Claims

1. A system for lifting portions of a cable away from a lower surface that supports the cable, and conveying lifted portions of the cable toward a vertically elevated target destination, the system comprising:

a frame structure extending upwardly relative to the lower surface and displaceable along a direction parallel to the lower surface, wherein the frame structure includes a front portion, a back portion rearwardly opposite the front portion, a left side, a right side laterally opposite the left side, a bottom portion that is closest to the lower surface, and a top portion that is furthest from the lower surface;

a set of track elements carried or provided by or coupled to the frame structure, wherein the set of track elements establishes relative to portions of the frame structure a cable transportation path that is elevated relative to the lower surface such that the cable transportation path is vertically further away from the lower surface at the back portion of the frame structure than at the front portion of the frame structure; and

a cable conveying machine coupled to the frame structure, wherein the cable conveying machine is configured for progressively displacing the lifted portions of the cable away from the front portion of the frame structure toward the back portion of the frame structure along the cable transportation path.

2. The system of claim 1, further comprising a set of lateral displacement guides coupled to the set of track elements, wherein each lateral displacement guide is configured for retaining particular portions of the cable at a selected lateral position relative to the left side and the right side of the frame structure as the lifted portions of the cable are displaced toward the target destination.

3. The system of claim 2, wherein the set of lateral displacement guides includes at least one lateral displacement guide that is laterally repositionable at multiple locations relative to the left side and the right side of the frame structure.

4. The system of claim 1, 2, or 3, wherein the cable conveying machine comprises a cable hauling machine having an ingress facing toward the front portion of the frame structure at which portions of the cable are drawn into the hauling machine, and an egress facing toward

the back portion of the frame structure at which portions of the cable are output from the hauling machine.

5. The system of claim 4, wherein the egress is vertically further away from the lower surface than the ingress.

6. The system of any one of claims 1 to 5, wherein the set of track elements comprises a plurality of cross bars that extend lengthwise parallel to each other, and which are configured for supporting particular lifted portions of the cable between the front portion of the frame structure and the back portion of the frame structure.

7. The system of any one of claims 1 to 6, wherein the set of track elements comprises a plurality of rollers configured for rotating in response to displacement of particular portions of the cable therealong.

8. The system of any one of claims 1 to 7, wherein the set of track elements includes a first track element disposed between the front portion and the back portion of the frame structure, and a second track element disposed beyond the back portion of the frame structure.

9. The system of claim 8, wherein the second track element is pivotally coupled to the frame structure such that the second track element is laterally displaceable relative to the left side and the right side of the frame structure.

10. The system of claim 8 or 9, wherein the second track element is coupled to the frame structure by way of a hinge structure such that the second track element is upwardly and downwardly displaceable relative to the frame structure.

11. A modular system for lifting portions of a cable away from a lower surface that supports the cable, and conveying lifted portions of the cable toward a vertically elevated target destination, the system comprising:

a plurality of frame structures disposed serially relative to each other with respect to the lower surface, wherein each of the plurality of frame structures extends upwardly relative to the lower surface and is displaceable along a direction parallel to the lower

surface, wherein each of the plurality of frame structures includes a front portion, a back portion rearwardly opposite the front portion, a left side, a right side laterally opposite the left side, a bottom portion that is closest to the lower surface, and a top portion that is furthest from the lower surface, and wherein the plurality of frame structures comprises:

a first frame structure; and

a last frame structure coupled to the first frame structure and having a top portion that is further away from the lower surface than the top portion of the first frame structure;

a set of track elements carried or provided by or coupled to the plurality of frame structures, wherein the set of track elements establishes a cable transportation path that is elevated relative to the lower surface such that the cable transportation path is vertically further away from the lower surface at the back portion of the last frame structure than at the front portion of the first frame structure; and

at least one cable conveying machine coupled to the plurality of frame structures, wherein the at least one cable conveying machine is configured for progressively displacing the lifted portions of the cable away from the front portion of the first frame structure toward the back portion of the last frame structure along the cable transportation path.

12. The system of claim 11, further comprising a set of lateral displacement guides coupled to the set of track elements, wherein each lateral displacement guide is configured for retaining particular portions of the cable at a selected lateral position relative to the left side and the right side of a particular frame structure within the plurality of frame structures as the lifted portions of the cable are displaced toward the target destination.

13. The system of claim 12, wherein the plurality of lateral displacement guides includes at least one lateral displacement guide that is laterally repositionable at multiple locations relative to the left side and the right side of a particular frame structure within the plurality of frame structures.

14. The system of claim 11, 12, or 13, wherein the at least one cable conveying machine comprises a cable hauling machine having an ingress facing toward the front portion of the first frame structure at which portions of the cable are drawn into the hauling machine, and an egress

facing toward the back portion of the last frame structure at which portions of the cable are output from the cable hauling machine.

15. The system of claim 14, wherein the egress is vertically further away from the lower surface than the ingress.

16. The system of any one of claims 11 to 15, wherein the set of track elements comprises a plurality of cross bars that extend lengthwise parallel to each other, and which are configured for supporting particular lifted portions of the cable between the front portion of a particular frame structure within the plurality of frame structures and the back portion of the particular frame structure within the plurality of frame structures.

17. The system of any one of claims 11 to 16, wherein the set of track elements comprises a plurality of rollers configured for rotating in response to displacement of particular portions of the cable therealong.

18. The system of any one of claims 11 to 17, wherein the set of track elements includes a first track element disposed between the front portion and the back portion of a particular frame structure within the plurality of frame structures, and a second track element disposed beyond the back portion of the last frame structure within the plurality of frame structures.

19. The system of claim 18, wherein the second track element is pivotally coupled to the last frame structure such that the second track element is laterally displaceable relative to the left side and the right side of the last frame structure.

20. The system of claim 18 or 19, wherein the second track element is coupled to the last frame structure by way of a hinge structure such that the second track element is upwardly and downwardly displaceable relative to the last frame structure.

21. A method for lifting portions of a cable away from a lower surface that supports the cable, and conveying lifted portions of the cable toward a vertically elevated target destination, the method comprising:

providing a frame structure extending upwardly relative to the lower surface and displaceable along a direction parallel to the lower surface, wherein the frame structure includes a front portion, a back portion rearwardly opposite the front portion, a left side, a right side laterally opposite the left side, a bottom portion that is closest to the lower surface, and a top portion that is furthest from the lower surface;

providing a set of track elements carried or provided by or coupled to the frame structure, wherein the set of track elements establishes relative to portions of the frame structure a cable transportation path that is elevated relative to the lower surface such that the cable transportation path is vertically further away from the lower surface at the back portion of the frame structure than at the front portion of the frame structure;

providing a cable conveying machine coupled to the frame structure; and

activating the cable conveying machine to progressively lift portions of the cable away from the lower surface and displace the lifted portions of the cable away from the front portion of the frame structure toward the back portion of the frame structure along the cable transportation path in an automated manner.