

CELEBRATING

25

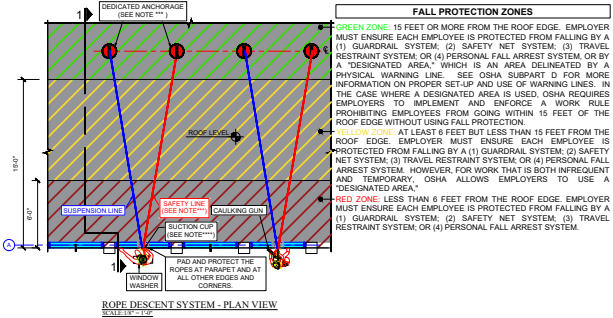
YEARS OF SAFETY  
1996 - 2021

SAFETY FROM THE TOP DOWN

## Anchor Layout Requirements

1. Anchors shall be identified on a plan of maintenance, typically posted on the inside of the roof door, so that workers can easily locate these anchorages on roofs.
2. Each worker shall be tied off to two independent anchorages – one for a fall arrest rope and one for a suspension rope.
3. Anchorages shall be placed in line with the work area requiring service, and there shall be no objects obstructing the path of the rope from the anchorage to the work area. Properly aligned anchors prevent unsafe lateral rope movement or displacement, which damages the rope proportionate to load.
4. Anchors should be placed to allow for at least two workers to make rope descending system descents in the same area of the building façade for both suspension line and fall arrest line.
5. Consideration should be given to providing sufficient anchorage for rescue workers to access window cleaners in the event that they are stranded on the façade of the building.
6. Anchors shall not be placed within 6 feet (1800 mm) of an unprotected roof edge unless fall protection is provided. In most cases anchors can and should be placed further than 6 feet (1800 mm) back from the edge to reduce risk of falling.
7. Outside corners of the roof are of particular concern. Anchors must be located to prevent the rope from being displaced on the parapet/guardrail. See diagram below:
8. The diagram below illustrates the standards governing a safe placement of roof anchors:

# ROPE DESCENT SYSTEM LAYOUT REFERENCE DIAGRAM



**ANSI/WCA I-14.1  
ROPE DESCENT SYSTEM (RDS)**

5.7.10 WHILE SUSPENDED, WINDOW CLEANERS SHALL NOT REACH FURTHER THAN SIX (6) FEET (1.8M) IN ANY DIRECTION AS MEASURED FROM PLUMB LINE OF THE SUSPENSION POINT ON THE BEARING POINT ON THE BUILDING. RAPID DESCENTS, EXCESSIVE SWINGING AND SUDDEN STOPS ARE PROHIBITED.

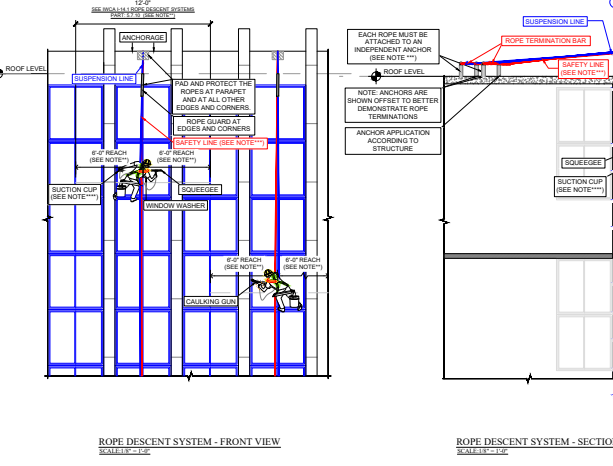
9.1.6 ANCHORAGES SHALL BE UNOBSTRUCTED AND LOCATED BEHIND AND IN LINE WITH THE EQUIPMENT OR PORTION OF THE BUILDING THEY ARE INTENDED TO SERVICE AND SHALL BE FREE OF SHARP EDGES THAT MAY CAUSE DAMAGE TO THE APPURTENANCES ATTACHED TO THEM.

**OSHA'S SUBPART D - WALKING - WORKING SURFACES DESIGNATED AREA FOR FALL PROTECTION SYSTEMS**

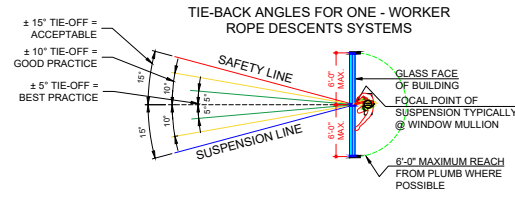
(1) GUARDRAIL SYSTEM  
(2) SAFETY NET SYSTEM  
(3) TRAVEL RESTRAINT SYSTEM  
(4) PERSONAL FALL ARREST SYSTEM

**\*\*\* OSHA'S SUBPART D - WALKING - WORKING SURFACES REQUIRES "EACH EMPLOYEE TO USE A SEPARATE INDEPENDENT FALL ARREST SYSTEM." THIS MEANS THAT EACH WORKER MUST HAVE THEIR OWN PRIMARY SUPPORT LINE CONNECTED TO ONE ANCHORAGE AND AN INDEPENDENT FALL ARREST SYSTEM CONNECTED TO AN INDEPENDENT ANCHORAGE. AN INDEPENDENT FALL ARREST ANCHORAGE IS REQUIRED FOR RDS.**

**\*\*\*\* OSHA'S SUBPART D - WALKING-WORKING SURFACES REQUIRES STABILIZATION AT THE SPECIFIC WORK LOCATION WHEN DESCENTS ARE GREATER THAN 130 FEET. OSHA HAS DETERMINED THAT STABILIZATION CAN BE SOMETHING AS SIMPLE AS A SUCTION CUP.**



COMMON SUCTION CUP USED BY WINDOW CLEANERS. THE TYPICAL CAPACITY RANGES FROM 25LBS TO 35LBS.  
[HTTPS://EN.WIKIPEDIA.ORG/WIKI/SUCTION\\_CUP](https://en.wikipedia.org/wiki/Suction_cup)



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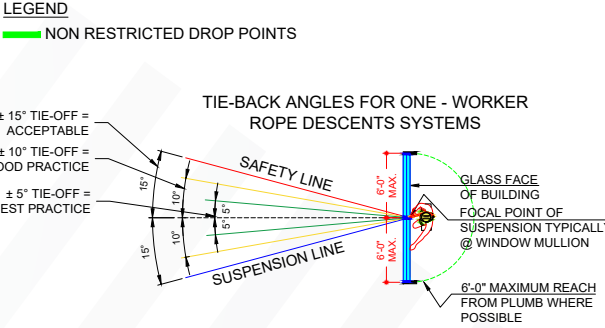
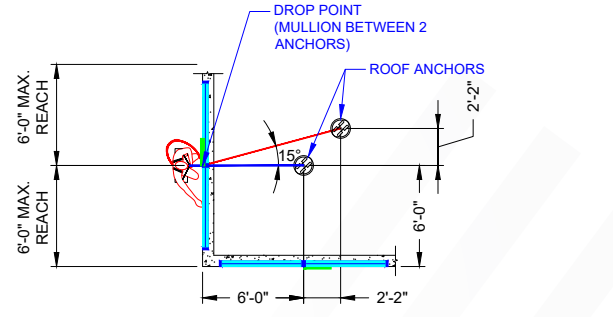
SCALE	1/4" = 1'-0"
DRAWN BY	EF, A. Anshu
CHECKED BY	G. Saha
APPROVED BY	G. Saha

ROPE DESCENT SYSTEM  
TEMPLATE GUIDE FOR

**A-1**

# ROPE DESCENT SYSTEM OUTSIDE CORNER LAYOUT REFERENCE DIAGRAM

- NOTES:**
1. MAXIMUM ANCHOR SPACING = 12FT.
  2. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
  3. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST ROPE.
  4. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.
  5. THE ABOVE IS INTENDED TO SERVE AS AN GUIDE TO THE 1.14 WINDOW CLEANING SAFETY STANDARD. A QUALIFIED PERSON IS REQUIRED TO DESIGN THE ANCHOR LAYOUT SYSTEM (SEE SECTION 9 OF ANSI I.14.1-2001), AND REFER TO FEDERAL AND LOCAL OSHA REGULATIONS AS THESE ARE MORE STRINGENT.
  6. PERIMETER GUARDING 42-INCHES IN HEIGHT (SEE SECTION 9.2 FALL PROTECTION OF ANSI I.14) OR A PERSONAL FALL ARREST SYSTEM IS REQUIRED WHEN INSTALLING OR RIGGING TO AN ANCHOR WITHIN 6FT. OF A ROOF EDGE (SEE I.14.1 2001 APPENDIX)
  7. AT OUTSIDE CORNERS, ANCHORS SHALL BE LOCATED TO PREVENT A ROPE FROM BEING DISPLACED ALONG THE ROOF EDGE.
  8. WHILE SUSPENDED, WINDOW CLEANERS SHALL NOT REACH FURTHER THAN 6FT. (SEE ROPE DESCENT SYSTEMS (RDS) SECTION 5.7.10)

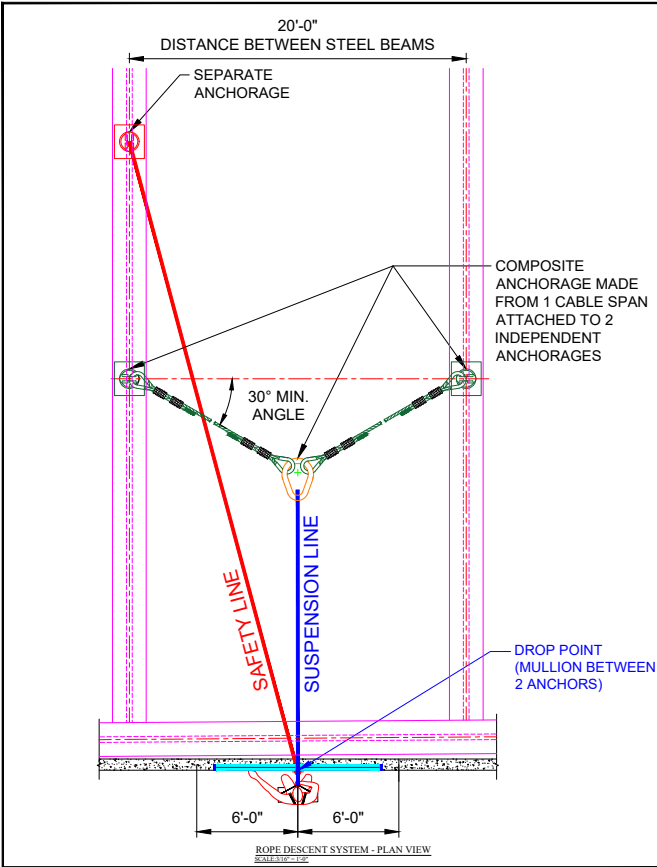


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P: 314.337.1098 | F: 314.337.1099  
www.summitanchor.com | info@summitanchor.com

SCALE	1/4" = 1'-0"
DRAWN BY	EF, A. Anshu
CHECKED BY	G. Saha
APPROVED BY	G. Saha

ROPE DESCENT SYSTEM  
TEMPLATE GUIDE FOR  
OUTSIDE CORNER

**A-2**



# ROPE DESCENT SYSTEM - USING A COMPOSITE SLING ANCHORAGE

OFTEN MEETING OSHA MINIMUM REQUIREMENT OF 2 ANCHORS PER WORKER FOR ROPE DESCENT SYSTEMS CAN BE CHALLENGING ON STEEL FRAME BUILDING ROOFS. INSTALLATION OF A COMPOSITE ANCHOR SLING MAY BE THE SOLUTION.

## LAYOUT REFERENCE DIAGRAM

THE WINDOW CLEANER IS ALWAYS TO ATTACH TO TWO SEPARATE ANCHORAGES. WHEN THE WINDOW CLEANER ATTACHES TO THE MID SPAN EYE ON THE HORIZONTAL STEEL LINE FOR PRIMARY SUSPENSION LINE OR FALL PROTECTION, BOTH ANCHORS ARE PUT INTO USE FOR THAT ONE PRIMARY SUSPENSION. THEIR SECOND LINE A.K.A. THE LIFE LINE OR SAFETY LINE SHALL BE ATTACHED TO A COMPLETELY SEPARATE ANCHORAGE. THIS SEPARATE ANCHORAGE SHALL NOT BE EITHER OF THE ANCHORAGES THAT SUPPORTS THE HORIZONTAL STEEL LINE WITH MID SPAN EYE FOR THEIR PRIMARY SUPPORT.

### LEGEND

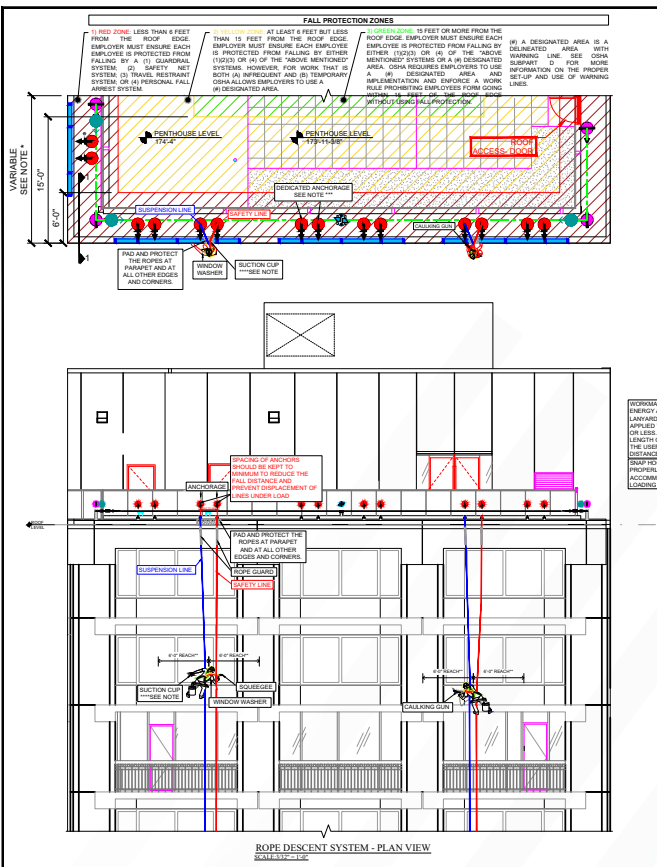
- SAFETY LINE ANCHOR
- 2 ANCHORAGES FOR COMPOSITE SLING ANCHORAGE
- OBLONG RING
- CABLE SLING
- SAFETY LINE
- SUSPENSION LINE

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SCALE	SIZE	DATE
AS SHOWN	11" x 17"	5/31/2023
DRAWN BY	EF. Anwar	5/31/2023
CHECKED BY	GL. Shaw	5/31/2023
APPROVED BY		

ROPE DESCENT SYSTEM TEMPLATE GUIDE

**A-3**



# ROPE DESCENT SYSTEM

## SET BACK GUARDRAIL LAYOUT REFERENCE DIAGRAM

**\*ANSI/MCA L-14.1 ROPE DESCENT SYSTEM (RDS)**

5.7.10 WHILE SUSPENDED, WINDOW CLEANERS SHALL NOT REACH FURTHER THAN SIX (6) FEET (1.8M) IN ANY DIRECTION AS MEASURED FROM PLUMB LINE OF THE SUSPENSION POINT ON THE BEARING POINT ON THE BUILDING. RAPID DESCENTS, EXCESSIVE SWINGING AND SUDDEN STOPS ARE PROHIBITED.

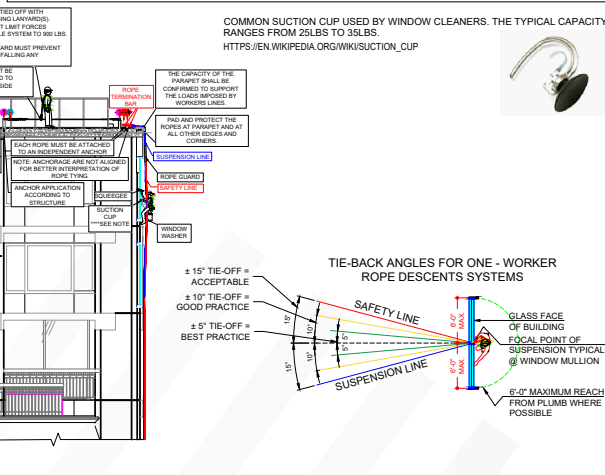
9.1.6 ANCHORAGES SHALL BE UNOBSTRUCTED AND LOCATED BEHIND AND IN LINE WITH THE EQUIPMENT OR PORTION OF THE BUILDING THEY ARE INTENDED TO SERVICE AND SHALL BE FREE OF SHARP EDGES THAT MAY CAUSE DAMAGE TO THE APPURTENANCES ATTACHED TO THEM.

OSHA'S SUBPART D - WALKING - WORKING SURFACES DESIGNATED AREA FOR FALL PROTECTION SYSTEMS

- (1) GUARDRAIL SYSTEM
- (2) SAFETY NET SYSTEM
- (3) TRAVEL RESTRAINT SYSTEM
- (4) PERSONAL FALL ARREST SYSTEM

\*\*\* OSHA'S SUBPART D - WALKING - WORKING SURFACES REQUIRES "EACH EMPLOYEE TO USE A SEPARATE INDEPENDENT FALL ARREST SYSTEM." THIS MEANS THAT EACH WORKER MUST HAVE THEIR OWN PRIMARY SUPPORT LINE CONNECTED TO ONE ANCHORAGE AND AN INDEPENDENT FALL ARREST SYSTEM CONNECTED TO AN INDEPENDENT ANCHORAGE. AN INDEPENDENT FALL ARREST ANCHORAGE IS REQUIRED FOR RDS.

\*\*\*\* OSHA'S SUBPART D - WALKING - WORKING SURFACES REQUIRES STABILIZATION AT THE SPECIFIC WORK LOCATION WHEN DESCENTS ARE GREATER THAN 130 FEET. OSHA HAS DETERMINED THAT STABILIZATION CAN BE SOMETHING AS SIMPLE AS A SUCTION CUP.



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CHECKED BY	GL. Shaw	5/31/2023
APPROVED BY		

ROPE DESCENT SYSTEM TEMPLATE GUIDE - CABLE SET BACK

**A-4**

# CABLE SET BACK HLL LAYOUT REFERENCE DIAGRAMS

**FALL DISTANCE CALCULATION - SECTION VIEW**  
SCALE: 1/8" = 1'-0"

**FALL DISTANCE CALCULATION ELEVATION VIEW**  
SCALE: 1/8" = 1'-0"

**3M DBI-SALA LEADING EDGE AWARENESS**  
HTTPS://YOUTU.BE/UFF1CA4PXF4

**UNPROTECTED EDGES REPRESENT A FALL HAZARD WHEN WORKING AT HIGH LEVELS. WHILE WORKERS USE SELECTIVE EQUIPMENT TO REDUCE FALLING FROM AN EDGE, THERE IS A PROBABILITY OF A FALL IF EQUIPMENT IS NOT WELL USED OR IS NOT DESIGN FOR FALLING FROM AN EDGE. WE RECOMMEND USING A SELF-RETRACTABLE LANYARD THAT INCORPORATES A STEEL CABLE THAT IS TESTED TO SUPPORT LOADS WHEN FALLING OVER SHARP EDGES AND KEEP WORKERS SAFE.**

**3M DBI-SALA LEADING EDGE AWARENESS**  
HTTPS://YOUTU.BE/UFF1CA4PXF4

**STEP #1: WHEN HLL CONFIGURATION INCLUDES SALADBI ZORBIT DETERMINE POTENTIAL LIFE LINE DEFLECTION BASED ON NUMBER OF USERS.**

SPAN LENGTH (IN FEET)	VERTICAL DEFLECTION OF HLL UNDER STATIC LOAD OF 500 LBS. PER USER (IN FEET AND INCHES)	
	One User	Two users
>0 But ≤ 10	0'-11"	1'-10"
10-20	1'-10"	3'-7"
20-30	2'-8"	5'-5"
30-40	3'-7"	7'-2"
40-50	4'-6"	9'-0"
50-60	5'-5"	10'-10"
60-70	6'-4"	12'-7"
70-80	7'-2"	14'-5"
80-90	8'-5"	16'-10"
90-100	9'-0"	18'-0"

\* Table requires a shock absorbing lanyard that limits the impact load to 900 lbs or less.

**STEP #2: WHEN HLL CONFIGURATION INCLUDES SALADBI NANOLOCK EDGE 8'-0" RETRACTABLE LANYARD DETERMINE THE CLEARANCE REQUIRED BASED ON SETBACK DISTANCE. ADD THE LIFELINE DEFLECTION DISTANCE TO THE CLEARANCE DISTANCE TO CHECK IF SUFFICIENT CLEARANCE IS PROVIDED.**

130-220 lb. (59-100 kg) D2-2' (0.6m)	
A	1'-0"
B	1'-0"
C	1'-0"

221-510 lb. (101-140 kg) D2-2' (0.6m)	
A	1'-0"
B	1'-0"
C	1'-0"

**WORKERS USING FALL RESTRAINT SYSTEM ARE A PREFERABLE, WHEN POSSIBLE, BECAUSE FALL ARREST SYSTEMS REQUIRE RESCUE AS PER OSHA REQUIREMENTS BELOW.**

Rescue considerations. As required by 1910.140(c)(21), when personal fall arrest systems are used, special consideration must be given to rescuing an employee promptly should a fall occur. The availability of rescue personnel, ladders, or other rescue equipment needs to be evaluated since there may be instances in which employees cannot self-rescue (e.g. employee unconscious or seriously injured). In some situations, equipment allowing employees to rescue themselves after the fall has been arrested may be desirable, such as devices that have descent capability.

**FALL DISTANCE CALCULATION - ELEVATION VIEW**  
SCALE: 1/8" = 1'-0"

**EDGE CLEARANCE CALCULATION**  
SCALE: 1/8" = 1'-0"

**ALLOWABLE ANGLE OF REDIRECTION**  
SCALE: 1/8" = 1'-0"

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P: (832) 371-1000 | F: (832) 371-0001  
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DATE:	AS NOTED
DRAWN BY:	M. Amadio
CHECKED BY:	C. Brown
APPROVED BY:	

ROPE DESCENT SYSTEM  
TEMPLATE GUIDE - CABLE SET  
BACK

A-5

# ANCHOR SET BACK LAYOUT REFERENCE DIAGRAM

**FALL DISTANCE CALCULATION - ELEVATION VIEW**  
SCALE: 1/8" = 1'-0"

**PLACING ANCHORS FURTHER BACK FROM A ROOF EDGE REDUCES THE RISK OF WORKERS FALLING AS WELL AS POTENTIALLY REDUCING THE FREE FALL DISTANCE.**

**WHEN ANCHORS ARE LOCATED WITHIN CLOSE PROXIMITY TO THE BUILDING EDGE FALL DISTANCE AND WELL AS FALL DISTANCE NEED TO BE ANALYZED BY A QUALIFIED PERSON.**

FF = 6.0 ft.  
(1.83 m)

FF = 6.0 ft.  
(1.83 m)

FF = 6.0 ft.  
(1.83 m)

FF = 8.0 ft.  
(2.44 m)

FF = 12.0 ft.  
(3.66 m)

**FALL DISTANCE CALCULATION - ELEVATION VIEW**  
SCALE: 1/8" = 1'-0"

**FALL DISTANCE CALCULATION - ELEVATION VIEW**  
SCALE: 1/8" = 1'-0"

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DATE:	3/22/2021
DRAWN BY:	M. Amadio
CHECKED BY:	C. Brown
APPROVED BY:	

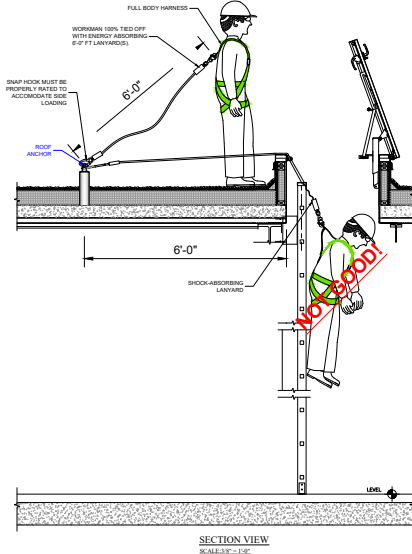
ROPE DESCENT SYSTEM  
TEMPLATE GUIDE - CABLE SET  
BACK

A-6

# ROOF HATCH FALL PROTECTION

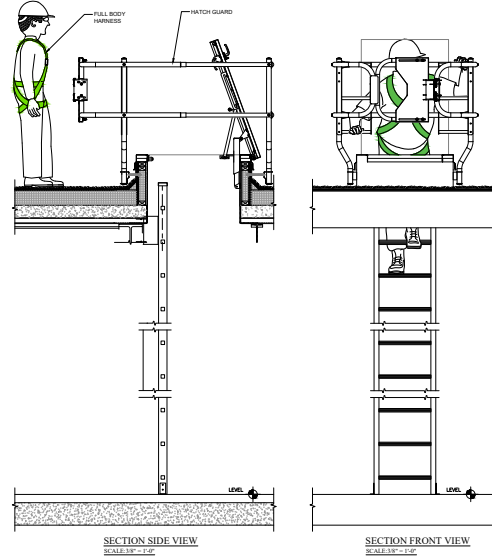
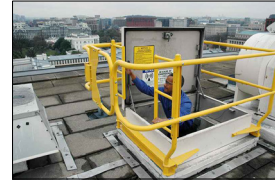
## MARGINAL OPTION

ANCHORAGE FOR USE WITH HATCH FOR FALL PROTECTION  
ADDING AN ANCHORAGE FOR FALL PROTECTION ADJACENT TO A ROOF HATCH OR SKY LIGHT OR OPENING IN THE ROOF DOES NOT ELIMINATE A FALL HAZARD



## BEST OPTION

HATCH GUARD FOR USE WITH HATCH FOR FALL PROTECTION  
ADDING AN ROOF HATCH GUARD WITH WALK THROUGH LADDER RUNGS FOR FALL PROTECTION TO A ROOF HATCH ELIMINATES MANY FALL HAZARDS. INCORPORATION OF A HATCH GUARD IS CONSIDERED BEST PRACTICE BY SUMMIT ANCHOR CO.



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SCALE	1/4" = 1'-0"
DRAWN BY	M. Amadio 4/22/2017
CHECKED BY	C. S. BARN 4/22/2017
APPROVED BY	

FALL PROTECTION  
TEMPLATE GUIDE

A-7

# ANCHOR LAYOUT REFERENCE TEMPLATE GUIDE FOR 2 WORKERS PER BAY AT 20'-0" FT COLUMN TO COLUMN SPACING

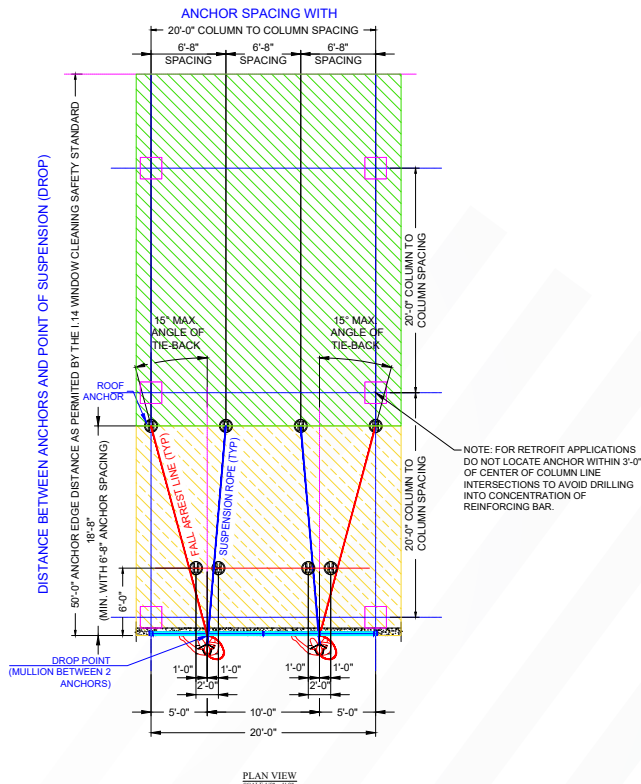
TO 14.1 2001 WINDOW CLEANING SAFETY STANDARD

### NOTES:

1. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
2. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST ROPE.
3. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.

### LEGEND

- YELLOW ZONE: 2 ANCHOR PAIRS CENTERED ON THE MULLIONS WITH 20'-0" COLUMN SPACING.
- GREEN ZONE: ANCHORS AT 6'-8" SPACING WITH 20'-0" COLUMN SPACING.



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SCALE	1/4" = 1'-0"
DRAWN BY	M. Amadio 1/22/2017
CHECKED BY	C. S. BARN 1/22/2017
APPROVED BY	

EQUIPMENT PLACEMENT  
CHART - FOR 20'-0" FT  
SPACING

A-8



# ANCHOR LAYOUT FOR 1 WORKER PER BAY AT 20'-0" FT COLUMN TO COLUMN SPACING

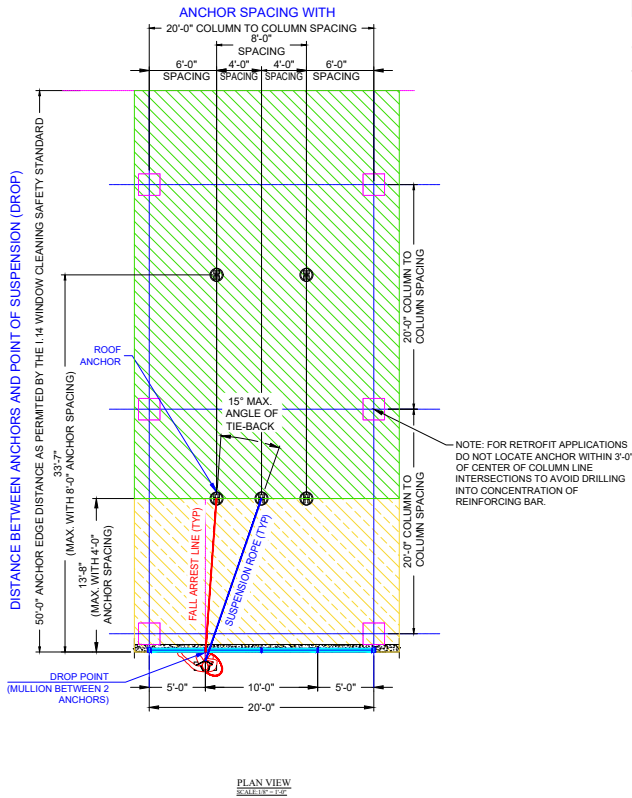
TO 14.1 2001 WINDOW CLEANING SAFETY STANDARD

**NOTES:**

1. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
2. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST LINE.
3. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.

**LEGEND**

- YELLOW ZONE: 3 ANCHOR CENTERED ON EVERY OTHER WINDOW MULLION @ 4'-0" FT ON CENTER WITH 20'-0" COLUMN SPACING.
- GREEN ZONE: ANCHORS AT 8'-0" SPACING WITH 20'-0" COLUMN SPACING.



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TITLE	158'-1'-0"
DRAWN BY	EF, Amadeo 1/25/2021
CHECKED BY	CS, Bunn 1/25/2021
APPROVED BY	1/25/2021

EQUIPMENT PLACEMENT CHART - FOR 20'-0" FT SPACING

**A-9**

# ANCHOR LAYOUT REFERENCE TEMPLATE GUIDE FOR 2 WORKERS PER BAY AT 24'-0" FT COLUMN TO COLUMN SPACING

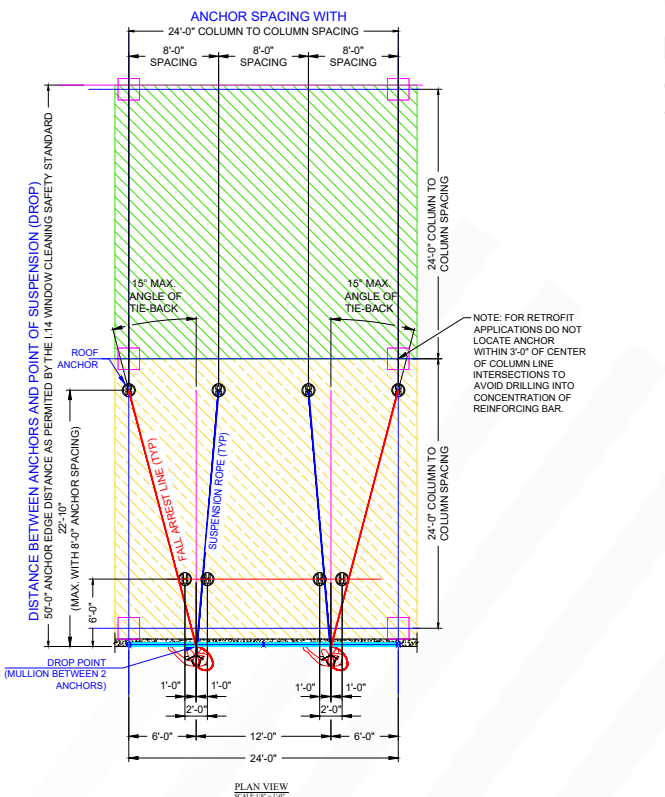
TO 14.1 2001 WINDOW CLEANING SAFETY STANDARD

**NOTES:**

1. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
2. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST LINE.
3. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.

**LEGEND**

- YELLOW ZONE: 2 ANCHOR PAIRS CENTERED ON THE MULLIONS WITH 24'-0" COLUMN SPACING.
- GREEN ZONE: ANCHORS AT 8'-0" SPACING WITH 24'-0" COLUMN SPACING.

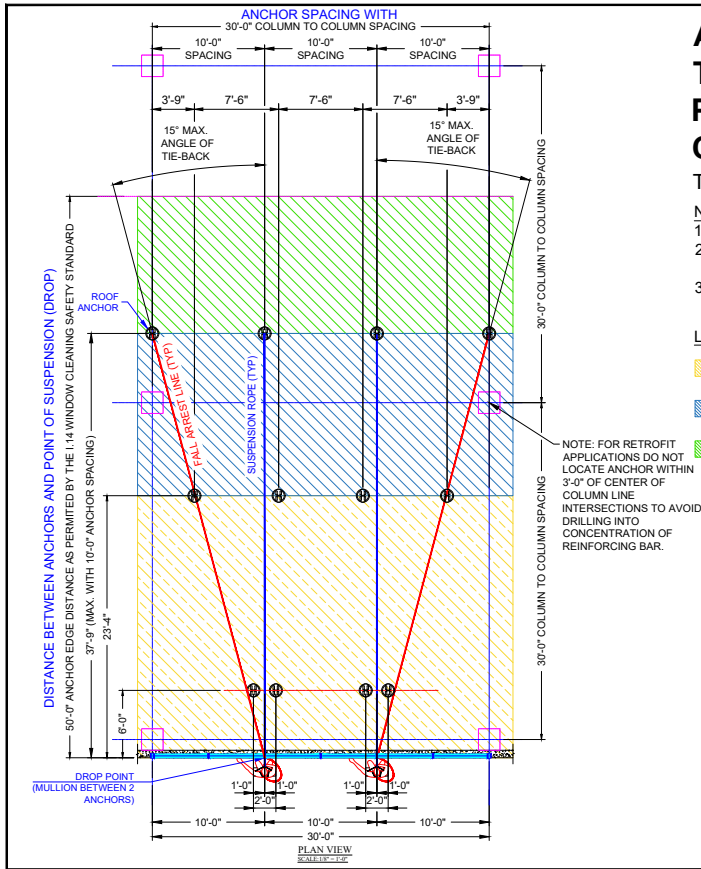


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TITLE	158'-1'-0"
DRAWN BY	EF, Amadeo 1/25/2021
CHECKED BY	CS, Bunn 1/25/2021
APPROVED BY	1/25/2021

EQUIPMENT PLACEMENT CHART - FOR 24'-0" FT SPACING

**A-10**



# ANCHOR LAYOUT REFERENCE TEMPLATE GUIDE FOR 2 WORKERS PER BAY AT 30'-0" FT COLUMN TO COLUMN SPACING

TO 14.1 2001 WINDOW CLEANING SAFETY STANDARD


**NOTES:**

1. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
2. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST ROPE.
3. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.

**LEGEND**

- YELLOW ZONE: ANCHOR PAIRS CENTERED ON EVERY OTHER WINDOW MULLION @ 10 FT ON CENTER WITH 30'-0" COLUMN SPACING.
- BLUE ZONE: ANCHORS AT 7'-6" SPACING CENTERED @ WINDOW MULLION WITH 30'-0" COLUMN SPACING.
- GREEN ZONE: ANCHORS AT 10'-0" SPACING WITH 30'-0" COLUMN SPACING.

NOTE: FOR RETROFIT APPLICATIONS DO NOT LOCATE ANCHOR WITHIN 3'-0" OF CENTER OF COLUMN LINE INTERSECTIONS TO AVOID DRILLING INTO CONCENTRATION OF REINFORCING BAR.



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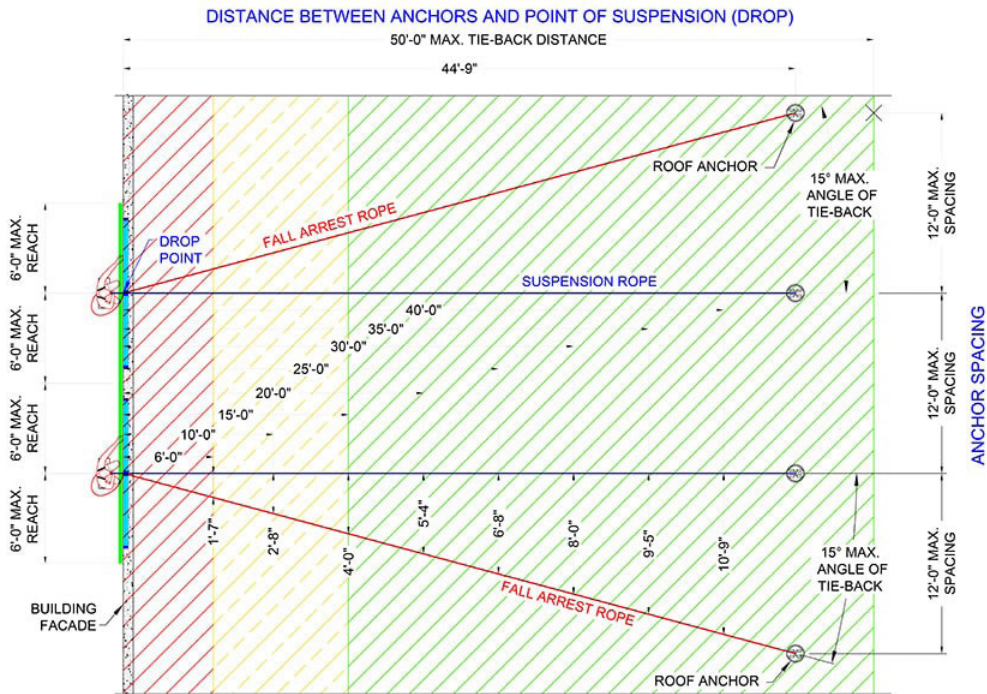
SCALE	1/8" = 1'-0"
DRAWN BY	M. Andrews   1/28/2021
CHECKED BY	C. Smith   1/28/2021
APPROVED BY	

EQUIPMENT PLACEMENT  
CHART - FOR 30'-0" FT  
SPACING

A-11

## NON RESTRICTIVE ANCHOR LAYOUT GUIDE

ANCHOR LAYOUT REFERENCE GUIDE TO 14.1 2001 WINDOW CLEANING SAFETY STANDARD



**GENERAL NOTES:**

1. MAXIMUM ANCHOR SPACING = 12FT.
2. MAXIMUM TIE-BACK DISTANCE FROM ROOF EDGE = 50FT.
3. MAXIMUM ANGLE FROM PERPENDICULAR = 15° FOR BOTH SUSPENSION ROPE AND FALL ARREST ROPE.
4. WINDOW CLEANER SHALL NOT REACH FURTHER THAN SIX (6) FEET IN ANY DIRECTION.

**FALL PROTECTION ZONES**

- GREEN ZONE:** 15 FEET OR MORE FROM THE ROOF EDGE. EMPLOYER MUST ENSURE EACH EMPLOYEE IS PROTECTED FROM FALLING BY A (1) GUARDRAIL SYSTEM; (2) SAFETY NET SYSTEM; (3) TRAVEL RESTRAINT SYSTEM; OR (4) PERSONAL FALL ARREST SYSTEM, OR BY A "DESIGNATED AREA," WHICH IS AN AREA DELINEATED BY A PHYSICAL WARNING LINE. SEE OSHA SUBPART D FOR MORE INFORMATION ON PROPER SET-UP AND USE OF WARNING LINES. IN THE CASE WHERE A DESIGNATED AREA IS USED, OSHA REQUIRES EMPLOYERS TO IMPLEMENT AND ENFORCE A WORK RULE PROHIBITING EMPLOYEES FROM GOING WITHIN 15 FEET OF THE ROOF EDGE WITHOUT USING FALL PROTECTION.
- YELLOW ZONE:** AT LEAST 6 FEET BUT LESS THAN 15 FEET FROM THE ROOF EDGE. EMPLOYER MUST ENSURE EACH EMPLOYEE IS PROTECTED FROM FALLING BY A (1) GUARDRAIL SYSTEM; (2) SAFETY NET SYSTEM; (3) TRAVEL RESTRAINT SYSTEM; OR (4) PERSONAL FALL ARREST SYSTEM. HOWEVER, FOR WORK THAT IS BOTH INFREQUENT AND TEMPORARY, OSHA ALLOWS EMPLOYERS TO USE A "DESIGNATED AREA."
- RED ZONE:** LESS THAN 6 FEET FROM THE ROOF EDGE. EMPLOYER MUST ENSURE EACH EMPLOYEE IS PROTECTED FROM FALLING BY A (1) GUARDRAIL SYSTEM; (2) SAFETY NET SYSTEM; (3) TRAVEL RESTRAINT SYSTEM; OR (4) PERSONAL FALL ARREST SYSTEM.

**LEGEND**

- NON-RESTRICTED DROP POINTS