VIOLA SONATA NO. 1

~ CEOL MOR ~

JORDAN ALEXANDER KEY

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"CEOL MOR"

FOR

SOLO VIOLA

Program Note

"Ceol Mor" takes its inspiration from traditional forms, sounds, and rhythms of Scottish bagpipe music, particularly from two primary genres: "Ceol mor" (a Gaelic word meaning "big music") and "Ceol baeg" (meaning "little music"). "Ceol Mor" (also know as "Piobaireachd," pronounced "pee-oh-brahk") is a traditional form of Scottish bagpipe music from the Middle Ages, formed around very basic themes, often only a few notes, and continuous variations of that theme using a system of elaborate embellishments. While this movement uses no specific piobaireachd for its material, the repetitive structure with slight variations in motivic and rhythmic execution with a slow build in tempo do pay homage to the style. Being a bagpiper himself, Jordan Alexander Key often searches for new ways to use the bagpipe in music as well as new ways to envision or contextualize traditional genres of Scottish music in "classical" concert venues. His new works for bagpipe have received international recognition, publication, and performance; most recently his work, "Microtonal Piobaireachd on Prime Numbers" was the winner of the Piobaireachd Society's "Modern Pibroch Library" 2018 competition.

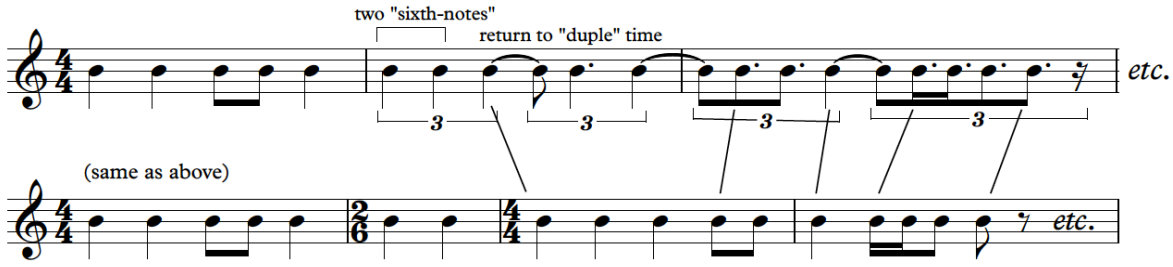
Performance Notes:

This work uses what I call "non-dyadic time signatures" (known elsewhere and erroneously as "irrational time signatures"). I do not call them "irrational" since they are in no way "irrational" (either psychologically or mathematically). They are "rational" proportions, but do not use powers of 2 for the bottom number, hence "non-dyadic" (not written over 2, 4, 8, 16, 32, 64, etc.). Such a system of time signature grew out of questions like "why isn't there a 'fifth' or 'third' note?" Well, many music teachers will simply say, "because there isn't one," but of course there is.

What we call a triplet is actually just a "third note," and similarly the quintuplet is the "fifth note." Systems of subdividing fundamental note values (like the breve or whole-note) into groups other than "dyadic-rationals" (third, fifth, seventh as compared to half, fourth, eighth, sixteenth, etc.) have existed at prior points in music history (particularly the late Middle Ages and Renaissance), using uncommon and arcane systems of mensuration. Such systems have long fallen out of favor; however, if reincorporated into our system of musical language, they can allow for the fluid notations of some rather complex rhythmic ideas without the use of perhaps excessive tempo changes or tuplet (and embedded tuplet) markings.

For example, imagine if I wanted to write a quarter note triplet in a 4/4 time signature, but I only wanted two-thirds of that triplet (namely, two quarter notes of the three within the quarter-note triplet), and then I wanted to return directly to duple time with no hint of the prior triplet? Well, I would have to write the two notes of the triplet, but then, in returning to the simple duple time from the 4/4, I would have to endlessly tie over values from within triplets. However, if I just recognize that I can create "sixth notes," then I can specify that I want two "sixth-notes" without the use of triplet and many ties subsequently. This can be done using a "non-dyadic" time signature, namely 2/6. See Figure 1.

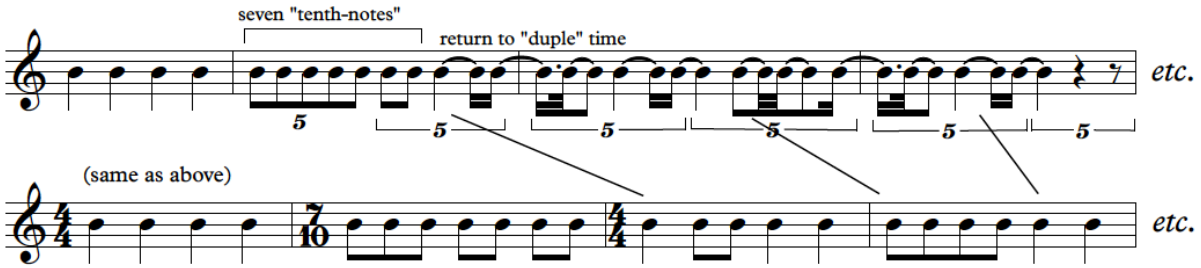
Figure 1:



Why "2/6" and "sixth-notes" rather than "third-notes"? Well, if we consider the "whole-note" as the fundamental value of rhythm (perhaps appropriately since it is "whole"), then to get the quarter-note triplets, we must recognize that the whole-note must be divided equally into six parts. Then, to get only two of these six equal divisions of the whole note, we simply specify "2," just as one might specify "3" in 4 equal divisions of the whole to get 3/4 rather than 4/4.

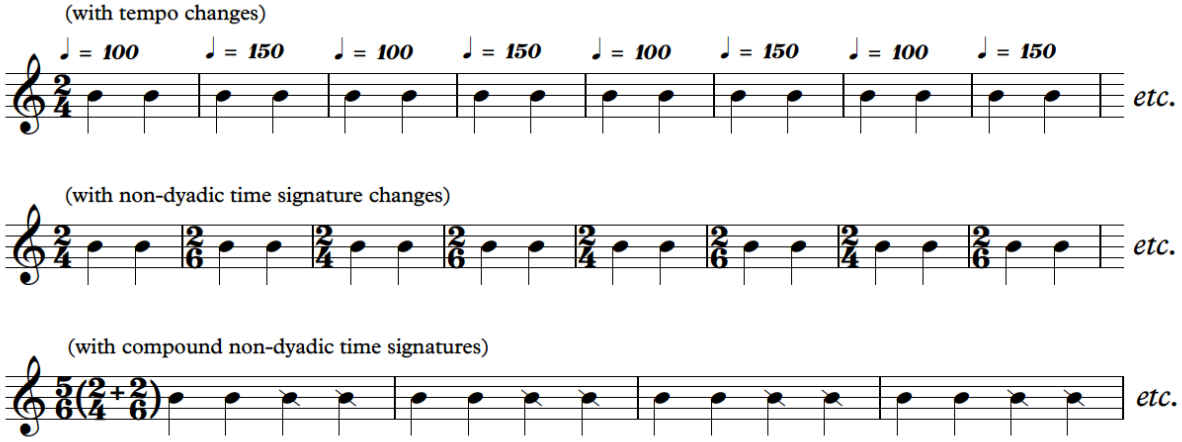
Similarly, if we want seven units of five equal divisions of the whole note (1 and 2/5's of an eighth-note quintuplet), we would recognize that we must divide the whole into 10 equal parts and play seven of those parts, thus requiring a 7/10 time signature and "tenth-notes." See Figure 2.

Figure 2:



Such a system allows for the rapid alternation between different tempos without the use of tempo markings on each measure. Furthermore, it utilizes and recognizes those rhythmic fluctuations that are proportional to each other. The notational possibilities of non-dyadic time signatures as compared to tempo changes are demonstrated, in a rudimentary form, in Figure 3.

Figure 3:



Within "Ceol Mor", in an effort to imitate the rhythmic nuances and inflections present in medieval bagpipe music from Scotland, I have used a small set of non-dyadic time signatures with traditional time signatures (dyadic). Note that all non-dyadic time signatures are calculated in proportion to the "whole-note," rather than some specific or given "measure length."

Below are the translations of the non-dyadic time signatures in this piece into tempo changes; however, I encourage you to attempt to figure these out on your own first, in an effort to encourage more fluency with this new rhythmic notations, which is becoming incrementally more popular in the 21st century.

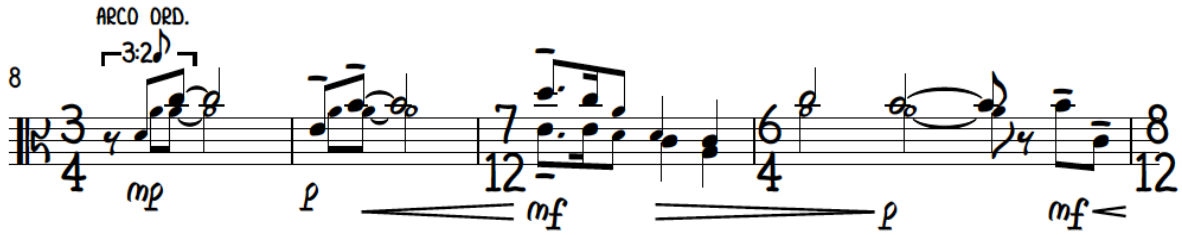
Non-Dyadic Time Signatures Over 12:
Below, you see the first instance of a non-dyadic time signature in this piece: 7/12. Twelve simply tells us to divide the whole note into 12 equal parts; if you think about this carefully, you will realize that this simply gives one eighth-note triplets (4 quarter-notes each divided into triplets, given 12-triplet-eighth-notes to the whole note). Now, the "7" tells us that we only want seven of those 12 equal division of the whole note (this is 2 and 1/3 eighth-note triplets). Thus, you can figure out the pace of an eighth-note triplet from the music prior to measure 10 and then group those calculated triplets into a grouping of 3+2+2, or you can calculate the requisite tempo change for eighth-note triplets (i.e. 12th notes). Note that I recommend starting to practice the piece by keeping the beat of the eighth-note rather than the quarter-note, and then advancing to the larger tacti when you become more comfortable. Let's calculate the tempo change:

If the quarter-note = 50 bpm, then the eighth-note = 100 bpm. To get the tempo to the eighth-note triplet we realize that we have 3 eighth-notes in the time of 2 previously (2/2 modulated to 3/2); thus, the tempo increases by 3/2 or (150%). Simply multiply the tempo given by 1.5 or 3/2.

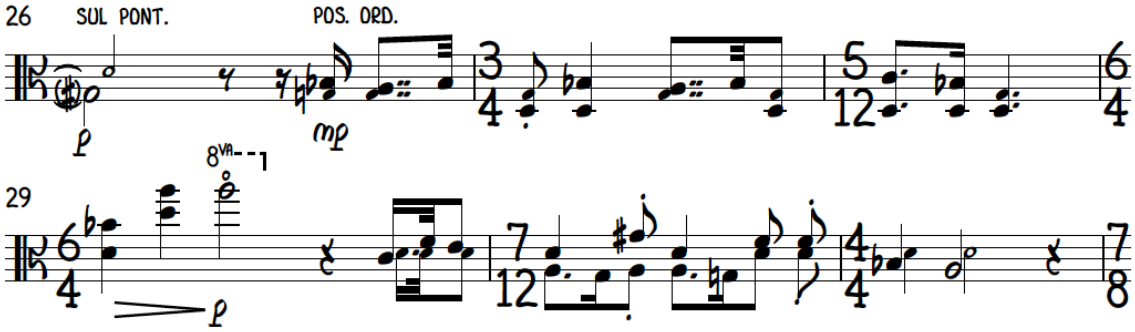
$$\text{Tempo for measures of } \frac{n}{12} = \text{Given tempo x } 1.5$$

Where n is the desired number of equal subdivision of the whole-note to be played per measure. Thus,

Tempo = 100 bpm (eighth-note) . . . . . 150 bpm . . . . . 100 bpm . . . . . 150 bpm
50 bpm (quarter-note) 75 50 75



Later in the piece, the over-arching tempo accelerates globally to quarter-note = 60 bpm (starting in measure 14). Thus, the above formula needs to be reapplied to find the relative tempo changes for any non-dyadic time signature. Let's calculate some of these measures of $\frac{n}{12}$.



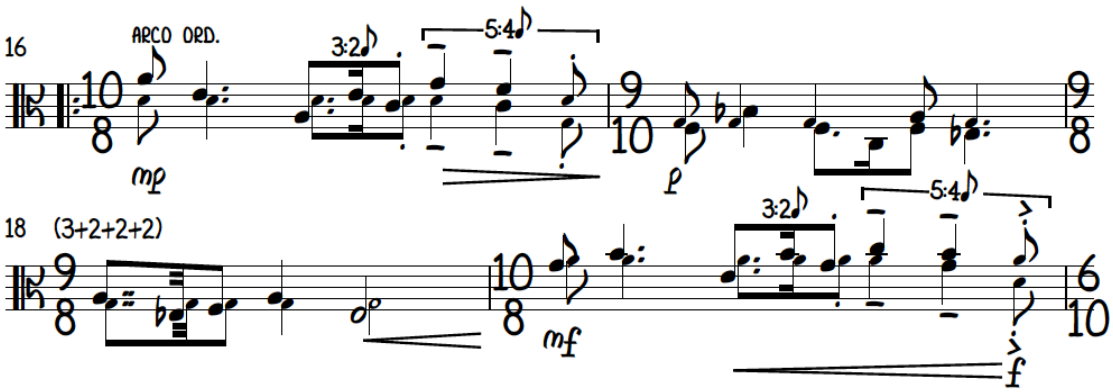
$$\text{Tempo for measures of } \frac{n}{12} = \text{Given tempo x } 1.5$$

The "given tempo" is now 60 bpm for the quarter-note. Thus, the tempo for measures 28 and 30 will be 60(1.5) = 90 bpm to the quarter-note (or 180 for the eighth-note). Remember that the tempo returns to the "given tempo" once the time signature changes out of the non-dyadic time to either a dyadic or different non-dyadic time.

The last "Even Faster" section at 80 bpm for the quarter-note also has some $\frac{n}{12}$ time signatures. The process is the same: 80(1.5) = 120 bpm (quarter-note) or 240 (eighth-note) for these measures of $\frac{n}{12}$.

Non-Dyadic Time Signatures Over 10:

There is only one other non-dyadic time signature in this piece: those over "10," or $\frac{n}{10}$. These are similar to the abstract examples given at the beginning of this document. "Tenth-notes" are simply traditional quintuplets in dyadic time; however, some non-equally divisible collection of them is called for (7/10, 9/10, 3/10. etc. rather than 5/10, 10/10, 15/10, etc.). Recognizing that the "tenth-note" is simply 5 eighth-notes in the time of four in normal dyadic time, we can figure that our tempo is modulating from 4/4 (four in-the-time-of four) to 5/4 (five in-the-time-of four, or 125%). Thus, we will be multiplying our "given tempo" by 1.25 or 5/4 in each measure of $\frac{n}{10}$.



In measure 17, we get the first non-dyadic time of $\frac{n}{10}$, specifically with 9 of the 10 equal sub-divisions (note that you also see the cautionary time signature at the end of the figure for measure 20, which is also $\frac{n}{10}$). The "given tempo" in this part is 60 bpm (quarter-note) or 120 (eighth-note). Thus, the tempo of the $\frac{n}{10}$ measures will be 60(1.25) = 75 bpm (quarter-note) or 150 bpm (eighth-note).

Note that in measure 17 and 20, you are prepared for this tempo change with the explicit "modulation" by use of a complete quintuplet in measure 16 and 19 respectively. This may be useful to successfully execute the transition, or else you may consider that the tempo actually changes to 75 bpm (quarter-note) in the last part of measure 16 and 19.

In the "Even Faster" section where quarter-note = 80 bpm, the tempo of $\frac{n}{10}$ measures will be 80(1.25) = 100 bpm (quarter-note) or 200 (eighth-note).

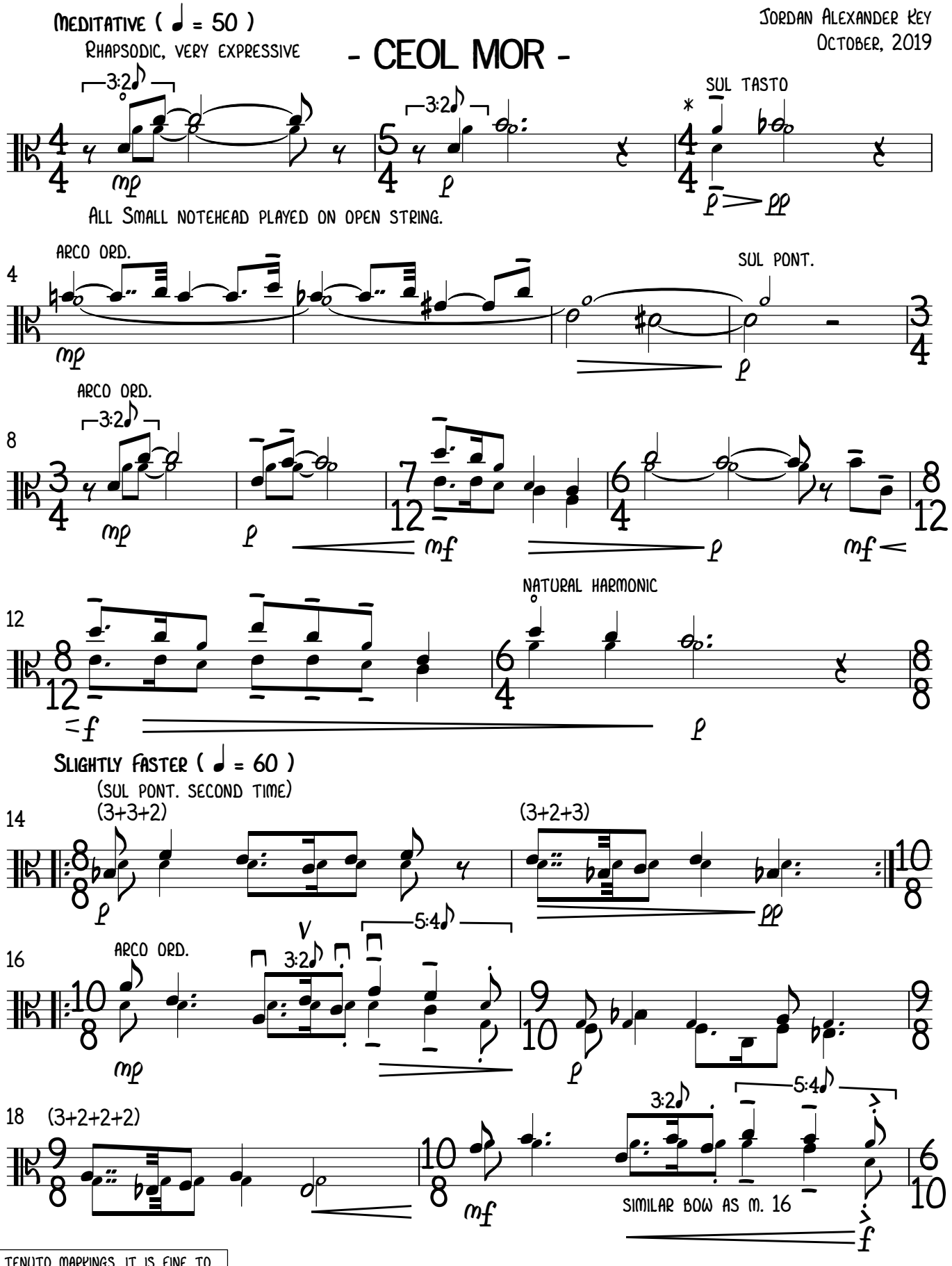
If you have any questions about this methodology or these calculations, don't hesitate to contact me at either jordanalexanderkey@gmail.com or by phone (540) 588-2409.

Note: All dynamic markings are relative. Given the performance space and the capabilities of expression, one must choose the base-line "*pp*" and adjust all dynamics in performance relative to this. There is no "ideal," quantitative softest and loudest.

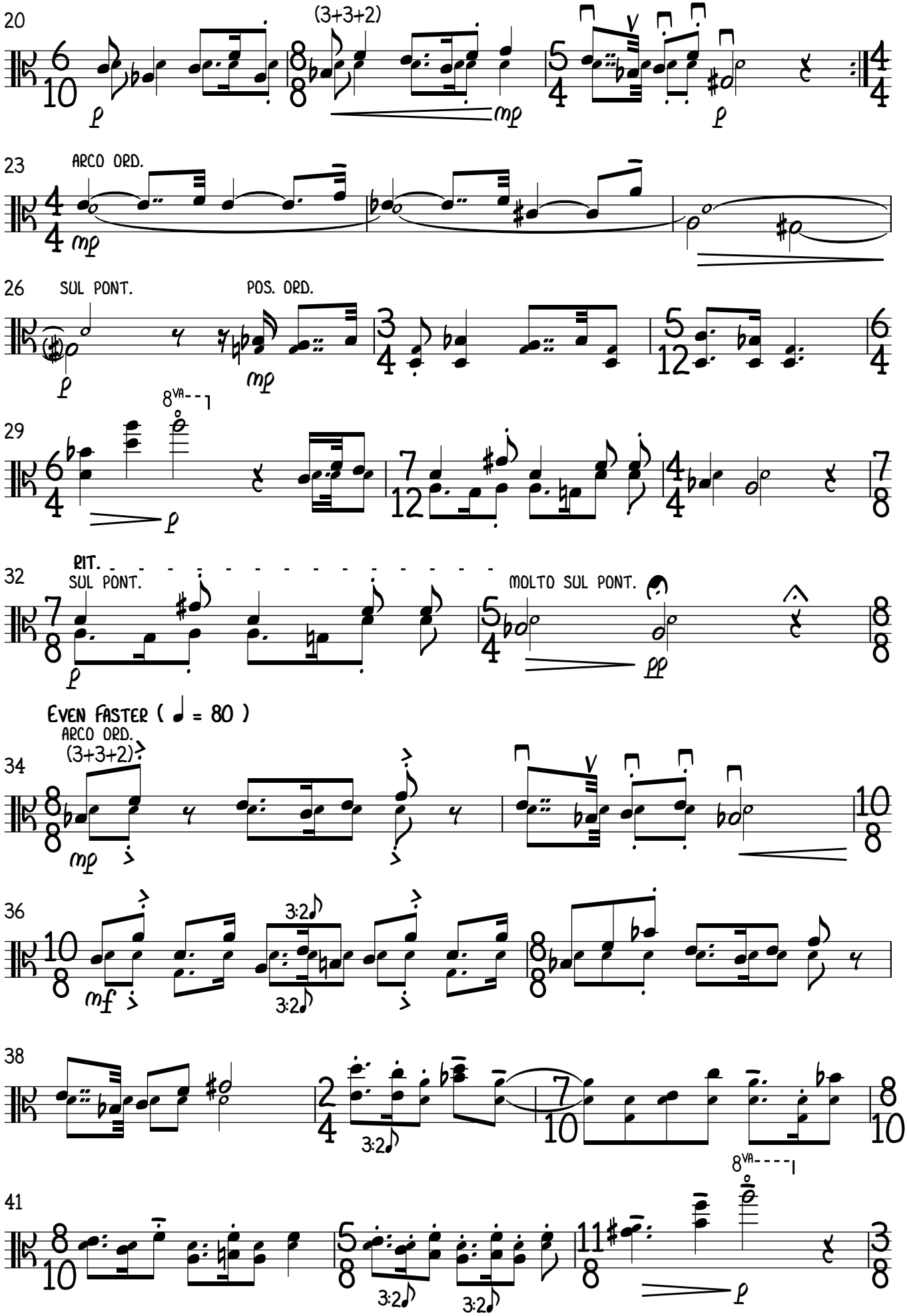
VIOLA SONATA NO. 1

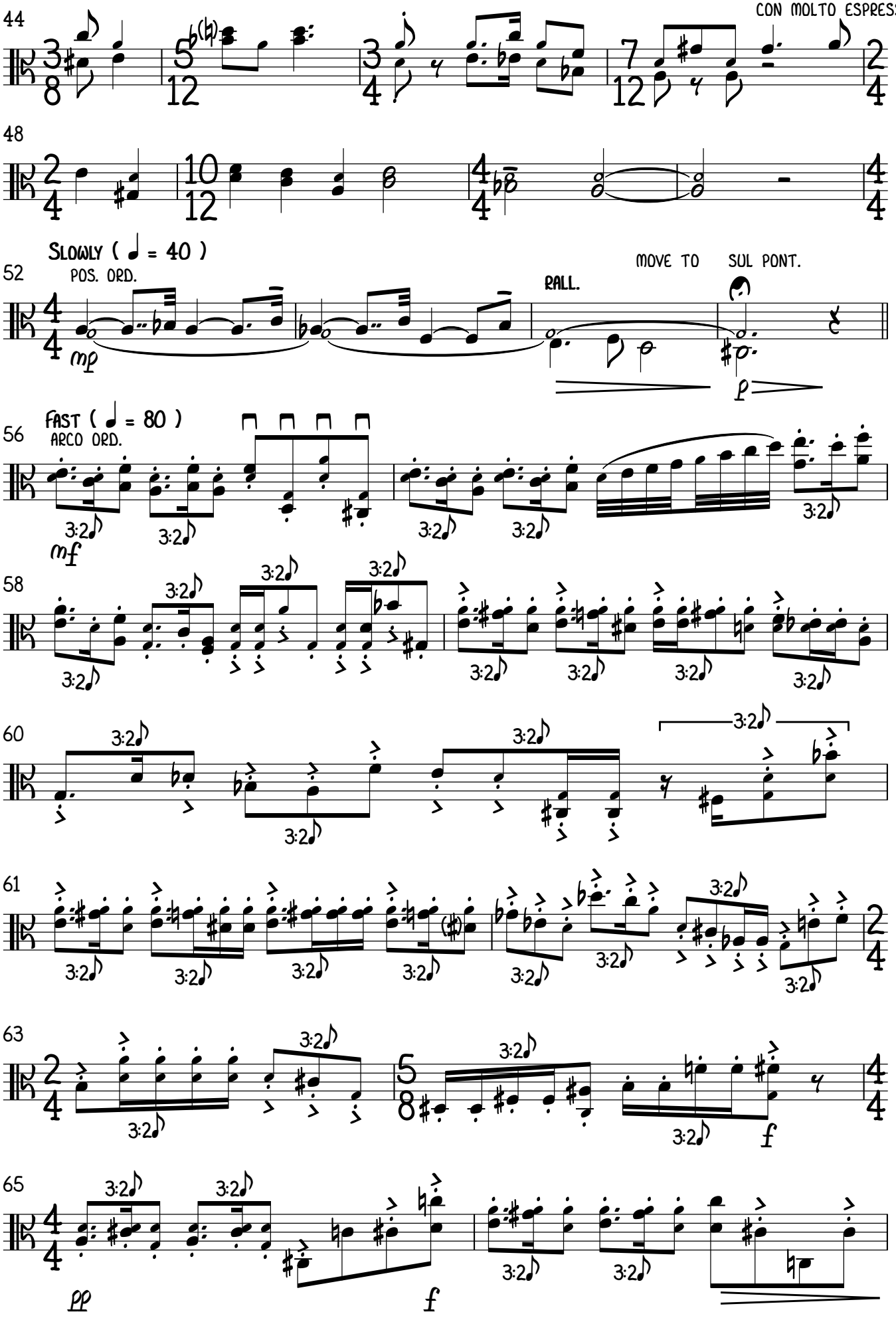
Jordan Alexander Key
October, 2019

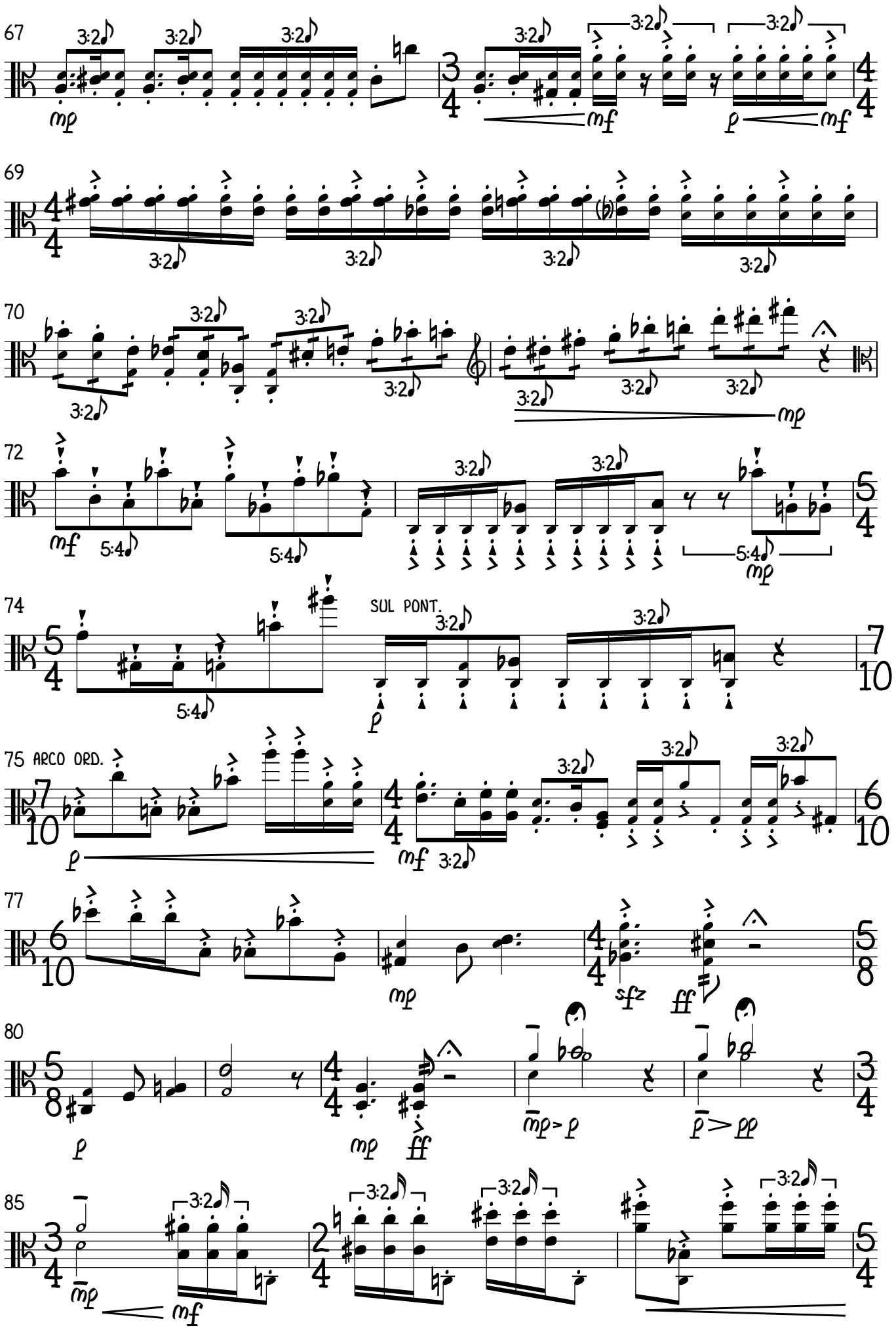
- CEOL MOR -

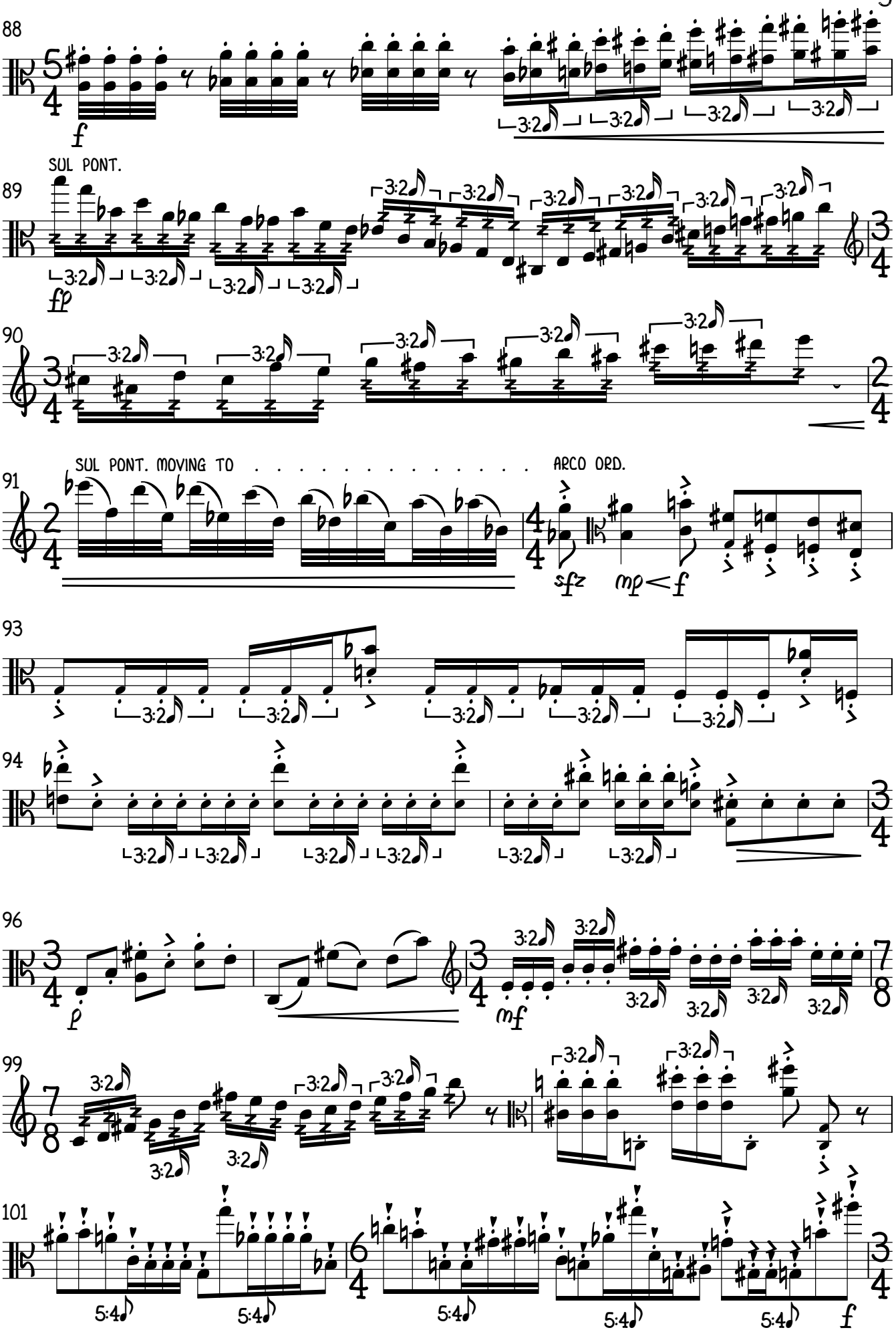


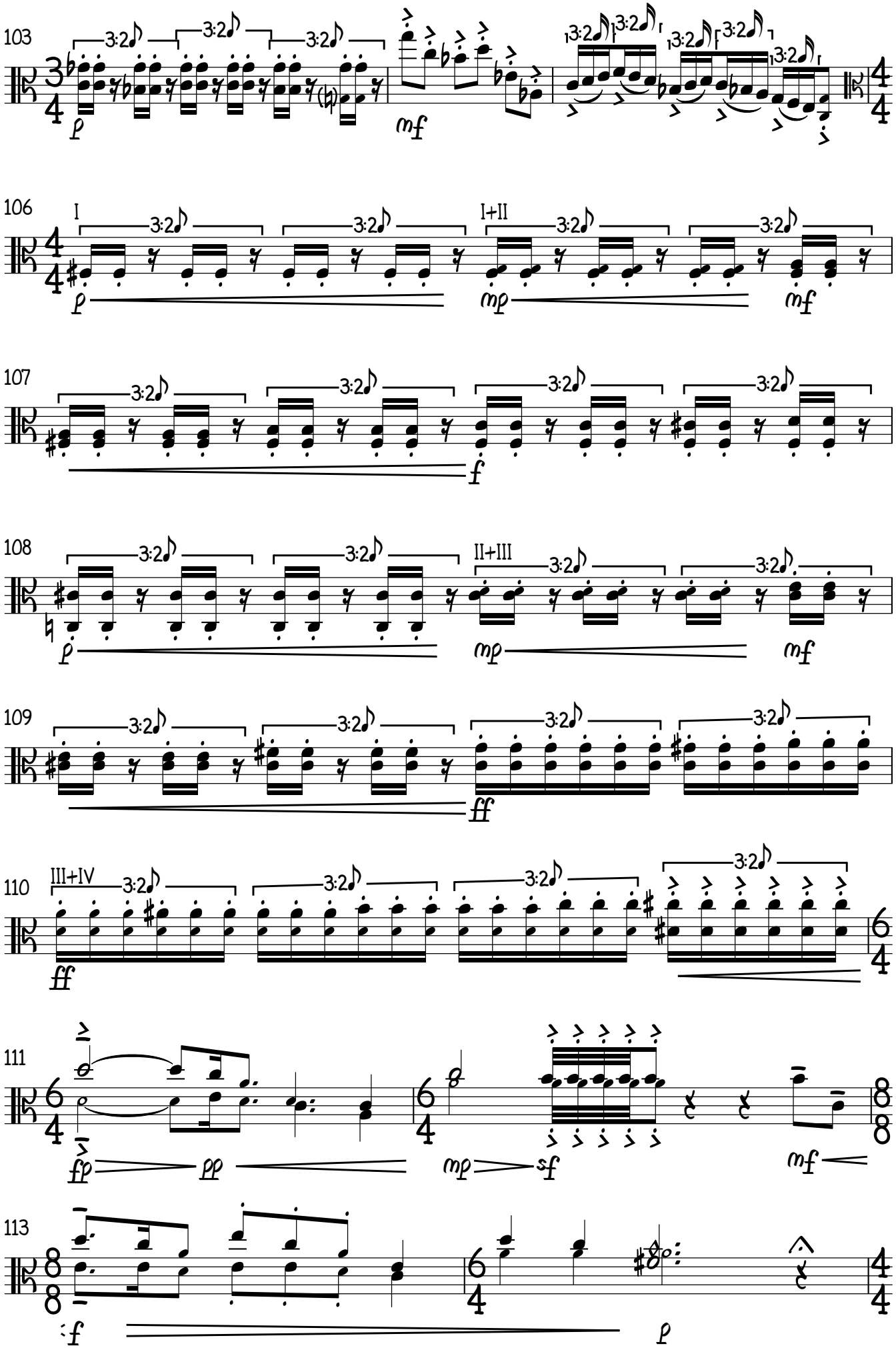
* On tenuto markings, it is fine to "pull" the time of the notes. They are gentle accents.

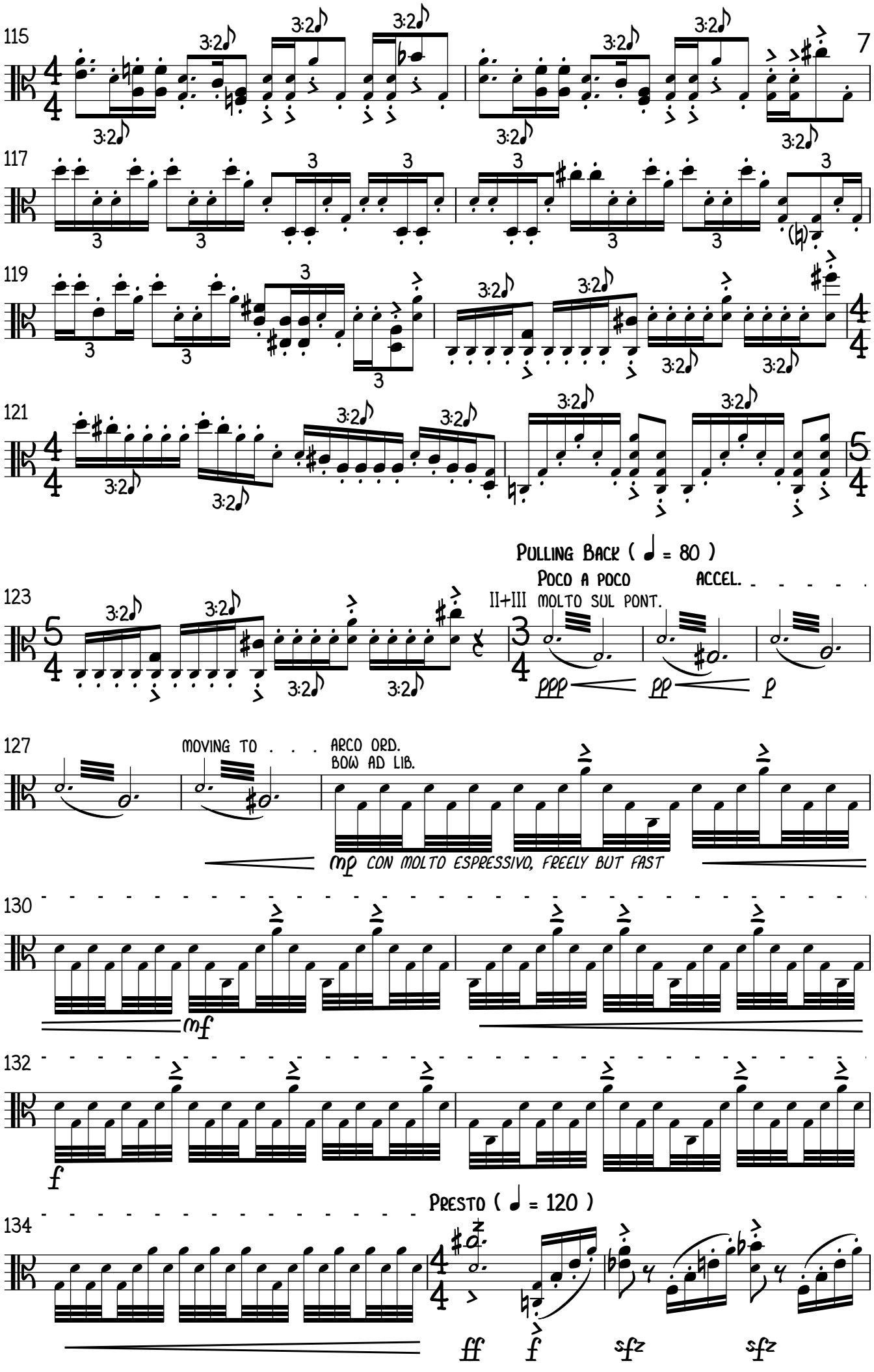

20
(3+3+2)
23
ARCO ORD.
26
SUL PONT.
POS. ORD.
29
8VA
32
RIT.
SUL PONT.
MOLTO SUL PONT.
EVEN FASTER (♩ = 80)
ARCO ORD.
(3+3+2)
34
36
3:2
38
41
8VA

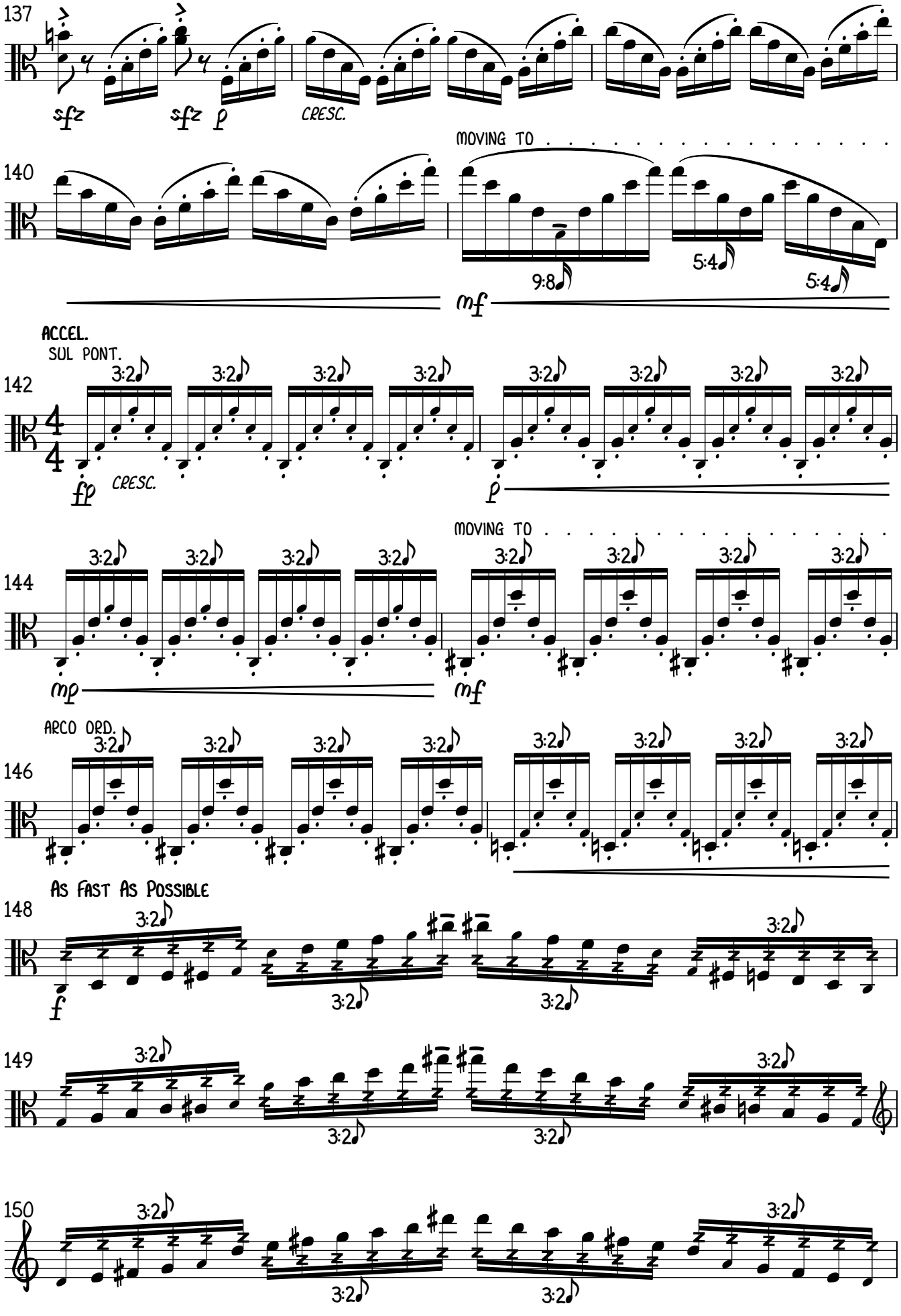

CON MOLTO ESPRESSIVO
SLOWLY (♩ = 40)
POS. ORD.
mp
RALL.
MOVE TO SUL PONT.
p
FAST (♩ = 80)
ARCO ORD.
mf
3:2
f
pp

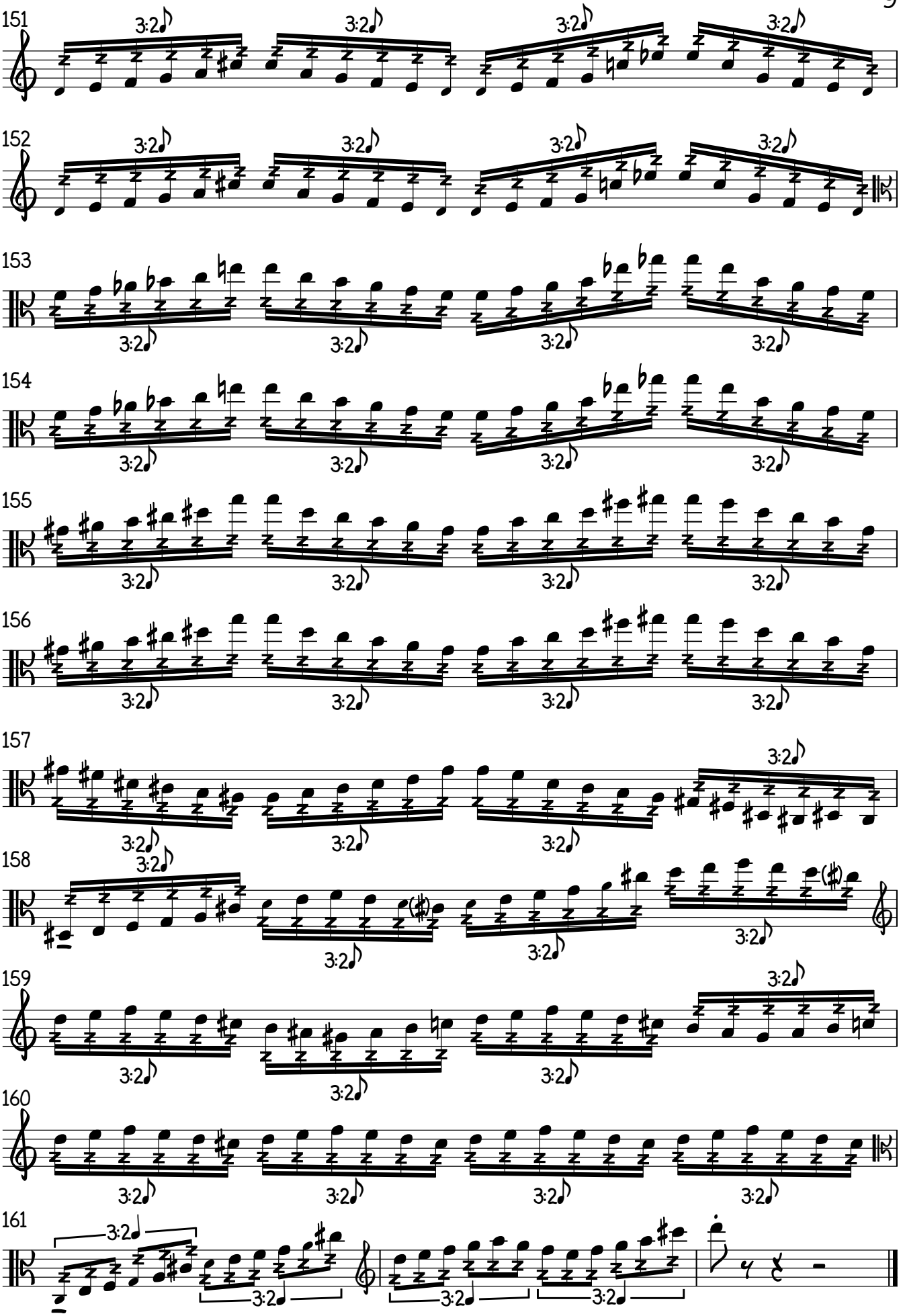

67
69
70
72
74
SUL PONT.
75 ARCO ORD.
77
80
85


88
f
SUL PONT.
89
ff
90
SUL PONT. MOVING TO
ARCO ORD.
91
sfz
mp<f
93
94
96
p
mf
99
101
f


103
106
I
I+II
107
108
II+III
109
110
III+IV
111
113


115
117
119
121
123
Pulling Back (♩ = 80)
Poco a poco
ACCEL.
II+III MOLTO SUL PONT.
127
MOVING TO . . .
ARCO ORD.
BOW AD LIB.
mp CON MOLTO ESPRESSIVO, FREELY BUT FAST
130
mf
132
f
134
Presto (♩ = 120)
ff
sfz
sfz


137
sfz
sfz
p
CRESC.
MOVING TO
140
9:8
5:4
5:4
mf
ACCEL.
SUL PONT.
142
3:2
fp
CRESC.
p
MOVING TO
144
mp
mf
ARCO ORD.
146
AS FAST AS POSSIBLE
148
f
149
150


151
152
153
154
155
156
157
158
159
160
161
3:2