Design and Access Statement

Dated 12th December 2021

Grid Reference 54.429981, -0.532396

Cliff Stability and Extension (in a Conservation Area and National Park)

Historical Information

The Cliff Stability and extension are described in Document 'Proposed Works Behind Galley Doc01 2021'

Pictures of cliff failure are attached:

'Tree unearthed slipped into Tea Hut'

'Failing Gabions'

The necessity for an extension to the existing Tea Hut is detailed in:

'Proposed Works Behind Galley Doc01 2021' & plan '3029-3a Proposed Plan'

Design principle: The materials and design have been chosen to blend in with the existing structure. The whole area will be replanted upon completion, as detailed in Document 'Replanting Scheme after Stabilisation'

Environmental Impact:

There is no adverse impact and the stabilisation will secure the future stability of the cliff above the Quarterdeck

Access This is by the existing door repositioned, as per drawings.

Report from Design Engineers

I have now completed the slope stability analysis of the existing slope geometry and that of the proposed 3.00m cut from the front of the exiting gabions. This has been accomplished by using LimitState Geo software. I have used the information supplied by the topographical survey to construct the worst case slope geometry for inclusion within the computational analysis.

The ground and groundwater conditions have been derived from published geological data and from the information you have supplied to us. The published geology indicates that the cliff comprises cohesive glacial deposits. The photographs taken during the construction of the existing gabion basket wall shows the exposed almost vertical cut face of the glacial deposits to remain stable and to comprise clay with sand and gravel inclusions. No groundwater is noted in the photographs. Therefore, a very stiff clay with granular inclusions has been adopted for this assessment and design. It is noted that the Quarter Deck has been constructed on imported engineered fill placed at the toe of the original cliff.

The new cut profile accommodates the additional 3.00m that you require for stage at the rear of the existing Tea Hut. I have also designed the proposed slope stability measures to be independent of the Tea Hut structure. This is so that the slope can be stabilised prior to the construction of the new extension.

The newly profiled embankment is modelled at a nominal 10 degrees from the vertical. Steel netting with erosion protection is held in place by a series of 5.00m long and 2.00m long duck bill anchors as shown on the attached sketch section. The netting will also need to be supported by a steel cable secured at the top of the slope and at the toe. It is envisaged that additional steel cables will be required on the slope to contour the netting.

Prior to the construction of the newly profiled slope, vegetation and loose materials will need to be removed. The construction of the newly profiled and secured slope will need to be undertaken in bays and by adopting a 'top down' technique. This is where the netting and anchors are installed, starting at the top and prior to excavating the new slope profile just below it. The steel netting can then be rolled down over the newly profiled ground surface to the next area to be excavated below. This can them be repeated until the netting and anchors have been installed at the base of the slope. Then the next bay can be treated in a similar manner.

It is noted that the existing gabion baskets have been filled with what appears to be 7 newton blocks and faced with sandstone. The sandstone can be retained to provide a facing to the bottom of the slope. The slope will be free draining.

The computational analysis of the proposed new slope has resulted in an adequacy of 117.7 for loads and 1.251 for strengths. These are the factors by which loads will need to be increased to cause failure or for strengths to be decreased to cause failure. Failure is considered to occur at an adequacy of 1 or below.

NYMNPA

13/12/2021

Proposed Works Behind the Galley on The Quarterdeck

Principally, this planning application has been made necessary by the increasing instability of the cliff behind the Galley on the Quarterdeck, but in doing so, provided an opportunity to create much-needed additional storage and preparation space.

Since its original conception in 2019, no one could have forecast the Galley's massive popularity, serving a large variety of quality food and drink close to the beach; so much so, The Galley now plays a vital role in attracting tourism and providing refreshments in the area…… See Trip Advisor's 5* reviews: https://www.tripadvisor.co.uk/Restaurant_Review-g504012-d16929160-Reviews-The_Galley_on_the_Quarterdeck-Robin_Hoods_Bay_North_York_Moors_National_Park_Nor.html

The extension to the rear of the Galley will enable us to provide more local employment, all of whom presently live locally and walk to work.

This is an incredibly expensive stabilisation project, but necessary to ensure the future of The Galley on the Quarterdeck; ultimately improving, protecting and stabilising this much visited part of Robin Hoods Bay and all private funded.

The steps onto the Quarterdeck, from Covet Hill, have always been busy; we have a digital counter across them, which clocked an incredible 4,200 people on the single busiest day this year.

 The movement of the cliff has been accelerated by excessive rainfall over the past 2 years and this is not an isolated case. Boggle Hole experienced similar problems, where the land to the North of their main building totally collapsed, causing them to close for several months. The same designers and remedial engineers have been employed to produce a scheme to rectify and stabilise the land above the Quarterdeck.

When the Quarterdeck was first built, in the 1950's, the clay was simply graded back. However, movement must have occurred, up to the year 2000 and a scheme of land drains were installed (See Drawing 'Quarterdeck Land Drainage062') Precipitation and drainage were key design points for a

successful scheme, preventing future movement of the cliff. Unfortunately, the land drains have become increasing ineffective and the clay has become waterlogged, resulting in movement of the slippery clay, which in turn sheared the land drains.

We will, no doubt expose, the original land drains and attempt to de-silt and reconnect, where they have sheared. The surface water from the Tea Hut and proposed extension will also be connected to them; this will help prevent future silting by maintaining a flow of clean rainwater.

In 2019 the Gabions were designed and built in front of, what was at that time, fairly solid clay and shale rock partials, see picture 'Fully self supporting clay behind gabions 2019' ; unfortunately, due to the unprecedented rainfall, the weight of the clay has pushed the gabions so far forward they are becoming unstable and about to touch the back of the tea hut.

In June of 2021 a contractor was employed to move some of the excessive and uneven weight of clay to the left side, making the angle of the slope more uniform. This was reasonably successful, but the gabions continued to move and tilt further forwards.

The engineers propose a scheme of stainless-steel netting, starting immediately below the existing cliff path and work down. They are held in position by a huge quantity of 5m long stainless-steel duck bill anchor plates, pushed into the slope, reduced to 2m long at Quarterdeck ground level. The retaining stainless steel mesh, which is clamped to them, will finish at Quarterdeck level; this is where the new storage and prep area will fit neatly behind the existing tea hut. The roof will continue its popular wave design, to cover over the new extension and the existing stone filled Gabions will be reinstalled to form a cosmetic front face

Replanting Scheme after Stabilisation

Advice was sought on how to reinstate the foliage after work is completed. The designing engineer responded to my enquiries below. However, we can encourage quicker growth by spreading native seeds over the area and planting shrubs like Sea Buckthorn around the edges of the retaining mesh. The consensus of opinion is, tall trees on an exposed coast, make stabilisation worse, when high winds rock the roots; high density low shrubs, with a vigorous rooting system retains the surface much better.

Using trees and plants is an effective way of reducing the effects of surface water erosion and weathering (solifluction). However, in this instance, we are using a combination of soil nails to reduce deep seated circular and shallow translational failure mechanisms along with active steel netting in combination with erosion protective matting. The steel netting will actively support the soils within the slope as the slope angle (from the horizontal) is steeper than the effective angle of internal friction of the insitu glacial soils in the slope. The erosion protection matting will sit below the active steel netting and provide some protection against surface water run-off and weathering.

Over time, soil particles will get entrapped within the erosion protection matting and will naturally seed up with native grasses and plants. This will then 'green up' over time. If it is proposed to plant trees and shrubs onto the stabilised slope, this will require holes to be cut through the active steel netting for them to be planted and for them to grow. This will degrade the effectiveness of the active steel netting and its ability to stabilise the slope. The soils nails, steel netting and erosion protection matting will provide similar stability, if not more, to that provided by the root system of trees and shrubs. However, until any planted trees and shrubs have established a significant root system within the slope, its stability will be compromised unless soil nails, steel netting and erosion protection matting has been installed.

Flowering creeping plants can be planted at the base of the stabilised slope which will then become entwined in the steel netting etc and, over time, provide a pleasing cover to the slope. It will also discourage the public from climbing the slope. very good at gardening and plant types but my colleagues who are, suggest plants such as an evergreen ivy or clematis.

Alan Wood & Partners

This report was generated by LimitState:GEO3.5.g.24265 - limitstate.com

About this Report

This report has been generated using LimitState:GEO, a software application capable of directly identifying the critical collapse mechanism for a wide variety of geotechnical stability problems, including those involving slopes, retaining walls, footings etc.

The software utilizes the Discontinuity Layout Optimization (DLO) procedure to obtain a solution (Smith and Gilbert 2007). The main steps involved are: (i) distribution of nodes across the problem domain; (ii) connection of every node to every other node with potential discontinuities (e.g. slip-lines); (iii) application of rigorous optimization techniques to identify the critical subset of potential discontinuities, and hence also the critical failure mechanism and margin of safety.

The accuracy of the DLO solution is controlled by the specified nodal density. Within the set of all possible discontinuities linking pairs of nodes, all potential translational failure mechanisms are considered, whether anticipated or not by the engineer. Failure mechanisms involving rotations along the edges of solid bodies in the problem can also be identified. Thus in this case the solution identified by the DLO procedure is guaranteed to be the most critical solution for the problem posed. This means that there is no need to prescribe any aspect of the collapse mechanism prior to an analysis, or to separately consider different failure modes. The critical mechanism and collapse load factor are determined according to the well established upper bound theorem of plasticity.

LimitState:GEO reports the solution to a problem both visually as a collapse mechanism and numerically in terms of an Adequacy Factor, which is defined as the factor by which specified loads must be increased, or material strengths decreased, in order for the system under consideration to reach a collapse state.

REFERENCE

Smith, C.C. and Gilbert, M. (2007) Application of discontinuity layout optimization to plane plasticity problems, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 463, 2086, pp 2461-2484.

Summary

Name	Date of Analysis	Name of Engineer	Organization
The Tea Hut	Mon Nov 29 2021	Andy Borthwick	Alan Wood & Partners

Reference #	Location	Map Reference	Tags
SG02487	Robin Hoods Bay		

| Comments |
|---|
| Proposed slope geotmetry. Ground and groundwater conditions assumed from published data and from the information supplied by the client. 5.00m and 2.00m duckbill anchors with steel netting and erosion protection. |

Target Nodal Density	Nodal Spacing Scale Factor	Water	Model Translational Failures?	Model Rotational Failures?	Seismic Accelerations: Horiz. / Vert. (g)
Medium (500 nodes)	0.89051	Enabled	True	Along edges	None

Scenario	Partial Factor Set	Short / Long Term?**	Analysis Type	Adequacy Factor
1	User	Long Term	Factor Load(s)	260.3
2*	**EC7 DA1/2**	**Long Term**	**Factor Load(s)**	**117.7**

*This report provides details of this scenario, which has been identified as the most critical. **For Mohr Coulomb materials with Drainage Behaviour specified as 'drained/undrained', undrained properties are used in a short term analysis, and drained properties are used in a long term analysis.

Failure Mechanism (Scenario 2)
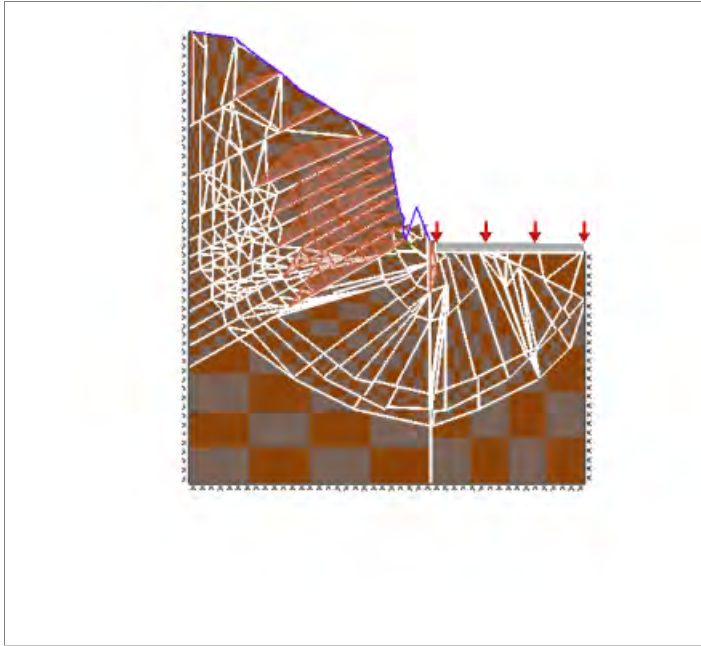
Geometry
(all distances in m)

All Geometrical Objects

No. of Vertices (V)	No. of Boundaries (B)	No. of Solids (S)
137	152	16

Boundary Objects

ID	Start Vertex ID (x, y)	End Vertex ID (x, y)	Baseline Nodal Spacing	Support Type	Material(s)
B1	V1 (0, 15)	V132 (9, 15)	0.5	Fixed	-
B2	V2 (15, 15)	V49 (15, 22)	0.5	Fixed	-
B13	V13 (7.4, 28)	V86 (7.3, 28)	0.5	Free	- geogrid -
B14	V14 (6.4, 28)	V1520 (6, 28)	0.5	Free	- geogrid -
B15	V15 (5.6, 29)	V820 (5.1, 29)	0.5	Free	- geogrid -
B16	V16 (4.6, 29)	V1521 (4.3, 29)	0.5	Free	- geogrid -
B17	V17 (4.1, 29)	V1522 (3.7, 30)	0.5	Free	- geogrid -
B18	V18 (3.3, 30)	V1523 (3, 30)	0.5	Free	- geogrid -
B19	V19 (2.6, 31)	V20 (2.3, 31)	0.5	Free	- geogrid -
B20	V20 (2.3, 31)	V21 (1.9, 31)	0.5	Free	- geogrid -
					-

B21	V21 (1.9, 31)	V22 (1.7, 31)	0.5	Free	

					- geogrid -
B22	V22 (1.7, 31)	V23 (1.5, 31)	0.5	Free	geogrid -
B23	V23 (1.5, 31)	V24 (1.4, 32)	0.5	Free	- geogrid -
B24	V24 (1.4, 32)	V1525 (0.98, 32)	0.5	Free	geogrid -
B25	V1 (0, 15)	V124 (0, 19)	0.5	Fixed	-
B52	V42 (11, 23)	V48 (12, 23)	0.5	Free	-
B53	V48 (12, 23)	V49 (15, 22)	0.5	Free	-
B55	V49 (15, 22)	V1220 (15, 24)	0.5	Fixed	-
B63	V54 (8, 24)	V635 (7.9, 24)	0.5	Free	- geogrid -
B65	V54 (8, 24)	V1526 (8.5, 24)	0.5	Free	- geogrid -
B67	V55 (9, 24)	V1224 (9.2, 24)	0.5	Free	-
B68	V56 (0.028, 32)	V25 (0, 32)	0.5	Free	-
B98	V86 (7.3, 28)	V117 (7, 28)	0.5	Free	- geogrid -
B128	V116 (7.5, 27)	V1527 (7.4, 27)	0.5	Free	- geogrid -
B129	V117 (7, 28)	V1528 (6.7, 28)	0.5	Free	- geogrid -
B130	V118 (7.6, 26)	V699 (7.6, 26)	0.5	Free	- geogrid -
B131	V119 (7.8, 25)	V508 (7.7, 26)	0.5	Free	- geogrid -
B132	V120 (0, 25)	V823 (0, 26)	0.5	Fixed	-
B133	V121 (0, 23)	V572 (0, 24)	0.5	Fixed	-
B134	V122 (0, 22)	V700 (0, 23)	0.5	Fixed	-
B135	V123 (0, 21)	V509 (0, 21)	0.5	Fixed	-
B136	V124 (0, 19)	V636 (0, 20)	0.5	Fixed	-
B137	V120 (0, 25)	V891 (2.4, 26)	0.5	Free	-
B138	V121 (0, 23)	V892 (3.1, 25)	0.5	Free	-
B139	V118 (7.6, 26)	V1536 (7.2, 26)	0.5	Free	- Soil Nail (Rigid) -
B140	V123 (0, 21)	V894 (3.5, 23)	0.5	Free	-
B141	V124 (0, 19)	V895 (3.7, 21)	0.5	Free	-
B148	V132 (9, 15)	V2 (15, 15)	0.5	Fixed	-
B149	V55 (9, 24)	V1539 (9, 23)	0.5	Free	- Soil Nail (Rigid) -
B525	V508 (7.7, 26)	V118 (7.6, 26)	0.5	Free	- geogrid -
B526	V509 (0, 21)	V122 (0, 22)	0.5	Fixed	-
B527	V509 (0, 21)	V972 (5.9, 25)	0.5	Free	-
B590	V572 (0, 24)	V120 (0, 25)	0.5	Fixed	-
B591	V572 (0, 24)	V973 (5.6, 27)	0.5	Free	-
B654	V635 (7.9, 24)	V1540 (7.9, 25)	0.5	Free	- geogrid -
B655	V636 (0, 20)	V123 (0, 21)	0.5	Fixed	-
B656	V636 (0, 20)	V974 (6.2, 23)	0.5	Free	-
					-

					geogrid
					-
B720	V700 (0, 23)	V121 (0, 23)	0.5	Fixed	-
B721	V700 (0, 23)	V971 (5.7, 26)	0.5	Free	-
B841	V820 (5.1, 29)	V1541 (4.9, 29)	0.5	Free	- geogrid
B843	V821 (0, 28)	V25 (0, 32)	0.5	Fixed	-
B844	V823 (0, 26)	V821 (0, 28)	0.5	Fixed	-
B845	V823 (0, 26)	V975 (3.3, 28)	0.5	Free	-
B846	V821 (0, 28)	V1216 (0.098, 28)	0.5	Free	-
B915	V891 (2.4, 26)	V1549 (2.9, 26)	0.5	Free	- Soil Nail (Rigid)
B916	V892 (3.1, 25)	V1557 (3.5, 25)	0.5	Free	- Soil Nail (Rigid)
B917	V893 (3.2, 24)	V122 (0, 22)	0.5	Free	-
B918	V894 (3.5, 23)	V1565 (4, 23)	0.5	Free	- Soil Nail (Rigid)
B919	V895 (3.7, 21)	V1573 (4.2, 22)	0.5	Free	- Soil Nail (Rigid)
B995	V971 (5.7, 26)	V1576 (6.2, 26)	0.5	Free	- Soil Nail (Rigid)
B996	V972 (5.9, 25)	V1579 (6.4, 25)	0.5	Free	- Soil Nail (Rigid)
B997	V973 (5.6, 27)	V1582 (6, 27)	0.5	Free	- Soil Nail (Rigid)
B998	V974 (6.2, 23)	V1585 (6.6, 24)	0.5	Free	- Soil Nail (Rigid)
B999	V975 (3.3, 28)	V1588 (3.8, 28)	0.5	Free	- Soil Nail (Rigid)
B1000	V976 (1.6, 29)	V1591 (2, 29)	0.5	Free	- Soil Nail (Rigid)
B1239	V1216 (0.098, 28)	V976 (1.6, 29)	0.5	Free	-
B1240	V1217 (0.098, 32)	V1594 (0.098, 31)	0.5	Free	- Soil Nail (Rigid)
B1241	V1217 (0.098, 32)	V56 (0.028, 32)	0.5	Free	- geogrid
B1242	V1218 (0.098, 30)	V1216 (0.098, 28)	0.5	Free	-
B1245	V1220 (15, 24)	V1223 (11, 24)	0.5	Free	-
B1248	V1223 (11, 24)	V42 (11, 23)	0.5	Free	-
B1249	V1223 (11, 24)	V1222 (9.2, 24)	0.5	Free	-
B1250	V1220 (15, 24)	V35 (15, 24)	0.5	Free	-
B1251*	V1224 (9.2, 24)	V35 (15, 24)	0.5	Free	-
B1252	V1224 (9.2, 24)	V1222 (9.2, 24)	0.5	Free	-
B1322	V1294 (9, 22)	V132 (9, 15)	0.5	Free	-
B1548	V1520 (6, 28)	V15 (5.6, 29)	0.5	Free	- geogrid
B1549	V1521 (4.3, 29)	V17 (4.1, 29)	0.5	Free	- geogrid
B1550	V1522 (3.7, 30)	V18 (3.3, 30)	0.5	Free	- geogrid
					- geogrid

B1551	V1523 (3, 30)	V19 (2.6, 31)	0.5	Free	

					-
B1552	V1524 (0.54, 32)	V1217 (0.098, 32)	0.5	Free	- geogrid
B1553	V1525 (0.98, 32)	V1524 (0.54, 32)	0.5	Free	- geogrid
B1554	V1526 (8.5, 24)	V55 (9, 24)	0.5	Free	- geogrid
B1555	V1527 (7.4, 27)	V13 (7.4, 28)	0.5	Free	- geogrid
B1556	V1528 (6.7, 28)	V14 (6.4, 28)	0.5	Free	- geogrid
B1557	V1529 (3.7, 24)	V893 (3.2, 24)	0.5	Free	- Soil Nail (Rigid)
B1558	V1530 (4.2, 24)	V1529 (3.7, 24)	0.5	Free	- Soil Nail (Rigid)
B1559	V1531 (4.7, 24)	V1530 (4.2, 24)	0.5	Free	- Soil Nail (Rigid)
B1560	V1532 (5.2, 25)	V1531 (4.7, 24)	0.5	Free	- Soil Nail (Rigid)
B1561	V1533 (5.7, 25)	V1532 (5.2, 25)	0.5	Free	- Soil Nail (Rigid)
B1562	V1534 (6.2, 25)	V1533 (5.7, 25)	0.5	Free	- Soil Nail (Rigid)
B1563	V1535 (6.7, 25)	V1534 (6.2, 25)	0.5	Free	- Soil Nail (Rigid)
B1564	V1536 (7.2, 26)	V1535 (6.7, 25)	0.5	Free	- Soil Nail (Rigid)
B1565	V1537 (9, 22)	V1294 (9, 22)	0.5	Free	- Soil Nail (Rigid)
B1566	V1538 (9, 23)	V1537 (9, 22)	0.5	Free	- Soil Nail (Rigid)
B1567	V1539 (9, 23)	V1538 (9, 23)	0.5	Free	- Soil Nail (Rigid)
B1568	V1540 (7.9, 25)	V119 (7.8, 25)	0.5	Free	- geogrid
B1569	V1541 (4.9, 29)	V16 (4.6, 29)	0.5	Free	- geogrid
B1570	V1542 (6.4, 28)	V117 (7, 28)	0.5	Free	- Soil Nail (Rigid)
B1571	V1543 (5.9, 27)	V1542 (6.4, 28)	0.5	Free	- Soil Nail (Rigid)
B1572	V1544 (5.4, 27)	V1543 (5.9, 27)	0.5	Free	- Soil Nail (Rigid)
B1573	V1545 (4.9, 27)	V1544 (5.4, 27)	0.5	Free	- Soil Nail (Rigid)
					- Soil Nail (Rigid)

| B1574 | V1546 (4.4, 27) | V1545 (4.9, 27) | 0.5 | Free | |

					-
B1575	V1547 (3.9, 27)	V1546 (4.4, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1576	V1548 (3.4, 26)	V1547 (3.9, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1577	V1549 (2.9, 26)	V1548 (3.4, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1578	V1550 (7, 27)	V116 (7.5, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1579	V1551 (6.5, 27)	V1550 (7, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1580	V1552 (6, 26)	V1551 (6.5, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1581	V1553 (5.5, 26)	V1552 (6, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1582	V1554 (5, 26)	V1553 (5.5, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1583	V1555 (4.5, 26)	V1554 (5, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1584	V1556 (4, 25)	V1555 (4.5, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1585	V1557 (3.5, 25)	V1556 (4, 25)	0.5	Free	Soil Nail (Rigid)
					-
B1586	V1558 (7.3, 25)	V119 (7.8, 25)	0.5	Free	Soil Nail (Rigid)
					-
B1587	V1559 (6.9, 24)	V1558 (7.3, 25)	0.5	Free	Soil Nail (Rigid)
					-
B1588	V1560 (6.4, 24)	V1559 (6.9, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1589	V1561 (5.9, 24)	V1560 (6.4, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1590	V1562 (5.4, 24)	V1561 (5.9, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1591	V1563 (4.9, 23)	V1562 (5.4, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1592	V1564 (4.4, 23)	V1563 (4.9, 23)	0.5	Free	Soil Nail (Rigid)
					-
B1593	V1565 (4, 23)	V1564 (4.4, 23)	0.5	Free	Soil Nail (Rigid)
					-
B1594	V1566 (7.5, 24)	V54 (8, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1595	V1567 (7.1, 23)	V1566 (7.5, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1596	V1568 (6.6, 23)	V1567 (7.1, 23)	0.5	Free	Soil Nail (Rigid)
					-
					Soil Nail (Rigid)

| B1597 | V1569 (6.1, 23) | V1568 (6.6, 23) | 0.5 | Free | |

					-
B1598	V1570 (5.6, 23)	V1569 (6.1, 23)	0.5	Free	Soil Nail (Rigid)
					-
B1599	V1571 (5.2, 22)	V1570 (5.6, 23)	0.5	Free	Soil Nail (Rigid)
					-
B1600	V1572 (4.7, 22)	V1571 (5.2, 22)	0.5	Free	Soil Nail (Rigid)
					-
B1601	V1573 (4.2, 22)	V1572 (4.7, 22)	0.5	Free	Soil Nail (Rigid)
					-
B1602	V1574 (7.1, 26)	V699 (7.6, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1603	V1575 (6.6, 26)	V1574 (7.1, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1604	V1576 (6.2, 26)	V1575 (6.6, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1605	V1577 (7.3, 25)	V508 (7.7, 26)	0.5	Free	Soil Nail (Rigid)
					-
B1606	V1578 (6.8, 25)	V1577 (7.3, 25)	0.5	Free	Soil Nail (Rigid)
					-
B1607	V1579 (6.4, 25)	V1578 (6.8, 25)	0.5	Free	Soil Nail (Rigid)
					-
B1608	V1580 (6.9, 27)	V13 (7.4, 28)	0.5	Free	Soil Nail (Rigid)
					-
B1609	V1581 (6.5, 27)	V1580 (6.9, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1610	V1582 (6, 27)	V1581 (6.5, 27)	0.5	Free	Soil Nail (Rigid)
					-
B1611	V1583 (7.5, 24)	V635 (7.9, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1612	V1584 (7.1, 24)	V1583 (7.5, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1613	V1585 (6.6, 24)	V1584 (7.1, 24)	0.5	Free	Soil Nail (Rigid)
					-
B1614	V1586 (4.7, 29)	V820 (5.1, 29)	0.5	Free	Soil Nail (Rigid)
					-
B1615	V1587 (4.2, 28)	V1586 (4.7, 29)	0.5	Free	Soil Nail (Rigid)
					-
B1616	V1588 (3.8, 28)	V1587 (4.2, 28)	0.5	Free	Soil Nail (Rigid)
					-
B1617	V1589 (2.9, 30)	V18 (3.3, 30)	0.5	Free	Soil Nail (Rigid)
					-
B1618	V1590 (2.5, 30)	V1589 (2.9, 30)	0.5	Free	Soil Nail (Rigid)
					-
B1619	V1591 (2, 29)	V1590 (2.5, 30)	0.5	Free	Soil Nail (Rigid)
					-
					Soil Nail (Rigid)

B1620	V1592 (0.098, 30)	V1218 (0.098, 30)	0.5	Free

					-
					-
B1621	V1593 (0.098, 31)	V1592 (0.098, 30)	0.5	Free	Soil Nail (Rigid)
					-
					-
B1622	V1594 (0.098, 31)	V1593 (0.098, 31)	0.5	Free	Soil Nail (Rigid)
					-

Loaded boundary.

Solid Objects

ID	Vertex IDs (x, y)	Boundary IDs	Baseline Nodal Spacing (x / y)	Material(s)/Water Regime(s)
S73*	V132 (9,15) V1 (0,15) V124 (0,19) V895 (3.7,21) V1573 (4.2,22) V1572 (4.7,22) V1571 (5.2,22) V1570 (5.6,23) V1569 (6.1,23) V1568 (6.6,23) V1567 (7.1,23) V1566 (7.5,24) V54 (8,24) V1526 (8.5,24) V55 (9,24) V1539 (9,23) V1538 (9,23) V1537 (9,22) V1294 (9,22)	B1 B25 B141 B919 B1601 B1600 B1599 B1598 B1597 B1596 B1595 B1594 B65 B1554 B149 B1567 B1566 B1565 B1322	1 / 1	Very Stiff Clay Dense sand modified
S74*	V509 (0,21) V122 (0,22) V893 (3.2,24) V1529 (3.7,24) V1530 (4.2,24) V1531 (4.7,24) V1532 (5.2,25) V1533 (5.7,25) V1534 (6.2,25) V1535 (6.7,25) V1536 (7.2,26) V118 (7.6,26) V508 (7.7,26) V1577 (7.3,25) V1578 (6.8,25) V1579 (6.4,25) V972 (5.9,25)	B526 B917 B1557 B1558 B1559 B1560 B1561 B1562 B1563 B1564 B139 B525 B1605 B1606 B1607 B996 B527	1 / 1	Very Stiff Clay Dense sand modified
S75*	V508 (7.7,26) V119 (7.8,25) V1558 (7.3,25) V1559 (6.9,24) V1560 (6.4,24) V1561 (5.9,24) V1562 (5.4,24) V1563 (4.9,23) V1564 (4.4,23) V1565 (4,23) V894 (3.5,23) V123 (0,21) V509 (0,21) V972 (5.9,25) V1579 (6.4,25) V1578 (6.8,25) V1577 (7.3,25)	B131 B1586 B1587 B1588 B1589 B1590 B1591 B1592 B1593 B918 B140 B135 B527 B996 B1607 B1606 B1605	1 / 1	Very Stiff Clay Dense sand modified
	V572 (0,24) V120 (0,25) V891 (2.4,26) V1549 (2.9,26) V1548 (3.4,26)	B590 B137 B915 B1577 B1576		

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S76*			1 / 1	Very Stiff Clay Dense sand modified
	V1547 (3.9,27)	B1575		
	V1546 (4.4,27)	B1574		
	V1545 (4.9,27)	B1573		
	V1544 (5.4,27)	B1572		
	V1543 (5.9,27)	B1571		
	V1542 (6.4,28)	B1570		
	V117 (7,28)	B98		
	V86 (7.3,28)	B13		
	V13 (7.4,28)	B1608		
	V1580 (6.9,27)	B1609		
	V1581 (6.5,27)	B1610		
	V1582 (6,27)	B997		
	V973 (5.6,27)	B591		
S77*	V13 (7.4,28)	B1555	1 / 1	Very Stiff Clay Dense sand modified
	V1527 (7.4,27)	B128		
	V116 (7.5,27)	B1578		
	V1550 (7,27)	B1579		
	V1551 (6.5,27)	B1580		
	V1552 (6,26)	B1581		
	V1553 (5.5,26)	B1582		
	V1554 (5,26)	B1583		
	V1555 (4.5,26)	B1584		
	V1556 (4,25)	B1585		
	V1557 (3.5,25)	B916		
	V892 (3.1,25)	B138		
	V121 (0,23)	B133		
	V572 (0,24)	B591		
	V973 (5.6,27)	B997		
	V1582 (6,27)	B1610		
	V1581 (6.5,27)	B1609		
	V1580 (6.9,27)	B1608		
S78*	V636 (0,20)	B655	1 / 1	Very Stiff Clay Dense sand modified
	V123 (0,21)	B140		
	V894 (3.5,23)	B918		
	V1565 (4,23)	B1593		
	V1564 (4.4,23)	B1592		
	V1563 (4.9,23)	B1591		
	V1562 (5.4,24)	B1590		
	V1561 (5.9,24)	B1589		
	V1560 (6.4,24)	B1588		
	V1559 (6.9,24)	B1587		
	V1558 (7.3,25)	B1586		
	V119 (7.8,25)	B1568		
	V1540 (7.9,25)	B654		
	V635 (7.9,24)	B1611		
	V1583 (7.5,24)	B1612		
	V1584 (7.1,24)	B1613		
	V1585 (6.6,24)	B998		
	V974 (6.2,23)	B656		
S79*	V635 (7.9,24)	B63	1 / 1	Very Stiff Clay Dense sand modified
	V54 (8,24)	B1594		
	V1566 (7.5,24)	B1595		
	V1567 (7.1,23)	B1596		
	V1568 (6.6,23)	B1597		
	V1569 (6.1,23)	B1598		
	V1570 (5.6,23)	B1599		
	V1571 (5.2,22)	B1600		
	V1572 (4.7,22)	B1601		
	V1573 (4.2,22)	B919		
	V895 (3.7,21)	B141		
	V124 (0,19)	B136		
	V636 (0,20)	B656		
	V974 (6.2,23)	B998		
	V1585 (6.6,24)	B1613		
	V1584 (7.1,24)	B1612		
	V1583 (7.5,24)	B1611		
	V700 (0,23)	B720		
	V121 (0,23)	B138		
	V892 (3.1,25)	B916		
	V1557 (3.5,25)	B1585		
	V1556 (4,25)	B1584		
	V1555 (4.5,26)	B1583		

	V1554 (5,26) V1553 (5.5,26) V1552 (6,26) V1551 (6.5,27) V1550 (7,27) V116 (7.5,27) V699 (7.6,26) V1574 (7.1,26) V1575 (6.6,26) V1576 (6.2,26) V971 (5.7,26)	B1582 B1581 B1580 B1579 B1578 B719 B1602 B1603 B1604 B995 B721		
S81*	V699 (7.6,26) V118 (7.6,26) V1536 (7.2,26) V1535 (6.7,25) V1534 (6.2,25) V1533 (5.7,25) V1532 (5.2,25) V1531 (4.7,24) V1530 (4.2,24) V1529 (3.7,24) V893 (3.2,24) V122 (0,22) V700 (0,23) V971 (5.7,26) V1576 (6.2,26) V1575 (6.6,26) V1574 (7.1,26)	B130 B139 B1564 B1563 B1562 B1561 B1560 B1559 B1558 B1557 B917 B134 B721 B995 B1604 B1603 B1602	1 / 1	Very Stiff Clay Dense sand modified
S83*	V820 (5.1,29) V15 (5.6,29) V1520 (6,28) V14 (6.4,28) V1528 (6.7,28) V117 (7,28) V1542 (6.4,28) V1543 (5.9,27) V1544 (5.4,27) V1545 (4.9,27) V1546 (4.4,27) V1547 (3.9,27) V1548 (3.4,26) V1549 (2.9,26) V891 (2.4,26) V120 (0,25) V823 (0,26) V975 (3.3,28) V1588 (3.8,28) V1587 (4.2,28) V1586 (4.7,29)	B15 B1548 B14 B1556 B129 B1570 B1571 B1572 B1573 B1574 B1575 B1576 B1577 B915 B137 B132 B845 B999 B1616 B1615 B1614	1 / 1	Very Stiff Clay Dense sand modified
S85*	V18 (3.3,30) V1522 (3.7,30) V17 (4.1,29) V1521 (4.3,29) V16 (4.6,29) V1541 (4.9,29) V820 (5.1,29) V1586 (4.7,29) V1587 (4.2,28) V1588 (3.8,28) V975 (3.3,28) V823 (0,26) V821 (0,28) V1216 (0.098,28) V976 (1.6,29) V1591 (2,29) V1590 (2.5,30) V1589 (2.9,30)	B1550 B17 B1549 B16 B1569 B841 B1614 B1615 B1616 B999 B845 B844 B846 B1239 B1000 B1619 B1618 B1617	1 / 1	Very Stiff Clay Dense sand modified
	V1217 (0.098,32) V1524 (0.54,32) V1525 (0.98,32) V24 (1.4,32) V23 (1.5,31)	B1552 B1553 B24 B23 B22		

S89*			1 / 1	Very Stiff Clay Dense sand modified
	V22 (1.7,31) V21 (1.9,31) V20 (2.3,31) V19 (2.6,31) V1523 (3,30) V18 (3.3,30) V1589 (2.9,30) V1590 (2.5,30) V1591 (2,29) V976 (1.6,29) V1216 (0.098,28) V1218 (0.098,30) V1592 (0.098,30) V1593 (0.098,31) V1594 (0.098,31)	B21 B20 B19 B1551 B18 B1617 B1618 B1619 B1000 B1239 B1242 B1620 B1621 B1622 B1240		
S90*	V1216 (0.098,28) V821 (0,28) V25 (0,32) V56 (0.028,32) V1217 (0.098,32) V1594 (0.098,31) V1593 (0.098,31) V1592 (0.098,30) V1218 (0.098,30)	B846 B843 B68 B1241 B1240 B1622 B1621 B1620 B1242	1 / 1	Very Stiff Clay Dense sand modified
S93*	V1220 (15,24) V49 (15,22) V48 (12,23) V42 (11,23) V1223 (11,24)	B55 B53 B52 B1248 B1245	1 / 1	Dense sand modified
S96*	V1224 (9.2,24) V55 (9,24) V1539 (9,23) V1538 (9,23) V1537 (9,22) V1294 (9,22) V132 (9,15) V2 (15,15) V49 (15,22) V48 (12,23) V42 (11,23) V1223 (11,24) V1222 (9.2,24)	B67 B149 B1567 B1566 B1565 B1322 B148 B2 B53 B52 B1248 B1249 B1252	1 / 1	Very Stiff Clay Dense sand modified
S98*	V1223 (11,24) V1220 (15,24) V35 (15,24) V1224 (9.2,24) V1222 (9.2,24)	B1245 B1250 B1251 B1252 B1249	1 / 1	Concrete

* Loaded solid (self weight).

Water Table *(all distances in m)*

Water Table Status	Vertices (x, y)
Enabled	(No water table points defined)

Water Regimes *(potentials in m, pressures in kN/m² (kPa))*
(No water regime defined)

Materials *(unit weights (weight densities) in kN/m³, strengths in kN/m² (kPa), angles in degrees, datum level in m, undrained strength gradient in kN/m² (kPa)/m)*

Mohr-Coulomb Material(s)

Key	Name	Unit Weight (Saturated Unit Weight)	Drainage Behaviour	c' (ϕ')	c_u (datum) (gradient) (grid)
	Very Stiff Clay	22 (22)	Drained/undrained	5* (25*)	150 (0) (0) (-)
	Dense sand				
		18 (21)	Always drained	0.2* (45*)	0 (0) (0) (-)

	modified				
	Concrete	23 (23)	Always undrained	0 (0)	10000* (0*) (0*) (-)

Property used in Scenario 2 (described in this report).

Engineered Element Material(s)

Key	Name	Pullout Factors: Tc (Tq)	Lateral Factors: Nc (Nq)	Mp	Rupture Strength	Compression Strength	Subdivide at Nodes?
	geogrid	1e +30(0.340224)	0.01(1e+30)	0	1e+30	0	True
	Soil Nail (Rigid)	50(0)	5(0)	1e+30	1e+30	1e+30	True

Partial Factors

Factor	User	EC7 DA1/2*		
Unfavourable: permanent	1	1		
Unfavourable: variable	1	1.3		
Unfavourable: accidental	1	1		
Favourable: permanent	1	1		
Favourable: variable	1	0		
Favourable: accidental	1	0		
c'	1	1.25		
$\tan\phi'$	1	1.25		
c_u	1	1.4		

These partial factors were used in Scenario 2 (described in this report).

Loads *(normal and shear loads in kN/m² (kPa))*

Boundary Objects

Loaded Object	Type	Loading Type	Adequacy?	Normal	Shear
B1251	Permanent Load	neutral	true	5	0

Solid Objects

Loaded Object	Type	Loading Type	Adequacy?
S73	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S74	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S75	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S76	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S77	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S78	Permanent (unfactored self weight: 20 kN/m³)	neutral	false
S79	Permanent (unfactored self weight: 20 kN/m³)	neutral	false

S80	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S81	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S83	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S85	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S89	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S90	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S93	Permanent (unfactored self weight: 18 kN/m³)	neutral	true	
S96	Permanent (unfactored self weight: 20 kN/m³)	neutral	false	
S98	Permanent (unfactored self weight: 23 kN/m³)	neutral	false	

Free-Body Diagrams *(Scenario 2; normal and shear forces are reported as total forces in kN per m width which include the effects of water pressures; angles in degrees [clockwise +ve, measured from horizontal], distances in m)*
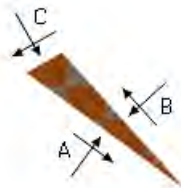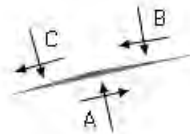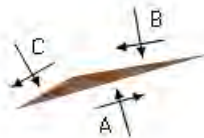

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.86, 20.4)	(3.94, 18.9)	36.1852	839.089	323.311	756.347	486.355
B	(3.94, 18.9)	(2.33, 20.7)	-132.08	908.076	348.369	-907.445	-350.008
C	(2.33, 20.7)	(1.86, 20.4)	150.363	182.288	-70.1454	151.098	-123.769
					Self Weight (kN/m):		-12.5781
					Sum:	0	0

						Horizontal Equilibrium Term: S.cosθ	Vertical Equilibrium Term: -S.sinθ

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)

|							+ N.sinθ	+ N.cosθ
A	(2.33, 20.7)	(3.94, 18.9)	47.9201	908.076	348.369		907.445	350.008
B	(3.94, 18.9)	(4.55, 19.3)	-36.8712	343.828	-131.331		-311.362	196.263
C	(4.55, 19.3)	(2.79, 20.9)	-137.905	732.481	282.729		-700.822	-353.995
D	(2.79, 20.9)	(2.33, 20.7)	150.373	192.474	-11.0169		104.738	-161.856
						Self Weight (kN/m):		-30.4198
						Sum:	0	0
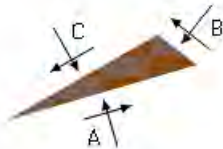
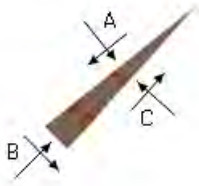| Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 20.9)	(3.38, 21.1)	-16.3038	169.003	-65.4825	-110.28	143.834
B	(3.38, 21.1)	(3.26, 21.2)	-141.657	30.4978	11.9832	-28.319	-16.4848
C	(3.26, 21.2)	(2.79, 20.9)	150.363	178.567	-57.8827	138.599	-126.597
					Self Weight (kN/m):		-0.752705
					Sum:	0	0
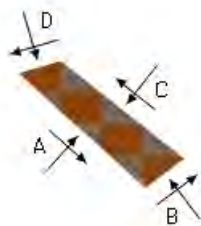
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 20.9)	(4.55, 19.3)	42.0946	732.481	282.729	700.822	353.995
B	(4.55, 19.3)	(5.09, 19.7)	-36.8726	266.267	-102.026	-241.381	151.798
C	(5.09, 19.7)	(3.38, 21.1)	-141.655	616.523	238.73	-569.721	-335.425
D	(3.38, 21.1)	(2.79, 20.9)	163.696	169.003	-65.4825	110.28	-143.834
					Self Weight (kN/m):		-26.5337
					Sum:	0	0

						Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)

						+ N.sinθ	+ N.cosθ
A	(3.26, 21.2)	(7.31, 22.2)	-14.6056	941.449	-367.938	-593.45	818.243
B	(7.31, 22.2)	(3.73, 21.5)	167.564	801.102	-313.522	478.677	-714.793
C	(3.73, 21.5)	(3.26, 21.2)	150.373	141.616	-51.4906	114.774	-97.638
					Self Weight (kN/m):		-5.8117
					Sum:	0	0
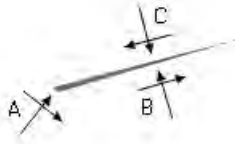
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.26, 21.2)	(3.38, 21.1)	38.3433	30.4978	11.9832	28.319	16.4848
B	(3.38, 21.1)	(7.31, 22.2)	-16.2984	948.888	-370.355	-621.769	806.817
C	(7.31, 22.2)	(3.26, 21.2)	165.394	941.449	-367.938	593.45	-818.243
					Self Weight (kN/m):		-5.059
					Sum:	0	0
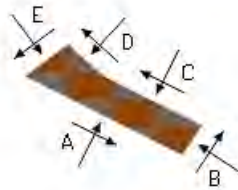
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.94, 18.9)	(6.19, 17.8)	26.564	1176.24	448.834	927.478	851.333
B	(6.19, 17.8)	(6.46, 18.2)	-56.5393	320.066	-121.423	-333.97	75.1635
C	(6.46, 18.2)	(5.06, 18.9)	-153.436	755.292	288.028	-595.397	-546.744
D	(5.06, 18.9)	(4.55, 19.3)	-137.904	324.581	123.83	-309.473	-157.84
E	(4.55, 19.3)	(3.94, 18.9)	143.129	343.828	-131.331	311.362	-196.263
					Self Weight (kN/m):		-25.6489
					Sum:	0	0

						Horizontal Equilibrium Term: S.cosθ	Vertical Equilibrium Term: -S.sinθ

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)		+ N.sinθ	+ N.cosθ
A	(8.43, 23.4)	(9, 23.9)	-42.964	11.8675	-7.52709		-13.5963	3.55473
B	(9, 23.9)	(8.02, 23.9)	-180	0.00245253	-0.158899		0.158899	-0.00244989
C	(8.02, 23.9)	(8.43, 23.4)	51.9297	11.5824	7.00439		13.4374	1.62827
					Self Weight (kN/m):			-5.18055
					Sum:		0	0
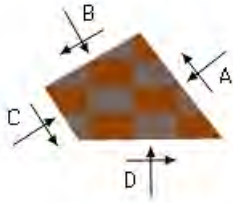
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.43, 23.4)	(8.02, 23.9)	-128.07	11.5824	7.00439	-13.4374	-1.62827
B	(8.02, 23.9)	(7.54, 23.6)	150.372	50.5761	7.3911	18.5811	-47.6164
C	(7.54, 23.6)	(7.71, 23.4)	57.1661	16.4259	7.38665	17.8067	2.70089
D	(7.71, 23.4)	(8.43, 23.4)	-0.596901	52.3382	-22.4043	-22.9505	52.101
					Self Weight (kN/m):		-5.55729
					Sum:	0	0
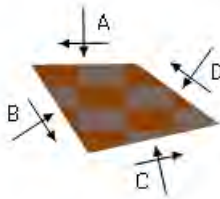
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.43, 23.4)	(7.71, 23.4)	179.403	52.3382	-22.4043	22.9505	-52.101
B	(7.71, 23.4)	(8.1, 22.8)	57.1612	103.418	41.4614	109.376	21.2437
C	(8.1, 22.8)	(9, 23)	-12.4812	95.9275	-39.4593	-59.26	85.1315
D	(9, 23)	(8.43, 23.4)	-143.871	79.4633	32.4543	-73.0661	-45.0449
					Self Weight (kN/m):		-9.22922
					Sum:	0	0

						Horizontal Equilibrium Term: S.cosθ	Vertical Equilibrium Term: -S.sinθ

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)

						+ N.sinθ	+ N.cosθ
A	(8.43, 23.4)	(9, 23)	36.1287	79.4633	32.4543	73.0661	45.0449
B	(9, 23)	(9, 23.9)	-90.0249	86.6781	-36.1049	-86.6623	-36.1428
C	(9, 23.9)	(8.43, 23.4)	137.036	11.8675	-7.52709	13.5963	-3.55473
					Self Weight (kN/m):		-5.34747
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.73, 21.5)	(7.31, 22.2)	-12.436	801.102	-313.522	-478.677	714.793
B	(7.31, 22.2)	(5.36, 21.9)	170.516	412.52	-161.786	227.54	-380.228
C	(5.36, 21.9)	(3.73, 21.5)	164.134	386.888	-151.126	251.137	-330.835
					Self Weight (kN/m):		-3.73074
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.73, 21.5)	(5.36, 21.9)	-15.8658	386.888	-151.126	-251.137	330.835
B	(5.36, 21.9)	(4.2, 21.7)	170.515	262.638	-102.673	144.541	-242.133
C	(4.2, 21.7)	(3.73, 21.5)	150.372	127.876	-49.8979	106.596	-86.4825
					Self Weight (kN/m):		-2.21888
					Sum:	0	0
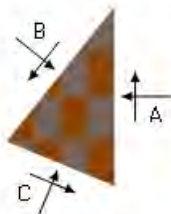
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(9, 23)	-90.0249	334.375	-74.9967	-334.342	-75.1426

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
B	(9, 23)	(8.43, 22.2)	128.693	194.139	-76.0542	199.073	-62.0002
C	(8.43, 22.2)	(9, 22)	22.3831	183.266	70.8237	135.269	142.495
					Self Weight (kN/m):		-5.35208
					Sum:	0	0
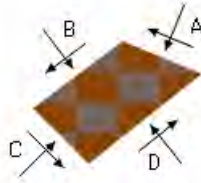
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(8.43, 22.2)	-157.617	183.266	70.8237	-135.269	-142.495
B	(8.43, 22.2)	(7.79, 21.8)	143.128	250.667	-96.7187	227.775	-142.502
C	(7.79, 21.8)	(8.19, 21.4)	44.9978	238.182	91.1073	232.843	103.998
D	(8.19, 21.4)	(9, 22)	-38.5305	352.118	-135.504	-325.349	191.04
					Self Weight (kN/m):		-10.0408
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(8.19, 21.4)	141.469	352.118	-135.504	325.349	-191.04
B	(8.19, 21.4)	(8.31, 21.2)	44.993	84.1644	32.0869	82.2021	36.8243
C	(8.31, 21.2)	(9, 22)	-48.0883	407.494	-156.141	-407.551	155.992
					Self Weight (kN/m):		-1.77655
					Sum:	0	0
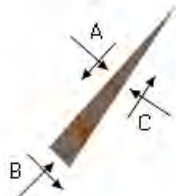
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(8.31, 21.2)	131.912	407.494	-156.141	407.551	-155.992
B	(8.31, 21.2)	(8.42, 21.1)	45.0157	101.68	38.5506	99.1583	44.6395

C	(8.42, 21.1)	(9, 22)	-56.5419	485.011	-185.137	-506.709	112.948
				Self Weight (kN/m):			-1.59458
				Sum:		0	0
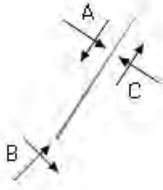
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(8.42, 21.1)	123.458	485.011	-185.137	506.709	-112.948
B	(8.42, 21.1)	(8.43, 21.1)	45.0243	12.9613	4.90186	12.6311	5.69885
C	(8.43, 21.1)	(9, 22)	-57.4294	495.489	-189.06	-519.34	107.421
				Self Weight (kN/m):			-0.17184
				Sum:		0	0
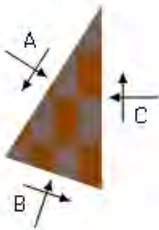
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(8.43, 21.1)	122.571	495.489	-189.06	519.34	-107.421
B	(8.43, 21.1)	(9, 20.9)	18.7269	357.232	135.665	243.206	294.738
C	(9, 20.9)	(9, 22)	-90.0249	762.625	-180.836	-762.546	-181.168
				Self Weight (kN/m):			-6.14869
				Sum:		0	0
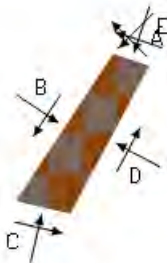
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.43, 21.1)	(8.42, 21.1)	-134.976	12.9613	4.90186	-12.6311	-5.69885
B	(8.42, 21.1)	(6.83, 18.7)	123.459	1316.63	-502.703	1375.6	-306.512
C	(6.83, 18.7)	(7.72, 18.5)	13.0291	526.391	200.016	313.534	467.751
D	(7.72, 18.5)	(9, 20.9)	-61.9634	1349.89	-514.482	-1433.3	180.399

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
E	(9, 20.9)	(8.43, 21.1)	-161.273	357.232	135.665	-243.206	-294.738
					Self Weight (kN/m):		-41.201
					Sum:	0	0
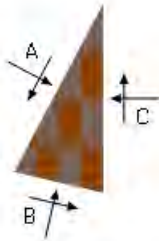
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 20.9)	(7.72, 18.5)	118.037	1349.89	-514.482	1433.3	-180.399
B	(7.72, 18.5)	(9, 18.2)	13.0303	1003.82	379.74	596.261	892.374
C	(9, 18.2)	(9, 20.9)	-90.025	2029.86	-676.383	-2029.56	-677.269
					Self Weight (kN/m):		-34.7063
					Sum:	0	0
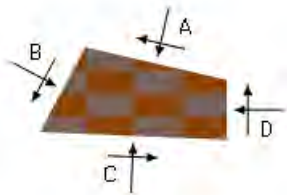
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 18.2)	(7.72, 18.5)	-166.97	1003.82	379.74	-596.261	-892.374
B	(7.72, 18.5)	(7.31, 17.8)	118.037	563.318	-213.626	597.622	-76.2271
C	(7.31, 17.8)	(9, 17.7)	2.35103	1179.3	446.711	494.683	1160
D	(9, 17.7)	(9, 18.2)	-90.0254	496.119	-170.946	-496.044	-171.162
					Self Weight (kN/m):		-20.2334
					Sum:	0	0
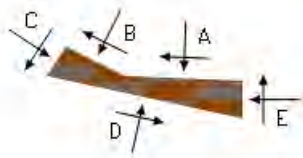
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 17.7)	(7.31, 17.8)	-177.649	1179.3	446.711	-494.683	-1160
B	(7.31, 17.8)	(6.46, 18.2)	-153.437	676.435	256.116	-531.588	-490.483
C	(6.46, 18.2)	(6.19, 17.8)	123.461	320.066	-121.423	333.97	-75.1635

D	(6.19, 17.8)	(9, 17.1)	12.2303	2160.73	817.578	1256.75	1938.5
E	(9, 17.1)	(9, 17.7)	-90.0254	564.528	-191.862	-564.445	-192.108
					Self Weight (kN/m):		-20.7501
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 23)	(8.1, 22.8)	167.519	95.9275	-39.4593	59.26	-85.1315
B	(8.1, 22.8)	(8.13, 22.7)	57.1542	6.51897	2.65857	6.91894	1.30125
C	(8.13, 22.7)	(9, 23)	-15.8634	99.1983	-40.6069	-66.1789	84.3183
					Self Weight (kN/m):		-0.488035
					Sum:	0	0
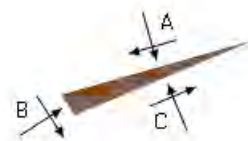
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 23)	(8.13, 22.7)	164.137	99.1983	-40.6069	66.1789	-84.3183
B	(8.13, 22.7)	(8.19, 22.6)	57.1604	14.7071	5.92444	15.5697	2.99739
C	(8.19, 22.6)	(9, 23)	-22.7403	107.471	-43.5904	-81.7486	82.2638
					Self Weight (kN/m):		-0.942927
					Sum:	0	0
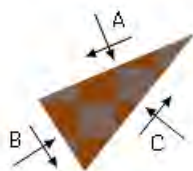
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 23)	(8.19, 22.6)	157.26	107.471	-43.5904	81.7486	-82.2638
B	(8.19, 22.6)	(8.43, 22.2)	57.163	111.624	43.4047	117.324	24.0607
C	(8.43, 22.2)	(9, 23)	-51.3072	194.139	-76.0542	-199.073	62.0002

						Self Weight (kN/m):		-3.79712
						Sum:	0	0
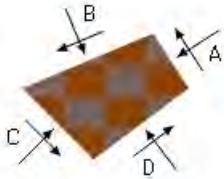
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.43, 22.2)	(8.19, 22.6)	-122.837	111.624	43.4047	-117.324	-24.0607
B	(8.19, 22.6)	(7.31, 22.2)	157.257	237.05	-92.2641	176.732	-182.952
C	(7.31, 22.2)	(7.79, 21.8)	45.0024	171.432	66.6747	168.367	74.0749
D	(7.79, 21.8)	(8.43, 22.2)	-36.8718	250.667	-96.7187	-227.775	142.502
					Self Weight (kN/m):		-9.5648
					Sum:	0	0
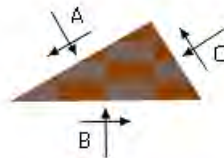
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.54, 23.6)	(7.06, 23.4)	150.362	112.032	-3.97617	58.8465	-95.4151
B	(7.06, 23.4)	(7.71, 23.4)	-0.601676	100.264	-39.9933	-41.0398	99.84
C	(7.71, 23.4)	(7.54, 23.6)	-122.834	16.4259	7.38665	-17.8067	-2.70089
					Self Weight (kN/m):		-1.724
					Sum:	0	0
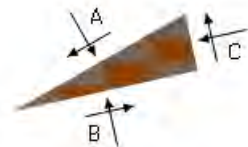
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.06, 23.4)	(4.68, 22)	150.37	730.866	-196.399	532.067	-538.184
B	(4.68, 22)	(7.24, 22.6)	-12.4812	595.908	-232.783	-356.077	531.51
C	(7.24, 22.6)	(7.06, 23.4)	-102.435	165.861	65.1088	-175.99	27.8667
					Self Weight		
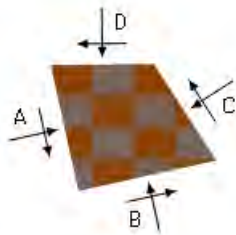
-21 1927

						(kN/m):		
						Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.06, 23.4)	(7.24, 22.6)	77.5653	165.861	65.1088	175.99	-27.8667
B	(7.24, 22.6)	(8.1, 22.8)	-12.484	179.538	-70.5159	-107.654	160.054
C	(8.1, 22.8)	(7.71, 23.4)	-122.839	103.418	41.4614	-109.376	-21.2437
D	(7.71, 23.4)	(7.06, 23.4)	179.398	100.264	-39.9933	41.0398	-99.84
					Self Weight (kN/m):		-11.1034
					Sum:	0	0
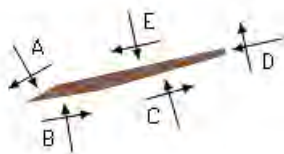
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.68, 22)	(4.2, 21.7)	150.363	131.839	-48.7634	107.57	-90.4882
B	(4.2, 21.7)	(5.36, 21.9)	-9.48478	262.638	-102.673	-144.541	242.133
C	(5.36, 21.9)	(7.26, 22.5)	-15.8657	451.322	-176.265	-292.933	385.942
D	(7.26, 22.5)	(7.24, 22.6)	-102.438	24.678	9.63251	-26.1732	4.09265
E	(7.24, 22.6)	(4.68, 22)	167.519	595.908	-232.783	356.077	-531.51
					Self Weight (kN/m):		-10.1697
					Sum:	0	0
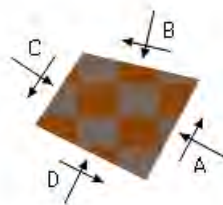
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.31, 17.8)	(7.72, 18.5)	-61.9625	563.318	-213.626	-597.622	76.2271
B	(7.72, 18.5)	(6.83, 18.7)	-166.971	526.391	200.016	-313.534	-467.751
C	(6.83, 18.7)	(6.46, 18.2)	123.458	363.582	-138.279	379.569	-85.0923

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
D	(6.46, 18.2)	(7.31, 17.8)	26.5634	676.435	256.116	531.588	490.483
					Self Weight (kN/m):		-13.8672
					Sum:	0	0
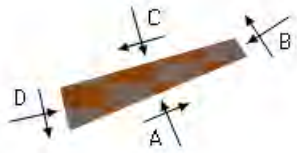
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.31, 22.2)	(8.19, 22.6)	-22.7431	237.05	-92.2641	-176.732	182.952
B	(8.19, 22.6)	(8.13, 22.7)	-122.84	14.7071	5.92444	-15.5697	-2.99739
C	(8.13, 22.7)	(7.26, 22.5)	164.133	195.219	-76.4512	126.908	-166.882
D	(7.26, 22.5)	(7.31, 22.2)	77.5631	61.6956	23.8948	65.3936	-10.0494
					Self Weight (kN/m):		-3.02238
					Sum:	0	0
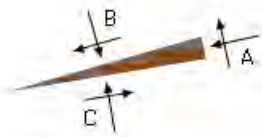
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.31, 22.2)	(7.26, 22.5)	-102.437	61.6956	23.8948	-65.3936	10.0494
B	(7.26, 22.5)	(5.36, 21.9)	164.134	451.322	-176.265	292.933	-385.942
C	(5.36, 21.9)	(7.31, 22.2)	-9.48355	412.52	-161.786	-227.54	380.228
					Self Weight (kN/m):		-4.33529
					Sum:	0	0
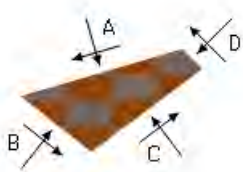
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.31, 22.2)	(3.38, 21.1)	163.702	948.888	-370.355	621.769	-806.817
B	(3.38, 21.1)	(5.09, 19.7)	38.345	616.523	238.73	569.721	335.425
C	(5.09, 19.7)	(7.79, 21.8)	-36.8692	1126.77	-433.824	-1023.12	641.123

	D	(7.79, 21.8)	(7.31, 22.2)	-134.998	171.432	66.6747	-168.367	-74.0749
						Self Weight (kN/m):		-95.6563
						Sum:	0	0
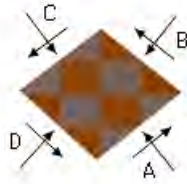
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.06, 18.9)	(5.62, 19.3)	-38.5297	302.806	-115.822	-279.234	164.726
B	(5.62, 19.3)	(5.09, 19.7)	-141.649	295.191	112.821	-271.619	-161.521
C	(5.09, 19.7)	(4.55, 19.3)	143.127	266.267	-102.026	241.381	-151.798
D	(4.55, 19.3)	(5.06, 18.9)	42.0963	324.581	123.83	309.473	157.84
					Self Weight (kN/m):		-9.24719
					Sum:	0	0
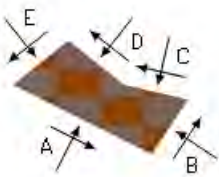
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.06, 18.9)	(6.46, 18.2)	26.5642	755.292	288.028	595.397	546.744
B	(6.46, 18.2)	(6.83, 18.7)	-56.5419	363.582	-138.279	-379.569	85.0923
C	(6.83, 18.7)	(6.19, 18.9)	-166.975	291.724	111.469	-174.365	-259.086
D	(6.19, 18.9)	(5.62, 19.3)	-141.657	348.8	132.992	-320.698	-191.053
E	(5.62, 19.3)	(5.06, 18.9)	141.47	302.806	-115.822	279.234	-164.726
					Self Weight (kN/m):		-16.9715
					Sum:	0	0
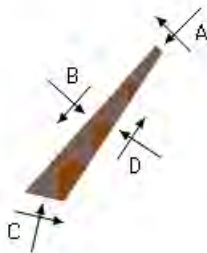
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.42, 21.1)	(8.31, 21.2)	-134.984	101.68	38.5506	-99.1583	-44.6395

B	(8.31, 21.2)	(6.19, 18.9)	131.91	1300.51	-497.875	1300.4	-498.183
C	(6.19, 18.9)	(6.83, 18.7)	13.0249	291.724	111.469	174.365	259.086
D	(6.83, 18.7)	(8.42, 21.1)	-56.5406	1316.63	-502.703	-1375.6	306.512
					Self Weight (kN/m):		-22.7756
					Sum:	0	0
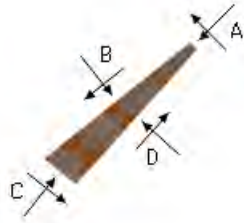
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.31, 21.2)	(8.19, 21.4)	-135.007	84.1644	32.0869	-82.2021	-36.8243
B	(8.19, 21.4)	(5.62, 19.3)	141.468	1149.63	-441.985	1061.9	-623.988
C	(5.62, 19.3)	(6.19, 18.9)	38.3434	348.8	132.992	320.698	191.053
D	(6.19, 18.9)	(8.31, 21.2)	-48.0904	1300.51	-497.875	-1300.4	498.183
					Self Weight (kN/m):		-28.4237
					Sum:	0	0
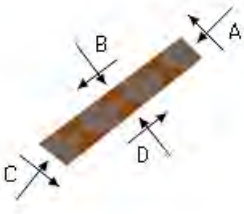
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.19, 21.4)	(7.79, 21.8)	-135.002	238.182	91.1073	-232.843	-103.998
B	(7.79, 21.8)	(5.09, 19.7)	143.131	1126.77	-433.824	1023.12	-641.123
C	(5.09, 19.7)	(5.62, 19.3)	38.3511	295.191	112.821	271.619	161.521
D	(5.62, 19.3)	(8.19, 21.4)	-38.5319	1149.63	-441.985	-1061.9	623.988
					Self Weight (kN/m):		-40.3878
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ

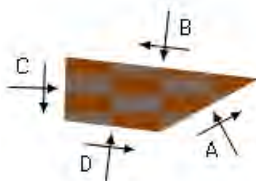| Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.1, 22.8)	(7.24, 22.6)	167.516	179.538	-70.5159	107.654	-160.054
B	(7.24, 22.6)	(7.26, 22.5)	77.5621	24.678	9.63251	26.1732	-4.09265
C	(7.26, 22.5)	(8.13, 22.7)	-15.8671	195.219	-76.4512	-126.908	166.882
D	(8.13, 22.7)	(8.1, 22.8)	-122.846	6.51897	2.65857	-6.91894	-1.30125
					Self Weight (kN/m):		-1.43486
					Sum:	0	0
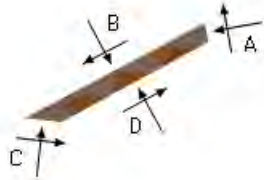
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.73, 25.5)	(7.65, 26)	-100.113	0.00240102	-0.0787522	0.0114654	-0.0779501
B	(7.65, 26)	(3.22, 23.6)	152.147	696.798	-86.2226	401.77	-575.797
C	(3.22, 23.6)	(4.12, 23.5)	6.43143	126.702	-50.8833	-36.3742	131.604
D	(4.12, 23.5)	(7.73, 25.5)	-28.5766	603.788	-87.2218	-365.408	488.512
					Self Weight (kN/m):		-44.2413
					Sum:	0	0
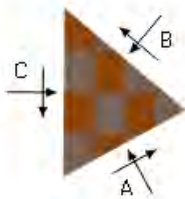
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.915, 21.8)	(1.37, 22)	-28.5742	141.512	-19.1583	-84.5142	115.109
B	(1.37, 22)	(0.92, 22.4)	-139.888	89.0615	35.5927	-84.6047	-45.1756
C	(0.92, 22.4)	(0.915, 21.8)	90.427	169.614	65.797	169.119	-67.0589
					Self Weight (kN/m):		-2.87447
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ

						Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.37, 22)	(1.83, 22.3)	-28.5739	152.656	-44.6257	-112.21	112.713
B	(1.83, 22.3)	(1.6, 22.5)	-140.198	40.2673	16.2125	-38.2311	-20.5591
C	(1.6, 22.5)	(1.38, 22.5)	175.102	38.6142	-15.3044	18.5365	-37.1709
D	(1.38, 22.5)	(1.37, 22)	90.647	132.49	51.1074	131.904	-52.5995
					Self Weight (kN/m):		-2.38374
					Sum:	0	0
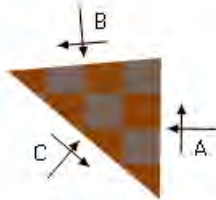
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.37, 22)	(1.38, 22.5)	-89.353	132.49	51.1074	-131.904	52.5995
B	(1.38, 22.5)	(0.92, 22.4)	175.116	99.5311	-38.9668	47.2996	-95.852
C	(0.92, 22.4)	(1.37, 22)	40.1118	89.0615	35.5927	84.6047	45.1756
					Self Weight (kN/m):		-1.9231
					Sum:	0	0
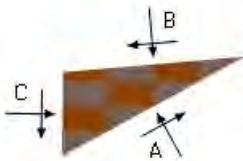
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.83, 22.3)	(2.29, 22.5)	-28.5739	154.101	-36.6796	-105.923	117.783
B	(2.29, 22.5)	(1.83, 22.5)	175.119	96.0124	-37.6411	45.6791	-92.459
C	(1.83, 22.5)	(1.83, 22.3)	90.8714	60.607	23.4509	60.2435	-24.3694
					Self Weight (kN/m):		-0.954726
					Sum:	0	0
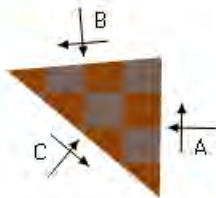
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.83, 22.3)	(1.83, 22.5)	-89.1286	60.607	23.4509	-60.2435	24.3694

						Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
B	(1.83, 22.5)	(1.6, 22.5)	175.121	46.1539	-18.1487	22.0124	-44.4411
C	(1.6, 22.5)	(1.83, 22.3)	39.8019	40.2673	16.2125	38.2311	20.5591
					Self Weight (kN/m):		-0.48737
					Sum:	0	0
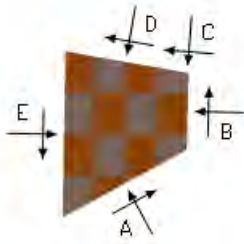
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.29, 22.5)	(2.75, 22.8)	-28.5841	116.533	-21.0905	-74.2629	92.2488
B	(2.75, 22.8)	(2.75, 23.1)	-88.6672	52.2559	20.6308	-51.7618	21.8408
C	(2.75, 23.1)	(2.74, 23.1)	-175.847	2.38088	-0.926866	0.740253	-2.44534
D	(2.74, 23.1)	(2.3, 23.2)	-169.997	57.5657	-23.273	12.9297	-60.7311
E	(2.3, 23.2)	(2.29, 22.5)	91.0986	113.233	44.6903	112.355	-46.855
					Self Weight (kN/m):		-4.05819
					Sum:	0	0
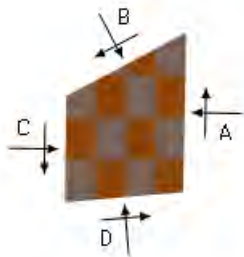
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.29, 22.5)	(2.3, 23.2)	-88.9014	113.233	44.6903	-112.355	46.855
B	(2.3, 23.2)	(1.84, 22.9)	152.149	106.216	-3.94833	53.114	-92.0674
C	(1.84, 22.9)	(1.83, 22.5)	90.8706	105.555	41.009	104.92	-42.6087
D	(1.83, 22.5)	(2.29, 22.5)	-4.88092	96.0124	-37.6411	-45.6791	92.459
					Self Weight (kN/m):		-4.63795
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ

A	(2.75, 22.8)	(3.2, 23)	-28.5739	101.846	-23.4947	-69.3486	78.2004
B	(3.2, 23)	(2.75, 23.1)	-175.575	53.5535	-21.7871	17.5868	-55.0759
C	(2.75, 23.1)	(2.75, 22.8)	91.3328	52.2559	20.6308	51.7618	-21.8408
					Self Weight (kN/m):		-1.28367
					Sum:	0	0
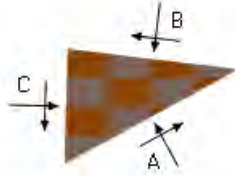
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.2, 23)	(3.66, 23.3)	-28.5739	110.748	-21.8969	-72.2035	86.7821
B	(3.66, 23.3)	(3.21, 23.3)	-173.196	59.3356	-23.9447	16.7475	-61.7542
C	(3.21, 23.3)	(3.2, 23)	91.572	56.084	22.1336	55.456	-23.663
					Self Weight (kN/m):		-1.36487
					Sum:	0	0
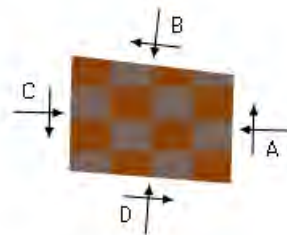
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.2, 23)	(3.21, 23.3)	-88.428	56.084	22.1336	-55.456	23.663
B	(3.21, 23.3)	(2.76, 23.4)	-173.196	49.037	-20.1129	14.1626	-51.0742
C	(2.76, 23.4)	(2.75, 23.1)	91.3333	59.4421	23.4621	58.8802	-24.8386
D	(2.75, 23.1)	(3.2, 23)	4.42542	53.5535	-21.7871	-17.5868	55.0759
					Self Weight (kN/m):		-2.8262
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.66, 23.3)	(4.12, 23.5)	-28.5745	114.101	-13.1563	-66.132	93.9083

	B	(4.12, 23.5)	(3.22, 23.6)	-173.569	126.702	-50.8833	36.3742	-131.604
	C	(3.22, 23.6)	(3.21, 23.3)	91.5705	47.0367	18.7349	46.5053	-20.0175
	D	(3.21, 23.3)	(3.66, 23.3)	6.8038	59.3356	-23.9447	-16.7475	61.7542
						Self Weight (kN/m):		-4.04132
						Sum:	0	0
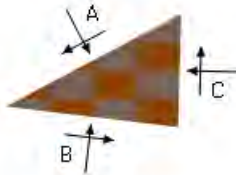
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.22, 23.6)	(2.76, 23.4)	152.15	90.0099	-21.0555	60.6679	-69.746
B	(2.76, 23.4)	(3.21, 23.3)	6.80371	49.037	-20.1129	-14.1626	51.0742
C	(3.21, 23.3)	(3.22, 23.6)	-88.4295	47.0367	18.7349	-46.5053	20.0175
					Self Weight (kN/m):		-1.34571
					Sum:	0	0
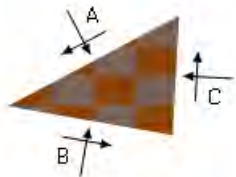
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.76, 23.4)	(2.3, 23.2)	152.15	110.418	-23.7111	72.5502	-86.549
B	(2.3, 23.2)	(2.74, 23.1)	10.0033	57.5657	-23.273	-12.9297	60.7311
C	(2.74, 23.1)	(2.76, 23.4)	-86.9463	60.9879	24.0373	-59.6204	27.2528
					Self Weight (kN/m):		-1.43485
					Sum:	0	0
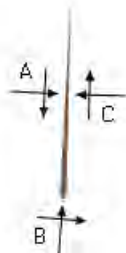
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.76, 23.4)	(2.74, 23.1)	93.0537	60.9879	24.0373	59.6204	-27.2528
B	(2.74, 23.1)	(2.75, 23.1)	4.15319	2.38088	-0.926866	-0.740253	2.44534

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
C	(2.75, 23.1)	(2.76, 23.4)	-88.6667	59.4421	23.4621	-58.8802	24.8386
					Self Weight (kN/m):		-0.0310858
					Sum:	0	0
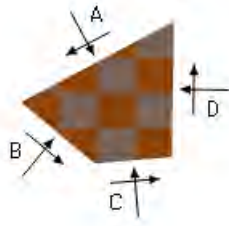
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.84, 22.9)	(1.38, 22.7)	152.14	134.292	-37.1756	95.6089	-101.368
B	(1.38, 22.7)	(1.6, 22.5)	39.7903	32.8433	13.4067	31.3234	16.6514
C	(1.6, 22.5)	(1.83, 22.5)	-4.87912	46.1539	-18.1487	-22.0124	44.4411
D	(1.83, 22.5)	(1.84, 22.9)	-89.1294	105.555	41.009	-104.92	42.6087
					Self Weight (kN/m):		-2.33366
					Sum:	0	0
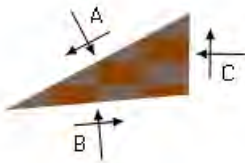
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.38, 22.7)	(0.92, 22.4)	152.149	147.055	-32.1856	97.1594	-114.983
B	(0.92, 22.4)	(1.38, 22.5)	-4.88376	99.5311	-38.9668	-47.2996	95.852
C	(1.38, 22.5)	(1.38, 22.7)	-89.3537	50.0831	19.499	-49.8599	20.063
					Self Weight (kN/m):		-0.932209
					Sum:	0	0
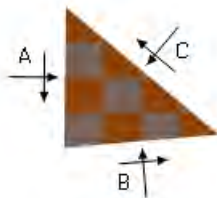
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.38, 22.7)	(1.38, 22.5)	90.6463	50.0831	19.499	49.8599	-20.063
B	(1.38, 22.5)	(1.6, 22.5)	-4.89779	38.6142	-15.3044	-18.5365	37.1709
C	(1.6, 22.5)	(1.38, 22.7)	-140.21	32.8433	13.4067	-31.3234	-16.6514

					Self Weight (kN/m):		-0.456454
					Sum:	0	0
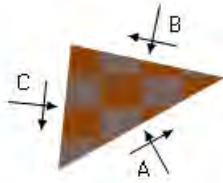
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 21.4)	(1.74, 21.6)	-29.1077	147.175	-40.7331	-107.175	108.781
B	(1.74, 21.6)	(1.34, 21.7)	-167.877	54.7899	-22.0829	10.0856	-58.2054
C	(1.34, 21.7)	(1.31, 21.4)	95.7762	101.552	39.204	97.0897	-49.227
					Self Weight (kN/m):		-1.34833
					Sum:	0	0
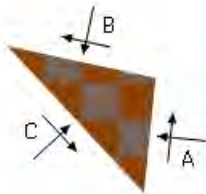
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 21.4)	(1.34, 21.7)	-84.2238	101.552	39.204	-97.0897	49.227
B	(1.34, 21.7)	(0.915, 21.8)	-167.876	75.4982	-29.8955	13.3755	-80.0926
C	(0.915, 21.8)	(1.31, 21.4)	47.0864	83.2911	33.3618	83.7142	32.2856
					Self Weight (kN/m):		-1.42004
					Sum:	0	0
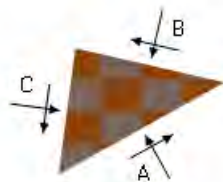
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.74, 21.6)	(2.18, 21.9)	-29.0976	149.77	-11.6521	-83.0278	125.192
B	(2.18, 21.9)	(1.78, 22)	-167.056	79.9592	-31.432	12.7409	-84.9653
C	(1.78, 22)	(1.74, 21.6)	97.6026	74.8147	29.2486	70.2869	-38.8904
					Self Weight (kN/m):		-1.3364

						Sum:	0	0
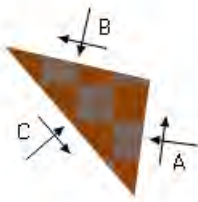
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.74, 21.6)	(1.78, 22)	-82.3974	74.8147	29.2486	-70.2869	38.8904
B	(1.78, 22)	(1.37, 22)	-167.072	54.2723	-21.9356	9.23378	-57.8048
C	(1.37, 22)	(1.74, 21.6)	49.2531	59.5186	24.4545	61.0532	20.3224
					Self Weight (kN/m):		-1.4081
					Sum:	0	0
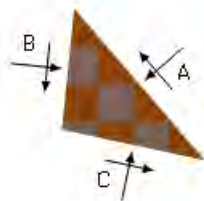
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.74, 21.6)	(1.37, 22)	-130.747	59.5186	24.4545	-61.0532	-20.3224
B	(1.37, 22)	(1.34, 21.7)	95.7773	74.4501	29.1407	71.1387	-36.4868
C	(1.34, 21.7)	(1.74, 21.6)	12.1226	54.7899	-22.0829	-10.0856	58.2054
					Self Weight (kN/m):		-1.39617
					Sum:	0	0
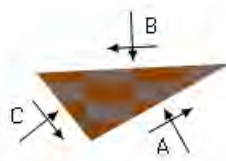
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 21.9)	(2.61, 22.1)	-29.1077	153.272	-23.6562	-95.2197	122.414
B	(2.61, 22.1)	(2, 22.1)	177.322	134.461	-52.5833	58.8134	-131.855
C	(2, 22.1)	(2.18, 21.9)	51.5055	35.2042	14.2258	36.4064	10.7836
					Self Weight (kN/m):		-1.34214
					Sum:	0	0
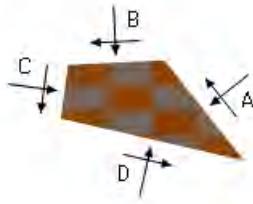
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 21.9)	(2, 22.1)	-128.494	35.2042	14.2258	-36.4064	-10.7836
B	(2, 22.1)	(1.8, 22.1)	177.323	62.0822	-23.9817	26.8585	-60.8929
C	(1.8, 22.1)	(1.78, 22)	97.6061	23.7298	9.31442	22.2887	-12.3723
D	(1.78, 22)	(2.18, 21.9)	12.9439	79.9592	-31.432	-12.7409	84.9653
					Self Weight (kN/m):		-0.916506
					Sum:	0	0
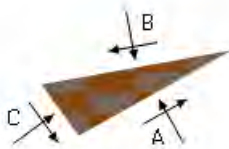
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.61, 22.1)	(3.05, 22.3)	-29.1077	123.763	-41.1513	-96.1528	88.1206
B	(3.05, 22.3)	(2.5, 22.3)	169.827	105.821	-41.6753	59.7097	-96.7973
C	(2.5, 22.3)	(2.61, 22.1)	53.8198	35.0599	13.7979	36.4431	9.56475
					Self Weight (kN/m):		-0.888031
					Sum:	0	0
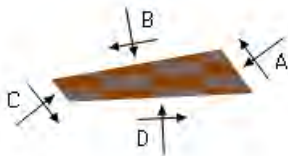
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.61, 22.1)	(2.5, 22.3)	-126.18	35.0599	13.7979	-36.4431	-9.56475
B	(2.5, 22.3)	(1.95, 22.2)	169.829	138.06	-53.7678	77.3059	-126.393
C	(1.95, 22.2)	(2, 22.1)	51.5072	17.4583	6.88782	17.9505	5.47843
D	(2, 22.1)	(2.61, 22.1)	-2.67763	134.461	-52.5833	-58.8134	131.855
					Self Weight (kN/m):		-1.37524
					Sum:	0	0
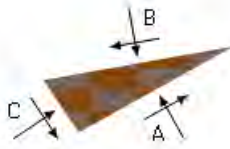
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.05, 22.3)	(3.48, 22.6)	-29.0976	109.334	-38.5172	-86.8332	76.7947
B	(3.48, 22.6)	(2.95, 22.5)	169.928	91.3254	-36.2368	51.6484	-83.5816
C	(2.95, 22.5)	(3.05, 22.3)	56.1782	33.5011	13.2069	35.1847	7.66696
					Self Weight (kN/m):		-0.880077
					Sum:	0	0
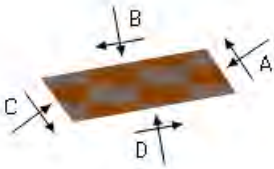
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.05, 22.3)	(2.95, 22.5)	-123.822	33.5011	13.2069	-35.1847	-7.66696
B	(2.95, 22.5)	(2.4, 22.4)	169.935	105.512	-41.5947	59.4046	-96.6127
C	(2.4, 22.4)	(2.5, 22.3)	53.808	34.1271	13.4586	35.4899	9.28782
D	(2.5, 22.3)	(3.05, 22.3)	-10.1729	105.821	-41.6753	-59.7097	96.7973
					Self Weight (kN/m):		-1.80547
					Sum:	0	0
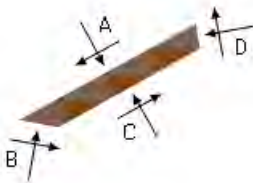
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.73, 25.5)	(4.12, 23.5)	151.423	603.796	-87.2218	365.411	-488.519
B	(4.12, 23.5)	(4.93, 23.4)	10.348	92.0709	-37.6357	-20.4862	97.3335
C	(4.93, 23.4)	(7.82, 25)	-29.1049	542.234	-92.9318	-344.937	428.571
D	(7.82, 25)	(7.73, 25.5)	-100.115	0.00256265	-0.0840531	0.0122371	-0.083197
					Self Weight (kN/m):		-37.3013
					Sum:	0	0
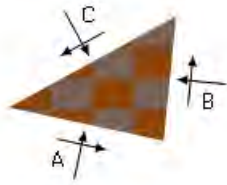
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.915, 21.8)	(1.34, 21.7)	12.124	75.4982	-29.8955	-13.3755	80.0926
B	(1.34, 21.7)	(1.37, 22)	-84.2227	74.4501	29.1407	-71.1387	36.4868
C	(1.37, 22)	(0.915, 21.8)	151.426	141.512	-19.1583	84.5142	-115.109
					Self Weight (kN/m):		-1.47042
					Sum:	0	0
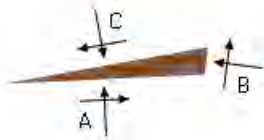
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.37, 22)	(1.8, 22.1)	-2.68193	71.089	-28.2292	-31.5225	69.6912
B	(1.8, 22.1)	(1.81, 22.1)	-82.3989	18.1347	6.9992	-17.0492	9.33713
C	(1.81, 22.1)	(1.37, 22)	169.827	86.1222	-33.8941	48.5717	-78.7822
					Self Weight (kN/m):		-0.246145
					Sum:	0	0
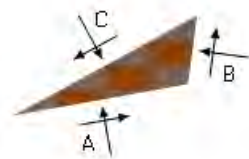
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.37, 22)	(1.81, 22.1)	-10.1726	86.1222	-33.8941	-48.5717	78.7822
B	(1.81, 22.1)	(1.83, 22.3)	-82.3944	67.6641	25.9328	-63.6379	34.6577
C	(1.83, 22.3)	(1.37, 22)	151.426	152.656	-44.6257	112.21	-112.713
					Self Weight (kN/m):		-0.726488
					Sum:	0	0
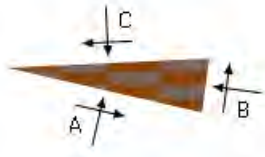
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.37, 22)	(1.78, 22)	12.9284	54.2723	-21.9356	-9.23378	57.8048
B	(1.78, 22)	(1.8, 22.1)	-82.3939	23.7298	9.31442	-22.2887	12.3723
C	(1.8, 22.1)	(1.37, 22)	177.318	71.089	-28.2292	31.5225	-69.6912
					Self Weight (kN/m):		-0.485859
					Sum:	0	0
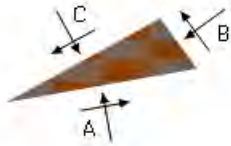
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.83, 22.3)	(2.4, 22.4)	-10.0732	137.693	-53.6664	-76.9177	126.187
B	(2.4, 22.4)	(2.29, 22.5)	-126.195	27.8095	11.111	-29.0049	-7.45242
C	(2.29, 22.5)	(1.83, 22.3)	151.426	154.101	-36.6796	105.923	-117.783
					Self Weight (kN/m):		-0.951167
					Sum:	0	0
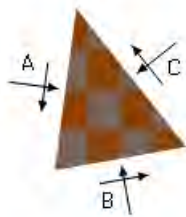
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.83, 22.3)	(1.81, 22.1)	97.6056	67.6641	25.9328	63.6379	-34.6577
B	(1.81, 22.1)	(1.95, 22.2)	-10.1816	50.0244	-19.2271	-27.7599	45.8422
C	(1.95, 22.2)	(1.83, 22.3)	-128.511	34.8956	13.7652	-35.8781	-10.9519
					Self Weight (kN/m):		-0.232633
					Sum:	0	0
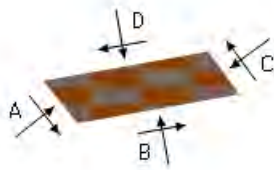
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.83, 22.3)	(1.95, 22.2)	51.4887	34.8956	13.7652	35.8781	10.9519
B	(1.95, 22.2)	(2.5, 22.3)	-10.1715	138.06	-53.7678	-77.3059	126.393
C	(2.5, 22.3)	(2.4, 22.4)	-126.192	34.1271	13.4586	-35.4899	-9.28782
D	(2.4, 22.4)	(1.83, 22.3)	169.927	137.693	-53.6664	76.9177	-126.187
					Self Weight (kN/m):		-1.87094
					Sum:	0	0
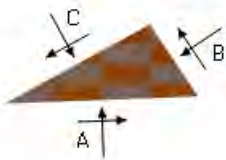
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.29, 22.5)	(2.9, 22.6)	-2.10489	101.355	-40.2496	-43.9432	99.8093
B	(2.9, 22.6)	(2.75, 22.8)	-123.802	28.6114	11.7654	-30.3197	-6.14401
C	(2.75, 22.8)	(2.29, 22.5)	151.416	116.533	-21.0905	74.2629	-92.2488
					Self Weight (kN/m):		-1.41649
					Sum:	0	0
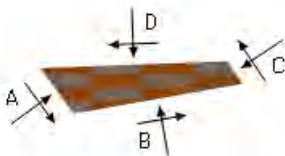
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.29, 22.5)	(2.4, 22.4)	53.8047	27.8095	11.111	29.0049	7.45242
B	(2.4, 22.4)	(2.95, 22.5)	-10.0653	105.512	-41.5947	-59.4046	96.6127
C	(2.95, 22.5)	(2.9, 22.6)	-123.796	12.8525	5.14783	-13.5435	-2.87403
D	(2.9, 22.6)	(2.29, 22.5)	177.895	101.355	-40.2496	43.9432	-99.8093
					Self Weight (kN/m):		-1.38174
					Sum:	0	0
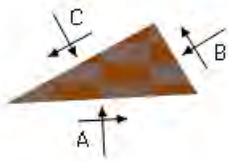
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.75, 22.8)	(3.34, 22.8)	-2.96474	86.3128	-34.5652	-38.984	84.409
B	(3.34, 22.8)	(3.2, 23)	-121.371	28.4645	11.6428	-30.3645	-4.87616
C	(3.2, 23)	(2.75, 22.8)	151.426	101.846	-23.4947	69.3486	-78.2004
					Self Weight (kN/m):		-1.33248
					Sum:	0	0
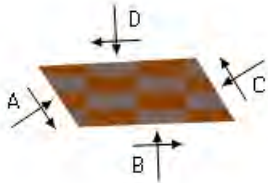
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.75, 22.8)	(2.9, 22.6)	56.1976	28.6114	11.7654	30.3197	6.14401
B	(2.9, 22.6)	(3.48, 22.6)	-2.10281	87.3582	-34.9216	-38.1049	86.0174
C	(3.48, 22.6)	(3.34, 22.8)	-121.362	29.2201	12.0062	-31.1989	-4.95915
D	(3.34, 22.8)	(2.75, 22.8)	177.035	86.3128	-34.5652	38.984	-84.409
					Self Weight (kN/m):		-2.79324
					Sum:	0	0
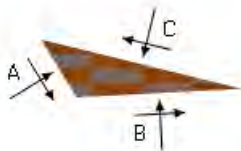
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.2, 23)	(3.34, 22.8)	58.6294	28.4645	11.6428	30.3645	4.87616
B	(3.34, 22.8)	(3.96, 22.9)	-2.96202	100.805	-40.113	-45.2741	98.5949
C	(3.96, 22.9)	(3.2, 23)	-166.224	95.5737	-38.7812	14.9096	-102.059
					Self Weight (kN/m):		-1.41216
					Sum:	0	0
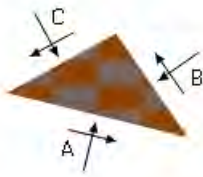
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.2, 23)	(3.96, 22.9)	13.7759	95.5737	-38.7812	-14.9096	102.059
B	(3.96, 22.9)	(3.66, 23.3)	-124.736	54.224	22.3474	-57.2939	-12.5321
C	(3.66, 23.3)	(3.2, 23)	151.426	110.748	-21.8969	72.2035	-86.7821
					Self Weight (kN/m):		-2.74464
					Sum:	0	0
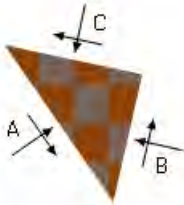
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.66, 23.3)	(3.96, 22.9)	55.264	54.224	22.3474	57.2939	12.5321
B	(3.96, 22.9)	(4.04, 23.2)	-77.1903	75.6714	29.6811	-67.2079	45.7191
C	(4.04, 23.2)	(3.66, 23.3)	-167.982	53.5221	-21.53	9.91392	-56.832
					Self Weight (kN/m):		-1.41918
					Sum:	0	0
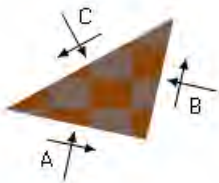
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.66, 23.3)	(4.04, 23.2)	12.0176	53.5221	-21.53	-9.91392	56.832
B	(4.04, 23.2)	(4.12, 23.5)	-77.1902	63.3328	24.9823	-56.2181	38.4018
C	(4.12, 23.5)	(3.66, 23.3)	151.426	114.101	-13.1563	66.132	-93.9083
					Self Weight (kN/m):		-1.32547
					Sum:	0	0
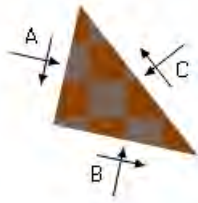
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.12, 23.5)	(4.04, 23.2)	102.81	63.3328	24.9823	56.2181	-38.4018
B	(4.04, 23.2)	(4.44, 23.1)	12.0132	49.5329	-20.1212	-9.3666	52.6368
C	(4.44, 23.1)	(4.12, 23.5)	-128.13	44.7849	18.8229	-46.8515	-12.8424
					Self Weight (kN/m):		-1.39271
					Sum:	0	0
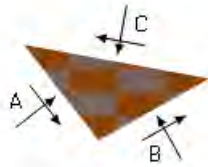
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.12, 23.5)	(4.44, 23.1)	51.8697	44.7849	18.8229	46.8515	12.8424
B	(4.44, 23.1)	(4.93, 23.4)	-29.0975	109.096	-16.337	-67.3376	87.375
C	(4.93, 23.4)	(4.12, 23.5)	-169.652	92.0709	-37.6357	20.4862	-97.3335
					Self Weight (kN/m):		-2.88389
					Sum:	0	0
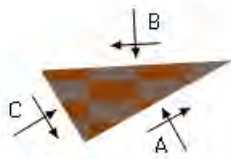
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.48, 22.6)	(3.96, 22.9)	-29.1065	120.341	-20.5322	-76.473	95.1604
B	(3.96, 22.9)	(3.34, 22.8)	177.038	100.805	-40.113	45.2741	-98.5949
C	(3.34, 22.8)	(3.48, 22.6)	58.6382	29.2201	12.0062	31.1989	4.95915
					Self Weight (kN/m):		-1.52465
					Sum:	0	0
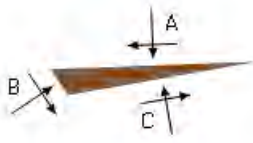
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.48, 22.6)	(2.9, 22.6)	177.897	87.3582	-34.9216	38.1049	-86.0174
B	(2.9, 22.6)	(2.95, 22.5)	56.2038	12.8525	5.14783	13.5435	2.87403
C	(2.95, 22.5)	(3.48, 22.6)	-10.0723	91.3254	-36.2368	-51.6484	83.5816
					Self Weight (kN/m):		-0.438195
					Sum:	0	0
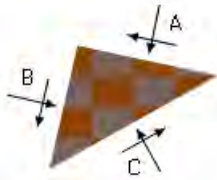
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.44, 23.1)	(4.04, 23.2)	-167.987	49.5329	-20.1212	9.3666	-52.6368
B	(4.04, 23.2)	(3.96, 22.9)	102.81	75.6714	29.6811	67.2079	-45.7191
C	(3.96, 22.9)	(4.44, 23.1)	-29.106	124.486	-18.3412	-76.5745	99.8471
					Self Weight (kN/m):		-1.49118
					Sum:	0	0
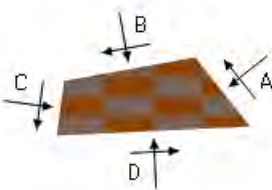
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2, 22.1)	(1.95, 22.2)	-128.493	17.4583	6.88782	-17.9505	-5.47843
B	(1.95, 22.2)	(1.81, 22.1)	169.818	50.0244	-19.2271	27.7599	-45.8422
C	(1.81, 22.1)	(1.8, 22.1)	97.6011	18.1347	6.9992	17.0492	-9.33713
D	(1.8, 22.1)	(2, 22.1)	-2.67712	62.0822	-23.9817	-26.8585	60.8929
					Self Weight (kN/m):		-0.235089
					Sum:	0	0
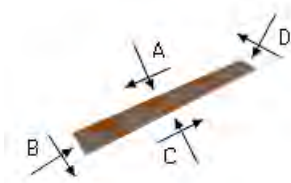
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(6.95, 27.9)	(2.92, 26.1)	156.476	305.396	-35.678	154.608	-265.775
B	(2.92, 26.1)	(3.25, 25.6)	57.1927	48.8877	20.7301	52.3218	9.06512
C	(3.25, 25.6)	(7.35, 27.6)	-26.7608	361.722	-49.2868	-206.883	300.785
D	(7.35, 27.6)	(6.95, 27.9)	-151.526	-0.000566746	0.0539964	-0.0471967	0.0262376
					Self Weight (kN/m):		-44.102
					Sum:	0	0
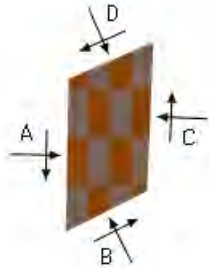
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.482, 25)	(0.465, 24.2)	91.1523	99.7774	40.7055	98.9386	-42.7039
B	(0.465, 24.2)	(0.93, 24.4)	-26.7563	101.327	-2.96714	-48.2744	89.1376
C	(0.93, 24.4)	(0.965, 25.2)	-87.6299	78.827	32.7944	-77.4033	36.0263
D	(0.965, 25.2)	(0.482, 25)	156.477	78.9288	5.1963	26.739	-74.4431
					Self Weight (kN/m):		-8.01691
					Sum:	0	0
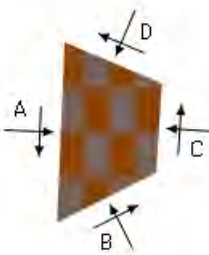
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.965, 25.2)	(0.93, 24.4)	92.3701	78.827	32.7944	77.4033	-36.0263
B	(0.93, 24.4)	(1.39, 24.6)	-26.7661	79.299	8.40054	-28.2057	74.5878
C	(1.39, 24.6)	(1.42, 25.1)	-86.342	50.0863	20.365	-48.6849	23.5192
D	(1.42, 25.1)	(0.965, 25.2)	-157.122	52.0374	-21.395	-0.512644	-56.2616
					Self Weight (kN/m):		-5.81904

						Sum:	0	0
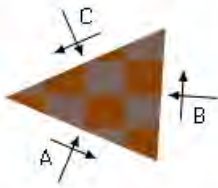
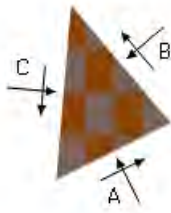| Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.965, 25.2)	(1.42, 25.1)	22.8776	52.0374	-21.395	0.512644	56.2616
B	(1.42, 25.1)	(1.45, 25.5)	-86.3413	68.4532	27.1501	-66.5814	31.4623
C	(1.45, 25.5)	(0.965, 25.2)	156.477	105.072	-26.3177	66.0688	-85.8354
					Self Weight (kN/m):		-1.88846
					Sum:	0	0
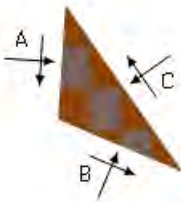
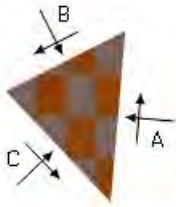| Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.45, 25.5)	(1.42, 25.1)	93.6587	68.4532	27.1501	66.5814	-31.4623
B	(1.42, 25.1)	(1.86, 24.9)	22.8706	44.2345	-18.4035	0.236171	47.9095
C	(1.86, 24.9)	(1.45, 25.5)	-125.065	63.0978	26.4094	-66.8176	-14.6356
					Self Weight (kN/m):		-1.81164
					Sum:	0	0
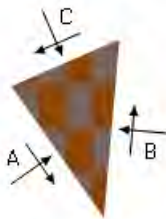
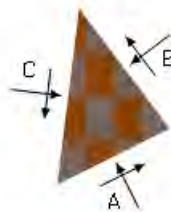| Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.45, 25.5)	(1.86, 24.9)	54.9354	63.0978	26.4094	66.8176	14.6356
B	(1.86, 24.9)	(1.93, 25.7)	-84.9795	92.8274	37.8311	-89.1602	45.8102
C	(1.93, 25.7)	(1.45, 25.5)	156.476	60.9474	2.1636	22.3426	-56.7457
					Self Weight (kN/m):		-3.70011
					Sum:	0	0
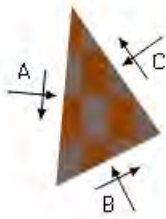
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.93, 25.7)	(1.86, 24.9)	95.0205	92.8274	37.8311	89.1602	-45.8102
B	(1.86, 24.9)	(2.32, 25.1)	-26.7663	67.6524	7.14174	-24.0855	63.6219
C	(2.32, 25.1)	(1.93, 25.7)	-125.043	61.4713	25.6824	-65.0747	-14.2684
					Self Weight (kN/m):		-3.5433
					Sum:	0	0
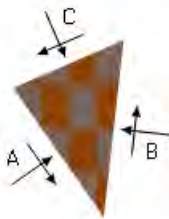
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.93, 25.7)	(2.32, 25.1)	54.9568	61.4713	25.6824	65.0747	14.2684
B	(2.32, 25.1)	(2.41, 25.9)	-83.536	74.048	30.7352	-70.1173	38.8757
C	(2.41, 25.9)	(1.93, 25.7)	156.477	47.4893	15.1732	5.04258	-49.5987
					Self Weight (kN/m):		-3.54541
					Sum:	0	0
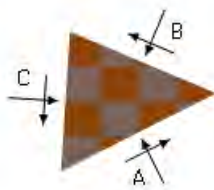
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.39, 24.6)	(1.86, 24.9)	-26.7565	87.2775	-10.2474	-48.4488	73.3151
B	(1.86, 24.9)	(1.42, 25.1)	-157.129	44.2345	-18.4035	-0.236171	-47.9095
C	(1.42, 25.1)	(1.39, 24.6)	93.658	50.0863	20.365	48.6849	-23.5192
					Self Weight (kN/m):		-1.88635
					Sum:	0	0
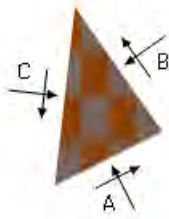
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.32, 25.1)	(2.79, 25.3)	-26.7565	60.3297	-13.716	-39.4119	47.6918
B	(2.79, 25.3)	(2.41, 25.9)	-125.014	28.262	13.1735	-30.7054	-5.42749
C	(2.41, 25.9)	(2.32, 25.1)	96.464	74.048	30.7352	70.1173	-38.8757
					Self Weight (kN/m):		-3.38859
					Sum:	0	0
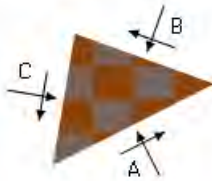
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 25.3)	(3.25, 25.6)	-26.7658	74.4776	-1.39029	-34.7768	65.8742
B	(3.25, 25.6)	(2.85, 25.7)	-160.144	40.4196	-16.7848	2.05931	-43.7177
C	(2.85, 25.7)	(2.79, 25.3)	99.5265	35.6663	14.8437	32.7175	-20.5422
					Self Weight (kN/m):		-1.61434
					Sum:	0	0
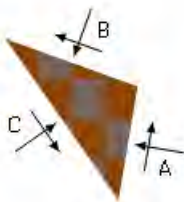
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 25.3)	(2.85, 25.7)	-80.4735	35.6663	14.8437	-32.7175	20.5422
B	(2.85, 25.7)	(2.41, 25.9)	-160.151	22.0739	-10.11	2.01209	-24.1955
C	(2.41, 25.9)	(2.79, 25.3)	54.9859	28.262	13.1735	30.7054	5.42749
					Self Weight (kN/m):		-1.77425
					Sum:	0	0
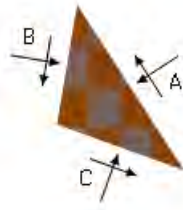
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.25, 25.6)	(2.92, 26.1)	-122.807	48.8877	20.7301	-52.3218	-9.06512
B	(2.92, 26.1)	(2.85, 25.7)	99.527	59.0996	23.5836	54.3811	-33.0401
C	(2.85, 25.7)	(3.25, 25.6)	19.8557	40.4196	-16.7848	-2.05931	43.7177
					Self Weight (kN/m):		-1.61245
					Sum:	0	0
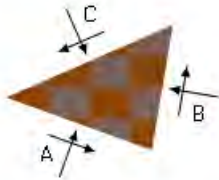
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.41, 25.9)	(2.85, 25.7)	19.8495	22.0739	-10.11	-2.01209	24.1955
B	(2.85, 25.7)	(2.92, 26.1)	-80.473	59.0996	23.5836	-54.3811	33.0401
C	(2.92, 26.1)	(2.41, 25.9)	156.472	73.3625	-29.5689	56.3932	-55.4634
					Self Weight (kN/m):		-1.77217
					Sum:	0	0
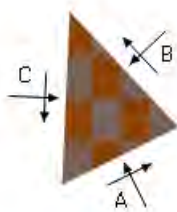
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.437, 23.5)	(0.873, 23.7)	-26.3852	112.369	-13.8486	-62.3442	94.508
B	(0.873, 23.7)	(0.465, 24.2)	-133.473	76.4535	30.8946	-76.7375	-30.1823
C	(0.465, 24.2)	(0.437, 23.5)	92.5027	141.637	55.4288	139.082	-61.5608
					Self Weight (kN/m):		-2.76489
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.873, 23.7)	(1.31, 24)	-26.3853	102.827	-9.69094	-54.3789	87.8076
B	(1.31, 24)	(0.93, 24.4)	-130.276	68.8299	28.0282	-70.6329	-23.1112
C	(0.93, 24.4)	(0.873, 23.7)	94.8628	129.81	51.0953	125.012	-61.9149
					Self Weight (kN/m):		-2.78153
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.873, 23.7)	(0.93, 24.4)	-85.1372	129.81	51.0953	-125.012	61.9149
B	(0.93, 24.4)	(0.465, 24.2)	153.244	101.327	-2.96714	48.2744	-89.1376
C	(0.465, 24.2)	(0.873, 23.7)	46.5273	76.4535	30.8946	76.7375	30.1823
					Self Weight (kN/m):		-2.95961
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 24)	(1.75, 24.2)	-26.3853	83.3122	-7.18122	-43.4582	71.4414
B	(1.75, 24.2)	(1.39, 24.6)	-127.022	52.7594	22.0183	-55.3805	-14.1904
C	(1.39, 24.6)	(1.31, 24)	97.0841	104.8	41.848	98.8386	-54.4529
					Self Weight (kN/m):		-2.79816
					Sum:	0	0
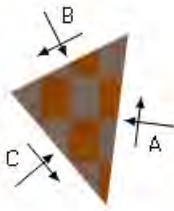
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 24)	(1.39, 24.6)	-82.9159	104.8	41.848	-98.8386	54.4529
B	(1.39, 24.6)	(0.93, 24.4)	153.234	79.299	8.40054	28.2057	-74.5878
C	(0.93, 24.4)	(1.31, 24)	49.7238	68.8299	28.0282	70.6329	23.1112
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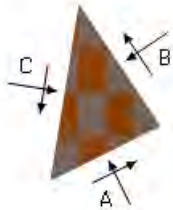
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.75, 24.2)	(2.18, 24.4)	-26.3853	88.3917	-5.37972	-44.1018	76.7924
B	(2.18, 24.4)	(1.86, 24.9)	-123.743	56.2536	23.3144	-59.7275	-11.86
C	(1.86, 24.9)	(1.75, 24.2)	99.1733	112.404	44.7714	103.829	-62.1176
					Self Weight (kN/m):		-2.8148
					Sum:	0	0
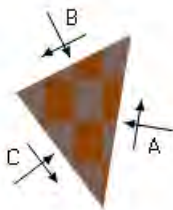
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.75, 24.2)	(1.86, 24.9)	-80.8267	112.404	44.7714	-103.829	62.1176
B	(1.86, 24.9)	(1.39, 24.6)	153.244	87.2775	-10.2474	48.4488	-73.3151
C	(1.39, 24.6)	(1.75, 24.2)	52.9779	52.7594	22.0183	55.3805	14.1904
					Self Weight (kN/m):		-2.99288
					Sum:	0	0
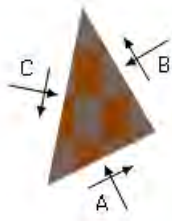
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.62, 24.6)	-26.3853	78.8081	-23.0817	-55.7005	60.3402
B	(2.62, 24.6)	(2.32, 25.1)	-120.449	25.6219	11.8877	-28.1124	-2.73738
C	(2.32, 25.1)	(2.18, 24.4)	101.135	92.813	37.5533	83.8129	-54.7713
					Self Weight (kN/m):		-2.83143
					Sum:	0	0
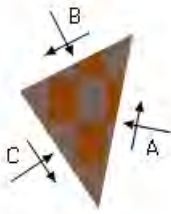
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.32, 25.1)	-78.8649	92.813	37.5533	-83.8129	54.7713
B	(2.32, 25.1)	(1.86, 24.9)	153.234	67.6524	7.14174	24.0855	-63.6219
C	(1.86, 24.9)	(2.18, 24.4)	56.2567	56.2536	23.3144	59.7275	11.86
					Self Weight (kN/m):		-3.00951
					Sum:	0	0
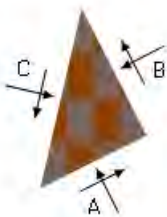
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.62, 24.6)	(3.06, 24.8)	-26.3853	55.8236	10.7497	-15.179	54.7853
B	(3.06, 24.8)	(2.79, 25.3)	-117.172	48.3754	20.3838	-52.3453	-3.95663
C	(2.79, 25.3)	(2.62, 24.6)	102.979	76.5753	31.5894	67.5243	-47.9806
					Self Weight (kN/m):		-2.84807
					Sum:	0	0
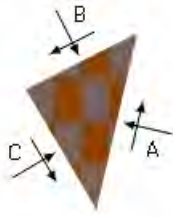
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.62, 24.6)	(2.79, 25.3)	-77.021	76.5753	31.5894	-67.5243	47.9806
B	(2.79, 25.3)	(2.32, 25.1)	153.244	60.3297	-13.716	39.4119	-47.6918
C	(2.32, 25.1)	(2.62, 24.6)	59.5508	25.6219	11.8877	28.1124	2.73738
					Self Weight (kN/m):		-3.02615
					Sum:	0	0
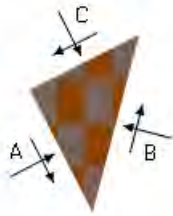
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 25.3)	(3.06, 24.8)	62.8281	48.3754	20.3838	52.3453	3.95663
B	(3.06, 24.8)	(3.25, 25.6)	-75.2903	100.762	40.7085	-87.1221	64.9604
C	(3.25, 25.6)	(2.79, 25.3)	153.234	74.4776	-1.39029	34.7768	-65.8742
					Self Weight (kN/m):		-3.04278
					Sum:	0	0
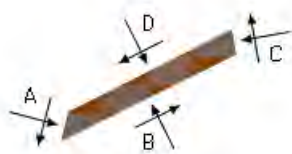
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.25, 25.6)	(3.06, 24.8)	104.71	100.762	40.7085	87.1221	-64.9604
B	(3.06, 24.8)	(7.46, 27)	-26.3857	509.648	-75.3802	-294.022	423.054
C	(7.46, 27)	(7.35, 27.6)	-100.114	0.00160867	-0.104264	0.0167253	-0.102926
D	(7.35, 27.6)	(3.25, 25.6)	153.239	361.724	-49.2868	206.883	-300.787
					Self Weight (kN/m):		-57.2043
					Sum:	0	0
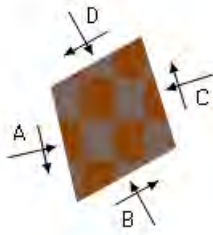
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 21.4)	(1.43, 20.8)	77.247	172.603	66.6675	183.061	-26.923
B	(1.43, 20.8)	(1.91, 21.1)	-29.0214	175.267	-46.5468	-125.725	130.685
C	(1.91, 21.1)	(1.74, 21.6)	-107.456	153.719	59.58	-164.512	10.7267
D	(1.74, 21.6)	(1.31, 21.4)	150.892	147.175	-40.7331	107.175	-108.781
					Self Weight (kN/m):		-5.70823
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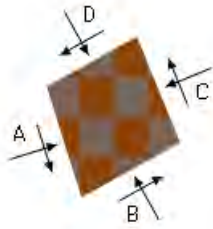
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.74, 21.6)	(1.91, 21.1)	72.5437	153.719	59.58	164.512	-10.7267
B	(1.91, 21.1)	(2.38, 21.4)	-29.0123	191.406	-49.9424	-136.523	143.151
C	(2.38, 21.4)	(2.18, 21.9)	-112.309	103.283	40.7381	-111.017	-1.51569
D	(2.18, 21.9)	(1.74, 21.6)	150.902	149.77	-11.6521	83.0278	-125.192
					Self Weight (kN/m):		-5.7163
					Sum:	0	0
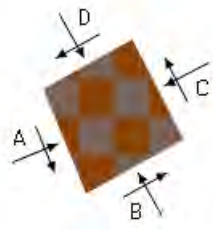
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 21.9)	(2.38, 21.4)	67.6908	103.283	40.7381	111.017	1.51569
B	(2.38, 21.4)	(2.86, 21.6)	-29.022	170.213	-25.1352	-104.549	136.652
C	(2.86, 21.6)	(2.61, 22.1)	-117.246	94.9974	37.6358	-101.688	-10.0301
D	(2.61, 22.1)	(2.18, 21.9)	150.892	153.272	-23.6562	95.2197	-122.414
					Self Weight (kN/m):		-5.72438

						Sum:	0	0
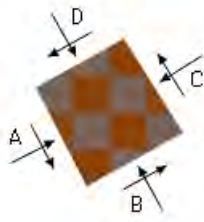
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.61, 22.1)	(2.86, 21.6)	62.7539	94.9974	37.6358	101.688	10.0301
B	(2.86, 21.6)	(3.34, 21.9)	-29.0214	132.896	-22.3597	-84.0196	105.366
C	(3.34, 21.9)	(3.05, 22.3)	-122.197	107.797	42.4159	-113.821	-21.5431
D	(3.05, 22.3)	(2.61, 22.1)	150.892	123.763	-41.1513	96.1528	-88.1206
					Self Weight (kN/m):		-5.73246
					Sum:	0	0
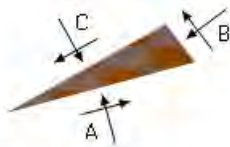
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.05, 22.3)	(3.56, 22.5)	-15.0605	97.5418	-38.5151	-62.5367	84.1841
B	(3.56, 22.5)	(3.48, 22.6)	-127.104	23.4503	9.26936	-24.2965	-6.74686
C	(3.48, 22.6)	(3.05, 22.3)	150.902	109.334	-38.5172	86.8332	-76.7947
					Self Weight (kN/m):		-0.642574
					Sum:	0	0
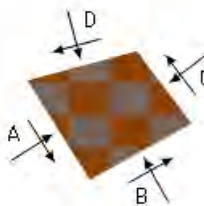
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.05, 22.3)	(3.34, 21.9)	57.8032	107.797	42.4159	113.821	21.5431
B	(3.34, 21.9)	(3.82, 22.1)	-29.0123	122.109	-25.5647	-81.5895	94.3781
C	(3.82, 22.1)	(3.56, 22.5)	-127.082	91.6623	35.8973	-94.7679	-26.639
D	(3.56, 22.5)	(3.05, 22.3)	164.94	97.5418	-38.5151	62.5367	-84.1841
					Self Weight (kN/m):		-5.09796

						Sum:	0	0
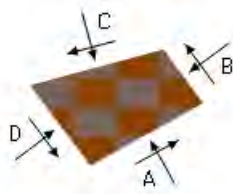
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.82, 22.1)	(4.29, 22.4)	-29.022	125.94	-41.6447	-97.5092	89.9278
B	(4.29, 22.4)	(4.12, 22.6)	-126.401	65.0687	25.4036	-67.4468	-18.1719
C	(4.12, 22.6)	(3.56, 22.5)	164.94	109.543	-43.2092	70.188	-94.5536
D	(3.56, 22.5)	(3.82, 22.1)	52.9175	91.6623	35.8973	94.7679	26.639
					Self Weight (kN/m):		-3.84131
					Sum:	0	0
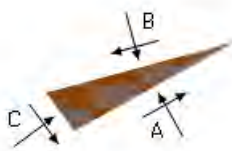
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.29, 22.4)	(5.25, 22.9)	-29.0168	247.407	-96.6572	-204.538	169.46
B	(5.25, 22.9)	(4.12, 22.6)	164.943	213.857	-84.4242	137.092	-184.576
C	(4.12, 22.6)	(4.29, 22.4)	53.599	65.0687	25.4036	67.4468	18.1719
					Self Weight (kN/m):		-3.05587
					Sum:	0	0
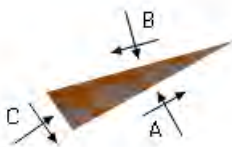
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.25, 22.9)	(5.72, 23.2)	-29.0214	195.978	-47.8535	-136.914	148.162
B	(5.72, 23.2)	(5.17, 23.1)	164.673	177.529	-68.5312	113.014	-153.105
C	(5.17, 23.1)	(5.25, 22.9)	54.9601	22.8328	9.06631	23.8997	5.68694
					Self Weight (kN/m):		-0.743899
					Sum:	0	0
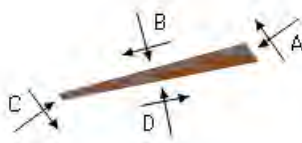
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.25, 22.9)	(5.17, 23.1)	-125.04	22.8328	9.06631	-23.8997	-5.68694
B	(5.17, 23.1)	(4.05, 22.7)	164.676	212.02	-83.7445	136.802	-182.348
C	(4.05, 22.7)	(4.07, 22.7)	53.5739	7.93561	3.14634	8.25422	2.17742
D	(4.07, 22.7)	(5.25, 22.9)	-11.21	207.835	-82.3139	-121.156	187.862
					Self Weight (kN/m):		-2.00435
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.25, 22.9)	(4.07, 22.7)	168.79	207.835	-82.3139	121.156	-187.862
B	(4.07, 22.7)	(4.12, 22.6)	53.5906	15.3286	6.06278	15.9353	4.21785
C	(4.12, 22.6)	(5.25, 22.9)	-15.0567	213.857	-84.4242	-137.092	184.576
					Self Weight (kN/m):		-0.931628
					Sum:	0	0
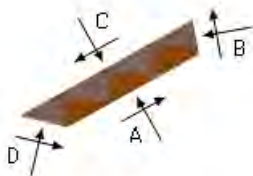
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.72, 23.2)	(7.92, 24.4)	-29.0177	402.115	-57.6117	-245.443	323.687
B	(7.92, 24.4)	(7.82, 25)	-100.112	0.00147495	-0.0955446	0.0153258	-0.094319
C	(7.82, 25)	(4.93, 23.4)	150.895	536.144	-10.1375	269.634	-463.519
D	(4.93, 23.4)	(5.72, 23.2)	13.4688	161.935	-63.6841	-24.2068	172.315
					Self Weight (kN/m):		-32.3888
					Sum:	0	0
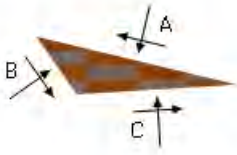
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.72, 23.2)	(4.93, 23.4)	-166.531	161.935	-63.6841	24.2068	-172.315
B	(4.93, 23.4)	(5.09, 23.2)	54.951	48.0239	19.0357	50.2487	11.9885
C	(5.09, 23.2)	(5.72, 23.2)	-3.47651	166.066	-64.4965	-74.4555	161.846
					Self Weight (kN/m):		-1.51949
					Sum:	0	0
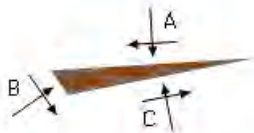
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.72, 23.2)	(5.09, 23.2)	176.523	166.066	-64.4965	74.4555	-161.846
B	(5.09, 23.2)	(5.14, 23.1)	54.9776	23.3138	9.06766	24.2943	5.96201
C	(5.14, 23.1)	(5.72, 23.2)	-11.1264	172.5	-66.7237	-98.7498	156.387
					Self Weight (kN/m):		-0.502412
					Sum:	0	0
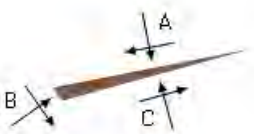
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.72, 23.2)	(5.14, 23.1)	168.874	172.5	-66.7237	98.7498	-156.387
B	(5.14, 23.1)	(5.17, 23.1)	54.9571	13.7067	5.29792	14.264	3.53231
C	(5.17, 23.1)	(5.72, 23.2)	-15.3272	177.529	-68.5312	-113.014	153.105
					Self Weight (kN/m):		-0.250447
					Sum:	0	0
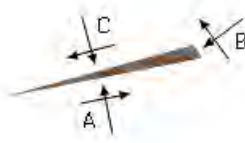
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.48, 22.6)	(4.07, 22.7)	-11.2173	106.095	-41.9983	-61.8268	95.903
B	(4.07, 22.7)	(4.05, 22.7)	-126.426	7.93561	3.14634	-8.25422	-2.17742
C	(4.05, 22.7)	(3.48, 22.6)	164.673	108.669	-42.8856	70.081	-93.471
					Self Weight (kN/m):		-0.254576
					Sum:	0	0
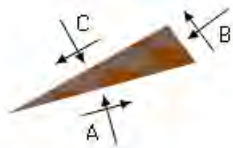
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.48, 22.6)	(4.05, 22.7)	-15.3273	108.669	-42.8856	-70.081	93.471
B	(4.05, 22.7)	(3.96, 22.9)	-126.405	30.7076	12.0189	-31.8479	-8.55142
C	(3.96, 22.9)	(3.48, 22.6)	150.893	123.101	-48.1303	101.929	-84.1482
					Self Weight (kN/m):		-0.771375
					Sum:	0	0
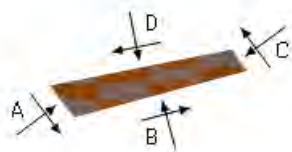
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.48, 22.6)	(3.56, 22.5)	52.8961	23.4503	9.26936	24.2965	6.74686
B	(3.56, 22.5)	(4.12, 22.6)	-15.0602	109.543	-43.2092	-70.188	94.5536
C	(4.12, 22.6)	(4.07, 22.7)	-126.409	15.3286	6.06278	-15.9353	-4.21785
D	(4.07, 22.7)	(3.48, 22.6)	168.783	106.095	-41.9983	61.8268	-95.903
					Self Weight (kN/m):		-1.17966
					Sum:	0	0
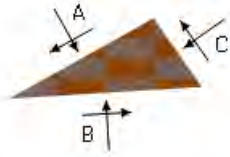
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.93, 23.4)	(4.44, 23.1)	150.903	111.855	-43.9351	92.7936	-76.3628
B	(4.44, 23.1)	(5.09, 23.2)	-3.47915	92.3056	-37.0115	-42.5449	89.8894
C	(5.09, 23.2)	(4.93, 23.4)	-125.049	48.0239	19.0357	-50.2487	-11.9885
					Self Weight (kN/m):		-1.53803
					Sum:	0	0
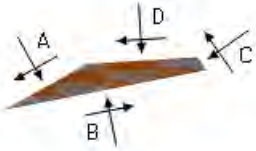
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.44, 23.1)	(3.96, 22.9)	150.894	125.06	-45.9393	100.967	-86.9252
B	(3.96, 22.9)	(5.14, 23.1)	-11.122	204.85	-81.2231	-119.218	185.332
C	(5.14, 23.1)	(5.09, 23.2)	-125.022	23.3138	9.06766	-24.2943	-5.96201
D	(5.09, 23.2)	(4.44, 23.1)	176.521	92.3056	-37.0115	42.5449	-89.8894
					Self Weight (kN/m):		-2.55511
					Sum:	0	0
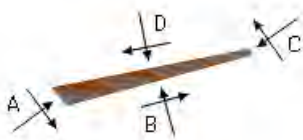
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.96, 22.9)	(4.05, 22.7)	53.5953	30.7076	12.0189	31.8479	8.55142
B	(4.05, 22.7)	(5.17, 23.1)	-15.3237	212.02	-83.7445	-136.802	182.348
C	(5.17, 23.1)	(5.14, 23.1)	-125.043	13.7067	5.29792	-14.264	-3.53231
D	(5.14, 23.1)	(3.96, 22.9)	168.878	204.85	-81.2231	119.218	-185.332
					Self Weight (kN/m):		-2.03571
					Sum:	0	0
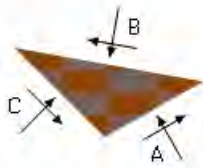
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.86, 20.4)	(2.33, 20.7)	-29.6367	182.288	-70.1454	-151.098	123.769
B	(2.33, 20.7)	(1.43, 20.8)	-169.887	163.552	-64.6619	34.9375	-172.365
C	(1.43, 20.8)	(1.86, 20.4)	44.519	118.323	46.5654	116.161	51.7226
					Self Weight (kN/m):		-3.12596
					Sum:	0	0
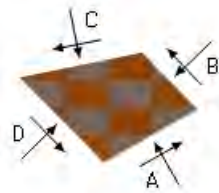
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.33, 20.7)	(2.79, 20.9)	-29.6268	192.474	-11.0169	-104.738	161.856
B	(2.79, 20.9)	(2.52, 21.2)	-134.022	88.5578	34.6182	-87.738	-36.6462
C	(2.52, 21.2)	(1.91, 21.1)	168.505	175.664	-68.0296	101.689	-158.572
D	(1.91, 21.1)	(2.33, 20.7)	45.2397	91.6005	36.5642	90.7871	38.5396
					Self Weight (kN/m):		-5.17826
					Sum:	0	0
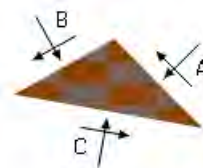
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.33, 20.7)	(1.91, 21.1)	-134.76	91.6005	36.5642	-90.7871	-38.5396
B	(1.91, 21.1)	(1.43, 20.8)	150.979	175.267	-46.5468	125.725	-130.685
C	(1.43, 20.8)	(2.33, 20.7)	10.1129	163.552	-64.6619	-34.9375	172.365
					Self Weight (kN/m):		-3.14041
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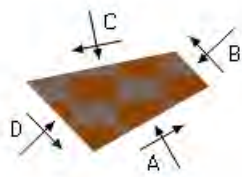
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.79, 20.9)	(3.26, 21.2)	-29.6367	178.567	-57.8827	-138.599	126.597
B	(3.26, 21.2)	(3.13, 21.3)	-133.262	41.5553	16.2865	-41.4246	-16.6163
C	(3.13, 21.3)	(2.52, 21.2)	168.495	159.061	-61.8117	92.286	-143.542
D	(2.52, 21.2)	(2.79, 20.9)	45.9783	88.5578	34.6182	87.738	36.6462
					Self Weight (kN/m):		-3.08455
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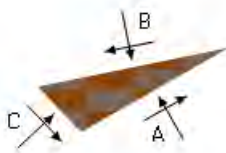
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.26, 21.2)	(3.73, 21.5)	-29.6274	141.616	-51.4906	-114.774	97.638
B	(3.73, 21.5)	(3.13, 21.3)	168.501	125.585	-49.2988	73.3494	-113.233
C	(3.13, 21.3)	(3.26, 21.2)	46.7378	41.5553	16.2865	41.4246	16.6163
					Self Weight (kN/m):		-1.02131
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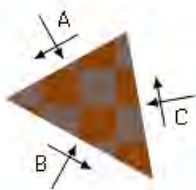
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.92, 24.4)	(7.49, 24.2)	150.991	11.3013	6.18743	0.0714856	-12.884
B	(7.49, 24.2)	(8.02, 23.9)	28.6938	13.3882	-7.38788	-0.053456	15.2913
C	(8.02, 23.9)	(7.92, 24.4)	-100.115	0.00267349	0.0876849	-0.0180296	0.0858529
					Self Weight (kN/m):		-2.49313
					Sum:	0	0
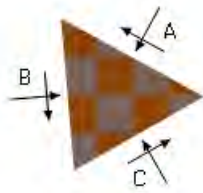
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(8.02, 23.9)	(7.49, 24.2)	-151.306	13.3882	-7.38788	0.053456	-15.2913
B	(7.49, 24.2)	(7.54, 23.6)	85.0827	39.6983	17.0515	41.0139	-13.5858
C	(7.54, 23.6)	(8.02, 23.9)	-29.6283	47.8332	-20.0383	-41.0673	31.6706
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					Sum:	0	0
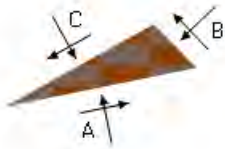
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.91, 21.1)	(2.52, 21.2)	-11.495	175.664	-68.0296	-101.689	158.572
B	(2.52, 21.2)	(2.38, 21.4)	-134.018	35.0518	13.8547	-34.8333	-14.3951
C	(2.38, 21.4)	(1.91, 21.1)	150.988	191.406	-49.9424	136.523	-143.151
					Self Weight (kN/m):		-1.0256
					Sum:	0	0
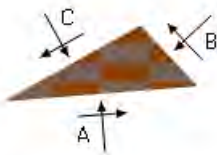
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.38, 21.4)	(3.06, 21.4)	-4.50066	155.607	-60.7604	-72.7697	150.366
B	(3.06, 21.4)	(2.86, 21.6)	-133.262	31.4902	12.9085	-31.7795	-12.1789
C	(2.86, 21.6)	(2.38, 21.4)	150.978	170.213	-25.1352	104.549	-136.652
					Self Weight (kN/m):		-1.53472
					Sum:	0	0
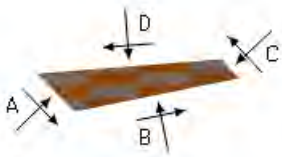
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.38, 21.4)	(2.52, 21.2)	45.9823	35.0518	13.8547	34.8333	14.3951
B	(2.52, 21.2)	(3.13, 21.3)	-11.5052	159.061	-61.8117	-92.286	143.542
C	(3.13, 21.3)	(3.06, 21.4)	-133.249	15.3005	6.09103	-15.317	-6.04931
D	(3.06, 21.4)	(2.38, 21.4)	175.499	155.607	-60.7604	72.7697	-150.366
					Self Weight (kN/m):		-1.52209
					Sum:	0	0
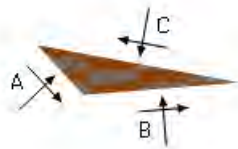
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.86, 21.6)	(3.06, 21.4)	46.7378	31.4902	12.9085	31.7795	12.1789
B	(3.06, 21.4)	(3.73, 21.5)	-4.49121	122.966	-48.5437	-58.0323	118.783
C	(3.73, 21.5)	(2.86, 21.6)	-169.576	122.565	-49.2394	26.2528	-129.45
					Self Weight (kN/m):		-1.51193
					Sum:	0	0
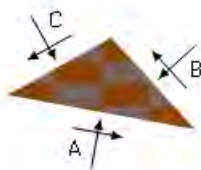
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.86, 21.6)	(3.73, 21.5)	10.4244	122.565	-49.2394	-26.2528	129.45
B	(3.73, 21.5)	(3.34, 21.9)	-132.471	56.8132	23.4915	-57.7668	-21.0377
C	(3.34, 21.9)	(2.86, 21.6)	150.979	132.896	-22.3597	84.0196	-105.366
					Self Weight (kN/m):		-3.04666
					Sum:	0	0
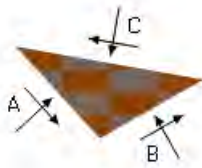
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.34, 21.9)	(3.73, 21.5)	47.5286	56.8132	23.4915	57.7668	21.0377
B	(3.73, 21.5)	(4.2, 21.7)	-29.6283	128.321	-22.4684	-82.974	100.431
C	(4.2, 21.7)	(3.34, 21.9)	-169.998	112.223	-45.3767	25.2072	-118.396
					Self Weight (kN/m):		-3.07217
					Sum:	0	0
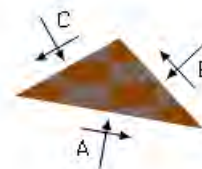
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.34, 21.9)	(4.2, 21.7)	10.0018	112.223	-45.3767	-25.2072	118.396
B	(4.2, 21.7)	(3.82, 22.1)	-132.921	55.5913	23.0158	-56.3823	-21.0037
C	(3.82, 22.1)	(3.34, 21.9)	150.988	122.109	-25.5647	81.5895	-94.3781
					Self Weight (kN/m):		-3.01467
					Sum:	0	0
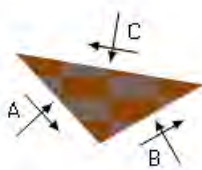
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.82, 22.1)	(4.2, 21.7)	47.0794	55.5913	23.0158	56.3823	21.0037
B	(4.2, 21.7)	(4.68, 22)	-29.6374	130.231	-21.334	-82.9321	102.652
C	(4.68, 22)	(3.82, 22.1)	-170.435	114.524	-46.2301	26.5499	-120.615
					Self Weight (kN/m):		-3.04017
					Sum:	0	0
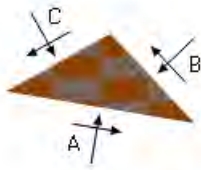
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.82, 22.1)	(4.68, 22)	9.56513	114.524	-46.2301	-26.5499	120.615
B	(4.68, 22)	(4.29, 22.4)	-133.379	70.6046	28.5968	-70.9593	-27.705
C	(4.29, 22.4)	(3.82, 22.1)	150.978	125.94	-41.6447	97.5092	-89.9278
					Self Weight (kN/m):		-2.98267
					Sum:	0	0
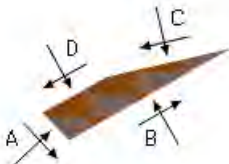
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(4.29, 22.4)	(4.68, 22)	46.6215	70.6046	28.5968	70.9593	27.705
B	(4.68, 22)	(7.06, 23.4)	-29.6302	737.981	-196.233	-535.44	544.451
C	(7.06, 23.4)	(5.25, 22.9)	167.091	430.427	-168.03	259.943	-382.01
D	(5.25, 22.9)	(4.29, 22.4)	150.983	247.407	-96.6572	204.538	-169.46
					Self Weight (kN/m):		-20.6863
					Sum:	0	0
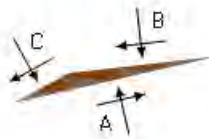
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.25, 22.9)	(7.06, 23.4)	-12.909	430.427	-168.03	-259.943	382.01
B	(7.06, 23.4)	(5.72, 23.2)	173.53	243.42	-96.2061	123.029	-231.026
C	(5.72, 23.2)	(5.25, 22.9)	150.979	195.978	-47.8535	136.914	-148.162
					Self Weight (kN/m):		-2.82271
					Sum:	0	0
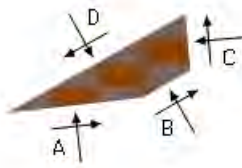
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.72, 23.2)	(7.06, 23.4)	-6.47023	243.42	-96.2061	-123.029	231.026
B	(7.06, 23.4)	(7.54, 23.6)	-29.6379	109.289	-31.4056	-81.3328	79.4693
C	(7.54, 23.6)	(7.49, 24.2)	-94.9173	39.6983	17.0515	-41.0139	13.5858
D	(7.49, 24.2)	(5.72, 23.2)	150.98	390.823	-63.7992	245.376	-310.812
					Self Weight (kN/m):		-13.269
					Sum:	0	0
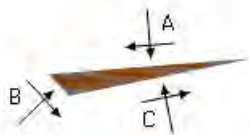
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.73, 21.5)	(3.06, 21.4)	175.509	122.966	-48.5437	58.0323	-118.783
B	(3.06, 21.4)	(3.13, 21.3)	46.7506	15.3005	6.09103	15.317	6.04931
C	(3.13, 21.3)	(3.73, 21.5)	-11.4993	125.585	-49.2988	-73.3494	113.233
					Self Weight (kN/m):		-0.498964
					Sum:	0	0
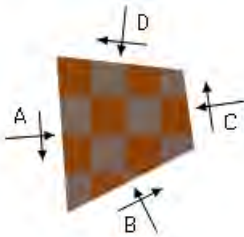
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.437, 23.5)	(0.478, 22.9)	86.02	109.365	43.1587	112.096	-35.4644
B	(0.478, 22.9)	(0.955, 23.2)	-26.729	140.608	-25.3454	-85.8819	114.181
C	(0.955, 23.2)	(0.912, 23.5)	-98.2525	47.8281	19.0417	-50.066	11.9798
D	(0.912, 23.5)	(0.437, 23.5)	-173.83	83.3332	-33.0002	23.8515	-86.3976
					Self Weight (kN/m):		-4.29931
					Sum:	0	0
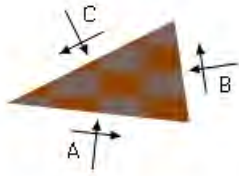
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.437, 23.5)	(0.912, 23.5)	6.16965	83.3332	-33.0002	-23.8515	86.3976
B	(0.912, 23.5)	(0.873, 23.7)	-98.2525	36.75	14.7927	-38.4927	9.36483
C	(0.873, 23.7)	(0.437, 23.5)	153.615	112.369	-13.8486	62.3442	-94.508
					Self Weight (kN/m):		-1.2544
					Sum:	0	0
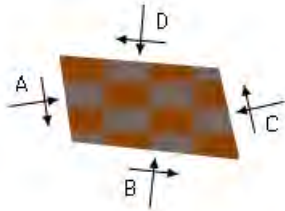
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.873, 23.7)	(0.912, 23.5)	81.7475	36.75	14.7927	38.4927	-9.36483
B	(0.912, 23.5)	(1.43, 23.4)	6.17189	86.7382	-34.452	-24.9289	89.9389
C	(1.43, 23.4)	(1.37, 23.7)	-102.8	36.9952	14.9671	-39.3916	6.40011
D	(1.37, 23.7)	(0.873, 23.7)	-175.379	81.866	-32.5259	25.8277	-84.2194
					Self Weight (kN/m):		-2.75476
					Sum:	0	0
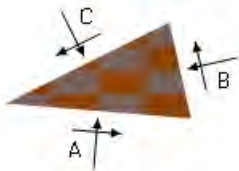
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.873, 23.7)	(1.37, 23.7)	4.62077	81.866	-32.5259	-25.8277	84.2194
B	(1.37, 23.7)	(1.31, 24)	-102.798	26.7709	11.0393	-28.5512	4.83472
C	(1.31, 24)	(0.873, 23.7)	153.615	102.827	-9.69094	54.3789	-87.8076
					Self Weight (kN/m):		-1.24658
					Sum:	0	0
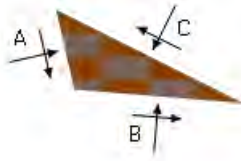
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 24)	(1.37, 23.7)	77.2017	26.7709	11.0393	28.5512	-4.83472
B	(1.37, 23.7)	(1.91, 23.7)	4.61869	73.6407	-29.6471	-23.6207	75.789
C	(1.91, 23.7)	(1.31, 24)	-153.422	64.4411	-26.7251	-4.93056	-69.5887
					Self Weight (kN/m):		-1.36561
					Sum:	0	0
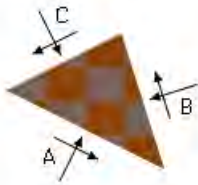
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.31, 24)	(1.91, 23.7)	26.578	64.4411	-26.7251	4.93056	69.5887
B	(1.91, 23.7)	(1.75, 24.2)	-107.584	44.7792	18.874	-48.3887	4.46496
C	(1.75, 24.2)	(1.31, 24)	153.615	83.3122	-7.18122	43.4582	-71.4414
					Self Weight (kN/m):		-2.61219
					Sum:	0	0
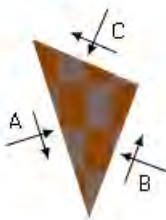
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.75, 24.2)	(1.91, 23.7)	72.4163	44.7792	18.874	48.3887	-4.46496
B	(1.91, 23.7)	(2.05, 24)	-69.6024	59.8807	23.9801	-47.7683	43.3467
C	(2.05, 24)	(1.75, 24.2)	-156.679	34.6934	-14.279	-0.620447	-37.5118
					Self Weight (kN/m):		-1.36988
					Sum:	0	0
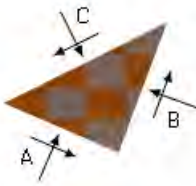
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.75, 24.2)	(2.05, 24)	23.3208	34.6934	-14.279	0.620447	37.5118
B	(2.05, 24)	(2.18, 24.4)	-69.6036	56.0414	22.395	-44.7222	40.5229
C	(2.18, 24.4)	(1.75, 24.2)	153.615	88.3917	-5.37972	44.1018	-76.7924
					Self Weight (kN/m):		-1.24231
					Sum:	0	0
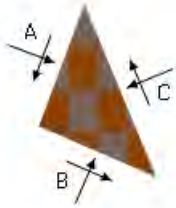
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.05, 24)	110.396	56.0414	22.395	44.7222	-40.5229
B	(2.05, 24)	(2.39, 23.9)	23.3192	38.4255	-15.7916	0.708692	41.5379
C	(2.39, 23.9)	(2.18, 24.4)	-112.554	41.8261	17.7387	-45.4309	0.339199
					Self Weight (kN/m):		-1.35419
					Sum:	0	0
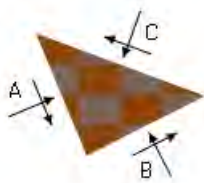
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.39, 23.9)	67.4463	41.8261	17.7387	45.4309	-0.339199
B	(2.39, 23.9)	(2.87, 24.1)	-26.7289	84.9417	-11.3356	-48.3306	70.7654
C	(2.87, 24.1)	(2.18, 24.4)	-159.686	62.3702	-26.1774	2.89967	-67.5787
					Self Weight (kN/m):		-2.84744
					Sum:	0	0
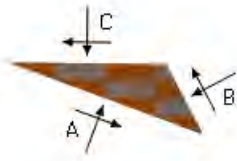
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.87, 24.1)	20.3136	62.3702	-26.1774	-2.89967	67.5787
B	(2.87, 24.1)	(2.74, 24.4)	-117.637	20.8338	8.88648	-22.5786	-1.79476
C	(2.74, 24.4)	(2.18, 24.4)	-179.41	64.158	-26.1464	25.4783	-64.4263
					Self Weight (kN/m):		-1.35771
					Sum:	0	0
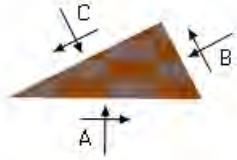
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.18, 24.4)	(2.74, 24.4)	0.590454	64.158	-26.1464	-25.4783	64.4263
B	(2.74, 24.4)	(2.62, 24.6)	-117.651	28.1004	11.4868	-30.2222	-2.86299
C	(2.62, 24.6)	(2.18, 24.4)	153.615	78.8081	-23.0817	55.7005	-60.3402
					Self Weight (kN/m):		-1.22311
					Sum:	0	0
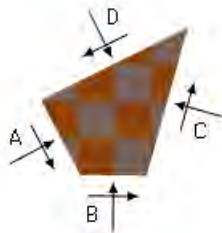
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.62, 24.6)	(2.74, 24.4)	62.3485	28.1004	11.4868	30.2222	2.86299
B	(2.74, 24.4)	(2.93, 24.4)	0.609476	26.294	-10.5986	-10.3248	26.4027
C	(2.93, 24.4)	(3.06, 24.8)	-74.4469	41.1967	17.1994	-35.0765	27.6158
D	(3.06, 24.8)	(2.62, 24.6)	153.615	55.8236	10.7497	15.179	-54.7853
					Self Weight (kN/m):		-2.09623
					Sum:	0	0
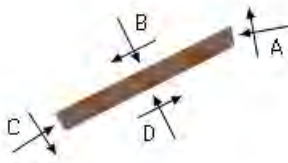
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.55, 26.5)	(7.46, 27)	-100.115	0.00259353	-0.085067	0.0123847	-0.0842006
B	(7.46, 27)	(3.06, 24.8)	153.614	509.66	-75.3802	294.027	-423.064
C	(3.06, 24.8)	(3.34, 24.4)	57.2184	19.8318	9.51651	21.8261	2.73526
D	(3.34, 24.4)	(7.55, 26.5)	-26.7302	561.618	-70.8207	-315.866	469.744
					Self Weight (kN/m):		-49.3306
					Sum:	0	0
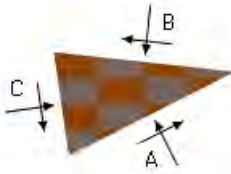
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.955, 23.2)	(1.43, 23.4)	-26.7288	126.118	-20.4535	-74.9948	103.44
B	(1.43, 23.4)	(0.912, 23.5)	-173.828	86.7382	-34.452	24.9289	-89.9389
C	(0.912, 23.5)	(0.955, 23.2)	81.7475	47.8281	19.0417	50.066	-11.9798
					Self Weight (kN/m):		-1.52101
					Sum:	0	0
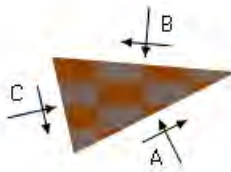
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.43, 23.4)	(1.91, 23.7)	-26.7289	103.1	-18.6293	-63.0122	83.7023
B	(1.91, 23.7)	(1.37, 23.7)	-175.381	73.6407	-29.6471	23.6207	-75.789
C	(1.37, 23.7)	(1.43, 23.4)	77.2003	36.9952	14.9671	39.3916	-6.40011
					Self Weight (kN/m):		-1.51319
					Sum:	0	0
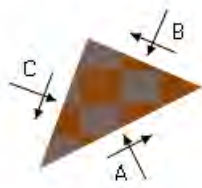
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.91, 23.7)	(2.39, 23.9)	-26.7294	98.3139	-3.17806	-47.0596	86.3778
B	(2.39, 23.9)	(2.05, 24)	-156.681	38.4255	-15.7916	-0.708692	-41.5379
C	(2.05, 24)	(1.91, 23.7)	110.398	59.8807	23.9801	47.7683	-43.3467
					Self Weight (kN/m):		-1.49324
					Sum:	0	0
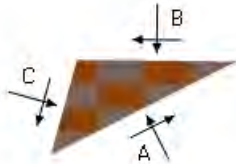
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.87, 24.1)	(3.34, 24.4)	-26.7385	72.7933	-15.0164	-46.1537	58.2597
B	(3.34, 24.4)	(2.93, 24.4)	-179.412	32.0226	-13.5838	13.2503	-32.162
C	(2.93, 24.4)	(2.87, 24.1)	105.552	38.4267	15.3512	32.9034	-25.0926
					Self Weight (kN/m):		-1.00512
					Sum:	0	0
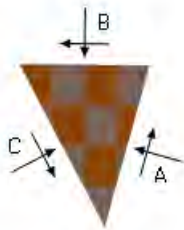
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.87, 24.1)	(2.93, 24.4)	-74.4476	38.4267	15.3512	-32.9034	25.0926
B	(2.93, 24.4)	(2.74, 24.4)	-179.391	26.294	-10.5986	10.3248	-26.4027
C	(2.74, 24.4)	(2.87, 24.1)	62.3629	20.8338	8.88648	22.5786	1.79476
					Self Weight (kN/m):		-0.4846
					Sum:	0	0
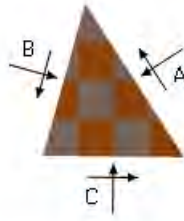
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.34, 24.4)	(3.06, 24.8)	-122.782	19.8318	9.51651	-21.8261	-2.73526
B	(3.06, 24.8)	(2.93, 24.4)	105.553	41.1967	17.1994	35.0765	-27.6158
C	(2.93, 24.4)	(3.34, 24.4)	0.5877	32.0226	-13.5838	-13.2503	32.162
					Self Weight (kN/m):		-1.81095
					Sum:	0	0
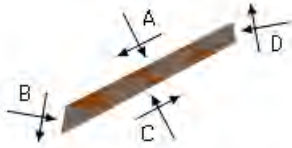
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(7.55, 26.5)	(3.34, 24.4)	153.27	561.627	-70.8207	315.87	-469.752
B	(3.34, 24.4)	(3.22, 23.6)	99.5995	93.5061	37.8491	85.8844	-52.9133
C	(3.22, 23.6)	(7.65, 26)	-27.8525	696.79	-86.2226	-401.766	575.79
D	(7.65, 26)	(7.55, 26.5)	-100.114	0.00260675	-0.0855003	0.0124478	-0.0846295
					Self Weight (kN/m):		-53.04
					Sum:	0	0
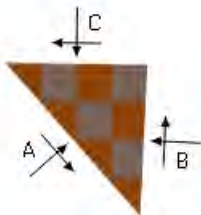
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.478, 22.9)	(0.92, 22.4)	48.7008	98.0326	39.2507	99.552	35.2195
B	(0.92, 22.4)	(0.943, 22.9)	-87.2796	137.284	53.205	-134.604	59.6607
C	(0.943, 22.9)	(0.478, 22.9)	-179.262	92.1089	-36.2245	35.0517	-92.5615
					Self Weight (kN/m):		-2.31869
					Sum:	0	0
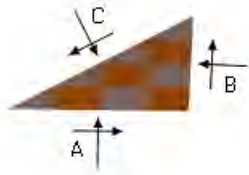
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.478, 22.9)	(0.943, 22.9)	0.737881	92.1089	-36.2245	-35.0517	92.5615
B	(0.943, 22.9)	(0.955, 23.2)	-87.2802	51.8535	20.3306	-50.8302	22.7687
C	(0.955, 23.2)	(0.478, 22.9)	153.271	140.608	-25.3454	85.8819	-114.181
					Self Weight (kN/m):		-1.14875
					Sum:	0	0
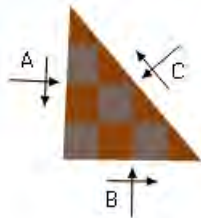
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.955, 23.2)	(0.943, 22.9)	92.7198	51.8535	20.3306	50.8302	-22.7687
B	(0.943, 22.9)	(1.17, 22.9)	0.7193	35.2675	-14.0486	-13.5995	35.4431
C	(1.17, 22.9)	(0.955, 23.2)	-130.285	36.2396	14.8262	-37.2307	-12.1245
					Self Weight (kN/m):		-0.549921
					Sum:	0	0
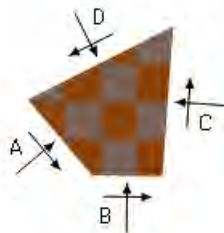
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.955, 23.2)	(1.17, 22.9)	49.7147	36.2396	14.8262	37.2307	12.1245
B	(1.17, 22.9)	(1.4, 22.9)	0.719166	49.1261	-19.2505	-18.625	49.3667
C	(1.4, 22.9)	(1.43, 23.4)	-85.9089	96.5567	37.996	-93.6005	44.7866
D	(1.43, 23.4)	(0.955, 23.2)	153.271	126.118	-20.4535	74.9948	-103.44
					Self Weight (kN/m):		-2.83806
					Sum:	0	0
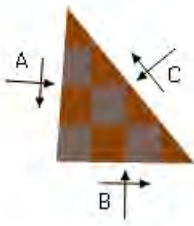
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.43, 23.4)	(1.4, 22.9)	94.0911	96.5567	37.996	93.6005	-44.7866
B	(1.4, 22.9)	(1.84, 22.9)	0.725667	67.0847	-26.7943	-25.9401	67.4196
C	(1.84, 22.9)	(1.43, 23.4)	-129.234	65.3447	26.95	-67.6604	-20.4525
					Self Weight (kN/m):		-2.18042
					Sum:	0	0
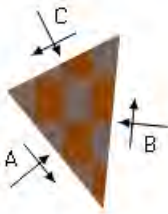
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.43, 23.4)	(1.84, 22.9)	50.7664	65.3447	26.95	67.6604	20.4525
B	(1.84, 22.9)	(1.91, 23.7)	-84.5345	136.422	53.8607	-130.673	66.6083
C	(1.91, 23.7)	(1.43, 23.4)	153.271	103.1	-18.6293	63.0122	-83.7023
					Self Weight (kN/m):		-3.35858
					Sum:	0	0
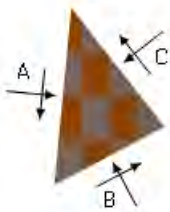
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.91, 23.7)	(1.84, 22.9)	95.4655	136.422	53.8607	130.673	-66.6083
B	(1.84, 22.9)	(2.3, 23.2)	-27.8509	106.216	-3.94833	-53.114	92.0674
C	(2.3, 23.2)	(1.91, 23.7)	-128.132	74.7356	30.4012	-77.5586	-22.2328
					Self Weight (kN/m):		-3.22624
					Sum:	0	0
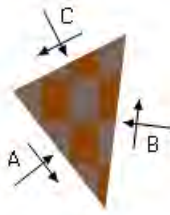
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.91, 23.7)	(2.3, 23.2)	51.8676	74.7356	30.4012	77.5586	22.2328
B	(2.3, 23.2)	(2.39, 23.9)	-83.1569	131.767	52.1215	-124.618	67.4491
C	(2.39, 23.9)	(1.91, 23.7)	153.271	98.3139	-3.17806	47.0596	-86.3778
					Self Weight (kN/m):		-3.30415
					Sum:	0	0
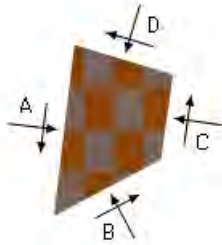
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.39, 23.9)	(2.3, 23.2)	96.8431	131.767	52.1215	124.618	-67.4491
B	(2.3, 23.2)	(2.76, 23.4)	-27.8504	110.418	-23.7111	-72.5502	86.549
C	(2.76, 23.4)	(2.81, 23.8)	-81.7791	60.853	24.1785	-56.7701	32.632
D	(2.81, 23.8)	(2.39, 23.9)	-163.253	43.5928	-18.0349	4.70204	-46.9412
					Self Weight (kN/m):		-4.79068
					Sum:	0	0
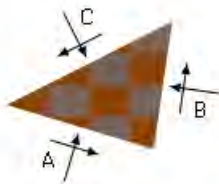
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.39, 23.9)	(2.81, 23.8)	16.7474	43.5928	-18.0349	-4.70204	46.9412
B	(2.81, 23.8)	(2.87, 24.1)	-81.7769	46.8202	18.9545	-43.6285	25.455
C	(2.87, 24.1)	(2.39, 23.9)	153.271	84.9417	-11.3356	48.3306	-70.7654
					Self Weight (kN/m):		-1.63084
					Sum:	0	0
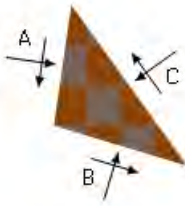
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.87, 24.1)	(2.81, 23.8)	98.2231	46.8202	18.9545	43.6285	-25.455
B	(2.81, 23.8)	(3.22, 23.6)	16.7603	32.9277	-13.9841	-3.89784	35.5611
C	(3.22, 23.6)	(2.87, 24.1)	-125.793	37.2235	16.3065	-39.7307	-8.54169
					Self Weight (kN/m):		-1.56443
					Sum:	0	0
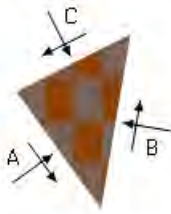
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.87, 24.1)	(3.22, 23.6)	54.2074	37.2235	16.3065	39.7307	8.54169
B	(3.22, 23.6)	(3.34, 24.4)	-80.4005	93.5061	37.8491	-85.8844	52.9133
C	(3.34, 24.4)	(2.87, 24.1)	153.261	72.7933	-15.0164	46.1537	-58.2597
					Self Weight (kN/m):		-3.19528
					Sum:	0	0
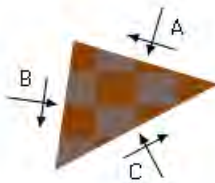
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.22, 23.6)	(2.81, 23.8)	-163.24	32.9277	-13.9841	3.89784	-35.5611
B	(2.81, 23.8)	(2.76, 23.4)	98.2209	60.853	24.1785	56.7701	-32.632
C	(2.76, 23.4)	(3.22, 23.6)	-27.8504	90.0099	-21.0555	-60.6679	69.746
					Self Weight (kN/m):		-1.55294
					Sum:	0	0
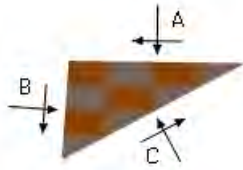
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.84, 22.9)	(1.4, 22.9)	-179.274	67.0847	-26.7943	25.9401	-67.4196
B	(1.4, 22.9)	(1.38, 22.7)	94.0892	71.8344	27.7946	69.6688	-32.8477
C	(1.38, 22.7)	(1.84, 22.9)	-27.8601	134.292	-37.1756	-95.6089	101.368
					Self Weight (kN/m):		-1.10026
					Sum:	0	0
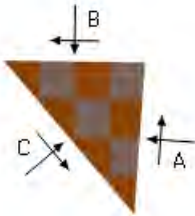
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.38, 22.7)	(1.4, 22.9)	-85.9108	71.8344	27.7946	-69.6688	32.8477
B	(1.4, 22.9)	(1.17, 22.9)	-179.281	49.1261	-19.2505	18.625	-49.3667
C	(1.17, 22.9)	(1.38, 22.7)	49.7162	49.9896	19.9676	51.0438	17.0939
					Self Weight (kN/m):		-0.574947
					Sum:	0	0
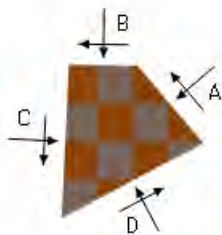
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.38, 22.7)	(1.17, 22.9)	-130.284	49.9896	19.9676	-51.0438	-17.0939
B	(1.17, 22.9)	(0.943, 22.9)	-179.281	35.2675	-14.0486	13.5995	-35.4431
C	(0.943, 22.9)	(0.92, 22.4)	92.7204	137.284	53.205	134.604	-59.6607
D	(0.92, 22.4)	(1.38, 22.7)	-27.8506	147.055	-32.1856	-97.1594	114.983
					Self Weight (kN/m):		-2.78519
					Sum:	0	0
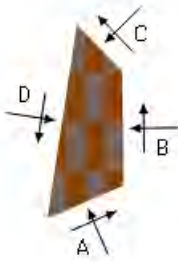
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.482, 25)	(0.965, 25.2)	-23.5234	78.9288	5.1963	-26.739	74.4431
B	(0.965, 25.2)	(0.956, 26)	-90.7118	85.9887	34.9635	-86.4164	33.8925
C	(0.956, 26)	(0.669, 26.3)	-133.861	26.1486	-11.409	-10.9492	-26.3445
D	(0.669, 26.3)	(0.482, 25)	98.6425	133.877	54.9172	124.105	-74.4112
					Self Weight (kN/m):		-7.57997
					Sum:	0	0
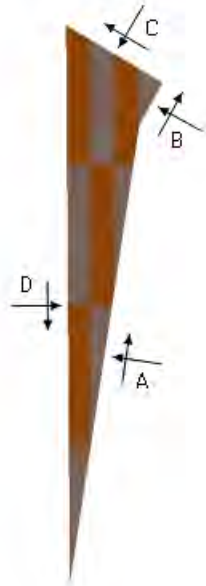
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.482, 25)	(0.669, 26.3)	-81.3575	133.877	54.9172	-124.105	74.4112
B	(0.669, 26.3)	(0.732, 26.4)	-61.0021	9.96653	4.23132	-6.66778	8.53092
C	(0.732, 26.4)	(0.473, 26.5)	-149.283	22.8572	-9.72956	-3.30951	-24.6204
D	(0.473, 26.5)	(0.482, 25)	89.6385	133.732	55.8701	134.082	-55.0252
					Self Weight (kN/m):		-3.29661
					Sum:	0	0
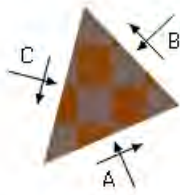
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.965, 25.2)	(1.45, 25.5)	-23.5232	105.072	-26.3177	-66.0688	85.8354
B	(1.45, 25.5)	(1.11, 25.8)	-133.861	26.5175	-11.8384	-10.9177	-26.9097
C	(1.11, 25.8)	(0.965, 25.2)	104.527	88.7035	35.4079	76.9865	-56.5254
					Self Weight (kN/m):		-2.40038
					Sum:	0	0
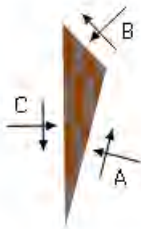
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.965, 25.2)	(1.11, 25.8)	-75.4732	88.7035	35.4079	-76.9865	56.5254
B	(1.11, 25.8)	(0.956, 26)	-133.849	21.7203	-8.99332	-9.42999	-21.5343
C	(0.956, 26)	(0.965, 25.2)	89.2882	85.9887	34.9635	86.4164	-33.8925
					Self Weight (kN/m):		-1.09853
					Sum:	0	0
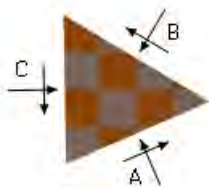
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.45, 25.5)	(1.93, 25.7)	-23.5237	60.9474	2.1636	-22.3426	56.7457
B	(1.93, 25.7)	(1.44, 26)	-149.284	39.3502	-16.9669	-5.51119	-42.4963
C	(1.44, 26)	(1.45, 25.5)	88.948	27.6325	12.3169	27.8538	-11.8078
					Self Weight (kN/m):		-2.44155
					Sum:	0	0
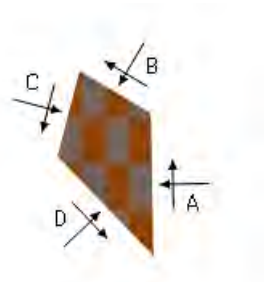
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.45, 25.5)	(1.44, 26)	-91.052	27.6325	12.3169	-27.8538	11.8078
B	(1.44, 26)	(1.19, 26.1)	-149.292	19.4618	-8.42417	-2.69758	-21.0345
C	(1.19, 26.1)	(1.11, 25.8)	104.527	22.8078	9.74761	19.6337	-15.1569
D	(1.11, 25.8)	(1.45, 25.5)	46.1392	26.5175	-11.8384	10.9177	26.9097
					Self Weight (kN/m):		-2.5261
					Sum:	0	0
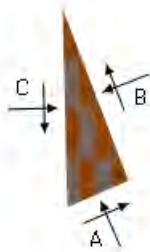
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.93, 25.7)	(2.41, 25.9)	-23.5233	47.4893	15.1732	-5.04258	49.5987
B	(2.41, 25.9)	(1.89, 27.2)	-110.984	102.165	43.9221	-111.118	4.42127
C	(1.89, 27.2)	(1.93, 25.7)	88.6196	115.009	49.1702	116.161	-46.3851
					Self Weight (kN/m):		-7.63487
					Sum:	0	0
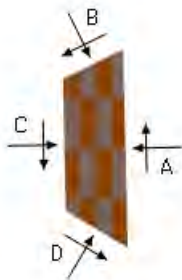
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.93, 25.7)	(1.89, 27.2)	-91.3804	115.009	49.1702	-116.161	46.3851
B	(1.89, 27.2)	(1.42, 27)	153.716	69.4757	-24.0499	52.327	-51.6445
C	(1.42, 27)	(1.44, 26)	88.9489	57.8597	25.7471	58.3224	-24.6811
D	(1.44, 26)	(1.93, 25.7)	30.716	39.3502	-16.9669	5.51119	42.4963
					Self Weight (kN/m):		-12.5558
					Sum:	0	0
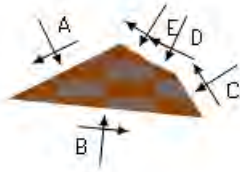
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(5.12, 28.8)	(3.31, 27.9)	153.718	78.929	-14.2052	47.6858	-64.4798
B	(3.31, 27.9)	(6.45, 27.6)	5.45581	96.4501	-48.5889	-39.1995	100.633
C	(6.45, 27.6)	(6.01, 28.3)	-122.097	6.56099	5.38173	-8.41777	1.07272
D	(6.01, 28.3)	(5.6, 28.5)	-154.732	-0.00226893	0.013503	-0.0112424	0.00781589
E	(5.6, 28.5)	(5.12, 28.8)	-147.862	-0.00167825	0.0687361	-0.0573097	0.0379877
					Self Weight (kN/m):		-37.2712
					Sum:	0	0
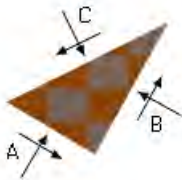
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.473, 26.5)	(0.732, 26.4)	30.717	22.8572	-9.72956	3.30951	24.6204
B	(0.732, 26.4)	(0.946, 26.8)	-61.0173	41.2978	17.1764	-27.8018	35.0371
C	(0.946, 26.8)	(0.473, 26.5)	153.716	63.1425	3.86634	24.4923	-58.3272
					Self Weight (kN/m):		-1.33027
					Sum:	0	0
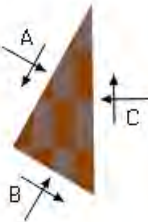
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.946, 26.8)	(0.732, 26.4)	118.983	41.2978	17.1764	27.8018	-35.0371
B	(0.732, 26.4)	(0.952, 26.3)	30.7057	21.3881	-9.00657	3.18073	22.9881
C	(0.952, 26.3)	(0.946, 26.8)	-90.7117	30.8163	13.5697	-30.9825	13.1858
					Self Weight (kN/m):		-1.13679
					Sum:	0	0
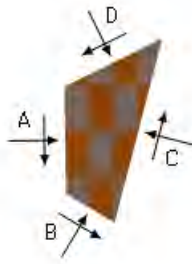
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.946, 26.8)	(0.952, 26.3)	89.2883	30.8163	13.5697	30.9825	-13.1858
B	(0.952, 26.3)	(1.19, 26.1)	30.7175	27.229	-11.2532	4.23253	29.1571
C	(1.19, 26.1)	(1.42, 27)	-75.4736	64.6675	27.8093	-55.6248	43.1408
D	(1.42, 27)	(0.946, 26.8)	153.716	57.6539	5.70898	20.4098	-54.2218
					Self Weight (kN/m):		-4.89029
					Sum:	0	0
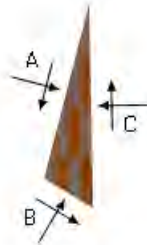
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.42, 27)	(1.19, 26.1)	104.526	64.6675	27.8093	55.6248	-43.1408
B	(1.19, 26.1)	(1.44, 26)	30.7081	19.4618	-8.42417	2.69758	21.0345
C	(1.44, 26)	(1.42, 27)	-91.0511	57.8597	25.7471	-58.3224	24.6811
					Self Weight (kN/m):		-2.57484
					Sum:	0	0
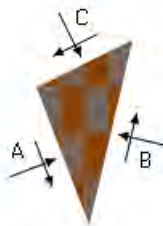
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.89, 27.2)	(2.41, 25.9)	69.0157	102.165	43.9221	111.118	-4.42127
B	(2.41, 25.9)	(2.84, 27.7)	-76.8549	158.879	66.7587	-139.534	101.141
C	(2.84, 27.7)	(1.89, 27.2)	153.721	85.6222	10.5918	28.4158	-81.461
					Self Weight (kN/m):		-15.2591
					Sum:	0	0
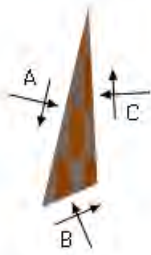
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.84, 27.7)	(2.41, 25.9)	103.145	158.879	66.7587	139.534	-101.141
B	(2.41, 25.9)	(2.92, 26.1)	-23.5285	76.1141	-2.05282	-32.2622	68.969
C	(2.92, 26.1)	(2.84, 27.7)	-92.8125	105.158	45.6514	-107.272	40.4372
					Self Weight (kN/m):		-8.26487
					Sum:	0	0
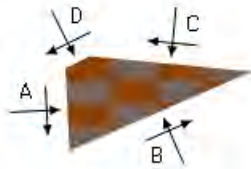
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.84, 27.7)	(2.92, 26.1)	87.1875	105.158	45.6514	107.272	-40.4372
B	(2.92, 26.1)	(6.45, 27.6)	-23.5232	293.97	-57.7388	-170.275	246.493
C	(6.45, 27.6)	(3.31, 27.9)	-174.544	96.4501	-48.5889	39.1995	-100.633
D	(3.31, 27.9)	(2.84, 27.7)	153.717	45.3487	-4.15297	23.8036	-38.8219
					Self Weight (kN/m):		-66.6011
					Sum:	0	0
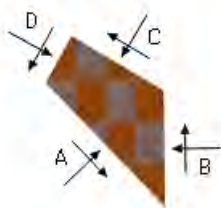
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.669, 26.3)	(0.956, 26)	46.139	26.1486	-11.409	10.9492	26.3445
B	(0.956, 26)	(0.952, 26.3)	-90.7121	14.3569	6.47284	-14.4362	6.29399
C	(0.952, 26.3)	(0.732, 26.4)	-149.294	21.3881	-9.00657	-3.18073	-22.9881
D	(0.732, 26.4)	(0.669, 26.3)	118.998	9.96653	4.23132	6.66778	-8.53092
					Self Weight (kN/m):		-1.1195
					Sum:	0	0
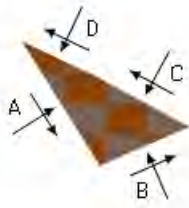
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(6.01, 28.3)	(6.45, 27.6)	57.9027	6.56099	5.38173	8.41777	-1.07272
B	(6.45, 27.6)	(6.95, 27.9)	-23.5289	8.6324	-5.42157	-8.4165	5.75102
C	(6.95, 27.9)	(6.42, 28.1)	-151.531	0.0012692	0.0124241	-0.0115267	0.0048067
D	(6.42, 28.1)	(6.01, 28.3)	-154.732	0.00226897	-0.0124119	0.0102556	-0.00735013
					Self Weight (kN/m):		-4.67576
					Sum:	0	0
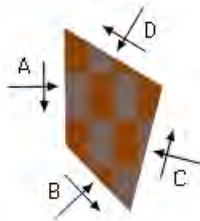
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.952, 26.3)	(0.956, 26)	89.2879	14.3569	6.47284	14.4362	-6.29399
B	(0.956, 26)	(1.11, 25.8)	46.1508	21.7203	-8.99332	9.42999	21.5343
C	(1.11, 25.8)	(1.19, 26.1)	-75.473	22.8078	9.74761	-19.6337	15.1569
D	(1.19, 26.1)	(0.952, 26.3)	-149.283	27.229	-11.2532	-4.23253	-29.1571
					Self Weight (kN/m):		-1.24008
					Sum:	0	0
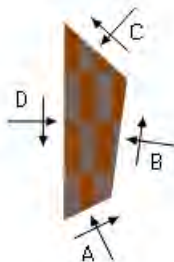
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.473, 26.5)	(0.946, 26.8)	-26.2837	63.1425	3.86634	-24.4923	58.3272
B	(0.946, 26.8)	(1.11, 27.9)	-82.3012	92.1524	39.1351	-86.079	51.1277
C	(1.11, 27.9)	(0.479, 28.5)	-137.868	35.9127	-16.7762	-11.6514	-37.8868
D	(0.479, 28.5)	(0.473, 26.5)	90.1697	122.382	53.5705	122.223	-53.9328
					Self Weight (kN/m):		-17.6353

					Sum:	0	0
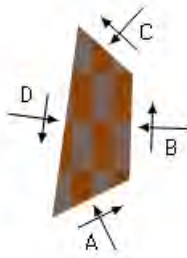
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.946, 26.8)	(1.42, 27)	-26.2836	57.6539	5.70898	-20.4098	54.2218
B	(1.42, 27)	(1.44, 27.6)	-88.2468	59.4283	24.7453	-58.6435	26.5516
C	(1.44, 27.6)	(1.11, 27.9)	-137.862	21.2042	-9.70814	-7.02571	-22.2375
D	(1.11, 27.9)	(0.946, 26.8)	97.6988	92.1524	39.1351	86.079	-51.1277
					Self Weight (kN/m):		-7.40824
					Sum:	0	0
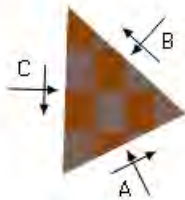
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.42, 27)	(1.89, 27.2)	-26.2838	69.4757	-24.0499	-52.327	51.6445
B	(1.89, 27.2)	(1.44, 27.6)	-137.871	20.6224	-10.1381	-6.31652	-22.0945
C	(1.44, 27.6)	(1.42, 27)	91.7532	59.4283	24.7453	58.6435	-26.5516
					Self Weight (kN/m):		-2.99839
					Sum:	0	0
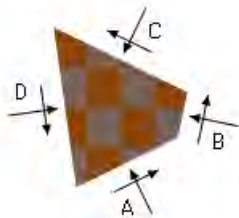
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.89, 27.2)	(2.84, 27.7)	-26.2789	85.6222	10.5918	-28.4158	81.461
B	(2.84, 27.7)	(2.92, 28.1)	-78.365	27.0451	11.8103	-24.1074	17.0222
C	(2.92, 28.1)	(1.68, 28.7)	-154.059	54.3074	-25.7904	-0.564663	-60.1176
D	(1.68, 28.7)	(1.89, 27.2)	81.9694	50.1243	24.732	53.0879	-17.487
					Self Weight (kN/m):		-20.8787

						Sum:	0	0
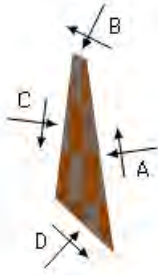
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.89, 27.2)	(1.68, 28.7)	-98.0306	50.1243	24.732	-53.0879	17.487
B	(1.68, 28.7)	(1.58, 28.8)	-154.047	3.06311	-1.61515	0.11247	-3.46102
C	(1.58, 28.8)	(1.44, 27.7)	96.8836	49.6239	23.0554	46.5029	-28.8368
D	(1.44, 27.7)	(1.89, 27.2)	42.6603	20.5388	-10.1264	6.47246	21.9658
					Self Weight (kN/m):		-7.15493
					Sum:	0	0
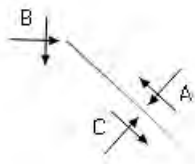
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.89, 27.2)	(1.44, 27.7)	-137.34	20.5388	-10.1264	-6.47246	-21.9658
B	(1.44, 27.7)	(1.44, 27.6)	91.6802	0.158737	0.0891255	0.155936	-0.0939396
C	(1.44, 27.6)	(1.89, 27.2)	42.1293	20.6224	-10.1381	6.31652	22.0945
					Self Weight (kN/m):		-0.0348163
					Sum:	0	0
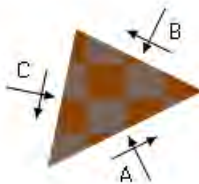
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.84, 27.7)	(3.31, 27.9)	-26.2833	45.3487	-4.15297	-23.8036	38.8219
B	(3.31, 27.9)	(2.92, 28.1)	-154.056	18.1258	-8.47968	-0.303753	-20.0089
C	(2.92, 28.1)	(2.84, 27.7)	101.635	27.0451	11.8103	24.1074	-17.0222
					Self Weight (kN/m):		-1.79074
					Sum:	0	0
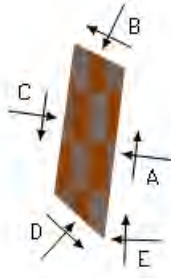
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.44, 27.7)	(1.58, 28.8)	-83.1164	49.6239	23.0554	-46.5029	28.8368
B	(1.58, 28.8)	(1.24, 28.9)	-154.066	16.1154	-7.50187	-0.303614	-17.7734
C	(1.24, 28.9)	(1.11, 27.9)	97.6993	43.013	20.0682	39.9368	-25.6496
D	(1.11, 27.9)	(1.44, 27.6)	42.1382	21.2042	-9.70814	7.02571	22.2375
E	(1.44, 27.6)	(1.44, 27.7)	-88.3198	0.158737	0.0891255	-0.155936	0.0939396
					Self Weight (kN/m):		-7.74522
					Sum:	0	0
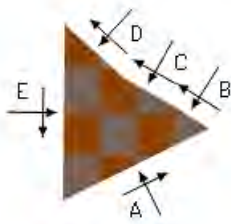
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.31, 27.9)	(5.12, 28.8)	-26.2817	78.8936	-14.1847	-47.6517	64.4572
B	(5.12, 28.8)	(4.58, 29.2)	-147.861	0.000225033	-0.0204721	0.0172151	-0.0110814
C	(4.58, 29.2)	(4.06, 29.5)	-150.728	4.8461e-05	-0.0156642	0.0136406	-0.00770085
D	(4.06, 29.5)	(3.34, 30.1)	-137.482	0.00101497	-0.00512487	0.00309142	-0.00421161
E	(3.34, 30.1)	(3.31, 27.9)	90.6902	47.9422	26.6518	47.6178	-27.2273
					Self Weight (kN/m):		-37.2069
					Sum:	0	0
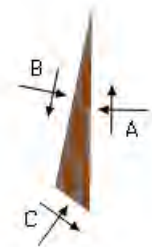
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.31, 27.9)	(3.34, 30.1)	-89.3098	47.9422	26.6518	-47.6178	27.2273
B	(3.34, 30.1)	(2.94, 28.2)	101.636	51.018	26.8903	44.5462	-36.6273
C	(2.94, 28.2)	(3.31, 27.9)	35.8682	16.042	-7.80997	3.07159	17.5758

						Self Weight (kN/m):	-8.17572
						Sum:	0	0
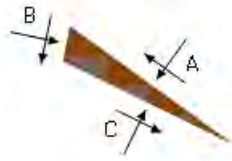
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.31, 27.9)	(2.94, 28.2)	-144.132	16.042	-7.80997	-3.07159	-17.5758
B	(2.94, 28.2)	(2.92, 28.1)	101.642	3.13352	1.49386	2.76784	-2.09515
C	(2.92, 28.1)	(3.31, 27.9)	25.944	18.1258	-8.47968	0.303753	20.0089
					Self Weight (kN/m):		-0.338038
					Sum:	0	0
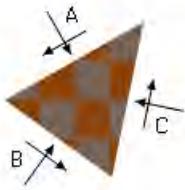
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(3.34, 30.1)	(1.62, 29.2)	150.549	69.8048	-2.51768	36.5136	-59.5467
B	(1.62, 29.2)	(2.94, 28.2)	35.8728	46.9339	-24.0267	8.0326	52.1109
C	(2.94, 28.2)	(3.34, 30.1)	-78.3643	51.018	26.8903	-44.5462	36.6273
					Self Weight (kN/m):		-29.1916
					Sum:	0	0
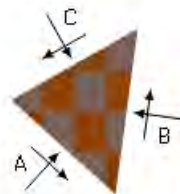
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.479, 28.5)	(1.11, 27.9)	42.1316	35.9127	-16.7762	11.6514	37.8868
B	(1.11, 27.9)	(1.24, 28.9)	-82.3007	43.013	20.0682	-39.9368	25.6496
C	(1.24, 28.9)	(0.479, 28.5)	150.55	63.1321	3.16394	28.2854	-56.5298
					Self Weight (kN/m):		-7.00665

						Sum:	0	0
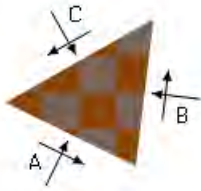
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.24, 28.9)	(1.58, 28.8)	25.9335	16.1154	-7.50187	0.303614	17.7734
B	(1.58, 28.8)	(1.62, 29.2)	-83.1148	11.1074	5.66597	-10.3482	6.95639
C	(1.62, 29.2)	(1.24, 28.9)	150.549	25.3059	2.75346	10.0446	-23.3897
					Self Weight (kN/m):		-1.3401
					Sum:	0	0
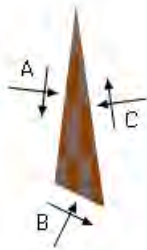
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.62, 29.2)	(1.58, 28.8)	96.8852	11.1074	5.66597	10.3482	-6.95639
B	(1.58, 28.8)	(1.68, 28.7)	25.9534	3.06311	-1.61515	-0.11247	3.46102
C	(1.68, 28.7)	(1.62, 29.2)	-98.0311	9.58773	5.31179	-10.2358	3.92028
					Self Weight (kN/m):		-0.424915
					Sum:	0	0
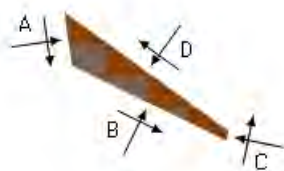
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.62, 29.2)	(1.68, 28.7)	81.9689	9.58773	5.31179	10.2358	-3.92028
B	(1.68, 28.7)	(2.92, 28.1)	25.9409	54.3074	-25.7904	0.564663	60.1176
C	(2.92, 28.1)	(2.94, 28.2)	-78.3578	3.13352	1.49386	-2.76784	2.09515
D	(2.94, 28.2)	(1.62, 29.2)	-144.127	46.9339	-24.0267	-8.0326	-52.1109
					Self Weight (kN/m):		-6.1815
					Sum:	0	0
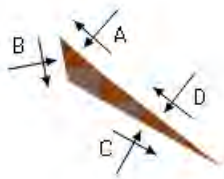
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.9, 31.2)	(1.67, 31.4)	-138.424	0.00114833	-0.0118207	0.00808063	-0.00870345
B	(1.67, 31.4)	(1.72, 31.1)	79.1354	0.459504	0.411614	0.528839	-0.317646
C	(1.72, 31.1)	(2.64, 30.6)	29.1459	1.79817	-1.60677	-0.527518	2.35305
D	(2.64, 30.6)	(1.9, 31.2)	-142.015	0.000328357	0.0116718	-0.00940108	0.00692516
					Self Weight (kN/m):		-2.03363
					Sum:	0	0
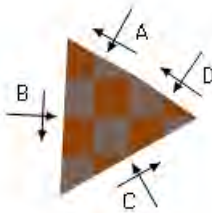
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(2.64, 30.6)	(1.72, 31.1)	-150.854	1.79817	-1.60677	0.527518	-2.35305
B	(1.72, 31.1)	(1.62, 29.2)	92.8281	37.1006	21.7152	35.9839	-23.5194
C	(1.62, 29.2)	(3.34, 30.1)	-29.4505	69.8073	-2.51668	-36.514	59.5494
D	(3.34, 30.1)	(2.64, 30.6)	-145.33	-0.00141103	-0.0021264	0.00255151	-4.89383e-05
					Self Weight (kN/m):		-33.6768
					Sum:	0	0
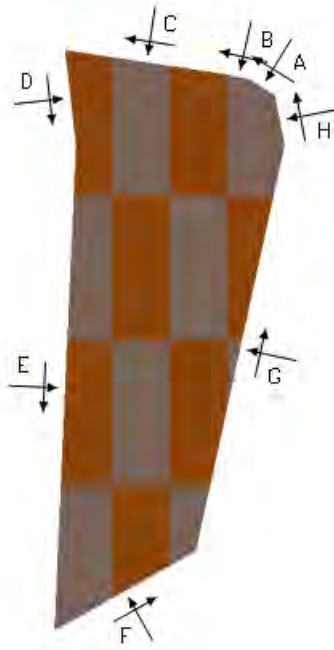
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.67, 31.4)	(1.53, 31.5)	-148.282	-0.000814117	0.000159036	0.000292706	0.000776146
B	(1.53, 31.5)	(1.41, 31.5)	-167.203	0.000352074	0.00977744	-0.0096128	0.00182108
C	(1.41, 31.5)	(0.537, 31.6)	-171.416	0.000103208	0.0865152	-0.085562	0.0128077
D	(0.537, 31.6)	(0.595, 31.1)	83.5545	3.1213	2.57978	3.39118	-2.21307
E	(0.595, 31.1)	(0.479, 28.5)	92.5436	73.2961	37.7974	71.5464	-41.013
F	(0.479, 28.5)	(1.24, 28.9)	-29.4504	63.1321	3.16394	-28.2854	56.5298
G	(1.24, 28.9)	(1.72, 31.1)	-77.6464	53.4424	28.8683	-46.0285	39.6339
H	(1.72, 31.1)	(1.67, 31.4)	-100.865	0.459504	0.411614	-0.528839	0.317646
					Self Weight (kN/m):		-53.2707
					Sum:	0	0
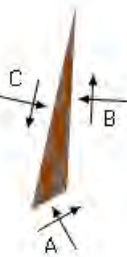
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(1.24, 28.9)	(1.62, 29.2)	-29.4506	25.3059	2.75346	-10.0446	23.3897
B	(1.62, 29.2)	(1.72, 31.1)	-87.1719	37.1006	21.7152	-35.9839	23.5194
C	(1.72, 31.1)	(1.24, 28.9)	102.354	53.4424	28.8683	46.0285	-39.6339
					Self Weight (kN/m):		-7.2752
					Sum:	0	0
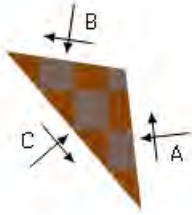
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(0.595, 31.1)	(0.537, 31.6)	-96.4455	3.1213	2.57978	-3.39118	2.21307
B	(0.537, 31.6)	(0.0983, 31.7)	-171.428	0.00221753	-0.0727345	0.0715893	-0.0130461
C	(0.0983, 31.7)	(0.595, 31.1)	49.43	2.53152	2.14739	3.31959	0.015097
					Self Weight (kN/m):		-2.21512
					Sum:	0	0
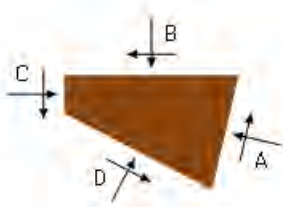
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.9, 23.6)	-76.9754	299.011	-239.268	-345.232	-165.747
B	(11.9, 23.6)	(11.4, 23.6)	-180	230.558	-138.573	138.573	-230.558
C	(11.4, 23.6)	(11.4, 23.5)	90	133.638	-50.3367	133.638	50.3367
D	(11.4, 23.5)	(11.8, 23.2)	27.3889	581.683	-219.097	73.0215	617.274
					Self Weight (kN/m):		-271.306
					Sum:	0	0
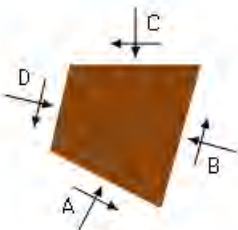
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(12.3, 23)	27.3793	582.308	-219.33	73.1018	617.935
B	(12.3, 23)	(12.5, 23.6)	-74.4925	302.017	-241.714	-355.656	-152.148
C	(12.5, 23.6)	(11.9, 23.6)	-180	78.237	62.6777	-62.6777	-78.237
D	(11.9, 23.6)	(11.8, 23.2)	103.025	299.011	-239.268	345.232	165.747
					Self Weight (kN/m):		-553.297
					Sum:	0	0
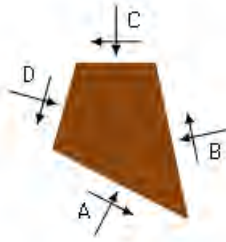
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(13.2, 22.5)	27.3883	2064.77	-605.93	411.737	2112.09
B	(13.2, 22.5)	(13, 23.6)	-101.842	942.131	-753.884	-767.393	-931.161
C	(13, 23.6)	(12.5, 23.6)	-180	-0.110105	0	0	0.110105
D	(12.5, 23.6)	(12.3, 23)	105.507	302.017	-241.714	355.656	152.148
					Self Weight (kN/m):		-1333.19
					Sum:	0	0
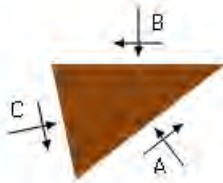
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13.2, 22.5)	(14.7, 23.6)	-37.6124	1554.3	1243.73	36.6288	1990.32
B	(14.7, 23.6)	(13, 23.6)	-180	1004.7	804.022	-804.022	-1004.7
C	(13, 23.6)	(13.2, 22.5)	78.158	942.131	-753.884	767.393	931.161
					Self Weight (kN/m):		-1916.78
					Sum:	0	0
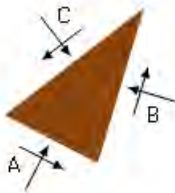
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13.2, 22.5)	(14.2, 22)	27.3883	2749.12	-467.185	849.717	2655.91
B	(14.2, 22)	(14.7, 23.6)	-73.3664	1115.2	892.424	-813.088	1174.3
C	(14.7, 23.6)	(13.2, 22.5)	142.388	1554.3	1243.73	-36.6288	-1990.32
					Self Weight (kN/m):		-1839.89
					Sum:	0	0
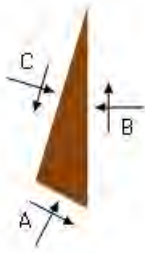
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(14.2, 22)	(14.7, 21.8)	27.3811	1242.15	-465.513	158.023	1317.06
B	(14.7, 21.8)	(14.7, 23.6)	-90	971.111	777.182	-971.111	777.182
C	(14.7, 23.6)	(14.2, 22)	106.634	1115.2	892.424	813.088	-1174.3
					Self Weight (kN/m):		-919.947
					Sum:	0	0
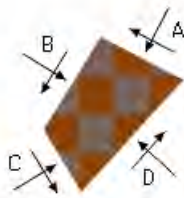
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(14.7, 21.8)	(14.2, 22)	-152.619	1242.15	-465.513	-158.023	-1317.06
B	(14.2, 22)	(13.9, 21.5)	121.522	944.011	354.661	619.251	-795.908
C	(13.9, 21.5)	(14.1, 21.1)	58.7695	573.967	-215.781	378.893	482.12
D	(14.1, 21.1)	(14.7, 21.8)	-47.717	1723.34	646.365	-840.121	1637.65
					Self Weight (kN/m):		-6.79993
					Sum:	0	0
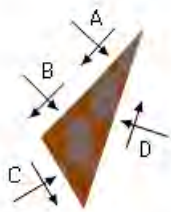
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(14.7, 21.8)	(14.1, 21.1)	132.283	1723.34	646.365	840.121	-1637.65
B	(14.1, 21.1)	(13.7, 20.7)	135	1085.36	407.263	479.489	-1055.45
C	(13.7, 20.7)	(14.1, 20)	59.1982	1193.05	-448.341	795.22	995.999
D	(14.1, 20)	(14.7, 21.8)	-71.6722	2544.74	956.748	-2114.83	1708.38
					Self Weight (kN/m):		-11.2797
					Sum:	0	0
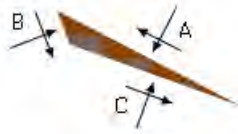
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.4, 23.5)	-152.611	581.683	-219.097	-73.0215	-617.274
B	(11.4, 23.5)	(11.4, 23.4)	69.0255	101.133	-38.0928	80.7943	71.772
C	(11.4, 23.4)	(11.8, 23.2)	19.8293	510.841	-192.412	-7.77282	545.821
					Self Weight (kN/m):		-0.319058
					Sum:	0	0
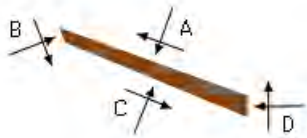
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.4, 23.4)	-160.171	510.841	-192.412	7.77282	-545.821
B	(11.4, 23.4)	(11.4, 23.4)	69.0191	40.2127	-15.1464	32.1257	28.5381
C	(11.4, 23.4)	(11.8, 23.2)	22.3131	504.564	-190.047	15.7549	538.939
D	(11.8, 23.2)	(11.8, 23.2)	-90.3417	55.7714	-21.0067	-55.6534	-21.3174
					Self Weight (kN/m):		-0.338335
					Sum:	0	0
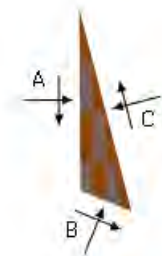
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.8, 23.2)	89.6583	55.7714	-21.0067	55.6534	21.3174
B	(11.8, 23.2)	(11.8, 23.2)	22.5625	17.094	-6.43856	0.533765	18.2586
C	(11.8, 23.2)	(11.8, 23.2)	-104.467	64.3112	-24.2232	-56.1872	-39.5689
					Self Weight (kN/m):		-0.00716692
					Sum:	0	0
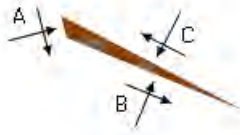
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.8, 23.2)	75.5328	64.3112	-24.2232	56.1872	39.5689
B	(11.8, 23.2)	(12.3, 23)	22.3043	541.69	-204.03	16.9147	578.594
C	(12.3, 23)	(11.8, 23.2)	-152.621	582.308	-219.33	-73.1018	-617.935
					Self Weight (kN/m):		-0.22708
					Sum:	0	0
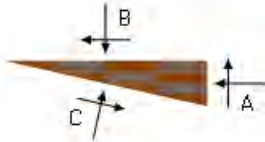
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.5)	(11.4, 23.6)	-90	133.638	-50.3367	-133.638	-50.3367
B	(11.4, 23.6)	(10.8, 23.6)	-180	596.502	-224.68	224.68	-596.502
C	(10.8, 23.6)	(11.4, 23.5)	12.6334	611.894	-230.476	-91.0428	647.491
					Self Weight (kN/m):		-0.652276
					Sum:	0	0
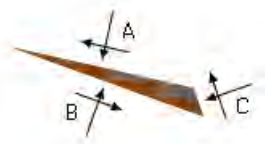
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.5)	(10.8, 23.6)	-167.367	611.894	-230.476	91.0428	-647.491
B	(10.8, 23.6)	(11.4, 23.4)	19.826	669.354	-252.117	-10.1845	715.188
C	(11.4, 23.4)	(11.4, 23.5)	-109.147	98.4369	-37.0772	-80.8583	-67.2791
					Self Weight (kN/m):		-0.418019
					Sum:	0	0
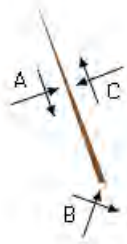
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.5)	(11.4, 23.4)	70.8527	98.4369	-37.0772	80.8583	67.2791
B	(11.4, 23.4)	(11.4, 23.4)	18.9246	4.20746	-1.58477	-0.064019	4.49557
C	(11.4, 23.4)	(11.4, 23.5)	-110.974	101.133	-38.0928	-80.7943	-71.772
					Self Weight (kN/m):		-0.00262776
					Sum:	0	0
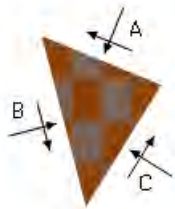
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(11.8, 23.2)	-157.696	541.69	-204.03	-16.9147	-578.594
B	(11.8, 23.2)	(12, 22.5)	75.4794	744.331	-280.344	650.308	457.953
C	(12, 22.5)	(12.3, 23)	-58.344	603.863	-227.438	-633.393	123.256
					Self Weight (kN/m):		-2.61503
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(12, 22.5)	121.656	603.863	-227.438	633.393	-123.256
B	(12, 22.5)	(12.7, 19.9)	75.484	3125.38	-1176.9	2730.64	1922.68
C	(12.7, 19.9)	(12.8, 19.9)	-26.5397	122.651	46.1583	-13.5658	130.345
D	(12.8, 19.9)	(12.3, 23)	-99.1317	3612.1	-1359.95	-3350.47	-1916.01
					Self Weight (kN/m):		-13.7557
					Sum:	0	0
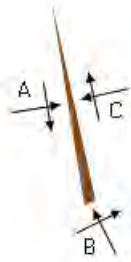
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(12.8, 19.9)	80.8683	3612.1	-1359.95	3350.47	1916.01
B	(12.8, 19.9)	(13, 20)	-26.5788	240.325	90.3995	-26.6208	255.381
C	(13, 20)	(12.3, 23)	-102.464	3712.97	-1397.37	-3323.85	-2165.83
					Self Weight (kN/m):		-5.55555
					Sum:	0	0
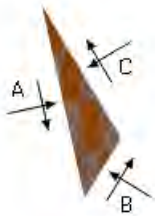
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(13, 20)	77.5356	3712.97	-1397.37	3323.85	2165.83
B	(13, 20)	(13.5, 20.9)	-58.4742	1212.82	456.794	-794.986	1023.52
C	(13.5, 20.9)	(12.3, 23)	-120.799	3793.39	-1424.73	-2528.86	-3166.16
					Self Weight (kN/m):		-23.1953
					Sum:	0	0
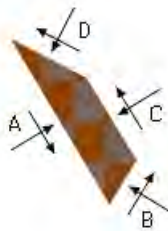
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.3, 23)	(13.5, 20.9)	59.2009	3793.39	-1424.73	2528.86	3166.16
B	(13.5, 20.9)	(13.9, 21.5)	-58.4762	988.047	371.17	-648.156	833.005
C	(13.9, 21.5)	(13.2, 22.5)	-121.232	2223.97	-834.433	-1468.97	-1866.66
D	(13.2, 22.5)	(12.3, 23)	-152.612	2064.77	-605.93	-411.737	-2112.09
					Self Weight (kN/m):		-20.4093
					Sum:	0	0
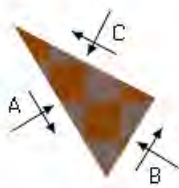
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13.2, 22.5)	(13.9, 21.5)	58.768	2223.97	-834.433	1468.97	1866.66
B	(13.9, 21.5)	(14.2, 22)	-58.4783	944.011	354.661	-619.251	795.908
C	(14.2, 22)	(13.2, 22.5)	-152.612	2749.12	-467.185	-849.717	-2655.91
					Self Weight (kN/m):		-6.65794
					Sum:	0	0
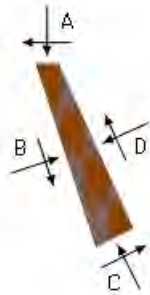
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.8, 23.6)	(10.3, 23.6)	-180	511.459	-192.956	192.956	-511.459
B	(10.3, 23.6)	(11.7, 19.4)	71.814	4072.68	-1537.15	3389.51	2731.44
C	(11.7, 19.4)	(12.5, 19.8)	-26.5624	1212.03	456.022	-134.158	1288.01
D	(12.5, 19.8)	(10.8, 23.6)	-114.328	4561.16	-1718.23	-3448.31	-3444.66
					Self Weight (kN/m):		-63.3314
					Sum:	0	0
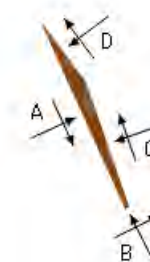
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.8, 23.6)	(12.5, 19.8)	65.6719	4561.16	-1718.23	3448.31	3444.66
B	(12.5, 19.8)	(12.6, 19.8)	-26.6208	146.898	55.1674	-16.3514	156.061
C	(12.6, 19.8)	(11.7, 22.4)	-109.122	2968.53	-1118.09	-2438.43	-2028.88
D	(11.7, 22.4)	(10.8, 23.6)	-126.796	1727.23	-650.53	-993.528	-1555.45
					Self Weight (kN/m):		-16.3956
					Sum:	0	0
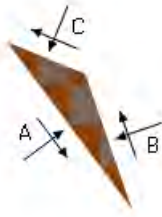
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.8, 23.6)	(11.7, 22.4)	53.2041	1727.23	-650.53	993.528	1555.45
B	(11.7, 22.4)	(11.4, 23.4)	-109.127	1183.11	-445.595	-971.841	-808.591
C	(11.4, 23.4)	(10.8, 23.6)	-157.689	694.554	-261.608	-21.6866	-741.872
					Self Weight (kN/m):		-4.98449
					Sum:	0	0
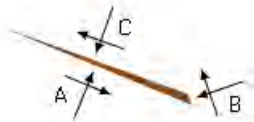
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.8, 23.6)	(11.4, 23.4)	22.3105	694.554	-261.608	21.6866	741.872
B	(11.4, 23.4)	(11.4, 23.4)	-109.058	38.7998	-14.6142	-31.8711	-26.5186
C	(11.4, 23.4)	(10.8, 23.6)	-160.174	669.354	-252.117	10.1845	-715.188
					Self Weight (kN/m):		-0.164633
					Sum:	0	0
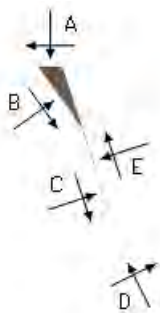
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.3, 23.6)	(9.74, 23.6)	-180	461.423	-174.29	174.29	-461.423
B	(9.74, 23.6)	(10.7, 22.2)	54.4225	1436.19	-542.418	852.546	1276.73
C	(10.7, 22.2)	(11.7, 19.4)	71.5656	2849.2	-1075.06	2363.02	1920.88
D	(11.7, 19.4)	(11.7, 19.4)	-26.5651	3.10828	1.16846	-0.344966	3.30268
E	(11.7, 19.4)	(10.3, 23.6)	-108.186	4072.68	-1537.15	-3389.51	-2731.44
					Self Weight (kN/m):		-8.05225
					Sum:	0	0
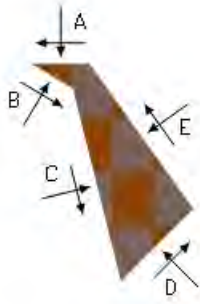
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.74, 23.6)	(9.2, 23.6)	-180	366.577	-138.908	138.908	-366.577
B	(9.2, 23.6)	(9.58, 23.4)	30.8818	193.731	-74.0599	35.8605	204.281
C	(9.58, 23.4)	(10, 21.6)	75.9633	1158.55	-439.602	1017.34	707.466
D	(10, 21.6)	(10.7, 22.2)	-45	772.029	291.814	-339.563	752.251
E	(10.7, 22.2)	(9.74, 23.6)	-125.577	1436.19	-542.418	-852.546	-1276.73
					Self Weight (kN/m):		-20.6946
					Sum:	0	0
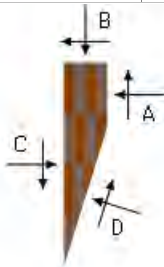
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.2, 23.6)	(9.2, 23.9)	-90	2.68573	-2.19636	-2.68573	-2.19636
B	(9.2, 23.9)	(9, 23.9)	-180	3.64221e-08	-2.27641e-08	2.27647e-08	-3.64217e-08
C	(9, 23.9)	(9, 23)	89.9751	88.8489	-11.9133	88.8437	11.952
D	(9, 23)	(9.2, 23.6)	-72.684	80.092	-32.5758	-86.158	-7.26026
					Self Weight (kN/m):		-2.49542
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.2, 23.6)	(9, 23)	107.316	80.092	-32.5758	86.158	7.26026
B	(9, 23)	(9.13, 23)	-35.3347	14.2243	5.94941	-3.3703	15.0455
C	(9.13, 23)	(9.2, 23.6)	-82.8025	79.4231	-31.8497	-82.7877	-21.6477

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
					Self Weight (kN/m):		-0.658008
					Sum:	0	0
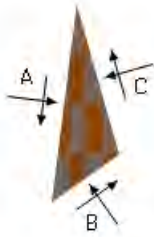
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.2, 23.6)	(9.13, 23)	97.1975	79.4231	-31.8497	82.7877	21.6477
B	(9.13, 23)	(9.32, 23.2)	-35.3225	34.1976	13.6795	-8.6118	35.8112
C	(9.32, 23.2)	(9.2, 23.6)	-105.847	86.7892	-34.1128	-74.1759	-56.5153
					Self Weight (kN/m):		-0.943637
					Sum:	0	0
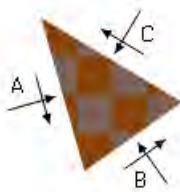
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.2, 23.6)	(9.32, 23.2)	74.1529	86.7892	-34.1128	74.1759	56.5153
B	(9.32, 23.2)	(9.58, 23.4)	-35.3155	143.802	54.9456	-38.3154	149.097
C	(9.58, 23.4)	(9.2, 23.6)	-149.118	193.731	-74.0599	-35.8605	-204.281
					Self Weight (kN/m):		-1.33116
					Sum:	0	0
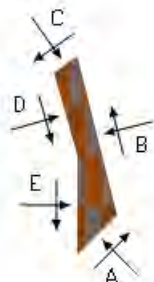
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 21.1)	(10, 21.6)	-45.0006	326.391	124.3	-142.9	318.687
B	(10, 21.6)	(9.58, 23.4)	-104.037	1158.55	-439.602	-1017.34	-707.466
C	(9.58, 23.4)	(9.32, 23.2)	144.685	143.802	54.9456	38.3154	-149.097
D	(9.32, 23.2)	(9.58, 22.2)	74.1535	397.947	-152.34	341.225	255.215
E	(9.58, 22.2)	(9.58, 21.1)	90	780.701	-295.729	780.701	295.729

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
					Self Weight (kN/m):		-13.0682
					Sum:	0	0
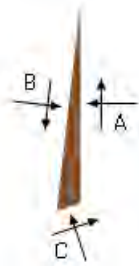
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 21.1)	(9.58, 22.2)	-90	780.701	-295.729	-780.701	-295.729
B	(9.58, 22.2)	(9.45, 21.1)	96.5091	748.99	-284.106	776.368	197.371
C	(9.45, 21.1)	(9.58, 21.1)	-18.2488	93.4592	35.4254	4.33378	99.8539
					Self Weight (kN/m):		-1.49507
					Sum:	0	0
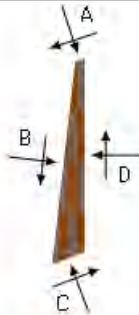
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 21.1)	(9.45, 21.1)	161.751	93.4592	35.4254	-4.33378	-99.8539
B	(9.45, 21.1)	(9.13, 18.3)	96.5088	1947.21	-737.688	2018.28	512.202
C	(9.13, 18.3)	(9.58, 18.5)	-20.9107	341.315	129.266	-1.03669	364.972
D	(9.58, 18.5)	(9.58, 21.1)	-90	2012.91	-761.608	-2012.91	-761.608
					Self Weight (kN/m):		-15.7108
					Sum:	0	0
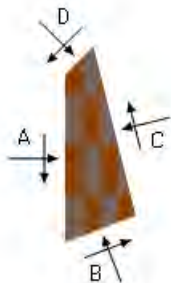
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 21.1)	(9.58, 18.5)	90	2012.91	-761.608	2012.91	761.608
B	(9.58, 18.5)	(10.7, 18.9)	-20.9032	1022.88	386.391	-4.04597	1093.42
C	(10.7, 18.9)	(10, 21.6)	-104.037	2449.18	-924.77	-2151.77	-1491.17
D	(10, 21.6)	(9.58, 21.1)	134.999	326.391	124.3	142.9	-318.687

						Self Weight (kN/m):	-45.1696
						Sum:	0	0
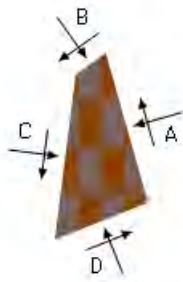
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 22.2)	(9.32, 23.2)	-105.847	397.947	-152.34	-341.225	-255.215
B	(9.32, 23.2)	(9.13, 23)	144.678	34.1976	13.6795	8.6118	-35.8112
C	(9.13, 23)	(9, 22)	97.1976	322.324	-124.416	335.372	83.0517
D	(9, 22)	(9.58, 22.2)	-21.8183	201.398	77.6482	-2.7587	215.831
					Self Weight (kN/m):		-7.85631
					Sum:	0	0
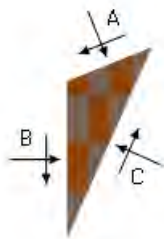
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 22.2)	(9, 22)	158.182	201.398	77.6482	2.7587	-215.831
B	(9, 22)	(9, 20.9)	89.9751	762.625	-180.836	762.546	181.168
C	(9, 20.9)	(9.58, 22.2)	-66.073	716.161	-272.919	-765.305	40.9842
					Self Weight (kN/m):		-6.32181
					Sum:	0	0
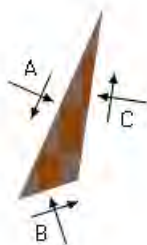
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 22.2)	(9, 20.9)	113.927	716.161	-272.919	765.305	-40.9842
B	(9, 20.9)	(9.41, 21.1)	-18.2695	203.869	77.7917	9.94338	217.98
C	(9.41, 21.1)	(9.58, 22.2)	-81.7545	742.516	-281.759	-775.248	-172.359
					Self Weight		
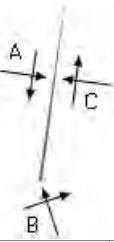
-4 63634

							Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 22.2)	(9.41, 21.1)	98.2455	742.516	-281.759	775.248	172.359
B	(9.41, 21.1)	(9.43, 21.1)	-18.2485	13.2403	5.02865	0.623414	14.1494
C	(9.43, 21.1)	(9.58, 22.2)	-82.7244	746.034	-283.033	-775.872	-186.27
					Self Weight (kN/m):		-0.238335
					Sum:	0	0
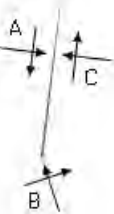
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 22.2)	(9.43, 21.1)	97.2756	746.034	-283.033	775.872	186.27
B	(9.43, 21.1)	(9.45, 21.1)	-18.3934	10.5614	4.00959	0.495747	11.286
C	(9.45, 21.1)	(9.58, 22.2)	-83.4909	748.99	-284.106	-776.368	-197.371
					Self Weight (kN/m):		-0.185813
					Sum:	0	0
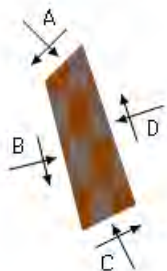
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.7, 22.2)	(10, 21.6)	135	772.029	291.814	339.563	-752.251
B	(10, 21.6)	(10.7, 18.9)	75.9633	2449.18	-924.77	2151.77	1491.17
C	(10.7, 18.9)	(11.7, 19.4)	-26.5674	1163.86	438.48	-128.308	1237.09
D	(11.7, 19.4)	(10.7, 22.2)	-108.434	2849.2	-1075.06	-2363.02	-1920.88
					Self Weight (kN/m):		-55.1247

						Sum:	0	0
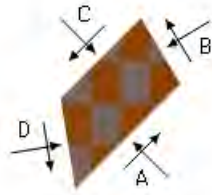
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(14.1, 20)	-45.0026	2005.93	754.656	-884.783	1952.03
B	(14.1, 20)	(13.7, 20.7)	-120.802	1193.05	-448.341	-795.22	-995.999
C	(13.7, 20.7)	(12.8, 19.8)	135	1546.26	581.685	682.056	-1504.68
D	(12.8, 19.8)	(13, 18.9)	80.8693	1075.91	-405.283	997.947	570.911
					Self Weight (kN/m):		-22.2572
					Sum:	0	0
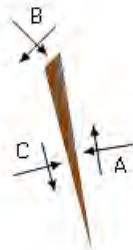
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(12.8, 19.8)	-99.1307	1075.91	-405.283	-997.947	-570.911
B	(12.8, 19.8)	(12.7, 19.8)	135	101.825	38.412	44.8396	-99.1624
C	(12.7, 19.8)	(13, 18.9)	75.4812	1090.84	-410.62	953.107	670.92
					Self Weight (kN/m):		-0.846974
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(12.7, 19.8)	-104.519	1090.84	-410.62	-953.107	-670.92
B	(12.7, 19.8)	(12.7, 19.7)	135	76.4912	28.8164	33.7111	-74.4637
C	(12.7, 19.7)	(13, 18.9)	71.561	1108.1	-416.925	919.396	745.943
					Self Weight (kN/m):		-0.55918
					Sum:	0	0
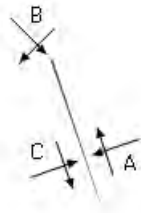
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(12.7, 19.7)	-108.439	1108.1	-416.925	-919.396	-745.943
B	(12.7, 19.7)	(12.7, 19.7)	135	13.7027	5.15915	6.04121	-13.3374
C	(12.7, 19.7)	(13, 18.9)	70.8794	1111.72	-418.254	913.355	759.374
					Self Weight (kN/m):		-0.0941073
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(12.7, 19.7)	-109.121	1111.72	-418.254	-913.355	-759.374
B	(12.7, 19.7)	(12.6, 19.7)	135.047	107.004	40.2595	47.1951	-104.131
C	(12.6, 19.7)	(13, 18.9)	65.6695	1145.25	-430.627	866.16	864.184
					Self Weight (kN/m):		-0.679442
					Sum:	0	0
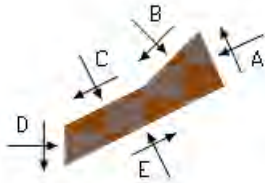
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 18.9)	(12.6, 19.7)	-114.331	1145.25	-430.627	-866.16	-864.184
B	(12.6, 19.7)	(11.8, 18.9)	134.996	1079.22	406.975	475.352	-1050.9
C	(11.8, 18.9)	(10.7, 18.3)	153.433	1371.26	516.565	151.216	-1457.51
D	(10.7, 18.3)	(10.7, 17.8)	90	570.909	-215.221	570.909	215.221
E	(10.7, 17.8)	(13, 18.9)	-26.564	2996.89	1128.02	-331.317	3184.97
					Self Weight (kN/m):		-27.5995
					Sum:	0	0
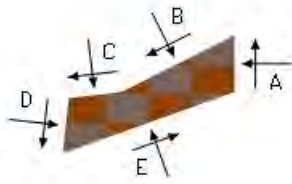
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(10.7, 17.8)	(10.7, 18.3)	-90	570.909	-215.221	-570.909	-215.221
B	(10.7, 18.3)	(9.58, 17.8)	153.439	1003.91	379.525	109.503	-1067.65
C	(9.58, 17.8)	(9.06, 17.7)	173.195	462.306	174.555	-118.574	-479.726
D	(9.06, 17.7)	(9, 17.1)	96.509	532.08	-200.698	551.402	139.089
E	(9, 17.1)	(10.7, 17.8)	-19.6965	1533.92	579.468	28.5782	1639.48
					Self Weight (kN/m):		-15.97
					Sum:	0	0
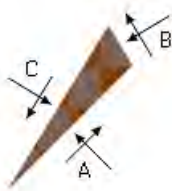
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 20)	(13.7, 20.7)	-45	1325.39	498.41	-584.76	1289.62
B	(13.7, 20.7)	(13.5, 20.9)	-120.787	315.537	-118.757	-210.226	-263.575
C	(13.5, 20.9)	(13, 20)	121.526	1212.82	456.794	794.986	-1023.52
					Self Weight (kN/m):		-2.52536
					Sum:	0	0
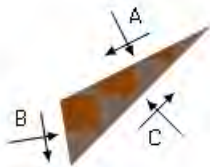
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13, 20)	(12.8, 19.9)	153.421	240.325	90.3995	26.6208	-255.381
B	(12.8, 19.9)	(12.8, 19.8)	80.8351	76.1983	-28.7171	70.6746	40.447
C	(12.8, 19.8)	(13, 20)	-45	220.871	83.275	-97.2954	215.064
					Self Weight (kN/m):		-0.129927
					Sum:	0	0
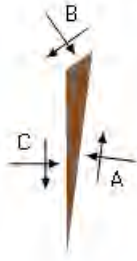
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 22)	(9.13, 23)	-82.8024	322.324	-124.416	-335.372	-83.0517
B	(9.13, 23)	(9, 23)	144.665	14.2243	5.94941	3.3703	-15.0455
C	(9, 23)	(9, 22)	89.9751	332.045	-99.189	332.002	99.3339
					Self Weight (kN/m):		-1.23671
					Sum:	0	0
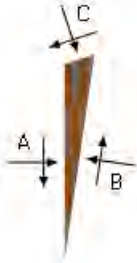
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 20.9)	(9, 18.2)	89.975	2029.86	-676.383	2029.56	677.269
B	(9, 18.2)	(9.41, 21.1)	-81.7546	1934.47	-733.13	-2019.62	-448.12
C	(9.41, 21.1)	(9, 20.9)	161.73	203.869	77.7917	-9.94338	-217.98
					Self Weight (kN/m):		-11.1682
					Sum:	0	0
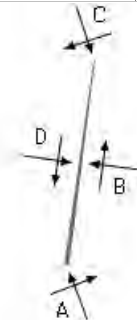
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 18.2)	(9.07, 18.3)	-20.9532	48.9479	18.5718	-0.117151	52.3526
B	(9.07, 18.3)	(9.43, 21.1)	-82.7241	1941.35	-735.585	-2018.88	-483.795
C	(9.43, 21.1)	(9.41, 21.1)	161.751	13.2403	5.02865	-0.623414	-14.1494
D	(9.41, 21.1)	(9, 18.2)	98.2454	1934.47	-733.13	2019.62	448.12
					Self Weight (kN/m):		-2.52843
					Sum:	0	0
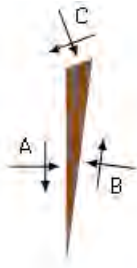
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 18.2)	(9, 17.7)	89.9746	496.119	-170.946	496.044	171.162
B	(9, 17.7)	(9.07, 18.3)	-82.7243	477.169	-180.3	-496.161	-118.416
C	(9.07, 18.3)	(9, 18.2)	159.047	48.9479	18.5718	0.117151	-52.3526
					Self Weight (kN/m):		-0.394138
					Sum:	0	0
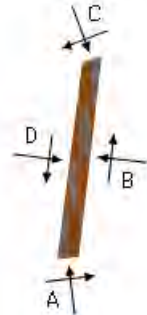
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 17.7)	(9.06, 17.7)	-6.80932	50.7636	19.1902	13.043	52.6791
B	(9.06, 17.7)	(9.13, 18.3)	-83.4916	491.423	-185.67	-509.303	-128.767
C	(9.13, 18.3)	(9.07, 18.3)	159.142	38.9524	14.7738	0.098336	-41.6599
D	(9.07, 18.3)	(9, 17.7)	97.2757	477.169	-180.3	496.161	118.416
					Self Weight (kN/m):		-0.667873
					Sum:	0	0
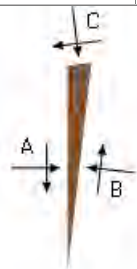
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9, 17.7)	(9, 17.1)	89.9746	564.528	-191.862	564.445	192.108
B	(9, 17.1)	(9.06, 17.7)	-83.491	532.08	-200.698	-551.402	-139.089
C	(9.06, 17.7)	(9, 17.7)	173.191	50.7636	19.1902	-13.043	-52.6791
					Self Weight (kN/m):		-0.339754
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.4)	(11.7, 22.4)	70.8731	1183.11	-445.595	971.841	808.591
B	(11.7, 22.4)	(11.8, 22.2)	53.2198	157.942	-59.4816	90.853	142.23
C	(11.8, 22.2)	(11.4, 23.4)	-110.977	1329.95	-500.9	-1062.5	-943.803
D	(11.4, 23.4)	(11.4, 23.4)	-157.62	6.10183	-2.29829	-0.190526	-6.51752
					Self Weight (kN/m):		-0.500077
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.4)	(11.4, 23.4)	22.3801	6.10183	-2.29829	0.190526	6.51752
B	(11.4, 23.4)	(11.4, 23.4)	-110.981	40.2127	-15.1464	-32.1257	-28.5381
C	(11.4, 23.4)	(11.4, 23.4)	-161.075	4.20746	-1.58477	0.064019	-4.49557
D	(11.4, 23.4)	(11.4, 23.4)	70.9423	38.7998	-14.6142	31.8711	26.5186
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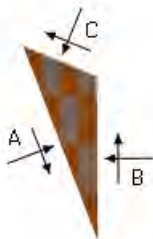
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.4, 23.4)	(11.8, 22.2)	69.0229	1329.95	-500.9	1062.5	943.803
B	(11.8, 22.2)	(11.8, 23.2)	-90.3171	1048.97	-395.072	-1046.75	-400.916
C	(11.8, 23.2)	(11.4, 23.4)	-157.687	504.564	-190.047	-15.7549	-538.939
					Self Weight (kN/m):		-3.94843
					Sum:	0	0
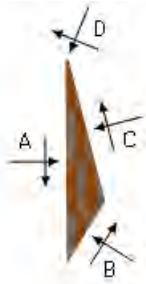
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 23.2)	(11.8, 22.2)	89.6829	1048.97	-395.072	1046.75	400.916
B	(11.8, 22.2)	(12, 22.5)	-58.3501	377.454	-142.154	-395.907	77.0514
C	(12, 22.5)	(11.8, 23.2)	-104.521	744.331	-280.344	-650.308	-457.953
D	(11.8, 23.2)	(11.8, 23.2)	-157.437	17.094	-6.43856	-0.533765	-18.2586
					Self Weight (kN/m):		-1.75655
					Sum:	0	0
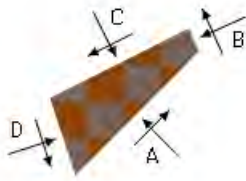
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 18.9)	(12.6, 19.7)	-45.0037	1079.22	406.975	-475.352	1050.9
B	(12.6, 19.7)	(12.5, 19.8)	-114.32	211.158	-79.3975	-159.699	-159.335
C	(12.5, 19.8)	(11.7, 19.4)	153.438	1212.03	456.022	134.158	-1288.01
D	(11.7, 19.4)	(11.8, 18.9)	71.8185	601.622	-226.463	500.893	402.916
					Self Weight (kN/m):		-6.47077
					Sum:	0	0
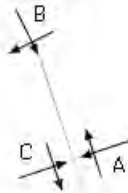
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 18.9)	(11.7, 19.4)	-108.182	601.622	-226.463	-500.893	-402.916
B	(11.7, 19.4)	(11.7, 19.4)	153.435	3.10828	1.16846	0.344966	-3.30268
C	(11.7, 19.4)	(11.8, 18.9)	71.5686	603.323	-227.096	500.548	406.23
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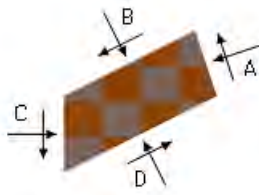
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 18.9)	(11.7, 19.4)	-108.431	603.323	-227.096	-500.548	-406.23
B	(11.7, 19.4)	(10.7, 18.9)	153.433	1163.86	438.48	128.308	-1237.09
C	(10.7, 18.9)	(10.7, 18.3)	90	523.456	-197.519	523.456	197.519
D	(10.7, 18.3)	(11.8, 18.9)	-26.5671	1371.26	516.565	-151.216	1457.51
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					Sum:	0	0
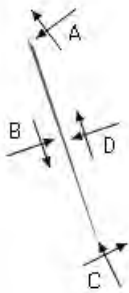
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 22.2)	(11.7, 22.4)	-126.78	157.942	-59.4816	-90.853	-142.23
B	(11.7, 22.4)	(12.6, 19.8)	70.8781	2968.53	-1118.09	2438.43	2028.88
C	(12.6, 19.8)	(12.6, 19.8)	-26.5651	18.0407	6.77917	-2.00457	19.1678
D	(12.6, 19.8)	(11.8, 22.2)	-108.435	2827.42	-1064.9	-2345.57	-1904.37
					Self Weight (kN/m):		-1.44821
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(11.8, 22.2)	(12.6, 19.8)	71.5651	2827.42	-1064.9	2345.57	1904.37
B	(12.6, 19.8)	(12.7, 19.9)	-26.5289	97.7029	36.7314	-10.8405	103.815
C	(12.7, 19.9)	(12, 22.5)	-104.516	3125.38	-1176.9	-2730.64	-1922.68
D	(12, 22.5)	(11.8, 22.2)	121.65	377.454	-142.154	395.907	-77.0514
					Self Weight (kN/m):		-8.45345

						Sum:	0	0
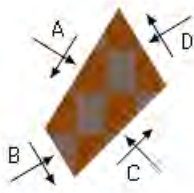
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(13.9, 21.5)	(13.5, 20.9)	121.524	988.047	371.17	648.156	-833.005
B	(13.5, 20.9)	(13.7, 20.7)	59.2127	315.537	-118.757	210.226	263.575
C	(13.7, 20.7)	(14.1, 21.1)	-45	1085.36	407.263	-479.489	1055.45
D	(14.1, 21.1)	(13.9, 21.5)	-121.231	573.967	-215.781	-378.893	-482.12
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					Sum:	0	0
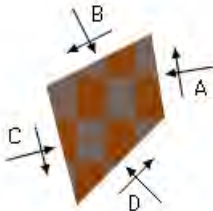
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.8, 19.8)	(12.8, 19.9)	-99.1649	76.1983	-28.7171	-70.6746	-40.447
B	(12.8, 19.9)	(12.7, 19.9)	153.46	122.651	46.1583	13.5658	-130.345
C	(12.7, 19.9)	(12.7, 19.8)	75.5297	116.689	-43.9529	101.948	71.7967
D	(12.7, 19.8)	(12.8, 19.8)	-45	101.825	38.412	-44.8396	99.1624
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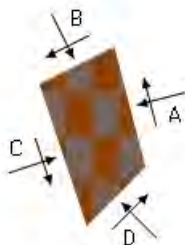
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.7, 19.8)	(12.7, 19.9)	-104.47	116.689	-43.9529	-101.948	-71.7967
B	(12.7, 19.9)	(12.6, 19.8)	153.471	97.7029	36.7314	10.8405	-103.815
C	(12.6, 19.8)	(12.7, 19.7)	71.5793	150.448	-56.6313	124.819	101.301
D	(12.7, 19.7)	(12.7, 19.8)	-45	76.4912	28.8164	-33.7111	74.4637
					Self Weight		

-0.153128

				(kN/m):			
				Sum:		0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.7, 19.7)	(12.6, 19.8)	-108.421	150.448	-56.6313	-124.819	-101.301
B	(12.6, 19.8)	(12.6, 19.8)	153.435	18.0407	6.77917	2.00457	-19.1678
C	(12.6, 19.8)	(12.7, 19.7)	70.8426	156.851	-59.0342	128.856	107.161
D	(12.7, 19.7)	(12.7, 19.7)	-45	13.7027	5.15915	-6.04121	13.3374
					Self Weight (kN/m):		-0.0293348
					Sum:	0	0
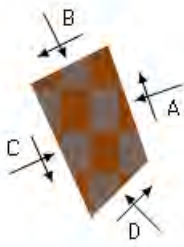
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(12.7, 19.7)	(12.6, 19.8)	-109.157	156.851	-59.0342	-128.856	-107.161
B	(12.6, 19.8)	(12.5, 19.8)	153.379	146.898	55.1674	16.3514	-156.061
C	(12.5, 19.8)	(12.6, 19.7)	65.6804	211.158	-79.3975	159.699	159.335
D	(12.6, 19.7)	(12.7, 19.7)	-44.9527	107.004	40.2595	-47.1951	104.131
					Self Weight (kN/m):		-0.244169
					Sum:	0	0
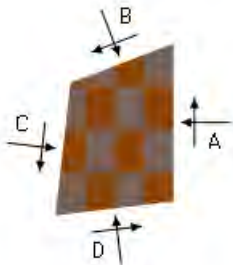
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 17.8)	(9.58, 18.5)	-90	628.913	-237.39	-628.913	-237.39
B	(9.58, 18.5)	(9.13, 18.3)	159.089	341.315	129.266	1.03669	-364.972
C	(9.13, 18.3)	(9.06, 17.7)	96.5084	491.423	-185.67	509.303	128.767
D	(9.06, 17.7)	(9.58, 17.8)	-6.80516	462.306	174.555	118.574	479.726

					Self Weight (kN/m):		-6.13155
					Sum:	0	0
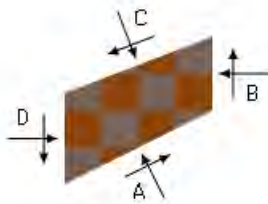
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.58, 17.8)	(10.7, 18.3)	-26.5612	1003.91	379.525	-109.503	1067.65
B	(10.7, 18.3)	(10.7, 18.9)	-90	523.456	-197.519	-523.456	-197.519
C	(10.7, 18.9)	(9.58, 18.5)	159.097	1022.88	386.391	4.04597	-1093.42
D	(9.58, 18.5)	(9.58, 17.8)	90	628.913	-237.39	628.913	237.39
					Self Weight (kN/m):		-14.0985
					Sum:	0	0
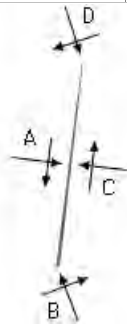
Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(9.43, 21.1)	(9.07, 18.3)	97.2759	1941.35	-735.585	2018.88	483.795
B	(9.07, 18.3)	(9.13, 18.3)	-20.8578	38.9524	14.7738	-0.098336	41.6599
C	(9.13, 18.3)	(9.45, 21.1)	-83.4912	1947.21	-737.688	-2018.28	-512.202
D	(9.45, 21.1)	(9.43, 21.1)	161.607	10.5614	4.00959	-0.495747	-11.286
					Self Weight (kN/m):		-1.96746
					Sum:	0	0

Face	Start Point (x, y)	End Point (x, y)	Angle (θ)	Normal (N)	Shear (S)	Horizontal Equilibrium Term: S.cosθ + N.sinθ	Vertical Equilibrium Term: -S.sinθ + N.cosθ
A	(14.7, 23.6)	(14.7, 23.9)	-90	0	0	0	0
B	(14.7, 23.9)	(9.2, 23.9)	-180	3214.03	6.84452e-08	0.0210328	-3214.03
C	(9.2, 23.9)	(9.2, 23.6)	90	2.68573	-2.19636	2.68573	2.19636

D	(9.2, 23.6)	(14.7, 23.6)	0	3249.34	-2.70676	-2.70676	3249.34
					Self Weight (kN/m):		-37.5078
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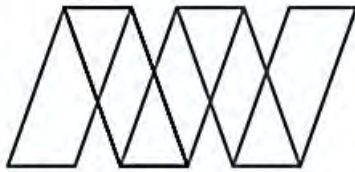
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Heritage Statement for Cliff Stability & Extension

The Galley on the Quarterdeck

Robin Hoods Bay

Overall Existing character and appearance of the Quarterdeck and proposed Tea Hut

In accordance with planning policy HE6 of PPS5 which sets out to assess the overall impact of the proposed extension and cliff stability project of the Tea Hut on the Heritage Asset and evaluate the measures taken to ensure that the proposals do actually contribute to the asset, I have prepared the following statement.

Having examined this part of the conservation area of Robin Hoods Bay, the general character and appearance is that of mixed architectural styles of houses and cottages ranging from 17th century to Victorian. There are varied and mixed use of different materials from painted render to traditional lime mortar and natural sand stone, with some uninspiring alterations and additions from the 1960's era.

The proposal is primarily for a stabilisation project of the cliff, which has become increasingly mobile due to excessive rainfall, over the past 2 winter seasons. The works involved will create a space to insert a storage extension to the existing Tea Hut, names The Galley on the Quarterdeck; itis set in a conservation area of the North Yorkshire Moors National Parks.

Assessment of Impact:

The proposal is again set on the cliff side, which was once all clay and no vegetation, as can be seen in the original photograph. The concrete sea defences, built in the mid 1950's, are in a style completely different to the main Heritage Asset and are clearly punctuated from the Heritage Asset by the galvanised steps leading from the Heritage Asset, down onto the concrete sea wall and viewing area. The area behind the new concrete sea defences is mostly low-level vegetation, designed to stabilise the soil with its extensive root formation. After the stabilisation works are completed, the vegetation removed will be replanted and seeded. Very little will be seen of the extension, apart from its dark grey wave design rood, which will be a continuation of the existing Tea Hut. Therefore, there is no negative impact of the proposal on the Heritage Asset itself, nor the surrounding conservation area of the National Park.

Mitigation Strategy:

Because there is a very clear demarcation line between the Heritage Asset and the modern, but highly necessary concrete sea defences, we feel the style of the proposal is sympathetic to the Heritage Asset in a number of ways:

1) The existing natural stone-faced Gabions will be replaced, when the works are completed.
2) .
3) The exposed parts of the extension will be in natural stone, which will age and blend in with the existing vegetation and surroundings
4) The continuation of a curved style of roof is a seamless blend of the modern Quarterdeck and the Heritage Asset.