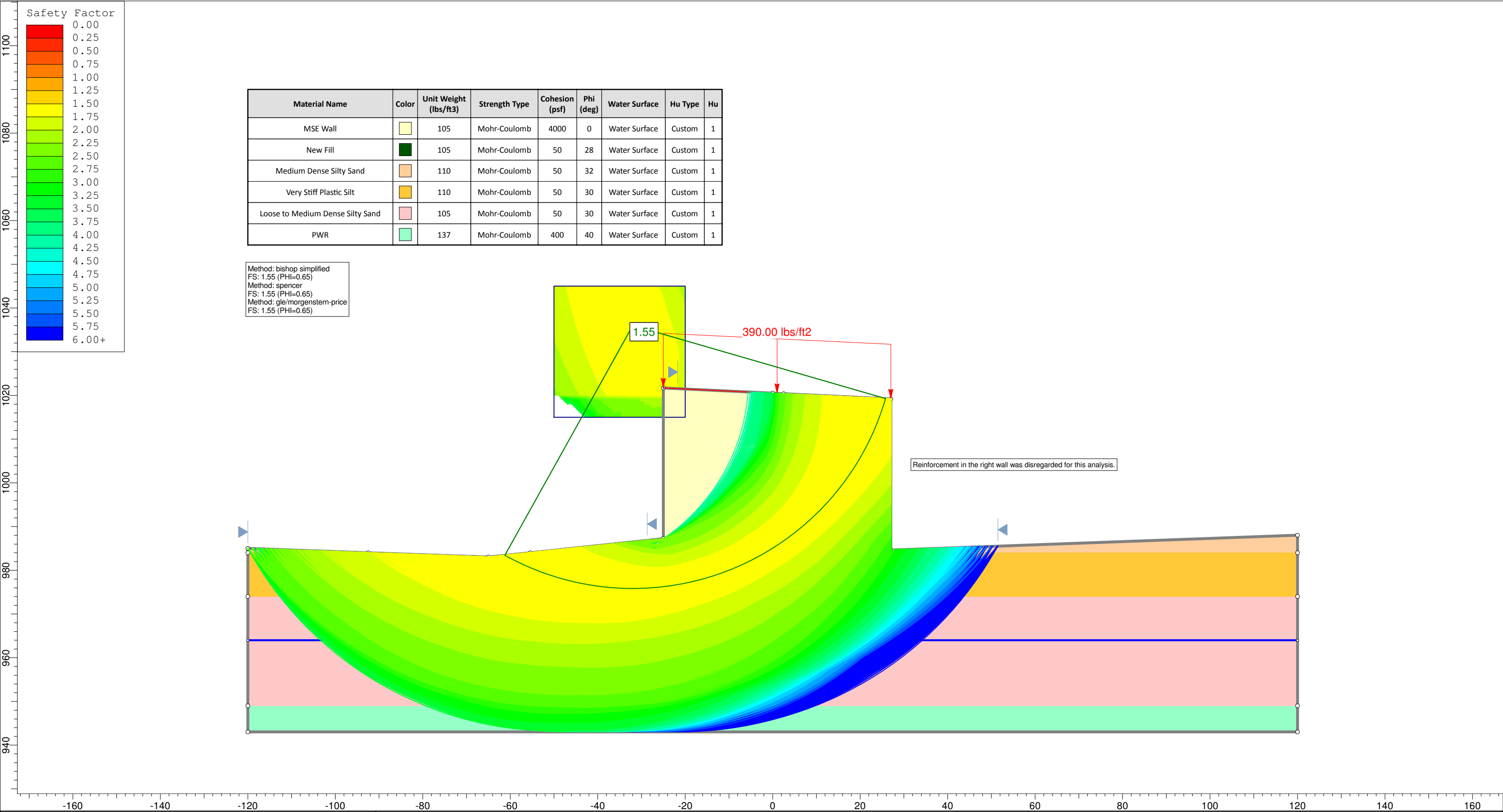


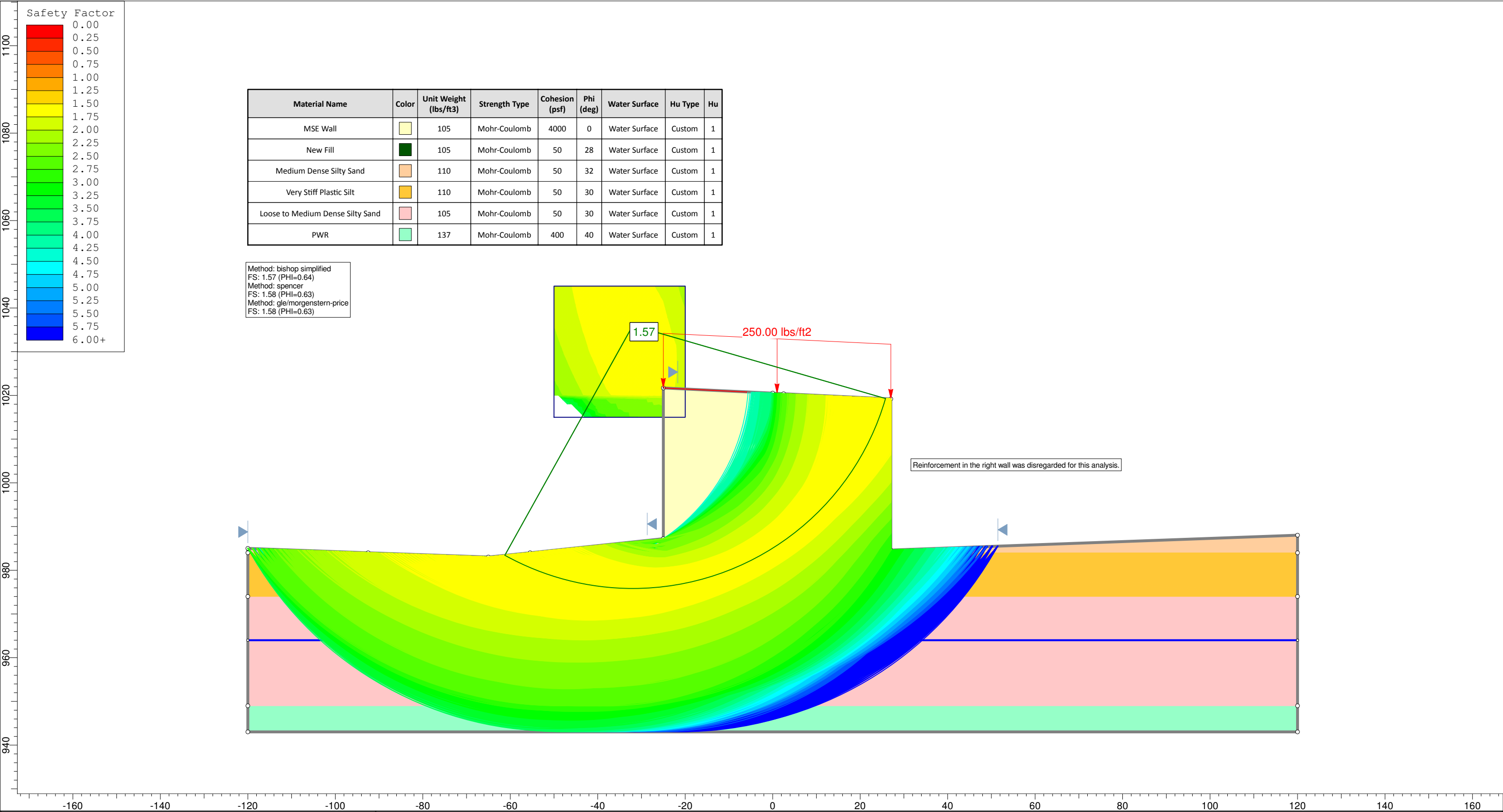


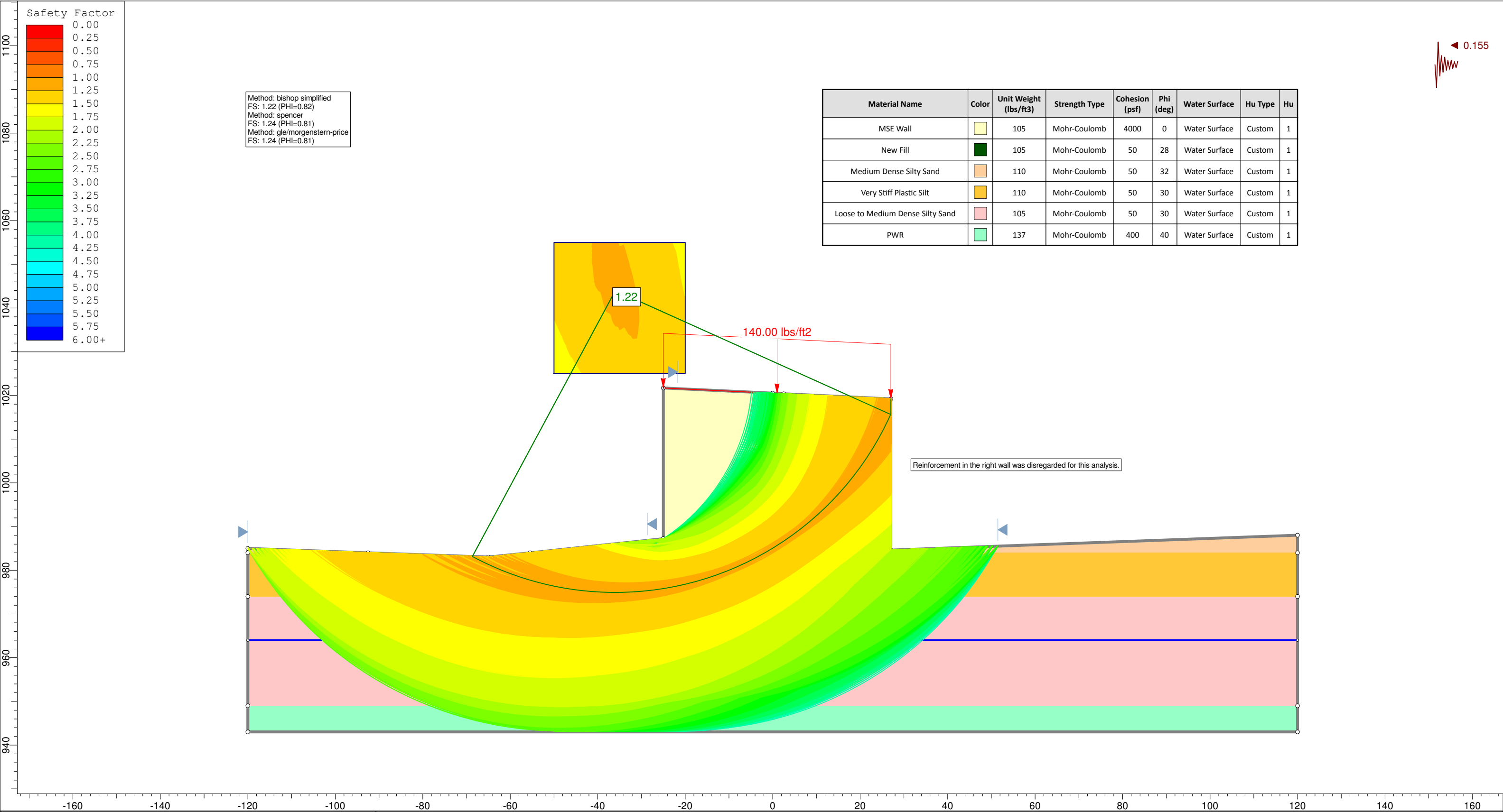
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Elastic Silt		110	Mohr-Coulomb	50	30	None	0
Sandy Silt		110	Mohr-Coulomb	50	30	None	0
Loose Silty Sand		105	Mohr-Coulomb	50	30	None	0
Medium Dense to Dense Silty Sand		115	Mohr-Coulomb	50	32	None	0

Method: bishop simplified
FS: 1.55 (PHI=0.65)
Method: spencer
FS: 1.54 (PHI=0.65)
Method: gle/morgenstern-price
FS: 1.54 (PHI=0.65)





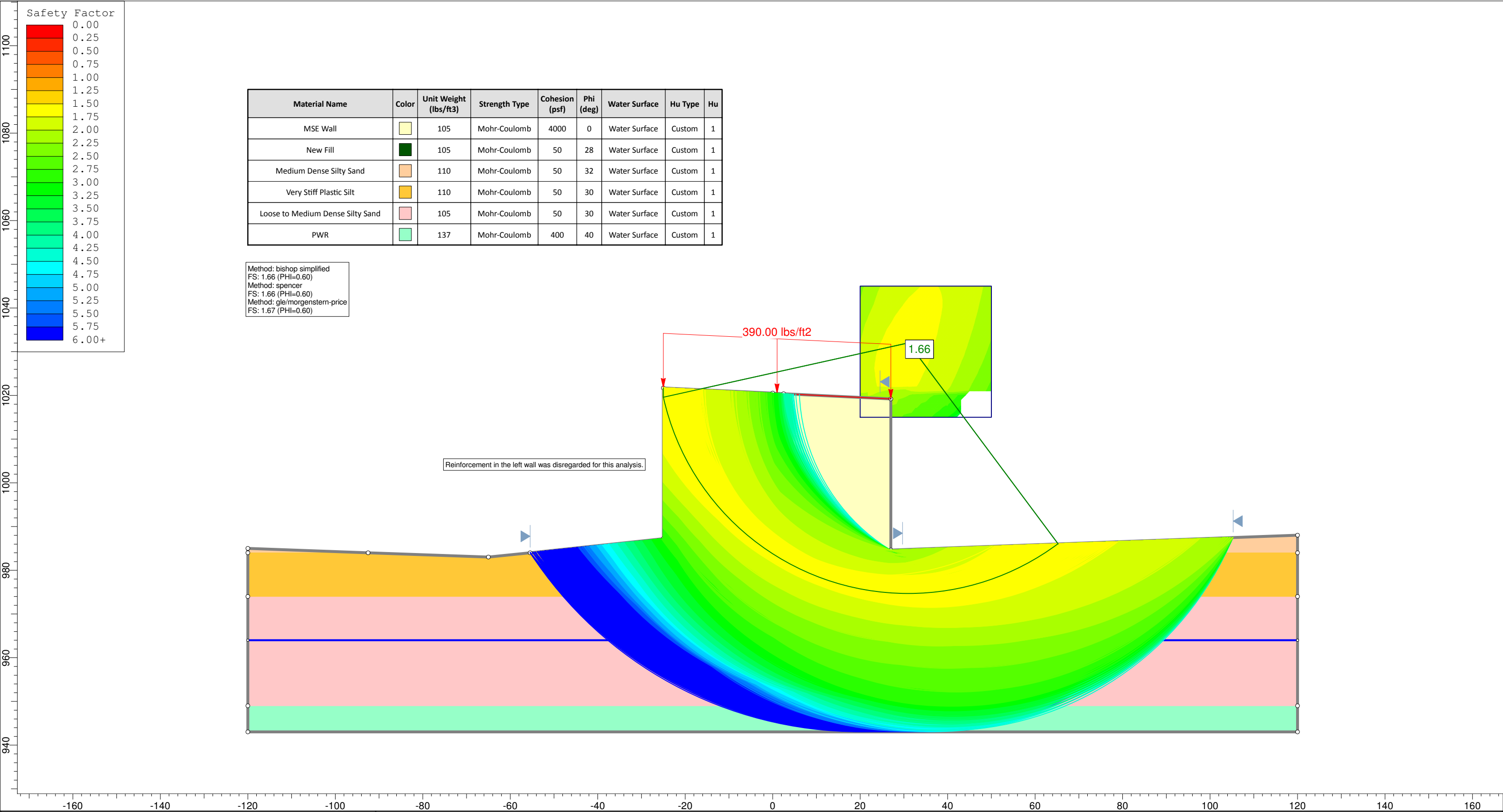




Method: bishop simplified
FS: 1.22 (PHI=0.82)
Method: spencer
FS: 1.24 (PHI=0.81)
Method: gle/morgenstern-price
FS: 1.24 (PHI=0.81)

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	28	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	32	Water Surface	Custom	1
Very Stiff Plastic Silt		110	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
PWR		137	Mohr-Coulomb	400	40	Water Surface	Custom	1

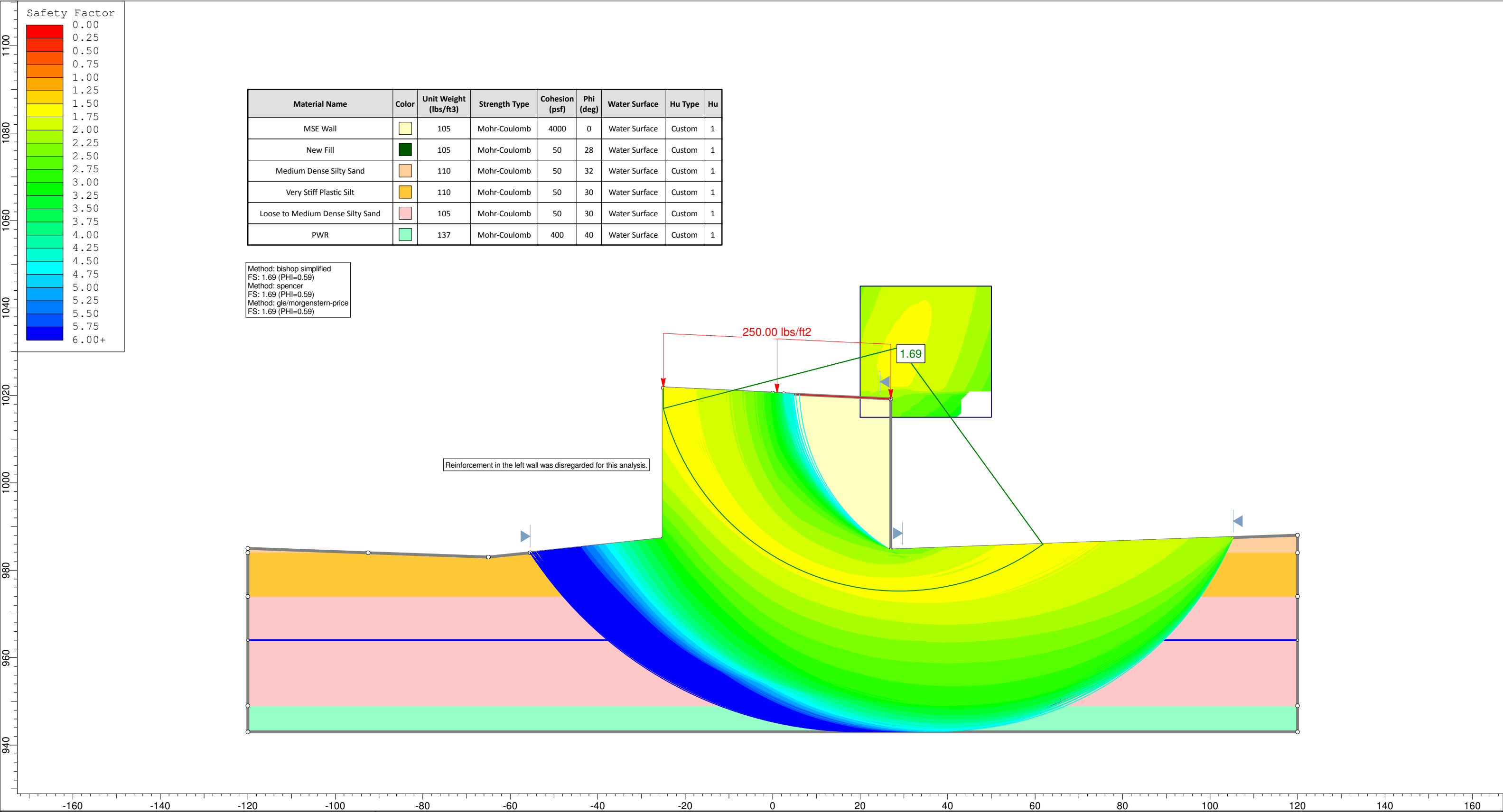
Reinforcement in the right wall was disregarded for this analysis.



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	28	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	32	Water Surface	Custom	1
Very Stiff Plastic Silt		110	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
PWR		137	Mohr-Coulomb	400	40	Water Surface	Custom	1

Method: bishop simplified
FS: 1.66 (PHI=0.60)
Method: spencer
FS: 1.66 (PHI=0.60)
Method: gle/morgenstern-price
FS: 1.67 (PHI=0.60)

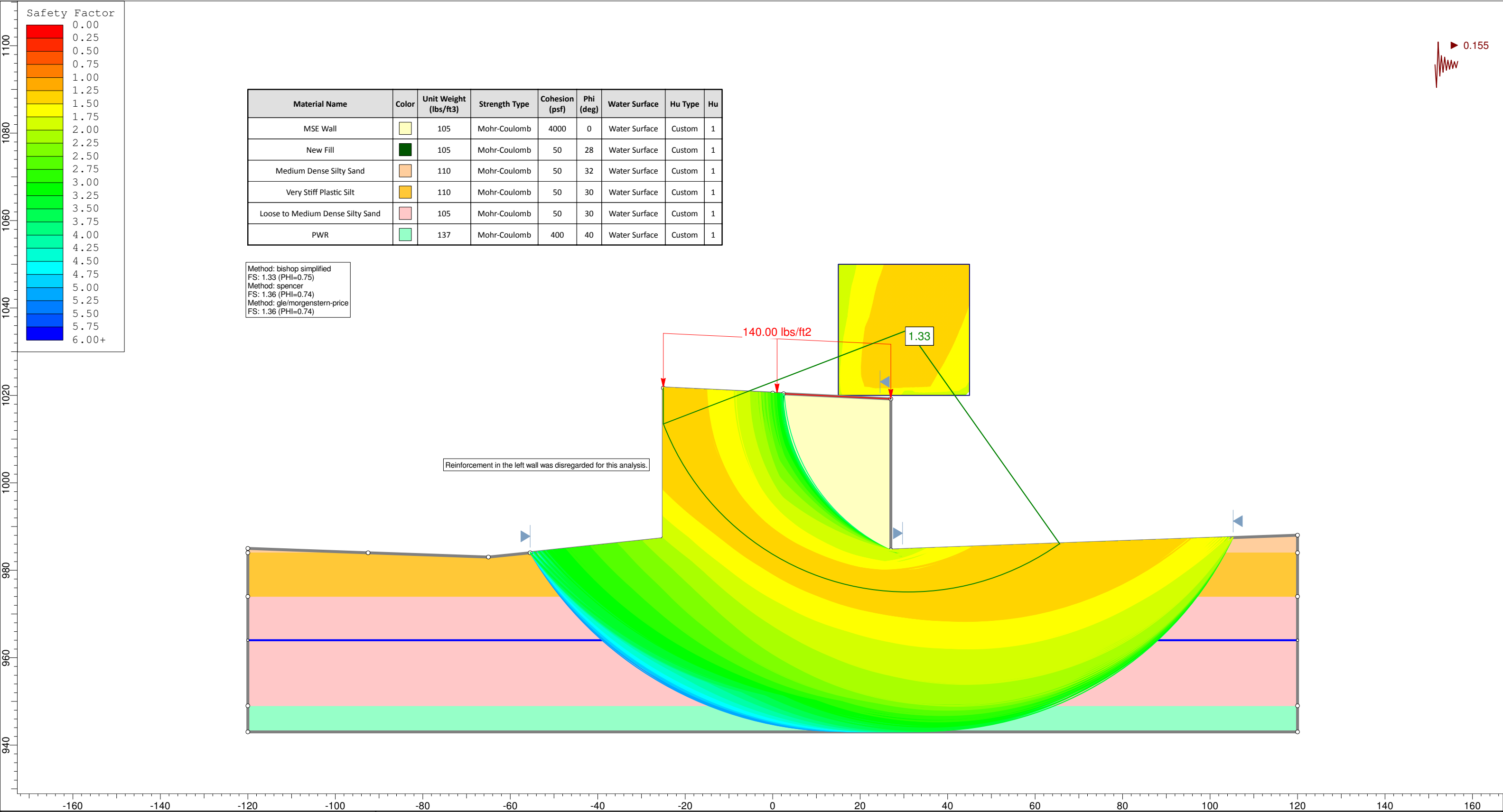
Reinforcement in the left wall was disregarded for this analysis.

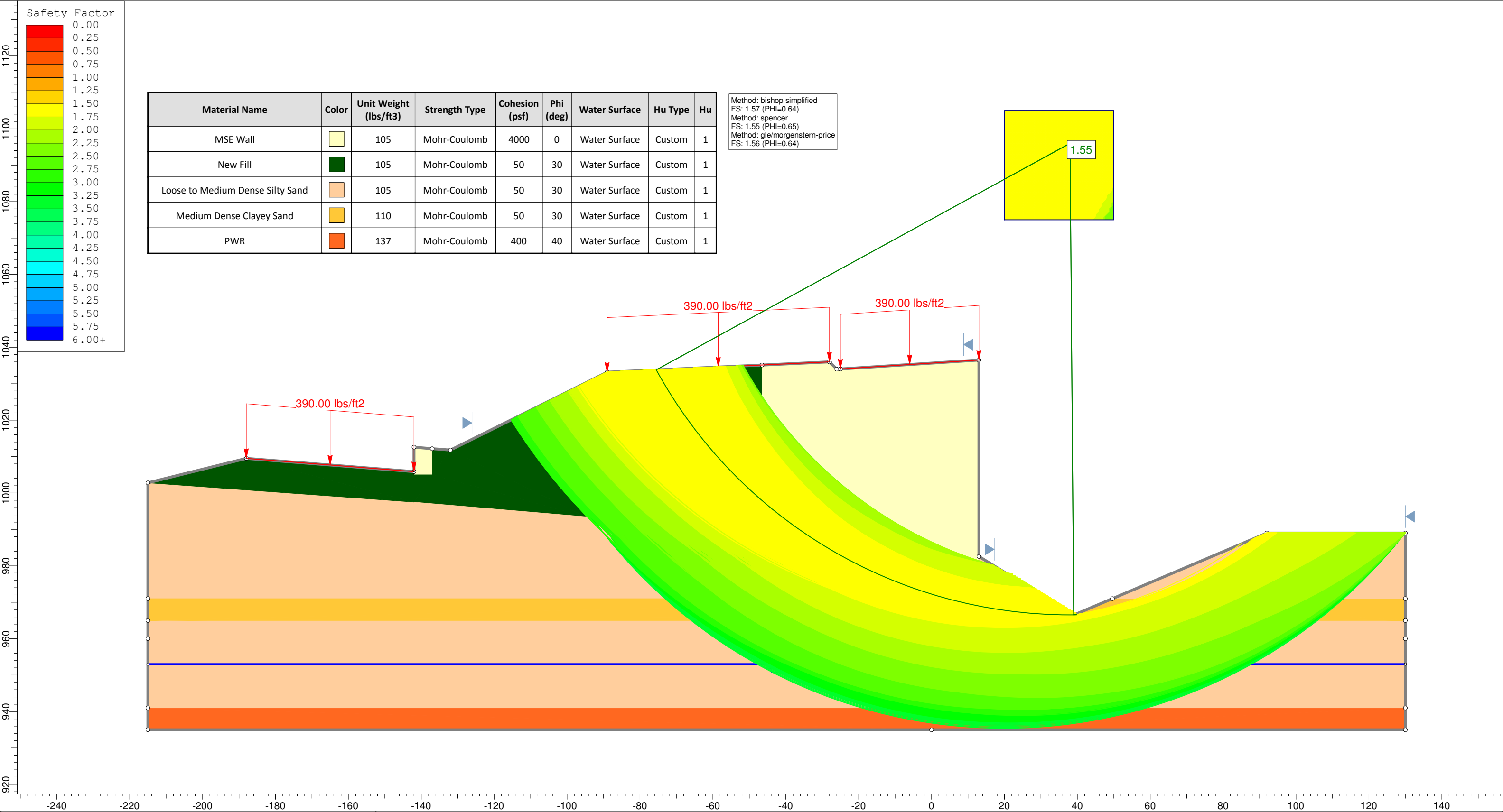


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	28	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	32	Water Surface	Custom	1
Very Stiff Plastic Silt		110	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
PWR		137	Mohr-Coulomb	400	40	Water Surface	Custom	1

Method: bishop simplified
FS: 1.69 (PHI=0.59)
Method: spencer
FS: 1.69 (PHI=0.59)
Method: gle/morgenstern-price
FS: 1.69 (PHI=0.59)

Reinforcement in the left wall was disregarded for this analysis.





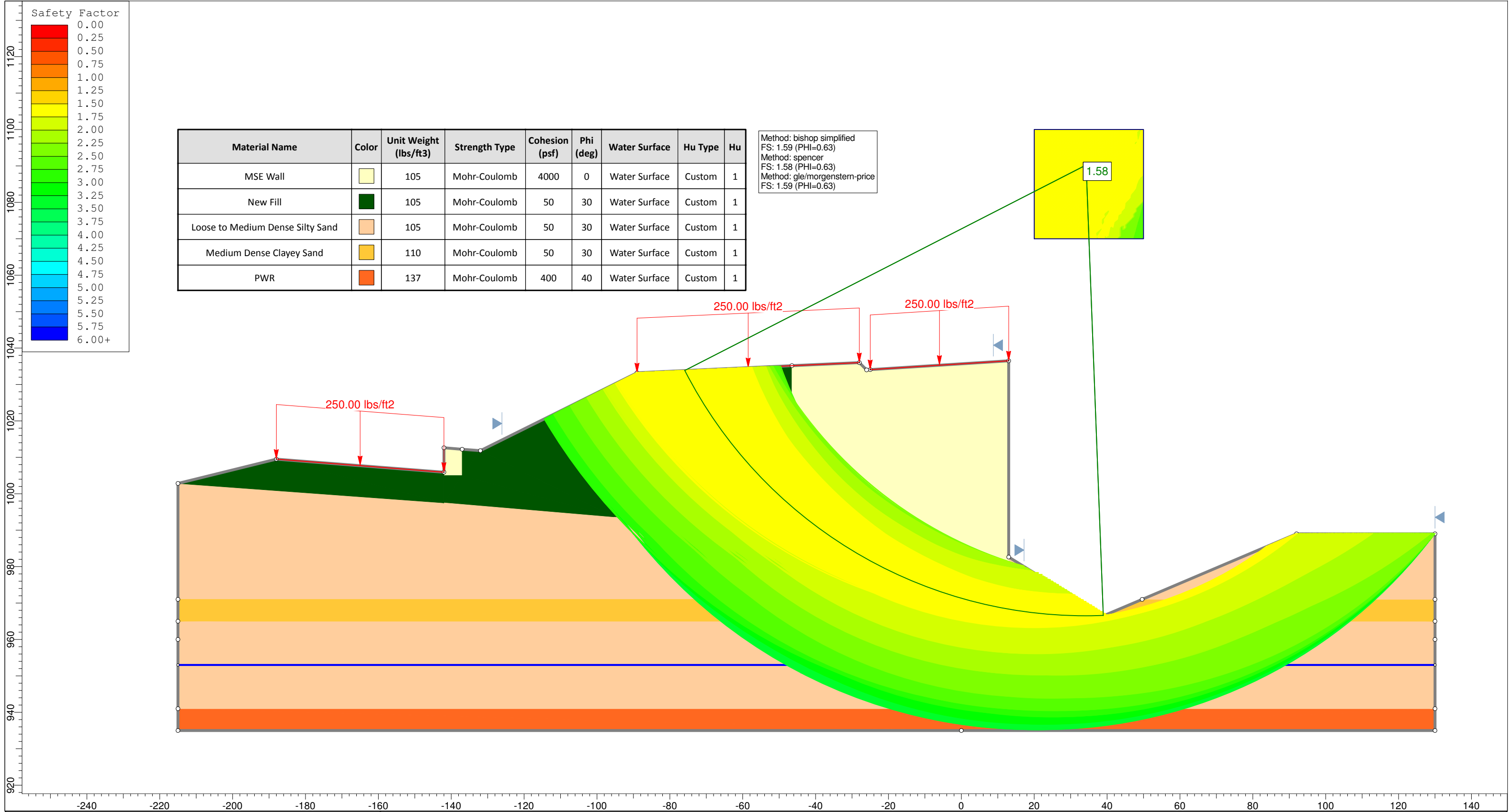
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Medium Dense Clayey Sand		110	Mohr-Coulomb	50	30	Water Surface	Custom	1
PWR		137	Mohr-Coulomb	400	40	Water Surface	Custom	1

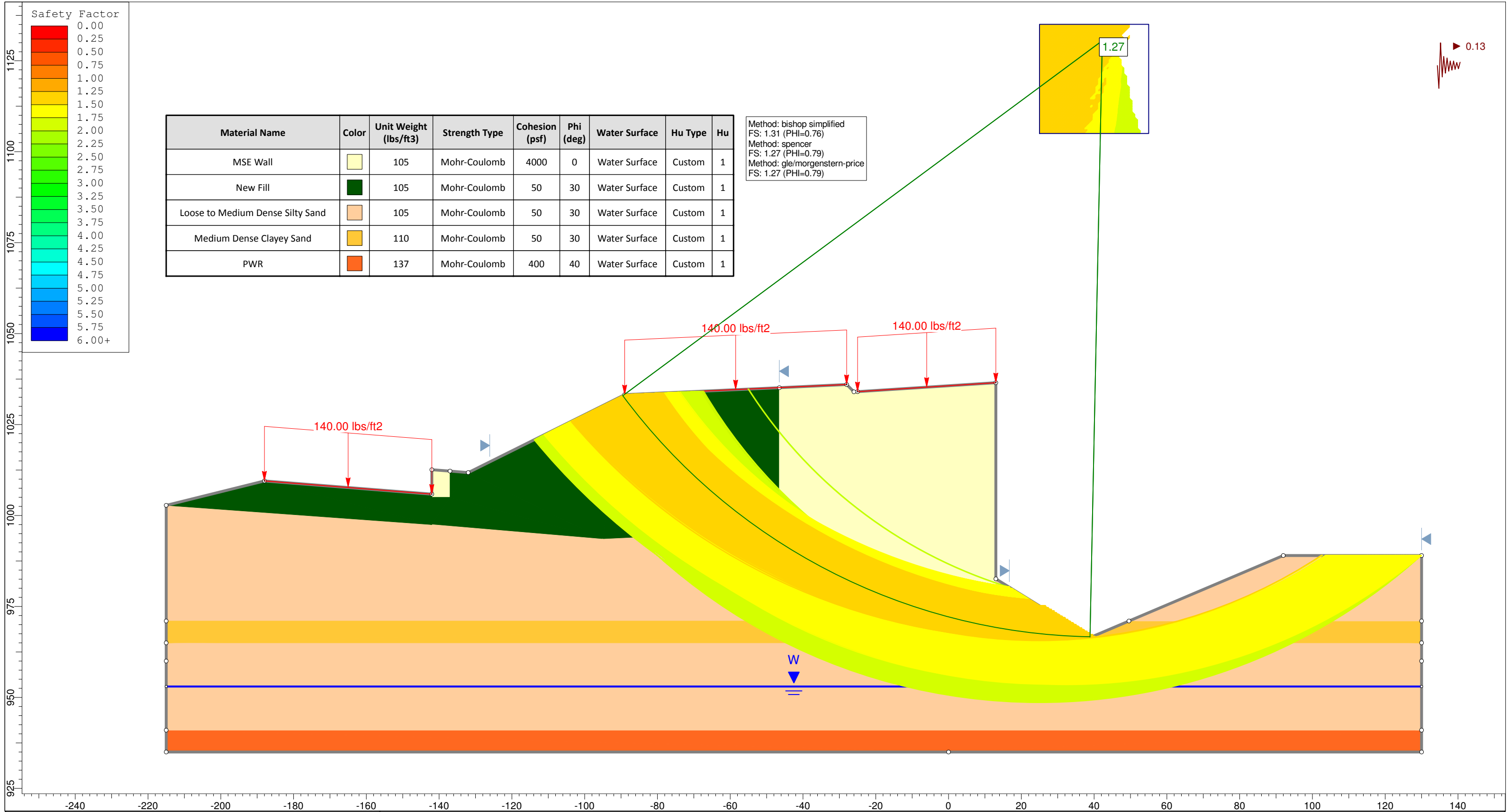
Method: bishop simplified
FS: 1.57 (PHI=0.64)
Method: spencer
FS: 1.55 (PHI=0.65)
Method: gle/morgenstern-price
FS: 1.56 (PHI=0.64)

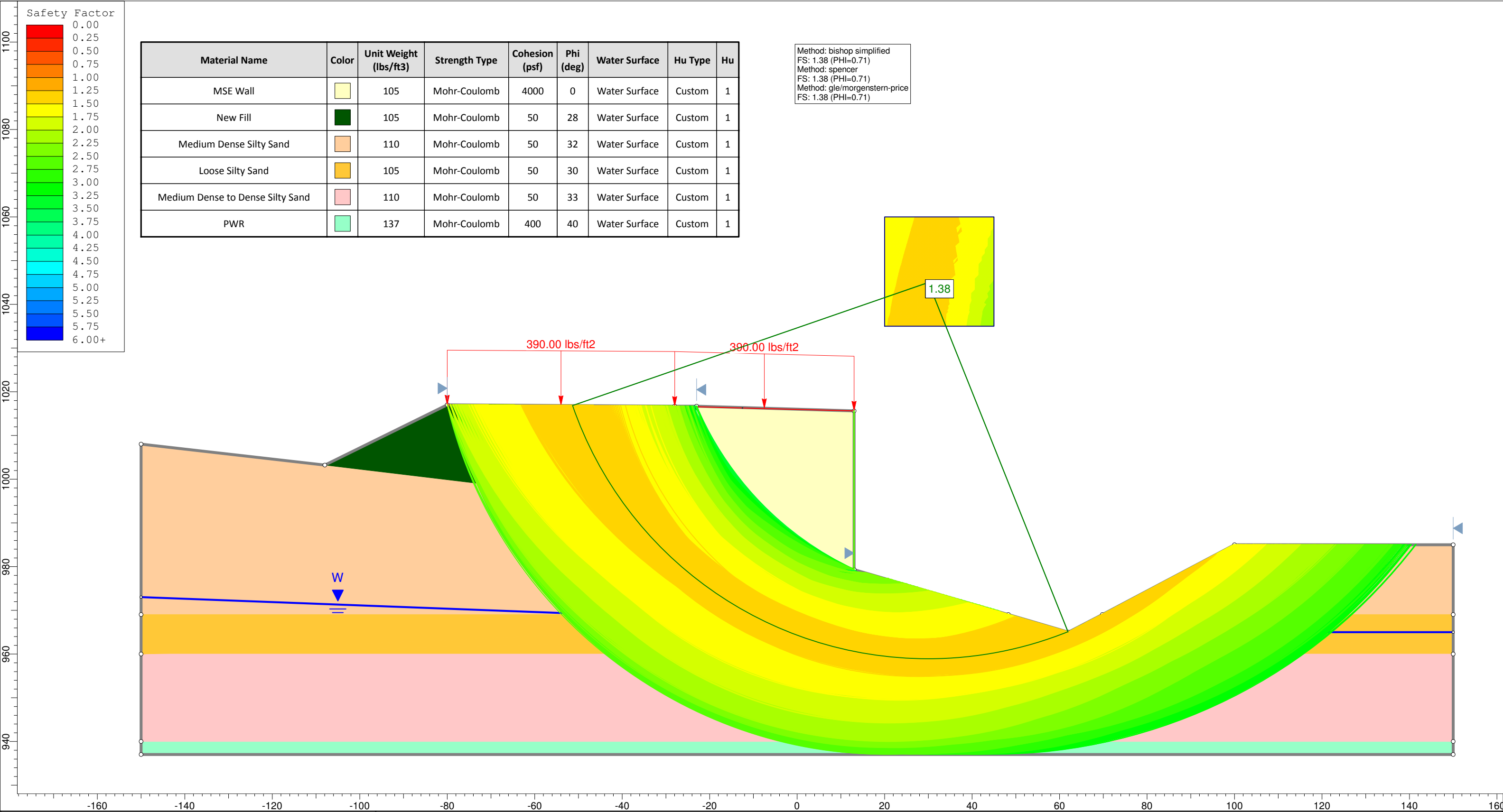
1.55



Project			Wall 33 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
Analysis Description			Roadway - Ramp 2B - Station 40+50- ESA		
Drawn By		CLB	Scale	1:300	Company
Date		09/04/2015	File Name		Roadway - Ramp 2B - Sta 40+50 - ESA.slim
			ECS Carolinas LLP		

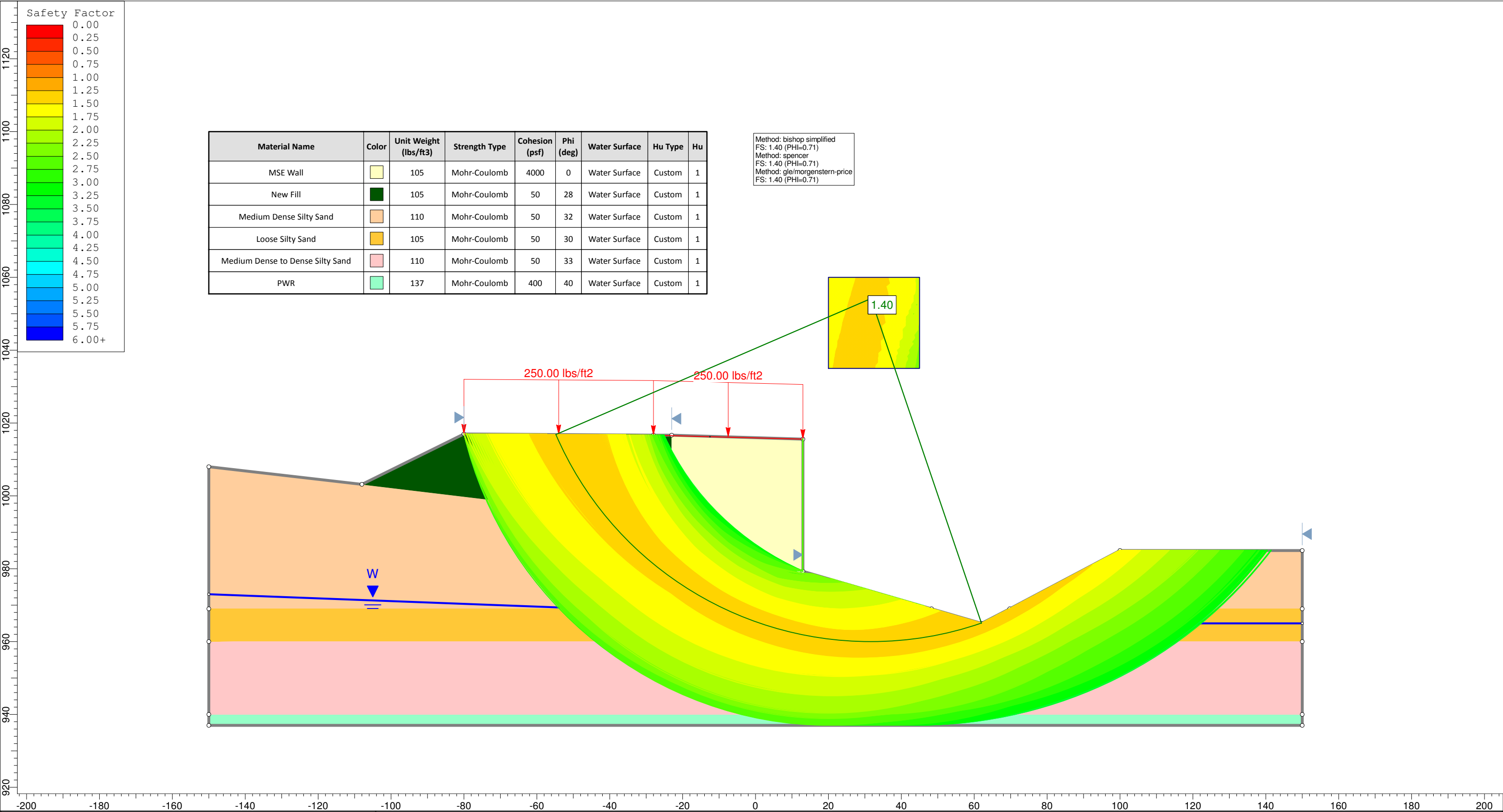


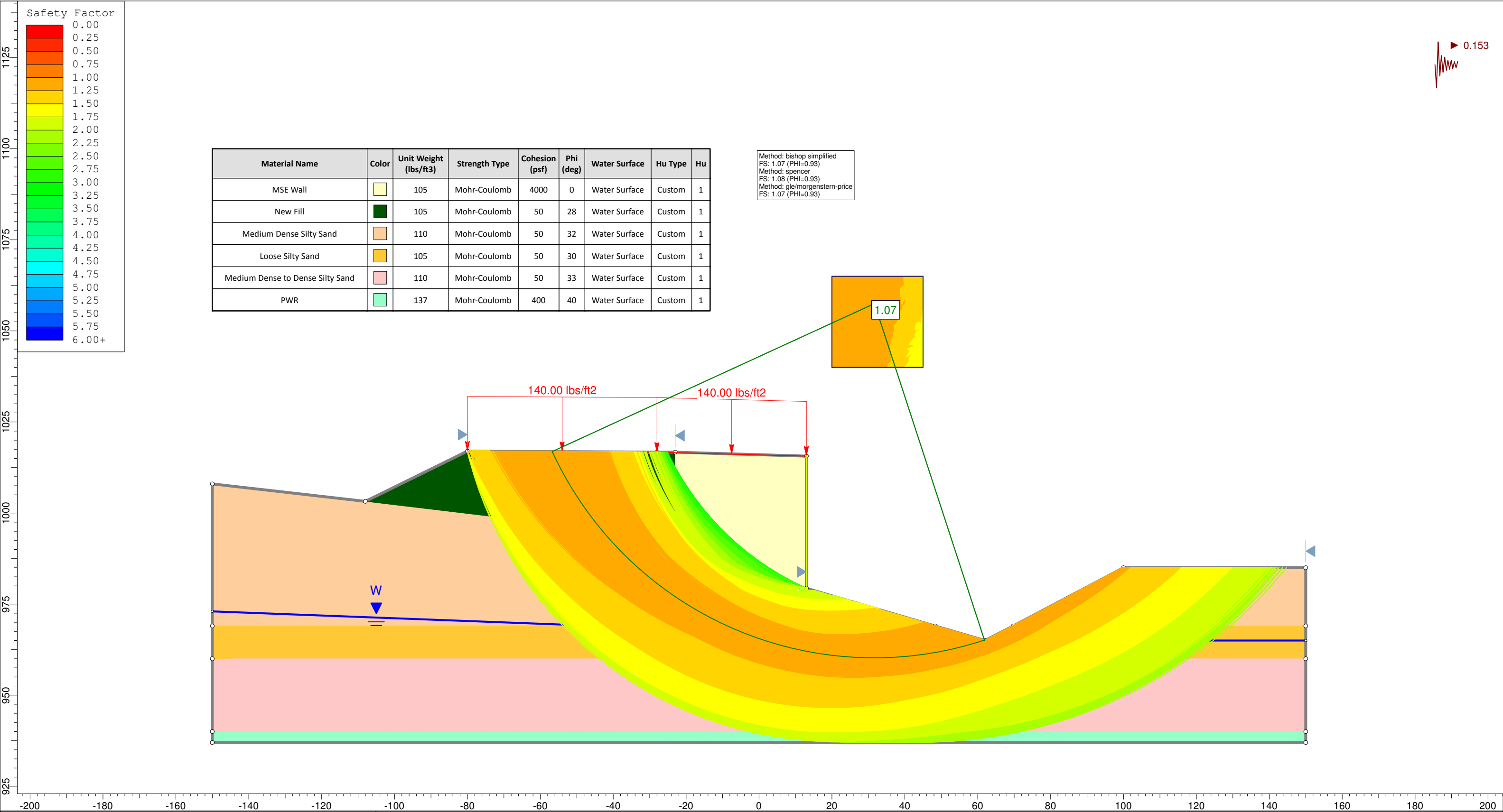





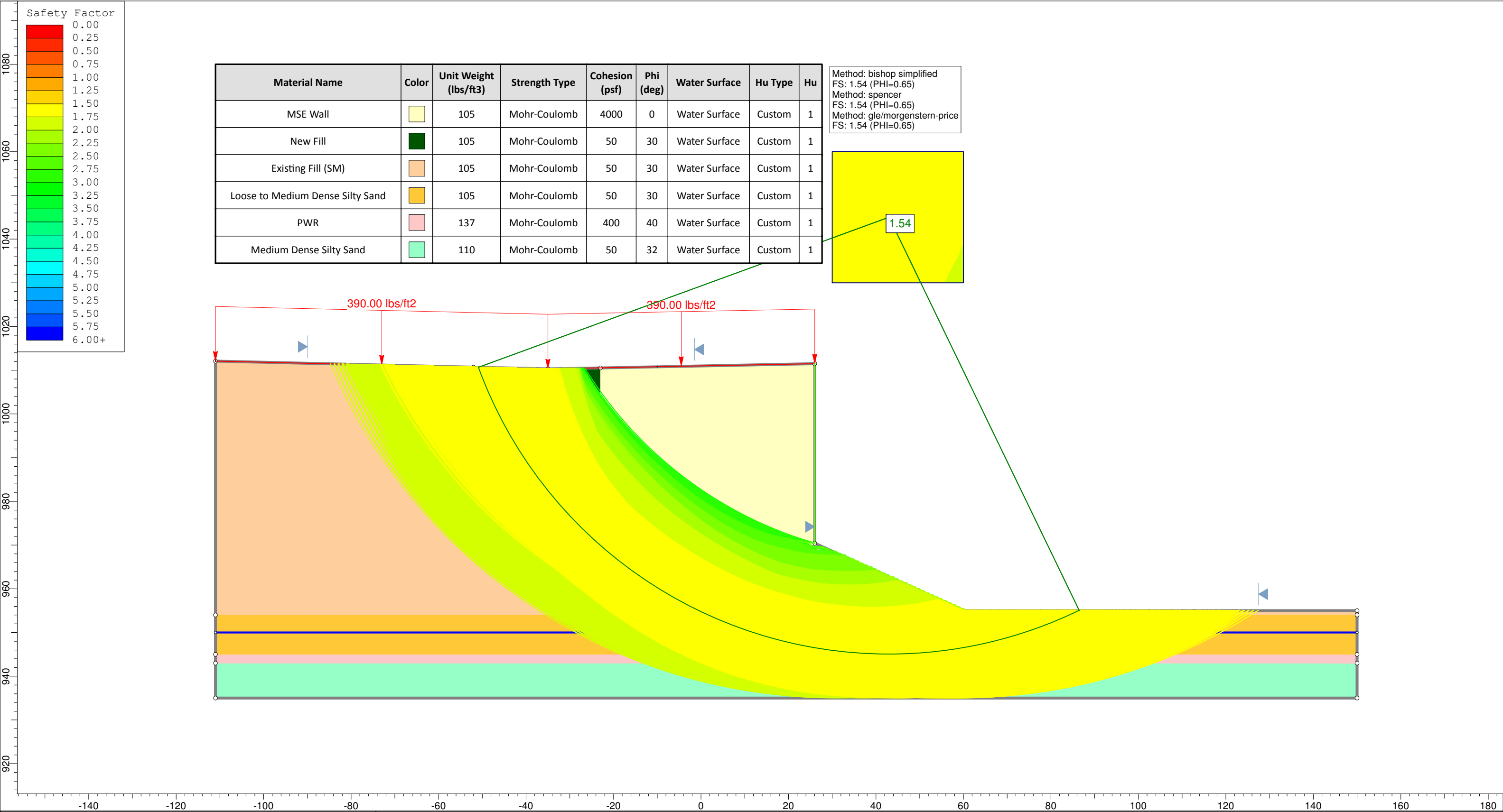
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	28	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	32	Water Surface	Custom	1
Loose Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Medium Dense to Dense Silty Sand		110	Mohr-Coulomb	50	33	Water Surface	Custom	1
PWR		137	Mohr-Coulomb	400	40	Water Surface	Custom	1


Method: bishop simplified
FS: 1.38 (PHI=0.71)
Method: spencer
FS: 1.38 (PHI=0.71)
Method: gle/morgenstern-price
FS: 1.38 (PHI=0.71)

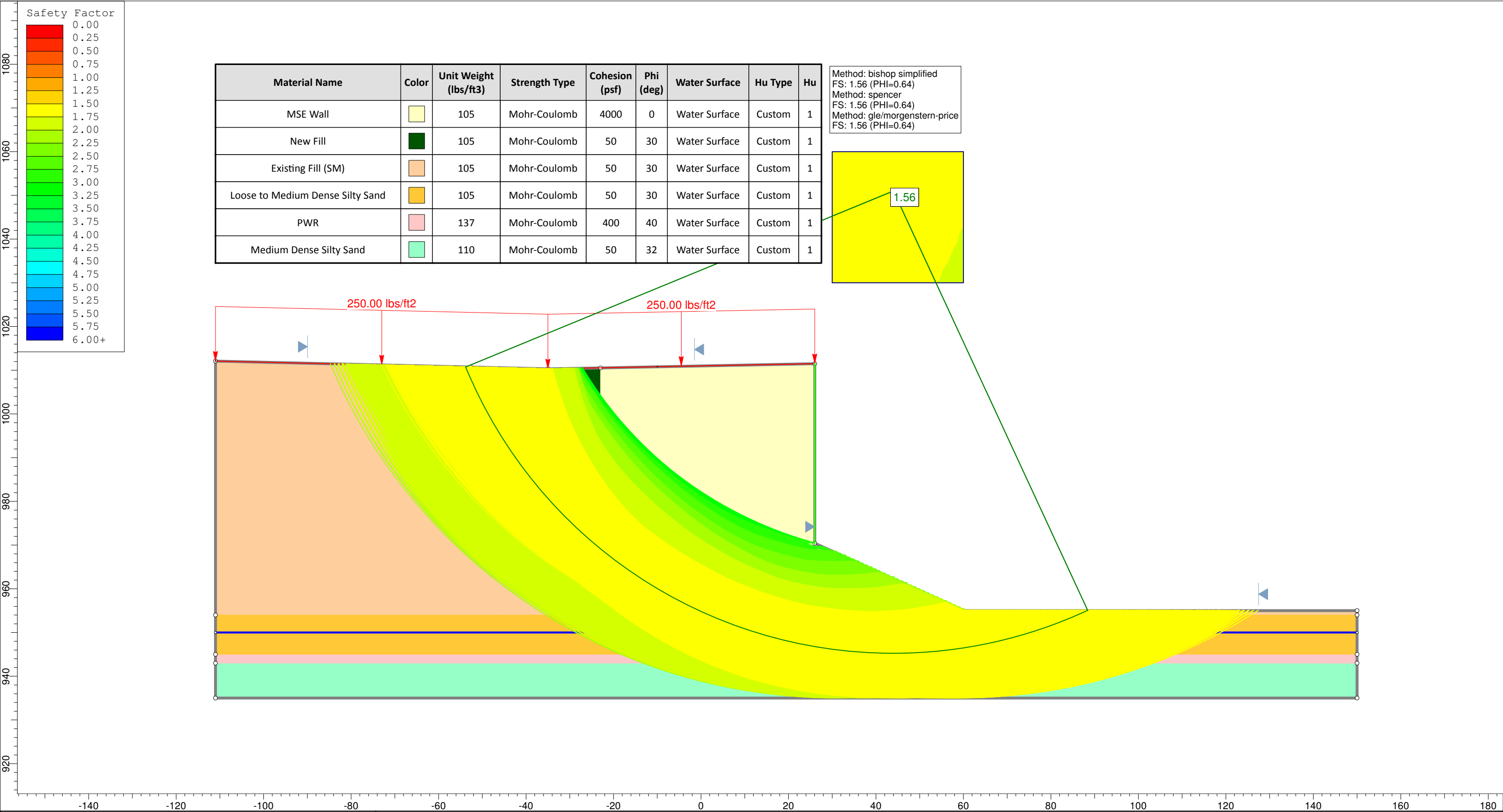




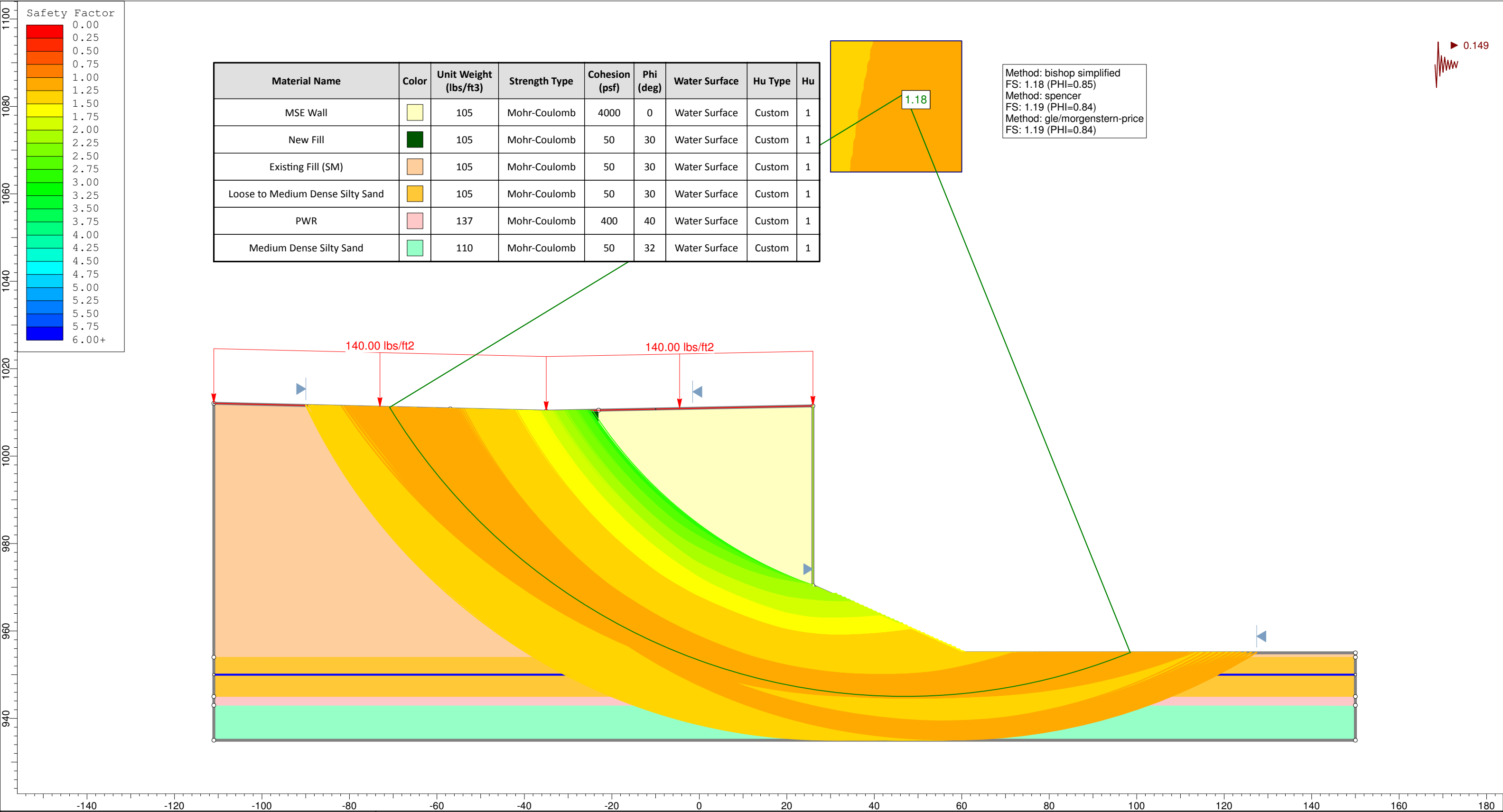
	Project			Wall 33 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - Ramp 2B - Station 44+00- Earthquake Analysis Kh=0.153		
	Drawn By		CLB	Scale	1:300	Company
	Date		09/04/2015	File Name		Roadway - Ramp 2B - Sta 44+00 - TSA_EQ.slim
						ECS Carolinas LLP

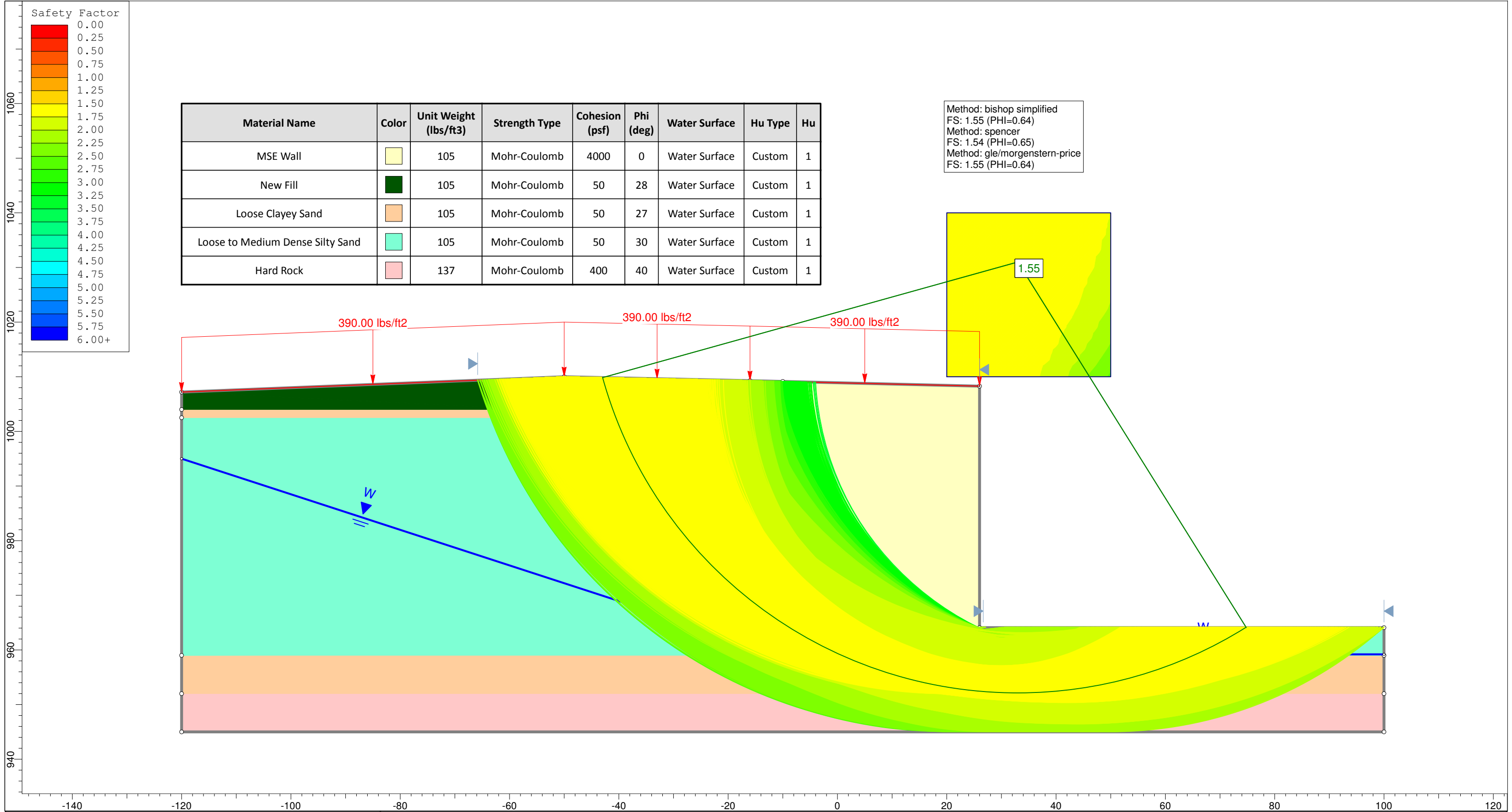


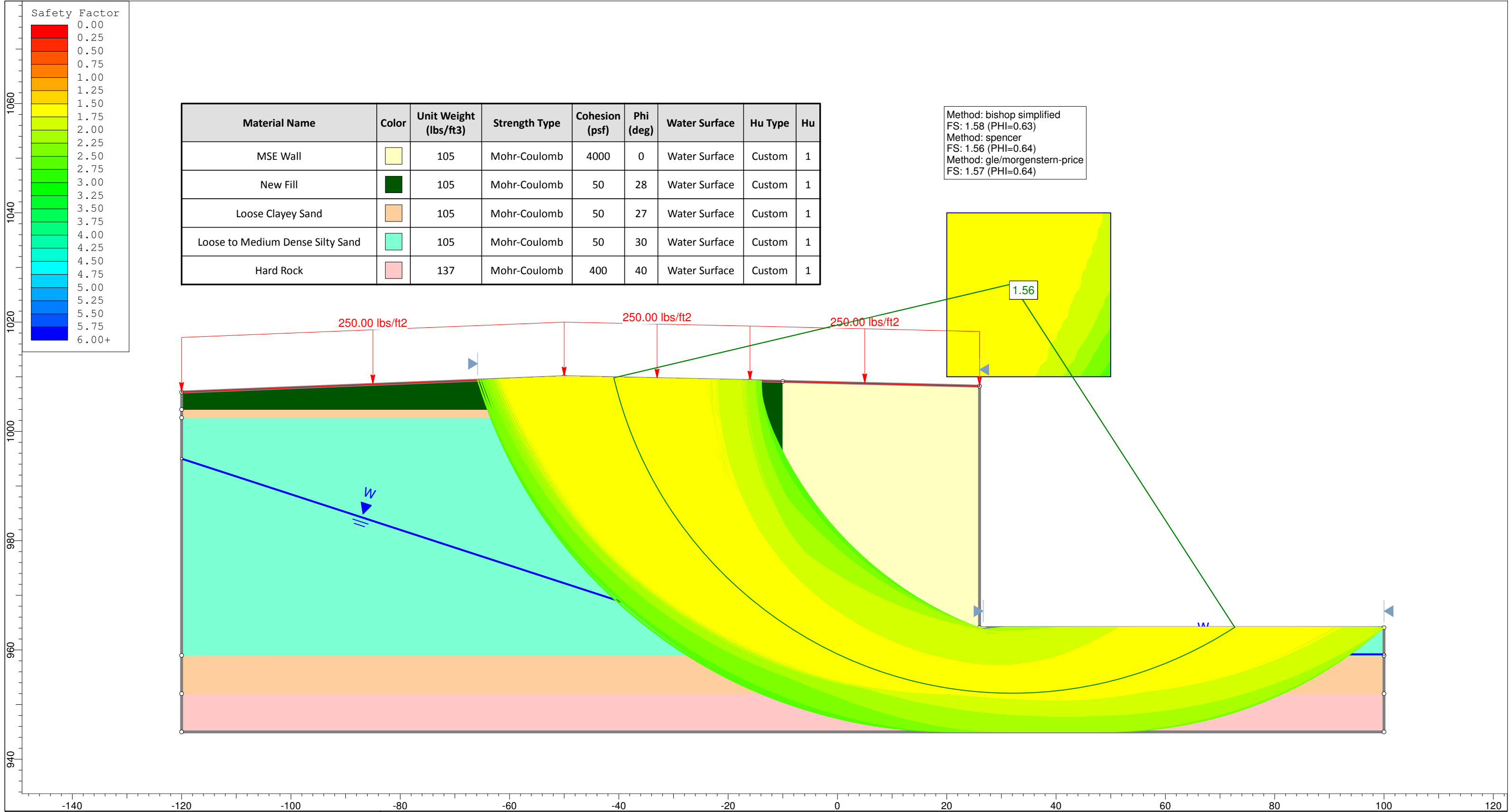
	Project			Wall 32 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - Ramp 4 - Station 40+00- ESA		
	Drawn By		CLB	Scale	1:250	Company
	Date		09/04/2015	File Name		Roadway - Ramp 4 - Sta 40+00 - ESA.slim
						ECS Carolinas LLP

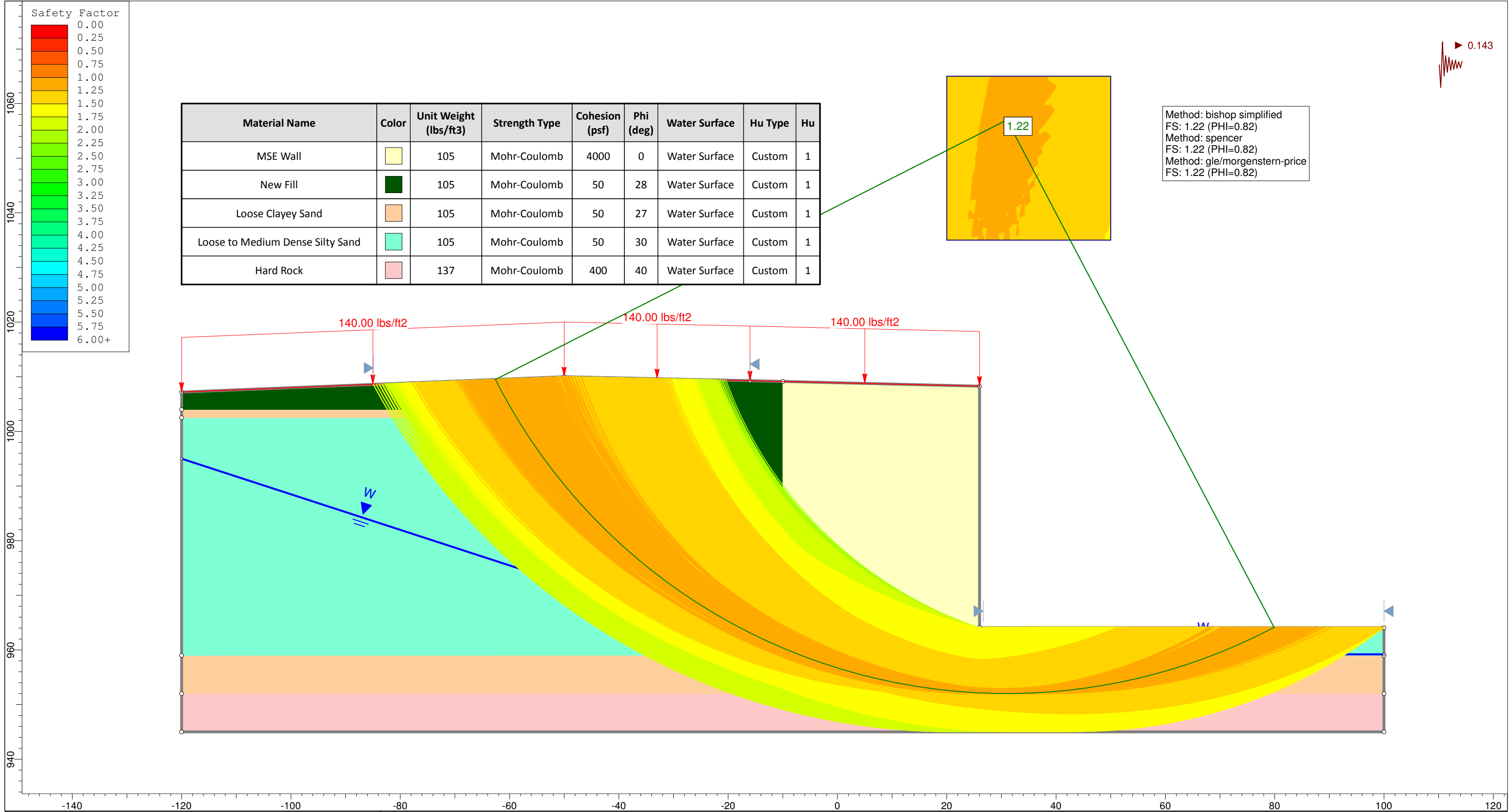


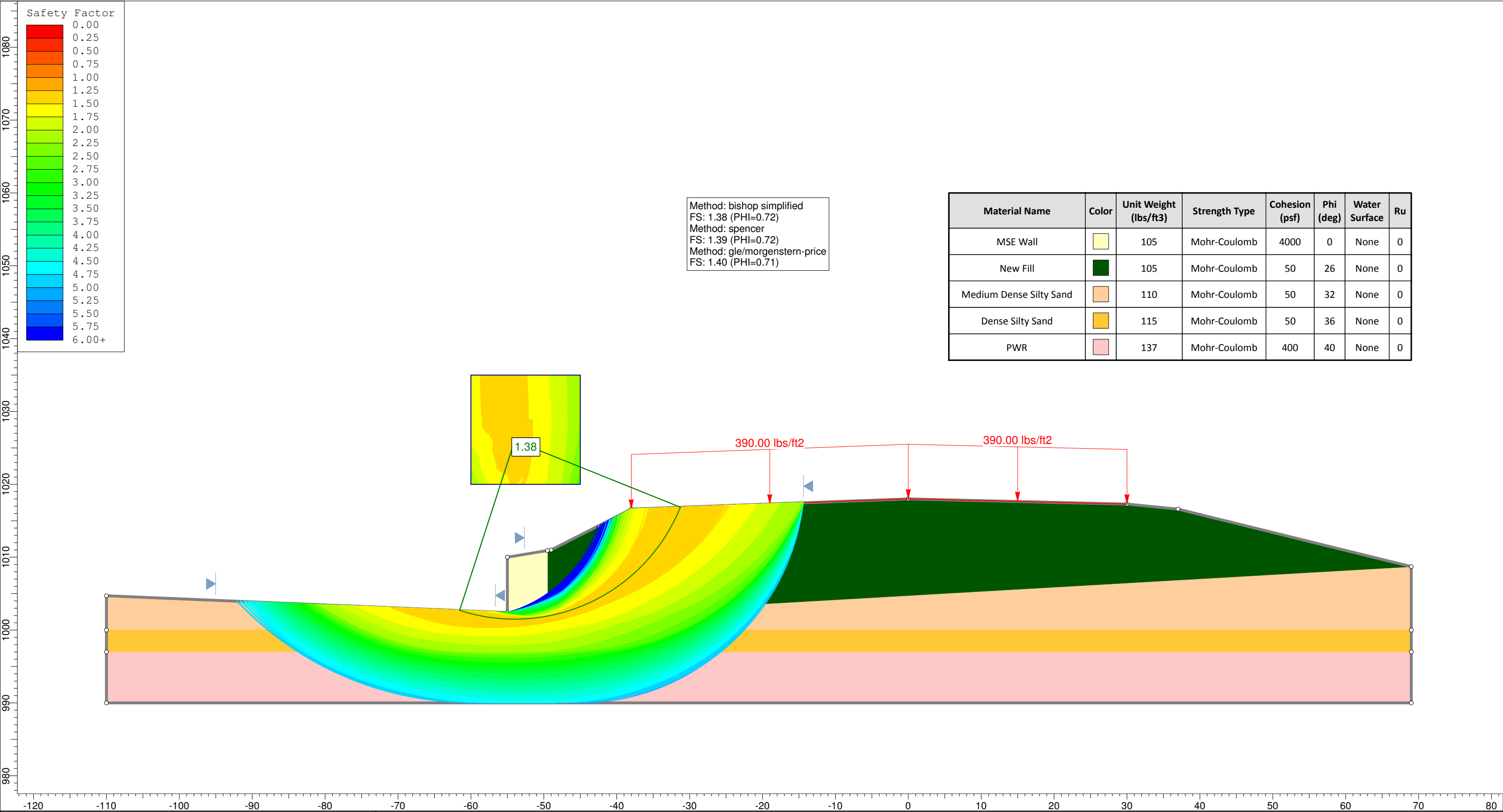
	Project			Wall 32 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - Ramp 4 - Station 40+00- TSA		
	Drawn By		CLB	Scale	1:250	Company
	Date		09/04/2015	File Name		Roadway - Ramp 4 - Sta 40+00 - TSA.slim
						ECS Carolinas LLP

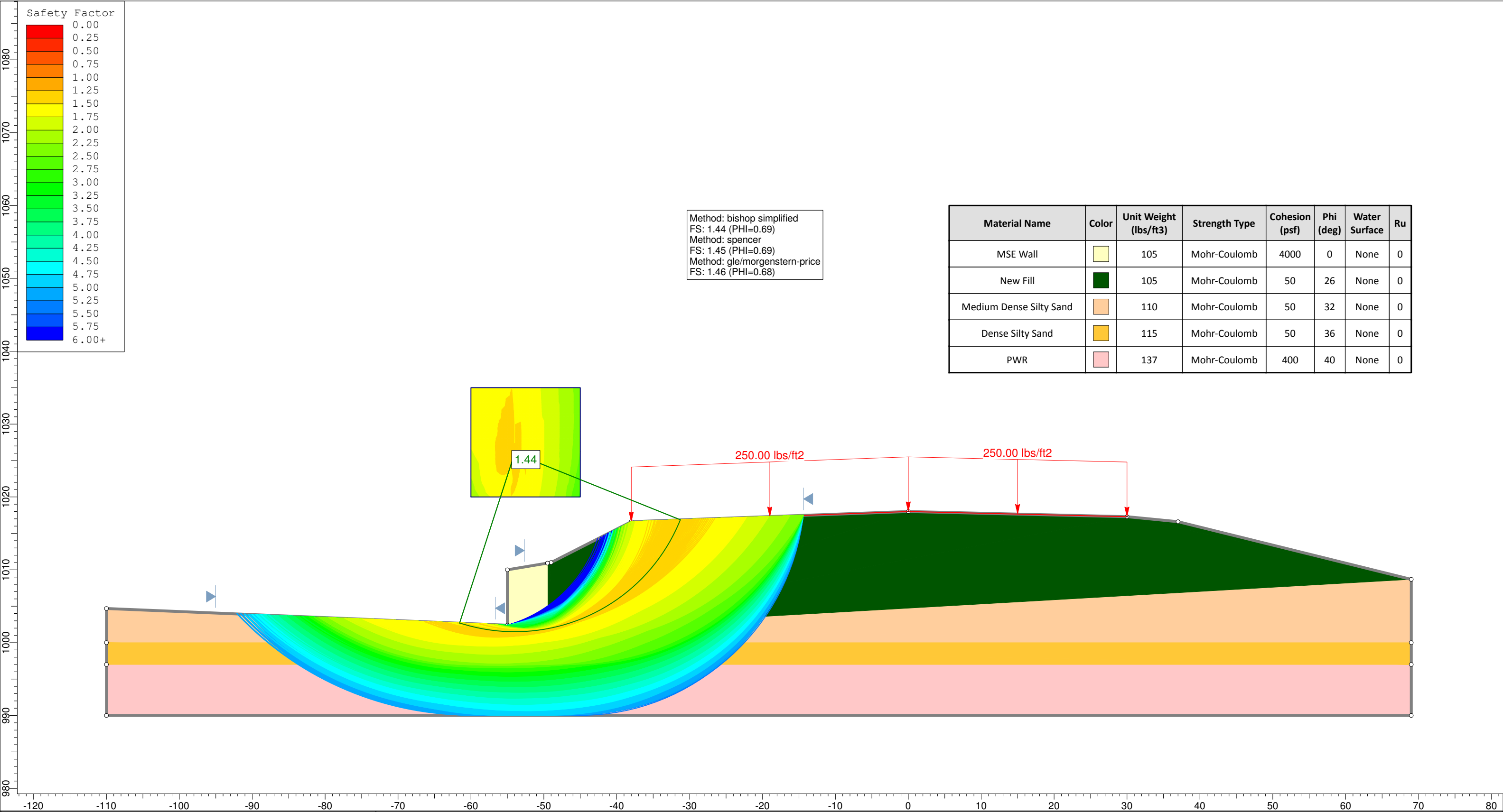




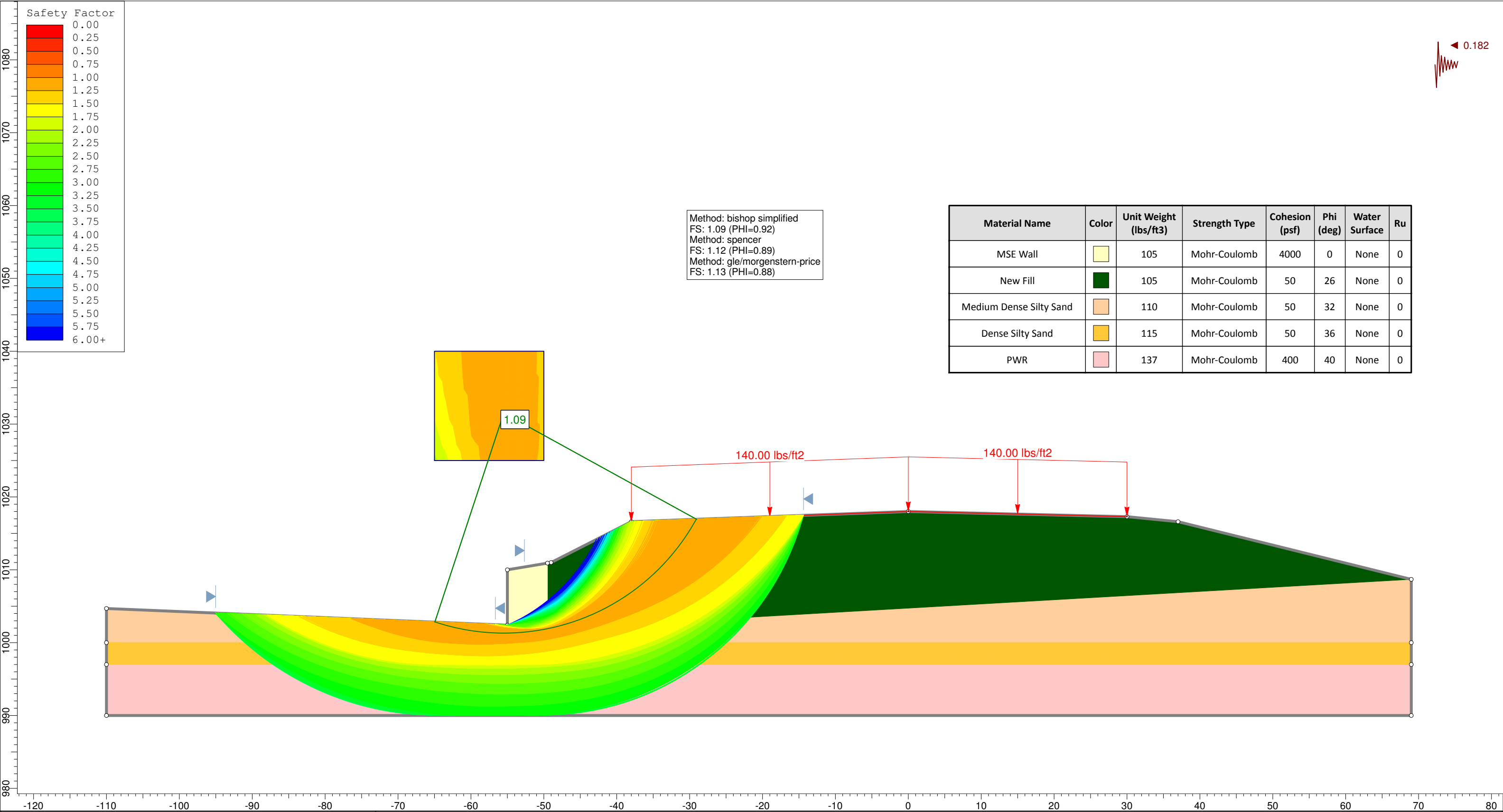


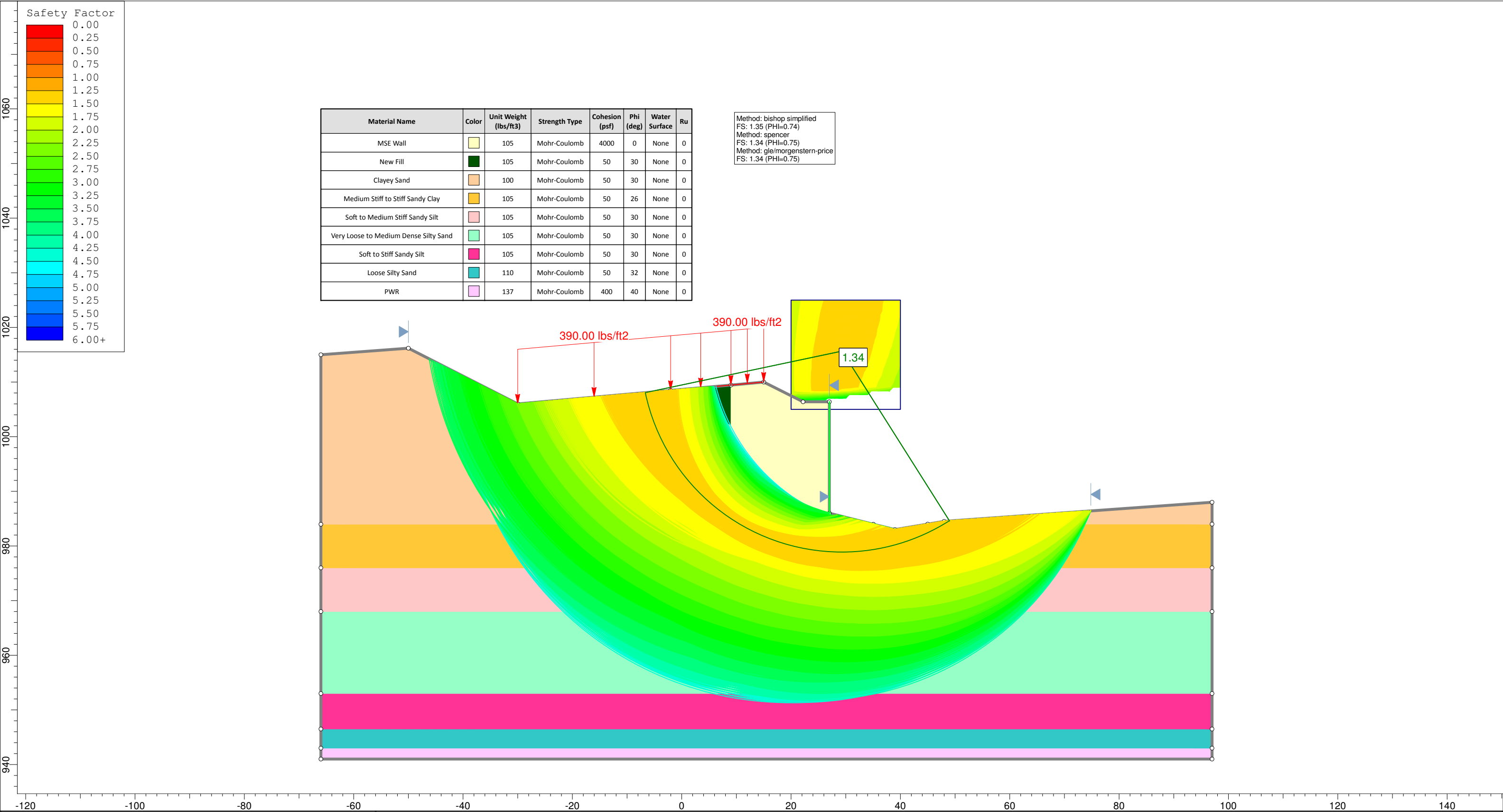


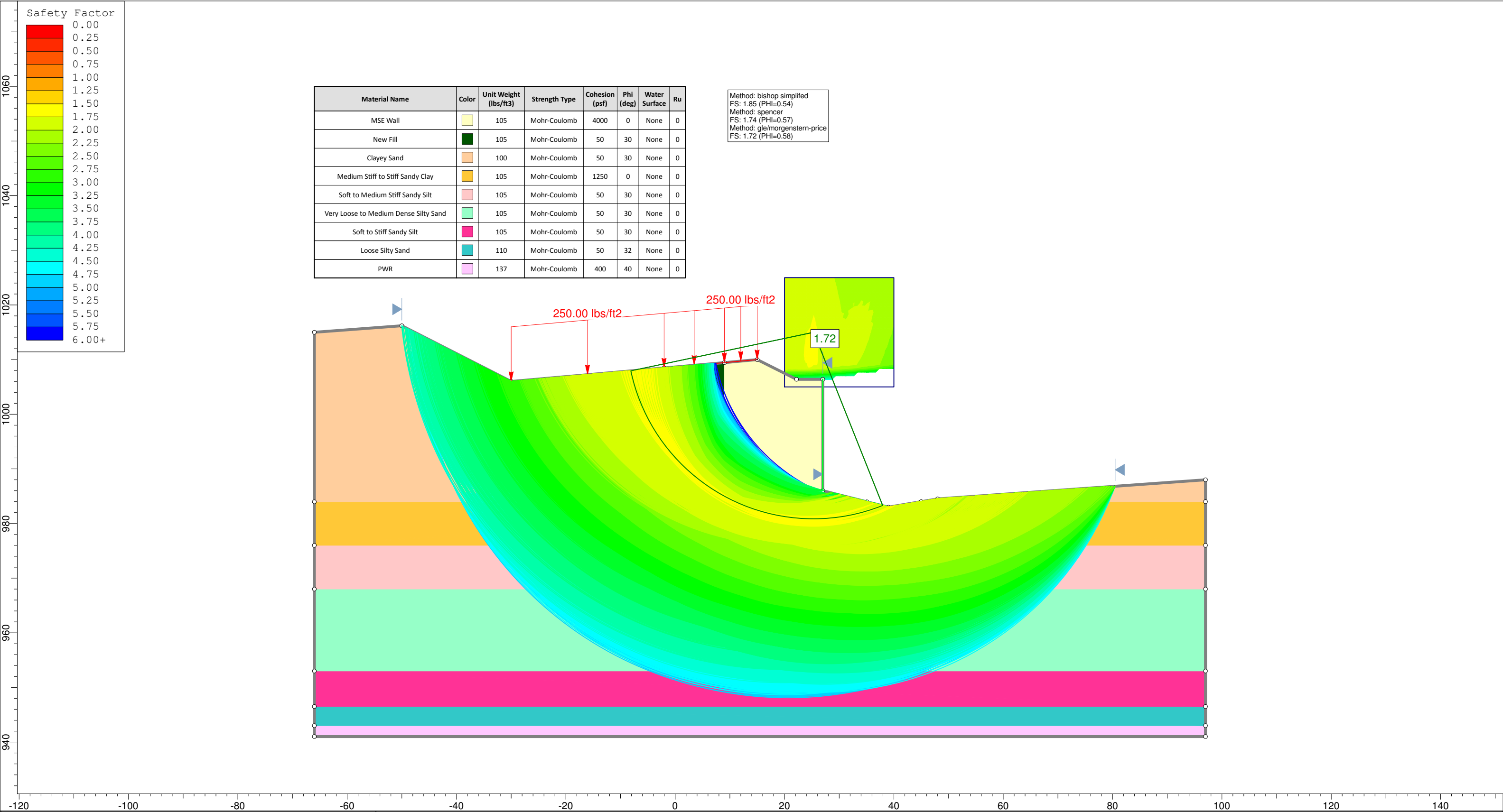


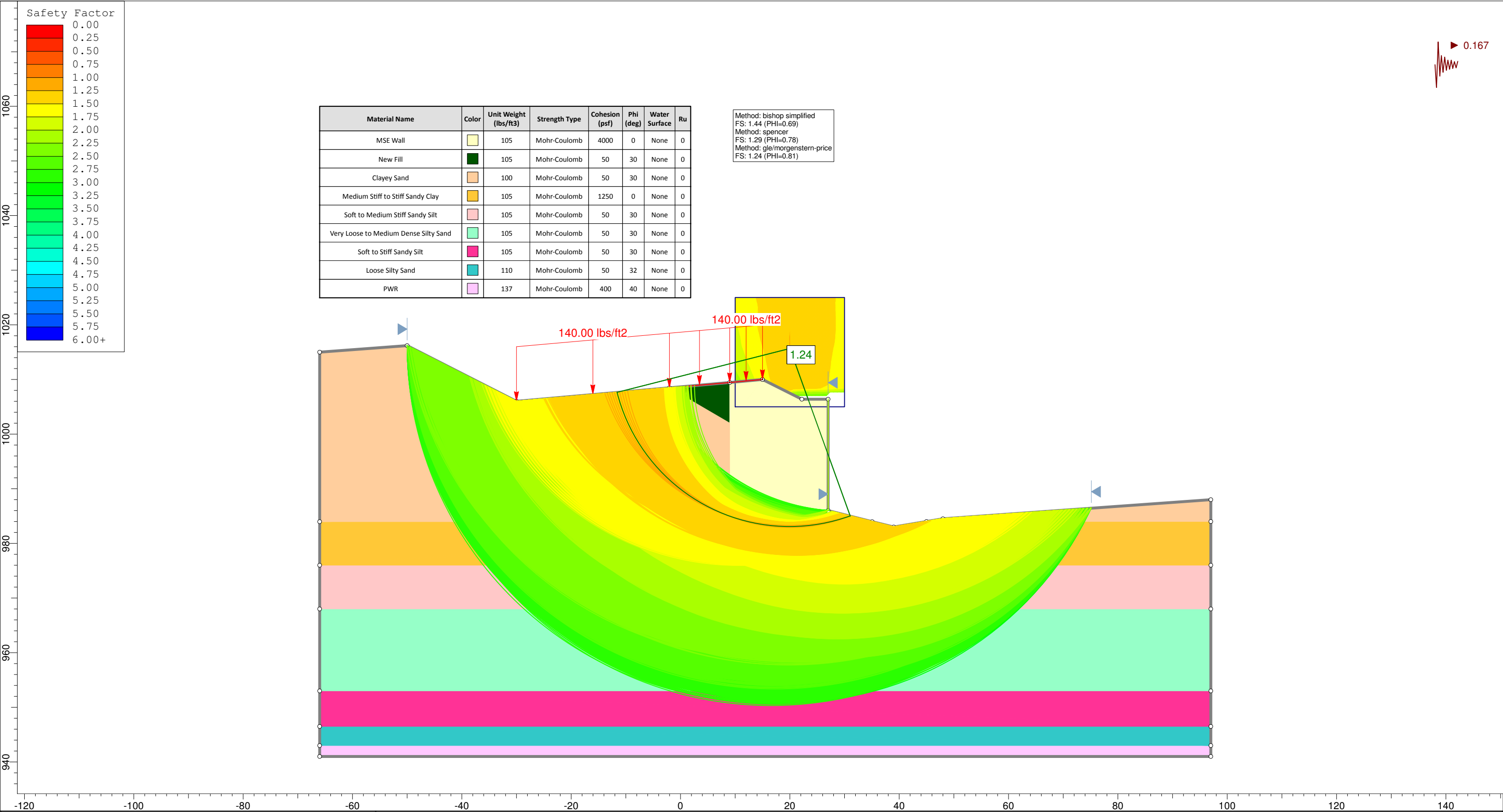


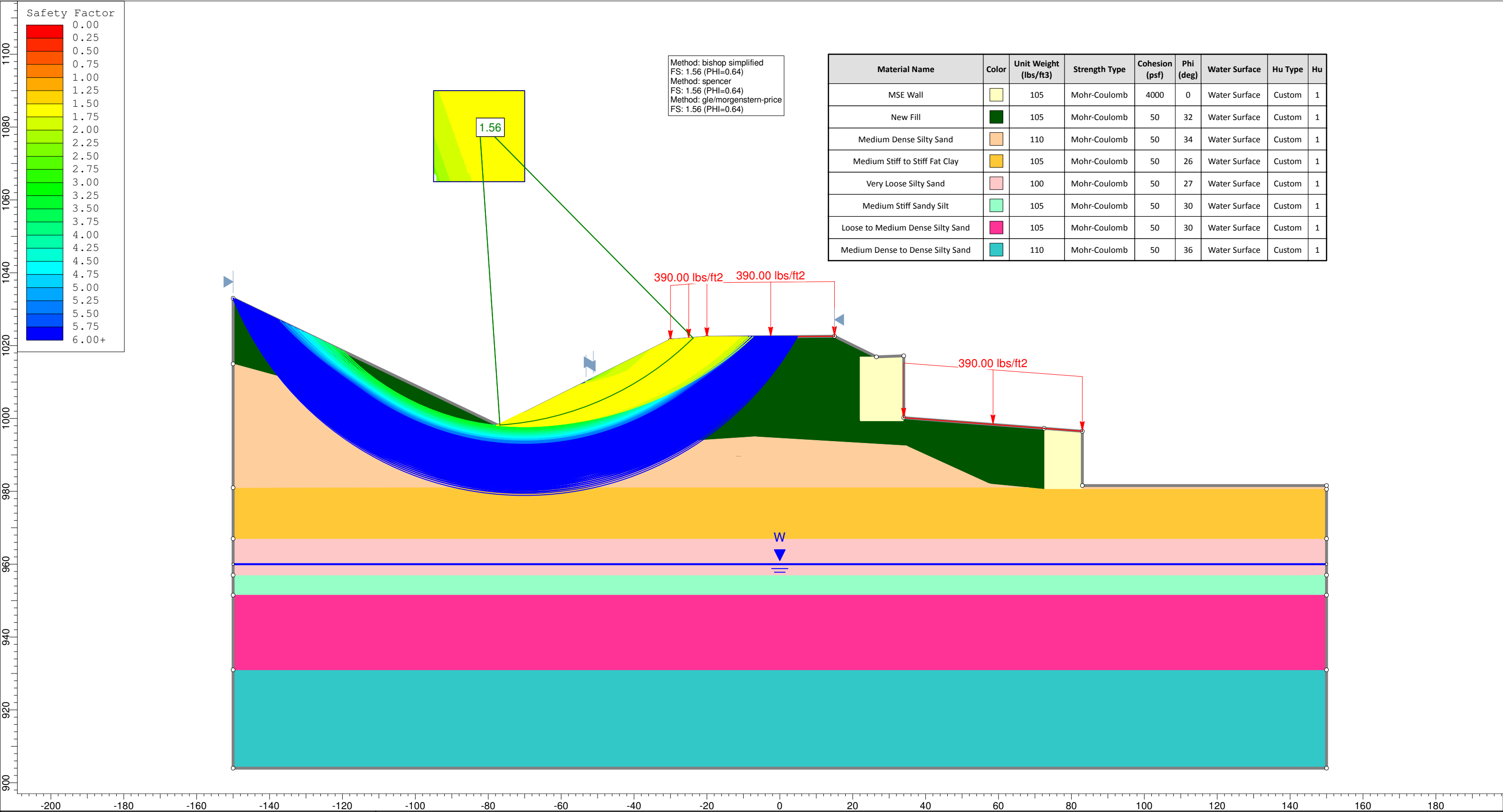
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
MSE Wall		105	Mohr-Coulomb	4000	0	None	0
New Fill		105	Mohr-Coulomb	50	26	None	0
Medium Dense Silty Sand		110	Mohr-Coulomb	50	32	None	0
Dense Silty Sand		115	Mohr-Coulomb	50	36	None	0
PWR		137	Mohr-Coulomb	400	40	None	0





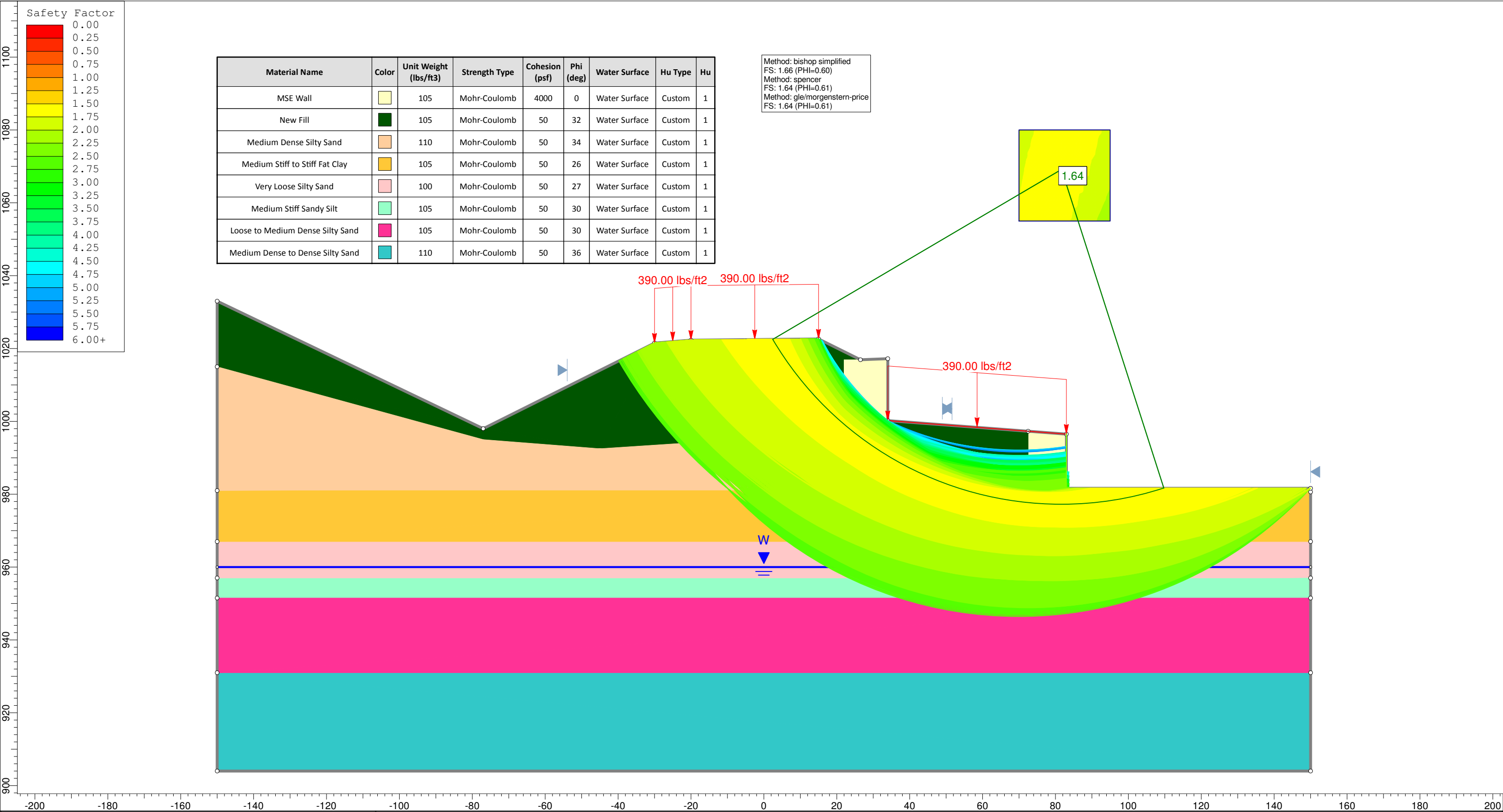






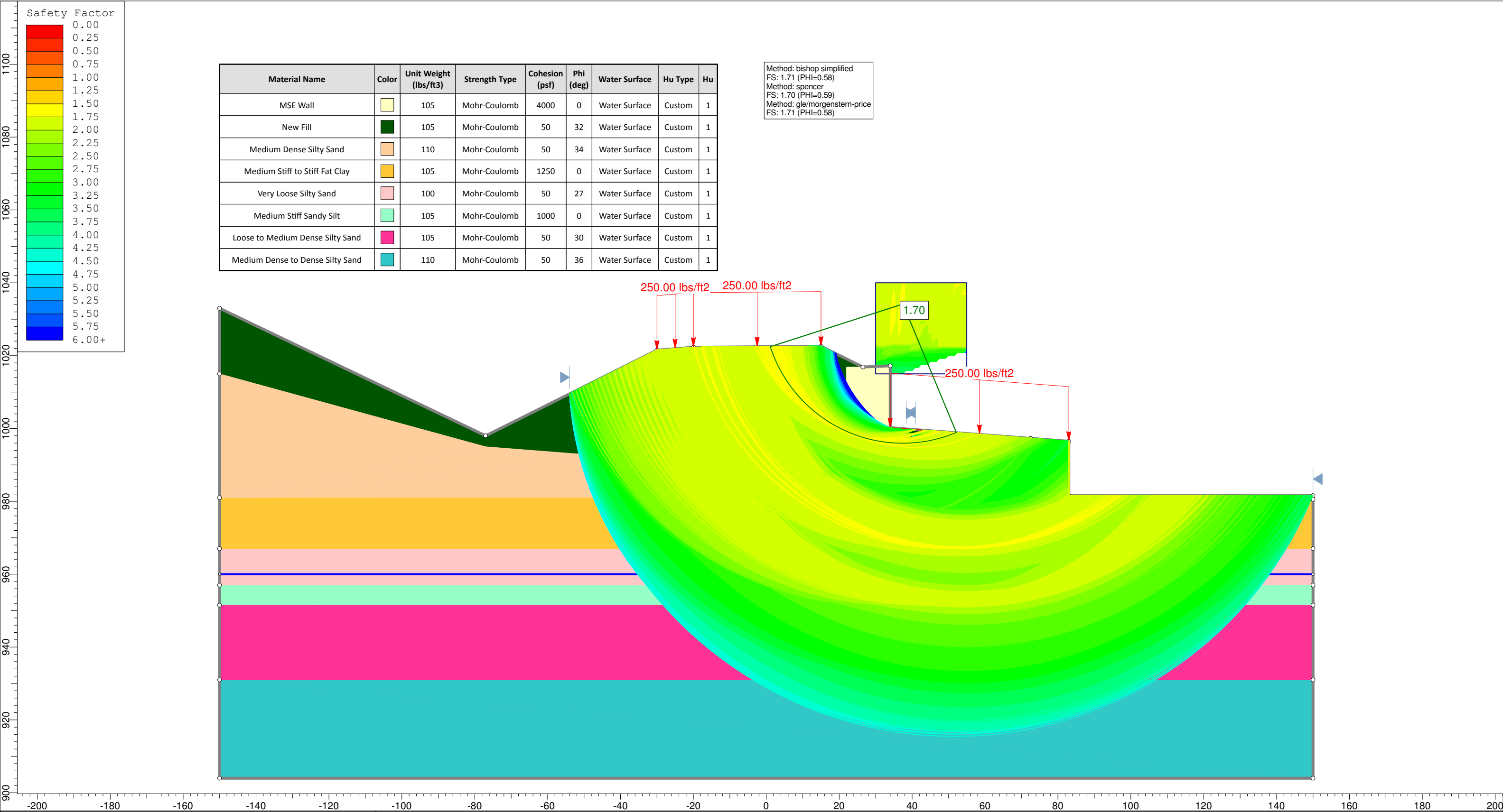
Method: bishop simplified
FS: 1.56 (PHI=0.64)
Method: spencer
FS: 1.56 (PHI=0.64)
Method: gle/morgenstern-price
FS: 1.56 (PHI=0.64)

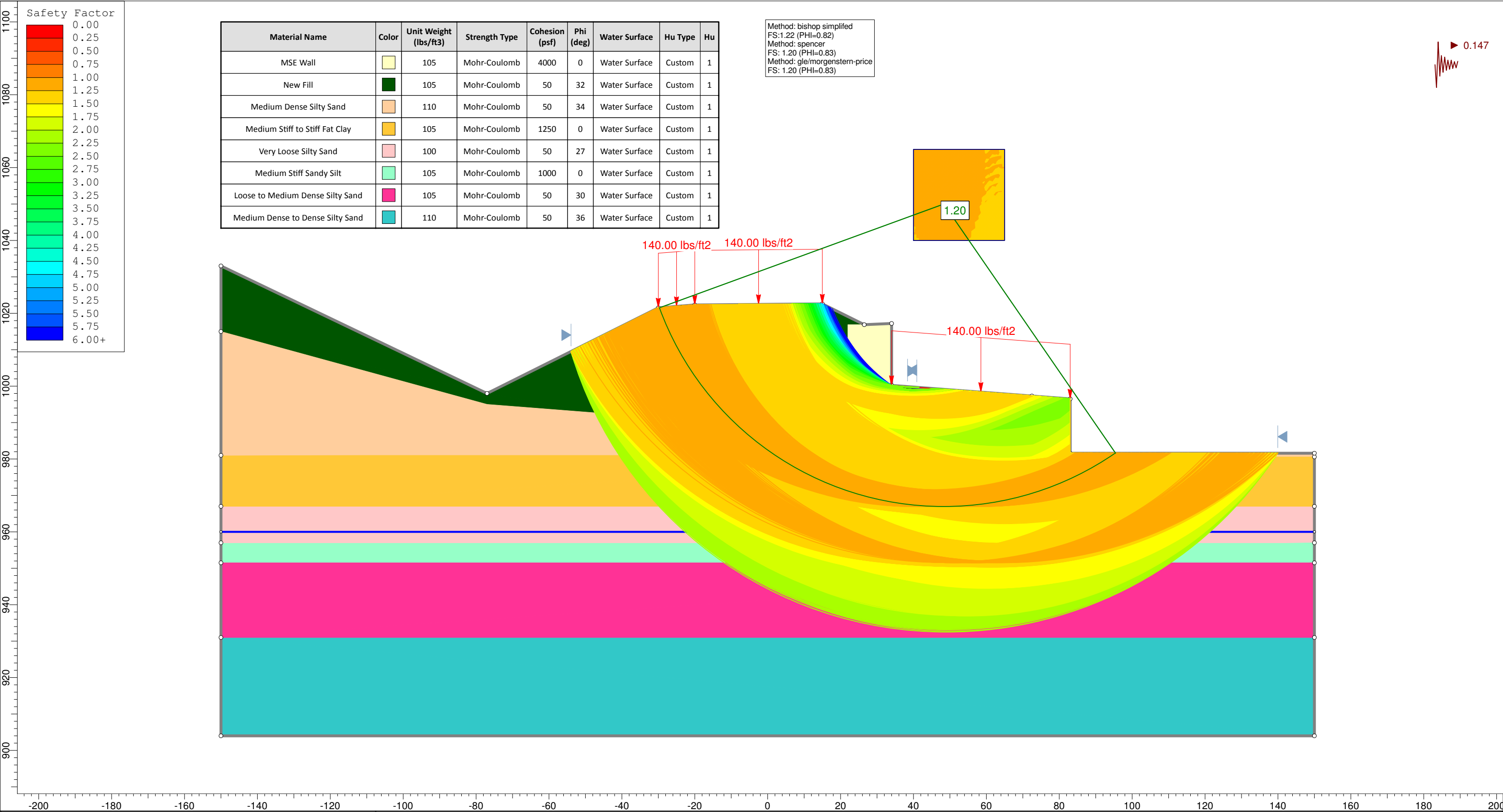
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	32	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	34	Water Surface	Custom	1
Medium Stiff to Stiff Fat Clay		105	Mohr-Coulomb	50	26	Water Surface	Custom	1
Very Loose Silty Sand		100	Mohr-Coulomb	50	27	Water Surface	Custom	1
Medium Stiff Sandy Silt		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Medium Dense to Dense Silty Sand		110	Mohr-Coulomb	50	36	Water Surface	Custom	1




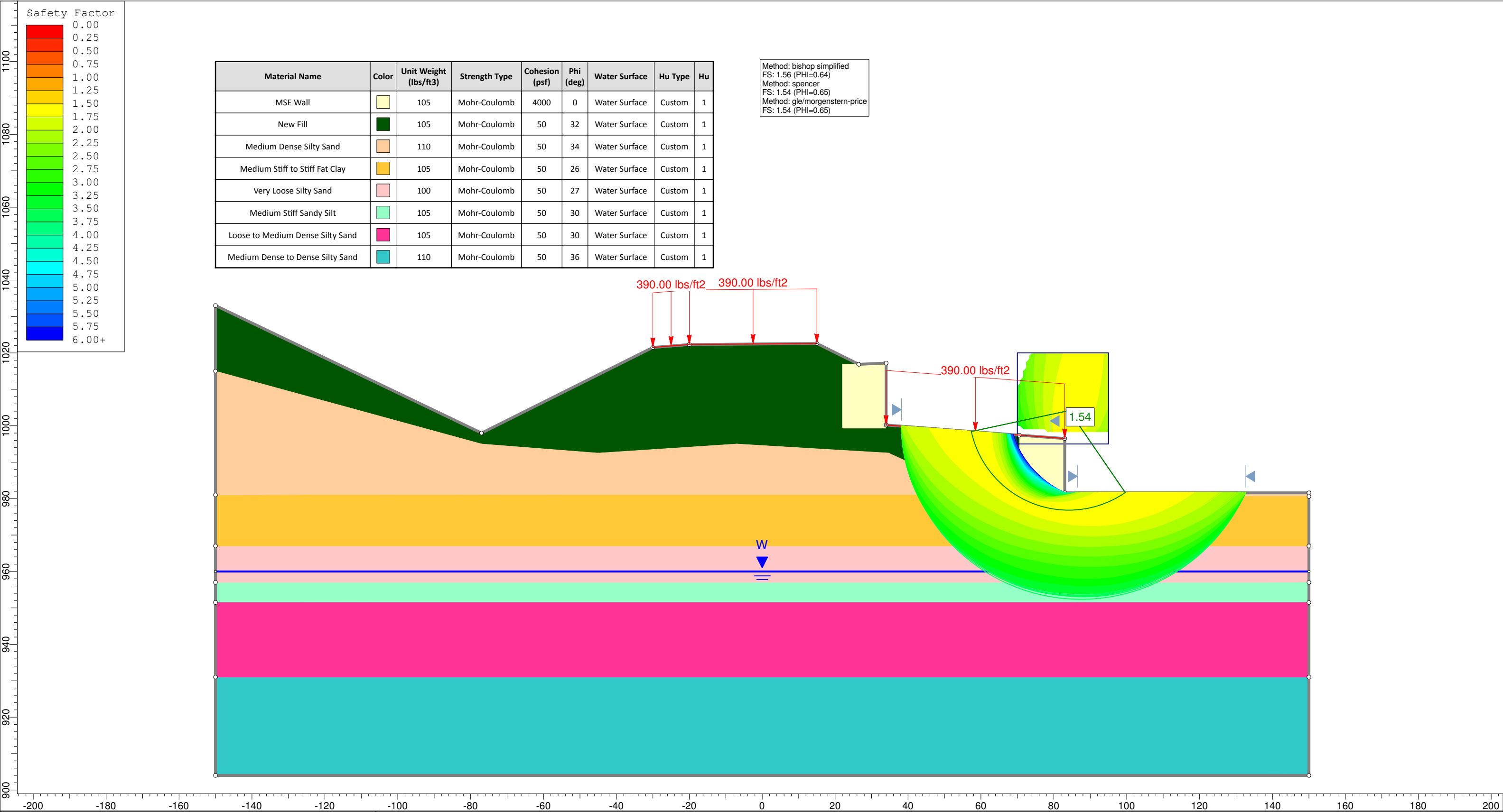
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	32	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	34	Water Surface	Custom	1
Medium Stiff to Stiff Fat Clay		105	Mohr-Coulomb	50	26	Water Surface	Custom	1
Very Loose Silty Sand		100	Mohr-Coulomb	50	27	Water Surface	Custom	1
Medium Stiff Sandy Silt		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Medium Dense to Dense Silty Sand		110	Mohr-Coulomb	50	36	Water Surface	Custom	1

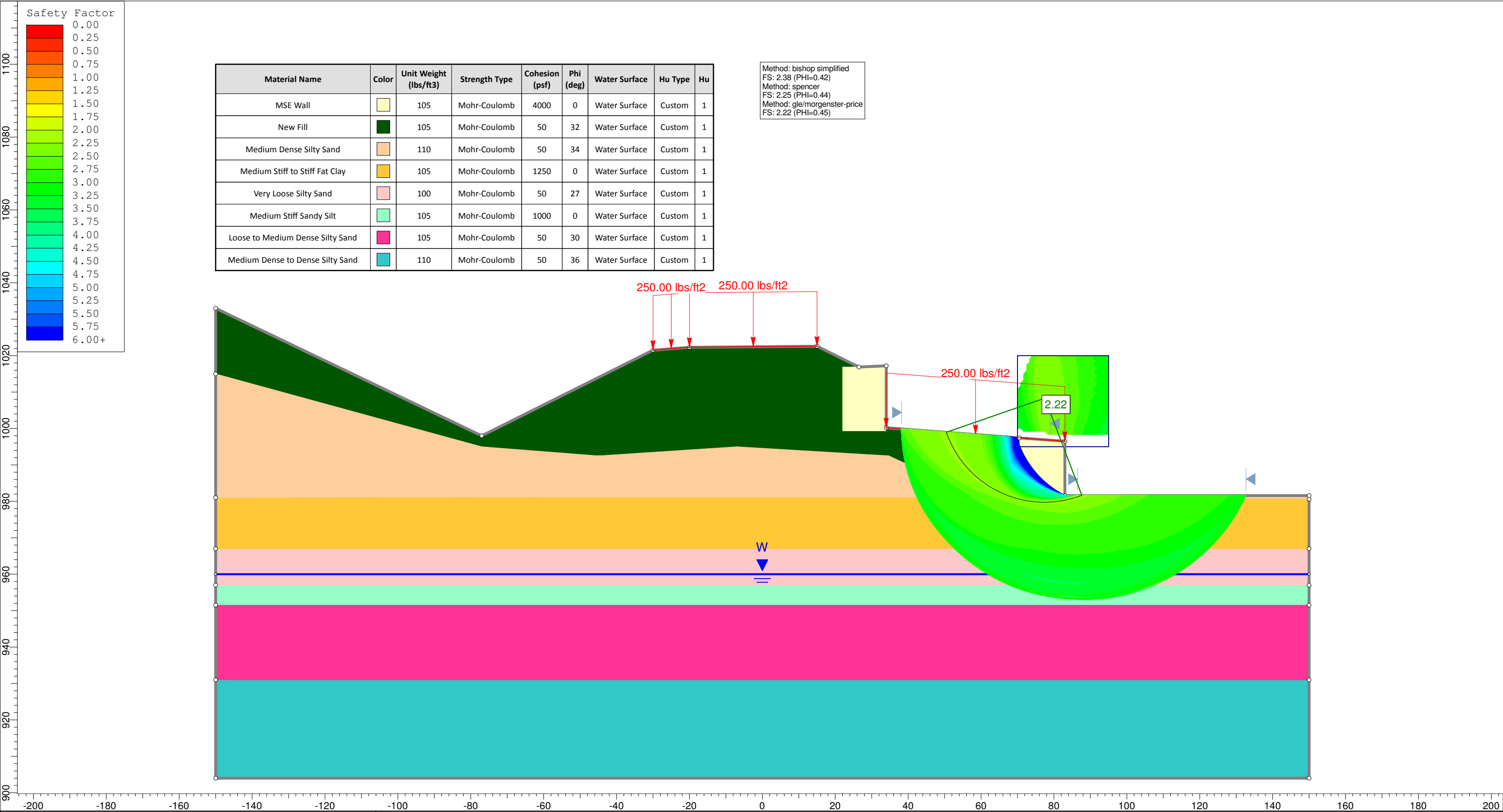
Method: bishop simplified
FS: 1.66 (PHI=0.60)
Method: spencer
FS: 1.64 (PHI=0.61)
Method: gle/morgenstern-price
FS: 1.64 (PHI=0.61)





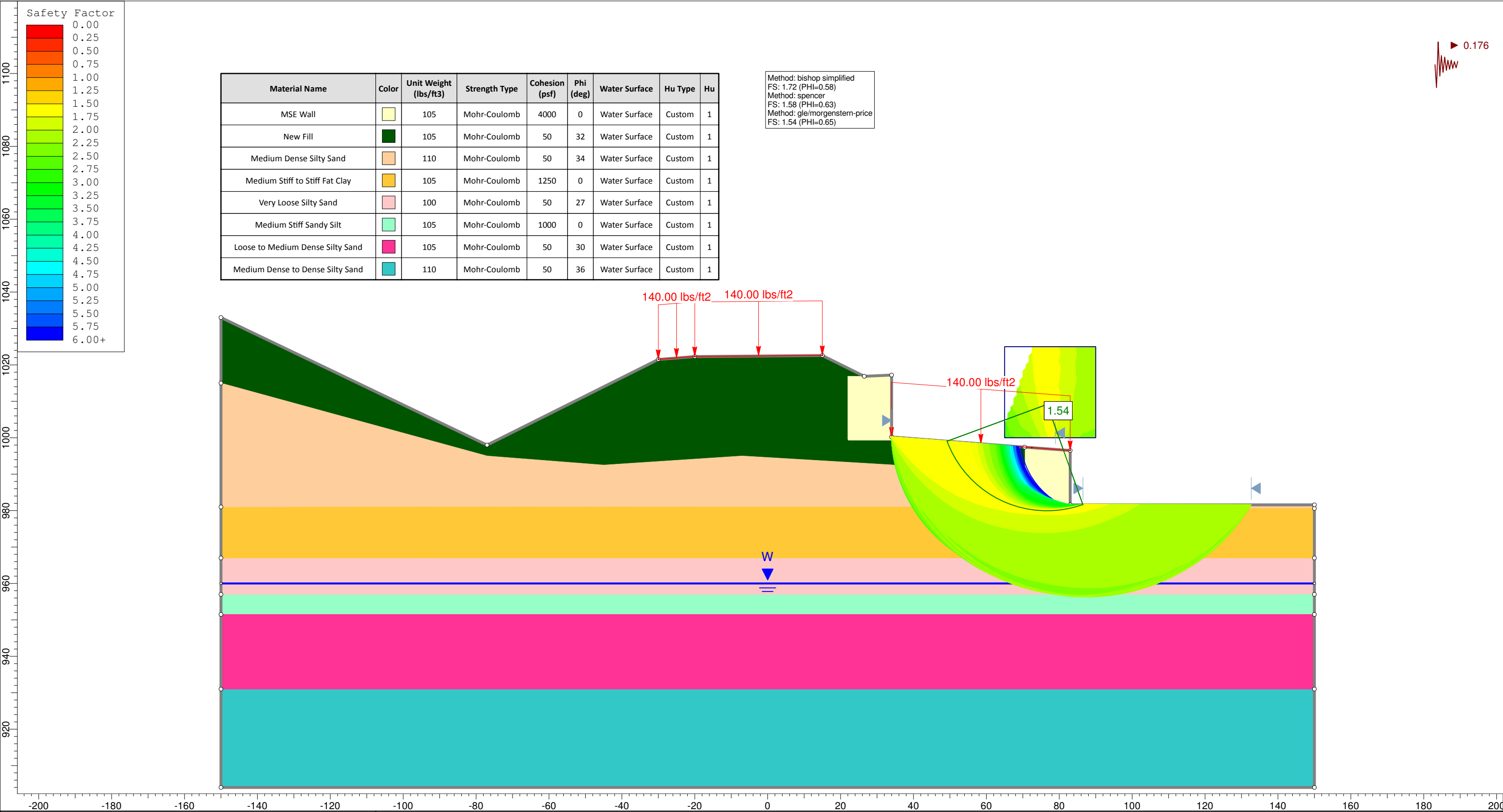
	Project			Walls 32 and 36 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - Ramp 4/4B - Station 388+00- Earthquake Analysis Kh=0.147		
	Drawn By		CLB	Scale	1:300	Company
	Date		09/02/2015	File Name		ECS Carolinas LLP
						Roadway Ramp 4-4B Both Wall - Station 388+00 - TSA_EQ.slim

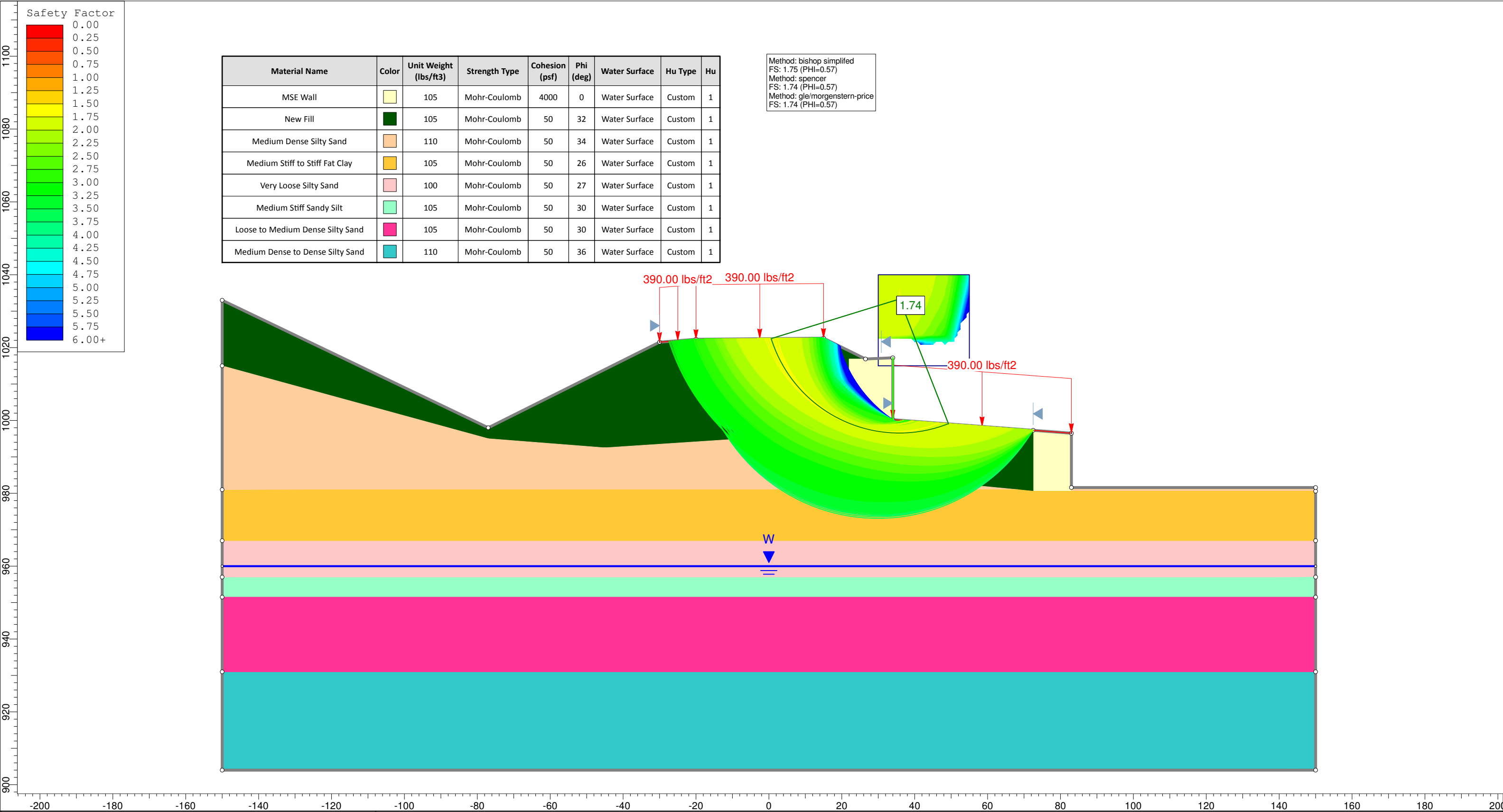


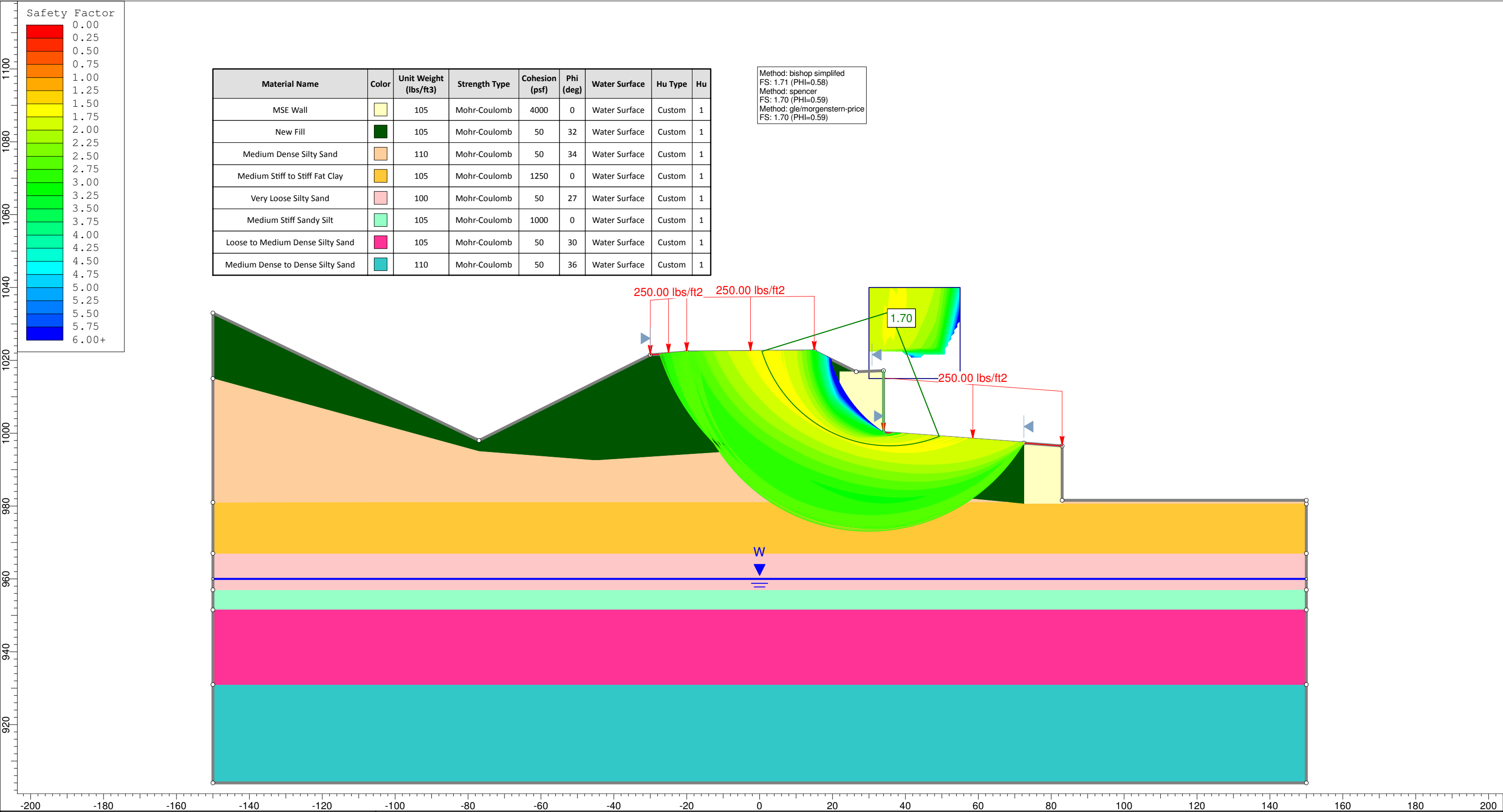


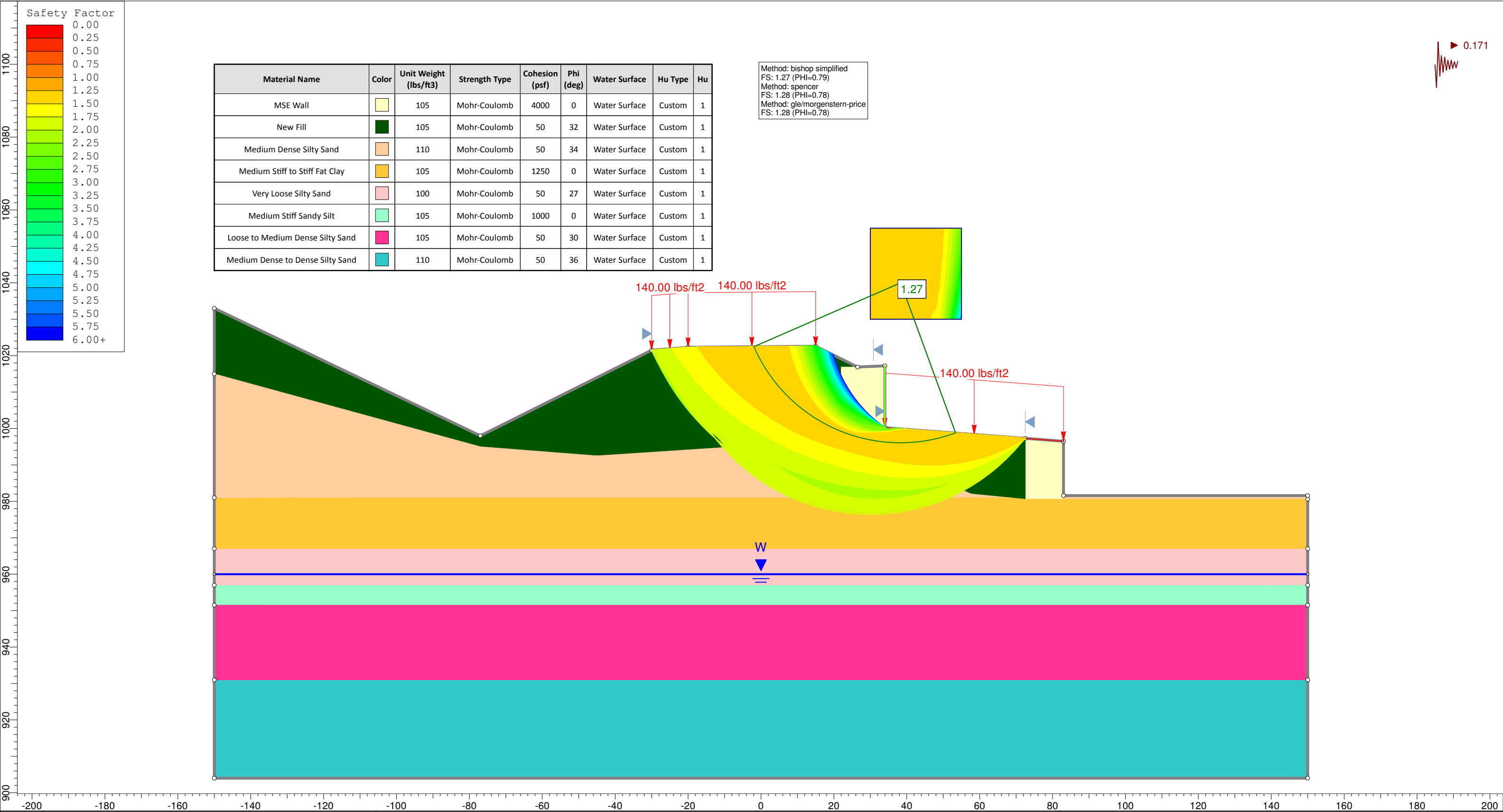
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Hu Type	Hu
MSE Wall		105	Mohr-Coulomb	4000	0	Water Surface	Custom	1
New Fill		105	Mohr-Coulomb	50	32	Water Surface	Custom	1
Medium Dense Silty Sand		110	Mohr-Coulomb	50	34	Water Surface	Custom	1
Medium Stiff to Stiff Fat Clay		105	Mohr-Coulomb	1250	0	Water Surface	Custom	1
Very Loose Silty Sand		100	Mohr-Coulomb	50	27	Water Surface	Custom	1
Medium Stiff Sandy Silt		105	Mohr-Coulomb	1000	0	Water Surface	Custom	1
Loose to Medium Dense Silty Sand		105	Mohr-Coulomb	50	30	Water Surface	Custom	1
Medium Dense to Dense Silty Sand		110	Mohr-Coulomb	50	36	Water Surface	Custom	1


Method: bishop simplified
FS: 2.38 (PHI=0.42)
Method: spencer
FS: 2.25 (PHI=0.44)
Method: gle/morgenster-price
FS: 2.22 (PHI=0.45)

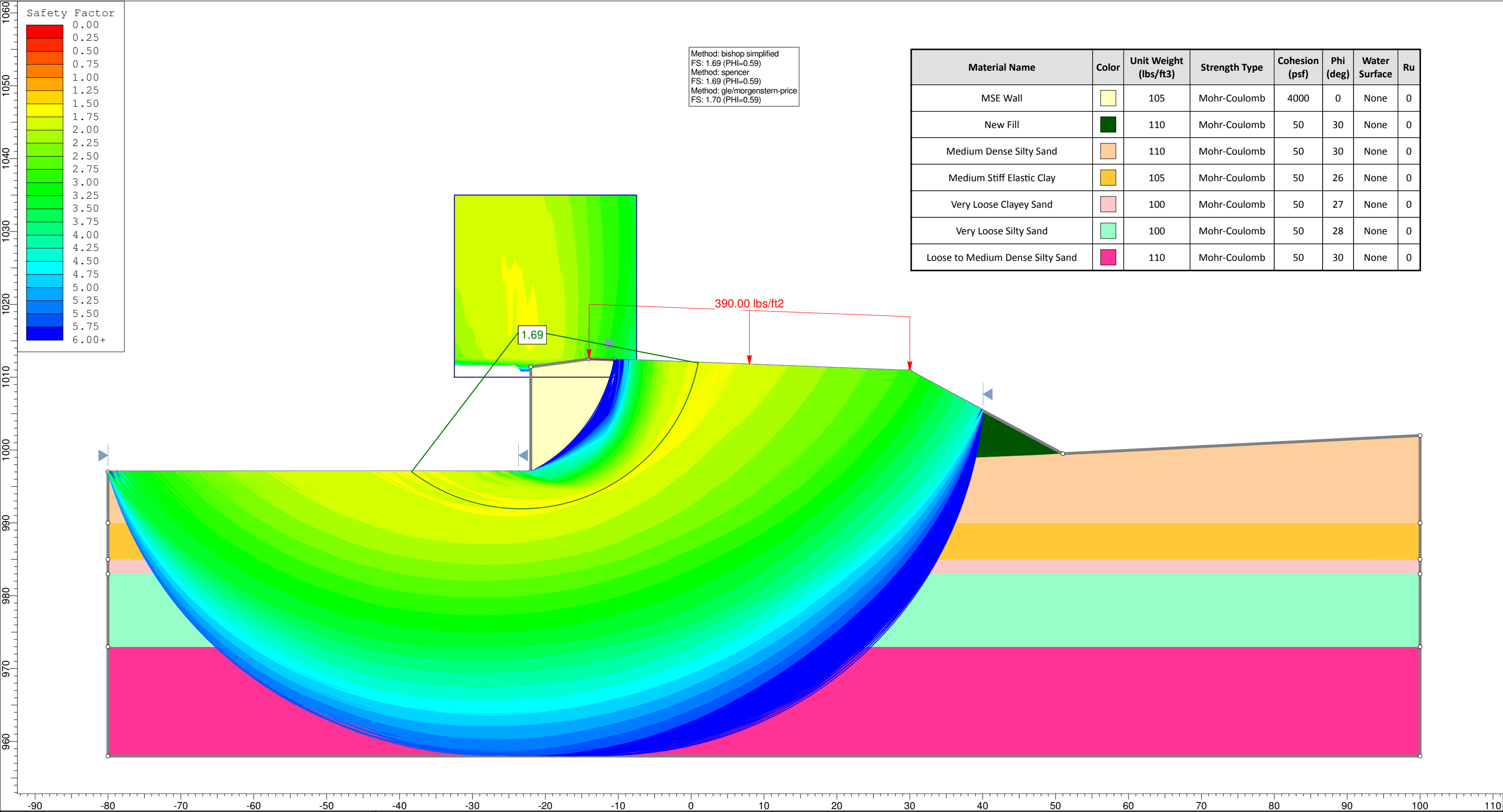


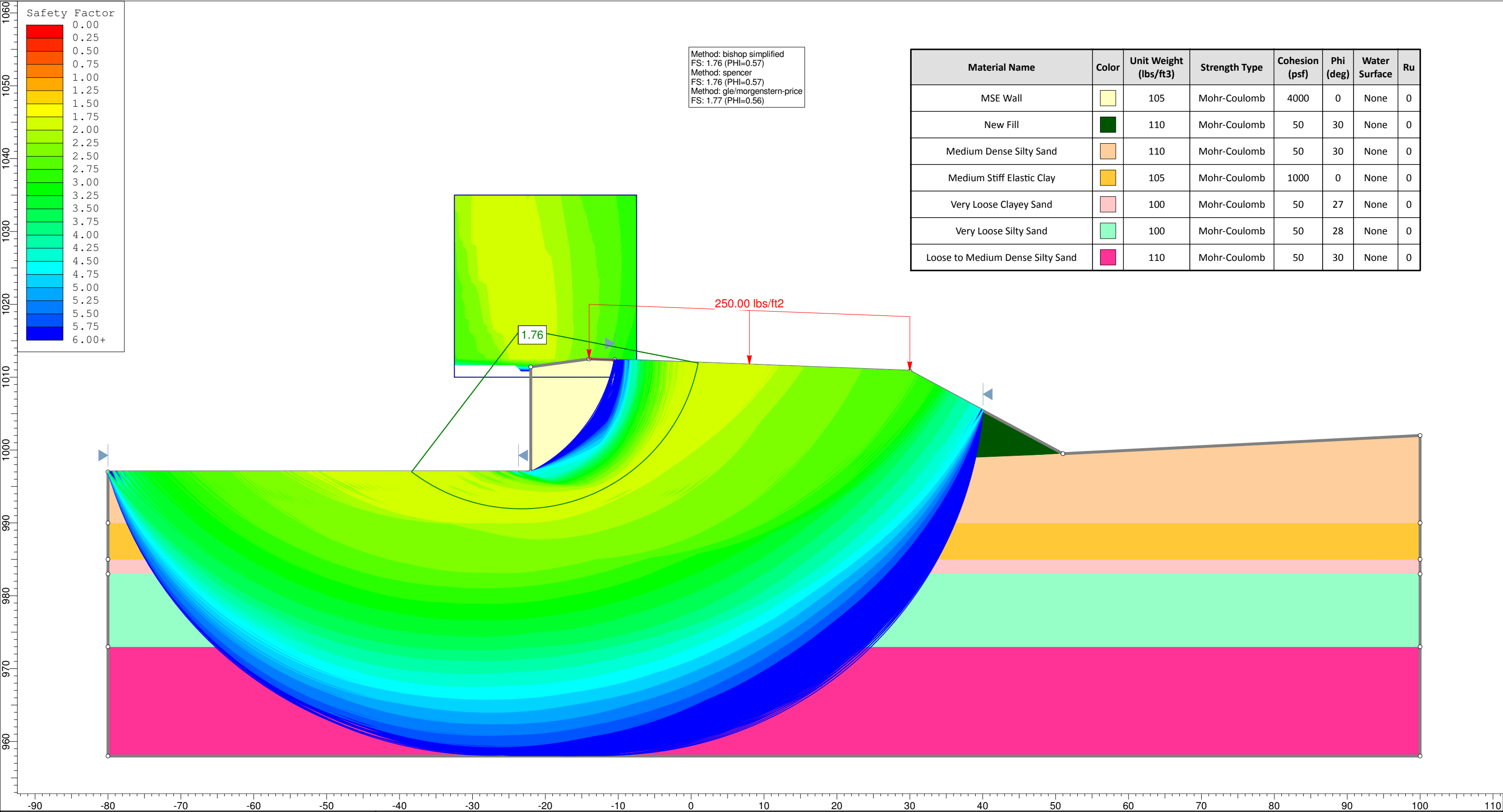


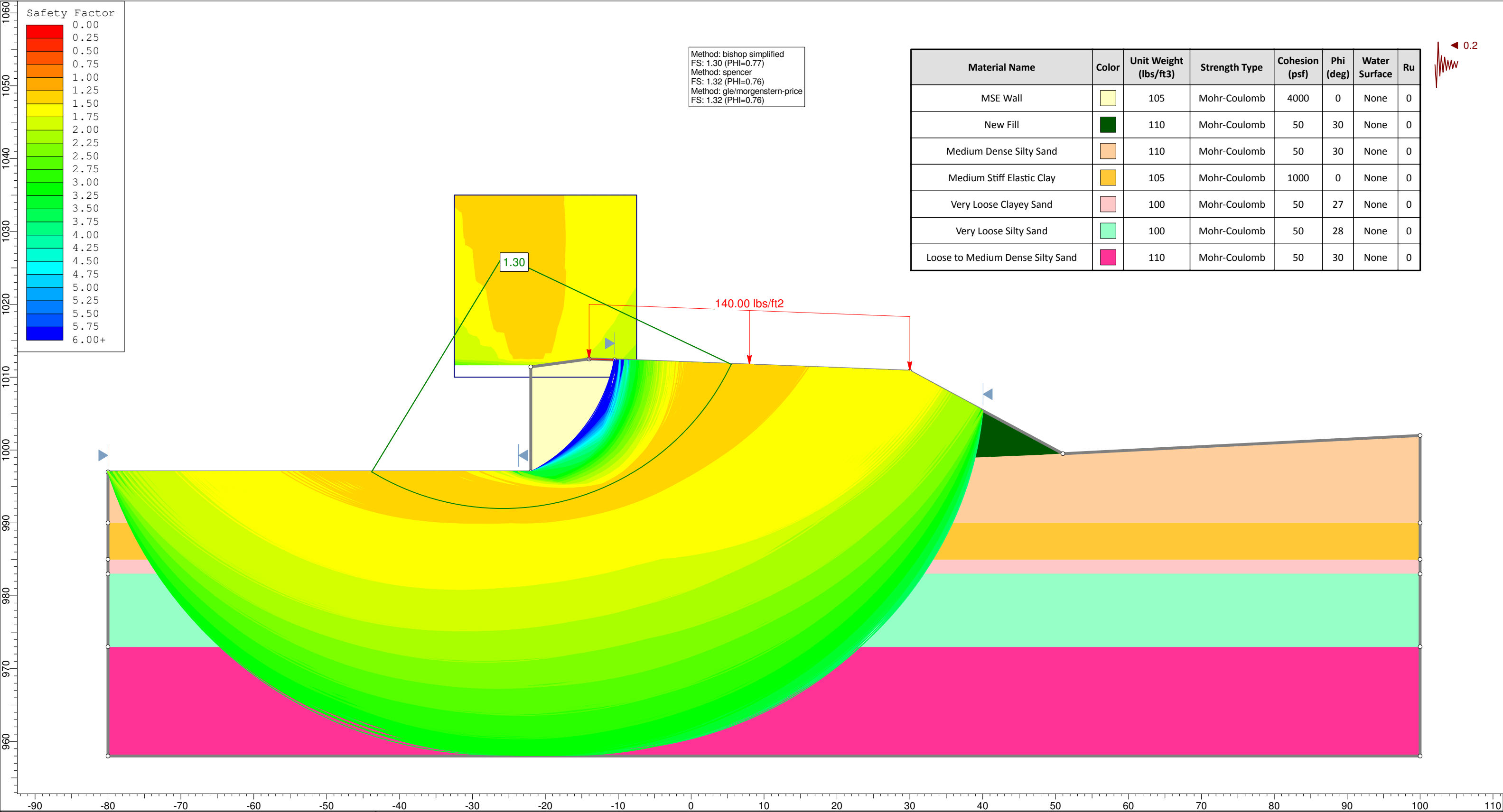





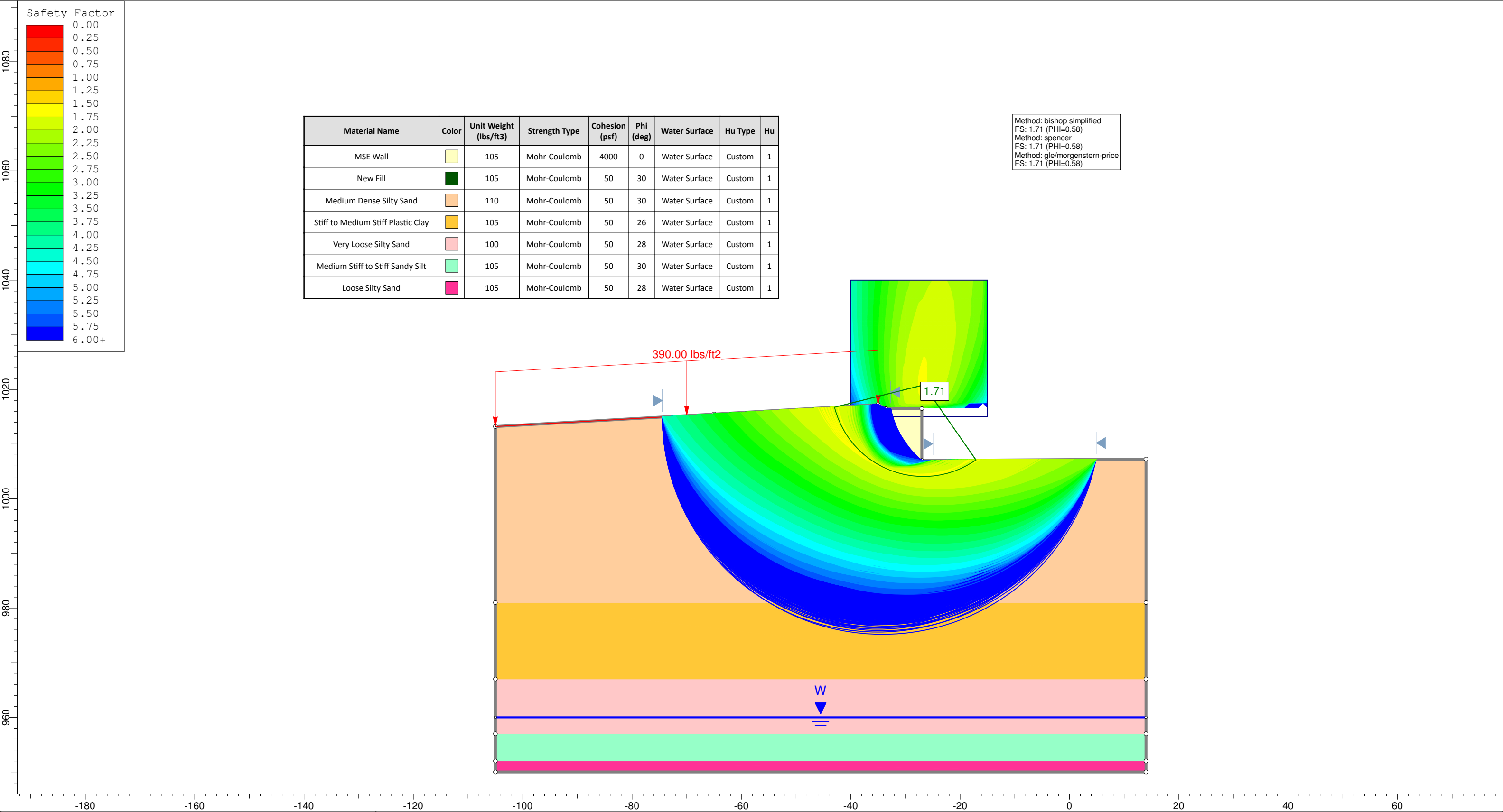
	Project			Walls 32 and 36 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - Ramp 4/4B - Station 388+00- Earthquake Analysis Kh=0.171		
	Drawn By		CLB	Scale	1:300	Company
	Date		09/02/2015	File Name		Roadway Ramp 4-4B Upper Wall - Station 388+00 - TSA_EQ.slim
						ECS Carolinas LLP

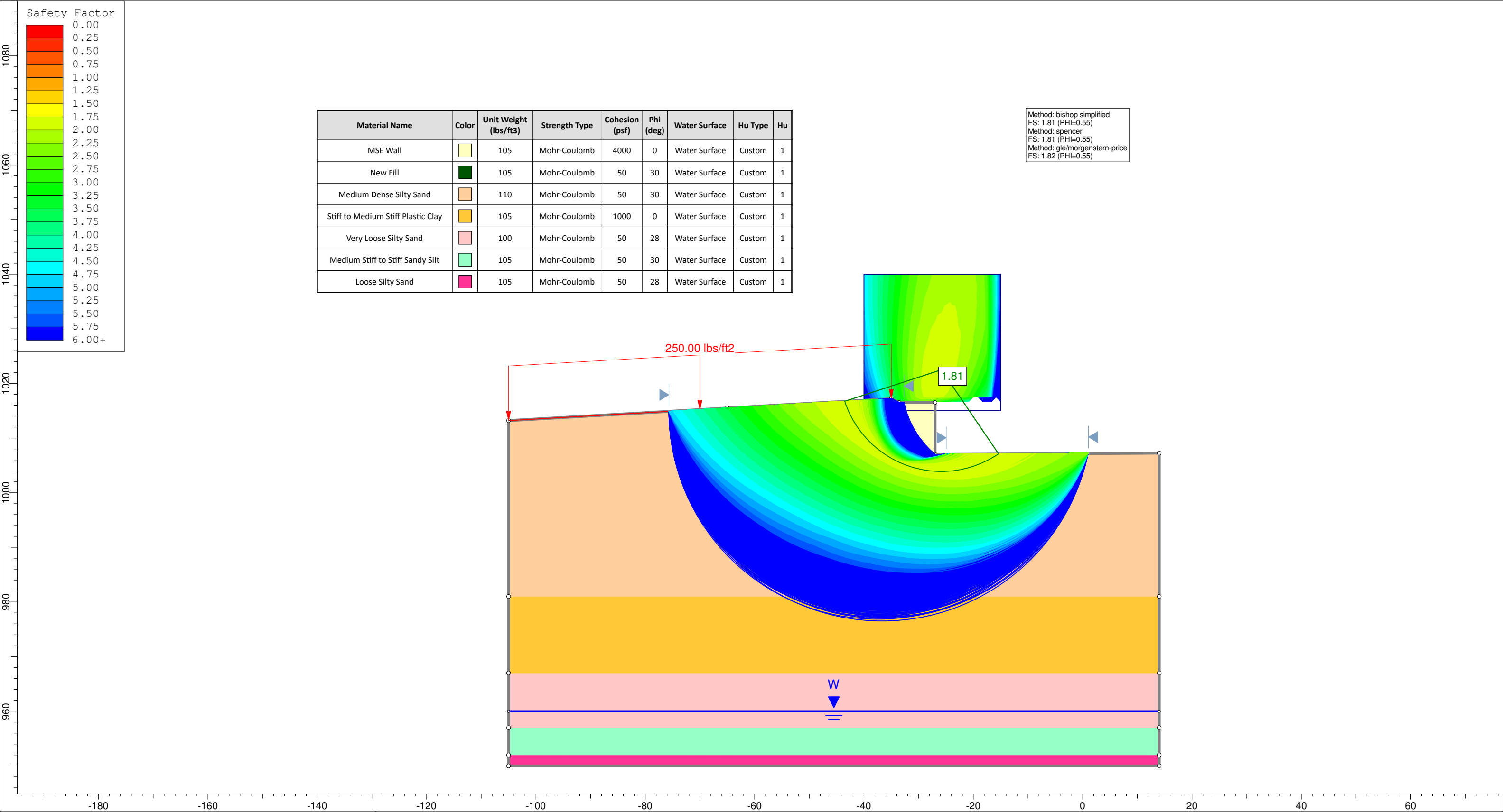


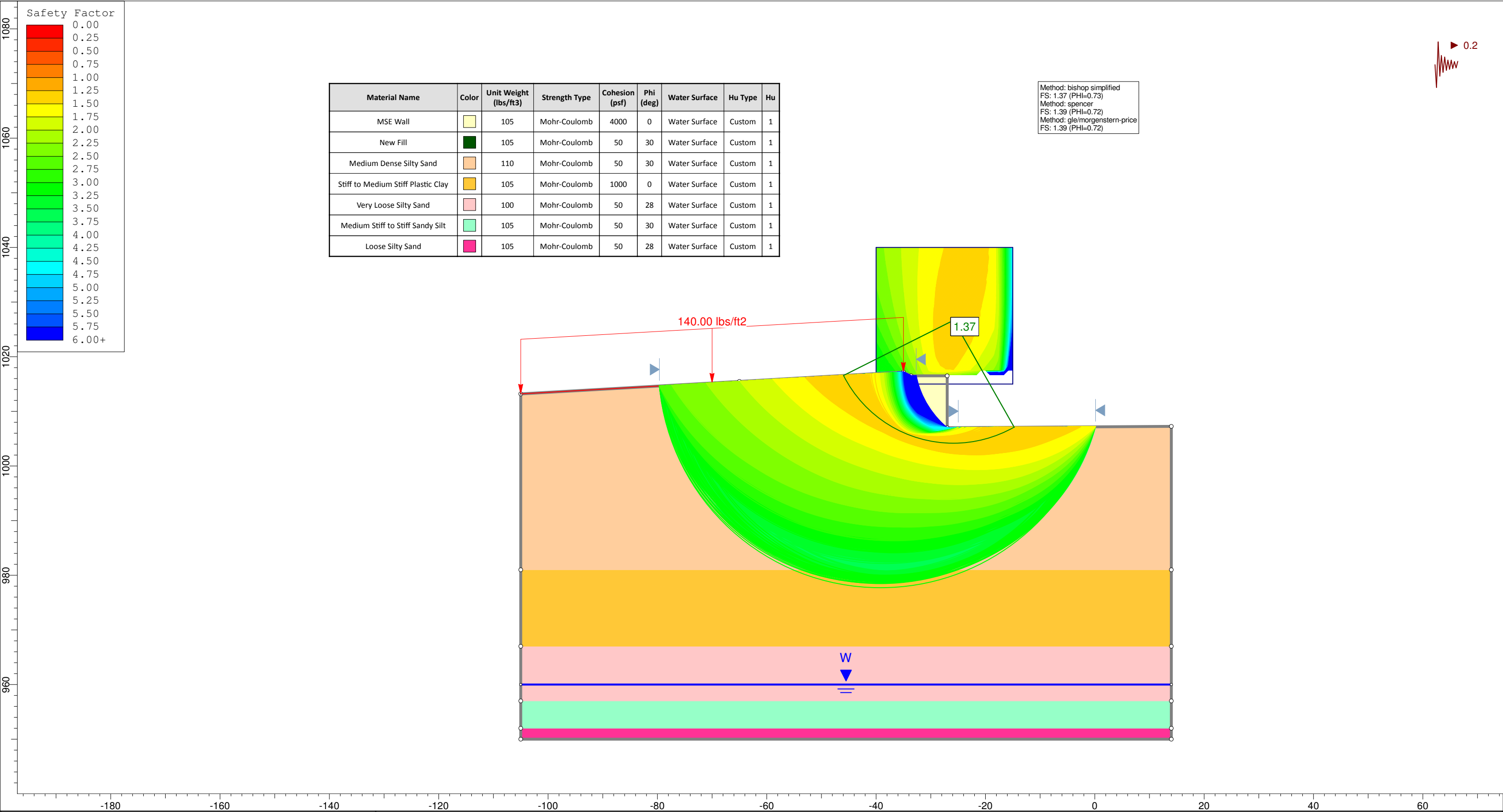


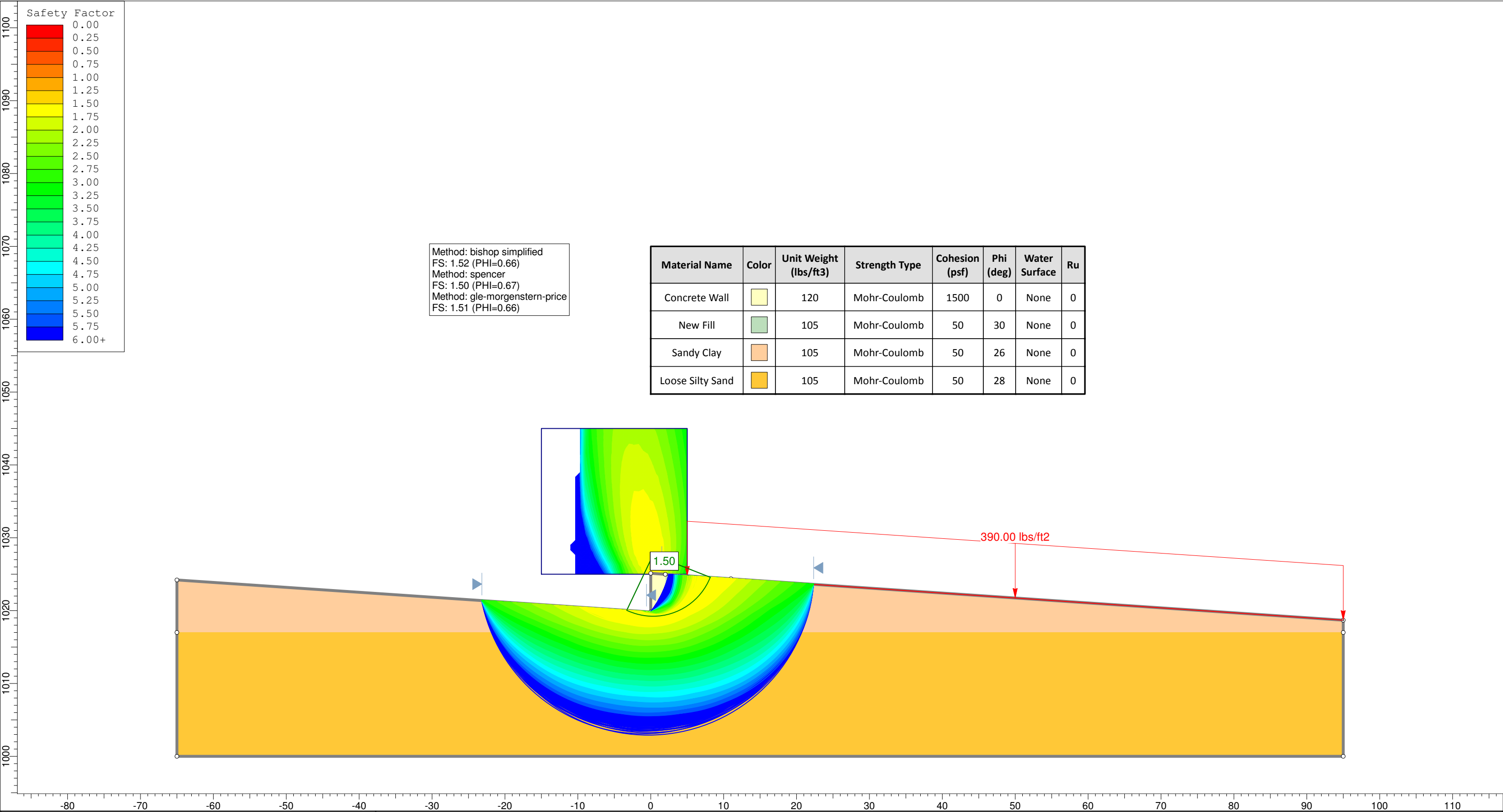


	Project			Wall 2 I-85/385 Interchange Improvements - Project ID: 003811; ECS Project No. 9283		
	Analysis Description			Roadway - I-85 - Station 280+00- Earthquake Analysis Kh=0.2		
	Drawn By		CLB	Scale	1:150	Company
	Date		10/27/2015	File Name		ECS Carolinas LLP
						Roadway - I-85 Sta 281+00 TSA_EQ.slim



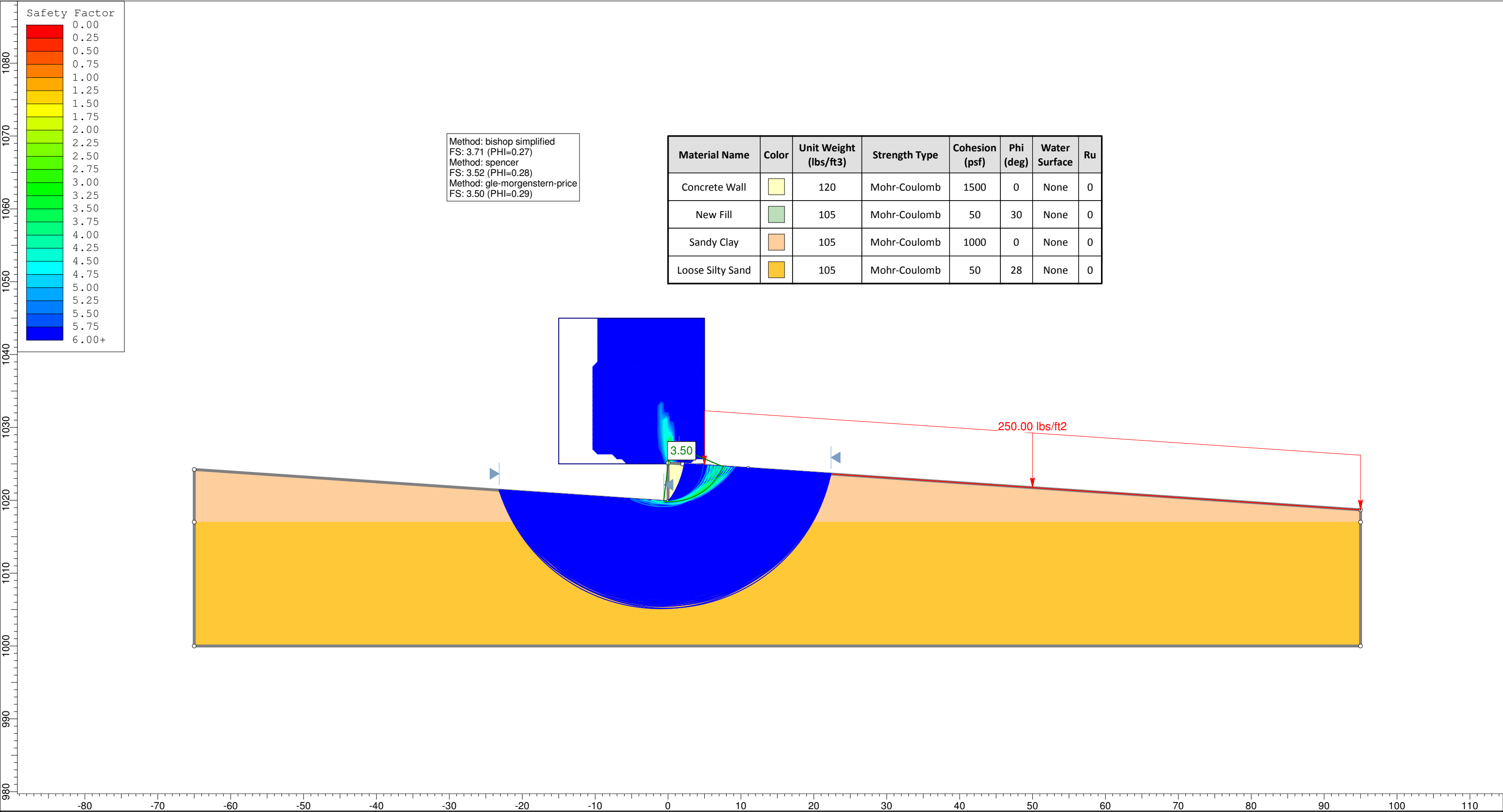






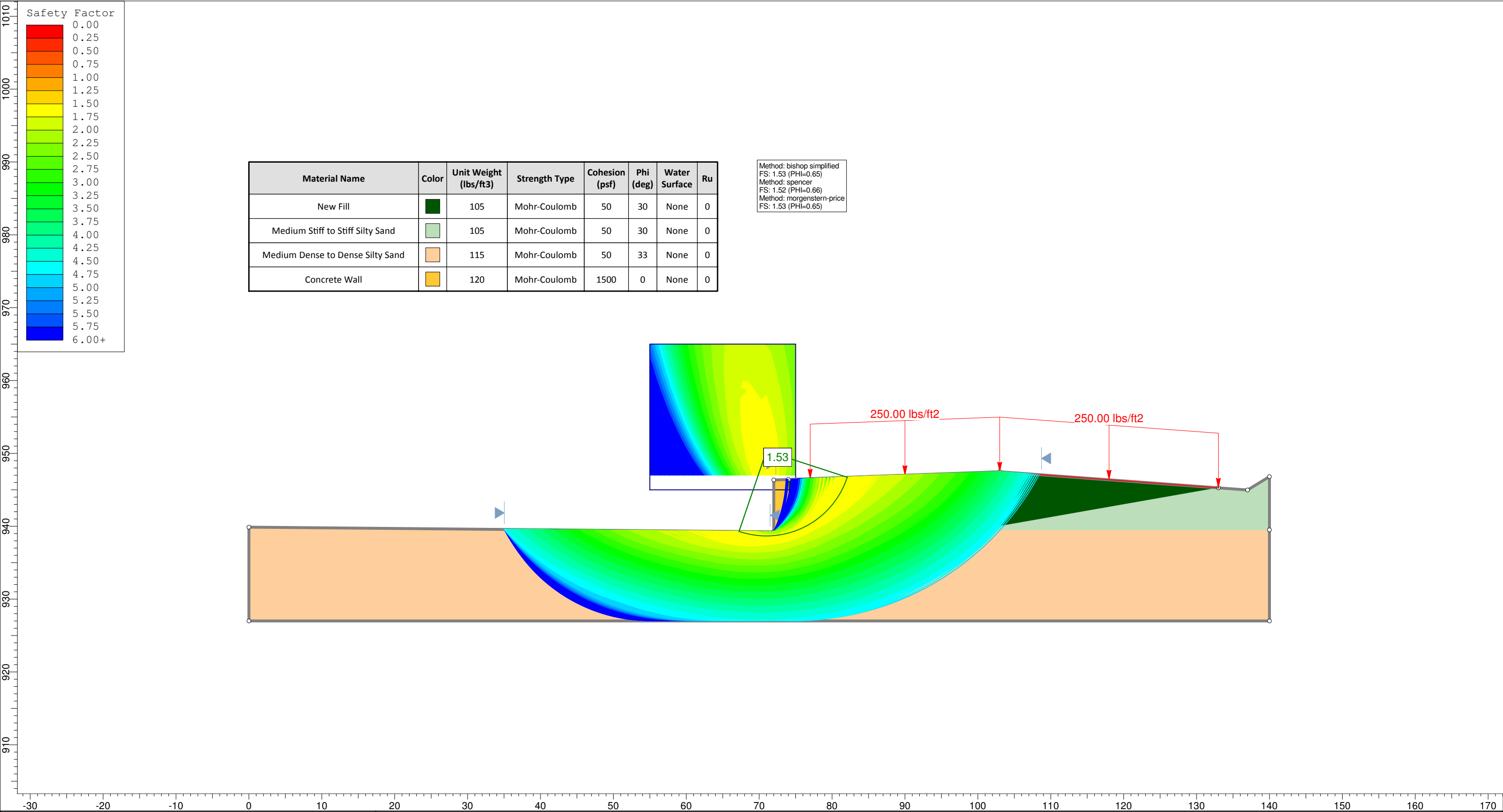
Method: bishop simplified
FS: 1.52 (PHI=0.66)
Method: spencer
FS: 1.50 (PHI=0.67)
Method: gle-morgenstern-price
FS: 1.51 (PHI=0.66)

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Concrete Wall	<div></div>	120	Mohr-Coulomb	1500	0	None	0
New Fill	<div></div>	105	Mohr-Coulomb	50	30	None	0
Sandy Clay	<div></div>	105	Mohr-Coulomb	50	26	None	0
Loose Silty Sand	<div></div>	105	Mohr-Coulomb	50	28	None	0



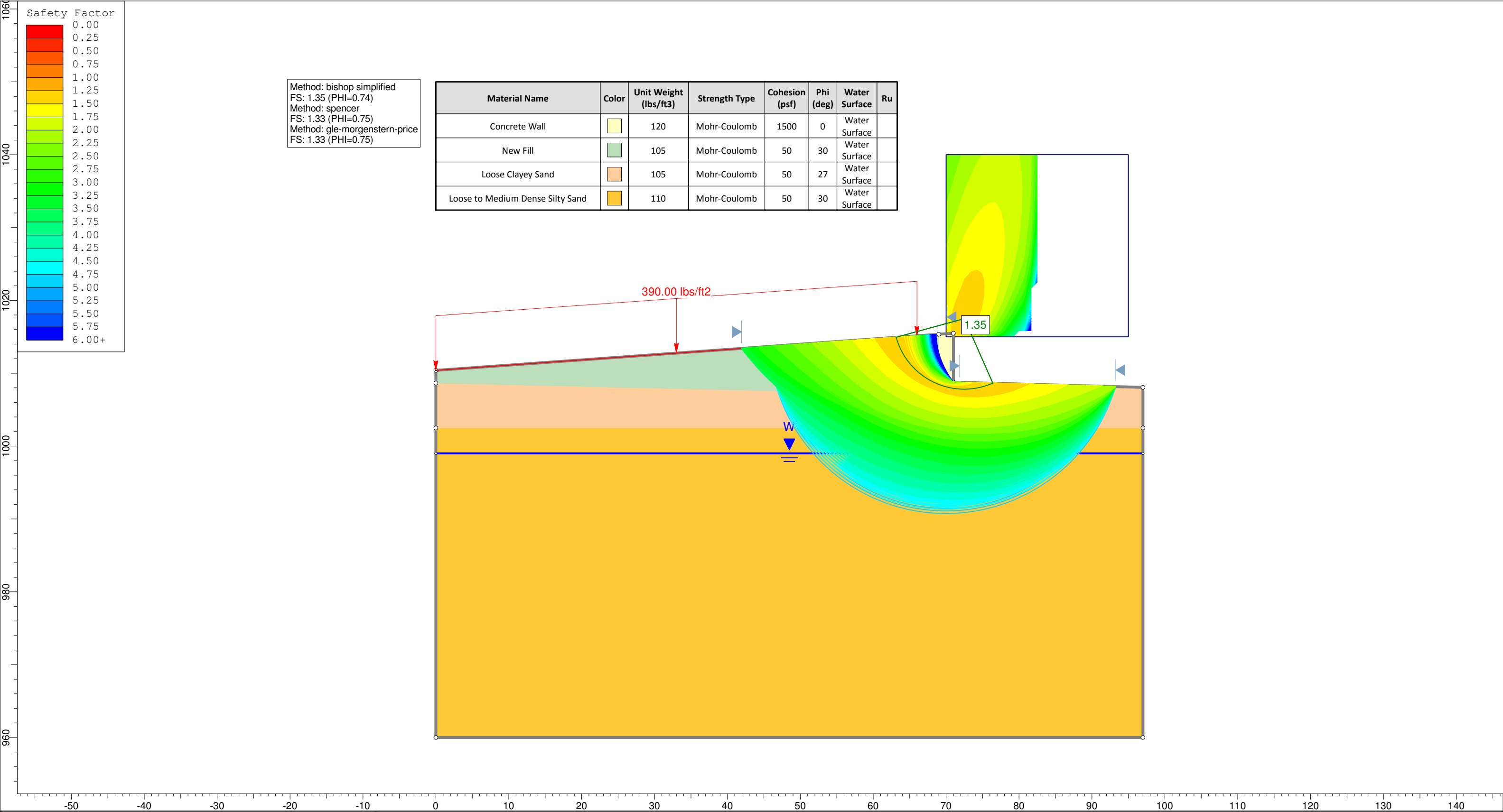
Method: bishop simplified
FS: 3.71 (PHI=0.27)
Method: spencer
FS: 3.52 (PHI=0.28)
Method: gle-morgenstern-price
FS: 3.50 (PHI=0.29)

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Concrete Wall		120	Mohr-Coulomb	1500	0	None	0
New Fill		105	Mohr-Coulomb	50	30	None	0
Sandy Clay		105	Mohr-Coulomb	1000	0	None	0
Loose Silty Sand		105	Mohr-Coulomb	50	28	None	0



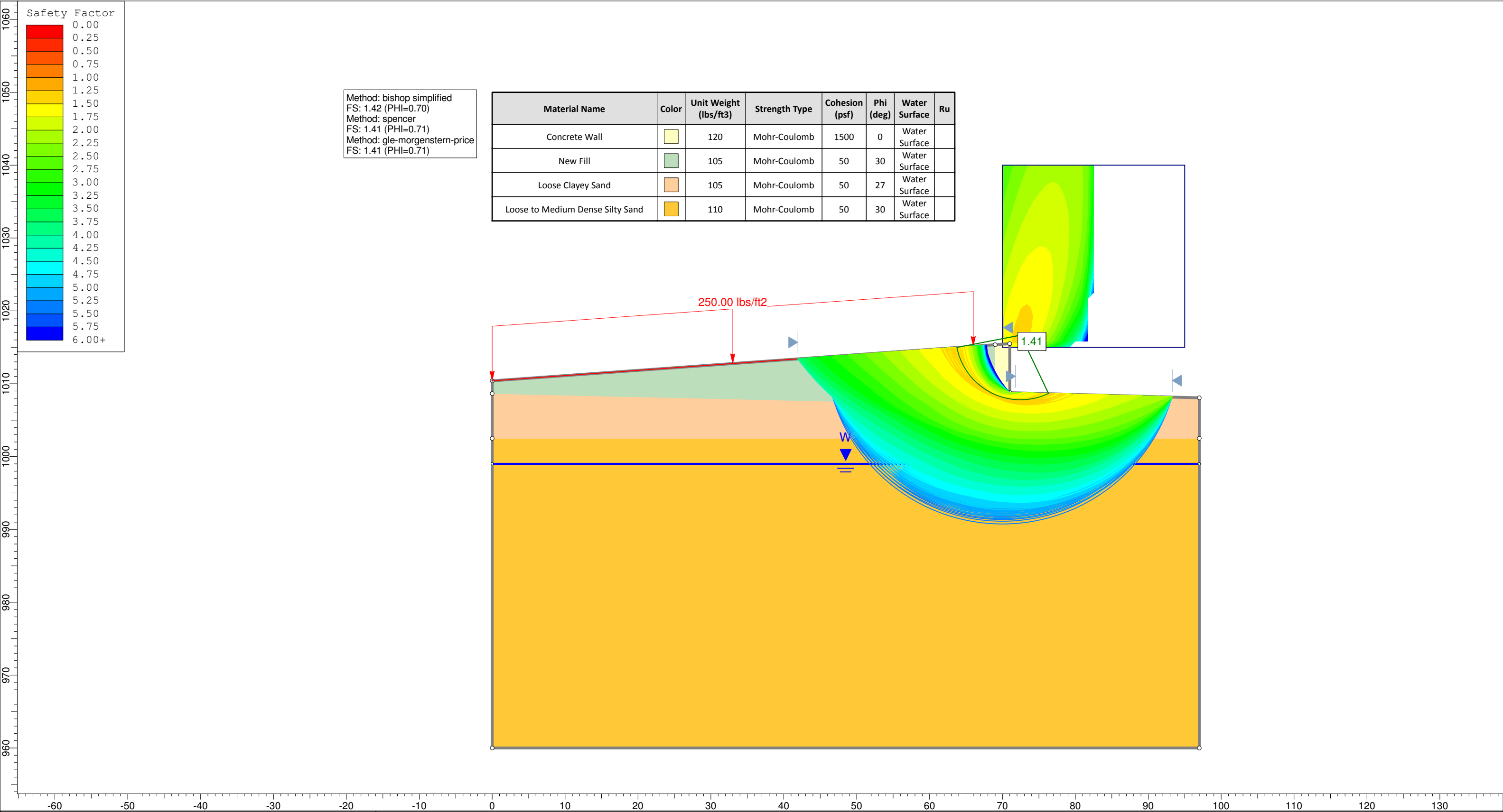
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
New Fill	<div></div>	105	Mohr-Coulomb	50	30	None	0
Medium Stiff to Stiff Silty Sand	<div></div>	105	Mohr-Coulomb	50	30	None	0
Medium Dense to Dense Silty Sand	<div></div>	115	Mohr-Coulomb	50	33	None	0
Concrete Wall	<div></div>	120	Mohr-Coulomb	1500	0	None	0

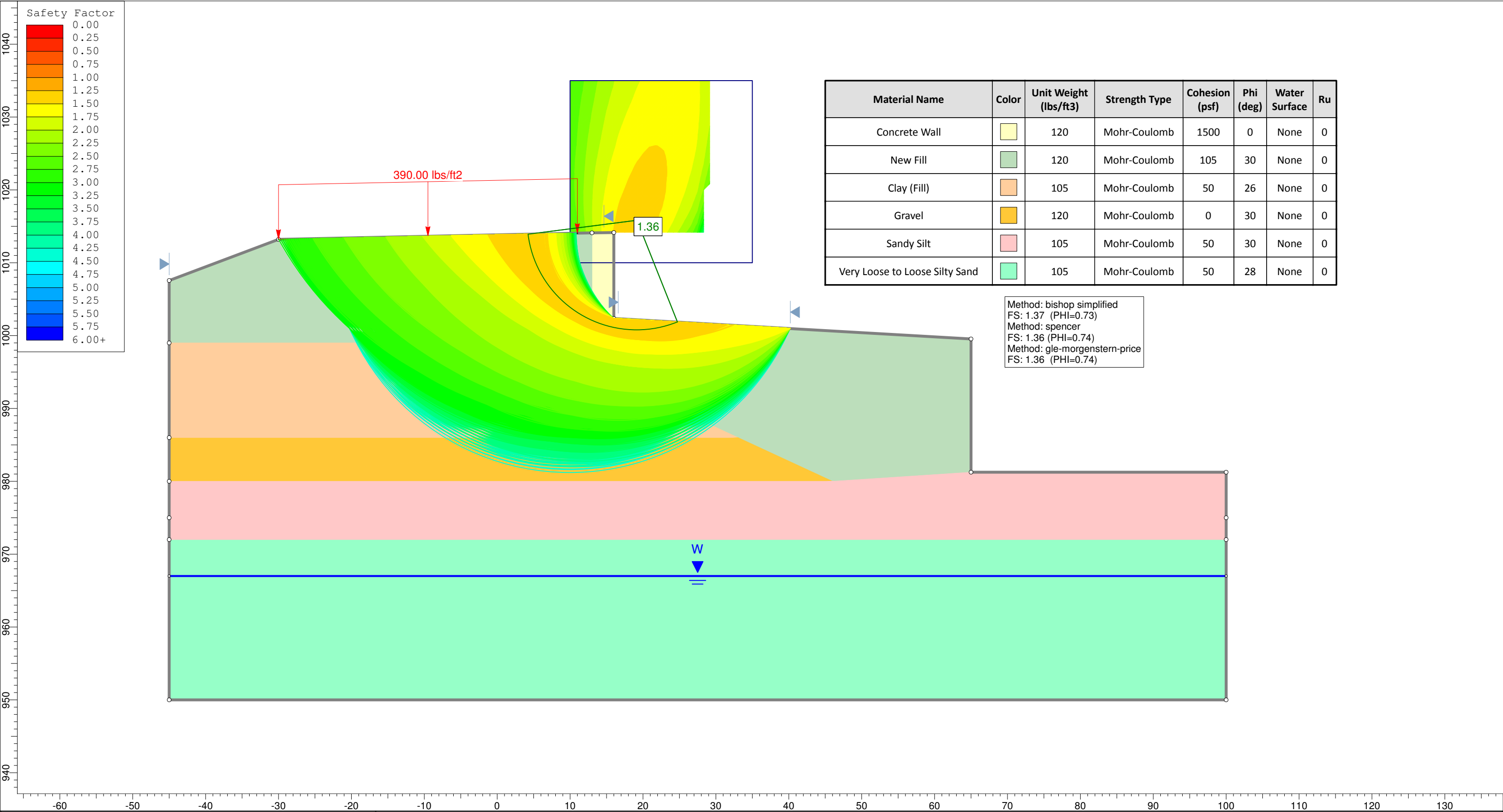
Method: bishop simplified
FS: 1.53 (PHI=0.65)
Method: spencer
FS: 1.52 (PHI=0.66)
Method: morgenstern-price
FS: 1.53 (PHI=0.65)

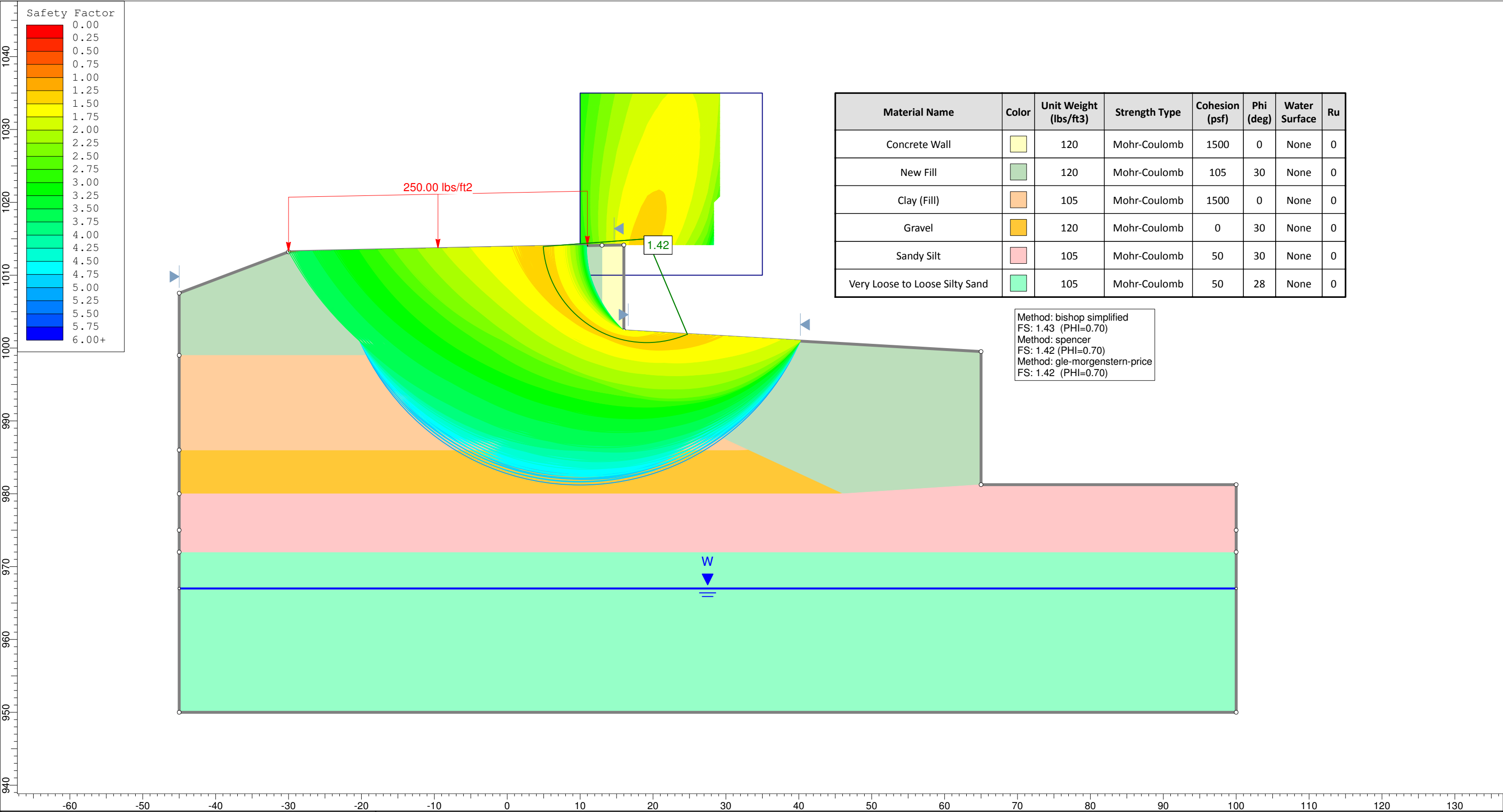


Method: bishop simplified
FS: 1.35 (PHI=0.74)
Method: spencer
FS: 1.33 (PHI=0.75)
Method: gle-morgenstern-price
FS: 1.33 (PHI=0.75)

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Concrete Wall		120	Mohr-Coulomb	1500	0	Water Surface	
New Fill		105	Mohr-Coulomb	50	30	Water Surface	
Loose Clayey Sand		105	Mohr-Coulomb	50	27	Water Surface	
Loose to Medium Dense Silty Sand		110	Mohr-Coulomb	50	30	Water Surface	







Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Concrete Wall		120	Mohr-Coulomb	1500	0	None	0
New Fill		120	Mohr-Coulomb	105	30	None	0
Clay (Fill)		105	Mohr-Coulomb	1500	0	None	0
Gravel		120	Mohr-Coulomb	0	30	None	0
Sandy Silt		105	Mohr-Coulomb	50	30	None	0
Very Loose to Loose Silty Sand		105	Mohr-Coulomb	50	28	None	0

Method: bishop simplified
FS: 1.43 (PHI=0.70)
Method: spencer
FS: 1.42 (PHI=0.70)
Method: gle-morgenstern-price
FS: 1.42 (PHI=0.70)