Istanbul Metropolitan Municipality-Dept. of Transportation
Sehzadebaşı Cad 25,
34134 Fatih Istanbul, Turkey
Golden Horn Swing Bridge Installation Project
Tender HB-S/2021
Contract Specifications
Project data
WBS: Tasks 8

## WBS: Tasks & Resources Assignments

| Phase Id    | Element Id     | WBS          | Resource<br>Initials | Task / Resource Name                  | Duration | Work      | Assignment<br>Units | Cost |
|-------------|----------------|--------------|----------------------|---------------------------------------|----------|-----------|---------------------|------|
|             |                | 0            |                      | 2-5-Tender-CS-TS-0                    |          |           |                     |      |
| 1-30 50 14  |                | 1            |                      | Contract Award Phase                  |          |           |                     |      |
|             |                | 1.1          |                      | Award date (M0.1)                     | 0 days   |           |                     |      |
|             |                | 1.2          |                      | Contract Bonds effective              | 45 days  |           |                     |      |
|             |                |              | O14.PM               | Project Manager                       |          |           | 100%                |      |
|             |                | 1.3          |                      | Notice to proceed (M0.2)              | 0 days   |           |                     |      |
| 31-20 20 14 |                | 2            |                      | Final Design Phase                    |          |           |                     |      |
|             | 21-01 10 20 15 | 2.1          |                      | Bored Piles                           | 60 days  |           |                     |      |
|             |                |              | 01                   | Owner Resources                       |          |           |                     |      |
|             | 21-01 40 40    | 2.2          |                      | Pits and Bases                        | 25 days  |           |                     |      |
|             |                |              | 01                   | Owner Resources                       | -        |           |                     |      |
|             | 21-06 10 20 70 | 2.3          |                      | Towers                                | 20 days  |           |                     |      |
|             |                |              | 01                   | Owner Resources                       | -        |           |                     |      |
|             | 21-07 20 60 70 | 2.4          |                      | Site Bridges                          |          |           |                     |      |
|             |                | 2.4.1        |                      | Approach Viaduct                      | 90 days  |           |                     |      |
|             |                |              | 01                   | Owner Resources                       |          |           |                     |      |
|             |                | 2.4.2        |                      | Central Cable stayed spans            | 150 days |           |                     |      |
|             |                |              | 01                   | Owner Resources                       |          |           |                     |      |
|             |                | 2.4.3        |                      | FD-Swing Bridge (M1)                  |          |           |                     |      |
|             |                | 2.4.3.1      |                      | Cylinder and Locking Devices          |          |           |                     |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          | 256 hrs   | 50%                 |      |
|             |                |              | O14.ME               | Turkish Mechanical Engineer           |          | 2,048 hrs | 400%                |      |
|             |                | 2.4.3.2      |                      | Machinery Room                        |          |           |                     |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          | 340 hrs   | 50%                 |      |
|             |                |              | 014.ME               | Turkish Mechanical Engineer           |          | 2,720 hrs | 400%                |      |
|             |                | 2.4.3.3      |                      | Swing Bridge Deck                     |          |           |                     |      |
|             |                |              | O14.PE               | Turkish Project Engineer              |          | 292 hrs   | 50%                 |      |
|             |                |              | 014.ME               | Turkish Mechanical Engineer           |          | 2,336 hrs | 400%                |      |
| 1-40 20 17  |                | 3            |                      | Permitting Phase                      |          |           |                     |      |
|             | 21-07 20 60 70 | 3.1          |                      | Site Bridges                          | 180 days | İ         |                     |      |
|             |                |              | 01                   | Owner Resources                       |          |           |                     |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          | 720 hrs   | 50%                 |      |
| 1-40 20 34  |                | 4            |                      | Coordination Phase                    |          |           |                     |      |
|             | 21-07 20 60 70 | 4.1          |                      | Site Bridges                          | 60 days  |           |                     |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          | 240 hrs   | 50%                 |      |
| 1-40 20 14  |                | 5            |                      | Subcontracting Phase                  |          |           |                     |      |
|             | 21-07 20 60 70 | 5.1          |                      | Site Bridges                          |          |           |                     |      |
|             |                | 5.1.1        |                      | Swing Bridge                          |          |           |                     |      |
|             |                | 5.1.1.1      |                      | Machinery Room                        |          |           |                     |      |
|             |                | 5.1.1.1.1    |                      | RFP                                   |          |           |                     |      |
|             |                | 51111111     | 014.PA               | Purchasing Agent                      |          | 40 hrs    | 100%                |      |
|             |                | 5.1.1.1.2    |                      | BID preparation                       | 15 days  |           |                     |      |
|             |                | 511111112    | S                    | S/Contractor                          | .s days  |           |                     |      |
|             |                | 5.1.1.1.3    |                      | BID evaluation                        |          |           |                     |      |
|             |                | 51111113     | 014.PE               | Turkish Project Engineer              |          | 32 hrs    | 100%                |      |
|             |                |              | 014.PA               | Purchasing Agent                      |          | 32 hrs    | 100%                |      |
|             |                | 5.1.1.1.4    | 0111111              | S/Contract execution                  |          | 52 1.115  | 700%                |      |
|             |                | 3.1.1.1.4    | O14.PA               | Purchasing Agent                      |          | 16 hrs    | 100%                |      |
|             |                |              | 5                    | S/Contractor                          |          | 8 hrs     | 100%                |      |
|             |                | 5.1.1.2      | 3                    | Swing Bridge Deck                     |          | o m s     | 70070               |      |
|             |                | 5.1.1.2.1    |                      | RFP                                   |          |           |                     |      |
|             |                | ا ۱۰۱۰۲ و    | 014.PA               | Purchasing Agent                      |          | 40 hrs    | 100%                |      |
|             |                | 5.1.1.2.2    | J 14.FA              | BID preparation                       | 15 days  | 70 III 3  | 100%                |      |
|             |                | J. 1. 1.Z.Z  | S                    | S/Contractor                          | 15 days  |           |                     |      |
|             |                | 5.1.1.2.3    |                      | BID evaluation                        |          |           |                     |      |
|             |                | 3.1.1.2.3    | O14.PE               | Turkish Project Engineer              |          | 32 hrs    | 100%                |      |
|             |                |              | 014.PE               | Purchasing Agent                      |          | 32 hrs    | 100%                |      |
|             |                | 5.1.1.2.4    | 014.FA               | S/Contract execution                  |          | JZ 1113   | 100%                |      |
|             |                | J. 1. 1.Z.4  | 014.PA               | Purchasing Agent                      |          | 16 hrs    | 100%                |      |
|             |                |              | S S                  | S/Contractor                          |          | 8 hrs     | 100%                |      |
| 1-25 10 21  |                | 6            | J                    | Fabrication Drawing Preparation Phase |          | 31113     | 100%                |      |
| 11-23 10 21 | 21.07.20.60.70 |              |                      | Site Bridges                          |          |           |                     |      |
|             | 21-07 20 60 70 | 6.1<br>6.1.1 |                      | Swing Bridge                          |          |           |                     |      |
|             |                | 6.1.1.1      | 1                    | Cylinder and Locking Devices          | 20 days  |           |                     |      |
|             |                | 0.1.1.1      | 014.PE               | Turkish Project Engineer              | ZU days  |           | 100%                |      |
|             |                |              | S S                  | Supplier                              |          |           | 100%                |      |
|             |                | 6112         | 3                    | Machinery Room                        | 15 4-1-  |           | 100%                |      |
|             |                | 6.1.1.2      | 014 05               |                                       | 15 days  |           | 1000                |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          |           | 100%                |      |
|             |                | 6443         | S                    | S/Contractor                          | 20.1     |           | 100%                |      |
|             |                | 6.1.1.3      | 0115                 | Swing Bridge Deck                     | 30 days  |           |                     |      |
|             |                |              | 014.PE               | Turkish Project Engineer              |          |           | 100%                |      |
|             |                | _            | S                    | S/Contractor                          |          |           | 100%                |      |
| 1-40 30 21  |                | 7            |                      | Product Purchasing Phase              |          |           |                     |      |
|             | 21-07 20 60 70 | 7.1          |                      | Site Bridges                          |          |           |                     |      |
|             |                | 7.1.1        |                      | Swing Bridge                          |          |           |                     |      |
|             |                | 7.1.1.1      |                      | Cylinder and Locking Devices          |          |           |                     |      |
|             |                | 7.1.1.1.1    |                      | RFP                                   |          |           |                     |      |
|             |                |              | 014.PA               | Purchasing Agent                      |          | 40 hrs    | 100%                |      |
|             |                | 7.1.1.1.2    |                      | BID preparation                       | 15 days  |           |                     |      |
|             |                |              |                      | · · · · · · · · · · · · · · · · · · · |          | -         |                     |      |

## Istanbul Metropolitan Municipality-Dept. of Transportation Sehzadebaşı Cad 25, 34134 Fatih Istanbul, Turkey Golden Horn Swing Bridge Installation Project Tender HB-S/2021 Contract Specifications Project data

| WBS: Tasks & Resource | es Assignments |
|-----------------------|----------------|
|-----------------------|----------------|

|                |                |           |                    | WBS: Tasks & Resources Assignmer            | nts       |        |              |                |
|----------------|----------------|-----------|--------------------|---|-----------|--------|--------------|----------------|
|                |                |           | S                  | Supplier                                    |           |        |              |                |
|                |                | 7.1.1.1.3 |                    | BID evaluation                              |           |        |              |                |
|                |                |           | 014.PE             | Turkish Project Engineer                    |           | 32 hrs | 100%         |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           | 32 hrs | 100%         |                |
|                |                | 7.1.1.1.4 |                    | Supply Contract execution                   |           |        |              |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           | 12 hrs | 100%         |                |
|                |                |           | S                  | Supplier                                    |           | 12 hrs | 100%         |                |
|                |                | 7.1.1.2   |                    | Deck materials                              | 10 days   |        |              |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           | 80 hrs | 100%         |                |
|                |                | 7.1.1.3   |                    | Electric & mechanical components            | 10 days   |        |              |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           | 80 hrs | 100%         |                |
| 31-40 40 14 21 |                | 8         |                    | Off-Site Fabrication Phase                  |           |        |              |                |
|                | 21-07 20 60 70 | 8.1       |                    | Site Bridges                                |           |        |              |                |
|                |                | 8.1.1     |                    | Swing Bridge                                | 200 1     |        |              |                |
|                |                | 8.1.1.1   | -                  | Cylinder and Locking Devices                | 280 days  |        |              |                |
|                |                |           | S                  | Supplier                                    |           |        |              | 6 4 5 40 200 0 |
|                |                | 0.4.4.0   | O14.MAT            | Swing Bridge Materials                      | 50.1      |        |              | € 1,540,200.00 |
|                |                | 8.1.1.2   |                    | Deck materials                              | 60 days   |        |              |                |
|                |                | 0.4.4.0   | S                  | Supplier                                    | 50.1      |        |              |                |
|                |                | 8.1.1.3   | -                  | Electric & mechanical components            | 60 days   |        |              |                |
| 24 40 20 27    |                | •         | S                  | Supplier                                    |           |        |              |                |
| 31-40 30 27    | 24 07 20 60 70 | 9         |                    | Product Delivery Phase                      |           |        |              |                |
|                | 21-07 20 60 70 | 9.1       |                    | Site Bridges                                |           |        |              |                |
|                |                | 9.1.1     |                    | PD-Swing Bridge (M2)                        | 2F 4-0.0- |        |              |                |
|                |                | 9.1.1.1   | 014.04             | Cylinder and Locking Devices                | 25 days   |        | 40001        |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           |        | 100%         |                |
|                |                | 0442      | 014.F.CH           | Ship Freight (Origin China)                 | F -1      |        | 11 TEU-CN    |                |
|                |                | 9.1.1.2   | 014.04             | Deck materials                              | 5 days    |        | 100%         |                |
|                |                |           | 014.PA             | Purchasing Agent                            |           |        |              |                |
|                |                | 0113      | 014.F.TK           | Ship Freight (Origin Turkey)                | E dava    |        | 32 TEU-TK    |                |
|                |                | 9.1.1.3   | O14.PA             | Electric & mechanical components            | 5 days    |        | 100%         |                |
|                |                |           | 014.PA<br>014.F.TK | Purchasing Agent                            |           |        | 4 TEU-TK     |                |
| 31-40 40 14 14 |                | 10        | 014.F.1K           | Ship Freight (Origin Turkey) Assembly Phase |           |        | 4 IEU-IK     |                |
| 31-40 40 14 14 | 21-07 20 60 70 | 10.1      |                    | Site Bridges                                |           |        |              |                |
|                | 21-07 20 60 70 | 10.1.1    |                    | Swing Bridge                                |           |        |              |                |
|                |                | 10.1.1    |                    | Cylinder and Locking Devices                | 152 days  |        |              |                |
|                |                | 10.1.1.1  | 014.TW             | Team of Turkish Workers (5 Workers each)    | 132 days  |        | 400%         |                |
|                |                |           | 014.1W             | Swing Bridge Materials                      |           |        |              | € 1,206,800.00 |
|                |                | 10.1.1.2  | 014.000            | Swing Bridge Deck                           | 88 days   |        |              | c 1,200,000.00 |
|                |                | 10.1.1.2  | 014.TW             | Team of Turkish Workers (5 Workers each)    | oo days   |        | 400%         |                |
|                |                |           | 014.MAT            | Swing Bridge Materials                      |           |        |              | € 5,543,954.00 |
| 31-40 40 14 11 |                | 11        | 014.0011           | Erection Phase                              |           |        |              | c 3,343,334.00 |
| 51 40 40 14 11 | 21-01 10 20 15 | 11.1      |                    | Bored Piles                                 | 60 days   |        |              |                |
|                | 21 01 10 20 13 |           | 01                 | Owner Resources                             | oo days   |        |              |                |
|                | 21-01 40 40    | 11.2      | 01                 | Pits and Bases                              | 25 days   |        |              |                |
|                |                |           | 01                 | Owner Resources                             |           |        |              |                |
|                | 21-06 10 20 70 | 11.3      |                    | Towers                                      | 20 days   |        |              |                |
|                | 1 22 10 20 70  | 1         | 01                 | Owner Resources                             |           |        |              |                |
|                | 21-07 20 60 70 | 11.4      |                    | Site Bridges                                |           |        |              |                |
|                |                | 11.4.1    |                    | Approach Viaduct                            | 90 days   |        |              |                |
|                |                |           | 01                 | Owner Resources                             | , -       |        |              |                |
|                |                | 11.4.2    |                    | Central Cable stayed spans                  | 150 days  |        |              |                |
|                |                |           | 01                 | Owner Resources                             |           |        |              |                |
|                |                | 11.4.3    |                    | Swing Bridge                                |           |        |              |                |
|                |                | 11.4.3.1  |                    | Cylinder and Locking Devices                | 50 days   |        |              |                |
|                |                |           | 014.TW             | Team of Turkish Workers (5 Workers each)    | , -       |        | 400%         |                |
|                |                | 11.4.3.2  |                    | Machinery Room                              | 85 days   |        |              |                |
|                |                |           | 014.TW             | Team of Turkish Workers (5 Workers each)    |           |        | 400%         |                |
|                |                |           | O14.MAT            | Swing Bridge Materials                      |           |        |              | € 3,095,000.00 |
|                |                | 11.4.3.3  |                    | Swing Bridge Deck                           | 30 days   |        |              |                |
|                |                | -         | 014.TW             | Team of Turkish Workers (5 Workers each)    |           |        | 400%         |                |
| 31-40 50 11    |                | 12        |                    | Commissioning Start-Up Phase                |           |        |              |                |
| 31-40 30 11    | 21-07 20 60 70 | 12.1      |                    | CS-Site Bridges (M3)                        |           |        |              |                |
| 31-40 30 11    |                |           |                    |   | 32 days   |        |              |                |
| 31-40 50 11    | 21 07 20 00 70 | 12.1.1    |                    | Swing Bridge                                | JZ uays   |        |              |                |
| 51-40 50 11    | 21 07 20 00 70 | 12.1.1    | O14.PE             | Turkish Project Engineer                    | 32 days   |        | 100%         |                |
| 51-40 50 11    | 21 07 20 00 70 | 12.1.1    | O14.PE<br>O14.ME   |   | 32 days   |        | 100%<br>400% |                |

## Istanbul Metropolitan Municipality-Dept. of Transportation Şehzadebaşı Cad 25, 34134 Fatih Istanbul, Turkey Golden Horn Swing Bridge Installation Project Tender HB-S/2021

Contract Specifications
Project data

## OBS / ResBS

| Group  | Resource Name                            | Type     | Material Label | Initials | Max. Units | Std. Rate | •         |
|--------|--|----------|----------------|----------|------------|-----------|-----------|
| Obs.1  | Owner Resources                          | Work     |                | O1       |            |           |           |
| Obs.2  | Authority                                | Work     |                | Α        |            |           |           |
| Obs.14 | Project Manager                          | Work     |                | O14.PM   | 100%       | €.        | 180.00/hr |
| Obs.14 | Turkish Project Engineer                 | Work     |                | O14.PE   | 100%       | . 4       | €60.00/hr |
| Obs.14 | Turkish Mechanical Engineer              | Work     |                | O14.ME   | 400%       | . 4       | €43.00/hr |
| Obs.14 | Purchasing Agent                         | Work     |                | O14.PA   | 100%       | . 4       | €80.00/hr |
| Obs.14 | Supplier                                 | Work     |                | S        |            |           |           |
| Obs.14 | S/Contractor                             | Work     |                | S        |            |           |           |
| Obs.14 | Team of Turkish Workers (5 Workers each) | Work     |                | O14.TW   | 800%       | €.        | 150.00/hr |
| Obs.14 | Swing Bridge Materials                   | Cost     |                | O14.MAT  |            |           |           |
| Obs.14 | Ship Freight (Origin China)              | Material | TEU-CN         | O14.F.CH |            | €         | 1,440.00  |
| Obs.14 | Ship Freight (Origin Turkey)             | Material | TEU-TK         | O14.F.TK |            | €         | 212.00    |